THIS DOCUMENT IS IMPORTANT AND REQUIRES YOUR IMMEDIATE ATTENTION

If you are in any doubt as to any aspect of this circular or as to the action to be taken, you should consult your stockbroker or other licensed securities dealer in securities, bank manager, solicitor, professional accountant or other professional adviser.

If you have sold or transferred all your shares in CGN Mining Company Limited, you should at once hand this circular and the accompanying form of proxy to the purchaser or the transferee or to the bank, stockbroker or licensed securities dealer or other agent through whom the sale was effected for transmission to the purchaser or transferee.

中廣核礦業有限公司*

CGN Mining Company Limited

(Incorporated in the Cayman Islands with limited liability)

(Stock code: 1164)

MAJOR TRANSACTION AND CONNECTED TRANSACTION IN RELATION TO THE ACQUISITION OF THE ENTIRE EQUITY OF BEIJING SINO-KAZAKH

Sole Financial Adviser to the Company

HSBC

Independent Financial Adviser to the Independent Board Committee and Independent Shareholders

Gram Capital Limited
嘉林資本有限公司

A notice convening the extraordinary general meeting of the Company to be held at Boardroom 3-4, Mezzanine Floor, Renaissance Harbour View Hotel Hong Kong, 1 Harbour Road, Wanchai, Hong Kong on 23 July 2014 (Wednesday) at 10:30 a.m. is set out on pages EGM-1 to EGM-2 of this circular. A form of proxy for use at the EGM is enclosed with this circular. Such form of proxy is also published on the website of The Stock Exchange of Hong Kong Limited at www.hkexnews.hk.

Whether or not you are able to attend the EGM in person, you are requested to complete and return the accompanying form of proxy enclosed with this circular in accordance with the instructions printed thereon and deposit the same to the Company's branch share registrar and transfer office in Hong Kong, Union Registrars Limited at 18th Floor, Fook Lee Commercial Centre, Town Place, 33 Lockhart Road, Wanchai, Hong Kong as soon as possible but in any event not less than 48 hours before the time appointed for the holding of the EGM or any adjournment thereof. Completion and return of the form of proxy will not preclude you from attending and voting in person at the EGM or any adjournment thereof should you so wish.

* *For identification purpose only*

30 June 2014

CONTENTS

In this circular, unless the context otherwise requires, the following terms shall have the meanings set out below:

"Acquisition"	the proposed acquisition of the Equity under the Share Purchase Agreement
"Areva"	a multinational group specializing in nuclear and renewable energy with headquarters in France
"ARMZ-Uranium One"	ARMZ Uranium Holding Co (ARMZ), a Russian uranium mining company, took complete control of Uranium One Inc. in 2013. Uranium One Inc. is a Canadian-based uranium company with a globally diversified portfolio of assets located in Kazakhstan, USA, Australia and Tanzania
"associate(s)"	has the same meaning as ascribed to it under the Listing Rules
"Beijing Sino-Kazakh"	Beijing Sino-Kazakh Uranium Resources Investment Company Limited* (北京中哈鈾資源投資有限公司), a limited liability company incorporated in the PRC
"BMA"	Blackstone Mining Associates Limited, the competent person appointed by the Company for the preparation of the Competent Person's Report
"Board"	the board of Directors of the Company
"Cameco"	a Canadian-based company, one of the world's largest uranium producers with key mining operations in Canada, USA and Kazakhstan
"CB Subscription"	the subscription of the convertible bonds with a principal amount of HK$600.00 million issued by the Company pursuant to the subscription agreement dated 18 March 2011
"CGNPC"	China General Nuclear Power Corporation* (中國廣核集團有限公司, formerly known as 中國廣東核電集團有限公司 China Guangdong Nuclear Power Holding Corporation, Ltd.*), the sole beneficial shareholder of CGNPC-URC and the ultimate controlling shareholder of the Company

"CGNPC-URC"	CGNPC Uranium Resources Co., Ltd.* (中廣核鈾業發展有限公司), a company established in the PRC with limited liability and the sole shareholder of China Uranium Development
"Chapter 18 Valuation"	an independent valuation on Semizbay-U's mineral assets as at 31 December 2013 undertaken by AVISTA Valuation Advisory Limited in compliance with Chapter 18 of the Listing Rules
"China" or "PRC"	the People's Republic of China which, for the purpose of this circular, excludes Hong Kong, Macau and Taiwan
"China Uranium Development"	China Uranium Development Company Limited (中國鈾業發展有限公司*), the controlling shareholder of the Company, holding approximately 50.11% equity interest in the Company as at the Latest Practicable Date
"Company"	CGN Mining Company Limited (中廣核礦業有限公司*), a company incorporated in the Cayman Islands with limited liability, the Shares of which are listed on the main board of the Stock Exchange (stock code: 1164)
"Competent Evaluator"	has the meaning ascribed to it under Chapter 18 of the Listing Rules
"Competent Person's Report"	has the meaning ascribed to it under Chapter 18 of the Listing Rules, the competent person's report prepared by BMA, which is set out in Appendix V – Competent Person's Report to this circular
"Completion"	the completion of the sale and purchase of the Equity pursuant to the Share Purchase Agreement
"Completion Date"	the date on which Completion is required to take place in accordance with the Share Purchase Agreement
"connected person"	has the same meaning as ascribed to it under the Listing Rules

"Consensus Economics"	Established in London in 1989, Consensus Economics Inc. is a specialized firm prepares monthly compilations of country economic forecasts and topical analyses covering the G-7 industrialised nations, Asia Pacific, Eastern Europe, Latin America that are published in its Consensus Forecasts™ publications, as well as specialised publications on Foreign Exchange forecasts and Energy and Metal price forecasts
"controlling shareholder"	has the same meaning as ascribed to it under the Listing Rules
"Director(s)"	the director(s) of the Company
"EGM"	the extraordinary general meeting of the Company to be convened at Boardroom 3-4, Mezzanine Floor, Renaissance Harbour View Hotel Hong Kong, 1 Harbour Road, Wanchai, Hong Kong on 23 July 2014, (Wednesday) at 10:30 a.m. for the purpose of considering and, if thought fit, passing the relevant resolution to approve the Share Purchase Agreement and the transactions contemplated thereunder
"Enlarged Group"	the Group immediately after the Completion
"Equity"	the entire equity interest of Beijing Sino-Kazakh, being RMB823.77 million, representing the entire registered capital of Beijing Sino-Kazakh
"Gram Capital" or "Independent Financial Adviser"	Gram Capital Limited, a corporation licensed to carry out Type 6 (advising on corporate finance) regulated activity under the SFO and the independent financial adviser to the Independent Board Committee and the Independent Shareholders in respect of the Acquisition
"Group"	the Company and its subsidiaries
"HK$"	Hong Kong dollars, the lawful currency of Hong Kong
"HKFRSs"	the Hong Kong Financial Reporting Standards issued by the Hong Kong Institute of Certified Public Accountants
"Hong Kong"	the Hong Kong Special Administrative Region of the People's Republic of China

"HSBC"	the Hongkong and Shanghai Banking Corporation Limited, whose registered address is at 1 Queen's Road Central, Hong Kong, is a registered institution under the SFO, registered with the Securities and Futures Commission under Central Entity number AAA523 and registered to conduct Type 1 (dealing in securities), Type 2 (dealing in futures contracts), Type 4 (advising on securities), Type 5 (advising on futures contracts), Type 6 (advising on corporate finance) and Type 9 (asset management) regulated activities, and a licensed bank under the Banking Ordinance (Chapter 155 of the Laws of Hong Kong); the sole financial adviser to the Company in respect of the Acquisition
"IFRSs"	the International Financial Reporting Standards issued by the International Accounting Standards Board
"Independent Board Committee"	a committee of the Board comprising all the independent non-executive Directors, namely, Mr. Ling Bing, Mr. Qiu Xianhong and Mr. Huang Jinsong
"Independent Shareholders"	the Shareholders other than China Uranium Development and its associates
"Irkol Mine"	the Irkol mine located in the Kyzylorzhinsk area, 20 kilometres from the town of Chiili, the Republic of Kazakhstan, which was owned and operated by Semizbay-U as at the Latest Practicable Date
"Joinder Agreement"	the joinder agreement to Semizbay-U Limited Liability Partnership Memorandum of Association entered into among Beijing Sino-Kazakh, KAP and The Mining Company LLP (a wholly-owned subsidiary of KAP) dated 10 December 2008, together with all subsequent amendments to such joinder agreement entered into among the parties from time to time
"KAP"	National Atomic Company Kazatomprom, a joint-stock company established according to the laws of the Republic of Kazakhstan
"Latest Practicable Date"	27 June 2014, being the latest practicable date prior to the printing of this circular for ascertaining certain information contained herein

"Listing Rules"	the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited
"Market Valuation"	an independent market valuation on Beijing Sino-Kazakh as at 31 December 2013 undertaken by AVISTA Valuation Advisory Limited
"Off-take Agreement"	the agreement dated 29 March 2013 entered into between KAP and CGNPC-URC on the basic principles of marketing (sale) policy with respect to the products of Semizbay-U pursuant to which CGNPC-URC shall be entitled to acquire the Off-take Quantity from Semizbay-U
"Off-take Quantity"	49% of Semizbay-U's total annual uranium production which CGNPC-URC is entitled to acquire pursuant to the Off-take Agreement
"percentage ratio"	has the same meaning as ascribed to it under the Listing Rules, as applicable to a transaction
"Purchase Price"	the sum of US$133.00 million (equivalent to approximately HK$1,030.75 million), being the consideration payable by the Company for the purchase of the Equity under the Share Purchase Agreement
"RMB"	Renminbi, the lawful currency of the PRC
"Semizbay Mine"	the Semizbay mine located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan, which was owned and operated by Semizbay-U as at the Latest Practicable Date
"Semizbay-U"	Semizbay-U Limited Liability Partnership, a limited liability partnership established with legal entity status according to the laws of the Republic of Kazakhstan, the partnership interest of which was owned as to 49% by Beijing Sino-Kazakh and 51% by KAP (directly and indirectly) as at the Latest Practicable Date
"SFO"	Securities and Futures Ordinance (Chapter 571 of the Laws of Hong Kong), as amended, supplemented or otherwise modified from time to time

"Share Purchase Agreement"	the agreement for the sale and purchase of the Equity, representing the entire registered capital of Beijing Sino-Kazakh dated 16 May 2014 and entered into between the Company (as purchaser) and CGNPC-URC (as seller)
"Share Subscription"	the subscription of the 1,670,000,000 shares by China Uranium Development pursuant to the subscription agreement dated 18 March 2011
"Shareholders"	the shareholder(s) of the Company
"Share(s)"	the ordinary share(s) of the Company with a par value of HK$0.01 each
"Stock Exchange"	The Stock Exchange of Hong Kong Limited
"subsidiaries"	has the same meaning as ascribed to it under the Listing Rules
"US$"	United States dollars, the lawful currency of the United States of America
"USGS"	U.S. Geological Survey
"Valuation Report"	has the meaning ascribed to it under Chapter 18 of the Listing Rules, the valuation report prepared by AVISTA Valuation Advisory Limited, which is set out in Appendix VI – Valuation Report to this circular
"%"	per cent

In this circular, for the purpose of illustration only, unless otherwise specified, conversion of US$ into HK$ is based on the exchange rate of US$1.00 = HK$7.75. No representation is made and there is no assurance that US$ or HK$ can be purchased or sold at such rate.

* *For identification purpose only*

This glossary of technical terms contains terms used in this circular in connection with the Enlarged Group. As such, these terms and their meanings may not correspond to standard industry meaning or usage of these terms:

"Exploration Results"	as defined under the JORC Code, an 'Exploration Result' is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource
"Feasibility Study"	a comprehensive technical and economic study of the selected development option for a mineral project that includes appropriately detailed assessments of applicable Modifying Factors together with any other relevant operational factors and detailed financial analysis that are necessary to demonstrate at the time of reporting that extraction is reasonably justified (economically mineable). The results of the study may reasonably serve as the basis for a final decision by a proponent or financial institution to proceed with, or finance, the development of the project. The confidence level of the study will be higher than that of a Pre-Feasibility Study
"GW"	gigawatt
"Indicated Mineral Resources"	as defined under the JORC Code, an 'Indicated Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to assume geological and grade (or quality) continuity between points of observation where data and samples are gathered. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Ore Reserve

"Inferred Mineral Resources"	as defined under the JORC Code, a Mineral Resource for which quantity and grade (or quality) are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade (or quality) continuity. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to an Ore Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration
"ISR"	in-situ recovery
"JORC Code"	the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (2012 edition), as amended from time to time
"kg"	kilogram(s)
"km"	kilometre(s)
"kt"	thousand tonnes
"lb"	pound
"m"	meter(s)

"Measured Mineral Resources"	as defined under the JORC Code, a 'Measured Mineral Resource' is that part of a Mineral Resource for which quantity, grade (or quality), densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. Geological evidence is derived from detailed and reliable exploration, sampling and testing gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes, and is sufficient to confirm geological and grade (or quality) continuity between points of observation where data and samples are gathered. A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proved Ore Reserve or under certain circumstances to a Probable Ore Reserve
"Mineral Resources"	as defined under the JORC Code, a 'Mineral Resource' is a concentration or occurrence of solid material of economic interest in or on the earth's crust in such form, grade (or quality), and quantity that there are reasonable prospects for eventual economic extraction. The location, quantity, grade (or quality), continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred Mineral Resource, Indicated Mineral Resource and Measured Mineral Resource categories
"Modifying Factors"	as defined under the JORC Code, 'Modifying Factors' are considerations used to convert Mineral Resources to Ore Reserves. These include, but are not restricted to, mining, processing, metallurgical, infrastructure, economic, marketing, legal, environmental, social and governmental factors

"Ore Reserves"	as defined under the JORC Code, an 'Ore Reserve' is the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by a Pre-Feasibility Study or a Feasibility Study as appropriate that includes application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves
"Pre-Feasibility Study"	a comprehensive study of a range of options for the technical and economic viability of a mineral project that has advanced to a stage where a preferred mining method, in the case of underground mining, or the pit configuration, in the case of an open pit, is established and an effective method of mineral processing is determined. It includes a financial analysis based on reasonable assumptions on the Modifying Factors and the evaluation of any other relevant factors which are sufficient for a Competent Person, acting reasonably, to determine if all or part of the Mineral Resources may be converted to an Ore Reserve at the time of reporting. A Pre-Feasibility Study is at a lower confidence level than a Feasibility Study
"Probable Ore Reserve"	as defined under the JORC Code, a 'Probable Ore Reserve' is the economically mineable part of an Indicated Mineral Resource, and in some circumstances, a Measured Mineral Resource. The confidence in the Modifying Factors applying to a Probable Ore Reserve is lower than that applying to a Proved Ore Reserve
"Proved Ore Reserve"	as defined under the JORC Code, a "Proved Ore Reserve" is the economically mineable part of a Measured Mineral Resource. A Proved Ore Reserve implies high degree of confidence in the Modifying Factors. A Proved Ore Reserve represents the highest confidence category of reserve estimate and implies a high degree of confidence in geological and grade continuity, and the consideration of the Modifying Factors. The style of mineralisation or other factors could mean that Proved Ore Reserve is not achievable in some deposits.

"t"	tonne(s)
"U_3O_8"	uranium oxide concentrate
"WNA"	World Nuclear Association

The conversion ratio from kilogram uranium to pound U_3O_8 is approximately 2.6.

中廣核礦業有限公司*
CGN Mining Company Limited

(Incorporated in the Cayman Islands with limited liability)
(Stock code: 1164)

Executive Directors:
Mr. Yu Zhiping *(Chief Executive Officer)*
Mr. He Zuyuan

Non-executive Directors:
Mr. Zhou Zhenxing *(Chairman)*
Mr. Chen Qiming
Mr. Yin Engang
Mr. Huang Jianming

Independent Non-executive Directors:
Mr. Ling Bing
Mr. Qiu Xianhong
Mr. Huang Jinsong

Registered Office:
Cricket Square
Hutchins Drive
P.O. Box 2681
Grand Cayman
KYI-1111
Cayman Islands

Head Office and Principal Place of Business in Hong Kong:
Suites 6706-6707, 67/F
Central Plaza, 18 Harbour Road
Wanchai, Hong Kong

30 June 2014

To the Shareholders, and, for information only, holders of options

Dear Sir or Madam,

MAJOR TRANSACTION AND CONNECTED TRANSACTION IN RELATION TO THE ACQUISITION OF THE ENTIRE EQUITY OF BEIJING SINO-KAZAKH

1. INTRODUCTION

Reference is made to the announcement of the Company dated 16 May 2014 in relation to the proposed acquisition of the Equity of Beijing Sino-Kazakh.

On 16 May 2014, the Company (as purchaser) and CGNPC-URC (as seller) entered into the Share Purchase Agreement, pursuant to which CGNPC-URC conditionally agreed to sell and the Company conditionally agreed to purchase the Equity, representing the entire registered capital of Beijing Sino-Kazakh, at the Purchase Price of US$133.00 million (equivalent to approximately HK$1,030.75 million).

As at the Latest Practicable Date, Beijing Sino-Kazakh held a 49% partnership interest in Semizbay-U. Through its indirect interest in Semizbay-U, CGNPC-URC is entitled to acquire the Off-take Quantity, being 49% of Semizbay-U's total annual uranium production pursuant

* *For identification purpose only*

to the Off-take Agreement. CGNPC-URC undertook to irrevocably and exclusively designate the Group, from the Completion Date, to purchase the Off-take Quantity from Semizbay-U for the entire term of the Off-take Agreement.

Upon Completion, the Company will, through Beijing Sino-Kazakh, hold a 49% partnership interest in Semizbay-U. Beijing Sino-Kazakh will become a wholly-owned subsidiary of the Company. Semizbay-U will not become a subsidiary of the Company and its financial statements will not be consolidated into those of the Group.

The purpose of this circular is to provide you (i) further details of the Acquisition and the Share Purchase Agreement; (ii) financial and other information of Beijing Sino-Kazakh and Semizbay-U; (iii) the unaudited pro forma financial information of the Enlarged Group; (iv) the Competent Person's Report and the Valuation Report as required under Chapter 18 of the Listing Rules; (v) a letter from the Independent Board Committee of the Company to the Independent Shareholders regarding the Acquisition; (vi) a letter of advice from Gram Capital to the Independent Board Committee and the Independent Shareholders; and (vii) the notice of the EGM.

2. THE SHARE PURCHASE AGREEMENT

The major terms of the Share Purchase Agreement are set out as follows:

2.1 Date

16 May 2014

2.2 Parties

Seller: CGNPC-URC

Purchaser: the Company

2.3 Assets to be acquired

The Company will acquire the Equity, being the entire registered capital of Beijing Sino-Kazakh, from CGNPC-URC.

As at the Latest Practicable Date, Beijing Sino-Kazakh directly held a 49% partnership interest in Semizbay-U. Semizbay-U holds the exclusive right to extract the underground resources of two uranium mines owned and operated by Semizbay-U in the Republic of Kazakhstan.

Please refer to the section headed "4. Information on Beijing Sino-Kazakh and Semizbay-U" below in this circular for further information.

2.4 Purchase Price

The Purchase Price for the Acquisition is US$133.00 million (equivalent to approximately HK$1,030.75 million), which was determined upon arm's length negotiations between the Company and CGNPC-URC with reference to the range of the preliminary results of the Market Valuation.

The Company has appointed AVISTA Valuation Advisory Limited as the Competent Evaluator to conduct the Chapter 18 Valuation and the Market Valuation. The Market Valuation, which was prepared using methodologies in line with international market practices, is based primarily on a discounted cash flow analysis on the estimated life of mine operational parameters, including but not limited to, Ore Reserves and Mineral Resources estimates, production profiles, operating and capital costs, potential for reserve extension and future outlook of commodity prices, with secondary consideration given to alternative valuation methodologies based on multiples of Ore Reserves and Mineral Resources and comparable transaction analysis. The Market Valuation seeks to evaluate the full market value of Semizbay-U and accordingly, reflects the value associated with Inferred Mineral Resources and the exploration potential of the Semizbay-U's assets, which are specifically excluded from the Chapter 18 Valuation as required by the Listing Rules.

According to AVISTA Valuation Advisory Limited, the key assumptions adopted in the discounted cash flow analysis for the Chapter 18 Valuation included, but not limited to, the following:

- BMA production schedules, with annual production of 711 tonnes uranium (1.85 million lb U_3O_8) and estimated life up to year 2029 for Irkol Mine and annual production of 508 tonnes uranium (1.32 million lb U_3O_8) and estimated life up to year 2032 for Semizbay Mine;

- Operating expenses, capital expenditures, depreciation expenses, working capital and income tax expenses were sourced from the Competent Person's Report with no adjustments adopted;

- Uranium prices in 2014 of US$145/kg for uranium (approximately US$56/lb for U_3O_8), determined based on Consensus Economics, a well-established source of reliable price forecast broadly accepted by the market, with reference to the expert opinion of BMA, whom has conducted due diligence process and reviewed various external sources to verify the reasonableness of price forecast; the prices are escalated with consideration of inflation of average rate of 3.8% per year for subsequent years, which is consistent with the BMA assumptions;

- Regarding the Off-take Agreement, the Competent Evaluator understands that the Company has obtained a written consent dated 31 March 2014 from KAP for the assignment of Off-take Quantity from CGNPC-URC to the Group. As the valuation is performed on the Group basis (i.e. assuming that the assignment of the Off-take Quantity from CGNPC-URC to the Group pursuant to the undertaking given by CGNPC-URC dated 16 May 2014 will take effect from completion of the Acquisition), the effect from the Off-take Agreement is assumed to be eliminated when valuing Irkol Mine and Semizbay Mine and Beijing Sino-Kazakh as a whole.

According to AVISTA Valuation Advisory Limited, most of the bases and assumptions applied in the preparation of the Chapter 18 Valuation and the Market Valuation are the same. The major difference in the bases and assumptions applied relates to the exclusion or inclusion of the Inferred Mineral Resources in the valuation. In the Chapter 18 Valuation, AVISTA Valuation Advisory Limited has not included any consideration of Inferred Mineral Resources in determining the value of Semizbay-U. However, according to AVISTA Valuation Advisory Limited, the value of the Inferred Mineral Resources that has a reasonable likelihood of being mined in the future has been included in the Market Valuation.

Please refer to Appendix VI – Valuation Report to this circular for further information.

2.5 Payment

The Purchase Price shall be paid by the Company at Completion to CGNPC-URC in the form of a single cash payment.

All of the Purchase Price will be funded by the Group by its internal resources taking into account the sufficiency of its working capital.

2.6 Conditions precedent

Completion is subject to the satisfaction or waiver by the Company of certain conditions precedent (except for the conditions set out in paragraphs (i) to (ii) which cannot be waived) (as the case may be), including, among others:

(i) the passing by the Independent Shareholders of a resolution to approve the Share Purchase Agreement and the transactions contemplated thereunder at a general meeting of the Company in accordance with the Listing Rules;

(ii) all approvals and consents from the competent authorities in the PRC and the Republic of Kazakhstan with respect to the transfer of Equity contemplated under the Share Purchase Agreement having been obtained;

(iii) the final results of the Market Valuation shall have no material difference from the preliminary results of the Market Valuation;

(iv) other customary conditions for transactions of a similar kind, such as the warranties given by CGNPC-URC remaining true, accurate and not misleading in any material respect at Completion, completion of due diligence on Beijing Sino-Kazakh and Semizbay-U to the reasonable satisfaction of the Company and no material adverse change on Beijing Sino-Kazakh or Semizbay-U.

CGNPC-URC and the Company undertake to each other to use all reasonable endeavours to ensure that the above conditions are fulfilled to the satisfaction of the Company as soon as reasonably practicable and in any event by 31 December 2014 (or such other date as may be agreed by both parties). In the event that any of the above conditions precedent shall not have been fulfilled or waived (as the case may be) prior to 31 December 2014 (or such other date as may be agreed by both parties), the Company shall not be bound to proceed with the purchase of the Equity. The Company currently has no intention of waiving those conditions precedent that are waivable. As at the Latest Practicable Date, none of the aforementioned conditions precedent has been fulfilled or waived.

Pursuant to the applicable PRC laws and the requirements of relevant authorities in the PRC, the effectiveness of the Share Purchase Agreement is subject to the approvals of the State-owned Assets Supervision and Administration Commission of the State Council of the PRC and the Ministry of Commerce of the PRC.

2.7 Completion

Subject to the fulfilment or waiver (as the case may be) of the relevant conditions precedent set out above, Completion shall take place on the Completion Date.

In the event that CGNPC-URC fails to fulfil its obligations under the Share Purchase Agreement on the Completion Date, the Company shall not be obliged to complete the purchase of the equity interest in Beijing Sino-Kazakh or pay any of the Purchase Price and may in its absolute discretion (in addition and without prejudice to any other right or remedy available to it) by written notice to CGNPC-URC:

(i) defer Completion by a period of not more than 28 days to such other date as it may specify in such notice;

(ii) waive all or any of the requirements contained or referred to CGNPC-URC's obligations at Completion at its discretion and proceed to Completion so far as practicable; or

(iii) terminate the Share Purchase Agreement without liability on its part.

3. EXISTING PROVISION REGARDING REPURCHASE OF INTEREST IN SEMIZBAY-U BY KAP UNDER THE JOINDER AGREEMENT

Pursuant to the Joinder Agreement among Beijing Sino-Kazakh, KAP and The Mining Company LLP (a wholly-owned subsidiary of KAP), KAP shall purchase and Beijing Sino-Kazakh shall sell the 49% partnership interest in Semizbay-U held by Beijing Sino-Kazakh upon receipt of the written request from KAP in any of the following situations, unless otherwise agreed by KAP and Beijing Sino-Kazakh in writing:

(i) KAP and CGNPC-URC fail to reach an agreement with respect to the supply of fuel pellets processed by a subsidiary of KAP to the nuclear power plant reactors operated by CGNPC ("**Pellets Contract**") on or before 1 July 2014; and

(ii) where the Pellets Contract is entered into before 1 July 2014, during the performance of the Pellets Contract, the Pellets Contract becomes unenforceable due to either party's non-performance of its obligation or any other reasons not attributable to either party.

With respect to the repurchase situation set out under sub-paragraph (i) above, as at the Latest Practicable Date, CGNPC-URC has informed the Company that the Pellets Contract had been entered into on 31 March 2014. As such, the repurchase situation as mentioned in sub-paragraph (i) above will no longer be applicable. The term of the Pellets Contract will remain effective until 30 June 2020. Pursuant to the Pellets Contract, CGNPC-URC will arrange for the supply of enriched uranium product in the form of Uranium Hexafluoride (or "UF_6") as converted from natural uranium to a subsidiary of KAP ("**Pellets Producer**") to fabricate the fuel pellets. The fuel pellets will then be delivered to a PRC processing plant designated by CGNPC-URC for further utilization in the manufacturing of fuel assemblies for the nuclear power plant reactors operated by CGNPC. CGNPC-URC shall pay the cost for the fabrication of fuel pellets by the Pellets Producer under the Pellets Contract, which will be subsequently reimbursed by the nuclear power plants operated by CGNPC.

With respect to the repurchase situation set out under sub-paragraph (ii) above, based on the long-term business cooperation between KAP and CGNPC-URC, the Company is of the view that it is unlikely that KAP and CGNPC-URC will default on their respective obligations under the Pellets Contract which may result in the exercise by KAP of its repurchase rights under the Joinder Agreement. The business cooperation between KAP and CGNPC-URC dated back to 2006 before CGNPC-URC acquired the 49% partnership interest in Semizbay-U from KAP in 2008. The cooperation between KAP and CGNPC-URC covers the areas of natural uranium resources extractions, trading of uranium resources and processing of uranium fuel products. With respect to the Pellets Contract, it was initiated and proposed at the request of KAP, being a corporation controlled by the government of the Republic of Kazakhstan, for the purposes of promoting the domestic uranium processing industry chain in the Republic of Kazakhstan. On the other hand, the entering into the Pellets Contract by CGNPC-URC was also conductive to obtaining KAP's consent to CGNPC-URC's investment in Semizbay-U and the supply of natural uranium to CGNPC-URC. The non-performance of the Pellets Contract by CGNPC-URC will result in the exercise of right by KAP to repurchase the 49% partnership interest in Semizbay-U and in turn, the termination of the Off-take Agreement and the supply of natural uranium thereunder. Further, CGNPC-URC also has the needs for fuel pellets fabrication for use in the nuclear power plant reactors operated by CGNPC. As such, the due performance of the Pellets Contract is considered to be in the mutual interest of both KAP and CGNPC-URC. In addition, CGNPC-URC and the Company are in negotiation with KAP with the aim of removing KAP's aforementioned repurchase right. A further announcement will be made in this regard should the aforementioned repurchase provision is subsequently amended.

If KAP's aforementioned repurchase right is exercised, the amount of repurchase price payable by KAP shall be an agreed amount (being approximately US$100.86 million (equivalent to approximately HK$781.67 million) as provided and recognised by the parties under the Joinder Agreement as the initial investment amount of Beijing Sino-Kazakh in

Semizbay-U) plus an interest calculated at a compound annualized rate of 7% (interest started to accrue since 31 December 2008, being the date on which the acquisition of the 49% partnership interest in Semizbay-U by Beijing Sino-Kazakh was completed) as agreed between the parties under the Joinder Agreement. Any dividend declared by Semizbay-U and received by Beijing Sino-Kazakh since 2013 (plus an interest of such dividend calculated at a compound annualized rate of 7%) shall be deducted from the repurchase price. So far as the Directors are aware, no dividend has been declared by Semizbay-U since 2013. Based on the aforementioned calculation, should KAP exercise the repurchase right as of the Latest Practicable Date, the repurchase price payable by KAP should be approximately US$144.00 million (equivalent to approximately HK$1,116.00 million), representing approximately 8.3% premium over the Purchase Price. Such repurchase price shall be paid in full by KAP to Beijing Sino-Kazakh within a three-month period. Upon receipt of full payment of the repurchase price by Beijing Sino-Kazakh, it will transfer the 49% partnership interest in Semizbay-U back to KAP.

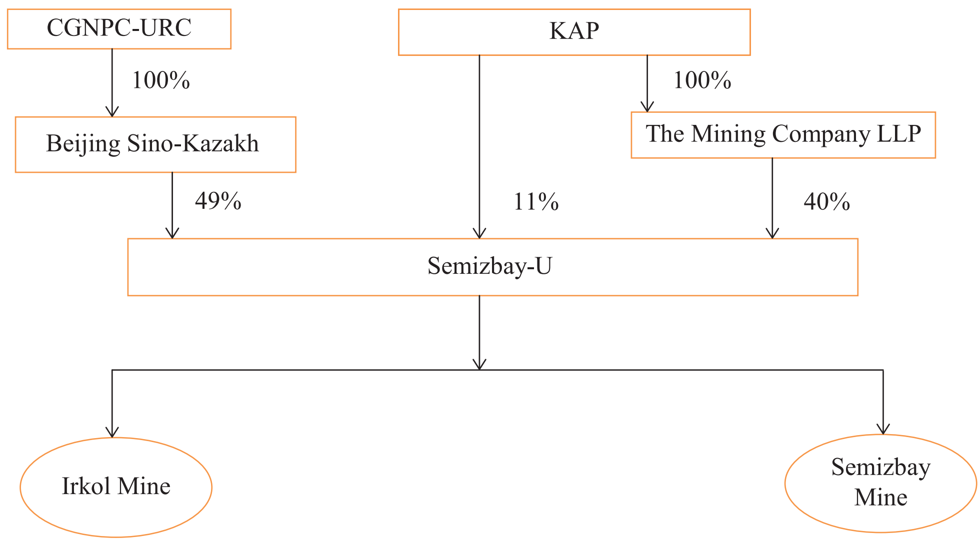
4. INFORMATION ON BEIJING SINO-KAZAKH AND SEMIZBAY-U

Beijing Sino-Kazakh is an investment holding company incorporated in the PRC on 26 November 2007 and is directly wholly-owned by CGNPC-URC. Beijing Sino-Kazakh acquired a 49% partnership interest in Semizbay-U for a consideration (after adjustment) of approximately US$102.35 million (equivalent to approximately HK$793.21 million). Such acquisition was completed on 31 December 2008. The Directors noted that the Purchase Price represented a premium over the aforementioned original acquisition costs of the 49% partnership interest in Semizbay-U by Beijing Sino-Kazakh. The Purchase Price represents a slight discount to the Market Valuation prepared by an independent valuer, which seeks to evaluate the full market value of Semizbay-U. The Market Valuation also includes net asset value of Beijing Sino-Kazakh (excluding its investment in Semizbay-U) of approximately US$10.7 million which was not reflected in the aforementioned original acquisition costs of the 49% partnership interest in Semizbay-U. Further, at the time Beijing Sino-Kazakh acquired the 49% partnership interest in Semizbay-U in 2008, the annual uranium production of Irkol Mine was only 300 tonnes and Semizbay Mine was not yet in production, where on the other hand, the uncertainty on Semizbay-U's both mines reaching full production was not an issue at the time when the Market Valuation was prepared.

As at the Latest Practicable Date, Beijing Sino-Kazakh held a 49% partnership interest in Semizbay-U. Semizbay-U is not consolidated into the financial statements of Beijing Sino-Kazakh and is not a subsidiary of Beijing Sino-Kazakh. Save as holding the 49% partnership interest in Semizbay-U, Beijing Sino-Kazakh has no other substantial business.

As at the Latest Practicable Date, Semizbay-U was owned as to 49% by Beijing Sino-Kazakh, 11% by KAP and 40% by The Mining Company LLP, a wholly-owned subsidiary of KAP. Semizbay-U is mainly engaged in the mining and extraction of natural uranium, and currently operates two uranium mines in production in the Republic of Kazakhstan.

The following chart shows the shareholding structure of Semizbay-U as well as its mineral assets as at the Latest Practicable Date:



4.1 Mineral assets of Semizbay-U

*(i) **Irkol Mine. Semizbay-U owns 100% interest in Irkol Mine.***

(a) Location: The Irkol Mine is located in the Kyzylorzhinsk area, 20 kilometres from the town of Chiili, the Republic of Kazakhstan.

(b) Products: natural uranium oxide.

(c) Mining permits and mining life: The Irkol Mine covers a mining lease area of 44 square kilometres for extraction operations at a depth of 400 to 700 metres from the surface. According to the Competent Person's Report, the Irkol Mine has a remaining mine life extending to the year 2029 with an average annual production of approximately 711 tonnes uranium (equivalent to approximately 1.85 million pounds of U_3O_8).

(d) Operational history and production: Commercial operations at the Irkol Mine commenced in 2007 using ISR extraction method. Full production capacity was achieved in 2010. Irkol Mine produced approximately 711.8 tonnes uranium (equivalent to approximately 1.85 million pounds of U_3O_8) and 654.4 tonnes uranium (equivalent to approximately 1.70 million pounds of U_3O_8) in 2012 and 2013, respectively.

(e) Employees: As at 31 December 2013, 204 employees and 23 casual and contract workers were engaged in the operation of the Irkol Mine.

(f) Reserves and resources:

The following table sets out the Mineral Resources of Irkol Mine at a uranium cut-off grade of 0.01%:

Category	Volume (M m³)	Tonnage (M t)	Uranium grade (%)	Uranium grade-thickness	Contained Uranium (000 t)
Measured	2	4	0.05	0.23	2
Indicated	18	33	0.05	0.18	15
Measured and indicated	21	37	0.05	0.19	17
Inferred	17	30	0.04	0.16	13
Total	**37**	**67**	**0.05**	**0.18**	**30**

Notes:

1. Figures may not add up due to rounding.

2. Resources have not been depleted for mining; 3,759 tonnes uranium has been extracted as at 31 December 2013.

3. Mineral Resources are inclusive of Ore Reserves.

The following table sets out the Ore Reserves of Irkol Mine at a grade-thickness cut-off of 0.04:

Category	Volume (M m³)	Tonnage (M t)	Uranium grade (%)	Uranium grade-thickness	Contained Uranium Metal (000 t)
Proved	2	4	0.05	0.23	2
Probable	18	32	0.05	0.19	15
Proved and probable	20	36	0.05	0.19	16
Mined out					4
Remaining	**20**	**36**			**13**

Note: Figures may not add up due to rounding.

(ii) Semizbay Mine. Semizbay-U owns 100% interest in Semizbay Mine.

(a) Location: The Semizbay Mine is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan.

(b) Products: natural uranium oxide.

(c) Mining permits and mining life: The Semizbay Mine covers a mining lease area of 27.2 square kilometres for extraction operations at a depth of 180 metres from the surface. According to the Competent Person's Report, the Semizbay Mine has remaining mine life extending to the year 2032 with an average annual production of approximately 508 tonnes uranium (equivalent to approximately 1.32 million pounds of U_3O_8).

(d) Operational history and production: Construction of well fields was completed in 2007 and the treatment plant was commissioned in 2009. Commercial operations commenced in 2009 using ISR extraction method. Semizbay Mine produced approximately 508.6 tonnes uranium (equivalent to approximately 1.32 million pounds of U_3O_8) and 507.0 tonnes uranium (equivalent to approximately 1.32 million pounds of U_3O_8) in 2012 and 2013, respectively.

(e) Employees: As at 31 December 2013, 300 employees and 33 casual and contract workers were engaged in the operation of the Semizbay Mine.

(f) Reserves and resources:

The following table sets out the Mineral Resources of Semizbay Mine at a uranium cut-off grade of 0.01%:

Category	**Volume (M m^3)**	**Tonnage (M t)**	**Uranium grade (%)**	**Uranium grade-thickness**	**Contained Uranium Metal (000 t)**
Indicated	13	22	0.06	0.31	13
Inferred	2	4	0.06	0.25	2
Total	**16**	**26**	**0.06**	**0.30**	**15**

Notes:

1. Figures may not add up due to rounding.

2. Resources have not been depleted for mining; 1,667 tonnes uranium has been extracted as at 31 December 2013.

3. Mineral Resources are inclusive of Ore Reserves.

The following table sets out the Ore Reserves of Semizbay Mine at a grade-thickness cut-off of 0.04:

Category	Volume (M m^3)	Tonnage (M t)	Uranium grade (%)	Uranium grade-thickness	Contained Uranium Metal (000 t)
Proven	–	–	–	–	–
Probable	13	21	0.06	0.31	13
Mined out					2
Remaining	**13**	**21**			**11**

Note: Figures may not add up due to rounding.

(iii) Historical production of Irkol Mine and Semizbay Mine

The following table sets out the historical production of Irkol Mine and Semizbay Mine from 2007 to 2013:

Mine Name	Items	Unit	2007	2008	2009	2010	2011	2012	2013
Irkol Mine	Leached Uranium in Pregnant Solution	tonne	–	–	516.7	747.3	655.4	721.0	663.1
	Processed Uranium in U_3O_8 Product	tonne	50.0	300.0	502.1	750.0	651.5	711.8	654.4
Semizbay Mine	Leached Uranium in Pregnant Solution	tonne	0.0	0.0	15.6	230.1	416.4	532.0	521.6
	Processed Uranium in U_3O_8 Product	tonne	0.0	0.0	8.5	224.0	409.9	508.6	507.0
Total	Leached Uranium in Pregnant Solution	tonne	–	–	532.3	977.4	1,071.8	1,253.0	1,184.7
	Processed Uranium in U_3O_8 Product	tonne	50.0	300.0	510.6	974.0	1,061.4	1,220.4	1,161.4

(iv) Mining process

ISR mining is conducted to produce uranium bearing pregnant leach solution, which goes to settling ponds prior to the main processing plant for production of uranium as yellow cake. The uranium is leached with sulfuric acid without addition of an oxidant. In the ISR leaching practice, the pregnant solution is pumped to the treatment plant where uranium is recovered via ion exchange, followed by precipitation with hydrogen peroxide.

4.2 Financial information of Beijing Sino-Kazakh and Semizbay-U

(i) Financial information of Beijing Sino-Kazakh

According to the audited financial statements of Beijing Sino-Kazakh for the year ended 31 December 2013 prepared in accordance with HKFRSs, the net asset value of Beijing Sino-Kazakh as at 31 December 2013 was approximately US$49.04 million (equivalent to approximately HK$380.06 million).

Beijing Sino-Kazakh is a holding company and did not record any revenue arising from its business operation in the year ended 31 December 2011, 31 December 2012 and 31 December 2013, respectively. The audited net profit/(loss) before and after taxation of Beijing Sino-Kazakh for the year ended 31 December 2011, 31 December 2012 and 31 December 2013, respectively, prepared in accordance with HKFRSs were as follows:

	For the year ended 31 December 2011 *(US$ million)*	**For the year ended 31 December 2012** *(US$ million)*	**For the year ended 31 December 2013** *(US$ million)*
Net profit/(loss) before taxation	approximately 20.46 (equivalent to approximately HK$158.57 million)	approximately 2.99 (equivalent to approximately HK$23.17 million)	approximately (13.00) (equivalent to approximately HK$(100.75) million)
Net profit/(loss) after taxation	approximately 16.70 (equivalent to approximately HK$129.43 million)	approximately 1.18 (equivalent to approximately HK$9.15 million)	approximately (11.88) (equivalent to approximately HK$(92.07) million)

(ii) Financial information of Semizbay-U

According to the audited financial statements of Semizbay-U for the year ended 31 December 2013 prepared in accordance with IFRSs, the net asset value of Semizbay-U as at 31 December 2013 was approximately US$73.07 million (equivalent to approximately HK$566.29 million).

The audited revenue and net profit/(loss) before and after taxation of Semizbay-U for the year ended 31 December 2011, 31 December 2012 and 31 December 2013, respectively, prepared in accordance with IFRSs were as follows:

	For the year ended 31 December 2011 *(US$ million)*	**For the year ended 31 December 2012** *(US$ million)*	**For the year ended 31 December 2013** *(US$ million)*
Revenue	approximately 191.08 (equivalent to approximately HK$1,480.87 million)	approximately 152.96 (equivalent to approximately HK$1,185.44 million)	approximately 122.69 (equivalent to approximately HK$950.85 million)
Net profit/(loss) before taxation	approximately 73.86 (equivalent to approximately HK$572.42 million)	approximately 37.88 (equivalent to approximately HK$293.57 million)	approximately (26.32) (equivalent to approximately HK$(203.98) million)
Net profit/(loss) after taxation	approximately 59.01 (equivalent to approximately HK$457.33 million)	approximately 30.98 (equivalent to approximately HK$240.10 million)	approximately (24.23) (equivalent to approximately HK$(187.78) million)

Semizbay-U recorded net profits in the financial years ended 31 December 2011 and 2012 but recorded a net loss in the financial year ended 31 December 2013, primarily due to the following reasons:

(a) The international uranium market was still negatively impacted by the aftermath of the nuclear crisis in Fukushima city of Japan and continued market downturns in the year 2013. The average international uranium spot price was approximately US$38.24 per pound U_3O_8 in 2013, compared to US$56.75 and US$48.50 per pound U_3O_8 in 2011 and 2012, respectively. As such, the uranium average selling price realised by Semizbay-U was adversely affected by such market downturn in 2013.

(b) The pricing methodology for the sale of uranium products of Semizbay-U changed in the year 2013 due to the Off-take Agreement entered into between KAP and CGNPC-URC. Before 2013, the selling price of Semizbay-U's uranium products was calculated at an initial discount of 2% over the arithmetic average of the long-term uranium benchmark price and the spot prices (as published by consulting companies recognized in the Republic of Kazakhstan as the official sources of uranium spot price). Such a pricing methodology limits Semizbay-U's exposure to the volatility of international uranium spot price. Starting in 2013, all of Semizbay-U's uranium products were sold to KAP and CGNPC-URC in accordance with the Off-take Agreement, in which the prices of uranium products sold are determined based on certain discount over uranium spot price (as published by consulting companies recognized in the Republic of Kazakhstan as the official sources of uranium spot price) only, which were calculated based on a pre-determined formula provided under the Off-take Agreement. Given this change in pricing methodology, the average selling price realised by Semizbay-U in 2013 was significantly lower than that in previous years since long-term uranium benchmark price was higher than spot price and the uranium spot price remained low in 2013. Therefore, the revenue of Semizbay-U generated from the sale of uranium products significantly decreased in the year 2013. Please refer to the below sub-paragraph headed "4.3 Off-take arrangement and undertaking by CGNPC-URC" in this circular for more information.

Notwithstanding the aforementioned situations, the Directors are of the view that there was no significant deterioration in the production and operation of Semizbay-U in the latest financial year. Semizbay-U had a steady production and sales volume in the past three years. The annual uranium production of Semizbay-U for the three years ended 31 December 2013 was approximately 1,061 tonnes uranium, 1,220 tonnes uranium and 1,161 tonnes uranium, respectively, and the annual sale volume for each of the years during the same period was approximately 1,200 tonnes uranium. The operating costs of Semizbay-U also remained relatively stable with a slight increase in the past three years, which was mainly attributable to the increase of costs of consumables and contracting service as well as power. The average annual operating costs of Semizbay Mine for 2011, 2012 and 2013 were approximately US$30 per pound U_3O_8, US$33 per pound U_3O_8 and US$35 per pound U_3O_8, respectively. The average annual operating costs of Irkol Mine for 2011, 2012 and 2013 were approximately US$23 per pound U_3O_8, US$28 per pound U_3O_8 and US$28 per pound U_3O_8, respectively.

In addition, as mentioned in the below sub-paragraph headed "4.3 Off-take arrangement and undertaking given by CGNPC-URC" of this circular, the Company will be entitled to purchase the Off-take Quantity from Semizbay-U following Completion. The change of the pricing methodology for the sale of uranium products of Semizbay-U in 2013 resulted in a lower uranium supply price, which was competitive as compared with other sources of uranium supply currently available to the Group. As such, the Group is expected to benefit from the lower purchase cost from Semizbay-U. Please refer to the sub-paragraph headed "5.1 Secure the stable supply of the uranium products" of this circular below.

Further, the Directors believe that the influence of the nuclear crisis in Fukushima city of Japan is diminishing, and there is a scarcity of traditional power generating resources (such as oil and coal) without desirable and sufficient substitutes other than nuclear power source. Given that the expected strong demand for energy in the long term for development of the PRC economy, the Company anticipates that the nuclear power industry, and in turn the uranium or related industries in the PRC would be developing persistently in the future.

4.3 Off-take arrangement and undertaking given by CGNPC-URC

On 29 March 2013, CGNPC-URC and KAP, which indirectly controlled 49% and 51% partnership interest in Semizbay-U, respectively, entered into the Off-take Agreement. Pursuant to the Off-take Agreement, CGNPC-URC and KAP are entitled to acquire and will fully underwrite 49% and 51% of Semizbay-U's total annual production respectively, with effect from 1 January 2013. The term of the Off-take Agreement is for the period of the duration of Semizbay-U and will be terminated on the date on which Beijing Sino-Kazakh ceases to be a holder of the partnership interest in Semizbay-U. CGNPC-URC and KAP are permitted, with prior agreement of both parties in writing, to assign part or all of their respective uranium product quantities to be purchased from Semizbay-U to their respective affiliates, including their subsidiaries.

The purchase price of the uranium under the Off-take Agreement that is applicable to each of CGNPC-URC and KAP is determined based on their respective fixed formulas which are fixed for the entire term of the Off-take Agreement. The general principle is to offer 2% discount over the international uranium spot price for the sale to CGNPC-URC and KAP of the uranium produced by Semizbay-U.

The purchase price of the uranium under the Off-take Agreement that is applicable to CGNPC-URC is calculated in the following manner:

the purchase price = the uranium spot price* X (100-2)/100

* *the uranium spot price is to be determined by the average arithmetic value of U_3O_8 spot price indicators published by Trade Tech LLC (Denver, Colorado, USA) and by Ux Consulting LLC (Roswell, Georgia, USA), being consulting companies recognized in the Republic of Kazakhstan as the official sources of uranium spot price, as of the end of the second month preceding the month of the relevant uranium product title transfer*

The purchase price of the uranium under the Off-take Agreement that is applicable to KAP is calculated in the following manner:

the purchase price = [the uranium spot price* x (100-2)/100 – T**] x (1+ VAT rate applicable in the Republic of Kazakhstan)

* *the uranium spot price is to be determined by the average arithmetic value of U_3O_8 spot price indicators published by Trade Tech LLC (Denver, Colorado, USA) and by Ux Consulting LLC (Roswell, Georgia, USA), being consulting companies recognized in Kazakhstan as the official sources of uranium spot price, as of the date of the relevant uranium product title transfer*

** *The indicator "T" refers to the difference between the transportation costs of (1) the uranium products supplied to KAP and (2) that supplied to CGNPC-URC.*

Pursuant to an undertaking given by CGNPC-URC dated 16 May 2014, CGNPC-URC undertook to the Company that, from the Completion Date and for the entire term of the Off-take Agreement:

(i) it will irrevocably and exclusively designate the Group to purchase the entire Off-take Quantity from Semizbay-U;

(ii) it will not purchase and will not permit any person other than a member of the Group to purchase any part of the Off-take Quantity from Semizbay-U without obtaining the prior written consent from the Company, provided that the Group will purchase the Off-take Quantity in full from Semizbay-U for each calendar year;

(iii) it will continue to perform its rights and obligations under the Off-take Agreement not affected or modified by the above undertaking and will not assign its rights or obligations under the Off-take Agreement, amend or agree to amend any terms of the Off-take Agreement or terminate or agree to terminate the Off-take Agreement without obtaining the prior written consent from the Company; and

(iv) it will use its reasonable endeavours to procure Semizbay-U to enter into sales contracts with the Group based on terms and conditions set out under the Off-take Agreement.

The Group does not have an obligation to undertake the Off-take Quantity in full. CGNPC-URC may only be permitted to purchase, or to permit its affiliates (other than members of the Group) to purchase, any part of the Off-take Quantity from Semizbay-U when the Group fails to purchase the Off-take Quantity in full for the relevant calendar year.

The Company has obtained a written consent dated 31 March 2014 from KAP for the aforementioned assignment of Off-take Quantity from CGNPC-URC to the Group.

5. REASONS FOR AND BENEFITS OF THE ACQUISITION

The injection of the 49% partnership interest in Semizbay-U into the Group as contemplated under the Acquisition represents a support from the Group's ultimate controlling shareholder, CGNPC, in the Group's repositioning as a platform for uranium resources investment and trading. It is expected that the Acquisition will enable the Group to integrate its uranium trading business with upstream mining operations to maximise value and secure a stable supply of uranium through the indirect acquisition of partnership interest in Semizbay-U, an upstream uranium mining entity. The Board believes that the Acquisition also represents an excellent opportunity for the Group to expand its natural uranium trading business as the Company will be entitled to acquire the Off-take Quantity from Semizbay-U. It is expected to provide an attractive opportunity to acquire uranium resources, enhance the Group's strategic position as a platform for uranium resources investment and trading businesses and increase its overall competitiveness, business scale and shareholder value.

It is expected that the Acquisition will enable the Group to achieve the following objectives:

5.1 Secure the stable supply of the uranium products

Upon Completion and pursuant to the undertaking given by CGNPC-URC as further elaborated under the above sub-paragraph headed "4.3 Off-take arrangement and undertaking given by CGNPC-URC" of this circular, the Group is entitled to purchase the Off-take Quantity, being 49% of Semizbay-U's total annual uranium production pursuant to the Off-take Agreement. According to the current annual production of Semizbay-U, it is expected that the annual Off-take Quantity to be purchased from Semizbay-U after the Completion will be approximately 600 tonnes uranium. Such volume accounts for approximately 90% of the total purchase volume of uranium of the Group in the year 2013. The right to purchase the Off-take Quantity from Semizbay-U will provide the Group with a stable supply of uranium products for the Group's uranium trading business.

Upon Completion, the purchase price of uranium under the Off-take Agreement applicable to the Group represents a 2% discount over the international uranium spot price. Combined with the Group experience in uranium trading where most of the Group's uranium sales are priced with reference to long-term benchmark pricing, which is typically higher than spot prices, the Group would be able to maximise value within the entire uranium product supply chain. Where the international uranium market is in a downturn and the uranium spot price is low, the purchase price under the Off-take Agreement will be very competitive as compared with other sources of uranium supply available to the Group. While Semizbay-U will record lower revenue, the Group would benefit from the lower purchase cost from Semizbay-U and enjoy higher trading margin, which will offset the loss of revenue for their 49% stake in Semizbay-U.

On the contrary, when the international uranium market picks up and the uranium spot price rises, the purchase price of uranium under the Off-take Agreement may increase as a result and the Group will have higher purchase cost from Semizbay-U and therefore lower trading margin. However, Semizbay-U will record higher revenue as the total annual production of Semizbay-U shall be fully underwritten by KAP and CGNPC-URC under the Off-take Agreement, and therefore, the Group, as the owner of the 49% partnership interest in Semizbay-U, would be able to enjoy the benefit of the increase in the revenue and profit of Semizbay-U through profit sharing.

5.2 Integrate upstream mining operations and expand the scale of natural uranium trading business

The Group commenced the natural uranium trading business in 2011 and the Company has re-positioned itself as a uranium resources investment and trading platform with natural uranium trading to become one of the key focuses, which in turn diversifies the business model of the Company.

In 2013, the natural uranium trading business continues to bring significant source of revenue to the Group. For the year ended 31 December 2013, the natural uranium trading segment recorded turnover of approximately HK$743 million, which represents approximately 93% of total Company's turnover, with segmental profit of approximately HK$137 million during the period.

Given that the expected strong demand for energy in the long term for development of the PRC economy, the Company anticipates that the nuclear power industry, and in turn the uranium and related industry in the PRC would be developing persistently in the future. To enhance competitiveness, the Group focuses on the expansion of the scale of the uranium trading business.

The combination of the Group's interest in upstream mining assets and the further development of its downstream trading business will enable the Group to optimize the industry chain of the uranium business and maximise returns to the Shareholders.

The Off-take Quantity provides an additional channel for the Group to acquire the natural uranium in the market for its trading business, which will in turn enlarge the scale of the Group's natural uranium trading business.

5.3 Provide investment opportunities in uranium resources

The Group has repositioned itself as a platform for uranium resources investment and trading, leveraging on the background and expertise of CGNPC in the uranium industry to pursue business development and investment opportunities, which in turn diversifies the business model of the Group. Semizbay-U currently operates two uranium mines in production in the Republic of Kazakhstan. Please refer to the sub-paragraph headed "4.1 Mineral assets of Semizbay-U" for more information in this circular. The Acquisition represents a great investment opportunity in uranium resources which the Company is proactively seeking.

5.4 Expand institutional investors' interest to support a market re-rating

It is expected that upon Completion, the Enlarged Group will be uniquely positioned in the Hong Kong market with its significant interests in the upstream uranium assets in the Republic of Kazakhstan. The Company believes that the Enlarged Group, being the largest uranium group by production listed in Hong Kong, will make the Shares appealing to both institutional as well as retail investors domestically and internationally.

5.5 Reasonable uranium price forecasts

While it is noted that after each of the effective date (i.e. 31 December 2013) of the Competent Person's Report and the Valuation Report, the spot prices have decreased significantly from approximately US$35/lb at the beginning of 2014 to US$28/lb of U_3O_8 in April 2014, and the average 2014 price forecast from Consensus Economics decreased to US$40.9/lb. BMA has confirmed that the price forecast adopted in the Competent Person's Report is fair and reasonable for the following reasons:

Firstly, to reflect the potential impact on reserve estimates, BMA has conducted a scenario analysis based on the updated April 2014 price forecast from Consensus Economics, and confirmed that there is no change on the reserve and its classification. Please refer to Section 2.9 of the Competent Person's Report for further details.

Secondly, Consensus Economics is a well-established source of reliable price forecast. The sources of Consensus Economics forecast are from over 15 institutions, including but not limited to BoA Merrill Lynch, UBS, Morgan Stanley, Commonwealth Bank, Deutsche Bank and Credit Suisse. The price forecast of Consensus Economics is seen as a broadly accepted forecast benchmark by investment managers, government and public sector institutions.

Thirdly, as part of the due diligence process, BMA reviewed various external sources to verify the reasonableness of price forecast for the reserve estimates as of 31 December 2013. For the price forecast as of April 2014, BMA also reviewed various external sources and confirmed that the April 2014 price forecast is in line with broader market consensus.

To reflect the potential impact on the Chapter 18 Valuation, the Competent Evaluator has conducted a subsequent analysis based on updated April 2014 price forecast from Consensus Economics. Based on the analysis, the Competent Evaluator considers that the adjusted forecasted prices would not have significant impact on the valuation results, and thus the fairness and the reasonableness of the valuation conclusion are not considered to be impacted. Please refer to Section 10.6 of the Valuation Report for more details.

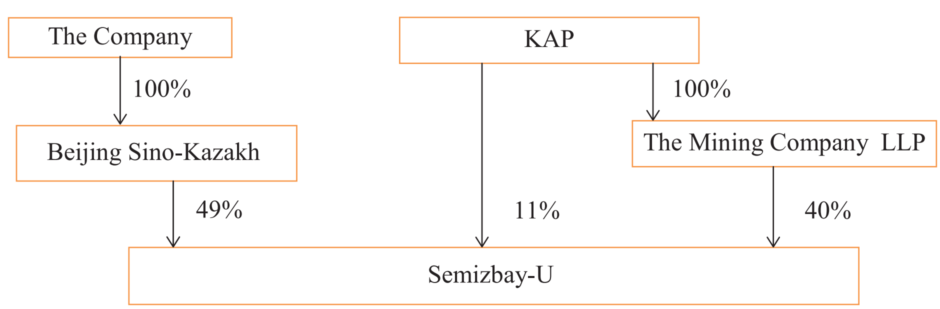
Based on the above, the Directors consider that the adjusted uranium forecast prices would not have significant impact on the reserve estimate or the valuation results.

6. EFFECTS OF THE ACQUISITION ON THE COMPANY

Beijing Sino-Kazakh accounts for the investment in Semizbay-U as a joint venture using the equity method. The financial statements of Semizbay-U used for equity accounting purposes are prepared using uniform accounting policies as those of Beijing Sino-Kazakh for the transactions and events under similar circumstances. Under the equity method, investment in Semizbay-U was initially recognised in the statement of financial position at cost and adjusted thereafter to recognise Beijing Sino-Kazakh's share of the profit or loss and other comprehensive income of Semizbay-U.

Upon Completion, Beijing Sino-Kazakh will become a direct wholly-owned subsidiary of the Company and its financial statements will be consolidated into those of the Group. In view of the development potential and prospects of and the mineral assets of Semizbay-U, the Directors expect that the Enlarged Group would enjoy higher future earnings after the Acquisition. Unaudited pro forma financial information of the Enlarged Group is set out in Appendix IV – Unaudited Pro Forma Financial Information of the Enlarged Group to this circular.

The following chart shows the shareholding structure of Beijing Sino-Kazakh and Semizbay-U upon Completion:



7. IMPLICATION UNDER THE LISTING RULES

As the highest applicable percentage ratio calculated pursuant to Rule 14.07 of the Listing Rules in respect of the Acquisition exceeds 25% but is less than 100%, the Acquisition constitutes a major transaction of the Company pursuant to Rule 14.06(3) of the Listing Rules.

In addition, China Uranium Development, a subsidiary of CGNPC-URC, is the controlling shareholder of the Company. As such, CGNPC-URC is a connected person of the Company by virtue of Rule 14A.11(4). The Acquisition also constitutes a connected transaction of the Company and is subject to the reporting, announcement and Independent Shareholders' approval requirements under Chapter 14A of the Listing Rules.

Mr. Yu Zhiping, Mr. Zhou Zhenxing and Mr. Chen Qiming have abstained from voting at the Board meeting approving the Share Purchase Agreement due to the potential conflict of interests as a result of their holding of positions as directors in CGNPC-URC. Other than the above, none of the then Directors has a material interest in the Acquisitions nor has any of them abstained from voting in respect of the relevant board resolution.

8. GENERAL INFORMATION

8.1 Information of the Group

The Group's original principal business used to be selling, distributing and manufacturing of pharmaceutical and food products and property investment. The Group has repositioned itself as a platform for uranium resources investment and trading after the successful completion of China Uranium Development's Share Subscription and CB Subscription on 18 August 2011.

8.2 Information of CGNPC-URC

CGNPC-URC is the sole shareholder of China Uranium Development, the controlling shareholder of the Company, which holds approximately 50.11% equity interest in the Company. CGNPC-URC is one of the few enterprises in the PRC which owns the licence(s) to manage nuclear fuels and deal with the import and export of natural uranium. The core businesses of CGNPC-URC are to: (i) manage the supply of nuclear fuels for CGNPC; (ii) establish an interest in and support development of commercial resources and reserves of natural uranium; and (iii) deal with the import and export trade of the PRC and overseas natural uranium and related products.

9. EGM

The notice convening the EGM is set out on pages EGM-1 to EGM-2 of this circular. At the EGM, the ordinary resolution in relation to the Share Purchase Agreement and the transactions contemplated thereunder will be proposed to approve.

A form of proxy for use at the EGM is enclosed with this circular. Whether or not you intend to attend the EGM in person, you are requested to complete the enclosed form of proxy in accordance with the instructions printed thereon and return the same to the Company's branch share registrar and transfer office in Hong Kong, Union Registrars Limited, at 18th Floor, Fook Lee Commercial Centre, Town Place, 33 Lockhart Road, Wanchai, Hong Kong, as soon as possible but in any event, not less than 48 hours before the time appointed for holding the EGM or any adjournment thereof. Completion and return of the form of proxy will not preclude you from attending and voting in person at the EGM or any adjournment thereof should you so wish.

China Uranium Development and its associates, holding an aggregate of approximately 50.11% equity interest in the Company, will abstain from voting on the ordinary resolution concerning the Share Purchase Agreement and the transactions contemplated under the Share Purchase Agreement at the EGM as they have interests in the Share Purchase Agreement.

To the best of the Directors' knowledge, information and belief, having made all reasonable enquiries, no other Shareholder is required to abstain from voting on the resolution to be proposed at the EGM, save for China Uranium Development and its associates. The Board confirms that to the best of their knowledge, information and belief having made all reasonable enquiries, as at the Latest Practicable Date, there was no voting trust or other agreement or other arrangement or understanding (other than an outright sale) entered into by or binding upon any Shareholder and there was no obligation or entitlement of any Shareholder whereby he has or may have temporarily or permanently passed control over the exercise of the voting right in respect of his Shares to a third part, either generally or on a case-by-case basis.

10. RECOMMENDATION

After having taken into account all relevant factors (including the premium represented by the Purchase Price over the original acquisition cost of the 49% partnership interest in Semizhay-U by Beijing Sino-Kazakh), the Directors (including the independent non-executive Directors) consider that the terms of the Share Purchase Agreement have been entered into on normal commercial terms, are fair and reasonable and in the interest of the Company and the Shareholders as a whole.

Accordingly, the Directors (including the independent non-executive Directors) recommend the Independent Shareholders to vote in favour of the proposed ordinary resolution in relation to the Share Purchase Agreement and the transactions contemplated thereunder.

HSBC has been appointed as the sole financial adviser to the Company in connection with the Acquisition.

The Independent Board Committee consisting of Mr. Ling Bing, Mr. Qiu Xianhong and Mr. Huang Jinsong, being the three independent non-executive Directors, has been formed to (i) advise the Independent Shareholders as to the fairness and reasonableness of the Share Purchase Agreement and the transactions contemplated thereunder, and whether such transactions are in the interests of the Company and its Shareholders as a whole; and (ii) advise the Independent Shareholders on how to vote in respect of such transactions taking into account the recommendation of Gram Capital.

Gram Capital has been appointed as the Independent Financial Adviser to advise the Independent Board Committee and the Independent Shareholders in respect of the Share Purchase Agreement and the transactions contemplated thereunder.

11. ADDITIONAL INFORMATION

Your attention is drawn to the information set out in the appendices to this circular.

Yours faithfully,
For and on behalf of the Board of
CGN Mining Company Limited
Zhou Zhenxing
Chairman

中廣核礦業有限公司*
CGN Mining Company Limited

(Incorporated in the Cayman Islands with limited liability)
(Stock code: 1164)

30 June 2014

To the Independent Shareholders

Dear Sir/Madam,

**MAJOR TRANSACTION AND CONNECTED TRANSACTION
IN RELATION TO
THE ACQUISITION OF THE ENTIRE EQUITY
OF BEIJING SINO-KAZAKH**

We refer to the circular of the Company (the "**Circular**") dated 30 June 2014 of which this letter forms part. Terms defined in the Circular shall have the same meanings herein unless the context otherwise requires.

We have been appointed to establish the Independent Board Committee to give recommendations in respect of the Acquisition as referred to in the Circular. Gram Capital has been appointed as the Independent Financial Adviser to advise the Independent Board Committee and the Independent Shareholders in this regard.

Please refer to the letter from the Board set out on pages 12 to 33 of the Circular which contains, inter alia, information in respect of the Acquisition and the letter from Gram Capital set out on pages 35 to 50 of the Circular which contains its advice in respect of the Acquisition.

Having taken into account the opinion of Gram Capital, we consider that the Acquisition is on normal commercial terms and is fair and reasonable and that the Acquisition is in the interests of the Company and the Shareholders as a whole. Accordingly, we recommend the Independent Shareholders to vote in favour of the ordinary resolution to be proposed at the EGM to approve the Acquisition.

Yours faithfully
For and on behalf of
the independent Board Committee
CGN Mining Company Limited
Mr. Ling Bing, Mr. Qiu Xianhong and Mr. Huang Jinsong

* *For identification purpose only*

Set out below is the text of a letter received from Gram Capital, the Independent Financial Adviser to the Independent Board Committee and the Independent Shareholders in respect of the Acquisition for the purpose of inclusion in this circular.

Gram Capital Limited
嘉林資本有限公司

Room 1209, 12/F.
Nan Fung Tower
173 Des Voeux Road Central
Hong Kong

30 June 2014

To: The independent board committee and the independent shareholders of CGN Mining Company Limited

Dear Sirs,

MAJOR AND CONNECTED TRANSACTION

INTRODUCTION

We refer to our appointment as the Independent Financial Adviser to advise the Independent Board Committee and the Independent Shareholders in respect of the Acquisition, details of which are set out in the letter from the Board (the "**Board Letter**") contained in the circular dated 30 June 2014 issued by the Company to the Shareholders (the "**Circular**"), of which this letter forms part. Terms used in this letter shall have the same meanings as defined in the Circular unless the context requires otherwise.

On 16 May 2014, the Company (as purchaser) and CGNPC-URC (as seller) entered into the Share Purchase Agreement, pursuant to which CGNPC-URC conditionally agreed to sell and the Company conditionally agreed to purchase the Equity, representing the entire registered capital of Beijing Sino-Kazakh, at the Purchase Price of US$133 million (equivalent to approximately HK$1,030.75 million).

With reference to the Board Letter, the Acquisition constitutes a major and connected transaction for the Company under Chapters 14 and 14A of the Listing Rules respectively. As such, the Acquisition is subject to the reporting, announcement and independent shareholders' approval requirements under the Listing Rules.

The Independent Board Committee comprising Mr. Ling Bing, Mr. Qiu Xianhong and Mr. Huang Jinsong (all being independent non-executive Directors) has been established to advise the Independent Shareholders on (i) whether the terms of the Share Purchase Agreement are on normal commercial terms and are fair and reasonable so far as the Independent Shareholders are concerned; (ii) whether the Acquisition is in the interests of the Company and the Shareholders as a whole and is conducted in the ordinary and usual course of business of the Group; and (iii) how the Independent Shareholders should vote in respect of the resolution(s) to approve the Share Purchase Agreement and the transactions contemplated thereunder at the EGM. We, Gram Capital Limited, have been appointed as the Independent Financial Adviser to advise the Independent Board Committee and the Independent Shareholders in this respect.

BASIS OF OUR OPINION

In formulating our opinion to the Independent Board Committee and the Independent Shareholders, we have relied on the statements, information, opinions and representations contained or referred to in the Circular and the information and representations as provided to us by the Directors. We have assumed that all information and representations that have been provided by the Directors, for which they are solely and wholly responsible, are true and accurate at the time when they were made and continue to be so as at the Latest Practicable Date. We have also assumed that all statements of belief, opinion, expectation and intention made by the Directors in the Circular were reasonably made after due enquiry and careful consideration. We have no reason to suspect that any material facts or information have been withheld or to doubt the truth, accuracy and completeness of the information and facts contained in the Circular, or the reasonableness of the opinions expressed by the Company, its advisers and/or the Directors, which have been provided to us. Our opinion is based on the Directors' representation and confirmation that there are no undisclosed private agreements/arrangements or implied understanding with anyone concerning the Acquisition. We consider that we have taken sufficient and necessary steps on which to form a reasonable basis and an informed view for our opinion in compliance with Rule 13.80 of the Listing Rules.

We have not made any independent evaluation or appraisal of the assets and liabilities of the Group, Beijing Sino-Kazakh or Semizbay-U, and we have not been furnished with any such evaluation or appraisal, save and except for the Chapter 18 Valuation and the Market Valuation, which were both prepared by AVISTA Valuation Advisory Limited (the "**Valuer**"). Since we are not experts in the valuation of land, properties, business and/or mining right, we have relied solely upon the Market Valuation for the fair market value of 100% equity interest in Beijing Sino-Kazakh as at 31 December 2013.

The Directors have collectively and individually accepted full responsibility for the accuracy of the information contained in the Circular and have confirmed, having made all reasonable enquiries, which to the best of their knowledge and belief, that the information contained in the Circular is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement in the Circular or the Circular misleading. We, as the Independent Financial Adviser, take no responsibility for the contents of any part of the Circular, save and except for this letter of advice.

We consider that we have been provided with sufficient information to reach an informed view and to provide a reasonable basis for our opinion. We have not, however, conducted any independent in-depth investigation into the business and affairs of the Company, CGNPC-URC, Beijing Sino-Kazakh, Semizbay-U or their respective subsidiaries or associates, nor have we considered the taxation implication on the Group or the Shareholders as a result of the Acquisition. Our opinion is necessarily based on the financial, economic, market and other conditions in effect and the information made available to us as at the Latest Practicable Date. Shareholders should note that subsequent developments (including any material change in market and economic conditions) may affect and/or change our opinion and we have no obligation to update this opinion to take into account events occurring after the Latest Practicable Date or to update, revise or reaffirm our opinion. In addition, nothing contained in this letter should be construed as a recommendation to hold, sell or buy any Shares or any other securities of the Company.

Lastly, where information in this letter has been extracted from published or otherwise publicly available sources, the sole responsibility of Gram Capital is to ensure that such information has been correctly extracted from the relevant sources.

PRINCIPAL FACTORS AND REASONS CONSIDERED

In arriving at our opinion in respect of the Acquisition, we have taken into consideration the following principal factors and reasons:

1. Background of and reasons for the Acquisition

Business overview of the Group

As referred to in the Board Letter, the Group has repositioned itself as a platform for uranium resources investment and trading after the successful completion of China Uranium Development's Share Subscription and the CB Subscription on 18 August 2011.

Set out below are the audited consolidated financial results of the Group for the two years ended 31 December 2013 as extracted from the Company's 2013 annual report (the "**2013 Annual Report**"):

	For the year ended 31 December 2013	**For the year ended 31 December 2012**	**Year on year change**
	HK$'000	*HK$'000*	*%*
Turnover	796,594	1,232,287	(35.4)
– Pharmaceutical and food	45,706	57,836	(21.0)
– Property investment	7,580	6,958	8.9
– Natural uranium trading	743,308	1,167,493	(36.3)
Profit for the year	16,050	18,647	(13.9)

As depicted by the above table, the Group generates its revenue primarily from the natural uranium trading segment. For the year ended 31 December 2013, the price of natural uranium remained on the low side after having been affected by the nuclear crisis in Fukushima city of Japan and other macro-economic factors. Nonetheless, in view of the long-term economic growth of the PRC which spurs strong demand for energy in the country, the Directors expect that there would be growth in the nuclear power industry, uranium or related industries, and such possible growth would create opportunities for investors in natural uranium resources investment projects.

As confirmed by the Directors, looking forward, the Group will continue to develop the scale of natural uranium trading and proactively identify uranium resource investment opportunities to accelerate the momentum for the Group's revenue.

Information on Beijing Sino-Kazakh and Semizbay-U

As referred to in the Board Letter, Beijing Sino-Kazakh is an investment holding company incorporated in the PRC and is directly wholly-owned by CGNPC-URC. As at the Latest Practicable Date, the only substantial business of Beijing Sino-Kazakh was its 49% partnership interest in Semizbay-U.

As at the Latest Practicable Date, Semizbay-U was owned as to 49% by Beijing Sino-Kazakh, 11% by KAP (being a corporation controlled by the government of the Republic of Kazakhstan) and 40% by The Mining Company LLP, a wholly-owned subsidiary of KAP. Semizbay-U holds the exclusive right to extract the underground resources of two uranium mines, namely the Irkol Mine and the Semizbay Mine, which it owns and operates in the Republic of Kazakhstan, and is mainly engaged in the mining and extraction of natural uranium from those two mines.

Details with regard to the mining rights held by Semizbay-U for conducting mining and extraction of natural uranium from the Irkol Mine and the Semizbay Mine are included under the section headed "Further information about Semizbay-U" of the Circular.

The Irkol Mine commenced commercial operations in 2007 and full production capacity was achieved in 2010. The total uranium production of the Irkol Mine in 2012 and 2013 was approximately 711.8 tonnes uranium and 654.4 tonnes uranium, respectively. According to the Competent Person's Report, the Irkol Mine has JORC Code Ore Reserves of approximately 13,000 tonnes uranium and 11,000 tonnes uranium recoverable by the processing plant as of 31 December 2013. Based on an average annual production of approximately 711 tonnes uranium, the Irkol Mine is expected to have a mining life up to 2029.

Construction of the well fields at the Semizbay Mine was completed in October 2007 and the treatment plant was commissioned in 2009. Commercial operations commenced at the Semizbay Mine in 2009. The total uranium production of the Semizbay Mine in 2012 and 2013 was approximately 508.6 tonnes uranium and 507.0 tonnes uranium, respectively. According to the Competent Person's Report, the Semizbay Mine has JORC Code Ore Reserves of approximately 11,000 tonnes uranium and 10,000 tonnes uranium recovered by the processing plant. Based on an average annual production of approximately 508 tonnes uranium, the Semizbay Mine is expected to have a mining life up to 2032.

Shareholders may refer to the sub-section headed "Information on Beijing Sino-Kazakh and Semizbay-U" of the Board Letter and the section headed "Further information about Semizbay-U" of the Circular for further information on the business of Beijing Sino-Kazakh and Semizbay-U, and the mineral assets of Semizbay-U.

Financial information

We have studied the financial statements of Beijing Sino-Kazakh and Semizbay-U as included in Appendices II and III to the Circular. As confirmed by the Company, except for the effect of interest rate swaps of Beijing Sino-Kazakh, the financial statements of Beijing Sino-Kazakh and Semizbay-U for the three years ended 31 December 2013 do not contain any other non-recurring or extraordinary items. Details of such interest rate swaps are included in Appendix II to the Circular.

Set out below is an extract of the audited financial information of Beijing Sino-Kazakh for the three years ended 31 December 2013 prepared in accordance with HKFRSs:

	For the year ended 31 December 2013	**For the year ended 31 December 2012**	**For the year ended 31 December 2011**
	US$ million	*US$ million*	*US$ million*
Revenue *(Note)*	–	–	–
Net profit/(loss) before taxation	(13.00)	2.99	20.46
Net profit/(loss) after taxation	(11.88)	1.18	16.70

Note:

Beijing Sino-Kazakh is a holding company and did not record any revenue arising from its business operation in the three years ended 31 December 2013.

Set out below is an extract of the audited financial information of Semizbay-U for the three years ended 31 December 2013 prepared in accordance with IFRSs:

	For the year ended 31 December 2013 *US$ million*	**For the year ended 31 December 2012** *US$ million*	**For the year ended 31 December 2011** *US$ million*
Revenue	122.69	152.96	191.08
Net profit/(loss) before taxation	(26.32)	37.88	73.86
Net profit/(loss) after taxation	(24.23)	30.98	59.01

As depicted by the above table, Semizbay-U made profits in the two years ended 31 December 2012 but recorded a net loss in the year ended 31 December 2013. The Directors have detailed the reasons of such loss, being (i) the downturn of the international uranium market in 2013 due to the aftermath of the nuclear crisis in Fukushima city of Japan; and (ii) the change in pricing methodology for the sale of uranium products of Semizbay-U in 2013 as a result of the entering into of the Off-take Agreement, under the sub-section headed "Financial information of Beijing Sino-Kazakh and Semizbay-U" of the Board Letter. Notwithstanding the aforementioned loss making position, the Directors are of the view that there is no significant deterioration in the production and operation of Semizbay-U in the latest financial year given that Semizbay-U had a steady production and sales volume in the past three years. Furthermore, as the Company will be entitled to purchase the Off-take Quantity from Semizbay-U following the Completion, the change of the pricing methodology for the sale of uranium products of Semizbay-U in 2013 which had resulted in a lower uranium supply price would make its price relatively competitive as compared with other sources of uranium supply currently available to the Group. As such, the Group is expected to benefit from the lower purchase cost from Semizbay-U regardless of the volatility of the international uranium price. We concur with the Directors regarding the above.

The Joinder Agreement

The Joinder Agreement (with subsequent amendments) was entered into among Beijing Sino-Kazakh, KAP and The Mining Company LLP on 10 December 2008. Pursuant to the Joinder Agreement, KAP shall purchase and Beijing Sino-Kazakh shall sell the 49% partnership interest in Semizbay-U held by Beijing Sino-Kazakh upon receipt of the written request from KAP in any of the following situations, unless otherwise agreed by KAP and Beijing Sino-Kazakh in writing:

(i) KAP and CGNPC-URC fail to reach an agreement with respect to the supply of fuel pellets processed by a subsidiary of KAP to the nuclear power plant reactors operated by CGNPC (the "**Pellets Contract**") on or before 1 July 2014; and

(ii) where the Pellets Contract is entered into before 1 July 2014, during the performance of the Pellets Contract, the Pellets Contract becomes unenforceable due to either party's non-performance of its obligation or any other reasons not attributable to either party.

With respect to the repurchase situation set out under sub-paragraph (i) above, according to CGNPC-URC, the Pellets Contract had been entered into on 31 March 2014. As such, the repurchase situation as mentioned in sub-paragraph (i) above will no longer be applicable.

With respect of the repurchase situation set out under sub-paragraph (ii) above, based on the long-term business cooperation between KAP and CGNPC-URC, the Company is of the view that it is unlikely that KAP and CGNPC-URC will default on their respective obligations under the Pellets Contract which may result in the exercise by KAP of its repurchase rights under the Joinder Agreement. According to the Directors, the business cooperation between KAP and CGNPC-URC covers the areas of natural uranium resources extractions, trading of uranium resources and processing of uranium fuel products. With respect to the Pellets Contract, it was initiated and proposed at the request of KAP for the purposes of promoting the domestic uranium processing industry chain in the Republic of Kazakhstan. On the other hand, the entering into of the Pellets Contract by CGNPC-URC was also conductive to obtaining KAP's consent to CGNPC-URC's investment in Semizbay-U and the supply of natural uranium to CGNPC-URC. The non-performance of the Pellets Contract by CGNPC-URC will result in the exercise of right by KAP to repurchase the 49% partnership interest in Semizbay-U and in turn, the termination of the Off-take Agreement and the supply of natural uranium thereunder. CGNPC-URC also has the needs for fuel pellets fabrication for use in the nuclear power plant reactors operated by CGNPC. As such, the due performance of the Pellets Contract is considered to be in the mutual interest of both KAP and CGNPC-URC. The Directors further confirmed that CGNPC-URC and the Company are in negotiation with KAP with an aim of removing KAP's aforementioned repurchase right.

With the above being the case together with the fact that as stated in the Board Letter, if KAP chooses to exercise the repurchase right as of the Latest Practicable Date, the repurchase price payable by KAP should be approximately US$144.00 million, representing approximately 8.3% premium over the Purchase Price, we consider the risk poses to the Group in association with the repurchase situation (ii) as set forth under the Joinder Agreement to be acceptable.

Off-take arrangement and undertaking given by CGNPC-URC

On 29 March 2013, CGNPC-URC and KAP, which indirectly controlled 49% and 51% partnership interest in Semizbay-U, respectively, entered into the Off-take Agreement. Pursuant to the Off-take Agreement, CGNPC-URC and KAP are entitled to acquire and will fully underwrite 49% and 51% of Semizbay-U's total annual production respectively, with effect from 1 January 2013. The Off-take Agreement will be terminated on the date on which Beijing Sino-Kazakh ceases to be a holder of the partnership interest in Semizbay-U. CGNPC-URC and KAP are permitted, with prior agreement of both parties in writing, to assign part or all of their respective uranium product quantities to be purchased from Semizbay-U to their respective affiliates, including their subsidiaries.

The purchase price of the uranium under the Off-take Agreement that is applicable to each of CGNPC-URC and KAP is determined based on their respective fixed formulas which are fixed for the entire term of the Off-take Agreement. The general principle is to offer 2% discount over the international uranium spot price for the sale to CGNPC-URC and KAP of the uranium produced by Semizbay-U, details of which are set out under the sub-section headed "Off-take arrangement and undertaking given by CGNPC-URC" of the Board Letter.

Pursuant to an undertaking given by CGNPC-URC dated 16 May 2014, CGNPC-URC undertook to the Company that, from the Completion Date and for the entire term of the Off-take Agreement:

(i) it will irrevocably and exclusively designate the Group to purchase the entire Off-take Quantity from Semizbay-U;

(ii) it will not purchase and will not permit any person other than a member of the Group to purchase any part of the Off-take Quantity from Semizbay-U without obtaining the prior written consent from the Company, provided that the Group will purchase the Off-take Quantity in full from Semizbay-U for each calendar year;

(iii) it will continue to perform its rights and obligations under the Off-take Agreement not affected or modified by the above undertaking and will not assign its rights or obligations under the Off-take Agreement, amend or agree to amend any terms of the Off-take Agreement or terminate or agree to terminate the Off-take Agreement without obtaining the prior written consent from the Company; and

(iv) it will use its reasonable endeavours to procure Semizbay-U to enter into sales contracts with the Group based on terms and conditions set out under the Off-take Agreement.

The Group does not have an obligation to undertake the Off-take Quantity in full. CGNPC-URC may only be permitted to purchase, or to permit its affiliates (other than members of the Group) to purchase, any part of the Off-take Quantity from Semizbay-U when the Group fails to purchase the Off-take Quantity in full for the relevant calendar year.

The Company had obtained the written consent dated 31 March 2014 from KAP for the aforementioned designation of the Off-take Quantity by CGNPC-URC to the Group.

In light of that the aforesaid off-take arrangement and designation of the Off-take Quantity could provide a secure and stable source of uranium products to the Group for its uranium trading business at a discounted price over the international uranium spot price, we concur with the Directors that such arrangement and designation are favourable to the Group.

Reasons for the Acquisition

As extracted from the Board Letter, the injection of the 49% partnership interest in Semizbay-U into the Group as contemplated under the Acquisition represents a support from the Group's ultimate controlling shareholder, CGNPC, in the Group's repositioning as a platform for uranium resources investment and trading. In addition, the Directors expect that the Acquisition will enable the Group to integrate its uranium trading business with upstream mining operations to maximise value and secure a stable supply of uranium through the indirect acquisition of partnership interest in Semizbay-U, an upstream uranium mining entity. The Board believes that the Acquisition also represents an excellent opportunity for the Group to expand its natural uranium trading business as the Company will be entitled to acquire the Off-take Quantity from Semizbay-U. The Directors are of the view that the Acquisition will provide an attractive opportunity to acquire uranium resources, enhance the Group's strategic position as a platform for uranium resources investment and trading businesses and increase the Group's overall competitiveness, business scale and shareholder value. In particular, the Directors expect that the Acquisition will enable the Group to (i) secure a stable supply of the uranium products; (ii) integrate upstream mining operations and expand the scale of natural uranium trading business; (iii) provide investment opportunities in uranium resources; and (iv) expand institutional investors' interest to support a market re-rating.

In relation to the above, we noted that under the 國務院關於印發能源發展"十二五"規劃的通知 (Notice issued by the State Council regarding the "Twelfth Five Year Plan" on Energy Development*), there were 29.24 million kilowatts capacity of nuclear plant under construction in the PRC in 2010, and the PRC government targeted to have the operating nuclear power reaching the capacity of 40 million kilowatts and with 18 million kilowatts capacity of nuclear plant under construction by 2015.

We have also reviewed the section headed "Industry overview" of the Circular in relation to the overall market conditions together with the price and supply and demand trends relevant to the Acquisition. As disclosed therein, the global uranium demand is expected to increase by 48% during the period from 2013 to 2023 and the uranium prices are expected to rise in the near future. We noticed that the information contained in the section was mainly sourced from WNA, an international organisation that promotes nuclear energy and supports companies within the global nuclear industry and represents the industry in key world forums including the United Nations policy forums, the International Atomic Energy Agency and the Nuclear Energy Agency advisory committees, and USGS, the sole science agency for the Department of the Interior of the United States of America that provides reliable scientific information on, amongst others, mineral resources.

In view of the aforesaid reasons for the Acquisition, we concur with the Directors that the Acquisition is fair and reasonable, in the interests of the Company and the Shareholders as a whole and is conducted in the ordinary and usual course of business of the Group.

* *For identification purposes only*

2. Terms of the Share Purchase Agreement

On 16 May 2014, the Company (as purchaser) and CGNPC-URC (as seller) entered into the Share Purchase Agreement, pursuant to which CGNPC-URC conditionally agreed to sell and the Company conditionally agreed to purchase the Equity, representing the entire registered capital of Beijing Sino-Kazakh, at the Purchase Price of US$133 million (equivalent to approximately HK$1,030.75 million).

The Purchase Price

The Purchase Price for the Acquisition is US$133 million (equivalent to approximately HK$1,030.75 million), which was determined upon arm's length negotiations between the Company and CGNPC-URC with reference to the range of the preliminary results of the Market Valuation.

Assessment of the Purchase Price

(i) Trading multiples analysis for the Acquisition

In order to assess the fairness and reasonableness of the Purchase Price, we have attempted to perform a trading multiples (i.e. price to earnings and price to book ratios) analysis. However, the uranium mining business is rather unique and that to the best of our knowledge and endeavour, there is only one company (being CNNC International Limited (stock code: 2302)) listed on the Stock Exchange with interest in upstream uranium asset. Thus, we consider the trading multiples analysis to be inapplicable.

(ii) The Market Valuation

For the purpose of satisfying the relevant Listing Rules' disclosure requirements, we understand that the Company has commissioned the Valuer as the Competent Evaluator to conduct the Chapter 18 Valuation.

The Chapter 18 Valuation has been prepared by the Valuer in accordance with Chapter 18 of the Listing Rules and the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports' (the "**VALMIN Code**") requirements. It is also considered to be compliant with the CIMVAL Code (2003) and the TSXV Appendix 3G entitled Valuation Standards and Guidelines for Mineral Properties (2004). The full text of the Chapter 18 Valuation is set out in Appendix VI to the Circular.

For the purpose of setting a reference to determine the Purchase Price, the Company has also commissioned the Valuer as the Competent Evaluator to conduct the Market Valuation.

The Market Valuation has been prepared by the Valuer in compliance with the VALMIN Code, the CIMVAL Code (2003) as well as the TSXV Appendix 3G entitled Valuation Standards and Guidelines for Mineral Properties (2004), using information supplied by the Company and contained in the Competent Person's Report. The methodology used in the preparation of the Market Valuation is commonly adopted by the Valuer in preparing valuations for mines and natural resources, The Valuer confirmed that they have conducted their own due diligence, including but not limited to (i) site inspection from 27 April 2014 to 1 May 2014; (ii) back and forth discussions with BMA and the management of Semizbay-U regarding the financial projections and other relevant data used in the Market Valuation to check and ensure the consistency and reasonableness of the technical and financial mining issues; and (iii) researching independently from WNA for information on overall market conditions together with the price and supply and demand trends relevant to the Acquisition, and they believe that the conclusions of the Market Valuation are reasonable assessments based on the information obtained.

As confirmed by the Valuer, the Market Valuation is based on the production schedule as contained in the Competent Person's Report which in turn has already taken into account the resources/reserves of the Irkol Mine and the Semizbay Mine. The Market Valuation is conducted primarily using a discounted cash flow analysis on the estimated life of mine operational parameters, including but not limited to Ore Reserves and Mineral Resources estimates, production profiles, operating and capital costs, potential for reserve extension and future outlook of commodity prices, with secondary consideration given to alternative valuation methodologies based on multiples of Ore Reserves and Mineral Resources and comparable transaction analysis. The Market Valuation seeks to evaluate the full market value of Semizbay-U and accordingly, reflects the value associated with the Inferred Mineral Resources and the exploration potential of the Semizbay-U's assets, which are specifically excluded from the Chapter 18 Valuation as required by the Listing Rules. Most of the bases and assumptions applied in the preparation of the Chapter 18 Valuation and the Market Valuation are the same. The major difference in the bases and assumptions applied relates to the exclusion or inclusion of the Inferred Mineral Resources in the valuation. In the Chapter 18 Valuation, the Valuer have not included any consideration of the Inferred Mineral Resources in determining the value of Semizbay-U. However, according to the Valuer, the value of the Inferred Mineral Resources that have a reasonable likelihood of being mined in the future (i.e. 20% of the Inferred Mineral Resources) has been included in the Market Valuation. The Valuer are of the opinion that the said 20% assumption is relatively prudent and it is unlikely that such conversion level cannot be reached judging from their professional experience, the general industry practice, as well as the historical operation condition of Semizbay-U.

For our due diligence purpose, we have reviewed and enquired into (i) the terms of engagement of the Valuer with the Company; (ii) the Valuer's qualification and experience in relation to the performance of the Market Valuation; and (iii) the steps and due diligence measures taken by the Valuer when conducting the Market Valuation. From the mandate letter and other relevant information provided by the Valuer and based on our interview with the Valuer, we are satisfied with the terms of engagement of the Valuer as well as their qualification and experience for performing the Market Valuation. The Valuer have also confirmed that they are independent to the Group, CGNPC-URC, Beijing Sino-Kazakh and Semizbay-U.

Moreover, we have enquired into the Valuer in depth regarding how the Market Valuation was arrived at. We noted that the Valuer have considered various methodologies in preparing the Market Valuation, including the geoscience rating method, the cost method, the joint venture terms and the rules of thumb. Nonetheless, the said methods were rejected and considered not appropriate for the Market Valuation since (i) the geoscience rating method determines the valuation by applying a formal points rating system to a series of geoscientific parameters displayed by the mineral tenement but not the actual operating cost and production data; (ii) the cost method is primarily used when there is no operating or production data; (iii) the joint venture terms is used where a farm-in may take place where an entity pays certain amount of money for certain percentage of the project under consideration; and (iv) the rules of thumb is primarily used as for preliminary value process. Therefore, the Market Valuation is primarily based on the discounted cash flow analysis under the net present value ("**NPV**") valuation method which relies upon the NPV estimation of present and future cash flows from the current mining operations. This method is recommended in the VALMIN Code (2005) as the primary valuation method to be used for operating mineral operations, which is not only applicable to this case considering the development status of the Irkol Mine as well as the Semizbay Mine, but also the preferred methodology. Based on our discussion with the Valuer, we also understand that the Valuer selected certain relevant transactions based on some recent projects in which they were directly involved or where details of the transaction are in the public domain, and according to criteria including but not limited to transaction size, timing and size of the deposit, to conduct the market method which was used for secondary consideration in the Market Valuation.

The Valuer have further explained to us the bases and assumptions, together with the estimates and calculations in arriving at the Market Valuation. In this relation, we noted that (i) the amounts of resources for each mine were determined with reference to the resources amounts and recovery in the BMA Resource Statements, with modest discount adopted based on the previous experience of the Valuer for similar valuation projects; (ii) the forecasted production data applied was based on the BMA production schedule as included in the Competent Person's Report; (iii) the forecasted operating and capital expenditures were based on the 2012 Feasibility Study which is considered to be reasonable by BMA; (iv) the forecasted uranium price in 2014 was based on Consensus Economics, a well-established source of reliable price forecast broadly accepted by the market, with reference to the expert opinion of BMA, and the prices were escalated with consideration of inflation of an average rate of 3.8% per year for subsequent years, which is consistent with the BMA assumptions and considered by the Valuer as reasonable; and (v) the discount rate (i.e. the weighted average cost of capital) was calculated based on the capital asset pricing model and reflects, among other things, (a) the risk free rate, being the 30-year United States Federal Reserve Treasury Bond as at 31 December 2013; (b) the equity risk premium for the United States' market published by various research reports and adjusted for the country risk premium of the Republic of Kazakhstan published by Aswath Damodaran in January 2014; (c) the re-levered beta according to the Damodaran database; (d) other risk premiums including small size risk premium sourced from SBBI Year Book 2013 and company specific risk based on expert opinion of the Valuer; (e) the cost of debt based on the central bank benchmark interest rate reported by the National Bank of Kazakhstan; and (f) the equity to debt ratio based on the Damodaran database. The Market Valuation also includes the relevant sensitivity analyses which were determined based on the previous experience of the Valuer for similar valuation projects.

In relation to (iv) the forecasted uranium price in 2014 as mentioned in the previous paragraph, we noted from our independent research that the uranium spot price had decreased significantly from December 2013 to April 2014. We have enquired into the Valuer and were advised that while the aforesaid price drop from December 2013 to April 2014 suggested a minus change to the NPV, no material differences should be adopted to adjust the Market Valuation since there was no material change of other applied factors. In addition, we noted that a subsequent analysis has been performed by the Valuer based on the market forecasted prices as of April 2014 (with all other assumptions and parameters remained static), and no material difference on the valuation result was noted for adoption of the updated data as compared with the valuation based on the data as of 31 December 2013. Besides that, we understand that the current adoption of the forecasted uranium price in 2014 was based on Consensus Economics which sourced the forecast from various market recognised independent institutions (including but not limited to BoA Merrill Lynch, UBS, Morgan Stanley, Commonwealth Bank, Deutsche Bank, Credit Suisse, etc.). Given (i) the Valuer's representation as presented above; (ii) the basis for the current adoption of the forecasted uranium price in 2014 (i.e. Consensus Economics) which is relatively well-established and reliable; and (iii) the WNA's forecast that the global uranium demand is expected to increase by 48% during the period from 2013 to 2023 and the uranium prices are expected to rise in the near future, we consider that the current adoption of the forecasted uranium price in 2014, is acceptable.

Overall speaking, we understand that the Valuer are satisfied with (i) the rationality of the bases and assumptions in arriving at the Market Valuation; and (ii) the appropriateness and accuracy of the estimates and calculations. During the course of our discussion with the Valuer, we did not identify any major factor which caused us to doubt the fairness and reasonableness of the principal bases and assumptions adopted for the Market Valuation.

Taking into account that the Purchase Price was determined upon arm's length negotiations between the Company and CGNPC-URC with reference to the range of the preliminary results of the Market Valuation, we are of the opinion that the Purchase Price is fair and reasonable so far as the Independent Shareholders are concerned.

Payment

The Purchase Price shall be paid by the Company at Completion to CGNPC-URC in the form of a single cash payment. According to the Directors, the Purchase Price will be funded by the Group by its internal resources taking into account the sufficiency of its working capital.

Having considered the foregoing terms of the Share Purchase Agreement, we are of the view that the terms of the Share Purchase Agreement are on normal commercial terms and are fair and reasonable so far as the Independent Shareholders are concerned.

3. Possible financial effects of the Acquisition

As confirmed by the Directors, upon Completion, Beijing Sino-Kazakh will become a direct wholly-owned subsidiary of the Company and its financial statements will be consolidated into those of the Group. The Company will, through Beijing Sino-Kazakh, hold a 49% partnership interest in Semizbay-U and Semizbay-U will not become a subsidiary of the Company and its financial statements will not be consolidated into those of the Group.

Effect on net asset value and gearing

With reference to the unaudited pro forma financial information of the Enlarged Group as contained in Appendix IV to the Circular, the Acquisition would lead to a decrease in the net assets of the Group. Moreover, the Group's gearing level (defined as total borrowings divided by equity attributable to owners of the Company, net of intangible assets and goodwill) would increase due to the Acquisition.

Effect on working capital and earnings

Since the Company will satisfy the Purchase Price in cash by the internal resources of the Group, the Enlarged Group's working capital would be reduced due to the Acquisition. According to the 2013 Annual Report, the Group had unpledged bank balances and cash of approximately HK$1,030.5 million as at 31 December 2013. The Directors confirmed that taking into account the business prospects, the internal resources of the Enlarged Group and the effect of the Acquisition, the Enlarged Group has sufficient working capital for its present requirements, i.e. at least the next 12 months from the date of the Circular.

Furthermore, in view of the development potential and prospects of and the mineral assets of Semizbay-U, the Directors expect that the Enlarged Group is likely to enjoy higher future earnings after the Acquisition.

It should be noted that the aforementioned analyses are for illustrative purpose only and do not purport to represent how the financial position of the Enlarged Group will be upon Completion.

4. Risk factors

The Independent Shareholders may wish to bear in mind the risk factors which are highlighted under the section headed "Risk relating to the Republic of Kazakhstan and operation of Semizbay-U" of the Circular when considering the Acquisition.

RECOMMENDATION

Having taken into consideration the factors and reasons as stated above, in particular:

(i) the Company has re-positioned itself as a uranium resources investment and trading platform with natural uranium trading to become one of the key focuses;

(ii) the Acquisition will enable the Group to secure a stable supply of uranium products at a relatively lower price pursuant to the Off-take Agreement;

(iii) the Company is of the view that it is unlikely that KAP and CGNPC-URC will default on their respective obligations under the Pellets Contract which may result in the exercise by KAP of its repurchase rights under the Joinder Agreement and even if KAP chooses to exercise the repurchase right as of the Latest Practicable Date, the repurchase price payable by KAP should be approximately US$144.00 million, representing approximately 8.3% premium over the Purchase Price;

(iv) the possible benefits to the Group due to the Acquisition as summarised under the sub-section headed "Reasons for the Acquisition" of this letter and detailed under the sub-section headed "Reasons for and benefits of the Acquisition" of the Board Letter;

(v) the Purchase Price was determined upon arm's length negotiations between the Company and CGNPC-URC with reference to the Market Valuation; and

(vi) the other principal terms of the Share Purchase Agreement being fair and reasonable, we are of the opinion that (i) the terms of the Share Purchase Agreement are on normal commercial terms and are fair and reasonable so far as the Independent Shareholders are concerned; and (ii) the Acquisition is in the interests of the Company and the Shareholders as a whole and is conducted in the ordinary and usual course of business of the Group. Accordingly, we recommend the Independent Board Committee to advise the Independent Shareholders to vote in favour of the resolution(s) to be proposed at the EGM to approve the Share Purchase Agreement and the transactions contemplated thereunder and we recommend the Independent Shareholders to vote in favour of the resolution(s) in this regard.

Yours faithfully,
For and on behalf of
Gram Capital Limited
Graham Lam
Managing Director

Note: Mr. Graham Lam is a licensed person registered with the SFC and a responsible officer of Gram Capital Limited to carry out Type 6 (advising on corporate finance) regulated activity under the SFO. He has around 19 years of experience in the corporate finance industry.

1 COMPETITIVE STRENGTHS

(i) The Enlarged Group will be the largest uranium group by production listed in Hong Kong

Semizbay-U is a uranium focused entity engaged in developing uranium mines and producing uranium products in the Republic of Kazakhstan. It currently owns and operates two producing mines: Irkol Mine and Semizbay Mine.

As far as the Company is aware, CNNC International Limited (Stock Code: 2302) is the only other company listed on the Stock Exchange with interest in upstream uranium asset. According to its 2013 Annual Report, CNNC International Limited holds a 37.2% equity interests in Société d'Azelik S.A. ("SOMINA") which owns a uranium mine in Niger, and two exploration licenses in Mongolia. While there is no disclosure on production level of SOMINA, according to WNA, the estimated production of SOMINA in 2013 was approximately 96 tonnes uranium, which is significantly lower than production of Semizbay-U. Taking the abovementioned basis into account, the Directors are of the view that there are no companies listed in Hong Kong which have similar levels of uranium production as of the Latest Practicable Date. Thus, upon Completion, the Enlarged Group, which will own 49% indirect interest in Semizbay-U's uranium mineral assets, will be uniquely positioned in the Hong Kong market as the largest uranium group by production with producing upstream mining assets and integrated uranium trading business. The Enlarged Group will provide a unique investment opportunity for investors to get exposure to the uranium sector and capitalize on the significant growth in the PRC nuclear power industry and the associated demand in uranium.

(ii) The Enlarged Group will have substantial interest in large scale, high grade and low cost upstream uranium assets which are in production with long mine lives

The Enlarged Group will own a substantial interest in upstream uranium mines in production with a track record since 2009. Semizbay-U produced approximately 1,161 tonnes uranium in 2013 and is expected to maintain its combined annual production at over 1,200 tonnes uranium for the remaining mining life of both mines. As at 31 December 2013, it has remaining JORC ore reserves of approximately 24,000 tonnes of contained uranium metal and remaining JORC mineral resources of totally approximately 40,000 tonnes of contained uranium metal.

The proved and probable uranium reserves may support a remaining mine life of over 15 years for Irkol Mine (based on the annual production of approximately 711 tonnes uranium and overall recovery of 90% for Irkol Mine) and over 18 years for Semizbay Mine (based on annual production of approximately 508 tonnes uranium and overall recovery of 85% for Semizbay Mine).

The scale of the mines combined with high grade deposits and operational efficiency provide Semizbay-U with a competitive cost structure. The operating cost per pound of U_3O_8 produced in Irkol Mine and Semizbay Mine in 2013 is US$28 and US$35, respectively. The average selling price of Semizbay-U in 2013 is approximately US$32 per pound U_3O_8. This compares favorably to the Company's average selling price of over US$50 per pound of U_3O_8 in the past three years.

(iii) The Enlarged Group's integrated uranium mining and trading businesses will maximize margin across the value chain

The Enlarged Group will be an integrated uranium group with uranium upstream assets and trading business upon completion of the Acquisition. The Company is currently engaged in uranium trading business and is designated as CGNPC's overseas uranium assets platform.

The Company has long-term uranium sales agreements with CGNPC-URC, the sole uranium supplier of CGNPC, at a price, which is generally higher than the current uranium spot price. For details, please refer to paragraph (vi) in this section. The integration of the upstream operation with trading business will provide the Enlarged Group with security of stable uranium supply while benefiting from the low cost structure of Semizbay-U's mines, enabling the Enlarged Group to capture the additional value from the lower uranium procurement costs. This would optimize the value for the Enlarged Group and maximize returns for its Shareholders.

(iv) The mines are strategically located in the Republic of Kazakhstan, the world's leading uranium producer

The Republic of Kazakhstan is currently the largest uranium producing country globally according to WNA, with uranium production of 21,317 tonnes in 2012, accounting for approximately 36.5% of the global uranium production. This represents a significant increase from approximately 27.6% in 2009 when the Republic of Kazakhstan surpassed Canada to become the world's largest mined uranium producer.

According to the International Atomic Energy Agency, the Republic of Kazakhstan has the second largest reasonably assured resources and inferred uranium resources of 629,000 tonnes at up to US$50 per pound U_3O_8 price, accounting for approximately 12% of global reasonable assured resources and inferred uranium resources as at the end of 2011. The abundant uranium resources in the Republic of Kazakhstan have attracted numerous major international uranium companies to establish operations in the country. CGNPC, Areva, Cameco and ARMZ-Uranium One all have sizeable operations in the Republic of Kazakhstan.

Substantially all production in the Republic of Kazakhstan is using ISR method, including Irkol Mine and Semizbay Mine. ISR method requires considerably lower capital costs to construct the mines, lower operating expenses and less manpower. Environmental impacts of ISR extraction are mitigated since ISR does not create waste by-products by extracting the ore to the surface. The ISR process mobilises less than 5% of the radioactive elements, the balance of which remains in the ground as compared to 100% mobilisation when conventional open-pit or underground mining methods are used. This significantly reduces the need for construction of re-cultivation ponds which are necessary to store radioactive waste from conventional mining methods.

Republic of Kazakhstan is geologically adjacent to China and an uninterrupted transportation of uranium to China is relatively easier to be arranged with relatively lower costs. CGNPC also maintains long-term cooperation relationship in the supply of natural uranium with major uranium suppliers in the Republic of Kazakhstan such as KAP. So far as the Directors are aware, even if CGNPC's other uranium assets (such as Husab projects in Namibia, Africa) may be additional sources of uranium supply, the Republic of Kazakhstan, being the largest uranium producing country worldwide, is expected to remain as a major source of uranium supply to satisfy the demand of uranium for use in nuclear reactors operated by CGNPC.

(v) The Enlarged Group is well positioned to capitalize on increasing demand for uranium and growth of nuclear sector in China

Uranium is relatively scarce resource with strategic importance in nuclear power industry worldwide. The global nuclear sector is expected to grow significantly and put pressure on the supply of uranium. At the end of 2012, there were about 435 nuclear reactors operating worldwide which required approximately 68,000 tonnes uranium. The total worldwide uranium supply for the same period amounted to 58,394 tonnes, representing a shortfall of approximately 14% of worldwide uranium demand. The shortfall was made up by secondary sources including stockpiled uranium held by utilities.

The global uranium demand will increase by 48% during the period from 2013 to 2023 and the global nuclear reactor capacity will increase by 34% during the same period, as estimated in the 2011 WNA Market Report. Many countries (China in particular) are forging ahead with construction of new power plants and maintain ambitious goals for adding significant nuclear generating capacity for the next 20 years.

Nuclear power sector in China benefits from robust regulatory framework and high level of government support given its important role in China's rapid economic development. Nuclear power has an important role in China, especially in the coastal areas remote from the coalfields and where the economy is developing rapidly. China's concerted nuclear expansion began with the National Development and Reform Commission's Tenth Economic Plan for the years 2001-2005, with increased self-reliance. As in April 2014, China has 20 operating nuclear power reactors with a total capacity of 17 GW according to WNA, with another 29 reactors under construction, 57 reactors on order or planned and 118 reactors proposed with total combined capacity of approximately 233 GW, approximately 12.7 times of the current capacity. The Board has ground to believe that the demand of uranium resources is expected to continue to grow and remain strong in China.

The increasing global uranium demand and strong growth potential in China's nuclear power sector would fuel the Enlarged Group's long-term sustainable growth.

(vi) The Enlarged Group is designated as the flagship and listed international upstream platform of CGNPC and is well positioned to leverage on CGNPC's relationships, expertise and support

The Enlarged Group's ultimate controlling shareholder, CGNPC, was established in 1994, and has grown into one of China's two main nuclear power corporations which are owned and directly administered by the State-owned Assets Supervision and Administration Commission of the State Council of the PRC. CGNPC is mainly engaged in the business of investment, design, construction and operation of nuclear plants and the development of international uranium resources and nuclear equipment research and development and engineering.

CGNPC has a portfolio of high quality uranium assets, including Husab project in Namibian, the largest uranium mine globally under construction as of the Latest Practicable Date. Based on the currently available information, the annual production of Husab project is expected to be the second largest worldwide upon commencement of production.

According to the experience in the past years, CGNPC-URC, the sole uranium supplier of CGNPC, had agreed to exclusively source from the Company the entire amount of uranium products demanded by certain end users (including but not limited to, Guangxi Fangchenggang Nuclear Power Co., Ltd.* (廣西防城港核電有限公司) and Yangjiang Nuclear Power Co., Ltd.* (陽江核電有限公司), both of which are the subsidiaries of CGNPC) based on a price as determined with reference to the arithmetic average prices of both the spot price index and long-term price index and the rational price expectation of the Company and CGNPC-URC, while the Company also retains the flexibility to sell to other third parties for higher price. Such continuing connected transactions between the Group and CGNPC-URC have been disclosed in the announcement of the Company dated 15 October 2013 and have been approved by the independent shareholders of the Company at the general meeting held on 9 December 2013. For details, please refer to the announcement of the Company dated 15 October 2013 and the circular of the Company dated 19 November 2013. The Company expects that such cooperation mechanism between CGNPC and the Company will continue in the foreseeable future.

The Enlarged Group will benefit from the strong support of CGNPC, including but not limited to, CGNPC's extensive relationships, funding support, industry expertise and future acquisition opportunities.

(vii) The Enlarged Group has strong and experienced management team comprising domestic and international professionals

The Board and senior management team of the Company comprise personnel with extensive industry knowledge and experience as well as many years of working experience in uranium exploration, extraction and trading business. Upon completion of the Acquisition, the senior management team of Semizbay-U will continue to be in charge of its day-to-day management and operational decisions. The Enlarged Group will also benefit from Semizbay-U's strong local workforce with extensive insights, knowledge and experiences in the region. Many of these senior management members of Semizbay-U have extensive local on-the-ground mining experience and possess the industry knowledge, skills and network with local government bodies and other authorities and organizations.

The combination of strong and experienced management team of PRC and international professionals will provide competitive advantage to the Enlarged Group and enhance the Group's performance in operation, safety, environment and social responsibilities. The Company believes that its management team possesses the leadership capabilities and qualifications required to develop its business and ensure its continued success.

2 BUSINESS STRATEGIES

The Enlarged Group will continue to develop the natural uranium trading business and proactively identify uranium resource investment opportunities with a vision to become one of the world's leading uranium groups. The Company believes that this strategy is designed to deliver sustainable growth in shareholder value in the long run. The Enlarged Group will consider pursuing a number of strategic initiatives to achieve such goals, including:

(i) Continue to optimize the existing operations and pursue organic growth opportunities

The Enlarged Group will continue to promote the optimization of the existing operations of two mines of Semizbay-U, including efficiency improvement and cost reduction.

The Enlarged Group will also look into the expansion potential of current resources and reserves through exploration at the appropriate time.

(ii) Continue to develop the trading business

The Company has repositioned itself as a platform for uranium resources trading and investment since 2011. It has been engaged in the uranium trading business since 2011 and achieved significant revenue growth in 2012. Currently, the Company is exploring various business opportunities to increase revenue of trading business globally.

The Enlarged Group will continue to develop the natural uranium trading business worldwide. The integration of the Enlarged Group's interest in upstream mining assets and the further development of its downstream trading business will contribute strong cash flow, provide significant synergy and maximise returns to its Shareholders.

(iii) Pursue quality acquisition opportunities

CGNPC has been active in acquiring upstream uranium resources globally and has a quality uranium asset portfolio, including the world-class Husab project. The Group will consider and evaluate the possibility of acquiring these assets as and when appropriate to build up the Group's portfolio of upstream uranium resources. The Enlarged Group will also continue to identify and evaluate acquisition opportunities globally, with focus on quality uranium assets in North America (especially Canada), Central Asia and Africa.

Through the pursuit of quality acquisitions, the Enlarged Group intends to further strengthen its global resources base and develop as CGNPC's global platform for consolidating upstream uranium resources.

(iv) Continue to leverage on the expertise, experience and relationships of CGNPC

The Enlarged Group will continue to leverage on the strong support from CGNPC including competitive price of off-take arrangement, low-cost financing from domestic and policy banks, insights and experiences in overseas acquisition and knowledge and relationships in the PRC market. CGNPC, with a 9.4 GW installed nuclear power capacity and a 17.7 GW planned installed capacity under construction as at 31 March 2014, accounts for 59% of the PRC installed nuclear capacity and 54% of the PRC under-construction capacity, respectively. CGNPC's extensive expertise, experience and relationships will benefit the development of the Enlarged Group in the long term.

This section contains certain information which has been derived from official, market and other public sources including the WNA, USGS, etc. The Directors believe that the sources of such information are appropriate sources for the information. The Directors have exercised reasonable care in selecting and identifying the named information sources and, in compiling, extracting and reproducing such information, and have no reason to believe that such information is false or misleading or that any fact has been omitted that would render such information false or misleading. This information has not been independently verified by the Directors or any of the Directors' affiliates or advisers or any of their affiliates or advisers and no representation is given as to its accuracy. This information may not be consistent with information from other sources. References to "reserves" or "resources" in this industry overview are not references to reserves or resources determined in accordance with the JORC Code. Unless otherwise stated, all references to reserves and resources follow the definitions published by WNA and/or USGS.

1 INTRODUCTION

Uranium is a heavy and mildly radioactive metal occurring naturally in the earth's crust and is capable of releasing abundant concentrated energy when actively excited. Uranium is predominantly used as the basic fuel in nuclear power reactors.

Uranium ore is mined through one of three extraction methods: open-pit mining, underground mining or ISR depending on geology of the deposit and safety and economic considerations. Both open-pit and underground mining require the ore to be removed from the ground in order to extract the uranium. Open-pit mining is generally used for deposits which are close to the surface. It requires an excavation area larger than the size of the deposit and as a result it is necessary to remove a large amount of material in order to access the ore body. Underground mining is used for deep deposits and have relatively small surface disturbance and considerably less quantity of material moved than in open pit mining.

After conventional mining, the ore is crushed and ground up and then treated with acid to dissolve the uranium. In ISR method, uranium is mined by dissolving it from the ore body in-situ and the resultant solution is pumped to the surface. The solution is then processed to recover the uranium. The end product of the mining and milling stages, or of ISR, is U_3O_8, which contains about 85% pure uranium. This is the form in which uranium is sold.

(i) ISR

The ISR method is a method of ore deposit extraction that does not bring the ore itself to the surface but dissolves the uranium in a groundwater sulphuric acid solution. It can be used at deposits that consist of uranium oxides and which are permeable. The groundwater located in the ore body is mixed with a low-sulphuric acid solution pumped through the injection well into the ore body. As a result of acidification, the uranium is dissolved into the solution (the "pregnant solution"). The pregnant solution is then pumped out of the well and into intermediate holding ponds where it is later transferred for processing. Once the uranium is recovered, the remaining solution is re-fortified and injected back into the ground. Any solid drilling waste with low radioactivity is collected in sludge reservoirs, and liquid waste is included in the production cycle as a base for the acidic pumping solution.

There are several advantages of using the ISR method over the open-pit or underground mining methods. ISR method requires considerably lower capital costs to construct the mines, lower operating expenses and less manpower. Environmental impacts of ISR extraction are mitigated since ISR does not create waste by-products by extracting the ore to the surface. The ISR process mobilises less than 5% of the radioactive elements, the balance of which remains in the ground as compared to 100% mobilisation when conventional open-pit or underground mining methods are used. This significantly reduces the need for construction of re-cultivation ponds which are necessary to store radioactive waste from conventional mining methods.

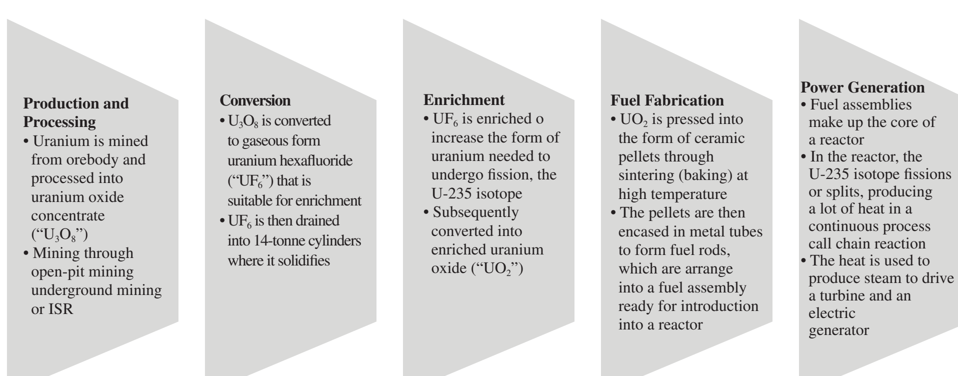
Mining methods of uranium have evolved over time. In 1990, over half of world production came from underground mines, but this shrunk dramatically to approximately 33% in 1999. Global use of ISR mining method has been growing steadily. According to WNA, approximately 45% of uranium produced globally is using ISR method.

Substantially all production from the Republic of Kazakhstan is using ISR method. The primary negative impact of the ISR method is acidification of groundwater and mobilisation of potentially hazardous heavy metals within groundwater. Due to unique natural hydrogeochemical environment found in the Republic of Kazakhstan uranium producing regions, groundwater is gradually restored to pre-production regime in approximately two to ten years depending on the density of the pollution and the rate of groundwater movement.

(ii) Nuclear Fuel Production

The production of nuclear energy requires a number of activities, from extraction of uranium to generation of electricity at a nuclear power plant. U_3O_8 produced after mining and milling stages at mines cannot be used as fuel for nuclear reactors without undergoing further processing. The diagram below illustrates the processes from mine to the nuclear power plant to generate electricity.

Production process of nuclear energy



2 URANIUM DEMAND

Uranium is principally used as fuel for nuclear power plants. Reactor-related demand for uranium is fundamentally driven by installed nuclear capacity, which is ultimately driven by the demand for electricity. According to WNA, approximately 12% of the world's electricity is generated from uranium in nuclear reactors.

(i) Uranium Consumption by Region

As at April 2014, according to WNA there were about 434 nuclear reactors operating worldwide with combined capacity of approximately 374 GW which required approximate 65,908 tonnes of uranium annually.

The US is the largest producer of electricity from nuclear reactors with approximately 771 billion kWh generated in 2012, accounting for approximately 19% of its total electricity generation. France has the largest dependency on nuclear with approximately 75% of its total electricity generated from nuclear reactors.

Table below summarises top 10 countries with largest nuclear electricity generation in 2012 and number of operating reactors, reactors under construction and reactors planned and proposed as at April 2014 according to WNA.

Top 10 countries with largest nuclear electricity generation in 2012

	Nuclear electricity generation 2012		As of April 2014								Uranium required 2014
			Reactors operable		Reactors under construction		Reactors planned		Reactors proposed		
Country	*Billion kWh*	*% e*	*No.*	*MWe net*	*No.*	*MWe gross*	*No.*	*MWe gross*	*No.*	*MWe gross*	*Tonnes uranium*
USA	770.7	19.0	100	99,098	5	6,018	5	6,063	17	26,000	18,816
France	407.4	74.8	58	63,130	1	1,720	1	1,720	1	1,100	9,927
Russia	166.3	17.8	33	24,253	10	9,160	31	32,780	18	16,000	5,456
South Korea	143.5	30.4	23	20,656	5	6,870	6	8,730	–	–	5,022
Germany	94.1	16.1	9	12,003	–	–	–	–	–	–	1,889
China	92.7	2.0	20	17,055	29	33,035	57	61,235	118	122,000	6,296
Canada	89.1	15.3	19	13,553	–	–	2	1,500	3	3,800	1,784
Ukraine	84.9	46.2	15	13,168	–	–	2	1,900	11	12,000	2,359
United Kingdom	64.0	18.1	16	10,038	–	–	4	6,680	7	8,920	1,738
Sweden	61.5	38.1	10	9,508	–	–	–	–	–	–	1,516
Rest of world	371.8	N/A	131	91,886	22	19,535	65	68,147	134	156,550	11,105
World total	2,346.0	c.11.0	434	374,348	72	76,338	173	188,755	309	346,370	65,908

Source: WNA

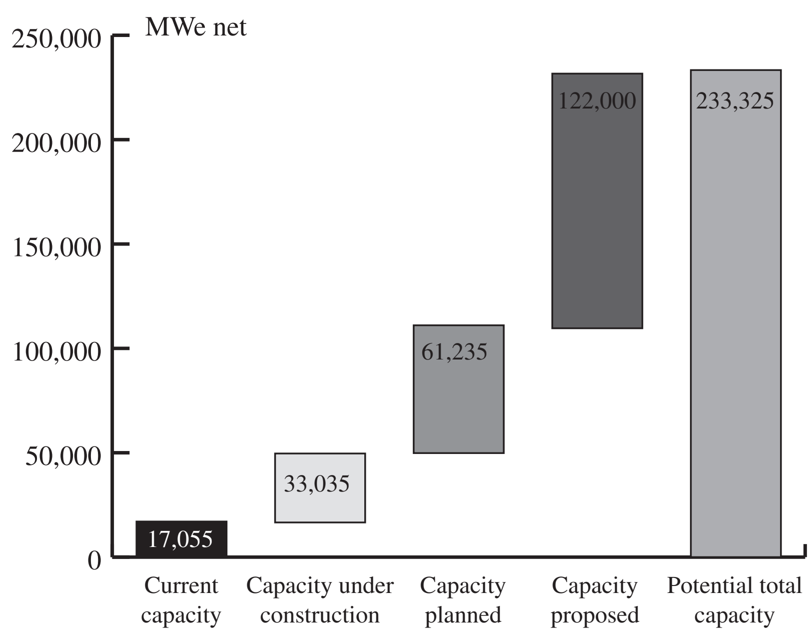
Because of the cost structure of nuclear power generation, with high capital and low fuel costs, the demand for uranium fuel is much more predictable than with probably any other mineral commodity. Once reactors are built, it is very cost-effective to keep them running at high capacity and for utilities to make any adjustments to load trends by cutting back on fossil fuel use. Demand forecasts for uranium thus depend largely on installed and operable capacity, regardless of economic fluctuations.

The global uranium demand is expected to increase by 48% during the period from 2013 to 2023 and the global nuclear reactor capacity will increase by 34% during the same period, as estimated by WNA. Many countries (China in particular) are forging ahead with construction of new power plants with the objective to add significant nuclear generating capacity in the next 20 years. According to WNA, as at April 2014 there were 72 reactors under construction with combined capacity of approximately 76 GW and 173 reactors on order or planned with combined capacity of approximately 189 GW. In addition, there were also 309 reactors proposed with total combined capacity of 346 GW. WNA estimates there will be 272 new reactors coming online compared to 74 reactors closing (exclude closed Japanese reactors) by 2030, which imply a net addition of 198 reactors during the period.

(ii) China Demand and Growth

Nuclear power has an important role in China, especially in the coastal areas remote from the coalfields and where the economy is developing rapidly. China's concerted nuclear expansion began with the National Development and Reform Commission's Tenth Economic Plan for the years 2001-2005, with increased self-reliance. As at April 2014, China has 20 operating nuclear power reactors with a total capacity of 17 GW according to WNA, with another 29 reactors under construction, 57 reactors on order or planned and 118 reactors proposed with total combined capacity of approximately 233 GW, approximately 12.7 times the current capacity.

China's nuclear power capacity(as of April 2014)



Source: WNA

3 URANIUM SUPPLY

(i) Uranium resources

Availability of uranium resources around the world is a critical variable in the long term viability of the nuclear industry. Total world resources of uranium, as is the case for other metals and minerals, are not known with an absolute degree of accuracy. The only reliable measure of long-term security of supply is the known resources in the ground capable of being mined.

Uranium is not a rare element and occurs in potentially recoverable concentrations in many types of geological settings. As with other minerals, investment in geological exploration generally results in increased known resources. Table below summarises top 10 countries with largest current known recoverable resources of uranium (reasonably assured resources plus inferred resources) based on price up to US$130/kg uranium (equivalent to approximately US$50/lb U_3O_8).

Known recoverable resources of uranium (2011)

	Tonnes uranium	**% of the world**
Australia	1,661,000	31%
The Republic of Kazakhstan	629,000	12%
Russia	487,200	9%
Canada	468,700	9%
Niger	421,000	8%
South Africa	279,100	5%
Brazil	276,700	5%
Namibia	261,000	5%
USA	207,400	4%
China	166,100	3%
Rest of world	470,000	9%
World total	5,327,200	100%

Source: WNA

(ii) Uranium production

Production from world uranium mines now supplies about 86% of the requirements of power utilities. Primary production from mines is supplemented by secondary supplies, principally by ex-military material and other inventories.

Approximately 64% of global production of uranium from mines is from the Republic of Kazakhstan, Canada and Australia. The Republic of Kazakhstan is the largest primary producer of uranium, with 21,317 tonnes uranium in 2012, approximately 36.5% of global production, followed by Canada with approximately 8,999 tonnes uranium (approximately 15.4% of global production) and Australia with approximately 6,991 tonnes uranium (approximately 12.0% of global production).

Table below summarises top 10 countries with the largest uranium production in 2012 and its historical production since 2005.

Production from mines (tonnes uranium)

Country	2005	2006	2007	2008	2009	2010	2011	2012
The Republic of Kazakhstan	4,357	5,279	6,637	8,521	14,020	17,803	19,451	21,317
Canada	11,628	9,862	9,476	9,000	10,173	9,783	9,145	8,999
Australia	9,516	7,593	8,611	8,430	7,982	5,900	5,983	6,991
Niger (est.)	3,093	3,434	3,153	3,032	3,243	4,198	4,351	4,667
Namibia	3,147	3,067	2,879	4,366	4,626	4,496	3,258	4,495
Russia	3,431	3,262	3,413	3,521	3,564	3,562	2,993	2,872
Uzbekistan	2,300	2,260	2,320	2,338	2,429	2,400	2,500	2,400
USA	1,039	1,672	1,654	1,430	1,453	1,660	1,537	1,596
China (est.)	750	750	712	769	750	827	885	1,500
Malawi	–	–	–	–	104	670	846	1,101
Rest of world	2,458	2,265	2,427	2,357	2,428	2,372	2,544	2,456
World total	41,719	39,444	41,282	43,764	50,772	53,671	53,493	58,394
Tonne(s) U_3O_8	49,199	46,516	48,683	51,611	59,875	63,295	63,084	68,864
% of world demand	65%	63%	64%	68%	78%	78%	85%	86%

Source: WNA

The uranium production industry is relatively small, with few companies accounting for majority of uranium produced. In 2012, eight companies marketed 88% of the world's uranium mine production, according to WNA. KazAtomProm, the Republic of Kazakhstan state-owned company, is the world's largest uranium producer in 2012 with approximately 15% of total global production.

Major uranium companies in the world

Company	Tonnes uranium	%
KazAtomProm	8,863	15%
Areva	8,641	15%
Cameco	8,437	14%
ARMZ – Uranium One	7,629	13%
Rio Tinto	5,435	9%
BHP Billiton	3,386	6%
Paladin	3,056	5%
Navoi	2,400	4%
Other	10,548	18%
Total	58,394	100%

Source: WNA

There is also a high concentration of production with the 15 largest uranium mines accounting for approximately 64% of total global uranium production in 2012, according to WNA.

The largest top 15 producing uranium mines in 2012

Mine	Country	Main owner	Type	Production (tonnes uranium)	% of world
McArthur River	Canada	Cameco	Underground	7,520	13%
Olympic Dam	Australia	BHP Billiton	By-product/ underground	3,386	6%
Ranger	Australia	ERA (Rio Tinto 68%)	Open pit	3,146	5%
Arlit	Niger	Somair/Areva	Open pit	3,065	5%
Tortkuduk (est.)	The Republic of Kazakhstan	Katco JV/Areva	ISR	2,661	5%
Rossing	Namibia	Rio Tinto (69%)	Open pit	2,289	4%
Budenovskoye 2	The Republic of Kazakhstan	Karatau JV/Kazatomprom-Uranium One	ISR	2,135	4%
Kraznokamensk	Russia	ARMZ	Underground	2,011	3%
Langer Heinrich	Namibia	Paladin	Open pit	1,955	3%
South Inkai	The Republic of Kazakhstan	Betpak Dala JV/Uranium One	ISR	1,870	3%
Inaki	The Republic of Kazakhstan	Inkai JV/Cameco	ISR	1,701	3%
Central Mynkuduk	The Republic of Kazakhstan	Ken Dala JV/Kazatomprom	ISR	1,622	3%
Akouta	Niger	Cominak/Areva	Underground	1,506	3%
Rabbit Lake	Canada	Cameco	Underground	1,479	3%
Budenovskoye 1&3	The Republic of Kazakhstan	Akbastau JV/Kazatomprom-Uranium One	ISR	1,203	2%
Top 15 total				37,549	64%

Source: WNA

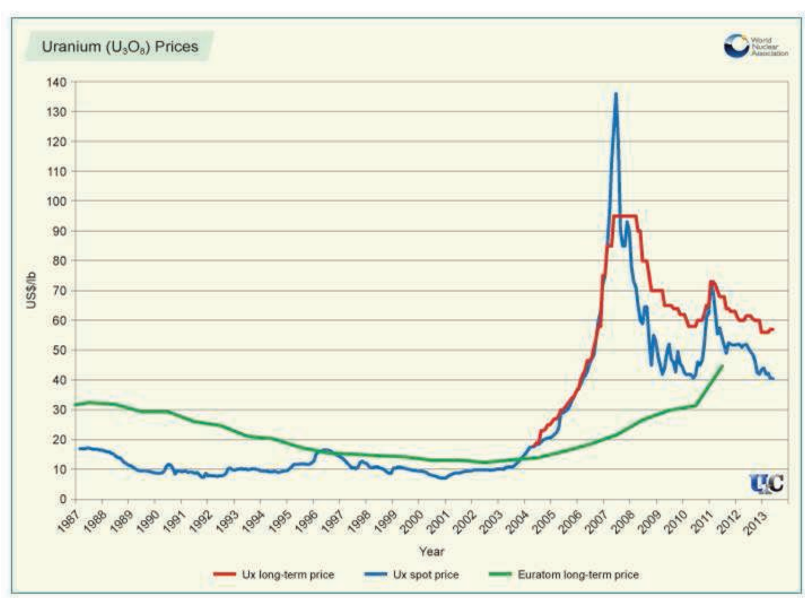
4 URANIUM PRICING MECHANISM

There is no uranium commodity exchange or common trading platform where international market prices for uranium can be determined. According to USGS, worldwide uranium purchases fall into two categories: spot purchases (delivery within one year), and contracts (medium-and long-term delivery).

Monthly and weekly price indicators for uranium products are generally used in spot transaction pricing. The Ux Consulting Company LLC (http://www.uxc.com), TradeTech (http://www.uranium.info/) and the Euratom Supply Agency (http://ec.europa.eu/euratom/) all track uranium prices. In 2011, the volume of uranium in the spot market was approximately 16,000 tonnes uranium (equivalent to approximately 41.6 million pounds of U_3O_8), or 20% total demand and 30% of production, according to USGS. The spot market exists through various traders, brokers, producers and utilities on a bilateral basis.

Most natural uranium is sold through long-term contracts. These contracts are typically at a fixed price with provisions for fluctuations in market price, and the duration of long-term contracts depends upon where the buyer is physically situated. The predominant pricing mechanism is through a base-escalation method, according to which the contract price is equal to the sum of (i) a percentage of base price (determined at the time of contracting, as adjusted for an escalation) and (ii) a percentage of the spot price published the month preceding the month of delivery. An alternative to the base-escalation method is to determine the contract price using a market mechanism, namely, the spot price for uranium at the end of the month prior to the delivery month. In the cases where the market mechanism is applied, minimum and maximum price limits are set.

Generally, long-term contract prices are higher than spot prices, mainly because the base price used is often greater than or equal to spot price indicators at the time the contract is executed. However, because of the volatile nature of spot prices, spot prices may exceed long-term prices at any given time. For price indicators, the industry relies on market research because these contracts are generally not publicly available; the exception being contracts in European Union countries which are reviewed by the EURATOM Supply Agency.



Source: WNA

5 MARKET OUTLOOK

The global uranium reactor demand is estimated to increase by approximately 50% during the period from 2013 to 2030 according to 2013 WNA Market Report.

As a result of the significant growth in uranium demand worldwide, there would be a substantial need for significant additional uranium production from existing and new operations. This outcome is clearly possible, given the good underlying uranium resource base, but will require a continuation of recent investment in production capacity.

The dependence of uranium supply on large individual uranium properties and countries adds uncertainty to estimates of future supply. Major producers Cameco, Areva, KazAtomProm, Rio Tinto, ARMZ/Uranium One, and BHP Billiton are expected to continue to maintain their large market share into the future.

Unless new large-capacity mines come online in the near future, prices are expected to rise, and this increase should at the same time stimulate additional exploration and make some unconventional resources more attractive.

Shareholders should carefully consider all of the information set out in this circular, including the risks and uncertainties described below before making a decision on how to vote on the resolution relating to the Share Purchase Agreement at the EGM. The business, financial condition and results of operations of the Enlarged Group could be materially and adversely affected by any of these risks.

To the best of the Directors' knowledge, the Directors consider the following risks to be the most significant in respect of the operation of Semizbay-U. However, the risks listed below do not purport to comprise all those risks associated with the operation of Semizbay-U and are not set out in any particular order of priority. Additional risks and uncertainties not currently known to the Directors may also have an adverse effect on Semizbay-U's business. If any of the following risks actually occurs, Semizbay-U's business, financial condition, capital resources, results and/or future operations could be materially and adversely affected.

1 RISKS RELATING TO OPERATION IN THE REPUBLIC OF KAZAKHSTAN

(i) Semizbay-U is exposed to the general risks associated with operation in the Republic of Kazakhstan as an emerging market.

The Republic of Kazakhstan, as an emerging market, in which Semizbay-U operates and does business is generally subject to greater risks, including legal, regulatory, economic and political risks, than more developed markets.

An emerging economy, such as the Republic of Kazakhstan, is generally subject to rapid change, and the information set out in this circular may quickly become outdated. Accordingly, Shareholders should exercise particular care in evaluating the risks involved and should consider whether, in light of these risks, he should vote in favour of the resolution relating to the Share Purchase Agreement. Shareholders are encouraged to consult with their own legal and financial advisers on the risks involved.

(ii) Semizbay-U could face enhanced risks and uncertainties upon any change in government or any change in the political climate in the Republic of Kazakhstan.

Semizbay-U could face enhanced risks and uncertainties upon any change in government or any change in the political climate in the Republic of Kazakhstan. For example, a new government with whom Semizbay-U may not have a strong working relationship may seek to re-nationalise Semizbay-U's assets, terminate Semizbay-U's subsoil use contracts and challenge the tax, legal or other arrangements affecting Semizbay-U's operations, which could have a material adverse effect on Semizbay-U's business, financial condition, results of operations and prospects.

(iii) Regional instability could potentially have a material adverse effect on Semizbay-U's operations in the Republic of Kazakhstan.

Since the break-up of the Soviet Union, a number of former Soviet republics have experienced periods of political instability, civil unrest, military action or incidents of violence. The Republic of Kazakhstan has not experienced any such unrest and, to date, this regional instability has not affected the Republic of Kazakhstan or Semizbay-U's operations in the Republic of Kazakhstan. That being said, there is a risk that future political instability, civil unrest, continued violence in the region or the challenge or revocation of the subsoil use licence could potentially have an adverse effect on Semizbay-U's business, financial condition, results of operations or prospects.

(iv) The laws and regulations of the Republic of Kazakhstan are developing and uncertain, the change of which could require Semizbay-U to incur substantial expenditures or subject Semizbay-U to material liabilities or other sanctions.

The laws and regulations of the Republic of Kazakhstan relating to foreign investment, subsoil use, licensing, companies, customs, currency, capital markets, environmental protection, pensions, insurance, banking, taxation and competition are still developing and are uncertain. Any change in the laws of the Republic of Kazakhstan could result in increased compliance costs. Moreover, many such laws provide regulators and officials with substantial discretion in their application, interpretation and enforcement of the laws.

In the Republic of Kazakhstan, all subsoil reserves belong to the State. Subsoil use rights are not granted in perpetuity, and any renewal must be agreed before the expiration of the relevant contract or licence. The rights that the State has granted to Semizbay-U are not granted in perpetuity. The 2010 Subsoil Law states that either the Ministry of Oil and Gas or the Ministry of Industry and New Technologies (each a Competent Body for the oil and gas and mining industry, respectively) are entitled to unilaterally terminate a subsoil use contract in case of more than two violations of contractual obligations or obligations set out in project documents, and the termination provisions contained in the 2010 Subsoil Law are not qualified by the gravity of the breach in question. Hence, depending on circumstances, a minor breach not cured by a subsoil user within prescribed time could conceivably lead to severe consequences, such as termination of the subsoil use rights, and, as the 2010 Subsoil Law is relatively new, there are few precedents that would make the consequences of a breach more predictable. For example, a non-compliance with a work programme not cured by a subsoil user within prescribed time may lead to termination of the relevant subsoil use contract at the discretion of the Competent Body.

Subsoil use laws and regulations in the Republic of Kazakhstan impose a very broad range of continuing obligations and restrictions on Semizbay-U and require Semizbay-U to incur significant capital expenditures and compliance costs. These significant expenditures and costs are incurred on an ongoing basis and Semizbay-U will be obliged to incur them also in the future. The relevant laws and regulations are often unclear and vague with regards to the extent of the obligations and restrictions that are relevant to Semizbay-U. In addition, regulatory authorities in the Republic of Kazakhstan exercise considerable discretion in the interpretation and enforcement of these laws and regulations, at times in a manner that is inconsistent with the relevant legislation and the previous practice.

As mentioned above, in the absence of a material qualification under the relevant laws and regulations, such breaches could conceivably lead to severe consequences, such as termination of the subsoil use rights. As far as the Directors are aware, no such non-compliance (or alleged non-compliance) has had any material adverse effect on operations of Semizbay-U in the past as a whole but there is no guarantee that such situation will not occur in the future.

Semizbay-U is required to obtain, on an ongoing basis, all permits as are required by the laws of the Republic of Kazakhstan. Failure to obtain any such permits could have a material adverse effect on Semizbay-U's business, financial condition, results of operations and prospects. Given the Republic of Kazakhstan's legislative, judicial and administrative history, it is not possible to predict the effect of current and future legislation on Semizbay-U's business. The ongoing rights of Semizbay-U under its subsoil use contracts and licences and other agreements may be susceptible to revision or cancellation, and legal redress in relation to such revocation or cancellation may be uncertain. Any changes to the rights of Semizbay-U under its subsoil use contracts and licences (and any other relevant legislative changes) or increased compliance costs could have a material adverse effect on Semizbay-U's business, financial condition, results of operations and prospects.

(v) Resource extraction operations in the Republic of Kazakhstan are highly regulated including, among other things, the issuance and renewal of contracts and licences.

The regulatory authorities in the Republic of Kazakhstan exercise considerable discretion in the interpretation and enforcement of local laws and regulations. At times, authorities use this discretion to enforce rights in a manner that is inconsistent with the relevant legislation, particularly with respect to licence issuance, renewal and compliance. Requirements imposed by regulatory authorities may be costly and time-consuming and may result in delays in the commencement or continuation of production operations. Any violation of the Republic of Kazakhstan law may result in the suspension of operations or revocation of permits or licences.

Regulatory authorities may impose more onerous requirements and obligations than those currently in effect. Although Semizbay-U is unable to predict the costs of compliance with such amended laws, regulations and permits, the costs could be substantial and could materially and adversely affect Semizbay-U's business, financial condition, results of operations and prospects.

Semizbay-U operates in the uranium industry which is subject to additional strict requirements and regulations. Failure to comply with these regulations may have material adverse effect on the business and operations of Semizbay-U.

(vi) Title or lease rights to Semizbay-U's immovable property, including land and/or production facilities, may be challenged.

Title or lease rights in some former Soviet republics have been subject to legal challenge. Title or lease rights to Semizbay-U's immovable properties, including land and/or production facilities, may be challenged, which may prevent or severely curtail Semizbay-U's use of the affected properties. Some of the properties which Semizbay-U has acquired may be subject to prior claims or unregistered agreements, and title may be affected by undetected defects. There can be no assurance that title or lease rights to some of Semizbay-U's properties will not be challenged or impugned.

(vii) Non-compliance with the Republic of Kazakhstan Local Content Requirements may adversely affect Semizbay-U's subsoil use operations.

In 2009, the Competent Body requested subsoil users to amend their subsoil use contracts to specify a percentage ratio between the Republic of Kazakhstan and foreign goods and services acquired by subsoil users and the percentage of the Republic of Kazakhstan employees which the subsoil users employ. The volume of goods and services of the Republic of Kazakhstan origin and the percentage of the Republic of Kazakhstan employees employed by a subsoil user are referred to as the Local Content Requirements. Non-compliance with the Local Content Requirements is considered as a breach of a subsoil use contract and may have material adverse impact on operations of Semizbay-U.

The 2010 Subsoil Law states that a subsoil users and its subcontractors must procure goods, work, and services from the Republic of Kazakhstan producers if such goods can comply with requirements of the Republic of Kazakhstan technical regulations, and if such work and services can comply with standards, price and quality parameters of similar work and services provided by non-residents. Subsoil users are required to procure goods, work and services in accordance with the special rules approved by the government, which promulgated specific requirements for such items through tender procedures and content of supply agreements.

The 2010 Subsoil Law requires subsoil users to give preference to the Kazakhstan citizens in terms of jobs and business opportunities in the subsoil use operations. In addition, subsoil users must finance training and retraining of the Republic of Kazakhstan citizens that are engaged in operations under a subsoil use contract. Also, a subsoil user is required to notionally reduce the price offered by a Republic of Kazakhstan producer by 20 per cent., provided that its goods, work, and services meet the tender requirements and the Republic of Kazakhstan technical regulations.

The 2010 Subsoil Law imposes certain filing and reporting obligations on subsoil users with respect to compliance with the Republic of Kazakhstan content requirements. Subsoil users must file annual programmes for acquisition of goods, work, and services for the forthcoming year, report on purchased goods, work, and services on a quarterly basis, and report on performance of obligations related to the Republic of Kazakhstan content in personnel.

The 2010 Subsoil Law requires subsoil users to procure goods, work and services for subsoil use operations in accordance with a procurement procedure established by the government. Expenditures incurred by a subsoil user that fail to comply with the procurement requirements shall not be considered expenditures incurred in fulfilment of the subsoil user's contractual obligations under their subsoil use contract. If a subsoil user is unable to fulfil the expenditure requirement, this may be viewed as a breach of its subsoil use contract, which may lead to unilateral termination of a subsoil use contract pursuant to the procedures set out in the Republic of Kazakhstan legislation.

(viii) Some of Semizbay-U's deposits are deposits of strategic significance under the 2010 Subsoil Law and under certain circumstances subsoil use contracts related to those deposits may be subject to termination.

The mines operated by Semizbay-U in the Republic of Kazakhstan (namely, Semizbay Mine and Irkol Mine) are included in the List of Strategic Deposits approved by the government. If the actions of the subsoil user have caused significant change to the economic interests of the Republic of Kazakhstan threatening national security, subsoil use contracts relating to such strategic deposits can be unilaterally terminated by the Competent Body if (i) within two months after receipt of a notification by the Competent Body to amend the contract, the subsoil user does not agree to negotiate the amendments; (ii) within four months after a subsoil user has agreed to conduct negotiations to amend the contract, the parties have not reached an agreement on the amendments; or (iii) within six months after an agreement on restoration of economic interests of the Republic of Kazakhstan is reached, the parties have not executed the amendments to the contract. Furthermore, at the initiative of the government, the Competent Body has the right to repudiate a subsoil use contract unilaterally, with two months' notice, if the actions of the subsoil user have caused significant change to the economic interests of the Republic of Kazakhstan threatening national security.

(ix) The taxation system in the Republic of Kazakhstan and the interpretation and application of tax laws and regulations are evolving, which significantly increases the risks with respect to Semizbay-U's operations and investment in the Republic of Kazakhstan.

As tax legislation in the Republic of Kazakhstan has been in effect for only a relatively short time, tax risks in the Republic of Kazakhstan are substantially higher than the tax risks in countries with more developed tax systems. The Republic of Kazakhstan tax laws are not always clearly determinable and have not always been applied in a consistent manner. In addition, the tax laws continue to evolve. The uncertain application and evolution of tax laws create the risk of additional and substantial tax payments by Semizbay-U, which could have a material adverse effect on Semizbay-U's business, financial condition, results of operations and prospects. Such uncertainties may, in particular, relate to the valuation of the taxable base for excess profits tax purposes and the application of transfer pricing policies. Since January 2001, Kazakhstan transfer pricing rules have required tax authorities to make transfer pricing adjustments in a wide range of situations involving cross-border transactions, most typically among related parties. Semizbay-U's historical trading relationships with CGNPC-URC could fall within these transfer pricing rules. Even among parties that are not related, prices may still be subject to adjustment if they deviate from market prices, and an adjustment of prices undertaken by tax authorities may result in an increase in the amount of tax and other mandatory payments that become payable. Due to the ambiguities in the legislation and the uncertainties in its interpretation, the relevant tax and customs authorities may challenge Semizbay-U's prices and propose adjustments.

Tax regulation and compliance is subject to review and investigation by authorities who may impose severe fines, penalties and interest charges. The tax authorities have a right to impose additional tax assessments for five years after the end of the relevant fiscal period. With respect to subsoil users, tax authorities have the power to revise amounts of excess profit and other taxes and payments calculated on the basis of an internal norm of profitability and an internal norm of profit or income index throughout the duration of their contracts and up to five years after their expiry. Accordingly, the calendar years 2009 to 2013 remain open to further assessments, while certain payments by subsoil users (e.g. excess profits tax) may be assessed in respect of the whole period of effectiveness of the applicable subsoil use contract.

2 RISKS RELATING TO THE OPERATION OF SEMIZBAY-U

In accordance with Chapter 18 of the Listing Rules, BMA identified in its Competent Person's Report certain risks relating to the operation of Semizbay-U. Set out below are the risks which are considered material to the operation of Semizbay-U.

(i) Risks relating to operation and development of Semizbay-U

(a) Risks relating to commodity price

BMA indicated that there is a general risk of variation in spot price on the contracts related to the spot price. Starting in 2013, all of Semizbay-U's uranium products were sold to KAP and CGNPC-URC in accordance with the Off-take Agreement, in which the price of uranium products sold are determined based on certain discount over uranium spot price (as published by consulting companies recognized in the Republic of Kazakhstan as the official sources of uranium spot price) only, which was calculated based on a pre-determined formula provided under the Off-take Agreement.

(b) Risks relating to operating costs

BMA indicated that the cost is dominated by sulphuric acid and key materials as well as repayment for wells field construction. The costs remain increasing in the first few years due to price inflation. The mining extraction tax (22%) and corporation income tax (20%) are the dominant and substantial taxation factors which could have relatively higher and significantly impact on the project's economy.

BMA further indicated that, for the Semizbay Mine, although the pregnant uranium content is low, the acid consumption in the leaching process is high, which caused high operating costs. This would require strengthening of hydrogeology research, technical studies and operational management.

(ii) Risks relating to geology

For the Semizbay Mine, BMA indicated that there are six ore bodies which show different geological and hydro geological conditions and varying mining parameters. Further exploration work and continuous technical studies are to be conducted to adjust the process and design parameters, such as different sulphuric acid dose is to be employed at different acidification/oxidation stages and production increased gradually.

The deposit of the Semizbay Mine is an ancient valley-type uranium deposit with complex morphological characteristics; therefore it is difficult to delineate the mineralization. Some resources risk exists, although sufficient infilling drilling work of the No. 3 ore body has delineated the ore body outline. More drilling holes would be required to fully delineate mineralisation.

(iii) Risks relating to resource and reserve estimation

BMA reported that the dataset used in resource modelling for the Irkol Mine and the Semizbay Mine is based on the digitized figures input from previous cross section figures and there is no available original drilling dataset. Due to the lack of the original geological exploration data, all boreholes are treated as vertical hole, thus some errors in the digitization are deemed to occur.

(iv) Risks relating to ISR leaching

For the Irkol Mine and the Semizbay Mine, the cold weather at site in winter season causes serious freezing of wells and halts pumping of liquid resulting in lower uranium content in pregnant solution. Well preparation and effective measure for prevention of freezing especially in winter weather is essential.

For the Irkol Mine and the Semizbay Mine, the mining parameters for ISR leaching production process may be subjected to significant fluctuations and deviations, especially in terms of the uranium content of pregnant solution and acid consumption. Ongoing technical studies on the leaching condition in the future design and operation of production should be addressed as priority and sound technical management is necessary.

For the Irkol Mine and the Semizbay Mine, the previous production identified significantly reduced uranium content in pregnant solution and longer leaching duration time than planned. Low uranium content but larger volume of pregnant solution would cause higher processing costs and lower annual production rate. It would require strengthening of hydrogeology research, technical studies and operational management.

For the Irkol Mine, the deposit has a characteristic big and thick in-continuous aquifer with high water flow. There is no impermeable bottom in some ore bodies. These factors result in lower uranium content in pregnant solution. Dynamic studies and proper management of water flow and uranium loss would be required.

For the Irkol Mine, a regional river flows in the mine lease area crossing No. 4 and 5 ore bodies which may partly affect economic viability although the impacted proportion of the mine area has not been identified as no mining planning has been projected yet. The river is also in the vicinity to No. 1, 2 and 3 ore bodies, which would cause environmental risk in mining.

For the Semizbay Mine, the exploration and drilling work were undertaken by outsourced manpower which sometimes may cause ineffective or untimely and insufficient supplies of acid and other materials. Engagement in management of contracts and materials supply and technical support would be necessary.

(v) Risks relating to environmental and occupational health and safety

BMA indicated that the main potential environment risk for the Irkol Mine and the Semizbay Mine is the leakage of pollutants from landfill site, and the leakage will be accompanied by radiation contamination of soils that require remediation and subsequent disposal.

The most significant radiation risk on the industrial site of ISR operation are emergency spills of productive solutions with average uranium content of about 80 mg/l in the building of the central pumping station. The results of calculation of concentrations at emergency straits performed show that the concentration of radionuclides in the air of the working area in the building of central nervous system does not exceed the permissible average volume. Therefore, emergency building pumping straits will not have a significant impact on staff and the public.

1 MINERAL ASSETS

According to the subsoil use contracts for the Irkol Mine and the Semizbay Mine, Semizbay-U owned two mines, namely the Irkol Mines and the Semizbay Mines as at the Latest Practicable Date.

(i) The Irkol Mine

The Irkol Mine is geographically located in the Kyzylorzhinsk area, 20 km from Chiili town, the Republic of Kazakhstan. The mining lease area covers 44 square kilometres at depth of from 400 to 700 m from the surface as stated in the lease document, 2008 report. The Irkol deposit was discovered in 1971, and exploration work was resumed in 1975-1977. In 2007, commercial operations of the Irkol deposit using ISR extraction method and yellow cake commenced; full production was commissioned in 2010.

During 2007 to 2013, approximately 5 to 8 new blocks with total of 1,618 wells were developed, of which 1,396 wells are actively run to achieve a scheduled constant production rate. The forecast extraction recovery of 90% in ISR leaching is reasonable based on the extensive operational results. The forecast overall pregnant leach solution uranium grade is approximately 46-61 mg/L.

JORC Ore Reserves of 13,000 tonnes uranium and 11,000 tonnes uranium recoverable by the processing plant was estimated by BMA as of 31 December 2013. Based on an average annual production of 711 tonnes uranium (equivalent to approximately 1.85 million pounds of U_3O_8), the mining life has expected years to 2029 by BMA's schedule. The projected mining facilities are sufficient for achieving the proposed production forecast and the processing capacity is in place.

(ii) The Semizbay Mine

The Semizbay Mine is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan. As per the lease document from the 2008 report, the mining lease area covers 27.2 square kilometres at depth of 180 m from the surface. The Semizbay deposit was discovered in 1973, and testing of ISR mining was conducted from April 1984 to 1989.

The overall design of Semizbay Project has an annual production capacity of 508 tonnes uranium (equivalent to approximately 1.32 million pounds of U_3O_8). The construction has been completed in October 2007 and the treatment plant was commissioned in 2009. The forecast uranium recovery of 85% for the Ore Reserves by ISR leaching is achievable with pregnant leach solution uranium grades of between 37.6 mg/L to 68.0 mg/L at an average grade of 44.0 mg/L.

JORC Ore Reserves of the Semizbay deposits estimated by BMA as of 31 December 2013 are approximately 11,000 tonnes uranium and 10,000 tonnes uranium recovered by the processing plant. Based on an average annual production of 508 tonnes uranium (equivalent to approximately 1.32 million pounds of U_3O_8), there is more than enough Ore Reserves for a mine life to 2032 by BMA's schedule.

2 NO MATERIAL ADVERSE CHANGE

No material adverse changes have occurred from the effective date of the Competent Person's Report, being 31 December 2013, up to the Latest Practicable Date.

3 NO LEGAL CLAIMS OR PROCEEDINGS

As at the Latest Practicable Date, no legal claims or proceedings that may have an material influence on the mining and exploration rights of the two mines owned by Semizbay-U and/or the business operations and financial positions of Semizbay-U are known to the Directors to be present, on-going, pending or threatened by any third party against Semizbay-U or vice versa.

In addition, there are no land claims of material importance that may exist over the land on which exploration or mining activity of the two mines owned by Semizbay-U is being carried out.

4 OTHER MATTERS CONCERNING SEMIZBAY-U

(i) Mining rights and other licenses/permits required under the laws of the Republic of Kazakhstan

(a) the subsoil use contract

Under the Republic of Kazakhstan's Subsoil and Subsoil Use Law, in order to conduct exploration, extraction and production of natural resources, an entity needs to enter into a "subsoil use contract" with the competent body (currently, the Ministry of Industry and New Technologies in the Republic of Kazakhstan – for mining industry). A subsoil use contract is a type of title document confirming the exclusive right of a subsoil user to explore and extract natural resources within the outlined contract territory.

According to the subsoil use contracts for the Irkol Mine and the Semizbay Mine, Semizbay-U owned these two mines as at the Latest Practicable Date. So far as the Directors are aware of, Semizbay-U has duly formalized subsoil use (mining) rights with respect to the Irkol Mine and the Semizbay Mine.

With respect to Irkol Mine, Semizbay-U holds the uranium mining License SPC Series No. 1527 of 4 March 1999 and subsoil use contract dated 14 June 2005. These documents allow for the mining of uranium in Kyzy-lorda oblast, the Republic of Kazakhstan. The subsoil use (mining) rights are valid for 25 years from the date of issuance of the mining license (i.e. until 4 March 2024).

With respect to Semizbay Mine, Semizbay-U holds the subsoil use contract dated 2 June 2006. This document allows uranium mining in Enbekshildersk District, Akmoltnsk Oblast, the Republic of Kazakhstan. The subsoil use (mining) rights are valid for 25 years from the date of execution of the subsoil use contract (i.e. until 2 June 2031).

Under the Subsoil and Subsoil Use Law, term of a production subsoil use contract can be extended provided that there are no breaches of contractual obligations by a subsoil user. In order to extend a contract, it is necessary to submit extension application not later than six months prior to the expiry date of the production contract with explanation of such extension's necessity. As at the Latest Practicable Date, the Company was not aware of any issues or legal obstacles in the renewal of subsoil use contracts for Irkol Mine and Semizbay Mine.

(b) other operational licenses/permits

In addition to a subsoil use contract, an entity engaged in exploration and production of natural resources may need special operational licenses. In particular, under the Republic of Kazakhstan's Licensing Law, certain types of activity connected with high level of danger, such as the mining activities carried out by Semizbay-U, cannot be conducted without first obtaining special licenses from relevant state authorities. Such special licenses, which are considered material and relevant to Semizbay-U in its ordinary course of business, include design (technological) and/or exploitation license of mining facilities, license for extraction of natural resources, license for opening up and development of deposits by open-pit and underground methods and license for technological works at deposits.

Semizbay-U holds the state license for design and exploitation of mining facilities, processing of minerals dated 15 June 2009 (with an indefinite term of validity), which is sufficient to cover its mining operations.

Further, Semizbay-U also holds the licence for the export of its uranium products dated 23 January 2009 (with an indefinite term of validity), which is valid as of the Latest Practicable Date.

(ii) Environmental, health and safety issues

Compliance with environmental, health and safety regulations is critical for an entity engaged in mining operations in the Republic of Kazakhstan. Generally, such compliance is one of the obligations of a mining company under a subsoil use contract executed with the competent authority. Under the Kazakhstan laws, failure to comply with a subsoil use contract (including the relevant obligation to comply with environmental, social, health and safety regulations) can be the grounds for termination of the relevant subsoil use contract by the State.

With respect to the Irkol Minie, Semizbay-U holds two permits for environmental emissions, which entitle Semizbay-U to make emissions and discharges of pollutants, and to place wastes to the environment. The permits are valid until 28 December 2016 and 31 December 2017, respectively. With respect to the Semizbay Mine, Semizbay-U holds two permits for environmental emissions, which entitle Semizbay-U to make emissions and discharges of pollutants, and to place wastes to the environment. Both of the permits are valid until 31 December 2014. Semizbay-U will apply for the renewal of such permits for environmental emissions in accordance with the applicable procedures under the Laws of Republic of Kazakhstan. As at the Latest Practicable Date, the Company was not aware of any issues or legal obstacles in the renewal of such permits.

Further, Semizbay-U also holds other required licenses and permits necessary for its business operations, including the state license for works connected with stages of life cycle of nuclear energy objects dated 18 December 2008 (with an indefinite term of validity); the state license for transportation of radioactive substances within the territory of the Republic of Kazakhstan dated 17 January 2011 (with an indefinite term of validity); the state license for purchase, storage, use, transportation, delivery and destruction of precursors dated 30 October 2009 (valid until May 2019); the state license for use of devices and apparatus generating ionizing radiation dated 18 May 2009 (with an indefinite term of validity); and the state license for use of radioactive substances dated 23 January 2009 (with an indefinite term of validity). All these licenses and permits were valid and effective as at the Latest Practicable Date, and were sufficient to cover the business operations of Semizbay-U. So far as the Directors are aware, Semizbay-U has obtained all required licenses and permits to carry on its operations and mining activities.

So far as the Directors are aware, there are no environmental, social, health and safety issues or non-compliance incidents which may have material adverse impact on the operations and mining activities of Semizbay-U and mines owned by it.

(iii) Non-compliance incidents with the Republic of Kazakhstan laws, regulations and permits which may have a material adverse impact

So far as the Directors are aware, there were no non-compliance incidents with the Republic of Kazakhstan laws, regulations and permits which may have a material adverse impact on the operations and mining activities of Semizbay-U as at the Latest Practicable Date.

1 INTRODUCTION

The financial information of the Group for each of the three years ended 31 December 2011, 2012 and 2013 together with the relevant notes to the financial statements has been included in the annual reports of the Company published with the title "Annual Report 2011" dated 11 April 2012 from pages 70 to 191, "Annual Report 2012" dated 26 March 2013 from pages 65 to 179 and "Annual Report 2013" dated 25 March 2014 from pages 73 to 187, all of which have been published on the website of the Stock Exchange (http://www.hkexnews.hk) and the website of the Company (http://www.irasia.com/listco/hk/cgnmining/index.htm).

2 INDEBTEDNESS

At the close of business on the Latest Practicable Date, the Enlarged Group had (i) unsecured and unguaranteed zero coupon convertible bonds in principal amount of HK$600.00 million due on 17 August 2016 with an initial conversion price of HK$0.23 per convertible share and (ii) total future minimum lease payments under non-cancelable operating leases in respect of leased premises amounted to approximately HK$5,757,000. As at the Latest Practicable Date, all the banking facilities of the Enlarged Group has been lapsed. No bank balances or cash is pledged as collateral.

Save as aforesaid or as otherwise disclosed herein, and apart from intra-group liabilities, the Enlarged Group did not have any loan capital issued and outstanding, or authorised or otherwise created but unissued, any term loans (secured, unsecured, guaranteed or not), bank overdrafts, loans or other similar indebtedness, liabilities under acceptance or acceptable credits, debentures, mortgages, charges, hire purchase commitments, guarantees or other material contingent liabilities at the close of business on the Latest Practicable Date.

Foreign currency amounts have been translated into Hong Kong dollars at the approximate exchange rates prevailing at the close of business on the Latest Practicable Date.

3 WORKING CAPITAL STATEMENT

The Directors are of the opinion that, taking into account the business prospects, the internal resources of the Enlarged Group and the effect of the Acquisition, the Enlarged Group has sufficient working capital for its present requirements, that is for at least the next twelve months from the date of this circular.

4 FINANCIAL AND TRADING PROSPECTS

To optimise its business model, the Company will continue to position itself as a uranium resources investment and trading platform with natural uranium trading to become one of the key focuses, which in turn enhance the Group's strategic position. To strengthen its competitiveness, the Company shall devote further resources (such as human resources) to developing its natural uranium investment and trading business to facilitate its operation.

The natural uranium market is one with boundless opportunities as well as challenges. The long term economic growth of China has spurred strong demand for energy in the country and the Company expects that this growth shall be carried into the growth of the nuclear power industry, uranium or related industries. The central government has been actively promoting the development of clean energy resources, expediting the consolidation of energy structure and increasing the supply of clean energy. Nuclear power development is an irreversible trend that is strongly supported by the central government. Uranium is a key element to nuclear power production and the increase in nuclear power plants in China will go further instigating the natural uranium demand. In the long run, this will provide a better business environment and respectable return for the uranium mine investment and the development of natural uranium industry.

Affected by the Fukushima events and other macro-economic factors, the price of natural uranium remains on the low side, however, this creates opportunities for investors in natural uranium resources investment projects. Notwithstanding the low price environment, the Group was still able to generate a moderate profit from our continuing operations and our management believes that the outlook of uranium trading business remains positive going forward. The Group will continue to develop the scale of natural uranium trading business and proactively seek investment opportunities in uranium resources, accelerating the growth momentum for the Group's revenue.

On the other hand, the profitability of the pharmaceutical and food segment of the Group, affected by the keen competition in the pharmaceutical industry, continues to decline. In the foreseeable future, consolidation is expected to take place in the markets of pharmaceuticals and food in the PRC, with substantial pressure on the operating environment. The Group will reinforce its risk management and trim down the existing pharmaceutical and food business. The Company is in the process of formulating a trim down plan with respect to the existing pharmaceutical and food business. However, as of the Latest Practicable Date, the Company was not in process of negotiation with any party in this respect, neither did the Company has a concrete plan or timetable with respect to such trim-down intention.

Upon Completion, the Group will integrate its uranium trading business with upstream mining operations to maximise value and secure a stable supply of uranium. The Group endeavors to lay good foundation, endlessly pursue break through, preserve sustainable growth and create value for the shareholders.

1 ACCOUNTANTS' REPORT OF BEIJING SINO-KAZAKH

Deloitte.
德勤

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30 June 2014

The Board of Directors
CGN Mining Company Limited

Dear Sirs,

We set out below our report on the financial information (the "Financial Information") relating to 北京中哈鈾資源投資有限公司 (for identification purpose, in English, Beijing Sino-Kazakh Uranium Resources Investment Company Limited, referred to as the "Company") for each of the three years ended 31 December 2013 (the "Relevant Periods") for inclusion in the circular issued by CGN Mining Company Limited dated 30 June 2014 (the "Circular") in connection with the proposed acquisition of the 100% equity interest of the Company.

The Company is a limited liability company established in Beijing, the People's Republic of China (the "PRC"). It is principally engaged in investment project.

The Company adopts 31 December as the financial year end date. The statutory financial statements of the Company were prepared in accordance with the relevant accounting policies and financial regulations applicable to enterprises established in the PRC. The statutory financial statements of the Company for each of the years ended 31 December 2012 and 2013 were audited by Deloitte Touche Tohmastu Certified Public Accountants LLP Guangzhou Branch. The PRC statutory financial statements of the Company for the year ended 31 December 2011 was audited by Shu Lun Pan CPA LLP Guangdong Branch.

For the purpose of the preparation of this report, the directors of the Company have prepared financial statements of the Company for the Relevant Periods in accordance with the Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants (the "HKICPA") (the "Underlying Financial Statements"). We have carried out an independent audit on the Underlying Financial Statements in accordance with Hong Kong Standards on Auditing ("HKSA") issued by the HKICPA and examined the Underlying Financial Statements in accordance with the Auditing Guideline 3.340 "Prospectuses and the Reporting Accountant" as recommended by the HKICPA.

The Financial Information set out in this report has been prepared from the Underlying Financial Statements. No adjustments are considered necessary to make to the Underlying Financial Statements for the Relevant Periods for the purpose of preparing our report for inclusion in the Circular.

The Underlying Financial Statements are the responsibility of the directors of the Company who approved their issue. The directors of CGN Mining Company Limited are also responsible for the contents of the Circular in which this report is included. It is our responsibilities to compile the Financial Information set out in this report from the Underlying Financial Statements, to form an independent opinion on the Financial Information and to report our opinion to you.

In our opinion, the Financial Information together with the notes thereon gives, for the purpose of this report, a true and fair view of the state of affairs of the Company as at 31 December 2011, 2012 and 2013, and of the results and cash flows for the Relevant Periods.

A. FINANCIAL INFORMATION

STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

	NOTES	Year ended 31 December 2011 US$	2012 US$	2013 US$
Other income	5	2,894,448	6,714,658	582,964
Other gains and losses	6	346,827	(7,102,261)	(216,460)
Administrative expenses		(359,745)	(577,319)	(439,413)
Share of profit (loss) of a joint venture		23,010,625	8,752,415	(11,048,946)
Finance costs	7	(5,436,512)	(4,793,864)	(1,873,409)
Profit (loss) before taxation	8	20,455,643	2,993,629	(12,995,264)
Income tax (expense) credit	9	(3,751,876)	(1,816,822)	1,119,079
Profit (loss) for the year		16,703,767	1,176,807	(11,876,185)
Other comprehensive income (expense):				
Items that may be reclassified subsequently to profit or loss:				
Cash flow hedges:				
– Fair value losses during the year		(6,037,436)	–	–
– Reclassification adjustments for amounts recognised in profit or loss		2,222,886	1,918,987	–
– Loss reclassified to profit or loss due to ineffectiveness of cash flow hedges		–	2,474,825	–
		(3,814,550)	4,393,812	–
Item that will not be reclassified to profit or loss:				
Exchange difference arising on translation to presentation currency		(415,869)	(2,322,882)	(1,776,943)
Other comprehensive income (expense)		(4,230,419)	2,070,930	(1,776,943)
Total comprehensive income (expense) for the year		12,473,348	3,247,737	(13,653,128)

STATEMENTS OF FINANCIAL POSITION

		As at 31 December		
		2011	2012	2013
		US$	*US$*	*US$*
NON-CURRENT ASSETS				
Property, plant and equipment	*12*	2,137,877	1,954,963	1,778,210
Investment in a joint venture	*13*	214,976,682	186,975,511	42,538,118
		217,114,559	188,930,474	44,316,328
CURRENT ASSETS				
Prepayments and other receivables		714	–	–
Amount due from immediate holding company	*14*	–	–	492,053
Amount due from a fellow subsidiary	*15*	80,497	34,454	8,638
Bank balances and cash	*16*	11,715,432	6,551,144	5,329,278
		11,796,643	6,585,598	5,829,969
CURRENT LIABILITIES				
Other payables		159,958	117,442	54,389
Amount due to immediate holding company	*14*	101,676	7,745	73,374
Income tax payable		710,473	315,802	–
Bank borrowings due within one year	*17*	17,492,320	17,492,320	–
		18,464,427	17,933,309	127,763
NET CURRENT (LIABILITIES) ASSETS		(6,667,784)	(11,347,711)	5,702,206
TOTAL ASSETS LESS CURRENT LIABILITIES		210,446,775	177,582,763	50,018,534
NON-CURRENT LIABILITIES				
Bank borrowings due after one year	*17*	106,577,985	71,847,185	–
Deferred tax liabilities	*19*	3,970,437	2,194,117	982,609
Derivative financial instruments	*20*	4,364,914	4,760,285	–
		114,913,336	78,801,587	982,609
NET ASSETS		95,533,439	98,781,176	49,035,925
CAPITAL AND RESERVES				
Paid-in capital	*18*	120,995,384	120,995,384	120,995,384
Reserves		(25,461,945)	(22,214,208)	(71,959,459)
TOTAL EQUITY		95,533,439	98,781,176	49,035,925

STATEMENTS OF CHANGES IN EQUITY

	Equity attributable to owners of the Company					
	Paid-in capital *US$*	Statutory surplus reserve *US$* *(Note 1)*	Translation reserve *US$*	Hedging reserve *US$*	Retained earnings *US$*	Total *US$*
At 1 January 2011	120,995,384	749,656	(14,249,806)	(579,262)	(23,855,881)	83,060,091
Profit for the year	–	–	–	–	16,703,767	16,703,767
Other comprehensive expense for the year	–	–	(415,869)	(3,814,550)	–	(4,230,419)
Total comprehensive (expense) income for the year	–	–	(415,869)	(3,814,550)	16,703,767	12,473,348
Transfer	–	2,338,249	–	–	(2,338,249)	–
At 31 December 2011	120,995,384	3,087,905	(14,665,675)	(4,393,812)	(9,490,363)	95,533,439
Profit for the year	–	–	–	–	1,176,807	1,176,807
Other comprehensive (expense) income for the year	–	–	(2,322,882)	4,393,812	–	2,070,930
Total comprehensive (expense) income for the year	–	–	(2,322,882)	4,393,812	1,176,807	3,247,737
Transfer	–	433,894	–	–	(433,894)	–
At 31 December 2012	120,995,384	3,521,799	(16,988,557)	–	(8,747,450)	98,781,176
Loss for the year	–	–	–	–	(11,876,185)	(11,876,185)
Other comprehensive expense for the year	–	–	(1,776,943)	–	–	(1,776,943)
Total comprehensive expense for the year	–	–	(1,776,943)	–	(11,876,185)	(13,653,128)
Dividends *(Note 2)*	–	–	–	–	(36,092,123)	(36,092,123)
At 31 December 2013	120,995,384	3,521,799	(18,765,500)	–	(56,715,758)	49,035,925

Note 1: In accordance with the Articles of Association of the Company, 10% of profit for the year of the statutory financial statements prepared in accordance with the relevant accounting policies and financial regulations applicable to enterprises established in the PRC and in Renminbi ("RMB") (the "PRC Statutory Accounts") is transferred to the statutory reserve. In accordance with the PRC regulations, such statutory surplus reserve is non-distributable, but for offsetting losses and transfer to paid-in capital.

Note 2: The board of directors of the Company (the "Directors") approved the dividends distributed to the Company's shareholder in 2013, which is declared in accordance with the retained earnings shown in the PRC Statutory Accounts.

STATEMENTS OF CASH FLOWS

	For the year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Operating activities			
Profit (loss) before taxation	20,455,643	2,993,629	(12,995,264)
Adjustments for:			
Depreciation of property, plant and equipment	137,561	135,658	132,510
Release of cumulative loss on cash flow hedges	–	2,474,825	–
Share of (profit) loss of a joint venture	(23,010,625)	(8,752,415)	11,048,946
Interest income	(265,968)	(159,483)	(124,859)
Unrealized exchange (gain) loss	(45,185)	1,832,380	(460,837)
Fair value loss on derivative financial instruments	–	2,340,423	183,689
Finance costs	5,436,512	4,793,864	1,873,409
Operating cash flows before movements in working capital	2,707,938	5,658,881	(342,406)
(Increase) decrease in prepayments and other receivables	(716)	706	–
Increase in amount due from immediate holding company	–	–	(484,402)
Increase in other payables	7,431	2,166	38,361
Cash generated from (used in) operations	2,714,653	5,661,753	(788,447)
Income tax paid	–	(711,342)	(375,151)
Net cash generated from (used in) operating activities	2,714,653	4,950,411	(1,163,598)
Investing activities			
Interest received	177,180	204,199	150,161
Dividends received from a joint venture, net of withholding tax	14,505,132	28,901,324	–
Return of investment in a joint venture	–	–	130,652,593
Cash generated from investing activities	14,682,312	29,105,523	130,802,754
Financing activities			
Interest paid	(3,226,680)	(2,916,356)	(1,972,775)
Settlement of derivative financial instruments	(2,222,886)	(1,918,987)	(4,887,231)
Repayment of borrowings	(11,872,290)	(34,522,887)	(88,436,326)
(Decrease) increase in amount due to immediate holding company	(198,943)	(92,668)	66,596
Dividends paid	–	–	(36,092,123)
Net cash used in financing activities	(17,520,799)	(39,450,898)	(131,321,859)
Net decrease in cash and cash equivalents	(123,834)	(5,394,964)	(1,682,703)
Cash and cash equivalents at the beginning of the year	11,216,266	11,715,432	6,551,144
Effect of foreign exchange rate changes	623,000	230,676	460,837
Cash and cash equivalents at the end of the year, represented by bank balances and cash	11,715,432	6,551,144	5,329,278

1. BASIS OF PRESENTATION OF FINANCIAL INFORMATION

The Company was established in the People's Republic of China (the "PRC") with limited liability under the Companies Law of the PRC on 26 November 2007. Its parent is 中廣核鈾業發展有限公司 CGNPC Uranium Resources Co. Ltd. ("CGNPC-URC"), a limited liability company established in the PRC. Its ultimate holding company is 中國廣核集團有限公司 China General Nuclear Power Corporation ("CGNPC"), also established in the PRC. The address of the registered office and the principal place of business of the Company is 29F, Building A, the International Center of Times, Shao Yaoju Beili No. 101, Chaoyang District, Beijing, PRC.

The principal activity of the Company is investment project.

The Financial Information is presented in United States Dollar ("US$") while the functional currency of the Company is Kazakhstan Tenge ("KZT"). For the convenience of users of the Underlying Financial Statements, the Financial Information of the Company for each of the three years ended 31 December 2011, 2012 and 2013 has been presented in US$. The exchange rates for translating major items of the Financial Information are as follows:

	Year ended 31 December		
	2011	**2012**	**2013**
Average exchange rate for the year	148.23	150.31	153.88

	At 31 December		
	2011	**2012**	**2013**
Exchange rate at the end of the year	148.58	152.05	155.71

2. APPLICATION OF HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs")

For the purpose of preparing and presenting the Financial Information of the Relevant Periods, the Company has consistently applied all the HKFRSs which are effective for the Company's accounting periods beginning on 1 January 2013 throughout the Relevant Periods.

At the date of this report, the Company has not early applied the following new and revised HKFRSs that have been issued but are not yet effective during the Relevant Periods:

HKFRS 9	Financial instruments[3]
HKFRS 14	Regulatory deferral account[5]
Amendments to HKFRS 9 and HKFRS 7	Mandatory effective date of HKFRS 9 and Transition Disclosures[3]
Amendments to HKFRS 10, HKFRS 12 and HKAS 27	Investment entities[1]
Amendments to HKFRS 11	Accounting for Acquisitions of Interests in Joint Operations[6]
Amendments to HKAS 16 and HKAS 38	Clarification of Acceptable Methods of Depreciation and Amortisation[6]
Amendments to HKAS 19	Defined benefit plan: Employee Contributions[2]
Amendments to HKAS 32	Offsetting financial assets and financial liabilities[1]
Amendments to HKAS 36	Recoverable amount disclosures for non-financial assets[1]
Amendments to HKAS 39	Novation of derivatives and continuation of hedge accounting[1]
Amendments to HKFRSs	Annual improvements to HKFRSs 2010-2012 Cycle[4]
Amendments to HKFRSs	Annual improvements to HKFRSs 2011-2013 Cycle[2]
HK (IFRIC) – Int 21	Levies[1]

1 Effective for annual periods beginning on or after 1 January 2014.

2 Effective for annual periods beginning on or after 1 July 2014.

3 Available for application – the mandatory effective date will be determined when the outstanding phases of HKFRS 9 are finalised.

4 Effective for annual periods beginning on or after 1 July 2014, with limited exceptions.

5 Effective for first annual HKFS financial statements beginning on or after 1 January 2016.

6 Effective for annual periods beginning on or after 1 January 2016.

The Directors anticipate that the application of the above new and revised HKFRSs will have no material impact on the Company's Financial Information.

3. SIGNIFICANT ACCOUNTING POLICIES

The Financial Information has been prepared in accordance with HKFRSs issued by the HKICPA. In addition, the Financial Information includes applicable disclosures required by Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited and by the Hong Kong Companies Ordinance.

The Financial Information has been prepared on the historical cost basis except for certain financial instruments that are measured at fair values at the end of each reporting period, as explained in the accounting policies below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Company takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

The principal accounting policies adopted are set out as follows:

Investments in joint venture

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of joint ventures are incorporated in the Financial Information using the equity method of accounting. The financial statements of a joint venture used for equity accounting purposes are prepared using uniform accounting policies as those of the Company for like transactions and events in similar circumstances. Under the equity method, investments in joint ventures are initially recognised in the statement of financial position at cost and adjusted thereafter to recognise the Company's share of the profit or loss and other comprehensive income of the joint ventures. When the Company's share of losses of a joint venture exceeds the Company's interest in that joint venture (which includes any long-term interests that, in substance, form part of the Company's net investment in the joint venture), the Company discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Company has incurred legal or constructive obligations or made payments on behalf of that joint venture.

For a joint venture acquired before 1 January 2010, contingent consideration was recognised, if and only if, the contingent consideration was probable and could be measured reliably. Subsequent adjustments to contingent consideration were recognised against the cost of investment.

The requirements of HKAS 39 are applied to determine whether it is necessary to recognise any impairment loss with respect to the Company's investment in a joint venture. When necessary, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with HKAS 36 *Impairment of Assets* as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognised forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognised in accordance with HKAS 36 to the extent that the recoverable amount of the investment subsequently increases.

Property, plant and equipment

Property, plant and equipment including buildings held for use in the production or supply of goods or services, or for administrative purposes are stated in the statement of financial position at cost less subsequent accumulated depreciation and accumulated impairment losses, if any.

Depreciation is recognised so as to write off the cost of items of property, plant and equipment less their residual values over their estimated useful lives, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in profit or loss.

Financial instruments

Financial assets and financial liabilities are recognised in the statement of financial position when an entity becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets or financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss ("FVTPL") are recognised immediately in profit or loss.

Financial assets

The Company's financial assets are mainly classified as loans and receivables.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial asset and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or, where appropriate, a shorter period to the net carrying amount on initial recognition.

Interest income is recognised on an effective interest basis for debt instruments when it is probable that the economic benefits will flow to the Company and the amount of income can be measured reliably.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Subsequent to initial recognition, loans and receivables (including other receivables, amounts due from immediate holding company and a related company and bank balances and cash) are carried at amortised cost using the effective interest method, less any identified impairment losses on financial assets.

Impairment of loans and receivables

Loans and receivables are assessed for indicators of impairment at the end of the reporting period. Loans and receivables are considered to be impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the loans and receivables, the estimated future cash flows of the loans and receivables have been affected.

Objective evidence of impairment could include:

- significant financial difficulty of the issuer or counterparty; or

- breach of contract, such as default or delinquency in interest or principal payments; or
- it becoming probable that the borrower will enter bankruptcy or financial re-organisation.

The amount of impairment loss recognised is the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the loans and receivables' original effective interest rate.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. Changes in the carrying amount of the allowance account are recognised in profit or loss. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited to profit or loss.

If, in a subsequent period, the amount of impairment loss decreases and the decrease can be related objectively to an event occurring after the impairment losses was recognised, the previously recognised impairment loss is reversed through profit or loss to the extent that the carrying amount of the asset at the date the impairment is reversed does not exceed what the amortised cost would have been had the impairment not been recognised.

Financial liabilities and equity instruments

Debt and equity instruments issued by an entity are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements entered into and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of the Company after deducting all of its liabilities. Equity instruments issued by Company are recognised at the proceeds received, net of direct issue costs.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial liability or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Interest expense is recognised on an effective interest basis.

Financial liabilities at FVTPL

Financial liabilities are classified at FVTPL when the financial liabilities are held for trading on initial recognition.

A financial liability is classified as held for trading if:

- it has been acquired principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is a part of a portfolio of identified financial instruments that the Company manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on remeasurement recognised in profit or loss. The net gain or loss recognised in profit or loss excludes any interest paid on the financial liabilities and is included in the other gains and losses line item. Fair value is determined in the manner described in note 23.

Other financial liabilities

Other financial liabilities including other payables, amount due to immediate holding company, and bank borrowings are subsequently measured at amortised cost, using the effective interest method.

Derivative financial instruments and hedging

Derivatives are initially recognised at fair value at the date when a derivative contract is entered into and are subsequently measured to their fair value at the end of the reporting period. The resulting gain or loss is recognised in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

Hedge accounting

The Company designates certain derivatives as hedges of the cash flow of floating-rate bank borrowings (cash flow hedges).

At the inception of the hedging relationship the Company documents the relationship between the hedging instrument and the hedged item, along with its risk management objectives and its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Company documents whether the hedging instrument that is used in a hedging relationship is highly effective in offsetting changes in cash flows of the hedge item.

Cash flow hedges

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges are recognised in other comprehensive income and accumulated in hedging reserve. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss and is included in the "other gains or losses" line item.

Amounts previously recognised in other comprehensive income and accumulated in equity (hedging reserve) are reclassified to profit or loss in the periods when the hedged item is recognised in profit or loss, in the same line of the statement of profit or loss and other comprehensive income as the recognised hedged item.

Hedge accounting is discontinued when the Company revokes the hedging relationship, when the hedging instrument expires or is sold, terminated, or exercised, or when it no longer qualifies for hedge accounting. Any gain or loss recognised in other comprehensive income and accumulated in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in profit or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognised immediately in profit or loss.

If a hedge of a forecast transaction subsequently results in the recognition of a financial asset or a financial liability, the associated gains or losses that were recognised in other comprehensive income shall be reclassified from other comprehensive income to profit or loss as a reclassification adjustment in the same period or periods during which the hedged forecast cash flows affects profit or loss.

Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the terms of a debt instrument.

Financial guarantee contracts issued by the Company are initially measured at their fair values and, if not designated as at FVTPL, are subsequently measured at the higher of:

(i) the amount of obligation under the contract, as determined in accordance with *HKAS 37 Provisions, Contingent Liabilities and Contingent Assets*; and

(ii) the amount initially recognised less, where appropriate, cumulative amortisation recognised in accordance with the revenue recognition policies.

Derecognition

The Company derecognises a financial asset only when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another entity.

On derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognised in other comprehensive income is recognised in profit or loss.

The Company derecognises financial liabilities when the Company's obligations are discharged, cancelled or expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

Impairment losses on tangible assets

At the end of the reporting period, the Company reviews the carrying amounts of its tangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset is estimated to be less than its carrying amount, the carrying amount of the asset is reduced to its recoverable amount. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset in prior years. A reversal of an impairment loss is recognised as income immediately.

Foreign currencies

In preparing the Financial Information of the Company, transactions in currencies other than the functional currency of the Company (foreign currencies) are recorded in the functional currency (i.e. the currency of the primary economic environment in which the Company operates) at the rates of exchanges prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences arising on the settlement of monetary items, and on the retranslation of monetary items, are recognised in profit or loss in the period in which they arise.

For the purposes of presenting the Financial Information, the assets and liabilities of the Company are translated from the functional currency of the Company (i.e. KZT) into the presentation currency of the Company (i.e. US$) using exchange rates prevailing at the end of each reporting period. Income and expenses items are translated at the average exchange rates for the year. Exchange differences arising, if any, are recognised in other comprehensive income and accumulated in equity under the heading of translation reserve.

Leasing

The Company as lessor

Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets until such time as the assets are substantially ready for their intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

Government grants

Government grants are not recognised until there is reasonable assurance that the Company will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Company recognises as expenses the related costs for which the grants are intended to compensate.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Company with no future related costs are recognised in profit or loss in the period in which they become receivable.

Retirement benefit costs

Payments to state-managed retirement benefit schemes are recognised as an expense when employees have rendered service entitling them to the contributions.

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year. Taxable profit differs from "profit before taxation" as reported in the statement of profit or loss and other comprehensive income because it excludes items of income or expense that are taxable or deductible in other years and it further excludes items that are never taxable or deductible. The Company's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the Financial Information and the corresponding tax base used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary difference to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Such assets and liabilities are not recognised if the temporary difference arises from goodwill or from the initial recognition (other than in a business combination) of other assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit.

Deferred tax liabilities are recognised for taxable temporary differences associated with investment in a joint venture, except where the Company is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of the reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realised, based on tax rate (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Company expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Current and deferred tax are recognised in profit or loss.

4. KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Company's accounting policies, which are described in note 3, the Directors are required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period, that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Impairment loss on investment in a joint venture

At the end of the reporting period, the Company reviews the carrying amounts of investment in a joint venture to determine whether there is any indication that the investment has suffered an impairment loss. If any such indication exists, the recoverable amount of the investment is estimated in order to determine the extent of the impairment loss, if any. The determination of recoverable amount of investment in a joint venture involves estimates as to: (1) future revenues based on forecasted uranium prices; (2) actual production volume of uranium mines held by the joint venture; (3) exchange rate between Tenge, the currency of the Republic of Kazakhstan, and US$; (4) the discount rate to be applied to such revenues and costs for the purpose of deriving a recoverable amount. If the recoverable amount of the investment is estimated to be less than its carrying amount, the carrying amount of the investment is reduced to its recoverable amount. An impairment loss is recognised immediately in profit or loss. The carrying amount of investment in a joint venture is US$214,976,682, US$186,975,511, US$42,538,118 as at 31 December 2011, 2012 and 2013 respectively.

Income taxes

As at 31 December 2011, 2012 and 2013, the aggregate amount of deductible temporary differences and unused tax losses are approximately US$4,394,000, US$4,754,000 and US$8,062,000, respectively. No deferred tax asset has been recognised due to the unpredictability of future profit streams. The realisability of the deferred tax asset mainly depends on whether sufficient future profits or taxable temporary differences will be available in the future. In cases where the management of the Company estimates sufficient profits are available in the future period, deferred tax assets will be recognised at that time.

5. OTHER INCOME

	Year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Interest income from banks and a financial institution	265,968	159,483	124,859
Government grants	2,628,480	6,555,175	–
Rental income, net of business tax	–	–	458,105
	2,894,448	6,714,658	582,964

The above government grants have been received in the relevant periods to compensate the interests incurred in previous years on the long-term bank borrowings.

6. OTHER GAINS AND LOSSES

	Year ended 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Net foreign exchange gains (losses)	346,827	(2,287,013)	(32,771)
Release of cumulative loss on hedging instruments of cash flow hedges	–	(2,474,825)	–
Fair value loss on derivative financial instruments	–	(2,340,423)	(183,689)
	346,827	(7,102,261)	(216,460)

7. FINANCE COSTS

	Year ended 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Interest on bank borrowings – not wholly repayable within five years	3,213,626	2,874,877	1,873,409
Fair value losses reclassified from equity to profit or loss on interest rate swaps designated as cash flow hedges of floating-rate borrowings	2,222,886	1,918,987	–
	5,436,512	4,793,864	1,873,409

8. PROFIT (LOSS) BEFORE TAXATION

	Year ended 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Profit (loss) before taxation has been arrived at after charging:			
Directors' emoluments *(see note 11)*	–	–	–
Salaries and other benefits	134,500	105,633	73,889
Retirement benefit schemes contributions	11,390	9,352	7,874
Total staff costs	145,890	114,985	81,763
Auditors' remuneration	10,833	13,507	4,846
Depreciation of property, plant and equipment	137,561	135,658	132,510

9. INCOME TAX EXPENSE (CREDIT)

	Year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Current tax:			
PRC Enterprise Income Tax			
– current year	693,253	310,707	–
– under provision in prior year	–	–	54,562
Kazakhstan Income Tax	1,611,681	3,211,258	–
	2,304,934	3,521,965	54,562
Deferred tax *(note 19)*	1,446,942	(1,705,143)	(1,173,641)
Income tax expense (credit)	3,751,876	1,816,822	(1,119,079)

Under the Law of PRC on Enterprise Income Tax (the "EIT Law") and Implementation Regulation of the EIT Law, the tax rate of the Company is 25% from 1 January 2008.

Pursuant to the tax law of the Republic of Kazakhstan, withholding income tax is levied on 10% of profit before distributed to overseas investors. The above Kazakhstan Income Tax is withheld by the joint venture when 49% of total dividends were distributed to the Company by the joint venture.

The income tax expense for the Relevant Periods can be reconciled to profit before taxation as follows:

	Year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Profit (loss) before taxation	20,455,643	2,993,629	(12,995,264)
Taxation at PRC Enterprise Income (Tax rate of 25%)	5,113,911	748,407	(3,248,816)
Tax effect of exchange differences *(Note)*	1,536,250	551,305	(332,289)
Tax effect of share of (profit) loss of a joint venture	(5,752,656)	(2,188,104)	2,762,237
Withholding income tax recognised on share of profit (loss) of a joint venture	2,859,894	1,506,115	(1,173,641)
Tax effect of tax losses and deductible temporary differences not recognised	–	1,188,634	824,612
Underprovision in prior year	–	–	54,562
Others	(5,523)	10,465	(5,744)
Income tax expense (credit) for the year	3,751,876	1,816,822	(1,119,079)

Note: The taxable (deductible) exchange gain (loss) of approximately US$6,145,000, US$2,205,000 and (US$1,329,000) for the Relevant Periods respectively were recognised in PRC Statutory Accounts, but did not exist in the Underlying Financial Statements of the Company.

10. EARNINGS PER SHARE

No earnings per share information is presented, as its inclusion, for the purpose of this report, is not considered meaningful.

11. DIRECTORS' AND EMPLOYEES' REMUNERATION

(a) Directors' emoluments

The Directors of the Company are also those of the holding company. No directors' emoluments are borne by the Company as the Company does not have operations other than investment holding.

(b) Employees' emoluments

The Company had two, one and one employee other than the Directors of the Company during the years ended 31 December 2011, 2012 and 2013 respectively. The emoluments of these individuals, which individually less than HK$1,000,000 (equivalent to US$127,194), for the years ended 31 December 2011, 2012 and 2013 are as follows:

	Year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Salaries and allowances	134,500	105,633	73,889
Retirement benefit schemes contributions	11,390	9,352	7,874
	145,890	114,985	81,763

12. PROPERTY, PLANT AND EQUIPMENT

	Buildings	**Equipment**	**Total**
	US$	*US$*	*US$*
COST			
At 1 January 2011	2,535,567	4,020	2,539,587
Exchange realignment	(11,781)	(19)	(11,800)
At 31 December 2011	2,523,786	4,001	2,527,787
Exchange realignment	(57,615)	(91)	(57,706)
At 31 December 2012	2,466,171	3,910	2,470,081
Exchange realignment	(58,102)	(92)	(58,194)
At 31 December 2013	2,408,069	3,818	2,411,887
ACCUMULATED DEPRECIATION			
At 1 January 2011	(252,230)	(1,618)	(253,848)
Provided for the year	(136,673)	(888)	(137,561)
Exchange realignment	1,489	10	1,499
At 31 December 2011	(387,414)	(2,496)	(389,910)
Provided for the year	(134,782)	(876)	(135,658)
Exchange realignment	10,383	67	10,450
At 31 December 2012	(511,813)	(3,305)	(515,118)
Provided for the year	(131,655)	(855)	(132,510)
Exchange realignment	13,609	342	13,951
At 31 December 2013	(629,859)	(3,818)	(633,677)

	Buildings	Equipment	Total
	US$	*US$*	*US$*
CARRYING VALUES			
At 1 January 2011	2,283,337	2,402	2,285,739
At 31 December 2011	2,136,372	1,505	2,137,877
At 31 December 2012	1,954,358	605	1,954,963
At 31 December 2013	1,778,210	–	1,778,210

Depreciation is provided using the straight-line method to write off the cost of each asset to their residual values over their estimated useful lives, as follows:

Buildings	20 years
Equipment	5 years

The buildings are all located in the PRC under medium-term lease.

13. INVESTMENT IN A JOINT VENTURE

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Cost of investment in a joint venture, unlisted	190,485,012	186,136,481	52,637,646
Share of post-acquisition results and other comprehensive income, net of dividend received	24,491,670	839,030	(10,099,528)
	214,976,682	186,975,511	42,538,118

Name of joint venture	Place of incorporation and operation	Proportion of equity interest and voting power attributable to the Company			
		At 31 December			Principal activities
		2011	**2012**	**2013**	
Semizbay-U Limited Liability Partnership ("Semizbay-U")	The Republic of Kazakhstan	49%	49%	49%	Preliminary processing and sale of the uranium protoxide-oxide

The summarised financial information prepared using International Financial Reporting Standards in respect of Semizbay-U is set out below:

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Current assets	99,102,177	80,217,403	79,383,276
Non-current assets	151,161,423	150,175,534	142,227,851
Current liabilities	73,213,109	54,941,989	90,947,429
Non-current liabilities	41,492,915	77,389,606	58,582,347
The above amounts of assets and liabilities include the following:			
Cash and cash equivalents	15,581,744	2,611,692	675,947
Current financial liabilities (excluding trade and other payables and provisions)	36,921,204	31,245,757	47,961,400
Non-current financial liabilities (excluding trade and other payables and provisions)	33,688,363	68,041,700	50,092,288

	Year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Total revenue	189,001,325	151,738,991	121,306,089
Profit (loss) and total comprehensive income for the year	58,365,189	30,737,048	(23,951,854)
Dividend received from the joint venture during the year	16,116,813	32,112,582	–
The above profit (loss) for the year includes the following:			
Depreciation and amortization	18,334,596	22,898,936	23,824,669
Interest expense	3,277,055	5,723,364	7,858,792
Income tax expense (credit)	14,688,060	6,844,581	(2,071,828)

Reconciliation of the above summarised financial information to the carrying amount of the investment in a joint venture recognised in the Company's financial statements:

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Net assets of Semizbay-U	135,557,576	98,061,342	72,081,351
Proportion of the Company's ownership interest in Semizbay-U	49%	49%	49%
Effect of fair value adjustments at acquisition	163,766,169	160,027,595	156,257,407
Accumulated amortization of fair value adjustments	(15,212,699)	(21,102,141)	(19,925,620)
Subsequent adjustments to consideration	–	–	(129,113,531)
Carrying amount of the Company's investment in Semizbay-U	214,976,682	186,975,511	42,538,118

The investment in a joint venture has been pledged to a bank to secure bank borrowings as at 31 December 2011 and 2012. Details of the pledge are disclosed in note 16. The bank borrowings have been repaid during the year ended 31 December 2013, therefore, the pledge has been released during 2013.

Pursuant to the sale and purchase agreement dated 17 October 2008 ("S&P Agreement") between the Company, The Mining Company LLP ("MC") and National Atomic Company Kazatomprom ("KAP"), the Company acquired 49% participating interest in Semizbay-U for a total consideration of US$234,346,000. The transaction was completed in December 2008.

According to the S&P Agreement, the Company was entitled to a dividend guarantee from the 49% investment in Semizbay-U from 2010 to 2033 with an aggregate minimum dividend sharing of US$810,579,000 ("Dividend Compensation"). The minimum dividend allocation to the Company for each year was determined based on a financial model of Semizbay-U approved by the Company, MC and KAP.

If the financial results of Semizbay-U did not meet the minimum dividend requirement as per the financial model (except if the deficit was caused by the Company), the shortfall would be compensated by KAP to the Company in following orders:

- Firstly, by the dividends shared by KAP in Semizbay-U;
- Secondly, by the dividends shared by MC in Semizbay-U as instructed by KAP, if the compensation in first order above does not fulfil the shortfall; and
- Lastly, by other means used by KAP to fulfil the remaining shortfall, if the compensation in the first two orders above does not fulfil the shortfall.

If the financial results of Semizbay-U exceeded the minimum dividend requirement as per the financial model, the Company will entitle the minimum dividend requirement (which is equivalent to 49% of the minimum profit) plus 19.6% of the dividend distribution in excess of the minimum dividend of the financial model ("Excessive Dividend").

The Directors consider the first two compensations above are the preferential rights on dividends of Semizbay-U which is included in the cost of investment in Semizbay-U and the last compensation is the dividend guarantee which is accounted for as derivative financial instrument. The profit of Semizbay-U for each forecasted year exceeds the minimum dividend therefore KAP was not and will not be required to use other means to compensate the Company than the first two compensations above. Therefore, the Directors consider the fair value of the dividend guarantee is minimal and not separately accounted for on initial recognition and subsequent reporting periods.

In 2012, it was forecasted that the financial results of Semizbay-U would not meet the minimum dividend requirement as per the financial model. On 1 November 2012 and 4 February 2013, the Company, MC and KAP entered into a supplemental agreement to the Joinder Agreement of Semizbay-U ("Joinder Agreement") and a supplemental agreement to the S&P Agreement ("Supplemental S&P") respectively. Pursuant to the Joinder Agreement and the Supplemental S&P, both Dividend Compensation and Excessive Dividend would be terminated since 2012. Dividend distribution for 2009, 2010 and 2011 was and will be made in accordance with the initial S & P Agreement. Future dividend distribution of Semizbay-U LPP shall be agreed on the Semizbay-U's annual meetings and based on the actual net income for the respective financial year with the dividend distribution pro rata to the participants' interests according to the Republic of Kazakhstan legislation.

In addition, according to the Joinder Agreement and the Supplemental S&P, the purchase consideration of the 49% participating interest in Semizbay-U LPP is revised to US$100,864,000. The payment in excess of the revised purchase consideration was negotiated as US$132,000,000 ("Return of Investment") which was paid by KAP to the Company in July 2013. The Directors consider the Return of Investment as an adjustment to consideration and recognised it against the cost of investment.

Pursuant to the Joinder Agreement and the Supplemental S&P, KAP shall purchase and Beijing Sino-Kazakh shall sell the 49% partnership interest in Semizbay-U held by Beijing Sino-Kazakh upon receipt of the written request from KAP in any of the following situations, unless otherwise agreed by KAP and Beijing Sino-Kazahk in writing:

(i) KAP and CGNPC-URC fail to reach an agreement ("Pellets Contract") on or before 1 July 2014 with respect to the supply of fuel pellets processed by a subsidiary of KAP to the nuclear power plant reactors operated by CGNPC; and

(ii) where the Pellets Contract is entered into before 1 July 2014, during the performance of the Pellets Contract, the Pellet Contract becomes unenforceable due to either party's non-performance of its obligation or any other reasons not attributable to either party.

With respect to the repurchase situation set out under sub-paragraph (i) above, the Pellets Contract had been entered into in March 2014. As such, the repurchase situation as mentioned in sub-paragraph (i) above will no longer be triggered.

With respect to the repurchase situation set out under sub-paragraph (ii) above, based on the long-term business cooperation between Semizbay-U and CGNPC-URC, the Company is of the view that it is unlikely that KAP and CGNPC-URC will default on their respective obligations under the Pellets Contract which may result in the exercise by KAP of its repurchase rights under the Joinder Agreement.

If KAP's aforementioned repurchase right is exercised, the amount of repurchase price payable by KAP shall be an agreed initial investment amount (being US$100,864,000 as provided under the Joinder Agreement) plus an interest calculated at a compound annualized rate of 7% (interest started to accrue since 31 December 2008) as agreed between the parties under the Joinder Agreement. Any dividend declared by Semizbay-U and received by the Company since 2013 (plus an interest of such dividend calculated at a compound annualized rate of 7%) shall be deducted from the repurchase price.

14. AMOUNT DUE FROM/TO IMMEDIATE HOLDING COMPANY

The amount due from immediate holding company represents the rental receivable aged within one year from CGNPC-URC.

The amount due to immediate holding company represents the expenses paid by CGNPC-URC on behalf of the Company.

The amounts are unsecured, interest free, and repayable on demand.

15. AMOUNT DUE FROM A FELLOW SUBSIDIARY

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Name of the company			
中廣核財務有限責任公司 (“CGNPC Finance”)	80,497	34,454	8,638

CGNPC Finance is a financial institution controlled by CGNPC. The Company deposits funds into CGNPC Finance and the balance at end of each year represents the relevant interest receivable.

16. BANK BALANCES AND CASH

Bank balances and cash comprised mainly short-term deposits which carry interest at prevailing market rates ranging from 0.01% per annum (“p.a.”) to 3.10% p.a. as at 31 December 2011, from 0.01% p.a. to 2.85% p.a. as at 31 December 2012 and from 0.01% p.a. to 2.65% as at 31 December 2013.

Included in bank balances and cash are deposits into a related company, CGNPC Finance, a finance institution, of US$11,608,911, US$6,546,550, and US$4,307,303 as at 31 December 2011, 2012 and 2013 respectively.

17. BANK BORROWINGS

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Floating-rate borrowing:			
Secured US$ bank loan – interest bearing at London Inter-Bank Offer Rate (“LIBOR”) + 1.8%	124,070,305	89,339,505	–
Carrying amount repayable:			
– Within 1 year or on demand	17,492,320	17,492,320	–
– More than 1 year, but not exceeding 2 years	17,492,320	17,492,320	–
– More than 2 years, but not exceeding 5 years	52,476,960	52,476,960	–
– Over than 5 years	36,608,705	1,877,905	–
	124,070,305	89,339,505	–
Less: amount repayable within one year and shown under current liabilities	(17,492,320)	(17,492,320)	–
Amount repayable after one year and shown under non-current liabilities	106,577,985	71,847,185	–

The bank borrowings due for repayment are classified based on the scheduled repayment dates as set out in the relevant loan agreements. The Company early repaid the entire amount of bank borrowings in December 2013.

The ranges of effective interest rates (which are also equal to contractual interest rates) on the Company's bank borrowings as at 31 December 2011, 2012, and 2013, respectively, is as follows:

	At 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Effective interest rates:			
Floating-rate borrowings	2.58%	2.31%	–

The Company's 49% investment in Semizbay-U has been pledged to secure the above bank borrowings during the years ended 31 December 2011 and 2012.

18. PAID-IN CAPITAL

Registered and paid-in capital	*US$*
At 1 January 2011, 31 December 2011, 31 December 2012 and 31 December 2013	120,995,384

The Company's registered capital is RMB823,770,000, which had been fully paid. The above paid-in capital was verified by Chinese Certified Public Accountants.

19. DEFERRED TAXATION

The followings are the deferred tax liabilities recognised and movements thereon during the Relevant Periods:

	Tax losses	**Withholding tax on investment income**	**Total**
	US$	*US$*	*US$*
As at 1 January 2011	199,193	(2,737,844)	(2,538,652)
Charged to income tax expense *(note 9)*:			
– Withholding tax on share of profit adjustments of a joint venture	–	(2,859,894)	(2,859,894)
– Reversal of withholding tax due to the dividends received from a joint venture	–	1,611,681	1,611,681
– Utilization of tax losses	(198,729)	–	(198,729)
	(198,729)	(1,248,213)	(1,446,942)
Exchange realignment	(464)	15,620	15,156
As at 31 December 2011	–	(3,970,437)	(3,970,437)
Credit to income tax expense (*note 9*):			
– Withholding tax on share of profit adjustments of a joint venture	–	(1,506,115)	(1,506,115)
– Reversal of withholding tax due to the dividends received from a joint venture	–	3,211,258	3,211,258
	–	1,705,143	1,705,143
Exchange realignment	–	71,177	71,177
As at 31 December 2012	–	(2,194,117)	(2,194,117)
Credit to income tax expense *(note 9)*:			
– Reversal of withholding tax due to share of loss of a joint venture	–	1,173,641	1,173,641

	Tax losses *US$*	Withholding tax on investment income *US$*	Total *US$*
	–	1,173,641	1,173,641
Exchange realignment	–	37,867	37,867
As at 31 December 2013	–	(982,609)	(982,609)

The following is the analysis of deferred tax balances for each reporting period ended:

	As at 31 December		
	2011 *US$*	2012 *US$*	2013 *US$*
Deferred tax liabilities	3,970,437	2,194,117	982,609

As at 31 December 2011, 2012 and 2013, the Company has an aggregate amount of deductible temporary differences approximately of US$4,394,000, US$4,754,000, nil and unused taxable losses of approximately nil, nil and US$8,062,000 respectively. No deferred tax asset has been recognised in relation to such deductible temporary differences and taxable losses as it is not probable that taxable profit will be available against which they can be utilised. The unused tax losses will be fully expired in 2018.

20. DERIVATIVE FINANCIAL INSTRUMENTS

	As at 31 December		
	2011 *US$*	2012 *US$*	2013 *US$*
Derivative under hedge accounting			
Cash flow hedge – Interest rate swaps	4,364,914	–	–
Classified as:			
Non-current	4,364,914	–	–
Other derivative (not under hedge accounting)			
Interest rate swaps	–	4,760,285	–
Classified as:			
Non-current	–	4,760,285	–

Cash flow hedges:

At the end of the reporting period, the Company had the following interest swap contracts designated as highly effective hedging instruments in order to manage the Company's cash flow exposure in relation to floating-rate bank borrowings.

The terms of the interest swap contracts have been negotiated to match the terms of the respective designated hedged items, which is interest payments of the floating-rate bank borrowings. The major terms of these contracts are as follows:

As at 31 December 2011	
Notional amount	US$112,642,200
Effective date	21 December 2009
Termination date	21 December 2018
Fixed rate	4.2% p.a.
Fixed-rate payer	the Company
Floating rate	6-month LIBOR + 180 basis points
Floating-rate payer	Bank
Payment date	21 June and 21 December of each year

As at 31 December 2011, cumulative fair value losses of US$4,393,812 have been recognised in other comprehensive income and accumulated in hedging reserve of equity and are expected to be reclassified to the statement of profit or loss and other comprehensive income at 21 June and 21 December of each year to 2018 when the interest payments of the borrowings occur.

Other derivatives (not under hedge accounting):

As at 31 December 2012, except for the notional amount of the interest rate swaps reduced to US$95,642,200 due to early repayments during the year, the major terms of the interest swap contracts remain unchanged as described in the "Cash flow hedges" above.

During the year ended 31 December 2012, the Company early repaid certain amount of bank borrowings and expected to early repay the remaining bank borrowings in 2013. As a result, the cash flow hedge became ineffective in 2012 when the management performed the annual effectiveness testing on cash flow hedges. In addition, the management de-designated the hedging relationship between the floating-rate bank borrowings and the interest rate swaps in December 2012. Therefore, the ineffective portion of the fair value change of interest rate swap amount to US$2,474,825 was reclassified from hedging reserve to profit or loss, included in other gains or losses, during the year ended 31 December 2012 due to the ineffectiveness of cash flow hedge.

The derivatives were settled during the year ended 31 December 2013 for US$4,887,231.

21. RELATED PARTY TRANSACTIONS

Save as disclosed in respective notes above, the Company had the following transactions with related companies:

(a) Interest income

	Year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
CGNPC Finance	261,759	159,193	109,914

(b) Financial guarantee

(i) The Company's immediate holding company, CGNPC-URC, provided financial guarantee to the Company to secure the bank borrowings as described in note 16. The bank borrowings were fully repaid during the year ended 31 December 2013.

(ii) The Company provided financial guarantee to the joint venture, Semizbay-U, to secure 49% of a bank facility with maximum amount of US$60,000,000 of Semizbay-U to a bank in the PRC at no charge. As at 31 December 2011 and 2012, the relevant bank borrowings of Semizbay-U are approximately US$40,088,000 and US$20,029,000 respectively and the exposure of credit risk of the Company are approximately US$19,643,000 and US$9,814,000 respectively. In November 2013, the bank borrowings were early settled and therefore there was no more financial guarantee provided to Semizbay-U or contingent liabilities as at 31 December 2013.

(c) Use of office

The Company provided office premises to the Company's immediate holding company, CGNPC-URC, at no charge during the years ended 31 December 2011 and 2012.

The relevant rental income was US$484,402 for the year ended 31 December 2013.

(d) Management fee

The Company received management and administrative service from the Company's immediate holding company at no charge.

(e) Compensation of key management personnel

No remuneration of Directors and other member of key management during the Relevant Periods were recorded.

(f) Government-related entities

The Company is a subsidiary of CGNPC which is controlled by the PRC government. The Directors consider that the Company is ultimately controlled by the PRC government and the Company operates in an economic environment currently pre-denominated by entities controlled, jointly controlled or significantly influenced by the PRC government ("PRC government-related entities"). Apart from the transactions which have been disclosed above and in notes 14, 15 and 16, the Company also conducts business with other PRC government-related entities in the ordinary course of business. The Company's deposits placements, borrowings and other general banking facilities are entered into with certain banks which are PRC-government related entities in its ordinary course of business. In view of the nature of those banking transactions, the Directors are of the opinion that separate disclosures would not be meaningful.

In addition, the Company has entered into various transactions, including operating expenses with other PRC government-related entities. In the opinion of the Directors, the transactions are considered as individually and collectively insignificant to the operation of the Company during the years ended 31 December 2011, 2012 and 2013.

22. CAPITAL RISK MANAGEMENT

The Company manages its capital to ensure that the Company will be able to continue as a going concern while maximising the return to equity owners through the optimisation of the debt and equity balance. The Company's overall strategy remains unchanged throughout the Relevant Periods.

The capital structure of the Company consists of bank borrowings disclosed in note 16, cash and cash equivalents and equity attributable to owners of the Company, comprising paid-in capital and reserves.

The management of the Company reviews the capital structure regularly. As part of this review, the management considers the cost of capital and the risks associated with each class of capital, and will balance its overall capital structure through the payment of dividends, new capital injection as well as the issue of new debt or the redemption of existing debt.

23. FINANCIAL INSTRUMENTS

(a) Categories of financial instruments

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Financial assets			
Loans and receivables (including and cash equivalents)	11,795,929	6,585,598	5,829,969
Financial liabilities			
Derivative instruments in designated hedge accounting relationships	4,364,914	–	–
Derivative instruments classified as held for trading	–	4,760,285	–
Amortised cost	124,313,429	89,445,498	78,976

(b) Financial risk management objectives and policies

The Company's major financial instruments include bank balances and cash, other receivables, amount due from a fellow subsidiary, bank borrowings, other payables, amount due from (to) immediate holding company and derivative financial instruments. Details of these financial instruments are disclosed in respective notes. The risks associated with these financial instruments include market risk (including interest rate risk and foreign currency risk), credit risk and liquidity risk. The management manages and monitors these exposures to ensure appropriate measures are implemented on a timely and effective manner.

(i) Market risk

The Company's activities expose it primarily to the financial risks of interest rates and changes in foreign currency.

Interest rate

The Company is exposed to cash flow interest rate risk in relation to floating-rate bank borrowings (see note 16 for details of the borrowings) and bank balances and cash. The Company enters into interest rate swaps to hedge against its exposures to changes in cash flow of floating-rate borrowings. The critical terms of those interest rate swaps are similar to those of hedged borrowings. These interest rate swaps are designated as effective hedging instruments and hedge accounting is applied during the year ended 31 December 2011. The Company early repaid certain amount of the bank borrowings during the year ended 31 December 2012 and the management de-designated the hedging relationship. The Company fully repaid the bank borrowings during the year ended 31 December 2013 and no significant exposure to interest rate risk as at 31 December 2013.

Sensitivity analysis

The Company does not anticipate there is any significant impact on its interest bearing assets resulting from the changes in interest rates as the interest rate of bank deposits are not expected to change significantly.

The sensitivity analysis below has been determined based on the exposure to interest rates for bank borrowings. The analysis is prepared assuming that the amount of liabilities outstanding at the end of each reporting period were outstanding for the whole year. 50 basis point increase or decrease represent the management's assessment of the reasonably possible change in interest rates of bank borrowing.

If 6-month LIBOR had been 50 basis points higher/lower and all other variables were held constant, the Company's:

- Post-tax profit for the years ended 31 December 2011 and 2012 would decrease/increase by nil and US$335,203 respectively. This is mainly attributable to the Company's exposure to interest rates on its floating-rate borrowings not under cash flow hedge; and

- Other comprehensive income for the years ended 31 December 2011, 2012 and 2013 would increase/decrease by approximately US$1,990,000, US$620,352 and nil respectively as a result of the changes in the fair value of interest rate swaps.

In the management's opinion, the sensitivity analysis is unrepresentative of the inherent interest risk as the exposure at the end of the reporting period does not reflect the exposure during the year.

(ii) Foreign currency risk

The carrying amounts of the Company's monetary assets and monetary liabilities denominated in currencies other than the Company's functional currency, i.e. KZT, at the end of the Relevant Periods are as follows:

	Assets As at 31 December			**Liabilities As at 31 December**		
	2011	**2012**	**2013**	**2011**	**2012**	**2013**
	US$	*US$*	*US$*	*US$*	*US$*	*US$*
RMB	11,786,919	6,582,203	4,808,728	103,678	8,026	78,976
US$	9,010	3,395	1,021,241	128,574,665	94,197,757	–

Sensitivity analysis

The Company is mainly exposed to RMB and US$.

The sensitivity analysis below details the Company's sensitivity to an increase and decrease in KZT against the foreign currencies. Taking into account for the subsequent depreciation of KZT after 31 December 2013, 5%, 5% and 25% are the sensitivity rates used for the three years ended 31 December 2013 respectively which represents management's assessment of the reasonably possible change in foreign currency rate. The sensitivity analysis includes the Company's monetary assets and monetary liabilities denominated in RMB and US$. A positive (negative) number indicates an increase (decrease) in post-tax profit and other equity for the year when KZT strengthens against RMB and US$. For a weakening of KZT against RMB and US$, there would be an equal but opposite impact on the post-tax profit and other equity for the year.

	RMB Year ended 31 December			**US$ Year ended 31 December**		
	2011	**2012**	**2013**	**2011**	**2012**	**2013**
	US$	*US$*	*US$*	*US$*	*US$*	*US$*
Profit or loss	(439,142)	(249,378)	(897,400)	4,668,373	3,573,073	(193,765)
Other equity	–	–	–	164,065	–	–

In the management's opinion, the sensitivity analysis is unrepresentative of the inherent foreign currency risk as the exposures at the end of the reporting period do not reflect the exposures during the year.

(iii) Credit risk management

The credit risk on financial guarantee provided by the Company to the joint venture is disclosed in note 23(b)(ii). Except for this, the credit risk on liquid funds is limited because the counterparties are banks with state-owned banks in the PRC.

Other than concentration of credit risk on liquid funds which are deposited with several banks, the Company does not have any other significant concentration of credit risk. Other receivables, amount due from immediate holding company and amount due from a fellow subsidiary are not significant and therefore the credit risk is limited.

(iv) Liquidity risk management

In the management of the liquidity risk, the Company monitors and maintains a level of cash and cash equivalents deemed adequate by the management to finance the Company's operations and mitigate the effects of fluctuations in cash flows. The management monitors the utilisation of bank borrowings and ensures compliance with loan covenants.

The following table details the Company's remaining contractual maturity for its non-derivative and derivative financial liabilities. The table has been drawn up based on the undiscounted cash flows of non-derivative financial liabilities based on the earliest date on which the Company can be required to pay in accordance with the contracted terms. The table includes both interest and principal cash flows. To the extent that interest flows are floating rate, the undiscounted amount is derived from interest rate curve at the end of each reporting period. The liquidity analysis for the Company's derivative financial instruments are prepared based on the contractual maturities as the management considers that the contractual maturities are essential for an understanding of the timing of the cash flows of these derivatives, which have been entered into for hedging purpose.

Liquidity and interest risk tables

	Weighted average interest rate	On demand or within 60 days	61-180 days	181-365 days	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	%	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
As at 31 December 2011								
Non-derivative financial liabilities								
Other payables	–	141,448	–	–	–	–	141,448	141,448
Amount due to immediate holding company	–	101,676	–	–	–	–	101,676	101,676
Bank borrowings	2.58%	–	10,432,330	10,366,125	79,785,066	38,714,868	139,298,389	124,070,305
		243,124	10,432,330	10,366,125	79,785,066	38,714,868	139,541,513	124,313,429
Derivatives – net settlement								
Interest rate swap		–	919,306	801,842	2,946,574	(98,943)	4,568,779	4,364,914

	Weighted average interest rate	On demand or within 60 days	61-180 days	181-365 days	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
		US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
As at 31 December 2012								
Non-derivative financial liabilities								
Other payables	–	98,248	–	–	–	–	98,248	98,248
Amount due to immediate holding company	–	7,745	–	–	–	–	7,745	7,745
Bank borrowings	2.31%	–	9,708,308	9,577,054	73,868,015	1,907,904	95,061,281	89,339,505
		105,993	9,708,308	9,577,054	73,868,015	1,907,904	95,167,274	89,445,498
Derivatives – net settlement								
Interest rate swap		–	913,982	861,566	3,028,850	9,437	4,813,835	4,760,285

	Weighted average interest rate	On demand or within 60 days	61-180 days	181-365 days	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
		US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
As at 31 December 2013								
Non-derivative financial liabilities								
Other payables	–	5,602	–	–	–	–	5,602	5,602
Amount due to immediate holding company	–	73,374	–	–	–	–	73,374	73,374
Total		78,976	–	–	–	–	78,976	78,976

(c) Fair value measurements of financial instruments

This note provides information about how the Company determines fair values of financial liabilities.

(i) Fair value of the Company's financial liabilities that are measured at fair value on a recurring basis

Financial liabilities	Fair value at 31 December 2011	2012	2013	Fair value hierarchy	Valuation technique(s) and key input(s)
Interest rate swaps classified as derivative financial instruments in the statement of financial position	Liabilities (designated for hedging) US$4,364,914	Liabilities (not designated for hedging) US$4,760,285	–	Level 2	Discounted cash flow Future cash flows are estimated based on forward interest rates (from observable yield curves at the end of the reporting period) and contracted interest rates, and contracted interest rates, discounted at a rate that various counterparties.

(ii) Fair value of financial assets and financial liabilities that are not measured at fair value on a recurring basis (but fair value disclosures are required)

The Directors consider that the carrying amounts of financial assets and financial liabilities other than derivative financial instruments recognised in the Financial Information approximate their fair values.

24. SEGMENT INFORMATION

Information reported to the Directors, being the chief operating decision maker, for the purpose of resource allocation and assessment of performance focuses only on the investment in a joint venture which is the same as that presented in the statement of profit or loss. Accordingly, no additional segment information other than entity-wide disclosure is presented. The principal activity of the Company is investment in joint venture, which is located in the Republic of Kazakhstan.

25. CONTINGENT LIABILITIES

The following contingent liabilities arise from the Company's investment in a joint venture:

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Financial guarantees given to a bank, in respect of a banking facility granted to a joint venture			
– amount guaranteed	29,400,000	29,400,000	–
– amount utilised	19,643,000	9,814,000	–

Details of the above financial guarantees are disclosed in note 23(b)(ii).

26. RETIREMENT BENEFIT SCHEMES

The employees of the Company are members of state-managed retirement benefit schemes operated by the PRC government. The Company is required to contribute certain percentage of payroll costs to the retirement benefit schemes to fund the benefit. The only obligation of the Company with respect to the retirement benefit schemes is to make the specific contributions.

B. DIRECTORS' REMUNERATION

Save as disclosed herein, no remuneration has been paid or is payable to the Directors by the Company during the Relevant Periods.

C. EVENT AFTER THE RELEVANT PERIODS

On 11 February 2014, the National Bank of Kazakhstan ("NBK") decided to temporarily reduce the interference in the formation of the exchange rate of KZT. As a result, on 12 February 2014, the market exchange rate of KZT for 1 US$ fell to 184.55, i.e. by about 19%. This would result in the decrease of balances of assets, liabilities and equity presented in US$ as if it had incurred as at 31 December 2013. The Directors are not able to quantify the effect because the changes of other variables are unpredictable. In order to prevent destabilization of the financial market and the economy as a whole, the NBK plans to establish a corridor of fluctuations of KZT against US$ in the range of 182-188 KZT for 1 US$. However, there is uncertainty about the exchange rate of KZT and future actions of the NBK, as well as the influence of these factors on the economy of the Republic of Kazakhstan.

D. SUBSEQUENT FINANCIAL STATEMENTS

No audited financial statements have been prepared by the Company subsequent to 31 December 2013.

Yours faithfully,

Deloitte Touche Tohmatsu
Certified Public Accountants
Hong Kong

2 MANAGEMENT DISCUSSION AND ANALYSIS OF BEIJING SINO-KAZAKH

The following is the management discussion and analysis of results of Beijing Sino-Kazakh for each of the three years ended 31 December 2011, 2012 and 2013 respectively, based on the financial information from Beijing Sino-Kazakh prepared under HKFRSs as set out above in the section entitled "Accountant Report of Beijing Sino-Kazakh for the three years ended 31 December 2011, 2012 and 2013".

OPERATING RESULTS

The principal activity of Beijing Sino-Kazakh is investment holding and did not record any revenue arising from its business operation in the past three financial years ended 31 December 2013. The following table sets forth certain income and expense items from our statements of profit or loss for the periods indicated:

	Year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Other income	2,894,448	6,714,658	582,964
Other gains and losses	346,827	(7,102,261)	(216,460)
Administrative expenses	(359,745)	(577,319)	(439,413)
Share of profit (loss) of a joint venture	23,010,625	8,752,415	(11,048,946)
Finance costs	(5,436,512)	(4,793,864)	(1,873,409)
Profit/(loss) before taxation	20,455,643	2,933,629	(12,995,246)
Income tax expense	(3,751,876)	(1,816,822)	1,119,079
Profit/(Loss) for the year	16,703,767	1,176,807	(11,876,185)

Other income

Beijing Sino-Kazakh's other income decreased by US$6.1 million from US$6.7 million in the year ended 31 December 2012 to US$0.6 million in the year ended 31 December 2013, primarily because it received government grants in the amount of US$6.6 million to compensate the interests incurred in previous years on the long-term bank borrowings in 2012, whereas no government grant was received in 2013.

Beijing Sino-Kazakh's other income increased by 131.0%, or US$3.8 million, from US$2.9 million in the year ended 31 December 2011 to US$6.7 million in the year ended 31 December 2012, primarily due to an increase in the government grant received in 2012.

Other gains and losses

Beijing Sino-Kazakh's other losses decreased by US$6.9 million from US$7.1 million in the year ended 31 December 2012 to US$0.2 million in the year ended 31 December 2013, primarily because it incurred losses from release of cumulative loss on hedging instruments of cash flow hedges in the amount of US$4.8 million in 2012 and a decrease in the net foreign exchange losses incurred in 2013.

Beijing Sino-Kazakh generated other gains comprising of foreign exchange gains in the amount of US$0.3 million in the year ended 31 December 2011.

Finance costs

Beijing Sino-Kazakh's finance costs decreased by US$2.9 million from US$4.8 million in the year ended 31 December 2012 to US$1.9 million in the year ended 31 December 2013, primarily due to reclassification of fair value losses on interest rate swaps designated as cash flow hedges of floating-rate borrowings incurred from equity to profit or loss in the amount of US$1.9 million in 2012 and a decrease in interest on bank borrowings not wholly repayable within five years in 2013.

Beijing Sino-Kazakh's finance costs decreased by US$0.6 million from US$5.4 million in the year ended 31 December 2011 to US$4.8 million in the year ended 31 December 2012, primarily due to a decrease in interests on bank borrowings not wholly repayable within five years.

LIQUIDITY, FINANCIAL RESOURCES AND GEARING

Net Assets/Liabilities

Set forth below is a summary of the audited financial statements of Beijing Sino-Kazakh as of 31 December 2011, 2012 and 2013.

	31 December 2011	**31 December 2012**	**31 December 2013**
	US$'000	*US$'000*	*US$'000*
Total Assets	228,911.2	195,516.1	50,146.3
Total Liabilities	133,377.8	96,734.9	1,110.4
Net Assets (Liabilities)	95,533.4	98,781.2	49,035.9
*Gearing Ratio	58.3%	49.5%	2.2%

* *Gearing ratio is defined as total liabilities over total assets other than goodwill.*

Bank Balances and Cash

As of 31 December 2011, 2012 and 2013, Beijing Sino-Kazakh's aggregate cash and bank balances amounted to approximately US$11.7 million, US$6.6 million and US$5.3 million, respectively, representing 99.3%, 99.5% and 91.4% of total current assets, respectively. Bank balances and cash comprised mainly short-term deposits which carry interest at prevailing market rates ranging from 0.01% per annum to 3.10% per annum as of 31 December 2011, from 0.01% per annum to 2.85% per annum as of 31 December 2012 and from 0.01% per annum to 2.65% per annum as of 31 December 2013.

Borrowings

As of 31 December 2011, 2012 and 2013, Beijing Sino-Kazakh's bank borrowings due within one year amounted to approximately US$17.5 million, US$17.5 million and nil, representing 94.7%, 97.5% and nil of total current liabilities, respectively. As of 31 December 2011, 2012 and 2013, Beijing Sino-Kazakh's bank borrowings due after one year amounted to approximately US$106.6 million, US$71.8 million and nil, representing 92.7%, 91.2% and nil of total non-current liabilities, respectively. Beijing Sino-Kazakh repaid all bank borrowings prior to their maturity terms in December 2013. The effective interest rates of the bank borrowings ranges are 2.58%, 2.31% and nil as of 31 December 2011, 2012 and 2013, respectively.

Beijing Sino-Kazakh's 49% investment in Semizbay-U was pledged to secure the above bank borrowings during the years ended 31 December 2011 and 2012.

Derivative financial instruments

Beijing Sino-Kazakh had interest swap contracts designated as highly effective hedging instructions in order to manage its cash flow exposure in relation to floating-rate bank borrowing. As of 31 December 2011, the interest swaps contracts had an aggregate notional amount of US$112,642,200 with a term of nine years starting from 21 December 2009. The interest swaps contract had fix rate of 4.2% per annum with Beijing Sino-Kazakh as the payer and floating rate of 6-month LIBOR plus 180 basis point with the bank as the payer.

As at 31 December 2012, except for the notional amount of the interest rate swaps reduced to US$95,642,200 due to early re-payments during the year, the major terms of the interest swap contracts remain unchanged.

During the year ended 31 December 2012, the Beijing Sino-Kazakh repaid certain amount of bank borrowings prior to their maturity dates and the management de-designated the hedging relationship between the floating-rate bank borrowings and the interest rate swaps.

The derivatives were settled during the year ended 31 December 2013 for US$4,887,231.

SIGNIFICANT INVESTMENT HELD

Beijing Sino-Kazakh holds 49% of the equity interests in a joint venture, Semizbay-U. As of 31 December 2011, 2012 and 2013, Beijing Sino-Kazakh's investment in Semizbay-U amounted to approximately US$215.0 million, US$187.0 million and US$42.5 million. The decrease in the carrying amount of the investment in Semizbay-U from 31 December 2011 to 31 December 2012 and from 31 December 2012 to 31 December 2013 was primarily due to share of profit/loss of Semizbay-U, dividends received from Semizbay-U, exchange differences and increases in the accumulated amortization of fair value adjustments from 2011 to 2013, and a subsequent adjustments to contingent consideration in 2013.

The investment in Semizbay-U was pledged to a bank to secure bank borrowings. Please see "– LIQUIDITY, FINANCIAL RESOURCES AND GEARING – Borrowings" for details.

According to a sale and purchase agreement dated 17 October 2008 between Beijing Sino-Kazakh, The Mining Company LLP and KAP, Beijing Sino-Kazakh is entitled to a dividend guarantee from its 49% investment in Semizbay-U from 2010 to 2033 with an aggregate minimum dividend sharing of US$810,579,000. The minimum dividend allocation to Beijing Sino-Kazakh was determined based on a financial model of Semizbay-U approved by Beijing Sino-Kazakh, The Mining Company LLP and KAP. If the financial results of Semizbay-U did not meet the minimum dividend requirement, the shortfall would be compensated by KAP to Beijing Sino-Kazakh in following orders:

1. By the dividends shared by KAP in Semizbay-U;
2. By the dividends shared by The Mining Company LLP in Semizbay-U as instructed by KAP, if the compensation in first order above does not fulfil the shortfall; and
3. By other means used by KAP to fulfil the remaining shortfall, if the compensation in the first two orders above does not fulfil the shortfall.

If the financial results of Semizbay-U exceeded the minimum dividend requirement as per the financial model, Beijing Sino-Kazakh will entitle the minimum dividend requirement (which is equivalent to 49% of the minimum profit) plus 19.6% of the dividend distribution in excess of the minimum dividend of the financial model ("Excessive Dividend").

On 1 November 2012 and 4 February 2013, Beijing Sino-Kazakh, The Mining Company and KAP entered into a supplemental agreement to the Joinder Agreement of Semizbay-U and a supplemental agreement to the sale and purchase agreement dated 17 October 2008 ("Supplemental S&P") respectively. Pursuant to the Joinder Agreement and the Supplemental S&P, both dividend compensation and Excessive Dividend would be terminated since 2012. Dividend distribution for 2009, 2010 and 2011 was and will be made in accordance with the initial sale and purchase agreement dated 17 October 2008. Future dividend distribution of Semizbay-U shall be agreed on the Semizbay-U's annual meetings and based on the actual net income for the respective financial year with the dividend distribution pro rata to the participants' interests according to the Republic of Kazakhstan legislation.

In addition, according to the Joinder Agreement and the Supplemental S&P, the purchase consideration of the 49% participating interest in Semizbay-U is revised to US$100,864,000. The payment in excess of the revised purchase consideration was negotiated as US$132,000,000 which was paid by KAP to Beijing Sino-Kazakh in July 2013.

Pursuant to the Joinder Agreement and the Supplemental S&P, KAP shall purchase and Beijing Sino-Kazakh shall sell the 49% partnership interest in Semizbay-U held by Beijing Sino-Kazakh upon receipt of the written request from KAP in any of the following situations, unless otherwise agreed by KAP and Beijing Sino-Kazahk in writing:

(i) KAP and CGNPC-URC fail to reach an agreement ("Pellets Contract") on or before 1 July 2014 with respect to the supply of fuel pellets processed by a subsidiary of KAP to the nuclear power plant reactors operated by CGNPC; and

(ii) where the Pellets Contract is entered into before 1 July 2014, during the performance of the Pellets Contract, the Pellet Contract becomes unenforceable due to either party's non-performance of its obligation or any other reasons not attributable to either party.

With respect to the repurchase situation set out under sub-paragraph (i) above, the Pellets Contract had been entered into in March 2014. As such, the repurchase situation as mentioned in sub-paragraph (i) above will no longer be triggered.

With respect to the repurchase situation set out under sub-paragraph (ii) above, based on the long-term business cooperation between Semizbay-U and CGNPC-URC, Beijing Sino-Kazakh is of the view that it is unlikely that KAP and CGNPC-URC will default on their respective obligations under the Pellets Contract which may result in the exercise by KAP of its repurchase rights under the Joinder Agreement.

If KAP's aforementioned repurchase right is exercised, the amount of repurchase price payable by KAP shall be an agreed initial investment amount (being US$100,864,000 as provided under the Joinder Agreement) plus an interest calculated at a compound annualized rate of 7% (interest started to accrue since 31 December 2008) as agreed between the parties under the Joinder Agreement. Any dividend declared by Semizbay-U and received by Beijing Sino-Kazakh since 2013 (plus an interest of such dividend calculated at a compound annualized rate of 7%) shall be deducted from the repurchase price.

As of 31 December 2011, 2012 and 2013, Beijing Sino-Kazakh received dividends from the joint venture in the amount of US$16.1 million, US$32.1 million and nil. No dividend was received from the joint venture in the year ended 31 December 2013 as dividend of the financial year 2012 has yet to be agreed upon in accordance with the Joinder Agreement and the Supplemental S&P.

ACQUISITION AND DISPOSALS

Please see "– SIGNIFICANT INVESTMENT HELD" for details of Beijing Sino-Kazakh's investment in Semizbay-U.

Beijing Sino-Kazakh had not made any other acquisition or disposal in the years ended 31 December 2011, 2012 and 2013.

SEGMENTAL INFORMATION

Information reported to the executive directors of Beijing Sino-Kazakh for the purpose of source allocation and assessment of performance focuses only on the investment in a joint venture. The principal activity of the company is investment in a joint venture, thus there is no segment information available.

FINANCIAL RISK MANAGEMENT

Beijing Sino-Kazakh's activities are exposed to a variety of financial risks, which include interest risk, foreign exchange risk, credit risk and liquidity risk. Beijing Sino-Kazakh may use derivative financial instruments such as interest rate swaps to manage exposure to fluctuations in interest rates from time to time.

Interest risk

Beijing Sino-Kazakh's main interest rate risk arises from floating-rate bank borrowings and bank balances and cash. Beijing Sino-Kazakh enters into interest rate swaps to hedge against its exposures to changes in cash flow of floating-rate borrowings. The critical terms of those interest rate swaps are similar to those of hedged borrowings. These interest rate swaps are designated as effective hedging instruments and hedge accounting is applied during the year ended 31 December 2011. Beijing Sino-Kazakh repaid certain amount of the bank borrowings during the year ended 31 December 2012 prior to their maturity dates and the management de-designated the hedging relationship. Beijing Sino-Kazakh fully repaid the bank borrowings during the year ended 31 December 2013 and had no significant exposure to interest rate risk as of 31 December 2013.

Beijing Sino-Kazakh does not anticipate there is any significant impact on its interest bearing assets resulting from the changes in interest rates as the interest rate of bank deposits are not expected to change significantly.

Foreign exchange risk

Beijing Sino-Kazakh's carrying amounts of monetary assets and liabilities are denominated in Renminbi and US$, thus the company is mainly exposed to foreign currency risk with risk back to Renminbi and US$.

Foreign exchange risk arises from future commercial transactions and recognised assets and liabilities denominated in a foreign currency. The risk is measured on the basis of forecast cash flows. Beijing Sino-Kazakh reviews its foreign currency needs and may take appropriate financial derivatives as required to mitigate the risks.

For the years ended 31 December 2011 and 2012, if there had been a 5% increase in Kazakhstan Tenge against Renminbi, Beijing Sino-Kazakh's profit/loss would have been US$439,142 and US$249,378 lower for the respective period. As of 31 December 2011 and 2012, if there had been a 5% increase in Kazakhstan Tenge against US$, Beijing Sino-Kazakh's profit/loss would have been US$4.7 million and US$3.6 million higher for the respective period. For the year ended 31 December 2013, if there had been a 25% increase in Kazakhstan Tenge against Renminbi and US$, Beijing Sino-Kazakh's profit/loss would have been US$897,400 and US$193,765 lower, respectively.

Credit risk

Beijing Sino-Kazakh's credit risk mainly arises from the financial guarantee provided by the company to its joint venture, Semizbay-U, to secure 49% of a bank facility with maximum amount of US$60,000,000 of Semizbay-U to a bank in China at no charge. As at 31 December 2011 and 2012, the relevant bank borrowings of Semizbay-U are approximately US$40,088,000 and US$20,029,000, respectively, and the exposure of credit risk of Beijing Sino-Kazakh are approximately US$19,643,000 and US$9,814,000, respectively. In November 2013, the facility was settled prior to its maturity date and there have been no financial guarantee provided to Semizbay-U or contingent liabilities as at 31 December 2013.

Beijing Sino-Kazakh's immediate holding company, CGNPC-URC, provided financial guarantee to Beijing Sino-Kazakh to secure its US$ bank borrowings in the amount of US$124.1 million and US$89.3 million as of 31 December 2011 and 2012. The bank borrowings were fully repaid during the year ended 31 December 2013.

The management believes that the credit risk on liquid funds is limited as the counterparties of such liquid funds are state-owned banks in the PRC.

Beijing Sino-Kazakh does not have any other significant concentration of credit risk. The management believes that other receivables, amount due from immediate holding company and amount due from a fellow subsidiary are not significant and therefore the credit risk is limited.

Liquidity risk

Beijing Sino-Kazakh manages liquidity risk by monitoring forecast and actual cash flows and maintaining a level of cash and cash equivalents deemed adequate by the management to finance the company's operations and mitigate the effects of fluctuations in cash flows. The management of Beijing Sino-Kazakh monitors the utilisation of bank borrowings and ensures compliance with loan covenants.

The following table set forth Beijing Sino-Kazakh's remaining contractual maturity for its non-derivative and derivative financial liabilities as of 31 December 2011, 2012 and 2013.

	On demand within 60 days	61-180 days	181-365 days	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
As of 31 December 2013							
Non-derivate financial liabilities							
Other payables	141,448	–	–	–	–	141,448	141,448
Amount due to immediate holding company	101,676	–	–	–	–	101,676	101,676
Bank borrowings	–	10,432,330	10,366,125	79,785,066	38,714,868	139,298,389	124,070,305
	243,124	10,432,330	10,366,125	79,785,066	38,714,868	139,541,513	124,313,429
Derivatives-net settlement							
Interest rate swap	–	919,306	801,842	2,946,574	(98,943)	4,568,779	4,364,914

	On demand within 60 days	61-180 days	181-365 days	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
As of 31 December 2012							
Non-derivate financial liabilities							
Other payables	98,248	–	–	–	–	98,248	98,248
Amount due to immediate holding company	7,745	–	–	–	–	7,745	7,745
Bank borrowings	–	9,708,308	9,557,054	73,868,015	1,907,904	95,061,281	89,339,505
	105,993	9,708,308	9,557,054	73,868,015	1,907,904	95,167,274	89,445,498
Derivatives-net settlement							
Interest rate swap	–	913,982	861,566	3,028,850	9,437	4,813,835	4,760,285

	On demand within 60 days *US$*	61-180 days *US$*	181-365 days *US$*	1-5 years *US$*	Over 5 years *US$*	Total undiscounted cash flows *US$*	Carrying amount *US$*
As of 31 December 2011							
Non-derivate financial liabilities							
Other payables	5,602	–	–	–	–	5,602	5,602
Amount due to immediate holding company	73,374	–	–	–	–	73,374	73,374
Total	78,976	–	–	–	–	78,976	78,976

CONTINGENT LIABILITIES

Beijing Sino-Kazakh's contingent liabilities arise from its investment in its joint venture, Semizbay-U. As of 31 December 2011 and 2012, Beijing Sino-Kazakh provided financial guarantee to Semizbay-U to secure 49% of a bank facility with maximum amount of US$60,000,000 to a bank in China at no charge. As of 31 December 2011 and 2012, the relevant bank borrowings of Semizbay-U are approximately US$40,088,000 and US$20,029,000, respectively. As of 31 December 2011 and 2012, the guaranteed amount were US$29,400,000 and US$29,400,000, respectively, and the amount utilised were US$19,643,000 and US$9,814,000, respectively. In November 2013, the facility was settled prior to its maturity date and there have been no financial guarantee provided to Semizbay-U LLP or contingent liabilities as at 31 December 2013.

PLEDGE OF ASSETS

Beijing Sino-Kazakh's 49% investment in Semizbay-U was pledged to secure the above bank borrowings. The investment in a joint venture has been pledged to a bank to secure its US$ bank borrowings in the amount of US$124.1 million and US$89.3 million as of 31 December 2011 and 2012. The bank borrowings were fully repaid during the year ended 31 December 2013, therefore, the pledge was released as at 31 December 2013.

CAPITAL STRUCTURE

Beijing Sino-Kazakh was a domestic enterprise established in the PRC on 26 November 2007 with a registered capital of US$120,995,384, which had been fully paid. Beijing Sino-Kazakh manages its capital to ensure that it will be able to continue as a going concern while maximising the return to equity owners through the optimisation of the debt and equity balance. Beijing Sino-Kazakh's overall strategy remains unchanged during the years ended 31 December 2011, 2012 and 2013.

The capital structure of Beijing Sino-Kazakh consists of bank borrowings as disclosed in "– LIQUIDITY, FINANCIAL RESOURCES AND GEARING – borrowings" and note 16 of Appendix II, cash and cash equivalents and equity attributable to owners of Beijing Sino-Kazakh, comprising paid-in capital and reserves.

The management of Beijing Sino-Kazakh reviews the capital structure regularly. As part of this review, the management considers the cost of capital and the risks associated with each class of capital, and will balance its overall capital structure through the payment of dividends, new capital injection as well as the issue of new debt or the redemption of existing debt.

EMPLOYMENT, SHARE OPTION SCHEMES AND TRAINING SCHEMES

No director's emoluments were borne by Beijing Sino-Kazakh during the years ended 31 December 2011, 2012 and 2013 as the company did not have operations other than investment holding. As at 31 December 2011, 2012 and 2013, Beijing Sino-Kazakh employed a total of two, one and one full-time employees other than the directors in its operations. Total staff costs for Beijing Sino-Kazakh amounted to US$145,890, US$114,985 and US$81,763 as of 31 December 2011, 2012 and 2013.

The employees of Beijing Sino-Kazakh are members of state-managed retirement benefit schemes operated by the PRC government. Beijing Sino-Kazakh is required to contribute certain percentage of payroll costs to the retirement benefit schemes to fund the benefit. The only obligation of Beijing Sino-Kazakh with respect to the retirement benefit schemes is to make the specific contributions.

FUTURE PLAN AND MATERIAL INVESTMENTS

Beijing Sino-Kazakh has no future plan for material investments or in capital assets in 2014.

1 ACCOUNTANTS' REPORT OF SEMIZBAY-U

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30 June 2014

The Board of Directors
CGN Mining Company Limited

Dear Sirs,

We set out below our report on the financial information (the "Financial Information") relating to Semizbay-U LLP (referred to as "Semizbay-U") for each of the three years ended 31 December 2011, 2012 and 2013 (the "Relevant Periods") for inclusion in the circular issued by CGN Mining Company Limited (the "Company") dated 30 June 2014 (the "Circular") in connection with the proposed acquisition of the 100% equity interest of 北京中哈鈾資源投資有限公司 (for identification purpose, in English, Beijing Sino-Kazakh Uranium Resources Investment Company Limited, referred to as "Beijing Sino-Kazakh") (the "Acquisition").

Beijing Sino-Kazakh has the investment in Semizbay-U during the Relevant Periods and the particulars are as follows:

Name of joint venture	Place and date of incorporation	Issued and fully paid charter capital	Equity interest attributable to Beijing Sino-Kazakh: At 31 December 2011	2012	2013	At the date of this report	Principal activities	Form of company
Directly owned								
Semizbay-U	The Republic of Kazakhstan 12 December 2006	United States dollar ("US$") 71,537,316	49%	49%	49%	49%	Preliminary processing and sale of uranium protoxide-oxide	Limited liability

Semizbay-U adopts 31 December as the financial year end date. The statutory financial statements of Semizbay-U for the years ended 31 December 2011, 2012 and 2013 were prepared in accordance with the International Financial Reporting Standards ("IFRSs") and were audited by Deloitte LLP, Kazakhstan (the "Underlying Financial Statements") in accordance with International Standards on Auditing issued by International Auditing and Assurance Standards Board.

We examined the Underlying Financial Statements for the Relevant Periods in accordance with the Auditing Guideline 3.340 "Prospectuses and the Reporting Accountant" as recommended by the Hong Kong Institute of Certified Public Accountants (the "HKICPA").

The Financial Information set out in this report has been prepared from the Underlying Financial Statements. No adjustments are considered necessary to make to the Underlying Financial Statements for the Relevant Periods for the purpose of preparing our report for inclusion in the Circular.

The Underlying Financial Statements are the responsibility of the directors of Semizbay-U who approved their issue. The directors of the Company are responsible for the contents of the Circular in which this report is included. It is our responsibilities to compile the Financial Information set out in this report from the Underlying Financial Statements, to form an independent opinion on the Financial Information and to report our opinion to you.

In our opinion, the Financial Information together with the notes thereon gives, for the purpose of this report, a true and fair view of the state of affairs of Semizbay-U as at 31 December 2011, 2012 and 2013, and the results and cash flows for the Relevant Periods.

A. FINANCIAL INFORMATION

STATEMENTS OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

		Year ended 31 December		
	NOTES	**2011**	**2012**	**2013**
		US$	*US$*	*US$*
Revenue	*6*	191,076,777	152,960,895	122,693,874
Cost of sales		(106,032,826)	(100,675,783)	(129,472,782)
Gross profit		85,043,951	52,285,112	(6,778,908)
Other income	*8*	212,045	295,990	1,163,369
Other expenses	*8*	(1,093,343)	(1,162,350)	(1,871,572)
Selling expenses		(677,200)	(612,635)	(3,459,274)
Administrative expenses		(5,200,156)	(4,824,485)	(5,890,325)
Finance income		4,699	5,533	64,408
Finance costs	*9*	(4,434,538)	(8,102,904)	(9,549,100)
Profit (loss) before taxation		73,855,458	37,884,261	(26,321,402)
Income tax (expense) credit	*10*	(14,849,352)	(6,899,698)	2,095,530
Profit (loss) for the year	*11*	59,006,106	30,984,563	(24,225,872)
Other comprehensive expense				
Items that will not be reclassified subsequently to profit or loss:				
Exchange difference arising on translation into presentation currency		(806,290)	(2,119,468)	(1,616,186)
Other comprehensive expense		(806,290)	(2,119,468)	(1,616,186)
Total comprehensive income (expense) for the year		58,199,816	28,865,095	(25,842,058)

STATEMENTS OF FINANCIAL POSITION

	NOTES	As at 31 December 2011 US$	2012 US$	2013 US$
NON-CURRENT ASSETS				
Property, plant and equipment	14	84,073,053	82,476,655	79,236,775
Intangible assets	15	116,961	109,825	149,508
Mine development costs	16	52,989,543	53,295,403	52,417,870
Subsoil use rights	17	4,013,120	3,749,741	3,495,580
Prepayments	18	3,980,768	3,823,378	3,262,236
Value-added taxes ("VAT") receivable		5,057,694	6,179,634	2,756,741
Restricted bank deposits	21	1,108,767	1,842,252	2,858,004
		151,339,906	151,476,888	144,176,714
CURRENT ASSETS				
Inventories	19	16,817,972	36,763,447	25,576,056
Trade and other receivables	20	47,239,123	23,315,337	35,042,335
VAT receivable		17,200,377	10,920,081	10,529,406
Prepayments	18	2,053,410	5,404,418	5,017,395
Income tax prepaid		308,167	1,874,924	3,620,617
Bank balances and cash	21	15,600,142	2,634,324	685,209
		99,219,191	80,912,531	80,471,018
CURRENT LIABILITIES				
Trade and other payables	22	36,334,757	23,901,573	43,575,041
Historical cost liabilities on subsoil use rights	23	699,212	699,211	699,212
Dividend payable	26	–	–	8,176,349
Loans and borrowings due within one year	24	36,265,586	30,817,308	39,743,025
		73,299,555	55,418,092	92,193,627
NET CURRENT ASSETS (LIABILITIES)		25,919,636	25,494,439	(11,722,609)
TOTAL ASSETS LESS CURRENT LIABILITIES		177,259,542	176,971,327	132,454,105
NON-CURRENT LIABILITIES				
Historical cost liabilities on subsoil use rights	23	3,728,140	3,175,036	2,603,678
Loans and borrowings due after one year	24	30,000,000	32,128,168	23,645,921
Dividend payable	26	–	33,328,115	24,529,074
Site restoration and decommissioning provisions	27	3,813,713	5,155,301	7,908,789
Deferred tax liabilities	25	4,000,054	4,273,610	697,604
		41,541,907	78,060,230	59,385,066
NET ASSETS		135,717,635	98,911,097	73,069,039
CAPITAL AND RESERVES				
Charter capital	28	71,537,316	71,537,316	71,537,316
Reserves		64,180,319	27,373,781	1,531,723
TOTAL EQUITY		135,717,635	98,911,097	73,069,039

STATEMENTS OF CHANGES IN EQUITY

	Equity attributable to owners of Semizbay-U			
	Charter capital	Exchange reserve	Accumulated profits	Total
	US$	*US$*	*US$*	*US$*
At 1 January 2011	71,537,316	(11,797,810)	51,411,313	111,150,819
Profit for the year	–	–	59,006,106	59,006,106
Exchange differences arising on translation into presentation currency	–	(806,290)	–	(806,290)
Total comprehensive income (expense) for the year	–	(806,290)	59,006,106	58,199,816
Dividends recognised as distribution *(note 13)*	–	–	(33,633,000)	(33,633,000)
At 31 December 2011	71,537,316	(12,604,100)	76,784,419	135,717,635
Profit for the year	–	–	30,984,563	30,984,563
Exchange differences arising on translation into presentation currency	–	(2,119,468)	–	(2,119,468)
Total comprehensive income (expense) for the year	–	(2,119,468)	30,984,563	28,865,095
Dividends recognised as distribution *(note 13)*	–	–	(65,671,633)	(65,671,633)
At 31 December 2012	71,537,316	(14,723,568)	42,097,349	98,911,097
Loss for the year	–	–	(24,225,872)	(24,225,872)
Exchange differences arising on translation into presentation currency	–	(1,616,186)	–	(1,616,186)
Total comprehensive expense for the year	–	(1,616,186)	(24,225,872)	(25,842,058)
At 31 December 2013	71,537,316	(16,339,754)	17,871,477	73,069,039

STATEMENTS OF CASH FLOWS

	For the year ended 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
OPERATING ACTIVITIES			
Receipts from customers	216,166,014	170,441,942	118,038,905
VAT refund	17,775,706	15,732,432	7,047,903
Payments to suppliers, employees and other payments	(119,377,445)	(132,704,440)	(97,668,779)
Cash generated from operating activities	114,564,275	53,469,934	27,418,029
Income taxes paid	(15,429,805)	(7,927,054)	(3,411,463)
Interest paid	(3,328,195)	(3,368,379)	(7,383,265)
NET CASH FROM OPERATING ACTIVITIES	95,806,275	42,174,501	16,623,301
INVESTING ACTIVITIES			
Payments for acquisition of intangible assets, property, plant and equipment other than construction in progress	(2,861,417)	(1,579,766)	(3,064,125)
Advances paid for property, plant and equipment	(2,985,343)	(3,029,334)	–
Payments for acquisition of mine development costs and payments for construction-in-progress	(26,955,443)	(16,195,346)	(15,018,213)
Payment of restricted bank deposits	(424,417)	(758,903)	(1,065,315)
Repayment on restricted bank deposits	1,644	–	–
NET CASH USED IN INVESTING ACTIVITIES	(33,224,976)	(21,563,349)	(19,147,653)
FINANCING ACTIVITIES			
Dividends paid	(31,747,197)	(29,137,938)	–
Proceeds from borrowings	6,046,037	67,251,828	69,023,662
Repayment of borrowings	(29,982,267)	(71,344,243)	(68,385,303)
NET CASH (USED IN) FROM FINANCING ACTIVITIES	(55,683,427)	(33,230,353)	638,359
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	6,897,872	(12,619,201)	(1,885,993)
CASH AND CASH EQUIVALENTS AT 1 JANUARY	9,398,942	15,600,142	2,634,324
Effect of foreign exchange rate changes	(696,672)	(346,617)	(63,122)
CASH AND CASH EQUIVALENTS AT 31 DECEMBER, REPRESENTED BY BANK BALANCES AND CASH	15,600,142	2,634,324	685,209

1. GENERAL INFORMATION

On 2 June 2006, the Ministry of Energy and Mineral Resources of the Republic of Kazakhstan (subsequently replaced by the Ministry of Industry and New Technologies of the Republic of Kazakhstan in year 2010) and JSC National Atomic Company Kazatomprom ("KAP") signed the contract for subsoil use of Semizbay mine.

Semizbay-U was established in the Republic of Kazakhstan ("Kazakhstan") on 12 December 2006 as a wholly owned subsidiary of KAP.

During the year ended 31 December 2008, the ownership interest of KAP in Semizbay-U decreased from 100% to 11%. The initial 40% ownership interest reduction resulted from the contribution to Semizbay-U's charter capital made by The Mining Company LLP, a subsidiary of KAP, in the form of transfer of its subsoil use right for Irkol mine. Further reduction occurred due to the sale of the 49% ownership interest in Semizbay-U to Beijing Sino-Kazakh. Beijing Sino-Kazakh is controlled by CGNPC Uranium Resources Co., Ltd. ("CGNPC-URC").

Semizbay-U's registered office is located at: 96, Lenin Street, Stepnyak, Enbekshilderskiy district, Akmola Oblast, Republic of Kazakhstan.

Semizbay-U's principal activities include preliminary processing and sale of the uranium protoxide-oxide produced at Semizbay mine and Irkol mine (the "Fields").

Semizbay mine is located in Akmola and North-Kazakhstan Oblasts. In Semizbay mine, uranium has been produced since December 2009. Commercial production of uranium at Irkol mine located in Kyzylorda Oblast, started in October 2007.

The functional currency of Semizbay-U is Kazakhstan Tenge ("KZT") while the Financial Information is presented in United States Dollars ("US$"). For the convenience of users of the Underlying Financial Statements, the financial information of Semizbay for each of the three years ended 31 December 2011, 2012 and 2013 has been presented in US$.

2. BASIS OF PREPARATION

The Financial Information has been prepared based on the assumption that Semizbay-U will continue as a going concern. This assumes that Semizbay-U will be able to pay its obligations when due in the normal course of its business and continue operating the Fields.

For the year ended 31 December 2013, the net loss incurred of US$24,225,872, mainly resulted from a decrease in global uranium prices, also as at 31 December 2013, Semizbay-U has net current liabilities equal to US$11,722,609.

Semizbay-U has received confirmations from its equity holders that they will provide financial and operational support to Semizbay-U. In addition, Semizbay-U has undrawn financing facilities as disclosed in note 30.

3. APPLICATION OF NEW AND REVISED INTERNATIONAL FINANCIAL REPORTING STANDARDS

The International Accounting Standard Board ("IASB") has issued a number of new and revised International Accounting Standards ("IASs"), International Financial Reporting Standards ("IFRSs"), interpretations and amendments (hereinafter collectively referred to as the "New IFRSs") which are effective for financial periods beginning on 1 January 2013. For the purpose of preparing and presenting the Financial Information of the Relevant Periods, Semizbay-U has consistently adopted all these New IFRSs throughout the Relevant Periods.

New and revised IFRSs issued but not yet effective

Semizbay-U has not early applied the following New IFRSs that have been issued but are not yet effective:

Amendments to IFRS 10, IFRS 12 and IAS 27	Investment Entities[1]
Amendments to IAS 11	Accounting for Acquisition of Interest in Joint Operations[6]
Amendments to IAS 16 and IAS 38	Clarification of Acceptable Methods of Depreciation and Amortisation[6]
Amendments to IAS 19	Defined Benefit Plans: Employee Contributions[2]
Amendments to IFRS 9 and IFRS 7	Mandatory Effective Date of IFRS 9 and Transition Disclosures[3]
Amendments to IAS 32	Offsetting Financial Assets and Financial Liabilities[1]
Amendments to IAS 36	Recoverable Amount Disclosure of Non-Financial Assets[1]
Amendments to IAS 39	Novation of Derivative and Continuation of Hedge Accounting[1]
Amendments to IFRSs	Annual Improvements to IFRSs 2010-2012 Cycle[4]
Amendments to IFRSs	Annual Improvements to IFRSs 2011-2013 Cycle[2]
IFRS 9	Financial Instruments[3]
IFRS 14	Regulatory Deferral Accounts[5]
IFRS 15	Revenue from Contracts with Customers[7]
IFRIC 21	Levies[1]

1 Effective for annual periods beginning on or after 1 January 2014

2 Effective for annual periods beginning on or after 1 July 2014

3 Available for application – the mandatory effective date will be determined when the outstanding phases of IFRS 9 are finalised

4 Effective for annual periods beginning on or after 1 July 2014, with limited exceptions

5 Effective for first annual IFRS financial statements beginning on or after 1 January 2016

6 Effective for annual periods beginning on or after 1 January 2016

7 Effective for annual periods beginning on or after 1 January 2017

The management of Semizbay-U anticipates that none of the above remaining New IFRSs will have a significant impact on the Financial Information during their initial application.

4. SIGNIFICANT ACCOUNTING POLICIES

The Financial Information has been prepared in accordance with accounting policies which conform with IFRSs issued by the IASB. In addition, the Financial Information includes applicable disclosures required by the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited and by the Hong Kong Companies Ordinance.

The Financial Information has been prepared on the historical cost basis.

Historical cost is generally based on the fair value of the consideration given in exchange for goods or services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, Semizbay-U takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in the Financial Information is determined on such a basis, except for leasing transactions that are within the scope of IAS 17, and measurements that have some similarities to fair value but are not fair value, such as net realisable value in IAS 2 or value in use in IAS 36.

The significant accounting policies are set out below.

Revenue recognition

Revenue is measured at the fair value of the consideration received or receivable and represents amounts received and receivable for goods sold in the normal course of business, net of discounts, estimated customer returns, rebates and other similar allowance, and sales related taxes.

Revenue from the sale of goods is recognised when the goods are delivered and titles have passed, at which time all the following conditions are satisfied:

– Semizbay-U has transferred to the buyer the significant risks and rewards of ownership of the goods;

– Semizbay-U retains neither continuing managerial involvement to the degree usually associated with ownership nor effective control over the goods sold;

– the amount of revenue can be measured reliably;

– it is probable that the economic benefits associated with the transaction will flow to Semizbay-U; and

– the costs incurred or to be incurred in respect of the transaction can be measured reliably.

Interest income from a financial asset is recognised when it is probable that the economic benefits will flow to Semizbay-U and the amount of income can be measured reliably. Interest income is accrued on a time basis, by reference to the principal outstanding and at the effective interest rate applicable, which is the rate that exactly discounts the estimated future cash receipts through the expected life of the financial asset to that asset's net carrying amount on initial recognition.

Property, plant and equipment

Property, plant and equipment other than construction in progress, are stated at cost less subsequent accumulated depreciation and accumulated impairment losses, if any.

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognised impairment loss. Costs include professional fees and, for qualifying assets, borrowing costs capitalised in accordance with Semizbay-U's accounting policy. Such properties are classified to the appropriate categories of property, plant and equipment when completed and ready for intended use. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

The cost of replacing part of an item of property, plant and equipment is recognised in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to Semizbay-U and its cost can be measured reliably. The carrying amount of the replaced part is derecognised. The current repair and maintenance expenses for property, plant and equipment are recognised in profit or loss.

Depreciation is recognised so as to write off the cost of assets, other than the construction in progress, buildings and constructions, and machinery and equipment which are part of mining assets, less their residual values over their estimated useful lives, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

Depreciation commences when the asset is put into operation. Depreciation expense on buildings, constructions and machinery and equipment which are part of mining assets is accrued using the unit-of-production method based on proved reserves (except for buildings and construction, that are used independently, machinery and equipment located on the Fields that are used independently, and could be re-located to another place and depreciated by using straight-line method as per above). Straight-line method of depreciation is also applied to vehicles and other property, plant and equipment.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in profit or loss.

Mine development costs

Mine development costs include the costs associated with the development and preparation of the Fields, drilling of uranium production wells, surface technological facilities for uranium production and processing of uranium, reclamation assets and ion-exchange resin, including related overheads less accumulated depletion and impairment loss.

Depletion of mine development costs is calculated by unit-of-production method and included in the production expenses starting from the commencement date of uranium production. Depletion of mine development costs relating to the licenced block is calculated on the basis of internal estimates of this block proved reserves. The overheads associated with mine development that do not meet recognition criteria of mine development costs provided for in the subsoil use contracts are capitalised separately on production development costs account. The production development costs attributable to the licenced block are charged to the cost of production based on internal estimates of the proved reserves of this block.

Subsoil use rights

The subsoil use rights are measured at cost less accumulated amortisation and impairment loss.

Semizbay-U assumes the liability for repayment of the historical costs incurred by the Kazakhstan Government in respect of the licenced blocks before the licences were issued. These historical costs are recognised as part of the acquisition cost with the recognition of respective liabilities equal to the present value of payments to be made during ten years starting from the commencement date of commercial production.

Subsoil use rights are amortised on a unit-of-production method and amortisation is charged to production costs after commercial production of uranium commences.

Foreign currencies

In preparing the Financial Information, transactions in currencies other than the functional currency of Semizbay-U (foreign currencies) are recognised at the rates of exchanges prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences on monetary items are recognised in profit or loss in the period in which they arise.

For the purpose of presenting the Financial Information, the assets and liabilities are translated into the presentation currency (i.e. US$) using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rates at the dates of the translation are used. Exchange differences arising, if any, are recognised in other comprehensive income and accumulated in equity.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets until such time as the assets are substantially ready for their intended use or sale.

All other borrowing costs are recognised in profit or loss in the period in which they are incurred.

Employee benefits

Pension contributions

Semizbay-U withholds 10% of the wages of its employees as contribution to pension funds. According to the legislation of the Republic of Kazakhstan, pension contributions are an obligation of employees. Semizbay-U has no obligation of the pension contribution as the employer.

Short-term benefits

Short-term employee benefit liabilities are measured on an undiscounted basis and are expensed as the related service is provided.

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit before taxation as reported in the statements of profit or loss and other comprehensive income, because of income or expense that are taxable or deductible in other years and items that are not taxable or tax deductible. Semizbay-U's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the Financial Information and the corresponding tax base used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary difference to the extent that it is probable that taxable profits will be available against which those deductible temporary differences can be utilised.

The carrying amount of deferred tax assets is reviewed at the end of each reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realised, based on tax rate (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which Semizbay-U expects, at the end of the reporting period, to recover or settle the carrying amount of its assets and liabilities.

Current and deferred tax is recognised in profit or loss, except when it relates to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity respectively.

Intangible assets

Intangible assets with finite useful lives that are acquired separately are carried at costs less accumulated amortisation and any accumulated impairment losses. Amortisation for intangible assets with finite useful lives is recognised on a straight-line basis over their estimated useful lives. The estimated useful life and amortisation method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains or losses arising from derecognition of an intangible asset are measured at the difference between the net disposal proceeds and the carrying amount of the asset and are recognised in profit or loss in the period when the asset is derecognised.

Impairment losses on tangible and intangible assets

At the end of the reporting period, Semizbay-U reviews the carrying amounts of its tangible and intangible assets to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the asset is estimated in order to determine the extent of the impairment loss, if any. When it is not possible to estimate the recoverable amount of an individual asset, Semizbay-U estimates the recoverable amount of the cash-generating unit to which the asset belongs. Where a reasonable and consistent basis of allocation can be identified, corporate assets are also allocated to individual cash-generating units, or otherwise they are allocated to the smallest group of cash-generating units for which a reasonable and consistent allocation basis can be identified.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a cash-generating unit) is estimated to be less than its carrying amount, the carrying amount of the asset (or a cash-generating unit) is reduced to its recoverable amount.

An impairment loss is recognised immediately in profit or loss. Where an impairment loss subsequently reverses, the carrying amount of the asset is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a cash-generating unit) in prior years. A reversal of an impairment loss is recognised as income immediately.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is calculated using the weighted average method, and includes expenditure incurred in acquiring the inventories, production or conversion costs and other costs incurred in bringing them to their existing location and condition. As for manufactured inventories and work in progress, the cost also includes an appropriate share of production overheads calculated based on standard (planned) production volume at normal (normative) operating capacity of Semizbay-U.

Net realisable value is the estimated selling price in the ordinary course of business, less the estimated cost of completion and the estimated costs necessary to make the sale.

Provisions

Provisions are recognised when Semizbay-U has a present obligation (legal or constructive) as a result of a past event, it is probable that Semizbay-U will be required to settle that obligation, and a reliable estimate can be made of the amount of the obligation.

Provisions are measured at the best estimate of the consideration required to settle the present obligation at the end of the reporting period, taking into account the risks and uncertainties surrounding the obligation. When a provision is measured using the cash flows estimated to settle the present obligation, its carrying amount is the present value of those cash flows (where the effect of the time value of money is material).

Financial instruments

Financial assets and financial liabilities are recognised in the statements of financial position when Semizbay-U becomes a party to the contractual provisions of the instrument.

Financial assets and financial liabilities are initially measured at fair value. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets or financial liabilities at fair value through profit or loss) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at fair value through profit or loss are recognised immediately in profit or loss.

Financial assets

Semizbay-U's financial assets are generally classified as loans and receivables.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a debt instrument and of allocating interest income over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts (including all fees paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the debt instrument, or, where appropriate, a shorter period to the net carrying amount on initial recognition.

Interest income is recognised on an effective interest basis for debt instruments.

Loans and receivables

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. Subsequent to initial recognition, loans and receivables (including trade and other receivables restricted bank deposits and bank balances and cash) are carried at amortised cost using the effective interest method, less any identified impairment losses.

Interest income is recognised by applying the effective interest rate, except for short-term receivables where the recognition of interest would be immaterial.

Impairment of financial assets

Financial assets are assessed for indicators of impairment at the end of each reporting period. Financial assets are considered to be impaired where there is objective evidence that, as a result of one or more events that occurred after the initial recognition of the financial asset, the estimated future cash flows of the financial assets have been affected.

Objective evidence of impairment could include:

- significant financial difficulty of the issuer or counterparty; or
- breach of contract, such as default or delinquency in interest and principal payments; or
- it becoming probable that the borrower will enter bankruptcy or financial re-organisation.

For certain categories of financial assets, such as trade receivables, assets that are assessed not to be impaired individually are, in addition, assessed for impairment on a collective basis. Objective evidence of impairment for a portfolio of receivables could include Semizbay-U's past experience of collecting payments, an increase in the number of delayed payments in the portfolio past the average credit period of 30 days, observable changes in national or local economic conditions that correlate with default on receivables.

For financial assets carried at amortised cost, the amount of the impairment loss recognised is the difference between the asset's carrying amount and the present value of the estimated future cash flows discounted at the financial asset's original effective interest rate.

The carrying amount of the financial asset is reduced by the impairment loss directly for all financial assets with the exception of trade receivables, where the carrying amount is reduced through the use of an allowance account. When a trade receivable is considered uncollectible, it is written off against the allowance account. Subsequent recoveries of amounts previously written off are credited against the allowance account. Changes in the carrying amount of the allowance account are recognised in profit or loss.

Financial liabilities and equity instruments

Debt and equity instruments issued by Semizbay-U are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of Semizbay-U after deducting all of its liabilities. Equity instruments issued by Semizbay-U are recognised at the proceeds received, net of direct issue costs.

Financial liabilities

Financial liabilities, including trade and other payables, historical cost liabilities on subsoil use rights, loans and borrowings and dividend payable, are initially measured at fair value, net of transaction costs, and are subsequently measured at amortised cost, using the effective interest method.

Effective interest method

The effective interest method is a method of calculating the amortised cost of a financial liability and of allocating interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash payments (including all fees paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial liability, or, where appropriate, a shorter period to the net carrying amount on initial recognition.

Interest expense is recognised on an effective interest basis.

Derecognition

Semizbay-U derecognises a financial asset only when the contractual rights to the cash flows from the asset expire.

On derecognition of a financial asset in its entirety, the difference between the asset's carrying amount and the sum of the consideration received and receivable and the cumulative gain or loss that had been recognised in other comprehensive income and accumulated in equity is recognised in profit or loss.

Semizbay-U derecognises financial liabilities when, and only when, Semizbay-U's obligations are discharged, cancelled or expire. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

5. KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of Semizbay-U's accounting policies, which are described in note 4, management is required to make judgments, estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and associated assumptions are based on the historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the period in which the estimate is revised if the revision affects only that period or in the period of the revision and future periods, if the revision affects both current and future periods.

The critical assumptions regarding future operations and other key sources of estimation uncertainty as at the end of the reporting period bearing a significant risk of substantial adjustment of the carrying amounts of assets and liabilities in the next financial year are described below.

Uranium ore reserves

One of the key factors of Semizbay-U's operations is ore reserve. All the reserve estimates assume some degree of uncertainty which depends on the volume of reliable geological and technical data available on the date of estimate and data interpretation. The estimates may be verified in the course of projects with a view to improve output, efficiency or production strategy.

Impairment of property, plant and equipment and other non-current assets

Determination of recoverable amount

Determination of the recoverable amount of the cash-generating unit involves the use of the management's estimates. The methods used to determine the value in use include discounted cash flow method. These estimates, including the methodologies used, may have a significant impact on the value in use and ultimately on the amount of any impairment of property, plant and equipment and other non-current assets.

As at 31 December 2013, as a result of the continued decline in uranium spot-prices, Semizbay-U carried out a review of the recoverable amount of its non-current assets. The recoverable amount of the relevant assets was determined on the basis of their value in use. The discount rate used in measuring value in use was 16.12% per annum. No impairment loss was identified as a result of the performed impairment test.

Useful lives of property, plant and equipment

As mentioned in note 4, Semizbay-U reviews the remaining useful life of property, plant and equipment at the end of each reporting period. Estimation of the assets' useful life depends on such factors as economic use, maintenance and repair programs, technological improvements and other business conditions. The management's assessment of the property, plant and equipment's useful life reflects the information available on the date of issue of the underlying financial statements. At 31 December 2011, 2012 and 2013, the carrying amount of property, plant and equipment is US$84,073,053, US$82,476,655 and US$79,236,775 respectively.

Provisions for site restoration

Semizbay-U estimates provisions for site restoration at the end of each reporting period and makes adjustment to reflect the best estimate. Semizbay-U estimates the site restoration provision based on significant management's estimates and judgments. Majority of these liabilities will occur in several years and apart from uncertainty of legal requirements, Semizbay-U's estimate may be affected by changes in the assets decommissioning technology, cost and industry practice. A provision is established on the basis of the net discounted value of site restoration costs when the liability arises. Actual costs incurred in future periods may substantially differ from the amounts of provisions. At 31 December 2011, 2012 and 2013, the carrying amount of site restoration provision is US$3,813,713, US$5,155,301 and US$7,908,789 respectively.

6. REVENUE

	For the year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Sales of uranium protoxide-oxide	191,076,777	152,715,291	122,693,874
Sales from trading of goods	–	245,604	–
	191,076,777	152,960,895	122,693,874

7. SEGMENT INFORMATION

Management determines the operating segment based on the information reported to Semizbay-U's chief operating decision maker ("CODM"), being the chief executive officer of Semizbay-U. As all of Semizbay-U's activities are engaged in mining development and all the principal assets employed are located in the Republic of Kazakhstan, Semizbay-U's CODM considers the performance assessment of Semizbay-U should be based on the results of Semizbay-U as a whole which are measured in accordance with Semizbay-U's accounting policies. Accordingly, no segment information is presented.

During the Relevant Periods, revenue generated from each of CGNPC-URC together with one of its subsidiary and KAP contributed more than 10% of the total revenue of Semizbay-U.

8. OTHER INCOME AND EXPENSES

	For the year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Other income			
Reimbursement from a customer	–	–	966,288
Scrap sales	212,045	59,017	78,325
Others	–	236,973	118,756
	212,045	295,990	1,163,369
Other expenses			
Social sphere expenses	701,003	1,149,996	557,368
Non-deductible VAT	333,945	1,469	–
Loss on disposal of property, plant and equipment	29,634	10,885	74,175
Write-down of inventories	–	–	1,117,323
Donations	–	–	35,847
Others	28,761	–	86,859
	1,093,343	1,162,350	1,871,572

9. FINANCE COSTS

	For the year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Interest on loans and borrowings wholly repayable within five years	3,313,041	5,006,358	5,270,298
Interest on dividend payable	–	763,094	2,678,401
	3,313,041	5,769,452	7,948,699
Imputed interest on historical cost liabilities on subsoil use rights	163,777	146,114	127,843
Net foreign exchange loss	705,196	1,846,388	969,488
Unwinding of discount *(note 27)*	252,524	340,950	503,070
	4,434,538	8,102,904	9,549,100

10. INCOME TAX EXPENSE (CREDIT)

Income tax expense (credit) of Semizbay-U for the Relevant Periods are presented as follows:

	For the year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Current income tax expense	13,988,105	6,815,284	–
(Over) underprovision in prior years	–	(254,906)	1,434,410
Deferred income tax expense (credit) *(note 25)*	861,247	339,320	(3,529,940)
	14,849,352	6,899,698	(2,095,530)

The income tax rate established by the tax legislation of the Republic of Kazakhstan effective in 2011, 2012 and 2013 is 20%.

The income tax expense (credit) can be reconciled to the profit (loss) before taxation as follows:

	For the year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Profit (loss) before taxation	73,855,458	37,884,261	(26,321,402)
Income tax expense (credit) calculated at 20%	14,771,092	7,576,852	(5,264,280)
Tax effect of income not taxable for tax purpose	–	(422,248)	–
Tax effect of expense not deductible for tax purpose	78,260	–	1,734,340
(Over) underprovision in prior years	–	(254,906)	1,434,410
Income tax expense (credit)	14,849,352	6,899,698	(2,095,530)

11. PROFIT (LOSS) FOR THE YEAR

Profit (loss) before taxation has been arrived at after charging:

	For the year ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Depreciation/depletion of			
– property, plant and equipment	5,213,259	6,633,264	6,618,378
– mine development costs	13,122,897	16,246,791	17,292,973
Amortisation of subsoil use rights	199,775	203,279	185,881
Amortisation of intangible assets	40,547	32,647	27,948
Total depreciation, depletion and amortisation	18,576,478	23,115,981	24,125,180
Less: amount capitalised in inventories	(832,269)	(920,341)	(597,670)
	17,744,209	22,195,640	23,527,510
Directors' emoluments *(note 12)*	–	–	–
Other staff costs	7,428,250	8,357,347	12,015,019
Total staff costs	7,428,250	8,357,347	12,015,019
Auditor's remuneration	29,287	28,798	33,602
Cost of inventories recognised as expense	106,032,826	100,675,783	129,472,782

12. DIRECTORS' AND EMPLOYEE'S EMOLUMENTS

(a) Directors' emoluments

The directors of Semizbay-U are either directors or employees of the shareholders or their respective holding companies. In the opinion of directors of Semizbay-U, there is no reasonable basis to allocate the remuneration to Semizbay-U.

(b) Employee's emoluments

None of the five highest paid individuals in Semizbay-U in 2011, 2012 and 2013 were directors of Semizbay-U and details of their emoluments are as follows:

	For the years ended 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Salaries and other benefits	411,827	318,724	320,034
Bonus	44,878	76,568	70,205
Compensation for loss of office	9,228	–	–
	465,933	395,292	390,239

No incentive was paid to these individuals as an inducement to join or upon joining in 2011, 2012 and 2013. The emoluments of each of the highest paid individuals mentioned above were below HK$1,000,000.

13. DIVIDENDS

	For the year ended 31 December 2011	2012	2013
	US$	*US$*	*US$*
Dividends recognised as distribution during the year:			
2010 final	33,633,000	–	–
2011 final *(note)*	–	65,671,633	–
2012 final	–	–	–
	33,633,000	65,671,633	–

Note: On 24 September 2012, Semizbay-U obtained a loan from KAP (see note 24) to pay the dividends of year 2011 to Beijing Sino-Kazakh. Dividend payables to KAP and The Mining Company LLP were reclassified to non-current liabilities according to agreements providing a grace period for payment of dividends (see note 26).

14. PROPERTY, PLANT AND EQUIPMENT

	Freehold Land	Buildings and constructions	Machinery and equipment	Vehicles	Office equipment	Construction in progress	Total
	US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
COST							
At 1 January 2011	–	54,756,825	24,735,658	2,845,624	1,336,201	3,987,646	87,661,954
Additions	2,094	85,705	1,686,694	1,060,121	56,909	5,051,725	7,943,248
Disposals	–	–	(71,450)	–	(33,979)	–	(105,429)
Transfer and reclassification	–	561,513	5,589,292	–	(87,110)	(6,063,695)	–
Foreign currency adjustments	(25)	(376,745)	(253,098)	(31,891)	(8,234)	(14,733)	(684,726)
At 31 December 2011	2,069	55,027,298	31,687,096	3,873,854	1,263,787	2,960,943	94,815,047
Additions	–	30,749	2,363,215	929,998	152,760	2,874,911	6,351,633
Disposals	–	–	(738,971)	–	(22,876)	–	(761,847)
Foreign currency adjustments	(32)	(854,544)	(509,456)	(70,191)	(21,023)	(77,051)	(1,532,297)
At 31 December 2012	2,037	54,203,503	32,801,884	4,733,661	1,372,648	5,758,803	98,872,536
Additions	–	73,906	2,983,581	196,760	80,860	1,642,119	4,977,226
Disposals	–	–	(1,208,426)	–	(69,114)	–	(1,277,540)
Transfer	–	1,937,051	1,811,785	–	(39,286)	(3,709,550)	–
Foreign currency adjustments	(38)	(1,031,965)	(647,186)	(90,326)	(25,383)	(87,812)	(1,882,710)
At 31 December 2013	1,999	55,182,495	35,741,638	4,840,095	1,319,725	3,603,560	100,689,512
DEPRECIATION							
At 1 January 2011	–	1,949,213	2,880,122	529,389	330,319	–	5,689,043
Provided for the year	–	1,959,801	2,592,961	462,277	198,220	–	5,213,259
Eliminated on disposals	–	–	(43,268)	–	(16,894)	–	(60,162)
Reclassification	–	(55)	3,976	–	(3,921)	–	–
Foreign currency adjustments	–	(36,641)	(50,038)	(9,112)	(4,355)	–	(100,146)
At 31 December 2011	–	3,872,318	5,383,753	982,554	503,369	–	10,741,994
Provided for the year	–	2,273,121	3,598,323	569,566	192,254	–	6,633,264
Eliminated on disposals	–	–	(734,974)	–	(14,023)	–	(748,997)
Foreign currency adjustments	–	(84,692)	(114,536)	(21,411)	(9,741)	–	(230,380)

	Freehold Land	Buildings and constructions	Machinery and equipment	Vehicles	Office equipment	Construction in progress	Total
	US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
At 31 December 2012	–	6,060,747	8,132,566	1,530,709	671,859	–	16,395,881
Provided for the year	–	2,240,713	3,559,360	647,147	171,158	–	6,618,378
Eliminated on disposals	–	–	(1,172,164)	–	(31,202)	–	(1,203,366)
Foreign currency adjustments	–	(134,680)	(174,791)	(34,792)	(13,893)	–	(358,156)
At 31 December 2013	–	8,166,780	10,344,971	2,143,064	797,922	–	21,452,737
CARRYING VALUES							
At 31 December 2011	2,069	51,154,980	26,303,343	2,891,300	760,418	2,960,943	84,073,053
At 31 December 2012	2,037	48,142,756	24,669,318	3,202,952	700,789	5,758,803	82,476,655
At 31 December 2013	1,999	47,015,715	25,396,667	2,697,031	521,803	3,603,560	79,236,775

Buildings and constructions, machinery and equipment which are part of mining assets are depreciated using the unit-of-production method based on proved reserves.

Buildings and constructions located on the Fields that are used independently, machinery and equipment located on the Fields that are used independently, and could be re-located to another place, as well as vehicles and office equipment are depreciated using the straight-line method.

The following useful lives are used in the calculation of depreciation using straight-line method:

	Useful lives
Buildings and constructions	12 – 25 years
Machinery and equipment	3 – 15 years
Vehicles	4 – 9 years
Office equipment	3 – 7 years

15. INTANGIBLE ASSETS

	2011	2012	2013
	US$	*US$*	*US$*
COST			
At 1 January	198,087	227,062	250,511
Additions	30,678	27,268	70,087
Foreign currency adjustments	(1,703)	(3,819)	(5,352)
At 31 December	227,062	250,511	315,246
AMORTISATION			
At 1 January	70,516	110,101	140,686
Provided for the year	40,547	32,647	27,948
Foreign currency adjustments	(962)	(2,062)	(2,896)
At 31 December	110,101	140,686	165,738
CARRYING VALUES			
At 31 December	116,961	109,825	149,508

Intangible assets represent software and are amortised on a straight-line basis over 3 to 7 years.

16. MINE DEVELOPMENT COSTS

	Field preparation *US$*	Site restoration costs *US$*	Ion-exchange resin *US$*	Total *US$*
COST				
At 1 January 2011	45,801,940	3,144,858	5,217,578	54,164,376
Additions	24,673,571	165,462	272,521	25,111,554
Foreign currency adjustments	(604,588)	(23,177)	(38,427)	(666,192)
At 31 December 2011	69,870,923	3,287,143	5,451,672	78,609,738
Additions	15,732,459	1,075,153	579,954	17,387,566
Foreign currency adjustments	(1,254,755)	(62,654)	(90,900)	(1,408,309)
At 31 December 2012	84,348,627	4,299,642	5,940,726	94,588,995
Additions	14,396,812	2,374,274	641,251	17,412,337
Foreign currency adjustments	(1,713,716)	(103,055)	(117,130)	(1,933,901)
At 31 December 2013	97,031,723	6,570,861	6,464,847	110,067,431
DEPLETION				
At 1 January 2011	12,047,076	63,012	630,468	12,740,556
Provided for the year	12,789,613	115,312	217,972	13,122,897
Foreign currency adjustments	(234,587)	(1,808)	(6,863)	(243,258)
At 31 December 2011	24,602,102	176,516	841,577	25,620,195
Provided for the year	15,893,884	135,591	217,316	16,246,791
Foreign currency adjustments	(553,774)	(4,206)	(15,414)	(573,394)
At 31 December 2012	39,942,212	307,901	1,043,479	41,293,592
Provided for the year	16,969,561	174,878	148,534	17,292,973
Foreign currency adjustments	(908,661)	(7,426)	(20,917)	(937,004)
At 31 December 2013	56,003,112	475,353	1,171,096	57,649,561
CARRYING VALUES				
At 31 December 2011	45,268,821	3,110,627	4,610,095	52,989,543
At 31 December 2012	44,406,415	3,991,741	4,897,247	53,295,403
At 31 December 2013	41,028,611	6,095,508	5,293,751	52,417,870

Depletion of mine development costs are charged to the cost of production starting from the commencement date of uranium production using the unit-of-production method.

17. SUBSOIL USE RIGHTS

	2011	2012	2013
	US$	*US$*	*US$*
COST			
At 1 January	4,522,701	4,493,416	4,423,663
Foreign currency adjustments	(29,285)	(69,753)	(82,650)
At 31 December	4,493,416	4,423,663	4,341,013
AMORTISATION			
At 1 January	284,837	480,296	673,922
Provided for the year	199,775	203,279	185,881
Foreign currency adjustments	(4,316)	(9,653)	(14,370)
At 31 December	480,296	673,922	845,433
CARRYING VALUES			
At 31 December	4,013,120	3,749,741	3,495,580

Subsoil use rights are amortised on a unit-of-production method and amortisation is charged to production costs after commercial production of uranium commences.

18. PREPAYMENTS

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Prepayments for			
– acquisition of property, plant and equipment	3,980,768	3,823,378	3,262,236
– purchase of inventories	1,952,379	5,285,711	4,260,113
– others	101,031	118,707	757,282
	6,034,178	9,227,796	8,279,631
Presented as			
– current portion	2,053,410	5,404,418	5,017,395
– non-current portion	3,980,768	3,823,378	3,262,236
	6,034,178	9,227,796	8,279,631

19. INVENTORIES

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Raw materials and consumables	2,882,453	5,760,548	5,261,728
Work in progress	5,916,873	8,826,071	9,852,073
Finished goods	8,018,646	22,176,828	10,462,255
	16,817,972	36,763,447	25,576,056

20. TRADE AND OTHER RECEIVABLES

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Trade receivables	47,218,975	22,980,773	34,537,114
Other receivables	20,148	334,564	505,221
Total trade and other receivables	47,239,123	23,315,337	35,042,335

Semizbay-U allows an average credit period of 30 days to its trade customers. The following is an aged analysis of trade receivables presented based on the invoice date at the end of each reporting period.

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
0-30 days	47,218,975	22,980,773	34,537,114

The above trade receivables are neither past due nor impaired as at 31 December 2011, 2012 and 2013, and relate to customers with no recent history of default.

21. BANK AND CASH BALANCES/RESTRICTED BANK DEPOSITS

Bank balances carry zero interest as at 31 December 2011, 2012 and 2013.

Restricted bank deposits represent cash deposit accounts amounting to US$1,108,767, US$1,842,252 and US$2,858,004 respectively at 31 December 2011, 2012 and 2013 in the banks of Republic of Kazakhstan opened in accordance with subsoil use contracts on the Fields, details are set out in note 27. The contractual interest rate of the restricted bank deposits at 31 December 2011, 2012 and 2013 was 0.5%, 0.5% and 0.5% per annum, respectively.

22. TRADE AND OTHER PAYABLES

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Trade payables	30,248,621	13,856,832	32,608,766
Interest payable	236,076	1,499,994	1,614,787
Accrued payroll and welfare expense	1,199,946	1,680,908	1,234,107
Mineral extraction tax payable	4,028,443	6,258,312	6,398,874
Other taxes payable	530,755	598,507	1,710,442
Other payables	90,916	7,020	8,065
Total	36,334,757	23,901,573	43,575,041

The following is an aged analysis of trade payables presented based on the invoice date at the end of the reporting period.

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
0-60 days	30,248,621	13,856,832	32,608,766

23. HISTORICAL COST LIABILITIES ON SUBSOIL USE RIGHTS

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Due over one year	3,728,140	3,175,036	2,603,678
Due within one year	699,212	699,211	699,212
	4,427,352	3,874,247	3,302,890

In accordance with the original terms and conditions specified in the subsoil use contracts, Semizbay-U's liabilities for the payment of the historical costs to the Kazakhstan Government have been determined in the amount of US$7,066,000 payable to the Kazakhstan Government as set forth in the tax legislation. As at 31 December 2011, 2012 and 2013, the undiscounted value of Semizbay-U's historical cost liabilities on subsoil use rights were US$5,050,000, US$4,351,000 and US$3,652,000, respectively. The future expected cash outflows for these liabilities were measured at amortised cost using effective interest method.

Historical costs on subsoil use rights are subject to equal quarterly repayments over 10 years starting from the commencement date of commercial extraction.

24. LOANS AND BORROWINGS

	Interest rate	As at 31 December		
		2011	2012	2013
		US$	*US$*	*US$*
Secured loans and borrowings				
In KZT				
KAP *(note a)*	8.0%	–	32,863,832	32,249,814
Unsecured or guaranteed loans and borrowings				
In US$				
Industrial and Commercial Bank of China Limited ("ICBC") *(note b)*	6-month LIBOR+1.0%	40,088,558	20,029,242	–
ICBC in Almaty, Kazakhstan *(note c)*	7.0%	3,080,101	–	–
JSC Kazinvestbank *(note d)*	8.5%	–	7,051,234	7,051,234
JSC Subsidiary of the Bank of China in Kazakhstan *(note e)*	7.0%	3,000,586	3,001,168	–
ABN AMRO Bank *(note f)*	6.7%	20,096,341	–	–
Amsterdam Trade Bank *(note g)*	1-month LIBOR+6.5%	–	–	4,002,962
Bank Center Credit JSC *(note h)*	5.0%	–	–	20,084,936
Total		66,265,586	62,945,476	63,388,946

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Loans and borrowings are repayable as follows:			
Within one year	36,265,586	30,817,308	39,743,025
Within the second year	30,000,000	8,032,042	7,881,974
Within the third year	–	8,032,042	7,881,974
Within the fourth year	–	8,032,042	7,881,973
Within the fifth year	–	8,032,042	–
Total	66,265,586	62,945,476	63,388,946
Less: Non-current portion of loans and borrowings	30,000,000	32,128,168	23,645,921
Current portion of loans and borrowings	36,265,586	30,817,308	39,743,025

The exposure of Semizbay-U's fixed-rate borrowings and the contractual maturity dates (or reset dates) are as follows:

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Fixed-rate borrowings:			
Within one year	15,184,899	10,788,066	35,740,062
Within the second year	10,992,129	8,032,042	7,881,974
Within the third year	–	8,032,042	7,881,974
Within the fourth year	–	8,032,042	7,881,974
Within the fifth year	–	8,032,042	–
Total	26,177,028	42,916,234	59,385,984

In addition, Semizbay-U has variable-rate borrowings which carry interest at LIBOR plus certain basis points. Interest rate is reset every month for the borrowing from Amsterdam Trade Bank, and every six months for the borrowing from ICBC.

The weighted average effective interest rates (which are also equal to contracted interest rates) on Semizbay-U's borrowings are as follows:

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Effective interest rate:			
Fixed-rate borrowings	6.89%	7.85%	6.15%
Variable-rate borrowings	2.45%	2.89%	4.05%

Notes:

(a) On 24 September 2012, KAP, a shareholder of Semizbay-U, provided a long-term loan of US$32,275,908 with the interest rate of 8.0% per annum. This loan was borrowed to pay dividends for 2011 to Beijing Sino-Kazakh (see note 13). The loan was secured by buildings and construction of Irkol mine and property, plant and equipment located at Semizbay mine, with a net book value of US$51,152,242 and US$51,087,872 as at 31 December 2012 and 2013 respectively.

(b) On 4 December 2009, ICBC provided a long-term credit line of US$60,000,000 at the interest rate of 6-month LIBOR plus fixed interest rate of 1.0% per annum. This loan is guaranteed by The Mining Company LLP and Beijing Sino-Kazakh, both are shareholders of Semizbay-U. Semizbay-U has drawn down full amount of the credit line within 2009 and 2010. The purpose of the loan was for financing the construction and operation of the Fields.

Within the credit agreement with ICBC, Semizbay-U must comply with the current environmental legislation and obtain all the required bank permits for acquisitions, mergers and acquisition, if any, and sell uranium to the civil customers located only in those countries which signed the Nuclear Non-Proliferation Treaty and are the members of the International Atomic Energy Agency. Besides, Semizbay-U must maintain its equity at the level of at least US$50,000,000 and the joint interest of KAP and The Mining Company LLP in Semizbay-U must be at least 51%. Semizbay-U's management believes that Semizbay-U meets the above loan covenants.

In November 2013, there was early settlement of this borrowing.

(c) During the year ended 31 December 2011, Semizbay-U obtained a short-term loan from ICBC in Almaty in amount of US$3,032,000 at the interest rate of 7.0% per annum with the guarantee of The Mining Company LLP and Beijing Sino-Kazakh, both are shareholders of Semizbay-U. The purpose of this loan was funding of working capital of Semizbay-U. The loan was repaid in 2012.

(d) On 24 May 2012, Semizbay-U entered into an agreement with JSC Kazinvestbank for unsecured short-term loans in the form of a credit line of US$7,000,000 effective till 24 May 2014, with an interest rate of 8.5% per annum. The purpose of this loan is to replenish Semizbay-U's working capital.

(e) On 7 July 2011, Semizbay-U entered into an agreement with JSC Subsidiary of the Bank of China in Kazakhstan for unsecured revolving credit line of US$3,000,000 with an interest rate of 7.0% per annum. The agreement was renewed on 9 July 2012 with an effective period till 24 May 2014. The purpose of this loan is to replenish Semizbay-U's working capital. The loan was repaid in July 2013.

(f) On 5 December 2008, ABN AMRO Bank provided a long-term irrevocable credit line of US$45,000,000 at the fixed interest rate of 6.7% per annum to Semizbay-U. This loan was guaranteed by KAP, a shareholder of Semizbay-U. The purpose of this loan was to finance the development of Semizbay mine. During the year ended 31 December 2008, Semizbay-U received US$15,000,000 and the rest was received in 2009. This loan was fully repaid in December 2012.

(g) On 31 May 2012, Semizbay-U entered into an agreement with Amsterdam Trade Bank for unsecured short-term credit line of US$25,000,000 with the purpose of replenishment of Semizbay-U's working capital. The agreement is effective to 23 April 2015.

(h) In October 2013, Semizbay-U received an unsecured credit line of Bank Center Credit JSC totalling US$30,000,000, and a consequent reduction in availability over the limit to US$20,000,000 starting 5 December 2013. The credit line was provided to refinance debt from the ICBC in the amount of US$10,000,000 and working capital financing (associated with uranium mining and administrative activities, except for the payment of dividends) in the amount of US$20,000,000. The agreement is effective to 24 October 2016.

25. DEFERRED TAX LIABILITIES

The following are the major deferred tax (liabilities) assets recognised and movement thereon during the Relevant Periods:

	Property, plant and equipment	Intangible assets	Trade receivables	Inventories	Accrued employee benefit liabilities	Mineral extraction tax	Tax losses	Others	Total
	US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
At 1 January 2011	(4,057,130)	8,284	–	–	22,083	743,853	–	112,408	(3,170,502)
(Charge) credit to profit or loss	(923,066)	(8,369)	4,924	–	18,961	120,379	–	(74,076)	(861,247)
Foreign currency adjustments	38,410	45	(59)	–	(377)	(6,456)	–	132	31,695
At 31 December 2011	(4,941,786)	(40)	4,865	–	40,667	857,776	–	38,464	(4,000,054)
(Charge) credit to profit or loss	(712,031)	(4,949)	–	–	22,071	470,954	–	(115,365)	(339,320)
Foreign currency adjustments	84,413	53	(75)	–	(870)	(18,414)	–	657	65,764
At 31 December 2012	(5,569,404)	(4,936)	4,790	–	61,868	1,310,316	–	(76,244)	(4,273,610)
(Charge) credit to profit or loss	(311,010)	9,958	12,456	225,621	3,628	58,888	3,671,973	(141,574)	3,529,940
Foreign currency adjustments	107,033	(3)	(209)	(2,159)	(1,190)	(25,047)	(35,139)	2,780	46,066
At 31 December 2013	(5,773,381)	5,019	17,037	223,462	64,306	1,344,157	3,636,834	(215,038)	(697,604)

Tax losses carried forward as at 31 December 2013 amounted to US$18,184,170. According to the Tax Code of the Republic of Kazakhstan, tax losses carried forward recognised for the tax purposes expire within ten years from the date of initial occurrence. Therefore, for tax purposes, tax losses carried forward by Semizbay-U as at 31 December 2013 will expire in 2023.

26. DIVIDEND PAYABLE

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
Dividend payable to KAP	–	7,188,417	7,054,111
Dividend payable to The Mining Company LLP	–	26,139,698	25,651,312
	–	33,328,115	32,705,423
Representing			
– current portion	–	–	8,176,349
– non-current portion	–	33,328,115	24,529,074

Semizbay-U declared the amount of dividends of US$65,671,633 following the results of 2011. Dividends attributable to Beijing Sino-Kazakh were paid in 2012 by the loan financing obtained from KAP (note 24). Semizbay-U was granted a grace period for payment of dividends to KAP and The Mining Company LLP till 2017 under the condition of the subsequent repayment of the principal amount by equal instalments during 4 years starting from 2014 and quarterly repayment of interest accrued at the rate of 8% per annum. Current accrued interest payable to The Mining Company LLP and KAP as at 31 December 2012 and 2013 are US$592,033 and US$162,810, and US$580,971 and US$159,768, respectively, and are included in trade and other payables.

27. SITE RESTORATION AND DECOMMISSIONING PROVISIONS

	As at 31 December		
	2011	2012	2013
	US$	*US$*	*US$*
At 1 January	3,423,813	3,813,713	5,155,301
Provided for the year	165,462	1,075,153	2,374,274
Unwinding of discount	252,524	340,950	503,070
Foreign currency adjustments	(28,086)	(74,515)	(123,856)
At 31 December	3,813,713	5,155,301	7,908,789

According to the subsoil use contracts, Semizbay-U has an obligation to establish a site restoration fund by annual transfer of cash to a special bank deposit of minimum 1% of production expenses during the license period (see note 21). In accordance with the subsoil use contracts, Semizbay-U has to submit restoration and decommissioning programme within two years from the commencement date of commercial production. At 31 December 2011, 2012 and 2013, Semizbay-U has provided its best estimate of the site restoration obligation in the amount of US$5,000,842, US$6,547,214 and US$8,485,190 (being expected future prices), respectively, discounted at the nominal rate of 7%, 7% and 6.3% per annum respectively.

The expected cash outflows in relation with site restoration are estimated on the basis of useful lives of the Fields. The main part of cash outflows related to Semizbay and Irkol sites restoration works is expected to occur from 2015 till 2024 and from 2015 till 2031, respectively.

28. CHARTER CAPITAL

	As at 31 December 2011, 2012 and 2013	
	Contribution paid	Ownership interest
	US$	
KAP	5,386,339	11%
The Mining Company LLP	42,157,276	40%
Beijing Sino-Kazakh	23,933,701	49%
	71,537,316	100%

The holders of interests in charter capital are entitled to receive dividends as declared from time to time, and are entitled to vote at shareholders' meetings of Semizbay-U. The shareholders' voting rights are proportional to their respective ownership interest in the charter capital.

No disclosure for the earnings per share and the related basis of computation in respect of the Relevant Periods have been made in this Financial Information as such information is not considered meaningful having regard to the purpose of this report.

29. CAPITAL RISK MANAGEMENT

Semizbay-U manages its capital to ensure it will be able to continue as a going concern while maximising the return to owners through the optimisation of the debt and equity balance. Semizbay-U's overall strategy remains unchanged from 2011.

The capital structure of Semizbay-U consists of debt, which includes loans and borrowings, disclosed in note 24, and equity attributable to owners of Semizbay-U, comprising capital and reserves.

30. FINANCIAL INSTRUMENTS

30a. Categories of financial instruments

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Financial assets			
Trade and other receivable	47,239,123	23,315,337	35,042,335
Bank balances and cash	15,600,142	2,634,324	685,209
Restricted bank deposits	1,108,767	1,842,252	2,858,004
	63,948,032	27,791,913	38,585,548
Financial liabilities			
Trade and other payables	30,575,613	15,363,846	34,231,618
Historical cost liabilities on subsoil use rights	4,427,352	3,874,247	3,302,890
Loans and borrowings	66,265,586	62,945,476	63,388,946
Dividend payable	–	33,328,115	32,705,423
	101,268,551	115,511,684	133,628,877

30b. Financial risk management objectives

Semizbay-U controls and manages financial risks relating to the operations of Semizbay-U through internal reporting on risks, which analyse the exposure to risk by degree and amount. These risks include currency risk, interest rate risk, credit risk and liquidity risk. The management takes full responsibility for implementation and monitoring of the Semizbay-U's risk management system.

Market risk

i. Currency risk

Semizbay-U is exposed to currency risk on sales, purchases and borrowings denominated in currencies other than Semizbay-U's functional currency, primarily, in US$. Semizbay-U does not use any hedging instruments for mitigation of currency risk.

Currency risk exposure

Semizbay-U's exposure to foreign currency risk based on notional (nominal) amounts was as follows:

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
US$			
Bank balances and cash	2,469,508	962,817	85,092
Trade and other receivables	41,562,540	22,966,565	13,488,471
Total assets	44,032,048	23,929,382	13,573,563
Trade and other payables	(5,493,598)	–	(2,400,000)
Historical cost liabilities on subsoil use rights	(4,427,352)	(3,874,247)	(3,302,890)
Loans and borrowings due within one year	(66,265,586)	(30,081,644)	(31,139,132)
Total liabilities	(76,186,536)	(33,955,891)	(36,842,022)
Net currency position	(32,154,488)	(10,026,509)	(23,268,459)

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
EURO			
Current liabilities			
Trade and other payables	(110,728)	(1,502,859)	(8,717)

Sensitivity analysis

10% weakening of KZT against US$ and Euro would decrease profit for the year by US$2,572,359 and US$8,858 for the year ended 31 December 2011, respectively, US$802,121 and US$120,229 for the year ended 31 December 2012, respectively. 25% weakening of KZT against US$ and Euro would increase loss for the year by US$4,653,692 and US$1,744 for the year ended 31 December 2013, respectively. This analysis is based on outstanding foreign currency denominated monetary items and adjusts their translation at the end of the reporting period for sensitivity rate and on the assumption that any other variables (e.g., interest rates) remain constant. If KZT strengthens against US$ and Euro by the aforesaid sensitivity rates, the effect would be opposite.

In the management's opinion, the sensitivity analysis is unrepresentative of the inherent foreign currency risk as the year end exposures at the end of the reporting period do not reflect the exposures during the relevant year.

ii. Interest rate risk

Structure

As at the reporting date, the structure of Semizbay-U's interest bearing financial instruments grouped by interest rate types was as follows:

	As at 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Fixed-rate instruments			
Financial assets	16,708,909	4,476,576	3,543,213
Financial liabilities	26,177,028	76,244,349	92,091,407
Floating-rate instruments			
Financial liabilities	40,088,558	20,029,242	4,002,962

Fair value sensitivity analysis for fixed-rate instruments

The fixed-rate financial assets and the fixed-rate financial liabilities are measured at amortised cost, therefore, a change in interest rates at the reporting date would not affect profit or loss for the year.

Cash flow sensitivity analysis for floating-rate instruments

An increase of 100 basis points in interest rates at the end of each reporting period would decrease profit or increase loss for the year by US$320,709, US$160,234 and US$32,024 for the years ended 31 December 2011, 2012 and 2013, respectively. This analysis assumes that the floating-rate instruments outstanding at the end of the reporting period were outstanding for the whole year, and all other variables (e.g., foreign currency rates) remain constant. If interest rates were decreased by 100 basis points, the effect would be opposite.

Credit risk

Credit risk is the risk of financial loss to Semizbay-U if a customer or counterparty to a financial instrument fails to meet its contractual obligations. At the end of each reporting period, the maximum exposure to credit risk which will case a financial loss to Semizbay-U due to failure to discharge an obligation by the counterparties is arising from the carrying amount of the respective recognised financial assets as stated in the statement of financial position.

Due to nature of its activity and according to an agreement concluded in August 2012 between the shareholders, Semizbay-U concludes transactions mostly with two counterparties, CGNPC-URC and its subsidiary throughout the Relevant Periods and KAP in 2013.

As of 31 December 2011 trade receivables of US$47,218,975 included receivables from CGNPC-URC in amount of US$41,562,540. As of 31 December 2012 trade receivables of US$22,980,773 included receivables from CGNPC-URC in amount of US$22,966,565. As of 31 December 2013 trade receivables of US$34,537,114 included receivables from KAP in amount of US$21,048,643 and receivables from CGNPC-URC's subsidiary in amount of US$13,488,471.

The management of Semizbay-U considered that the credit risk of the trade receivables from CGNPC-URC and its subsidiary and KAP is insignificant considering the historical settlement records, credit quality and financial position of the counter parties.

Credit risk on bank balance and deposits is limited as Semizbay-U's counterparties are banks with high credit ratings assigned by international rating agencies.

Liquidity risk

Liquidity risk is the risk that Semizbay-U will not be able to meet its financial obligations as they fall due.

Semizbay-U manages liquidity risks by maintaining sufficient reserves, available loans and credit lines by means of constant monitoring of budgeted and actual cash flow and comparing maturity dates of its financial assets and liabilities.

The following tables detail Semizbay-U's contractual maturities on its non-derivative financial liabilities at 31 December 2011, 2012 and 2013. The tables have been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which Semizbay-U can be required to pay.

In addition, the following tables detail Semizbay-U's expected maturity for its non-derivative financial assets. The tables have been drawn up based on the undiscounted contractual cash flows of the financial assets including interests that will be earned on those assets. The inclusion of information on these non-derivative financial assets is necessary in order to understand Semizbay-U's liquidity risk management as the liquidity is managed on a net asset and liability basis.

	Weighted average interest rate	On demand or less than 1 month	1-3 months	3 months to 1 year	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
		US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
At 31 December 2011								
Non-derivative financial assets								
Bank balances and cash	–	15,600,142	–	–	–	–	15,600,142	15,600,142
Trade and other receivables	–	47,239,123	–	–	–	–	47,239,123	47,239,123
Restricted bank deposits	0.5%	–	–	–	–	1,159,671	1,159,671	1,108,767
		62,839,265	–	–	–	1,159,671	63,998,936	63,948,032
Non-derivative financial liabilities								
Trade and other payables	–	–	30,575,613	–	–	–	30,575,613	30,575,613
Historical cost liabilities on subsoil use rights	3.3%	–	174,803	524,409	2,796,844	1,553,944	5,050,000	4,427,352
Loans and borrowings								
– fixed rate	6.9%	–	15,446,459	757,358	12,605,799	–	28,890,616	26,177,028
– variable rate	2.5%	–	245,542	21,817,314	19,727,891	–	41,790,747	40,088,558
		–	46,442,417	23,099,081	35,130,534	1,553,944	106,225,976	101,268,551

	Weighted average interest rate	On demand or less than 1 month	1-3 months	3 months to 1 year	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
		US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
At 31 December 2012								
Non-derivative financial assets								
Bank balances and cash	–	2,634,324	–	–	–	–	2,634,324	2,634,324
Trade and other receivables	–	23,315,337	–	–	–	–	23,315,337	23,315,337
Restricted bank deposits	0.5%	–	–	–	–	1,917,245	1,917,245	1,842,252
		25,949,661	–	–	–	1,917,245	27,866,906	27,791,913
Non-derivative financial liabilities								
Trade and other payables	–	–	–	15,363,846	–	–	15,363,846	15,363,846
Historical cost liabilities on subsoil use rights	3.3%	–	174,803	524,409	2,796,844	854,944	4,351,000	3,874,247
Loans and borrowings								
– fixed rate	7.9%	–	842,229	13,314,760	36,287,287	–	50,444,276	42,916,234
– variable rate	2.9%	–	144,711	20,463,376	–	–	20,608,087	20,029,242
Dividend payable	8.0%	–	666,562	1,999,686	39,993,737	–	42,659,985	33,328,115
		–	1,828,305	51,666,077	79,077,868	854,944	133,427,194	115,511,684

	Weighted average interest rate	On demand or less than 1 month	1-3 months	3 months to 1 year	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
At 31 December 2013								
Non-derivative financial assets								
Bank balances and cash	–	685,209	–	–	–	–	685,209	685,209
Trade and other receivables	–	35,042,335	–	–	–	–	35,042,335	35,042,335
Restricted bank deposits	0.5%	–	–	–	–	2,959,547	2,959,547	2,858,004
		35,727,544	–	–	–	2,959,547	38,687,091	38,585,548

	Weighted average interest rate	On demand or less than 1 month	1-3 months	3 months to 1 year	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
Non-derivative financial liabilities								
Trade and other payables	–	–	–	34,231,618	–	–	34,231,618	34,231,618
Historical cost liabilities on subsoil use rights	3.3%	–	174,803	524,409	2,796,844	155,944	3,652,000	3,302,890
Loans and borrowings								
– fixed rate	6.2%	–	28,605,627	9,005,155	26,493,217	–	64,103,999	59,385,984
– variable rate	4.1%	4,016,472	–	–	–	–	4,016,472	4,002,962
Dividend payable	8.0%	–	654,108	10,138,681	28,453,719	–	39,246,508	32,705,423
		4,016,472	29,434,538	53,899,863	57,743,780	155,944	145,250,597	133,628,877

As at 31 December 2011, 2012 and 2013, Semizbay-U has un-utilised facility amounting to US$44,815,000, US$25,000,000 and US$21,000,000, respectively, under existing credit lines.

Fair value

Management believes that the carrying amounts of Semizbay-U's financial assets and liabilities recognised in the Financial Information approximate their fair values.

31. COMMITMENTS

Semizbay-U's subsoil use rights for Irkol mine and Semizbay mine will expire in 2024 and 2030, respectively, and are terminable. Therefore, their extension requires an appropriate approval before termination of the respective subsoil use contract or license. If Semizbay-U does not fulfil contractual obligations, the subsoil use rights may be terminated by the Kazakhstan Government.

In accordance with Subsoil Use Contracts #2060 of 2 June 2006 and #1801 of 8 July 2005, Semizbay-U shall fulfil the following contractual obligations:

Field development costs

Following the Subsoil Use Contracts, Semizbay-U has got the approval for its minimal working program (the "MWP") which may be revised from time to time depending on the field economic and operating conditions.

In accordance with subsoil use contract terms, field development costs in 2011 approved by the Ministry of Industry and New Technologies of the Republic of Kazakhstan must be more than US$9,482,000 for Semizbay mine and US$6,851,000 for Irkol mine. Actual expenses for Semizbay mine in 2011 were US$39,629,000 and US$44,366,000 for Irkol mine.

In accordance with subsoil use contract terms, field development costs in 2012 approved by the Ministry of Industry and New Technologies of the Republic of Kazakhstan must be more than US$6,620,000 for Semizbay mine and US$9,405,000 for Irkol mine. Actual expenses in 2012 were US$50,241,000 for Semizbay mine and US$64,504,000 for Irkol mine.

In accordance with subsoil use contract terms, field development costs in 2013 approved by the Ministry of Industry and New Technologies of the Republic of Kazakhstan must be more than US$6,631,000 for Semizbay mine and US$9,329,000 for Irkol mine. Actual expenses in 2013 were US$65,263,000 for Semizbay mine and US$57,247,000 for Irkol mine.

The management believes that Semizbay-U meets these contractual obligations.

Field development costs comprise the following expenses under the subsoil use contracts terms:

Training of the Republic of Kazakhstan staffs

Annually, Semizbay-U is obligated to finance the trainings of the Republic of Kazakhstan staff in the amount of not less than 1% of total geological exploration costs in the period of exploration and evaluation, and of 1% of operating expenses in the period of commercial production. According to subsoil use contracts terms, trainings cost for 2011, 2012 and 2013 must be not less than US$90,600, US$107,999 and US$91,500, respectively. Actual expenses in 2011, 2012 and 2013 were US$497,000, US$768,000 and US$603,000, respectively.

Investments in development of social sphere

Annually, Semizbay-U is obligated to make investment to development of social sphere. According to subsoil use contracts terms, the annual expenses for development of social sphere must be not less than US$70,000 for Irkol mine and not less than US$100,000 for Semizbay mine. Actual expenses in 2011, 2012 and 2013 were US$701,003, US$1,149,996 and US$557,368, respectively.

Liquidation fund for site restoration

Under the Subsoil Use Contracts, Semizbay-U is obligated to accumulate cash on special bank account in the amount of not less than 1% of total annual operating expenses. This amount is required by the working programme to meet the condition of future site restoration in relation to obligations of site restoration, safety disassembling of wells and estimated cost of liquidation of chemicals leakage consequences.

If actual costs for site restoration exceed the amount of the liquidation fund, Semizbay-U must allocate additional funds for site restoration. If actual costs for site restoration are less than the amount of the liquidation fund, the rest of the respective cash fund should be returned to Semizbay-U and included in the taxable income. The management believes that Semizbay-U complies with this requirement.

32. RELATED PARTY TRANSACTIONS

(a) Transactions with related parties

		For the year ended 31 December		
Name of related parties	**Relationship**	**2011**	**2012**	**2013**
		US$	*US$*	*US$*
Sales of goods and service fee income				
CGNPC-URC	Holding company of a shareholder	185,537,089	152,715,291	14,005,482
Newkum Inc.	Subsidiary of CGNPC-URC	–	–	50,148,961
KAP	Shareholder	–	–	58,534,212
Subsidiaries and associate companies of KAP	Controlled or significantly influenced by KAP	34,306	–	–
		185,571,395	152,715,291	122,688,655

Name of related parties	Relationship	For the year ended 31 December 2011 US$	2012 US$	2013 US$
Reimbursement from a customer				
Newkum Inc.	Subsidiary of CGNPC-URC	–	–	966,288
Purchase of goods and property, plant and equipment				
Subsidiaries and associate companies of KAP	Controlled or significantly influenced by KAP	11,473,462	–	–
Service fee paid				
KAP	Shareholder	–	174,194	3,190,943
Subsidiaries and associate companies of KAP	Controlled or significantly influenced by KAP	47,476,306	93,564,054	54,931,681
Newkum Inc.	Subsidiary of CGNPC-URC	–	–	2,704,450
		47,476,306	93,738,248	60,827,074
Interest paid				
KAP	Shareholder	–	908,295	3,469,503
The Mining Company LLP	Shareholder	–	598,507	2,100,710
		–	1,506,802	5,570,213

The above transactions are based on market prices for uranium, or terms agreed by both parties.

(b) In addition to certain loans and dividend payable disclosed in notes 24 and 26, Semizbay-U has the following balances with related parties

Name of related parties	Relationship	As at 31 December 2011 US$	2012 US$	2013 US$
Trade receivables				
KAP	Shareholder	–	–	21,048,643
Subsidiaries and associate companies of KAP	Controlled or significantly influenced by KAP	119,932	–	–
CGNPC-URC	Holding company of a shareholder	41,562,540	22,966,565	–
Newkum Inc.	Subsidiary of CGNPC-URC	–	–	13,488,471
		41,682,472	22,966,565	34,537,114

The above balances are unsecured, non-interest bearing and repayable within 30 days from invoice date.

Other receivables				
Subsidiaries and associate companies of KAP	Controlled or significantly influenced by KAP	–	9,238	16,190

The above balances are non-trade in nature, unsecured, non-interest bearing and repayable within 30 days from invoice date.

Trade payables				
Subsidiaries and associate companies of KAP	Controlled or significantly influenced by KAP	16,941,334	3,893,731	22,295,736
KAP	Shareholder	–	169,484	167,255
Newkum Inc.	Subsidiary of CGNPC-URC	–	–	725,181
		16,941,334	4,063,215	23,188,172

The above balances are unsecured and repayable within 30 days from invoice date.

Interest payables				
KAP	Shareholder	–	162,810	158,058
The Mining Company LLP	Shareholder	–	592,033	587,359
		–	754,843	745,417

(c) Financial guarantee

Semizbay-U received financial guarantee from its shareholders, details are described in note 24.

(d) Government-related entities

Semizbay-U is a joint venture of CGNPC-URC (which is controlled by the People's Republic of China Government), KAP and The Mining Company LLP (both of which are controlled by the Kazakhstan Government).

Semizbay-U operates in an economic environment currently predenominated by entities controlled, jointly controlled or significantly influenced by the People's Republic of China Government or the Kazakhstan Government ("Government-related Entities"). Apart from the transactions which have been disclosed above, Semizbay-U also conducts business with other Government-related Entities in the ordinary course of business. Semizbay-U's deposits placements, borrowings and other general banking facilities, sales of fuels, income received from provision of services are entered into with certain entities which are Government-related Entities in its ordinary course of business. In view of the nature of those transactions, the management are of the opinion that separate disclosures would not be meaningful.

(e) Compensation of key management personnel

The remuneration of the key management personnel, representing the five highest paid individuals in the Relevant Periods are set out in note 12.

33. RETIREMENT BENEFIT SCHEMES

Employees' contributes to the state pension funds are withheld by Semizbay-U for all its current employees in accordance with the Law of the Republic of Kazakhstan "On pension provisioning in the Republic of Kazakhstan" effective from 1 January 1998.

All employees have the rights to receive pension benefits in proportion to their accumulated working time record and if they had a working time record as at 1 January 1998. In addition, employees have the right to receive pension payments from their pension fund accumulating accounts provided by the 10% compulsory pension contribution from their salary but not exceeding KZT 119,992, KZT 130,792 and KZT 139,950 (equivalent to US$818, US$877 and US$920) per month in 2011, 2012 and 2013, respectively.

B. EVENT AFTER THE RELEVANT PERIODS

On 11 February 2014, the National Bank of Kazakhstan ("NBK") decided to temporarily reduce the interference in the formation of the exchange rate of KZT. As a result, on 12 February 2014, the market exchange rate of KZT for US$1 fell to 184.55, i.e. by about 19%. In order to prevent destabilization of the financial market and the economy as a whole, the NBK plans to establish a corridor of fluctuations of KZT against US$ in the range of 182-188 KZT for US$1. However, there is uncertainty about the exchange rate of KZT and future actions of the NBK, as well as the influence of these factors on the economy of the Republic of Kazakhstan.

C. SUBSEQUENT FINANCIAL STATEMENTS

No audited financial statements have been prepared by Semizbay-U subsequent to 31 December 2013.

Yours faithfully,

Deloitte Touche Tohmatsu
Certified Public Accountants
Hong Kong

2 MANAGEMENT DISCUSSION AND ANALYSIS OF SEMIZBAY-U

The following is the management discussion and analysis of results of Semizbay-U for each of the three years ended 31 December 2011, 2012 and 2013, respectively, based on the financial information from Semizbay-U's Underlying Financial Statements (as defined in Appendix III) prepared under IFRSs as set out above in Appendix III entitled "Accountants Report of Semizbay-U for the three years ended 31 December 2011, 2012 and 2013".

OPERATING RESULTS

The following table sets forth certain income and expense items as a percentage of our revenues from our consolidated statements of comprehensive income for the periods indicated:

	Year Ended December 31,					
	2011		**2012**		**2013**	
	US$	*%*	*US$*	*%*	*US$*	*(%)*
Revenue	191,076,777	100.00	152,960,895	100.00	122,693,874	100.00
Cost of sales	(106,032,826)	(55.49)	(100,675,783)	(65.81)	(129,472,782)	(105.52)
Gross profit	85,043,951	44.50	52,285,112	34.18	(6,778,908)	(5.52)
Other income	212,045	0.11	295,990	0.19	1,163,369	0.95
Other expense	(1,093,343)	(0.57)	(1,162,350)	(0.76)	(1,871,572)	(1.52)
Selling expenses	(677,200)	(0.35)	(612,635)	(0.40)	(3,459,274)	(2.82)
Administrative expenses	(5,200,156)	(2.72)	(4,824,485)	(3.15)	(5,890,325)	(4.80)
Finance income	4,699	0.00	5,533	0.00	64,408	0.05
Finance costs	(4,434,538)	(2.32)	(8,102,904)	(5.29)	(9,549,100)	(7.78)
Profit/(loss) before taxation	73,855,458	38.65	37,884,261	24.77	(26,321,402)	(21.45)
Income tax (expense) credit	(14,849,352)	(7.77)	(6,899,698)	(4.51)	2,095,530	1.71
Profit/(loss) for the year	59,006,106	30.88	30,984,563	20.26	(24,225,872)	(19.74)

Revenue

The principal activities of Semizbay-U include preliminary processing and sale of uranium protoxide-oxide produced at Semizbay Mine and Irkol Mine.

The following table sets forth the details of revenue of Semizbay-U for the periods indicated:

	2011	2012	2013
	US$	*US$*	*US$*
		(in millions)	
Sales of uranium protoxide-oxide	191.1	152.7	122.7
Sales from trading of goods	–	0.3	–
	191.1	153.0	122.7

Semizbay-U's revenue decreased by 19.8% from US$153.0 million in the year ended 31 December 2012 to US$122.7 million in the year ended 31 December 2013, primarily due to a decrease in uranium average selling price as a result of a decrease in the international spot market price and a change in the pricing methodology for the sale of uranium products of Semizbay-U in 2013. In 2013, Semizbay-U received revenue in the amount of US$64.2 million from sales to CGNPC-URC and one of its subsidiary, and revenue in the amount of US$58.5 million from sales to KAP. In 2012, Semizbay-U derived 99.8% of its revenue from sales to CGNPC-URC.

Semizbay-U's revenue decreased by 19.9% from US$191.1 million in the year ended 31 December 2011 to US$153.0 million in the year ended 31 December 2012, primarily due to a decrease in the average selling price of uranium as a result of a decrease in the international spot market price. In 2011, Semizbay-U derived revenue primarily from sales to CGNPC-URC.

Cost of sales

Semizbay-U's cost of sales primarily consists of the cost of raw materials and supplies, mineral extraction tax, depletion and depreciation, third party production and processing services costs and payroll and bonuses.

Semizbay-U's cost of sales increased by 28.6% from US$100.7 million in the year ended 31 December 2012 to US$129.5 million in the year ended 31 December 2013, primarily due to increases in the costs of raw materials and supplies, mineral extraction tax and payroll and bonuses.

Semizbay-U's cost of sales remained relatively stable in the year ended 31 December 2012 in the amount of US$100.7 million as compared to US$106.0 million in the year ended 31 December 2011.

Other income

Semizbay-U's other income increased by US$0.9 million, from US$295,990 in the year ended 31 December 2012 to US$1.2 million in the year ended 31 December 2013, primarily due to the reimbursements from customer Semizbay-U received in the amount of US$966,288 in 2013.

Semizbay-U's other income increased by US$83,945 from US$212,045 in the year ended 31 December 2011 to US$295,990 in the year ended 31 December 2012.

Other expenses

Semizbay-U's other expenses increased by 61% from US$1.2 million in the year ended 31 December 2012 to US$1.9 million in the year ended 31 December 2013, primarily because Semizbay-U had write-down of inventories in the amount of US$1.1 million in 2013, whereas it did not had such expenses in 2012.

Semizbay-U's other expenses increased by 6.3% from US$1.1 million in the year ended 31 December 2011 to US$1.2 million in the year ended 31 December 2012, primarily due to an increase in the social related expenses from 2011 to 2012.

Selling expenses

Semizbay-U's selling expenses increased significantly by 464.7%, or US$2.9 million, from US$612,635 in the year ended 31 December 2012 to US$3.5 million in the year ended 31 December 2013, primarily because Semizby-U incurred product weighing expense in 2013, whereas it did not incur such expense in 2012.

Semizbay-U's selling expenses decreased slightly by US$64,565 from US$677,200 in the year ended 31 December 2011 to US$612,635 in the year ended 31 December 2012.

Administrative expenses

Semizbay-U's administrative expenses increased by 22.1% from US$4.8 million in the year ended 31 December 2012 to US$5.9 million in the year ended 31 December 2013, primarily due to an increase in the employee housing allowance in 2013.

Semizbay-U's administrative expenses decreased slightly by 7.2% from US$5.2 million in the year ended 31 December 2011 to US$4.8 million in the year ended 31 December 2012.

Finance income

Semizbay-U's finance income increased from US$5,533 in the year ended 31 December 2012 to US$64,408 in the year ended 31 December 2013. Semizbay-U's finance income increased by 17.7% from US$4,699 in the year ended 31 December 2011 to US$5,533 in the year ended 31 December 2012.

Finance costs

Semizbay-U's finance costs increased by 17.8% from US$8.1 million in the year ended 31 December 2012 to US$9.5 million in the year ended 31 December 2013, primarily due to an increase in the interest on dividend payable in 2013.

Semizbay-U's finance costs increased by 82.7% from US$4.4 million in the year ended 31 December 2011 to US$8.1 million in the year ended 31 December 2012, primarily due to an increase in the interest on loans and borrowings from 2011 to 2012.

Profit/loss for the year

As a result of the foregoing, Semizbay-U's had incurred a loss of US$24.2 million in the year ended 31 December 2013, whereas it had a profit of US$31.0 million in the year ended 31 December 2012 and a profit of US$59.0 million in the year ended 31 December 2011.

LIQUIDITY, FINANCIAL RESOURCES AND GEARING

Net Assets/Liabilities

Set forth below is a summary of the audited financial statements of Semizbay-U as of 31 December 2011, 2012 and 2013.

	31 December 2011	**31 December 2012**	**31 December 2013**
	US$'000	*US$'000*	*US$'000*
Total Assets	250,559.1	232,389.4	224,647.7
Total Liabilities	114,841.5	133,478.3	151,578.7
Net Assets	135,717.6	98,911.1	73,069.0
*Gearing Ratio	45.8%	57.4%	67.5%

* *Gearing ratio is defined as total liabilities over total assets other than goodwill.*

Bank balances and cash/Restricted bank deposits

As of 31 December 2011, 2012 and 2013, Semizbay-U's aggregate bank balances and cash amounted to approximately US$15.6 million, US$2.6 million and US$0.7 million, respectively, representing 15.7%, 3.3% and 0.9% of total current assets, respectively.

Bank balances carry zero interest as of 31 December 2011, 2012 and 2013.

As of 31 December 2011, 2012 and 2013, Semizbay-U had restricted bank deposits representing cash deposit accounts amounting to US$1.1 million, US$1.8 million and US$2.9 million at 31 December 2011, 2012 and 2013 in the banks of Republic of Kazakhstan opened in accordance with the subsoil use contracts on Irkol Mine and Semizbay Mine. The contractual interest rate of the restricted bank deposits at 31 December 2011, 2012 and 2013 was 0.5%, 0.5% and 0.5% per annum, respectively.

Loans and Borrowings

As of 31 December 2011, 2012 and 2013, Semizbay-U's bank borrowings due within one year amounted to approximately US$36.3 million, US$30.8 million and US$39.7 million, representing 49.5%, 55.6% and 43.1% of Semizbay-U's total current liabilities, respectively. As of 31 December 2011, 2012 and 2013, Semizbay-U's bank borrowings due after one year amounted to approximately US$30.0 million, US$32.1 million and US$23.6 million, representing 72.2%, 41.2% and 39.8% of its total non-current liabilities, respectively.

The following table sets forth the effective interest rates of the bank borrowings of Semizbay-U for the period indicated:

	As of 31 December		
	2011	**2012**	**2013**
	US$	*US$*	*US$*
Effective interest rate:			
Fixed-rate borrowings	6.89%	7.85%	6.15%
Variable-rate borrowings	2.45%	2.89%	4.05%

On 24 September 2012, KAP provided Semizbay-U with a long-term loan in the amount of US$32,275,908 with the interest rate of 8.0% per annum. This loan was borrowed to pay the dividends for 2011 to Beijing Sino-Kazakh. The loan was secured by buildings and construction of Irkol Mine and property, plant and equipment located at Semizbay Mine, with a net book value of US$51,152,242 and US$51,087,872 as at 31 December 2012 and 2013, respectively.

On 4 December 2009, Industrial and Commercial Bank of China Limited provided a long-term credit line of US$60,000,000 at the interest rate of 6-month LIBOR plus fixed interest rate of 1.0% per annum to Semizbay-U. This loan is guaranteed by The Mining Company LLP and Beijing Sino-Kazakh. The bank borrowing has been fully repaid during the year ended 31 December 2013.

On 5 December 2008, ABN AMRO Bank provided a long-term irrevocable credit line of US$45,000,000 at the fixed interest rate of 6.7% per annum to Semizbay-U. This loan was guaranteed by KAP. The borrowing was fully repaid during the year ended 31 December 2012.

SIGNIFICANT INVESTMENTS HELD

As of 31 December 2011, 2012 and 2013, Semizbay-U did not hold any significant investment.

ACQUISITION AND DISPOSALS

As of 31 December 2011, 2012 and 2013, Semizbay-U did not make any acquisition or disposal of subsidiaries or associated companies.

CHARGE ON ASSETS

As of 31 December 2011, 2012 and 2013, Semizbay-U had restricted bank deposits representing cash deposit accounts amounting to US$1.1 million, US$1.8 million and US$2.9 million at 31 December 2011, 2012 and 2013, respectively, in the banks of the Republic of Kazakhstan opened in accordance with the subsoil use contracts on Irkol Mine and Semizbay Mine.

SEGMENTAL INFORMATION

Management of Semizbay-U determines the operating segment based on the information reported to Semizbay-U's chief operating decision maker, being the chief executive officer of Semizbay-U. As Semizbay-U is only engages in mining development and all of its principal assets are located in the Republic of Kazakhstan, Semizbay-U's chief executive officer considers the performance assessment of Semizbay-U should be based on the results of Semizbay-U as a whole. Accordingly, there is no segment information of Semizbay-U during the year ended 31 December 2011, 2012 and 2013.

FINANCIAL RISK MANAGEMENT

Semizbay-U controls and manages financial risks relating to the operations of Semizbay-U through internal reporting on risks, which analyses the exposure to risk by degree and amount. Semizbay-U's activities are exposed to a variety of financial risks, which include currency risk, interest rate risk, credit risk and liquidity risk. The management of Semizbay-U takes full responsibility for implementation and monitoring of the Semizbay-U's risk management system.

Currency risk

Semizbay-U is exposed to currency risk on sales, purchases and borrowings denominated in currencies other than Semizbay-U's functional currency, primarily in US$. Semizbay-U did not use any hedging instruments to mitigate currency risk during the years ended 31 December 2011, 2012 and 2013.

For the years ended 31 December 2011 and 2012, if there had been a 10% weakening in Kazakhstan Tenge against US$, Semizbay-U's profit would have been US$2,572,359 and US$802,121 lower, respectively. For the year ended 31 December 2011 and 2012, if there had been a 10% weakening in Kazakhstan Tenge against Euro, Semizbay-U's profit would have been US$8,858 and US$120,229 lower, respectively. For the year ended 31 December 2013, if there had been a 25% weakening of Kazakhstan Tenge against US$ and Euro, Semizbay-U's loss will increase by US$4,653,692 and US$1,744, respectively. This analysis is based on outstanding foreign currency denominated monetary items and adjusts their translation at the end of each reporting period for sensitivity rate and on the assumption that any other variables (e.g. interest rates) remain constant. If Kazakhstan Tenge strengthens against US$ and Euro by the aforesaid sensitivity rates, the effect would be opposite.

Interest rate risk

Semizbay-U's main interest rate risk arises from floating-rate financial liabilities, primarily loans and bank borrowings. For the year ended 31 December 2011, 2012 and 2013, Semizbay-U did not enter into interest rate swaps to hedge against its exposures to changes in cash flow of floating-rate borrowings.

For the year ended 31 December 2011, 2012 and 2013, if there had been an increase of 100 basis points in interest rates at the end of each reporting period, Semizbay-U's profit would decrease or loss would increase by US$320,709, US$160,234 and US$32,024, respectively. This analysis is based on the assumption that the floating-rate instruments outstanding at the end of the reporting period were outstanding for the whole year, and all other variables (e.g. foreign currency rates) remain constant. If interest rates were decreased by the 100 basis points, the effect would be opposite.

Credit risk

Semizbay-U's credit risk mainly arises from the carrying amount of respective recognised financial assets as stated in the statement of financial position as of 31 December 2011, 2012 and 2013. Semizbay-U is exposed to risk of financial loss if a customer or counterparty to a financial instrument fails to meet its contractual obligations.

Semizbay-U engages in transactions mostly with two counterparties, CGNPC-URC and its subsidiary for the years ended 31 December 2011, 2012 and 2013 and KAP in 2013. The carrying value of trade and other receivables represents the maximum value Semizby-U exposed to credit risk. As of 31 December 2011, Semizbay-U's trade receivables amounted to US$47,218,975 including receivables from CGNPC-URC in amount of US$41,562,540. As of 31 December 2012, Semizbay-U's trade receivables amounted to US$22,980,773, including receivables from CGNPC-URC in amount of US$22,966,565. As of 31 December 2013, Semizbay-U's trade receivables amounted to US$34,537,114, comprising of receivables from KAP in amount of US$21,048,643 and receivables from CGNPC-URC's subsidiary in amount of US$13,488,471.

The management of Semizbay-U considered that the credit risk of the amounts due from CGNPC-URC and its subsidiary and KAP is insignificant considering the historical settlement record, credit quality and financial position of the counterparties.

Credit risk on bank balance and deposits is limited as the Semizbay-U's counterparties are banks with high credit ratings assigned by international rating agencies.

Liquidity risk

Semizby-U manages liquidity risk by maintaining a level of sufficient reserves, available loans and credit lines by means of constant monitoring of budgeted and actual cash flow and comparing maturity dates of its financial assets and liabilities.

The following table sets forth Semizbay-U's contractual maturities on its non-derivative financial liabilities and non-derivative financial assets as of 31 December 2011, 2012 and 2013.

	On demand or less than 1 month	1-3 months	3 months to 1 year	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
As of 31 December 2011							
Non-derivative financial assets							
Bank balances and cash	15,600,142	–	–	–	–	15,600,142	15,600,142
Trade and other receivables	47,239,123	–	–	–	–	47,239,123	47,239,123
Restricted bank deposits	–	–	–	–	1,159,671	1,159,671	1,108,767
	62,839,265	–	–	–	1,159,671	63,998,936	63,948,032
Non-derivative financial liabilities							
Trade and other payables	–	30,575,613	–	–	–	30,575,613	30,575,613
Historical cost liabilities on subsoil use rights	–	174,803	524,409	2,796,844	1,553,944	5,050,000	4,427,352
Loans and borrowings							
– fixed rate	–	15,446,459	757,358	12,605,799	–	28,809,616	26,177,028
– variable rate	–	245,542	21,817,314	19,727,891	–	41,790,747	40,088,558
	–	46,442,417	23,099,081	35,130,534	1,553,944	106,225,976	101,268,551

	On demand or less than 1 month	1-3 months	3 months to 1 year	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
As of 31 December 2012							
Non-derivative financial assets							
Bank balances and cash	2,634,324	–	–	–	–	2,634,324	2,634,324
Trade and other receivables	23,315,337	–	–	–	–	23,315,337	23,315,337
Restricted bank deposits	–	–	–	–	1,917,245	1,917,245	1,842,252
	25,949,661	–	–	–	1,917,245	27,866,906	27,791,913
Non-derivative financial liabilities							
Trade and other payables	–	–	15,363,846	–	–	15,363,846	15,363,846
Historical cost liabilities on subsoil use rights	–	174,803	524,409	2,796,844	854,944	4,351,000	3,874,247
Loans and borrowings							
– fixed rate	–	842,229	13,314,760	36,287,287	–	50,444,276	42,916,234
– variable rate	–	144,711	20,463,376	–	–	20,608,087	20,029,242
Dividend payable	–	666,562	1,999,686	39,993,737	–	42,659,985	33,328.115
	–	1,828,305	51,666,077	79,077,868	854,944	133,427,194	115,511,684

	On demand or less than 1 month	1-3 months	3 months to 1 year	1-5 years	Over 5 years	Total undiscounted cash flows	Carrying amount
	US$	*US$*	*US$*	*US$*	*US$*	*US$*	*US$*
As of 31 December 2013							
Non-derivative financial assets							
Bank balances and cash	685,209	–	–	–	–	685,209	685,209
Trade and other receivables	35,042,335	–	–	–	–	35,042,335	35,042,335
Restricted bank deposits	–	–	–	–	2,959,547	2,959,547	2,858,004
	35,727,544	–	–	–	2,959,547	38,687,091	35,585,548
Non-derivative financial liabilities							
Trade and other payables	–	–	34,231,618	–	–	34,231,618	34,231,618
Historical cost liabilities on subsoil use rights	–	174,803	524,409	2,796,844	155,944	3,652,000	3,302,980
Loans and borrowings							
– fixed rate	–	28,605,627	9,005,155	26,493,217	–	64,103,999	59,385,984
– variable rate	4,016,472	–	–	–	–	4,016,472	4,002,962
Dividend payable	–	654,108	10,138,681	28,453,719	–	39,246,508	32,705,423
	4,016,472	29,434,538	53,899,863	57,743,780	155,944	145,250,597	133,628,877

COMMITMENTS

The extension of Semizbay-U's subsoil use rights requires approval by the Kazakhstan Government before termination of the respective subsoil use contract or license, which are conditioned upon Semizbay-U's fulfilment of its contractual obligations under the subsoil use contracts #2060 dated as of 2 June 2006 and #1801 dated as of 8 July 2005 entered into between Semizbay-U and the Kazakhstan Government.

In accordance with the subsoil use contracts, Semizbay-U shall fulfil the following contractual obligations:

Field development costs

Under the subsoil use contracts, field development costs comprise of expenses relating to training of the Republic of Kazakhstan staff, investments in development of social sphere and accumulation of liquidation fund for site restoration. In particular, the subsoil use contracts require that Semizbay-U to accumulate cash on a special bank account in the amount of not less than 1% of total annual operating expenses to meet the condition of future site restoration in relation to obligations of site restoration, safety disassembling of wells and estimated cost of liquidation of chemicals leakage consequences.

In accordance with the subsoil use contracts, in 2011, the field development costs approved by the Ministry of Industry and New Technologies of the Republic of Kazakhstan must be more than US$9,482,000 for Semizbay Mine and US$6,851,000 for Irkol Mine. The actual expenses Semizbay-U incurred for Semizbay Mine and Irkol Mine in 2011 were US$39,629,000 and US$44,366,000, respectively. Approved field development costs in 2012 must be more than US$6,620,000 for Semizbay Mine and US$9,405,000 for Irkol Mine. The actual expense Semizbay-U incurred for Semizbay Mine and Irkol Mine in 2012 were US$50,241,000 and US$64,504,000, respectively. Approved field development costs in 2013 must be more than US$6,631,000 for Semizbay Mine and US$9,329,000 for Irkol Mine. The actual expenses Semizbay-U incurred for Semizbay Mine and Irkol Mine in 2013 were US$65,263,000 and US$57,247,000, respectively.

The management believes that Semizbay-U has met these contractual obligations under the subsoil use contracts during the years ended 31 December 2011, 2012 and 2013.

CAPITAL STRUCTURE

Semizbay-U was established in the Republic of Kazakhstan on 12 December 2006 as a wholly owned subsidiary of KAP. During the year ended 31 December 2008, the ownership interest of KAP in Semizbay-U decreased from 100% to 11%. The initial 40% ownership interest reduction was resulted from the contribution to Semizbay-U's charter capital by Mining Company LLP, a subsidiary of KAP, in the form of transfer of its subsoil use right of Irkol Mine. KAP's ownership interests in Semizbay-U was further reduced due to the sale of the 49% ownership interest in Semizbay-U to Beijing Sino-Kazakh.

As of 31 December 2011, 2012 and 2013, the charter capital contribution paid by KAP, The Mining Company LLP and Beijing Sino-Kazakh amounted to US$5,386,339, US$42,157,276 and US$23,933,701, representing 11%, 40% and 49% of the ownership interest of Semizbay-U, respectively.

The holders of interests in charter capital are entitled to receive dividends as declared from time to time, and are entitled to vote at shareholders' meetings of Semizbay-U. The shareholders' voting rights are proportional to their respective ownership interest in the charter capital.

Semizbay-U manages its capital to ensure that it will be able to continue as a going concern while maximising the return to owners through the optimisation of the debt and equity balance. Semizbay-U's overall strategy remains unchanged from 2011.

The capital structure of Semizbay-U consists of debt, which includes loans and borrowings, as disclosed in " – LIQUIDITY, FINANCIAL RESOURCES AND GEARING – Loans and Borrowings", and equity attributable to owners of Semizbay-U, comprising capital and reserves.

EMPLOYMENT, SHARE OPTION SCHEMES AND TRAINING SCHEMES

As of 31 December 2011, 2012 and 2013, Semizbay-U employed a total of 311, 520 and 504 full-time employees. The directors of Semizbay-U are either directors or employees of the shareholders or their respective holding companies. In the opinion of the directors of Semizbay-U, there is no reasonable basis to allocate their remuneration to Semizbay-U. Total staff costs for Semizbay-U amounted to US$7.4 million, US$8.4 million and US$12.0 million as of 31 December 2011, 2012 and 2013. None of the five highest paid individuals in Semizbay-U in 2011, 2012 and 2013 were directors of Semizbay-U.

Semizbay-U provides training programs to its Kazakhstan staff as required by the subsoil use contracts. Contributions to the state pension funds were withheld by Semizbay-U for all its current employees in accordance with the law of Kazakhstan for the years ended 31 December 2011, 2012 and 2013.

FUTURE PLAN AND MATERIAL INVESTMENTS

Semizbay-U has no future plan for material investments or in capital assets in 2014.

INTRODUCTION

The following is an illustrative and unaudited pro forma financial information of CGN Mining Company Limited (the "Company") and its subsidiaries (herein collectively referred to as the "Group") and 北京中哈鈾資源投資有限公司 (for identification purpose, in English, Beijing Sino-Kazakh Uranium Resources Investment Company Limited) (the "Target Company") (together with the Group, hereinafter referred to as the "Enlarged Group") ("Unaudited Pro Forma Financial Information"), which have been prepared on the basis of the notes set out below for the purpose of illustrating the effect of the proposed acquisition of the entire equity interest in the Target Company (the "Acquisition").

The Unaudited Pro Forma Financial Information of the Enlarged Group has been prepared in accordance with paragraph 29 of Chapter 4 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules"), for the purpose of illustrating the effect of the Acquisition as if the Acquisition had been completed on 31 December 2013.

The Unaudited Pro Forma Financial Information is prepared by the directors of the Company to provide information of the Group upon completion of the Acquisition. It is prepared for illustrative purpose only and based on a number of assumptions, estimates and uncertainties. Because of its hypothetical nature, the Unaudited Pro Forma Financial Information may not give a true picture of the financial position of the Enlarged Group following the completion of the Acquisition or any future date.

The Unaudited Pro Forma Financial Information should be read in conjunction with the financial information of the Group as set out in Appendix I of the circular, the accountant's report of the Target Company as set out in Appendix II of the circular and other financial information included elsewhere in the circular.

A. UNAUDITED PRO FORMA STATEMENT OF ASSETS AND LIABILITIES OF THE ENLARGED GROUP AS AT 31 DECEMBER 2013

	The Group as at 31 December 2013	The Target as at 31 December 2013	Pro forma adjustments				Pro Forma Enlarged Group
	HK$'000	*HK$'000*	*HK$'000*	*HK$'000*	*HK$'000*	*HK$'000*	*HK$'000*
	(Note 1)	*(Note 2)*	*(Note 3)*	*(Note 4)*	*(Note 5)*	*(Note 6)*	
Non-current assets							
Intangible assets	212	–					212
Property, plant and equipment	45,578	13,789					59,367
Investment properties	73,312	–					73,312
Prepaid lease payments on land use rights	19,265	–					19,265
Investment in a subsidiary	–	–	1,031,362		(1,031,362)		–
Investment in an associate	–	329,866					329,866
	138,367	343,655					482,022
Current assets							
Inventories	21,590	–					21,590
Loan receivable from a shareholder	248,082	–					248,082
Trade and other receivables	213,456	–					213,456
Amount due from immediate holding company	–	3,816				(3,816)	–
Amount due from an intermediate holding company	–	–				3,816	3,816
Amount due from a fellow subsidiary	–	67					67
Prepaid lease payments on land use rights	409	–					409
Bank balances and cash	1,030,491	41,326	(1,031,362)				40,455
	1,514,028	45,209					527,875
Current liabilities							
Trade and other payables	34,586	421		9,858			44,865
Amount due to immediate holding company	–	569				(569)	–
Amount due to an intermediate holding company	–	–				569	569
Value added tax payable	289	–					289
Income tax payable	7,582	–					7,582
	42,457	990					53,305

	The Group as at 31 December 2013	The Target as at 31 December 2013	Pro forma adjustments				Pro Forma Enlarged Group
	HK$'000	*HK$'000*	*HK$'000*	*HK$'000*	*HK$'000*	*HK$'000*	*HK$'000*
	(Note 1)	*(Note 2)*	*(Note 3)*	*(Note 4)*	*(Note 5)*	*(Note 6)*	
Net current assets	1,471,571	44,219					474,570
Total assets less current liabilities	1,609,938	387,874					956,592
Non-current liabilities							
Convertible bonds	520,705	–					520,705
Deferred tax liabilities	10,657	7,620					18,277
	531,362	7,620					538,982
Net assets	1,078,576	380,254					417,610

Notes:

(1) The amounts are extracted from the audited consolidated statement of financial position of the Group as at 31 December 2013 as set out in Appendix I to this circular.

(2) The amounts are extracted from the audited statement of financial position of the Target Company as at 31 December 2013 as set out in Appendix II to this circular. Amounts in the United States dollar are converted into Hong Kong dollars using an exchange rate of US$1 to HK$7.7546, being the exchange rate prevailing at the close of business on 31 December 2013.

(3) The adjustment represents the total consideration of US$133.00 million (equivalent to approximately HK$1,031,362,000) for the Acquisition, to be satisfied by cash from the Company's internal resources.

(4) The adjustment represents the estimated transaction costs, including mainly legal and professional fees of approximately HK$9,858,000 to be incurred by the Company and recognised in the profit and loss, upon the completion of the Acquisition.

(5) Upon completion, the assets and liabilities of the Target Company will be accounted for in the consolidated financial statements of the Enlarged Group using the principles of merger accounting in accordance with Accounting Guideline 5 "Merger Accounting for Common Control Combinations" issued by the Hong Kong Institute of Certified Public Accountants. The adjustment represents entries for the elimination of respective investment cost (the "Investment Cost") of approximately HK$1,031,362,000 incurred by the Company in the Target Company against the entire registered capital (the "Registered Capital") of the Target Company acquired by the Company of approximately HK$944,534,000. The difference between the Investment Cost and the Registered Capital of approximately HK$86,828,000 is recognised as a reserve of the Group.

(6) The amount is due from/to 中廣核鈾業發展有限公司 (for identification purpose, in English, CGNPC Uranium Resources Co., Ltd.), an intermediate holding company of the Company. Reclassification is made for consistent presentation.

ACCOUNTANT'S REPORT ON PRO FORMA FINANCIAL INFORMATION

30 June 2014

The Directors
CGN Mining Company Limited
Suites 6706-07, 67/F., Central Plaza
18 Harbour Road
Wanchai
Hong Kong

Dear Sirs,

We have completed our assurance engagement to report on the compilation of pro forma financial information of CGN Mining Company Limited (the "Company") and its subsidiaries (collectively referred to as the "Group") by the directors of the Company for illustrative purposes only. The pro forma financial information consists of the unaudited pro forma statement of assets and liabilities as at 31 December 2013, and related notes as set out on pages IV-1 to IV-3 of the circular in connection with the proposed acquisition (the "Acquisition") of the entire registered capital of 北京中哈鈾資源投資有限公司 (for identification purpose, in English, Beijing Sino-Kazakh Uranium Resources Investment Company Limited) (the "Target Company") (together with the Group hereinafter referred to as the "Enlarged Group") issued by the Company dated 30 June 2014 (the "Circular"). The applicable criteria on the basis of which the directors of the Company have compiled the pro forma financial information are described on pages IV-1 to IV-3 of the Circular.

The pro forma financial information has been compiled by the directors of the Company to illustrate the impact of the Acquisition on the Group's financial position as at 31 December 2013 as if the Acquisition had taken place at 31 December 2013. As part of this process, information about the Group's financial position has been extracted by the directors of the Company from the Group's financial statements for the year ended 31 December 2013, on which an independent auditor's report has been published.

Directors' Responsibility for the Pro Forma Financial Information

The directors of the Company are responsible for compiling the pro forma financial information in accordance with paragraph 29 of Chapter 4 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules") and with reference to Accounting Guideline 7 "Preparation of Pro Forma Financial Information for Inclusion in Investment Circulars" ("AG7") issued by the Hong Kong Institute of Certified Public Accountants (the "HKICPA").

Reporting Accountant's Responsibilities

Our responsibility is to express an opinion, as required by paragraph 29(7) of Chapter 4 of the Listing Rules, on the pro forma financial information and to report our opinion to you. We do not accept any responsibility for any reports previously given by us on any financial information used in the compilation of the pro forma financial information beyond that owed to those to whom those reports were addressed by us at the dates of their issue.

We conducted our engagement in accordance with Hong Kong Standard on Assurance Engagements 3420 "Assurance Engagements to Report on the Compilation of Pro Forma Financial Information Included in a Prospectus" issued by the HKICPA. This standard requires that the reporting accountant comply with ethical requirements and plan and perform procedures to obtain reasonable assurance about whether the directors of the Company have compiled the pro forma financial information in accordance with paragraph 29 of Chapter 4 of the Listing Rules and with reference to AG7.

For purposes of this engagement, we are not responsible for updating or reissuing any reports or opinions on any historical financial information used in compiling the pro forma financial information, nor have we, in the course of this engagement, performed an audit or review of the financial information used in compiling the pro forma financial information.

The purpose of pro forma financial information included in the Circular is solely to illustrate the impact of the Acquisition on unadjusted financial information of the Group as if the Acquisition had been undertaken at an earlier date selected for purposes of the illustration. Accordingly, we do not provide any assurance that the actual outcome of the Acquisition at 31 December 2013 would have been as presented.

A reasonable assurance engagement to report on whether the pro forma financial information has been properly compiled on the basis of the applicable criteria involves performing procedures to assess whether the applicable criteria used by the directors of the Company in the compilation of the pro forma financial information provide a reasonable basis for presenting the significant effects directly attributable to the event or transaction, and to obtain sufficient appropriate evidence about whether:

- the related pro forma adjustments give appropriate effect to those criteria; and
- the pro forma financial information reflects the proper application of those adjustments to the unadjusted financial information.

The procedures selected depend on the reporting accountant's judgment, having regard to the reporting accountant's understanding of the nature of the Group, the event or transaction in respect of which the pro forma financial information has been compiled, and other relevant engagement circumstances.

The engagement also involves evaluating the overall presentation of the pro forma financial information.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Opinion

In our opinion:

(a) the pro forma financial information has been properly compiled on the basis stated;

(b) such basis is consistent with the accounting policies of the Group; and

(c) the adjustments are appropriate for the purposes of the pro forma financial information as disclosed pursuant to paragraph 29(1) of Chapter 4 of the Listing Rules.

SHINEWING (HK) CPA Limited
Certified Public Accountants
Wong Hon Kei, Anthony
Practising Certificate Number: P05591

Hong Kong
30 June 2014

COMPETENT PERSONS REPORT

CGN Mining Company Limited

30th Floor, An Austrian World International
Center Nº 101, North ShaoYaoJu, Chaoyang
District, Beijing

PRC

Prepared For
CGN Mining Company Limited

By
Blackstone Mining Associates (H.K) Limited
Mining and Geological Consultants
Hong Kong

30 June 2014
(Effective date: 31 December 2013)
Report Nº BMA-01613

COMPETENT PERSONS REPORT

For the Semizbay-U ISR Uranium Projects in the Republic of Kazakhstan

CGN Mining Company Limited
30th Floor, Building A, the International Center of Times, Nº 101,
North ShaoYaoJu,
Chaoyang District, Beijing
PRC China
Telephone No: (852) 2243 3778

Blackstone Mining Associates Limited
15/F, 100 Queens Road,
Central, Hong Kong
Telephone No: (852) 2824 8529

Llyle Sawyer, MAIG, M.App.Sc.

Effective Date: 31 December 2013

Compiled by:	Reviewed by:
BMA Technical Team	Llyle Sawyer, MAIG M.App.Sc. Principal Consultant (Geology)

BLACKSTONE MINING ASSOCIATES

Client Use Only

This report has been prepared by Blackstone Mining Associates Limited (BMA), exclusively for CGN Mining Company Limited (Client).

This report is subject to the terms and conditions under which BMA prepared the report. The opinions contained in this document are given in good faith and BMA is of the opinion that any assumptions or interpretations are reasonable.

CGN Mining Company Limited agrees to indemnify BMA, its directors, shareholders, officers and associates (collectively known as associated parties) against all losses, claims, damages, liabilities or actions to which any such party may become subject under any statute or common law, except with respect to negligence, fraudulent or wilful misconduct. The client agrees to reimburse BMA or associated parties for any legal or other expenses incurred by BMA or its associated parties in connection with investigating any claims or defending any actions, except where BMA or its associated parties are found liable for, or guilty of negligence, fraudulent or wilful misconduct.

This report is provided to CGN Mining Company Limited solely for the purpose of assisting potential investors and other interested parties in assessing the geological and technical issues as well as the potential risks associated with the project above and should not be used or relied upon for any other purpose. This report does not constitute a full technical audit but rather it seeks to provide an independent overview of the geological and mining aspects of the Semizbay-U LLP Uranium Project. No part of this report or any reference thereof may be included in, with, or attached to any document or used for any purpose without BMA written consent to the form and context in which it appears.

The title of this report and any associated work remains with BMA and does not pass to the Company until all consideration has been paid in full.

Third Party Reliance and Associated Disclaimers

BMA prepared this report solely for the Client in having regard to the Clients particular needs and interests and in accordance with the Client's instructions. This report has not been drafted for any other person's particular needs or interests.

BMA does not make and expressly disclaims from making any representation or warranty, express or implied regarding the conclusions or findings found in this report to anyone other than the Client. BMA does not authorise you to rely on this report. If you choose to use or rely on all or part of this report, then any loss or damage you may suffer in so doing is at your sole and exclusive risk.

BMA has compiled this report on the basis of data and information provided by or on behalf of the Client. BMA does not believe there to be any reason to believe any material information has been omitted or withheld by the Client.

BMA has verified that data and information where specifically stated. BMA does not accept liability for the accuracy or completeness of any data or information provided to it unless expressly stated otherwise. The findings contained in this report apply as of the date of the report.

Mining Unknown Factors

Forward-looking production and economic targets are forecast estimates only and are dependent on various factors that are beyond BMA's control. Factors may include, but are not limited to, site-specific mining and geological conditions, management and personnel capabilities, availability of funding to properly operate and capitalise the operation, variations in cost elements and market conditions, developing and operating the mine in an efficient manner, unforeseen changes in legislation and new industry developments. Any of these factors may substantially alter the performance of any mining operation.

Material Change Statement

Based on information provided by the Company, no material change has occurred since the Effective Date to the resource and reserve statements or the values for the Semizbay-U LLP Uranium Projects at the date of publication of this circular.

CGN Mining Company Limited

Suites 1801-6, 18F Tower 2 the Gateway
25 Canton Road
Tsim Sha Tsui, Kowloon
Hong Kong

Date: March 12, 2014

Dear Sirs,

RE: Competent Persons Report – Semizbay-U LLP Uranium Project

Blackstone Mining Associates Limited (BMA) has been engaged by CGN Mining Company Limited (Client) to complete a Competent Person's Report (CPR) of the Semizbay-U LLP Uranium Projects in accordance with Chapter 18 of the Listing Rules of the Stock Exchange of Hong Kong (HKEx) and in accordance with the JORC Code.

The purpose of this CPR is to provide an independent technical assessment of the Project based on all available technical data. This CPR will be included in a HKEx circular. BMA is reliant upon the Client's legal advisor for all matters of legal review, including the exact structure of the transaction and the structure of the companies involved.

BMA's senior technical team (Team) consisted of a principal consultant geologist, a senior resource geologist, a principal mining engineer and a senior processing engineer. The Team undertook two site visits to the Project to familiarise themselves with site conditions. BMA's Competent Person Mr Llyle Sawyer was responsible for reviewing the CPR report and the JORC Mineral Resource and Ore Reserve Estimates stated within 31 December 2013.

During the site visit, the Team held detailed discussions with Company management and personnel on the technical aspects of the Project. The company personnel were cooperative and open in facilitating BMA's work.

In addition to work undertaken to generate independent JORC Mineral Resources and Ore Reserves estimates, this report relies largely on information provided by the Client and the Company, either directly from the site and other offices, or from reports by other organisations whose work is the property of the Client or the Company. The data relied upon for the Mineral Resources and Ore Reserves estimates completed by BMA have been compiled primarily by the Company and subsequently validated where possible by BMA. The report is based on information made available to BMA as of and up to March 2014. The Company and the Client have not advised BMA of any material change, or event likely to cause material change to the underlying data, designs or forecasts since the date of asset inspections.

BMA has conducted its review and preparation of the Independent Technical Review (ITR) and Competent Person's Report in accordance with the requirements of Chapter 18 of the Listing Rules of the HKEx. The report is also in accordance with:

- The "Australasian Code for Reporting Mineral Resources and Ore Reserves" (2012 edition published by the Joint Ore Reserves Committee ("JORC")) of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and the Minerals Council of Australia (the "JORC Code"); for determining mineral resources and ore reserves; and

- the Code and Guidelines for technical assessment and/or valuation of mineral and petroleum assets and mineral and petroleum securities for Independent Expert Reports (the "Valmin Code").

BMA operates as an independent technical consultant providing mineral resource evaluation, mining engineering and mine valuation services to the mineral resources, metallurgical reviews and financial services industries. This report was prepared on behalf of BMA by technical specialists, details of whose qualifications and experience are set out in **Annexure A**.

The work undertaken is an ITR of the information provided as well as information collected during site inspections completed by BMA as part of the ITR process. This ITR specifically excludes all aspects of legal issues, marketing, commercial and financing matters, insurance, land titles and usage agreements, and any other agreements/contracts that the Company may have entered into.

BMA does not warrant the completeness or accuracy of information provided by the Company which has been used in the preparation of this report. Drafts of this report were provided to the Company, but only for the purpose of confirming the accuracy of factual material and the reasonableness of assumptions relied upon in the report. Generally, the data available was sufficient for BMA to complete the scope of work. The quality and quantity of data available, and the cooperative assistance, in BMA's view, clearly demonstrated the Company's assistance in the ITR process. All opinions, findings and conclusions expressed in the report are those of BMA and its specialist advisors.

Yours faithfully,

Mr. Dali Christensen Cvek
President Asia Pacific
Blackstone Mining Associates Limited
Level 15/100 Queens Road,
Central, HONG KONG

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1 EXECUTIVE

1.1 Introduction

Blackstone Mining Associates Limited (BMA) was engaged by CGN Mining Company Limited to complete a Competent Person's Report (CPR) of the Semizbay-U LLP Uranium Project (Project) in accordance with the Chapter 18 Listing Rules of the Stock Exchange of Hong Kong (HKEx) and in accordance with the JORC Code (2012).

The purpose of this CPR is to provide an independent technical assessment of the Project based on all available technical data as at the effective date. This CPR will be included in a HKEx circular by CGN Mining Company Limited.

The Project consists of two locations, the Irkol Project and the Semizbay Project, which are owned by Semizbay-U LLP according to the certificate of state registration of legal entities 2008, number 75-1902-25, issued by the Department of Justice, Enbekshildersk District, Akmoltnsk Oblast. Semizbay-U is owned as to 49% by Beijing Sino-Kazakh(Beijing Sino-Kazakh Uranium Resources Investment Company Limited, a limited liability company incorporated in PRC), 11% by National Atomic Company Kazatomprom (KAP) and 40% by The Mining Company LLP, a wholly-owned subsidiary of KAP, a joint-stock company established according to the laws of the Republic of Kazakhstan. Semizbay-U is mainly engaged in the mining and extraction of natural uranium, and currently operates two mines in the Republic of Kazakhstan.

1.2 Irkol Project

The Irkol Mine is geographically located in the Kyzylorzhinsk area, 20 km from Chiili town, the Republic of Kazakhstan. The mining lease area covers 44 square kilometres at depth of from 400 to 700 m from the surface as stated in the lease document, 2008 report. The Irkol deposit was discovered in 1971, and exploration work was resumed in 1975-1977. In 2007, commercial operations of the Irkol deposit using the in situ recovery (ISR) extraction method and yellow cake commenced; full production was commissioned in 2010.

During 2007 to 2013, approximately 5 to 8 new blocks with total of 1618 wells were developed, of which 1396 wells are actively run to achieve a scheduled constant production rate. The forecast extraction of 90% in ISR leaching is reasonable based on the extensive operational results. The forecast overall pregnant leach solution uranium grade is approximately 46-61 mg/L.

JORC Ore Reserves of approximately 13,000 t uranium and 11,000 t uranium recoverable by the processing plant was estimated by BMA as of 31 December 2013. Based on average annual production of 711 t uranium (1.85 million lb U_3O_8), the mining life has expected years to 2029 by BMA's schedule. The projected mining facilities are sufficient for achieving the proposed production forecast and the processing capacity is in place.

1.3 Semizbay Project

The Semizbay Project is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan. As per the lease document from the 2008 report, the mining lease area covers 27.2 square kilometres at depth of 180 m from the surface. The Semizbay deposit was discovered in 1973, and testing of in situ leaching mining was conducted from April 1984 to 1989.

The overall design of Semizbay Project has an annual production capacity of 508 tonnes of uranium (1.32 million lb U_3O_8). The construction has been completed in October 2007 and the treatment plant was commissioned in 2009. The forecast uranium recovery of 85% for the Ore Reserves by ISR leaching is achievable with pregnant leach solution uranium grades of between 37.6 g/L to 68.0 g/L at an average grade of 44 mg/L.

JORC Ore Reserves of the Semizbay deposits estimated by BMA as of 31 December 2013 are approximately 11,000 t uranium and 10,000 t uranium recovered by the processing plant. Based on average annual production of 508 t uranium (1.32 million lb U_3O_8), there is more than enough Ore Reserves for a mine life to 2032 by BMA's schedule.

As stated during both the site visit and discussions with the Company, the Company will market the majority of dry uranium product from both Irkol and Semizbay projects which meets the quality specifications.

1.4 Scope of Work

The scope of work for the CPR included an independent expert assessment of the following aspects of the Project:

1. Reported uranium ore resources and reserves underlying the two mining right areas with restatement of tonnage to comply with JORC Code requirements;

2. Collect all available information of the Project including topography, landscape, access;

3. Review geological setting, exploration history, drill hole database, ore quality data, well-field design, mine production, process plant, capital expenditure and operating costs;

4. Conduct data verification program;

5. Resource and Reserve estimation in accordance with the guidelines of the 2012 JORC Code;

6. Review mining/extraction methods and design in the 2012 Feasibility Study and current mining activities;

7. Review production profiles;

8. Review processing and transportation;

9. Review of whole logistic system;

10. Review environment and social settings; and

11. Review company development and market studies.

The basis of our work included a desktop review of all information provided, site visits to the Project, the construction of a mineral resource model delineated by exploration data and the preparation of a Competent Persons Report in accordance with the JORC Code. These data were evaluated within the context of the BMA project team's extensive international mining experience.

1.5 Relevant Assets

The Irkol Project covers the uranium mining License SPC Series No 1527 of March 4, 1999 and State license No 0001278 (September 26,2006), a mining concession which allows for the mining of uranium in the mining license in Kyzy-lorda oblast, the Republic of Kazakhstan. The mine is located in Kpylordnnskoy area. The mining lease area is 44 square kilometres with a certified operational extraction depth of – 400 to 700 m from the surface.

The Semizbay Project is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan. The geographic coordinates are 52°55'50"N, 72°52'10"E. License No 14-05-11615 (December 14, 2007) is the mining concession that allows uranium mining in Enbekshildersk District, Akmoltnsk Oblast, the Republic of Kazakhstan in the mining lease area of 27.2 square kilometres with certified extraction operation to a depth of 180 m.

1.6 Work Program

BMA's International technical specialists in uranium mining, processing, geology, reserves, and environmental practices completed a series of visits to the each of the Projects.

The work program included following:

- Phase 1: Desktop review of information provided, including existing reports and data illustrated below.

- Phase 2: Site visits by BMA's technical team to conduct a review of geological data, leaching, processing, environmental and mineral economics.

- Phase 3: Data verification program, which include database checks.

- Phase 4: Resource/Reserve estimation of the Project. Preparation of the Competent Persons Report, update and finalisation of the report.

1.7 Site Visits

BMA's technical team conducted 2 site inspections from 17 February 2014 to 20 February 2014 and from 07 April to 11 April 2014 for the purposes of this CPR. The team consisted of Mr. Llyle Sawyer (Principal Consultant Geologist) and Mr. Jim Jiang (Senior Processing Engineer).

During these visits BMA made first hand observations, conducted detailed discussions with mine management and technical staff concerning uranium resources and both current and future mining/extraction and processing plans. BMA personnel inspected the project landscape and mining/extraction activities, management procedures, safety protocols and validation procedures, inspected well fields and processing facilities, examined and discussed geological and hydrogeological modelling procedures, interviewed the operations team on site and collected any further relevant information required for the preparation of this CPR.

1.8 Source of Information

The following documents were provided to BMA for review and use in preparing this CPR:

Irkol Project

- Mineral resources Report of Irkol deposits. No 10142, 1987 by Karamurunsk expedition No. 23, USSR Ministry of Geology
- Deposit geological exploration work report, including Volumes I,II,III 1986, by Soviet twenty-seventh Geological Brigade, USSR Ministry of Geology
- In-situ leaching uranium test results report (Volume I), unknown name
- The Feasibility Study report (14 sections) for industrial extraction of uranium by 2012 to 2025 with ISR method Irkol deposit by Limited Liability Partnership "PW-5", 2012
- Monthly production records reports and technical analysis reports for 2009, 2010, 2011, 2012, 2013, by the Semizbay-U LLP
- Technical Due Diligence Report for Semizbay-U uranium projects, prepared by Uranium Project Technical Due Diligence Team of CGNPC Uranium Industry Development Co., Ltd May 2008
- "Assessment of impact on the environment of Irkol Project for Semizbay-U LLP by TOO "Kazekosistems "(GL01259R, number 0042510)

Semizbay Project

- Resource estimate calculation report of Semizbay Uranium Project, 1979, by Stepnogorsk Geological Prospecting Team of the Virgin Mining and Chemical Combine, USSR Ministry of Geology

- Ore reserves estimation report of Semizbay Uranium Project compliant with local standards, 1988, by Stepnogorsk Geological Prospecting Team of the Virgin Mining and Chemical Combine, USSR Ministry of Geology

- Final report for 1984-1989 situ leaching uranium mining, 1989 by unknown named Russian institute, USSR Ministry of Geology

- The Feasibility Study report (14 sections) for industrial extraction of uranium with ISR method at Semizbay deposit located in the Republic of Kazakhstan (2012 to 2031) by Limited Liability Partnership "PW-5", 2012

- Technical Analysis Report of Semizbay Uranium Project, prepared by CGNPC Uranium Industry Development Co., Ltd., June 2008

- Monthly production reports and technical analysis reports for Semizbay Project in 2009, 2010,2011,2012,2013, by Semizbay-U LLP

- Production cost list for the 2011 "Semizbay-U" LLP.xls

- Technical Due Diligence Report for Semizbay uranium project, prepared by Uranium Project Technical Team of Uranium Development Co., Ltd of CGNPC Uranium Industry Development Co., Ltd, May 2008

1.9 Competent Person and Responsibilities

The BMA project team given in Table 1-1 has extensive professional experience in ISR uranium mining including resource and reserve estimations, mine and mineral processing evaluations.

Competent Person

Llyle Sawyer (BAppSc, MAppSc, MAIG)

Mr. Llyle Sawyer (Principal Consultant Geologist) was engaged to act as the competent person for the geology and ore resource estimation for the Project. Mr. Llyle Sawyer has contributed to sections 3, 4, 5, 6 and 8 (Mineralogy) of this report.

Mr. Sawyer is a broadly experienced geologist in both exploration and mining with more than 20 years' experience in uranium, gold, base metals, iron, manganese, and lithium. He is currently employed as a Project Manager/Senior Geologist for Geos Mining in Sydney. He has worked in Australia, PNG, Southeast Asia and South America, has contributed to a number of independent technical/competent persons reports. Mr. Sawyer is a Member of the Australian Institute of Geoscientists.

Mr. Sawyer is a Competent or Qualified Person as defined in the Australasian Code for Reporting or Mineral Resources and Ore Reserves. He has sufficient relevant experience to qualify as competent persons as defined in the 2012 edition of the Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC) and the Listing Rules in that capacity takes overall responsibility for this report for the purposes of Listing Rule. These requirements include:

- Greater than five years' experience relevant to the style of mineralisation and type of deposit.
- Member of the Australian Institute of Geoscientists ("MAIG").
- Have no economic or beneficial interest (present or contingent) in any of the reported assets.
- Not be remunerated with a fee dependent on the findings outlined in the Competent Person's Report.
- Is not an officer, employee or proposed officer of the issuer, Company or any group, holding or associated company of the issuer, and
- Assumes overall responsibility for the Competent Person's Report.

Llyle Sawyer has reviewed the geological and exploration aspects of the Project and is of the opinion that information in this report relating to Mineral Resources is based on and accurately reflects, information compiled by consultants and contractors employed by CGN Mining Company Limited. Mr. Llyle Sawyer consents to the inclusion in this report of the information in the form and context in which it appears.

Table 1-1 Senior Project Team (Qualifications and experience attached in Annexure A.)

Name	**Title**	**Site Visit Date**
Mr. Llyle Sawyer	Principal Consultant	17-20th, Feb, 2014
Ms. Sue Border	Peer Review	
Mr. Jack Gao	Principal Mining Engineer	
Dr Nursen Guresin	Consultant Principal Processing Engineer	
Mr. Huang Shi Qiang	Senior Geologist	
Mr. Jim Jiang	Senior Processing Consultant	07-12th, April,2014

1.10 Limitations and Exclusions

Information regarding property titles, licensing agreements and environmental liabilities were supplied by the Company's site personnel, other offices and by the Client. BMA has not been advised of any material change or event likely to cause material change of mine production since the date of engagement.

The scope of work for this project is in full accordance with the requirements of an independent technical review of the available information as the BMA team considered appropriate for technical reporting. Issues relating to legal, commercial and financing matters, license and approvals, land titles and agreements should be addressed by other counsels.

1.11 Report Qualifying Statements

BMA is a privately owned full service international technical consultancy firm headquartered in Hong Kong with branch offices in Beijing China and Sydney, Australia. Our company has a highly experienced team of technical specialist's proficient with diversified mining operations and expertise in mining, geology, infrastructure and mineral processing.

BMA was selected for this assignment on the basis of our experience with this type and style of mining operation including the type and style of mineralization and our specialist experience in exploration and feasibility studies, resource/reserve studies, mine development, technical assessments and valuation. This report was prepared by a project team with extensive professional experience in uranium ore resource/reserve and mine evaluations.

Neither BMA nor its representatives have any ownership or shareholder interest in the Client or Company or related companies and assets. BMA and its representatives have completed their work in accordance with the JORC Code, international reporting and the Australian Institute of Mining and Metallurgy Code of Ethics standards for professional engineering. BMA has exercised reasonable care in reviewing the information provided and have assumed all historical data to have been accurately reported and documented.

The accuracy of the results and conclusions of this report are contingent on the information provided. Neither BMA nor its representatives are responsible for any material errors or omissions in the information provided and have no reason to believe that any material facts have been withheld or that a more detailed analysis would result in the discovery of additional material information.

This CPR has been completed in accordance with JORC Code guidelines, the Australian Institute of Mining and Metallurgy Code of Ethics and generally accepted standards and practices employed in the international mining industry. BMA assumes all data provided for the compilation of this report have been prepared by competent institutes, engineers and geologists. BMA has conducted its own limited due diligence in checking for consistency and reasonableness in technical and financial mining issues and believe our conclusions are reasonable assessments of the information provided.

The report only addresses technical (e.g., reserve, mining, etc.) and certain financial (operating costs, capital costs, revenues, etc.) issues. BMA's financial review is limited to mine operating and capital costs and does not consider corporate or other downstream costs. BMA has not independently assessed existing or future uranium markets but rather relied on consensus forecasts and other reasonable price forecast measures.

Mr. Dali Christensen Cvek
President Asia Pacific
Blackstone Mining Associates

2 PROJECT SUMMARY

2.1 Summary

Blackstone Mining Associates Limited (BMA) was engaged by CGN Mining Company Limited to complete a Competent Person's Report (CPR) of the Semizbay-U LLP Uranium Project (the Project) in accordance with the Chapter 18 Listing rules of HKEx and in accordance with the JORC Code.

The purpose of this CPR is to provide an independent technical assessment of the Project based on all available technical data. This CPR will be included in a HKEx circular by CGN Mining Company Limited.

2.2 Operation Overview

The Project consists of two locations, the Irkol Project and the Semizbay Project, which are owned by Semizbay-U LLP according to the certificate of state registration of legal entities 2008, number 75-1902-25, issued by the Department of Justice, Enbekshildersk District, and Akmoltnsk Oblast. Semizbay-U is owned as to 49% by Beijing Sino-Kazakh(Beijing Sino-Kazakh Uranium Resources Investment Company Limited, a limited liability company incorporated in PRC), 11% by KAP and 40% by The Mining Company LLP, a wholly-owned subsidiary of National Atomic Company Kazatomprom(KAP), a joint-stock company established according to the laws of the Republic of Kazakhstan. Semizbay-U is mainly engaged in the mining and extraction of natural uranium, and currently operates two mines in the Republic of Kazakhstan.

The Irkol mine is geographically located in the Kyzylorzhinsk area, 20 km from Chiili town, the Republic of Kazakhstan (refer to **Figure 2-1**). The mining lease area covers 44 square kilometres for extraction operations at a depth of from 400 to 700 m from the surface. The nearby town has a major railway station with a national highway connected through to the regional centre. The distance from the Irkol deposit to the railroad is up to 40 km with a minimum of 15 km. A sealed road leads directly to the Irkol deposit processing facilities.

The Semizbay deposit is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan. The geographic coordinates are 52°55'50"N, 72°52'10"E. The mining lease is covers 27.2 square kilometres for extraction operations to 180m depth. The Semizbay deposit area is one of the least economically developed regions in northern Kazakhstan. Large settlements and railway stations are: Stepnogorsk (by 110km), Zaozernoe (by 120km), Bestube (by 50 km) and the railway station Kzyltu (by 100 km) have transport links with the deposit but there is no direct rail link to Semizbay. A road passing through the mine lease connects the village Kirovo with the village Koytas, and a second road connects the village Baylyust and the final processing facility.

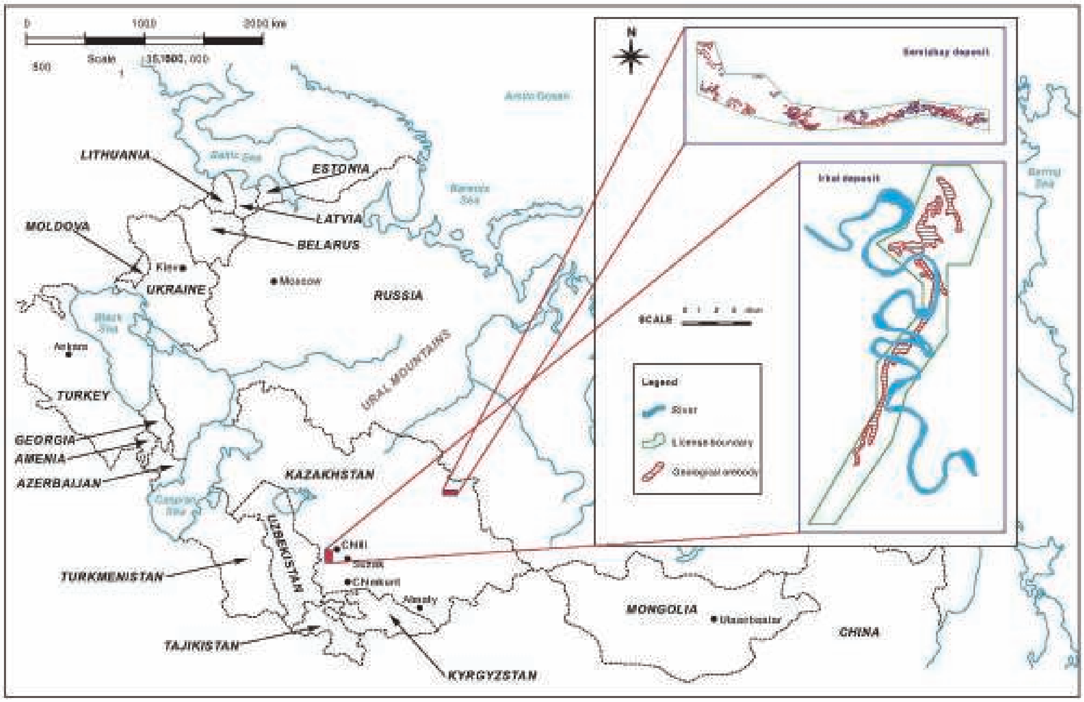


Figure 2-1 General Location Plan

2.3 Exploration and Development

The Irkol deposit was discovered in 1971, and exploration work was resumed in 1975-1977. Further exploration at the Irkol deposit was conducted in 1978-1981, followed by detailed exploration. The first field test work started in 1970's. During the detailed exploration work, a field test was performed during 1982 to 1985 aiming to provide operational design parameters.

In 2007, commercial operations of the Irkol deposit were commenced. The processing of solutions from No. 1 block was started and full production was commissioned in 2010. The initial well fields involved 8 ore blocks on the middle of No 1 geological ore body. The present facility consists of a main processing plant with an ion exchange (IX) and product recovery capacity of 711 t uranium (1.85 million lb U_3O_8) per year. During 2007 and 2013, approximately 5 to 8 new blocks were developed each year which ensured sufficient production rate. During this time, a total of 1618 wells were developed, of which 1396 wells are actively run to achieve a scheduled constant production rate, with a maximum design capacity achieved in 2010.

Exploration activities in the Semizbay region have been undertaken since 1960. The Semizbay deposit was discovered in August 1973, and was the first and only commercial hydrogenous type uranium deposit occurring in unconsolidated riverine sediments. Testing of in-situ leaching mining was conducted from April 1984 to 1989.

The overall design of Semizbay Project has an annual production capacity of 508 tonnes of uranium(1.32 million lb U_3O_8). The mining design commenced in 2006 and construction was completed in October 2007. The treatment plant was commissioned in 2009.

Well field development of Semizbay deposit uses an optimal pattern design to distribute barren lixivant (a solution of sulfuric acid and water) to the well field injectors, which carries the dissolved uranium back to the main processing plant. The processing plant produces uranium loaded pregnant solution taken to the main processing plant in Stepnogorsk for further processing.

The total uranium production tonnes for Irkol Project and Semizbay Project from 2007 to 2013 are shown in **Table 2-1.**

Table 2-1 Historical Production Tonnes, 2007-2013

Mine Name	Items	Unit	2007	2008	2009	2010	2011	2012	2013
Irkol	Leached Uranium in Pregnant Solution	t	–	–	516.7	747.3	655.4	721.0	663.1
	Processed Uranium in U_3O_8 Product	t	50.0	300.0	502.1	750.0	651.5	711.8	654.4
Semizbay	Leached Uranium in Pregnant Solution	t	0.0	0.0	15.6	230.1	416.4	532.0	521.6
	Processed Uranium in U_3O_8 Product	t	0.0	0.0	8.5	224.0	409.9	508.6	507.0
Total	Leached Uranium in Pregnant Solution	t	–	–	532.3	977.4	1,071.8	1253.0	1,184.7
	Processed Uranium in U_3O_8 Product	t	50.0	300.0	510.6	974.0	1,061.4	1220.4	1,161.4

Source: provided by the client

2.4 Geology and Mineralization

2.4.1 Irkol Deposit

The Irkol deposit is located in the central part of the Syrdarynck depression within the Syrdarynck uranium province in the northeast part of the Zapazhnoy-Karamurunsk ore field. The Irkol Project is located on the western flank of the Irkol mineralization field characterized by a calm tectonic setting, as the entire area of the field is not bounded by any faults. The majority of the deposit is hosted by sedimentary rocks of the Upper Turonian-Coniacian ages (the Irkol ore bearing horizon). It is a geochemically homogenous – deposit.

The deposit is associated in a regional oxidation zone developed in sandy gravel deposits of the Upper Turonian and lower Santonian Stage of the Upper Cretaceous. The host formation is stacked assorted fine-grained sands and gravel interbeds, with interbedded clays, siltstones, minor carbonates and salts, and sandstones of about 60 m thick. The mineralization is at depths of 180-750 m and extends for 20 km in a northerly direction and is 250-2000 m in width, partially passing under the Syr Darya River. About 40% of the uranium mineralization is located directly in the flood plain. This mineralization has not been drilled, for environmental reasons.

The Irkol deposit is mainly composed of unequal sands and fine particles. The uranium-bearing sand is characterized by uneven granularity. The uranium ore consists of siliceous rock debris of quartz-arkose, in which the clay content is about 15-20%, mainly hydromica containing montmorillonite and kaolinite impurities.

The mineral compositions of the ores and wall rocks are similar, but with different metal minerals grades. The minerals consist of quartz (65-75%) and feldspar (5-7%), sometimes kaolinized, and minor clastic chert (3-5%). The exploration, laboratory and field test results on the Irkol deposit show that the hydrological conditions are favourable for in-situ leaching mining of the uranium mineralization. The Irkol deposits are capped by an extensive thick siltstone aquiclude.

2.4.2 Semizbay Deposit

The Semizbay uranium deposit is a complex exogenous mineralization of epigenetic type. The ore-forming processes were multi-stage infiltration and/or replacement.

Geologically, the Semizbay deposit area is located within in extensive palaeochannel on the northern edge of the Ishkeolme anticlinorium, in the dipping zone of folded basement of the north-eastern Kazakhs shield under Mesozoic-Cenozoic sedimentary cover of the West Siberian Plate; of the Epipaleozoic Ural-Siberian platform. The geological structure of this vast and complex area consists of the Paleozoic folded basement rocks and a Mesozoic-Cenozoic platform cover, the East Kazakhstan fold system.

Economic uranium mineralization of the Semizbay deposit is localized within the productive strata of the upper Semizbay and lower Semizbay horizon, with a total thickness of 40~100m between 35 to 165m depth, and is concentrated in two mineralized zones explored over 28.8km. 205 ore zones were identified, striking from 100 m to 5200 m in length and from 50 m to 800m in width. Their ore thicknesses vary from 0.2 m to 3 m or more, up to 13m in some sections. Uranium mineralization in the deposit is located in a variety of sedimentary hosts. Uranium is mainly concentrated in the sandy-clay fraction. The depth of mineralization is based from mineralized intersections recorded in assay tabulation.

2.5 Mineral Resources and Ore Reserves

2.5.1 Irkol Deposit

2.5.1.1 Resource Estimate

The mineral resources for the Irkol Project were independently estimated by BMA under the JORC Code 2012 edition as of 31 December 2013, and summarised in **Table 2-2** at a Uranium cut-off grade of 0.01%. The estimations are based on the initial exploration data collected by the Company, and then verified by BMA, as well as a simplified geological model. The geological model involves geological interpretations on information derived from initial exploration surface drilling using sections and plans supplied to BMA.

The Measured and Indicated mineral resources under favourable economic situations may be considered as potential ore and used for ore reserve estimation and mine planning according to JORC Code definitions and guidelines. Mineral resources are not Ore Reserves and the existence of mineral resources does not demonstrate economic viability.

Table 2-2 Irkol Project – JORC Resource Statement for Irkol Deposit at a Uranium Cut-off Grade of 0.01%

Category	Volume *($M\ m^3$)*	Tonnage *(M t)*	Uranium grade *(%)*	Uranium grade-thickness	Contained Uranium *(000 t)*
Measured	2	4	0.05	0.23	2
Indicated	18	33	0.05	0.18	15
Meas.+Ind.	21	37	0.05	0.19	17
Inferred	17	30	0.04	0.16	13
Total	37	67	0.05	0.18	30

Notes:

1, Figures may not add up due to rounding.

2, Resources have not been depleted for mining; 3,759t of uranium has been extracted to 31/12/2013.

3, Mineral Resources are inclusive of Mineral Reserves.

2.5.1.2 *Reserve Estimate*

Ore Reserves are defined as the economically mineable/extractable part of the Indicated and Measured mineral resources. Ore Reserves at the projects are classified into Proved and Probable categories, Ore Reserves within the Measured Mineral Resources were classified as Proved, and within the Indicated Mineral Resources were classified as Probable in line with the JORC Code definitions and guidelines. All Inferred resources are treated as waste material and are excluded in reserve estimation. This Ore Reserve estimate was based on constructed resource model by BMA.

Ore Reserves have been estimated with no allowance for dilution, as dilution is not applicable to mining a deposit using the ISR extraction method. No environmental, permitting, legal, title, taxation, socio-economic, political, marketing, or other issues as outlined by the client are expected to materially affect the above estimate of Ore Reserves.

Ore Reserves at the Irkol Project were estimated based on the use of the in situ recovery (ISR) extraction method and yellow cake production. The Reserve estimate is based on forecast spot price US$55.86 per pound of U3O8 for 2014 with consideration of annual inflation rate 3.8% in the following up years. The general recovery of uranium mineral is 90%. The reserve estimate is based on a uranium grade-thickness (GT) cut-off of 0.04. A summary of the estimated Ore Reserves for Irkol project based on Grade-Thickness (GT) Cut-off of 0.04 with an effective date of 31 December 2013 is presented in **Table 2-3**.

A total uranium production of 3,759 t, including of 3,637 tonnes extracted in all production years from 2007 to 2013 and a total of 122 t extracted by pilot testing in 1982-1985, has been depleted from the reserve, as indicated above.

Table 2-3 Irkol Project – JORC Reserve Statement for Irkol Deposit at Grade-Thickness (GT) Cut-off of 0.04

Domain	Category	Volume	Tonnage	Uranium grade	Uranium grade-thickness	Contained Uranium Metal
		(M m^3)	*(M t)*	*(%)*		*(000 t)*
Total	Proved	2	4	0.05	0.23	2
	Probable	18	32	0.05	0.19	15
	Proved & Probable	20	36	0.05	0.19	16
	Mined out					4
	Remaining	20	36			13

Note: Figures may not add up due to rounding.

Following parameters and limitation were applied to reserve estimate:

- Uranium Grade Cut-off: 0.01%
- Minimum Grade-Thickness (GT): 0.04
- Maximum Allowed Barren Waste Width: 1 m
- Minimum Volume of Reserves in an Ore Block: 4,000 m^3
- Minimum samples of 11 with maximum No. of 2 per hole

2.5.2 Semizbay Deposit

2.5.2.1 Resource Estimate

The mineral resources for the Semizbay Project were independently estimated by BMA under the JORC Code 2012 edition as of 31 December 2013, and summarised in **Table 2-4** at a uranium cut-off grade of 0.01%. The estimations are based on the data collected by the Company, and then verified by BMA. The simplified geological model involves geological interpretations on information derived from initial exploration surface drilling using sections and plans.

The Indicated mineral resources under favourable economics may be considered as potential ore and used for ore reserve estimation and mine planning according to JORC Code definitions and guidelines. Mineral resources are not Ore Reserves and the existence of mineral resources does not demonstrate economic viability.

Table 2-4 JORC Resource Statement for Semizbay Deposit at a Uranium Cutoff Grade of 0.01%

Category	**Volume** *(M m^3)*	**Tonnage** *(M t)*	**Uranium grade** *(%)*	**Uranium grade-thickness**	**Contained Uranium Metal** *(000 t)*
Indicated	13	22	0.06	0.31	13
Inferred	2	4	0.06	0.25	2
Total	16	26	0.06	0.30	15

Notes:

1. Figures may not add up due to rounding.

2. Resources have not been depleted for mining; 1,667t of uranium has been extracted to 31/12/2013.

3. Mineral Resources are inclusive of Mineral Reserves.

2.5.2.2 Reserve Estimate

A summary of the estimated Ore Reserves for Semizbay project based on Grade-Thickness (GT) Cut-off of 0.04 with an effective date of 31 December 2013 is presented in **Table 2-5**. Ore Reserves were estimated based on the use of the in-situ recovery (ISR) extraction method and yellow cake production. Allowances for dilution and mining loss are factors which are not relevant to the uranium extraction method of in situ leaching. The recovery obtained from the in situ leaching process is included in the metallurgical recovery.

The Reserve estimate is based on forecast spot price US$55.86 per pound of U3O8 for 2014 with consideration of annual inflation rate 3.8% in the following up years. The general recovery of uranium mineral is 85%. Reserve estimate is based on a uranium grade-thickness (GT) cut-off of 0.04.

Table 2-5 JORC Reserve Statement for Semizbay Deposit at Grade – Thickness (GT) Cut-off of 0.04

Domain	Category	Volume	Tonnage	Uranium grade	Uranium grade-thickness	Contained Uranium Metal
		(M m^3)	*(M t)*	*(%)*		*(000 t)*
Total	Proven	–	–	–	–	–
	Probable	13	21	0.06	0.31	13
	Mined out					2
	Remaining	13	21			11

Note: Figures may not add up due to rounding.

Following parameters and limitation were applied to reserve estimate:

- Uranium Grade Cut-off: 0.01%
- Minimum Grade-Thickness (GT): 0.04
- Maximum Allowed Barren Waste Width: 1 m
- Minimum Volume of Reserves in an Ore Block: 4000 m^3
- Minimum samples of 11 with maximum No. of 2 per hole

2.6 ISR Mining and Processing

Both Irkol and Semizbay projects employ ISR mining method to produce a uranium-bearing lixivant, which goes to settling ponds prior to the main processing plant for production of uranium as yellow cake. The mining and processing methodology used at each project are similar.

The well field development and extraction of Irkol uranium has to date been in geological blocks of №1, 2 and 3 orebodies located on the east bank of the Syr Darya River to support the current production plan.

At Irkol Mine from 2007 to 2013, around 6,196 tonnes of reserve has been developed via extraction of 41 blocks or sub-blocks and 3,637 tonnes of uranium has been extracted, in which blocks №8-2 and №7-1 have being operated for 4 years. Three worked out blocks achieved an overall extraction of 90% and six additional blocks have extraction in excess of 80%. The forecast extraction of 90% ISR leaching is reasonable based on the extensive operational results and previous field testing. The average historical pregnant solution grade is stated to 38.6 mg/L. Base on the 2012 Feasibility Study, the forecast overall pregnant solution grade is approximately 46-61 mg/L.

The operation of Semizbay Project commenced in 2009 and full production rate was achieved in 2012. Approximately 8 new blocks were developed annually in the initial years, ensuring a sufficient production rate. Only №2 block which started production in 2009, has been exhausted, ceasing production in 2013 after being run for 4 years.

In Semizbay Project, a total of around 3,093 t uranium product has being developed from 2009 to 2013 via the uranium extraction from 29 blocks or sub-blocks, and a total of 1,667 t uranium has been extracted in these years. Field development and commercial operation of Semizbay projects were designed to reach a production rate of 508 tons of uranium (1.32 million lb U_3O_8) per year. The operation of №1 to №7 block blocks initiated from 2009 has an overall extraction of 70%. Most blocks will produce further uranium, and only №2 block has been temperately completed, with a uranium extraction of 85% estimated from production figures.

The forecast extraction rate of 85% for the Ore Reserves ISR leaching is reasonable based on the extensive operational results as well as field testing in exploration stage for the Semizbay deposit. The average pregnant liquor grade in 2013 is approximately 36 mg/L, based on production figures, and the forecast pregnant liquor grades of approximately 38-68 mg/L are achievable.

The Irkol and Semizbay projects produce a dry U_3O_8 uranium product meeting the quality specifications of uranium refining and conversion facilities. The main buyer is one of the founders of Semizbay – U LLP.

2.7 Production Plan and Mine Life

2.7.1 Irkol Project

BMA's production plan for Irkol Project is based on current JORC Ore Reserves of 13,000 t uranium; with 11,000 t uranium recoverable by processing plant. These reserve numbers are slightly more than the mineable reserves projected in the 2012 Feasibility Study by the Limited Liability Partnership "PW-5" – a Kazakh company offering a full range of design and survey services for the development and coordination of design and estimate documentation for the uranium mining industry under Russian estimation standards.

Based on average annual production totalling 711 t uranium (1.85 million lb U_3O_8), the mining life has been determined being up to year 2025 in the 2012 Feasibility Study and to year 2029 by BMA scheduling in the projected mining area, all focusing on №1, 2 and 3 orebodies.

The projected well field facilities are sufficient for achieving the proposed production forecast and the processing capacity is in place to produce 711 tpa uranium (1.85 million lb U_3O_8).

The forecast extraction of 90% in ISR leaching is reasonable based on the extensive operational results.

2.7.2 Semizbay Project

The JORC Ore Reserves of Semizbay deposit total 11,000 t uranium; with 10,000 t uranium product recoverable by the processing plant. Based on average annual production of 508 t uranium (1.32 million lb U_3O_8), there are more than enough Ore Reserves for a mine life extending to the year 2031 as in the 2012 Feasibility Study and to year 2032 by BMA's schedule. The current well field facilities are sufficient for achieving the production forecast and the processing capacity is in place to produce 508 tpa uranium (1.32 million lb U_3O_8).

The forecast uranium extraction is 85% for the Ore Reserves in ISR leaching and is reasonable based on the extensive operational results.

2.8 Economic Analysis

In 2008, the Irkol Project complex was commissioned with a capacity of 711 tpa uranium (1.85 million lb U_3O_8), at a cost of US$54.3 million. Based on the 2012 Feasibility Study, the remaining capital costs for Irkol Project, as of 2014 to 2025, are estimated to be US$388 million, which includes US$275 million for well field development and US$113 million for fixed assets.

Based on the 2012 Feasibility Study, the remaining capital costs of Semizbay mine, as of 2014 to 2031, are estimated to be US$461 million, which includes US$279 million for well field development and US$182 million for fixed assets investment in future years.

The costs data suggested a total operating costs for 2008-2013 including depreciation and amortization of approximately US$77-105/kg uranium (US$30-40/lb U_3O_8) uranium and US$53-74/kg uranium (US$20-28/lb U_3O_8) in Semizbay Project and Irkol Project respectively. The unit costs are considered to be reasonable and close to similar ISR operations in the Republic of Kazakhstan.

BMA has reviewed the 2012 Feasibility Study of Irkol Project and forecast total operating costs of on average US$89/kg uranium (US$34/lb U_3O_8) during 2014 to 2029. Based on the 2012 Feasibility Study of Semizbay Project, BMA has estimated total operating costs of on average US$113/kg uranium (US$44/lb U_3O_8) during 2014 to 2032. The minimum costs are considerably lower due to variation in the sulphide, materials and manpower costs etc. proportionally (reduction of 70%) in series with the proceeding last 3 years in the BMA model.

The operating cost includes ISR leaching preparation work, leaching, processing, transport, social expenses (direct taxation and fees) general and administration ("G&A") costs as well as depreciation of all capital expense. These costs are reasonable and reliable based on the historical actual operation costs and data on similar ISR operations in this area.

The key taxation items include Mineral Extraction Tax (MET) at an estimated rate of 22% over the life of the mine, and corporate income taxes, calculated as 20% of income after depreciating the capital investment over the life of the operation.

An independent schedule and economy analysis performed by BMA was based on the resource and reserve estimated by BMA as well as its mining schedule, with a forecasted operating costs estimated in the 2012 Feasibility Study as well as BMA' modification to the mine schedule and cash flow.

All capital and operating costs as well as forecast product price provide for inflation escalation at rate of 3.8%. The annual cash flow projections were estimated over the life of the mine based on capital expenditures, production costs and sales revenue. The financial indicators examined for each option of the project include after-tax net cash flow, net present value (NPV). This section incorporates a number of the project schedules have been adopted in the 2012 Feasibility Study which is considered to be reasonable by BMA. The factors adopted in excess years upon that of 2012 Feasibility Study (2025-2029 for Irkol and 2032 for Semizbay) were modified aiming to reflect the most likely scenario for project development as well as the mining and processing schedules and costs. No assumptions have been made for project financing in the economic model.

The cumulative NPV sensitivity analyses show that the prices of products and operating costs for the Irkol Project and Semizbay Project were the most sensitive factors to the financial returns of the projects.

2.9 Key Change from Effective Date to April 2014

2.9.1 2014 Consensus Price Forecast

BMA notes that the spot prices has decreased significantly from approximately US$35 at the beginning of 2014 to US$28 per pound of U_3O_8 at April 2014.

The Reserve estimate as of 31 December 2013 is based on a forecast spot price US$55.86 per pound of U_3O_8 for 2014 with consideration of annual inflation rate 3.8% in the following up years. While the spot price has decreased significantly from the end of 2013 to April 2014, the average consensus forecasted U_3O_8 price from the Energy & Metals Consensus Forecasts published by Consensus Economics Inc. in April 2014 has been adjusted to US$40.90, US$50.22, US$59.52, US$63.92 and US$67.67 per pound from 2014 to 2018, respectively. An inflated forecasted price after 2018 has been adopted in the economy model, which is stated in Section 2.9.3.

Table 2.6 2014 Consensus Price Forecast

Year	2013 Forecast Consensus Spot Price (June 2013) *US$/lb U_3O_8*	2013 Forecast Consensus Spot Price (June 2013) *US$/kg U*	2014 Forecast Consensus Spot Price (April 2014) *US$/lb U_3O_8*	2014 Forecast Consensus Spot Price (April 2014) *US$/kg U*
2014	55.8	145.2*	40.9*	106.3*
2015	58.0	150.8	50.2*	130.6*
2016	60.2	156.5	59.5*	154.8*
2017	62.5	162.5	63.9*	166.2*
2018	64.9	168.7	67.7*	175.9*
2019	67.3	175.1	70.3	182.7
2020	69.9	181.8	72.9	189.6
2021	72.6	188.7	75.7	196.8
2022	75.3	195.9	78.6	204.4
2023	78.2	203.4	81.6	212.1
2024	81.2	211.2	84.7	220.2
2025	84.3	219.2	87.9	228.6
2026	87.5	227.6	91.3	237.4
2027	90.9	236.3	94.8	246.4
2028	94.3	245.3	98.4	255.8
2029	97.9	254.6	102.2	265.6
2030	101.7	264.3	106.0	275.7
2031	105.5	274.4	110.1	286.2
Average	78.2	203.4	79.8	207.5

* refers to consensus uranium prices forecasted by Energy&Metals Consensus Forecasts

Notes:

1. an inflation of average rate 3.8% per year for the following ramp up years is applied from 2015 for 2013 Forecast Price and 2018 for 2014 Forecast Price.

2. the allowances of sales agreement (2%) has not been included as it would be eliminated through inter-company transaction.

2.9.2 Resource and Reserve

Factors which may affect the mineral reserve estimates include price assumptions, grade model assumptions, mine design, mining and process recovery assumptions, changes to capital and operating cost estimates and variations to the permitting, operating or social license regime assumptions etc. BMA notes that the spot price has decreased significantly from December 2013 to April 2014 while there is no material change of other applied factors. In order to assess the impact of the reserve and economy of the project for the variation of the predictable uranium prices by consensus parties, an updated NPV model was developed based on the predict price at April 2014.

The economy model suggested a minus changes while remains a positive NPV value. Therefore the reserve depends on the Grade-Thickness cut-off. The reporting reserve cut-off defined by BMA, as discussed with the site management, is most likely to be GT=0.04. During the site visit, BMA has viewed the actual minimum GT=0.04 (called "mc") is used in practice and did not increase currently. Therefore, the Reserve tonnes and its classification would not change provide none of the above key factors has varied.

2.9.3 Economy

No material difference was noted for adoption of the updated data compared with the economy model as of 31 December 2013.

2.10 Legal Matters Concerning Semizbay-U

A Kazakhstan counsel has been engaged to conduct legal due diligence on Semizbay-U in mid-April 2014. The scope of the legal due diligence mainly covers, among others, specific legal matters related to key mining rights and other licenses/permits required under the laws of the Republic of Kazakhstan as well as environmental, health and safety matters. During the due diligence, the Kazakhstan counsel gathered information about Semizbay-U and interviewed the management of Semizbay-U. BMA has also reviewed the relevant subsoil use contracts and the relevant information was summarized in Section 3.1.3 and Section 3.2.4 of this report. A brief summary of the legal due diligence findings relating to reserve estimation is set out below:

With respect to Irkol Mine, Semizbay-U holds the uranium mining License SPC Series No. 1527 of 4 March 1999 and subsoil use contract dated 14 June 2005. These documents allow for the mining of uranium in Irkol Mine and the subsoil use (mining) rights are valid for 25 years from the date of issuance of the mining license (i.e. until 4 March 2024). With respect to Semizbay Mine, Semizbay-U holds the subsoil use contract dated 2 June 2006. This document allows uranium mining in Semizbay Mine and the subsoil use (mining) rights are valid for 25 years from the date of execution of the subsoil use contract (i.e. until 2 June 2031). Under the Kazakhstan Subsoil Law, the term of a production subsoil use contract can be extended provided that there are no breaches of contractual obligations by a subsoil user. In order to extend a contract, it is necessary to submit extension application not later than six months prior to the expiry date of the production contract with explanation of such extension's necessity. However, according to the Kazakhstan counsel, the Subsoil Law does not provide for detailed procedures for extension of subsoil use contracts. The management of Semizbay-U confirms that they were not aware of any issues or legal obstacles in the renewal of subsoil use contracts for Irkol Mine and Semizbay Mine.

Regarding environmental, health and safety issues, Semizbay-U also holds the licenses and permits necessary for its business operations, including the state license for works connected with stages of life cycle of nuclear energy objects dated 18 December 2008 (with an indefinite term of validity); the state license for transportation of radioactive substances within the territory of the Republic of Kazakhstan dated 17 January 2011 (with an indefinite term of validity); the state license for purchase, storage, use, transportation, delivery and destruction of precursors dated 30 October 2009 (valid until May 2019); the state license for use of devices and apparatus generating ionizing radiation dated 18 May 2009 (with an indefinite term of validity); and the state license for use of radioactive substances dated 23 January 2009 (with an indefinite term of validity). All these licenses and permits were valid and effective as at the Latest Practicable Date, and were sufficient to cover the business operations of Semizbay-U. Further, as confirmed by the management of Semizbay-U, there are no environmental, social, health, safety issues or non-compliance incidents which may have material adverse impact on the operations and mining activities of Semizbay-U and mines owned by it.

General risks related to Semizbay-U's operation in the Republic of Kazakhstan has been included in the section headed "RISKS RELATING TO THE REPUBLIC OF KAZAKHSTAN AND OPERATION OF SEMIZBAY-U" of this circular. Further, according to the Kazakhstan counsel, pursuant to the Kazakhstan laws, failure to comply with a subsoil use contract (including the relevant obligation to comply with environmental, social, health and safety regulations) can be the grounds for termination of the relevant subsoil use contract by the state.

2.11 Key Project Risks

The key risks to the Project identified during the ITR are outlined below:

1. The dataset used in BMA resource modelling is based on the digitized figures input from previous cross section figures and not on available original drilling dataset. Some error in the digitization is deeming to occur. Modification factors and error modification factors impacting for the accuracy and confidence to the final resource results were analysed.

2. A regional river flows in the Irkol mine lease area crossing No 4 and No 5 ore bodies and also in vicinity to Nº1, 2 and 3 ore bodies, which could cause environmental risk in mining, thus no reserve for Nº4 and Nº5 ore bodies has been estimated. The application of appropriate geotechnical and hydro-geological management as well as environmental monitoring and management, as practised currently at mining operations, will reduce mining risk for the future mining of these ore bodies. This geotechnical and hydrogeological work will determine the amount able to be retained as resource and hence any reserve. Appropriate permitting and agreement as required by authorities would be necessary.

3. The extreme cold weather at site during winter seasons has caused serious freezing of wells and halts pumping of liquid resulting in lower uranium content in pregnant leach solution. Well preparation and effective measures for prevention of freezing especially in winter weather is essential. Such measures are under ongoing development at existing operations and application to existing and future extraction areas should reduce this risk.

4. Mining parameters for ISR leaching production process may be subjected to significant fluctuations and deviations, especially in terms of the uranium content of pregnant solution and acid consumption. On-going progressive technical studies on the leaching conditions in the future detail design and operation of production are being conducted as priority in conjunction with sound technical management to minimise the impact of this risk.

5. The Semizbay Project deposit is an ancient valley-type uranium deposit with complex morphological characteristics; therefore it is difficult to completely delineate the mineralization. Some resources risk exists, although sufficient infilling drilling work of the №3 ore body has delineated the ore body outline. More drilling holes to fully delineate mineralization have been conducted since 2008 and are a priority component of the ongoing exploration and geotechnical operations.

6. The spot prices has decreased significantly from approximately US$35 at the beginning of 2014 to US$28 per pound of U_3O_8 as at April 2014. Although the operation of Semizbay-U would be impacted by depressed uranium prices, the integration of Off-Take agreement would mitigate the negative price impact and create strategic benefit when evaluating the mining projects and Beijing Sino-Kazakh as a whole. Also, the continuing operation is beneficial for the purpose of maintaining employment and local economy development. Therefore, Semizbay-U is expected to continue operations and receive support from the shareholders.

3 GEOLOGY AND EXPLORATION

3.1 Irkol deposit

3.1.1 Location

The Irkol mine is geographically located in the Kyzylorzhinsk area, 20 km from the Chiili town, the Republic of Kazakhstan as shown in **Figure 3-1**. The mining lease area covers 44 square kilometres at depth of from 400 to 700 m from the surface. The nearby village has a major railway station with a national highway passing through the regional centre. The distance from the Irkol deposit to the railroad is up to 40 km with a minimum of 15 km. A sealed road leads directly to the Irkol deposit.

The general layout plan of Irkol Project is shown in **Figure 3-2**.

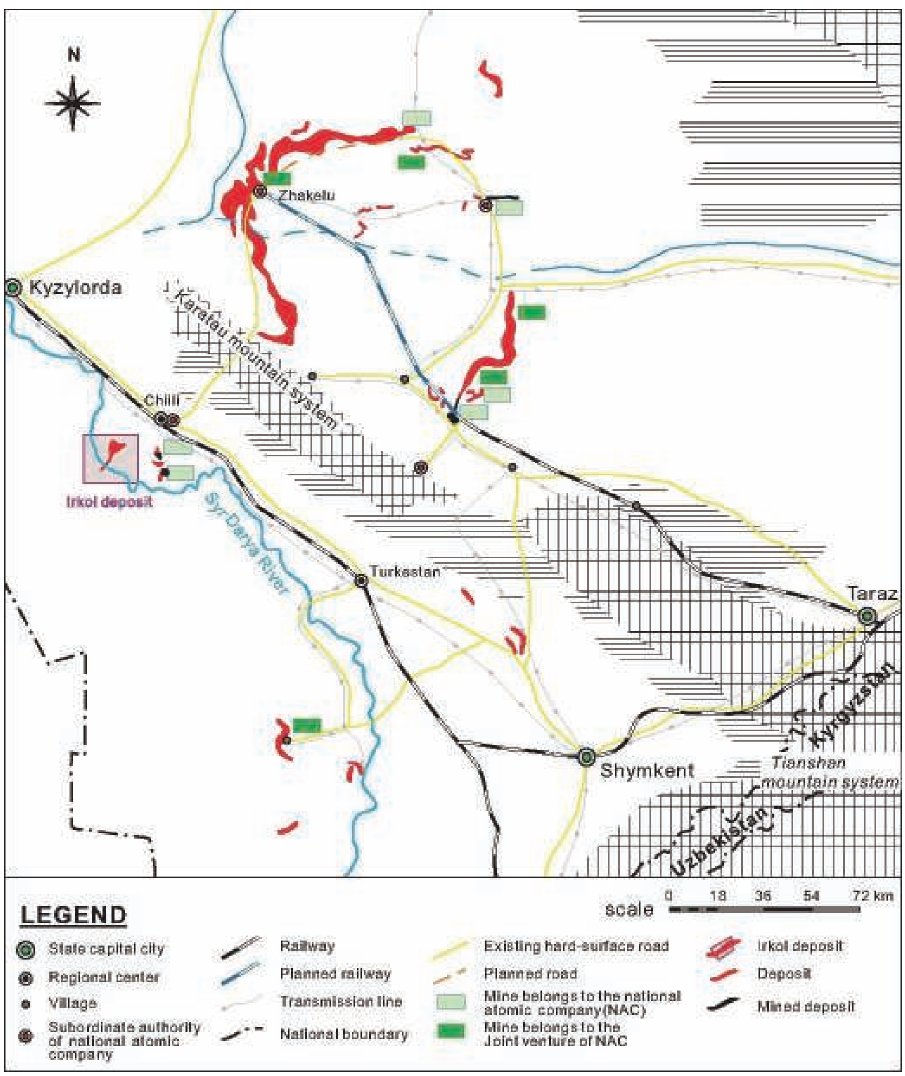


Figure 3-1 Irkol Project – General Location Plan

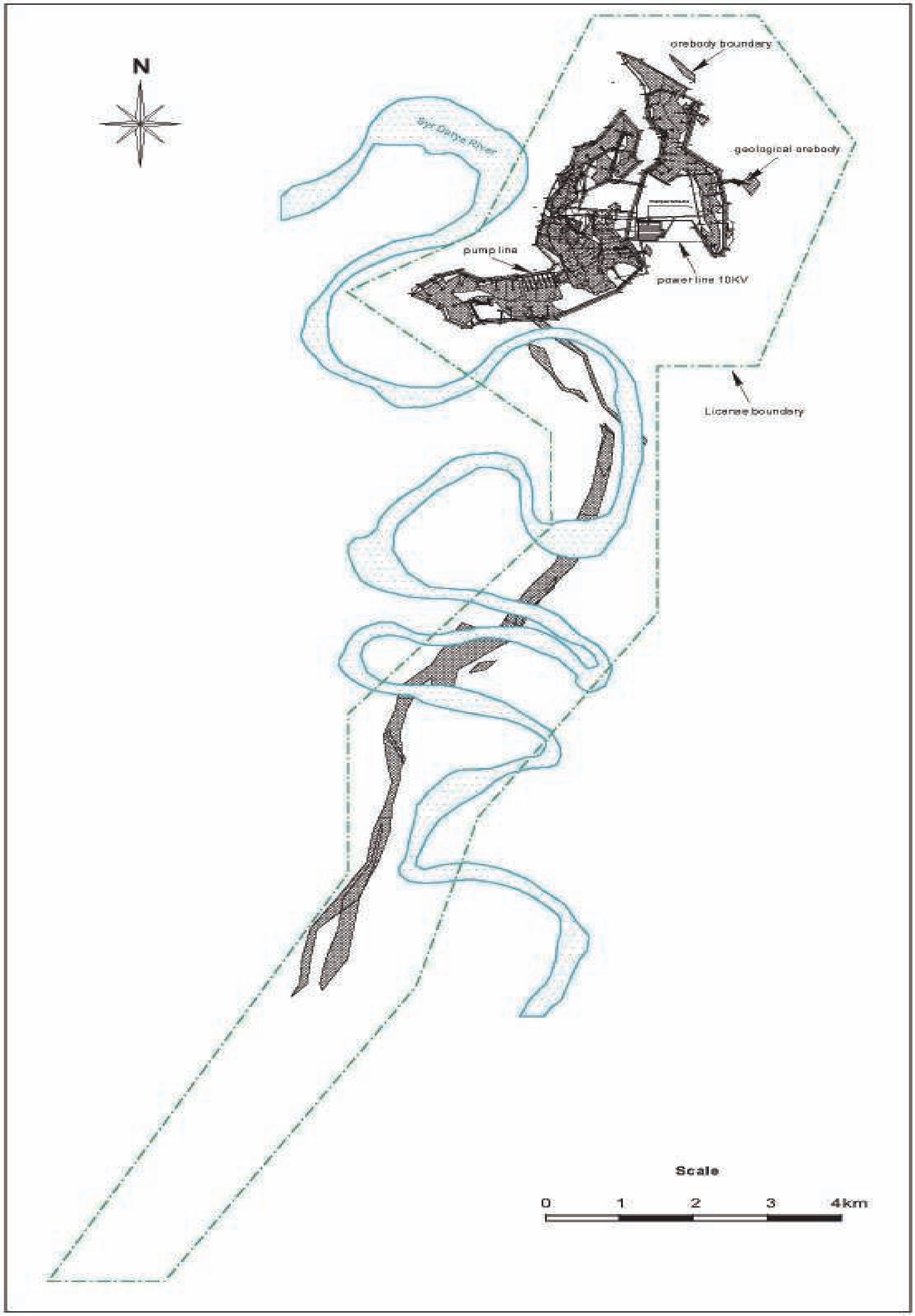


Figure 3-2 Irkol Project – General Layout Plan, 2012 Feasibility Study

3.1.2 Climate

The landform of the Project area is represented by densely vegetated and hilly terrain. The elevation ranges from 120 m to 450 m above sea level and subsides from south to north. Karst landforms are well developed in the south.

The Irkol deposit lies in the semi desert region, the climate of which is sharply continental with hot (up to +45 °C in July) and dry summers and cold (down to-20 °C in February) windy winters. In the past 5 years, temperatures (according to field Chiili) are +30 °C to +40 °C in summer, and-20 °C to-25 °C with a minimum of -33.4 °C in winter. Rainfalls occur mainly in spring and autumn, and do not exceed 200 mm per year. The greatest precipitation occurs in December and April and the lowest occurs from June to September. Annual winds are mainly from the north and northeast with speeds of 8-12 m/sec. On windy days, especially from April to June, the wind speed reaches 10-15 m/sec, with gusts up to 24 m/sec.

3.1.3 License and Permits

For the Irkol Mine, Semizbay-U holds the uranium mining License SPC Series No 1527 of 4 March 1999 and subsoil use contract dated 14 June 2005. These documents allow for the mining of uranium in Kyzy-lorda oblast, the Republic of Kazakhstan.

According to the due diligence findings of a Kazakhstan Counsel ("the Kazakhstan Counsel"), the term of the subsoil use rights is enough to cover the mine life years in 2012 Feasibility Study (which extends to 2024) while not enough to cover the extent life of the mine by BMA reserve (which extends to 2029). At the same time, we note that, under the Subsoil and Subsoil Use Law, term of a production subsoil use contract can be extended provided that there are no breaches of contractual obligations by a subsoil user. In order to extend a contract, it is necessary to submit extension application not later than six months prior to the expiry date of the production contract with explanation of such extension's necessity.

As at the Latest Practicable Date, the Company was not aware of any issues or legal obstacles in the renewal of subsoil use contracts. Although the Subsoil Law does not provide for detailed regulation of the procedures for extension of subsoil use contracts, during the interview the Semizbay-U's management assured us that there should be no issues with getting such extension. BMA has reviewed the mining licensing copy, location, strategy, un-formal legal opinion and legislative requirements and is of the view that it poses no significant risk to the company achieving its stated reserves.

The coordinates of the project are presented in Table 3-1. The boundaries corner points with number 1 to 16. Mining lease area is 44 square kilometres. Depth of operations allowable is from 400 to 700 m below the surface.

Table 3-1 Irkol Project – Coordinates of the Project

	Coordinate	
Angular point	**Latitude**	**Longitude**
1	43°58'40"	66°26'42"
2	44°02'04"	66°29'21"
3	44°03'25"	66°29'21"
4	44°05'00"	66°31'15"
5	44°05'47"	66°31'15"
6	44°06'59"	66°29'21"
7	44°07'30"	66°30'34"
8	44°09'21"	66°31'38"
9	44°09'21"	66°33'13"
10	44°08'15"	66°34'08"
11	44°06'21"	66°33'13"
12	44°06'21"	66°32'16"
13	44°04'16"	66°32'16"
14	44°02'32"	66°30'34"
15	44°02'07"	66°30'00"
16	43°58'40"	66°27'44"

3.1.4 Exploration and Development History

The Irkol deposit was discovered in 1971, the first intersections on Irkol deposit area were obtained during the drilling of several wells on a grid network of 3.2-1.6 x 0.8-0.2 km. Due to the discovery of the more prospective North Karamurum deposit at the time, the exploration work in the Irkol deposit area was suspended. Work resumed in 1975-77. Appraisal was done by drilling on a spaced grid network of 800 m x 400-100 m in the northern part and on a spaced grid network of 1600 m x 400-200 m in the central and southern parts of the uranium-bearing zone. Large scale uranium mineralization was immediately discovered localized in Coniacian sediments at depths of 250~750 m. The total length of the prospective zones was about 20 km. Thus, the formation of mineralization in the Coniacian sediments was regarded as objects of industrial value. Further preliminary exploration at the Irkol deposit was conducted in 1978-1981 and accompanied by sulfuric acid in situ leaching test-work in 3 boreholes. At the same time, large reserves were confirmed on almost every single line of drilling. Detailed exploration on the Irkol deposit was then carried out.

In the Irkol deposit Russian classified uranium reserves of B + C_1 + C_2 for detailed exploration were two times that of the C_2. In 1975-1985 detailed exploration drilling was conducted. In 1975 USSR State Reserves Committee approved the geological reserves estimates of uranium, totalling 29,541 tons including B + C_1 category of 16,788 t uranium at an average uranium grade of 0.042% and an average productivity of 5.1 kg/m^2 for categories B + C_1 and 3.8 kg/m^2 for category C_2. The spaced grid network of exploration drilling for categories B + C_1 was (200-100) x 50 m, and 400 x50 m for category C_2. In the 1980 preliminary survey, the network of exploration drilling was 400 x50 m for category C_2, and 800 x 200-100 m for category P_1. The total reserves of categories C_2+P_1 were estimate at 18, 000 t.

The reserves of the Irkol deposit were approved by the SRC USSR under certification No 10142 in November, 1987.

3.1.4.1 Regional Geology

The Irkol deposit is located in the central part of the Syrdarynck depression at the Syrdarynck uranium province in the northeast part of Zapazhnoy-Karamurunsk ore field; refer to Figure 3-3. The Mesozoic-Cenozoic sedimentary cover in the Syrdarynck depression unconformably overlies the metamorphic basement rocks that consist of Paleozoic and Proterozoic strata. Basement rocks exposed in the north eastern part of the depression 30-60 km east of the deposit within the unilateral Karatau horst uplift forms the asymmetric Karatau mountain system. The basic structure of the basement is the Karatau kmegaanti klinary, whose kernel lies in relatively narrow tectonic blocks. Near the Main Karatau fault lays the Upper Proterozoic to Cambrian volcanogenic-sedimentary rocks. Metallogenic specialization is related to metamorphic stratiform occurrences, with deposits of poly-metallic vanadium, molybdenum, uranium and gold in the superficial parts of the folded basement. This is overlain by sediments of pervasive oxidation weathering crust with thickness of 10~20 m.

The structure of Syrdarynck depression is divided into the Karamurunky uplift and the Karamurunsk depression. The Irkol deposit is located at the conjunction of these two structural terranes. The Karamurunsk uplift is a complex structure trending south-westerly, with the Cretaceous-Paleocene occurrences under an upper tier cover of about 100 km long and 40 km wide. Karamurunsk uplift consists of 3 major structures-the Karamurunsk, Irkolsk and Baygakumsk Faults.

Figure 3-3 Irkol Project – Regional Geology

The movement of observed faults is minor in a north-westerly direction, limiting the aforementioned horsts and graben development. The most studied structure is the Irkol horst, within which the Irkol deposit is located.

The Karamurunsky depression is a large (60 x 100 km) synclinal structure, axial to the deep Karamurunsk and Zhaugashsk depressions. In the southern part the Karamurunsky depression continues into the complicated Khorassan anticline, where the Kharasan mineralization field and a number of separate uranium deposits occur.

The main characteristics of the geological structure of the Karamurun mining area are the two large arched-blocky structures: traversing the trend of the Syr darya depression and the complex structure of the Karamurunsk uplift and Karamurunsk depressions. These structures constrain the autonomy and change of hydrogeological conditions of the Upper Cretaceous aquifer system within the middle Syr Darya Artesian Basin and manifested infiltration of ore-forming processes. The spatial fragmentation of the deposit and uranium-bearing areas, the morphology and size of the prospective zones are controlled regionally by the bedded oxidation zones within aquifers. Horizons and sub-horizons of the Upper Cretaceous uranium-bearing aquifer are restricted by the lithological and geochemical filtration heterogeneity of the Upper Cretaceous rocks, with changes from alluvial to diluvium sediment conditions.

3.1.5 Local Geology

The Irkol Project is located on the western flank of the Irkol ore field characterized by a calm tectonic setting, as the entire area of the field is not bounded by any faults. The majority of the Irkol deposit is hosted by sedimentary rocks of the Upper Turonian-Coniacian ages (the Irkol ore bearing horizon). It is a geochemically a homogenous deposit.

The deposit is associated with a regional oxidation zone developed in sandy gravel deposits of the Upper Turonian and lower Santonian Stage of Upper Cretaceous. The host formation is a stacked assorted fine-grained sands and gravel interbeds, with interbedded clays, siltstones, minor carbonate and salts, and sandstones of about 60 m thick.

The mineralization is at depths of 180-750 m and extends for 20 km in a northerly direction and is 250~2000 m in width, partially passing under the Syr Darya River. About 40% of the uranium mineralization is located directly within the river flood plain. This part of resource has not been drilled for environmental reasons.

The Irkol deposit is an infiltration uranium deposit formed by oxidation. The uranium-bearing formations are grey coloured aquifers, and ore-controlling structures, i.e. the epigenetic oxidation zones, develop in these horizons.

The lithology and structural features of the geological formations allow dividing the area based on hydrogeological stages, complexes, horizons and sub-horizons. The lower hydrogeological strata correspond to Paleozoic geological formations, of mid-Mesozoic-Paleogene and the upper hydrogeological strata correspond to the Upper Pliocene-Quaternary. The reservoir oxidation zone has evident only traces of oxygen (rarely to 2.5

mg/L), E_H is typically low (+80 mV to 40 mV rarely), the content of uranium in the water is occupying the order of magnitude between 10^{-6} to n 10^{-5} g/L, and the selenium content is 10^{-7} to-10^{-6} g/L. In the mineralization zone, oxygen in water is not apparent, but signs of hydrogen sulphide are evident E_H varies from 280 mV to-50 mV, the uranium content in water increases to 10^{-5} g/L, and the selenium content usually does not exceed 10^{-6} g/L.

3.1.5.1 Stratigraphy

The sedimentary assemblage is represented by 3 structural stages: lower; and middle including poorly positioned platform deposits of late Cretaceous, Paleogene and Miocene, and the upper exposed sub-orogenic sediments of Pliocene-Quaternary ages.

Lower Stage

The base rocks in the Irkol deposit consist of the Ordovician clastic strata (sandstones and siltstone) and the dominant Famennian and Lower Carboniferous carbonates (grey to dark grey limestone and dolomite). In the surficial parts of the folded basement the sediments are overlain by a pervasive oxidation weathering crust, with a thickness of 10-20 m, in the form of kaolinised and limonitised fractured rocks.

Middle stage

The middle stage is composed of the Late Cretaceous to Paleogene platform deposits that unconformably overlie the basement rocks as shown in Figure 3-3.

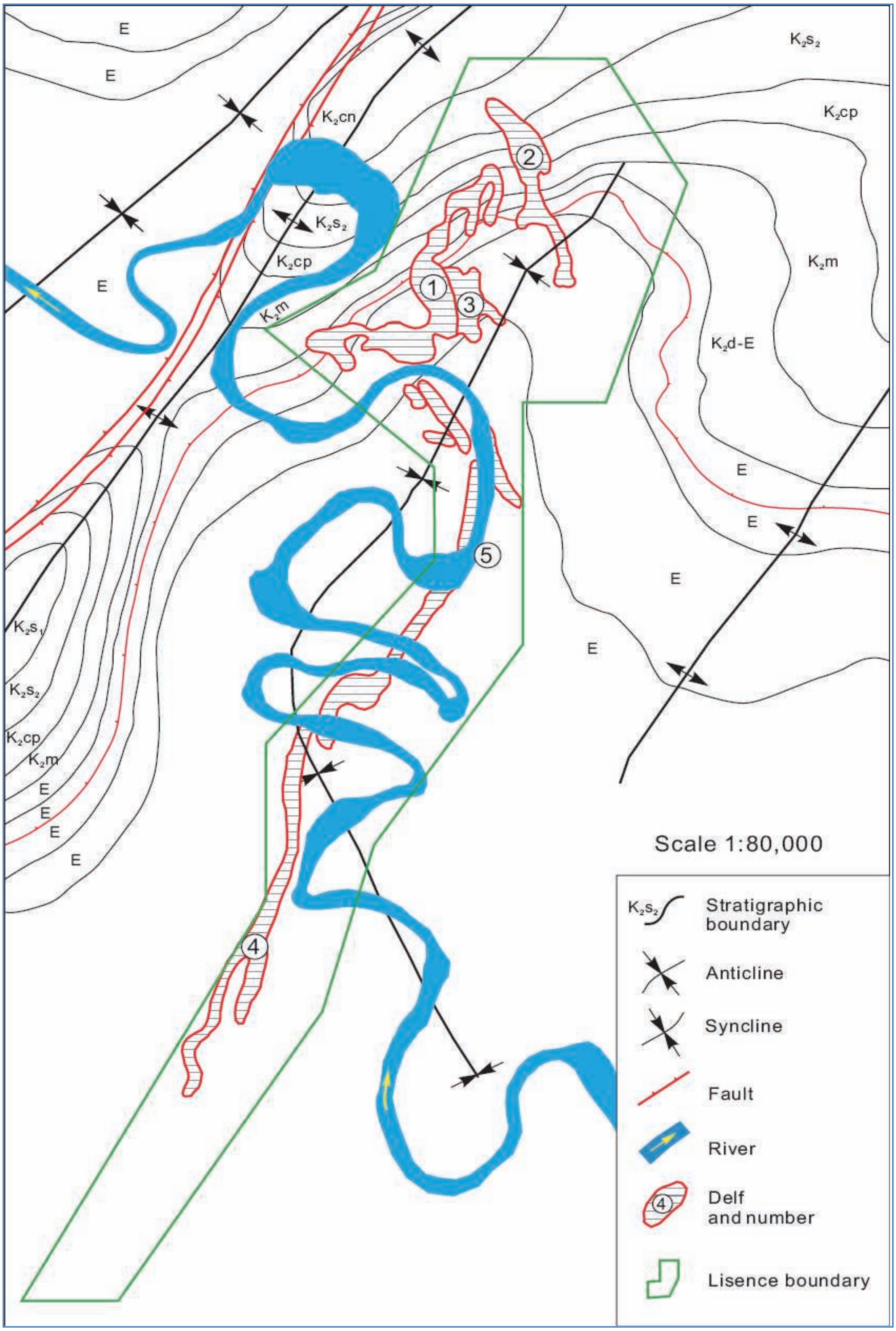


Figure 3-4 Irkol Project – Geological map of the Irkol deposit

Upper stage

The rocks of the upper stage are sub-horizontally bedded. The bottom 100-120m is composed of clays and siltstones with fine-grained brownish-yellow sands, calcareous sandstones and conglomerate of fine-sized rocks, containing gneiss and chert pebbles, shale and quartz. The upper part of the sequence (up to 110 m) is composed of brownish-yellow cross-bedded alluvial inequigranular aeolian sands with laminated lenses and laminated yellow to rarely grey clays.

Mineralisation is associated with the Turonian and Coniacian age units. In the Irkol deposit, 95% of the mineralization occurs in the Coniacian strata.

3.1.6 Mineralization

3.1.6.1 *Oxidation State*

Lithological mapping and geochemical studies have established the following configuration of epigenetic uranium-bearing oxidation zoning (by the movement of the interlayer water): 1) A zone of primary redness; 2) An interlayer oxidation zone of barren rocks; 3) A zone of mineralization; 4) A zone of grey barren rocks.

The proportions of major rock-forming clastic components (with decreasing ability to resist oxidization) are quartz and fragments of chert (60-80%), feldspars (3-12%), clay minerals (6-20%) and various accessory minerals (e.g. tourmaline, staurolite, ilmenite, and leyuoksen etc.).

The zone of primary redness is located in the rear part of the epigenetic oxidation zone at a distance of tens of kilometres and southeast of the deposit, where the sand and gravel facies are substituted by the red deluvial-proluvial formations. Anomalous concentrations of uranium were observed near the contact strip of the red sands and silts within the uranium-bearing zone of the deposit.

The interlayer oxidation zone of barren rocks. The typomorphous mineral is hydro goethite. Uranium is depleted due to the oxidative epigenetic processes as compared to the non-oxidized barren rocks. Selenium is low in concentration, usually less than $1x10^{-4\%}$.

The zone of mineralization is divided, by the cut-off of the selenium content at 0.001%, into: 1) dispersion halo of selenium; 2) selenium ores sub-zone (selenium more than 0.01%); 3) uranium ores sub-zone (uranium more than 0.01%); 4) dispersion halo of uranium, which is roll-shaped in section. In the core of the halo is an epigenetic ore-controlling oxidation zone and in the plane is a continuous, wide band extending along the front of the epigenetic ore-controlling oxidation zone and through the whole deposit.

The subzone of selenium ore in the Irkol deposit has two types of ore bodies: a non-limonite type and a limonite one. The non-limonite type is confined to whitish-grey sediments, in association with native selenium, where iron disulphide remnants and carbonaceous detritus are in the form of black substances. The limonite type is part of the interlayer oxidation zone, where hydroxides of iron are enriched in the selenium. Both types of selenium ore bodies in the Irkol deposit are small sized, and significantly inferior to the size of the uranium ore bodies. Sporadic vanadium concentrations of 0.05 to 0.1% were observed.

The uranium ore subzone. Dispersion haloes of uranium asymmetrically frame the subzone of the uranium ores. The dispersion halo of oxidized sediments is weakly aligned with the selenium ores and their halo. Progressing away from the barren grey rocks, this halo is comparable in size to that of the ore bodies in the subzone.

The zone of grey barren rocks is the base of the above-described epigenetic zones.

In epigenetic uranium-controlling oxidation zoning, the Irkol uranium bearing horizon was mainly formed at great depths (over 400 m). The temperature of the formation water and rocks reaches 40-45 °C in the southern part of the deposit, and the hydrostatic pressure is 50-75 atm.

In the infiltration deposits uranium is precipitated at redox boundary reactions within the oxidation zone. In the Irkol deposit, the uranium-bearing structures are grey-collared aquifers, within which epigenetic ore-controlling oxidation zones have developed, ore localization conditions are developed in the area of epigenetic ore-controlling oxidation zones. Hence the relationship between the morphology and uranium mineralization should be considered during exploration, resource definition and extraction.

The typical cross section plan is shown in 3-5.

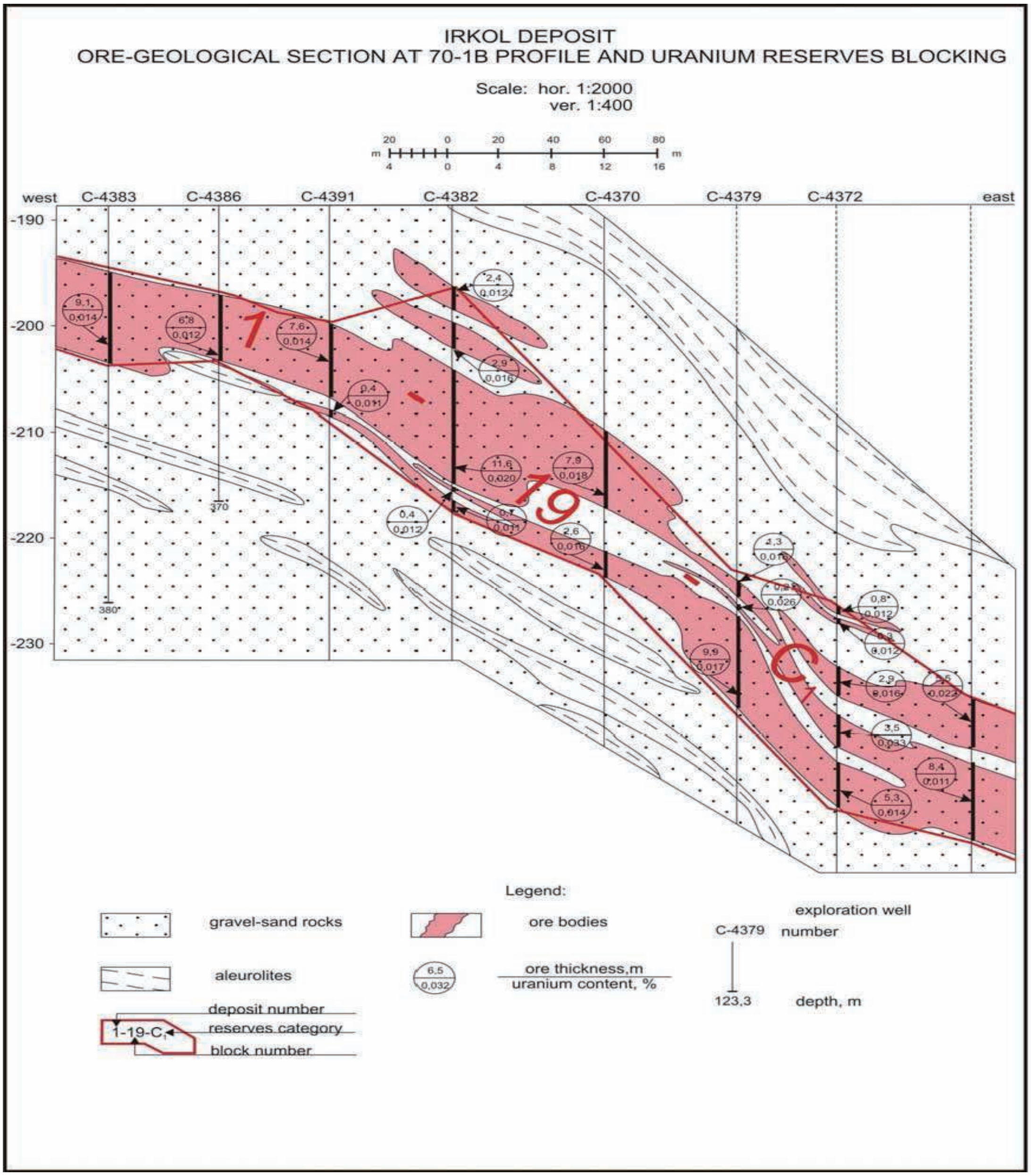


Figure 3-5 Irkol Project – Geological Cross Section plan

3.1.7 *Morphology of ore body*

In the Irkol deposit, 5 prospective orebodies are located in the Coniacian (No. 1, 2 and 4) and Upper Turonian (3 and 5) sub-horizons.

Orebody 1 is located in the northern section of the deposit and is localized in the frontal part of the bifurcated embayment of epigenetic ore-controlling oxidation zones in the Coniacian sub-horizon. It is one of the largest and most detailed exploration deposits, accounting for 35.8% of the total mineralization. The central part of the ore body was studied by a drilling grid network of 100 x 50~25 m spacing, and the remaining area by a network (drill grid spacing) of 200 x 50 m. The hydrogeological conditions of the orebody are characterized by 4 bushes (a group of drill holes composed of up to 6 drill holes). The geotechnical conditions were studied by in-situ leaching test-work and regional geotechnical mapping. The basic morphological element of the ore body is the bag (roll front nose) part and lower limb (tabular limb), forming one productive unit 4.8 km long and 100 to 500 m wide. The mineralization in main block is almost continuous and actual ore bearing ratio is 0.99. The uranium content is 0.01-0.04%.

Ore body 2 is located in the northern flank of the deposit and is bounded in the front portion of the Coniacian sub-horizon in the arch of the anticline. It is a ribbon-shaped body submeridional, 3.4 km long and 100 to 500 m wide. Mineralization is continuous in the northern flank with the uranium mineralization composing 78% to 100% of the orebody area and 84.5% of the mineralization has been projected within reserve blocks. Ore body 2 accounts for 20.4% of the total leachable quantity of the deposit (84.5% of mineralization has been assigned to resources). The orientation of the block across the strike of the south limb of the Irkol anticline determines its southern declination, and the depth increases in a southerly direction from 182 m to 488 m. The thickness of mineralization is 10-30 m. The uranium content is 0.02-0.04%, locally reaching 0.213%.

Ore body 3 is small in size with uranium mineralization accounting for 4.1% of the deposit. Ore body 3 has been explored by drilling through a network of 200 x 50 m with coincident hydrogeological studies. The geotechnical aspects of the ore body were studied during in-situ leaching trials, laboratory experiments and geotechnical mapping. The main prospective zone in the ore body has dimensions of 1.1 x 0.2~0.5 km, covering 92% of the uranium deposit. The depth of mineralization is 480-535 m and has a thickness of 5 ~29.5 m. The uranium grade varies from 0.01 to 0.03% and the specific productivity is between 1.1 to 10 kg/m^2, half of the orebody is mineralized.

Ore body 4 is the largest, but also the deepest and least explored in the deposit. It is located in the central and southern parts, stretching for 14 km. The entire northern half of the reservoir (7km) is in the influence zone of the Syr Darya River, the channel of which crosses the plane of the ore body 4 times. The northern and central parts of the orebody (at 11 km) have been explored by drilling with a network of 400 x 50 m. The orebody is not delineated in width. The southern flank of the orebody was evaluated by drilling through a network of 3.2 x 0.2-0.1 km. The hydrogeological conditions were studied via two bushes and two single wells. Orebody 4 accounts for 38.2%of the uranium in the deposit. The majority of the Orebody stretches south west with a southern declination. The depth from the north flank to the south increases from 560 m to 750 m. The volumetric ore bearing coefficient varies from 0.16-1.0, with an average of 0.7. The mineralization thickness varies greatly from 1-2 m to 20-30 m and the uranium grade varies from 0.01 to 0.04%, rarely 0.07-0.16%. The specific productivity is usually 2-6 kg/m^2. Three prospective zones outside of the river protection corridor are recognised with dimensions of 3000 x 200 m, 800 x 200 m and 400 x 50 m.

Ore body 5 is located in the central part of the deposit, in the southern flank of the orebody 1. It is a relatively small orebody (2.6 x 0.5-0.15 km) at a depth of 550-590 m. It is located in the Upper Turonian sub-horizon and was studied by drilling through a network of 400 ×1 00~50 m, accounting for 1.5% of the total deposit.

According to the characteristics of the prospective orebodies and blocks, the following conclusions are reached:

- The Irkol deposit consists of 5 prospective deposits, including 29 prospective geological blocks. 94.4% of the uranium is concentrated in (more than 1 km^2) orebodies 1, 2, and 4, localized in the sand and gravel rocks of the Coniacian stage.

- The basic prospective blocks stretch in the plane as solid tapes for several kilometres, with a width of a few hundred meters. They are relatively bedding-shaped in the section, characterized by variable thickness (from a few meters to tens of meters) and complex internal structures, which lead to an unstable combination from 5-7 orebodies. The ore bearing coefficient varies from 0.1 to 1 with an average of about 0.6. The uranium grade in the geological block is 0.01% to 0.04%. The uranium mineralization is relatively homogeneous.

3.1.8 Ore Host Components

The Irkol deposit is mainly composed of unequal sized sands and fine particles. The uranium-bearing sand is characterized by uneven granularity. The uranium ore consists of siliceous rock debris of quartz-arkose, in which the clay content is about 15-20%, mainly containing hydromica montmorillonite and kaolinite impurities.

The ore bearing sediments and wall rocks are of similar mineral compositions, mainly consist of quartz (65-75%) and feldspar (5-7%), sometimes kaolinized, and minor clastic chert (3-5%). The chemical composition of the uranium bearing ores in the deposit is silicate, with CO_2, S, C, P_2O_5 impurities and low contents of some harmful impurities (Pb, Th, REE). The carbonate content is low in the ores with measured CO_2 content being low, with an average value of 0.55%. In the ores and barren rocks, the C (carbon) content is low; with an average of 0.05-0.29% in conglomerate, increasing to 0.12-0.37% in sandstone, and to 0.57% in siltstone and mudstone. The ore of uranium belongs to the pitchblende uranium ore type. The main uranium bearing minerals are fine dispersed pitchblende, which are scattered, infilled between the particles of clay and salts, and soluble in a sulfuric acid solution. The proportion of the uranium ore is about 70-90% of the sediment and less than 30% pitchblende.

The Irkol deposit belongs to a single component type of uranium deposit associated with selenium, rhenium, and scandium, which do not reach the commercial grades. A few biological carbon occurrences were observed which may significantly affect the acid consumption during leaching. The pitchblende and some other oxide mineral components are soluble in sulfuric acid solution, quartz and other silicon components are not dissolved in sulfuric acid medium.

3.1.9 Hydrogeology

- The pressure surface with shallow buried depth has high filtration properties and low carbonate ores, and hosts smacked development of fresh water in the ore-bearing horizons;

- The aquifers are composed of gravel-sand, sand and gravel;

- The thickness of permeable rocks varies from 30 to 50 m, characterized by medium type aquifer sub-horizons;

- The upper aquitard is sustained, whereas the lower aquitard is a relatively sustained in the northern half of the deposit and less sustained in the southern half, limiting the thickness of aquitard to 0.5~16 m, with the majority ranging from 2 to 5 m;

- On the level of 0.8~15 m, the subhorizon refers to a type of shallow one;

- The water content of the aquifer rock is moderate with the specific yield of 0.22~1.27 L/s from wells;

- The host rocks are permeable to highly permeable with a filtration coefficient of 6~11 m/day, which is above the minimum value of the filtration coefficient of the ore bearing subhorizon;

- The subhorizon belongs to the high conduction type with a water conductivity of 176~312 m^3/day;

- The bulk of the ore delfs (mineralized zones) developed in the area of fresh water with a mineralization of 0.6 g/L, while only the southern part of the delfs occurs in the brackish water area.

The groundwater of the ore-bearing horizon in the central part of the deposit has a chloride-sulfate mineralization of up to 2.7 g/L, and in the north and south the mineralization of bicarbonate and sulfate sodium-potassium is 0.6~1.0 g/L (freshwater dominates the ore area), with a uranium content of $9.8x10^{-6}$ to $3.8x10^{-5}$ g/L.

The northern flank of the deposit is a local discharge area of the Upper Cretaceous aquifer, which partially drains the Quaternary groundwater horizon, where the Syr Darya River plays an important role.

(The Irkol deposit is located in the north wing of the large Syr Darya artesian basin which belongs to the intermediate Cyrdarya basin. It has three hydrogeological layers:

(1) The upper layer is Pliocene quaternary consisting of the Quaternary and Miocene aquifer;

(2) The middle layer is Mesozoic-Paleogene consisting of the Campanium-Maastrichtian group (the Caramulun layer), Santonian group, Upper Turonian-Coniacian group (the Irkol layer) and the Cenomanian group aquifer;

(3) The lower layer consists of the Paleozoic strata relative to weathering and tectonic fracture surfaces; this layer is of smaller significance in the in situ leaching.

The lithology of the uranium-bearing aquifer for the Irkol layer belongs to the Coniacian Group with a thickness of 30-60 m, and inequigranular sandstone and fine conglomerate, and inequigranular sandstone of the Upper Turonian Group with a thickness of 10-50 m. The total thickness of this layer ranges from 40 to 100 m, and 70-80 m in most of the area. The planned development thickness is 0.5-15 m. Lenticular aquifuge (thin aquitards) occur in the water-bearing strata series of siltstone, sandstone, and mudstone. Most thin beds have a thickness of less than 2-3 m.

In the region, the aquiclude lithology roofing the Irkol uranium-bearing aquifer (5-15 m) – consists of the Lower Santonian Group siltstone with thin interlayers of tight sandstone. The floor aquiclude is composed of Lower Turonian Group siltstone which is 40-50 m thick.

In the deposit, the roof of the uranium-bearing aquifer from north to south gradually increases from 135 m to 606 m depth, ranging between 350-500 m for most parts. The groundwater is high-pressure water and has resulted in the observed artesian conditions. The depth of the aquifer top is, from north to south is 130 m to 500 m and mostly between 340-490 m from north to south. The head of ground water is 0-15.0 m, with the majority at 5 m. In the northern part of the deposit, a lower terrain area, the artesian district of developing area is small. In the Irkol uranium-bearing aquifer, the groundwater flows to the north and west with a hydraulic gradient of 0.0004-0.0006 m. The elevation of the confined water above sea level is 146-148 m.

The flowing rate in drilling units is generally 0.4-1.3 L/s, which is high and the average hydraulic conductivity of the aquifer rocks is 750 m^2/day. The natural groundwater flow in the mineralization section is 7-11 m/day.

In the northern part of the deposit, the water chemistry is a bicarbonate-sulfuric acid-sodium potassium type, with a mineralization degree of 0.6-1 g/L. The uranium content in water is up to 9.8×10^{-6} g/L, with a maximum value of 3.8×10^{-5} g/L. The water is weakly alkaline.

The exploration results and subsequent studies on the geohydrological conditions outlined above are considered to be favourable for the application of in-situ leaching mining method in the Irkol uranium mineralization. Laboratory and field test results show that, the in-situ leaching technology is suitable for acid leaching mining of this deposit.

All horizons have small differences in head (0.5~1 m), but similar chemical compositions and salinities of groundwater.

3.1.10 Geotechnical properties of uranium ore

Laboratory tests and subsequent geotechnical work confirmed main uranium mineralization characteristics of the Irkol deposit:

1. Major uranium occurrences are located in permeable and highly permeable sand and gravel-sandy sediments (hydraulic conductivity (Kf) from 1 up to 12 m/hr).

2. The deposit contains low carbonate CO_2 content.

3. Enclosing rocks aquifers lie below the water table.

4. Laboratory and field test work showed that sulfuric acid leaching process resulted in high flows out and good geotechnical parameters (e.g. extracting uranium, reagent to rock ratio F:t, consumption of reagents, etc.). The process of leaching is conducted in relatively high temperature water (35 °C - 43 °C).

3.1.11 Exploration and drilling program

During the site visit, BMA was informed that the relevant information in the 1980th document regarding drilling to sampling QA/QC as following sections were lost in the time of transferring geology documents by the institute of Soviet twenty-seventh Geological Brigade of USSR during the USSR Event. Thus, the following relevant information is not available.

However, based on numerous QA/QC controls applied, including internal checks and inter-laboratory checks, the repeatability of the results for uranium and radium could be applied to confirm the accuracy specified by the instructions and no significant systematic deviations could be found. This could be considered to be similar to the Semizbay Project.

All drilling, logging, core drilling, and subsequent core splitting and assaying at Semizbay Project, was completed under the direction of various geological expeditions of the USSR Ministry of Geology. Standardised sampling and analysis procedures used are documented and able to be examined; these are quite detailed and thorough.

Based upon the rigorous QA/QC used in other areas of sampling and on strict regulations imposed by the Kazakhstan government, BMA considers that the security measures taken to store and ship samples were of the highest quality and meet this same high quality standard.

3.1.12 *Control methods of exploration*

No site specific information is available as it was lost, refer to Section 3.1.11.

3.1.13 *Sample density and sampling methods*

No site specific information is available as it was lost, refer to Section 3.1.11.

3.1.14 *Sample quality and representivity*

No site specific information is available as it was lost, refer to Section 3.1.11.

3.1.15 *Sampling method*

No site specific information is available as it was lost, refer to Section 3.1.11.

3.1.16 *Sample preparation, analyses and security*

No site specific information is available as it was lost, refer to Section 3.1.11.

3.1.17 *Quality assurance/quality control (QA/QC)*

No site specific information is available as it was lost, refer to Section 3.1.11.

3.1.18 *Resistivity*

No site specific information is available as it was lost, refer to Section 3.1.11.

3.1.19 *Geophysical works*

The volumes of the main types of geophysical work performed in the Irkol deposit are shown in the Table 3-2 Irkol Project – Volume of the main types of geophysical work performed in the Irkol deposit.

Table 3-2 Irkol Project – Volume of the main types of geophysical work performed in the Irkol deposit

Stage of work	Types of logging	Volume of work: All over the deposit with flanks well/km logging	Volume of work: Including detailed exploration well/km logging
Prospecting and exploration, exploration, hydrogeological, technological	Gamma-ray logging	1,910/911.4	1,116/516.9
	electric logging (CS+PS)	1,881/881.1	1,107/508.1
	inclinometer	1,821/860.8	1,116/510.6
	*fission neutron logging (CPV-m)	256/3.2	256/3.2
	caliper survey	219/114.9	37/78.2
	thermometry	123/50.1	81/38.9

* CPV-m performed only on ores.

Gamma logging is the mostly used geophysical logging in all wells, using a conductive radiometer probe-1 and PKC-1000, and then the device UKP-77. Immediately after drilling, gamma-ray logging was undertaken to provide data on the following issues:

- Refining the geologic section,
- Estimating the infiltration properties of the rocks,
- Determination of the ore body parameters,
- Rock lithology of the uranium-bearing horizon, and
- Refining the filtration rock properties of other uranium-bearing horizons

Test results given in Table 3-3 indicate that the logging data is reliable

Table 3-3 Irkol Project – Summary results of the control logging of production wells

		Error in the determination					
	Number of comparisons	Square anomaly		Interval depth		Interval thickness	
Period of work	(ore intervals)	Relative	Margin of accuracy		Relative		Relative
		%		*m*	%	*m*	%
1975-1985	210	±3.7	1.9	0.14	0.02	0.03	1.6

The standard error of determining the area is 3.7%, significantly less than permissible 7%. The errors of the ore intervals' depth and thickness (0.02% and 1.6%, respectively) are negligible. This data attest to a sufficiency and reliability of the geophysical logging.

The reliability of gamma-ray production has also been confirmed by comparison to radium gamma instrumentation channels UKP-77-91 and TSKU. The almost complete convergence of all parameters for 553 ore intervals for a total thickness of 1,181 m attests to the near uniformity and high quality of the primary materials and sufficient accuracy of the gamma tools.

3.1.20 *Gamma ray logging*

Gamma ray logging was performed using the radiometers probe-1 and PKC-1000 (1975-1979) and then the universal logging tools UKP-77 (1978-1985), which allows one at the same time to write chart gamma and electric logging (resistance method and the potential method).

Table 3-4 Irkol Project – Gamma ray log record scale and speed

		Gamma ray logging speed, m/h	
	Depth scale	probe-1, PKC-1000	UKP-77
Ore above the horizon	1:1,000	Up to 1,000	1,500-2,000
Producing horizon	1:200	Up to 500	600-900
Detailing producing horizon	1:50	Up to 60	120-150

The appropriate configuration of the devices (the natural background of zero gamma intensity and the control intensity of the generator) was set, and after logging all settings were checked. Simultaneous recording charts were produced on photographic N015u4.

Systematic control was carried out on logging control (1,013 and CPS-2 bis) and in production wells.

The monitoring results show the accuracy of gamma logging measurement made in the Irkol deposit is high enough. The relative mean variance in the determination area of anomalies for the entire work period does not exceed 4.2%, and the error of a single measurement is not greater than 7.0%.

The data also confirm sufficient accuracy and reproducibility of the logging. The mean variance of determining the area is 3.7%, significantly less than the allowable 7%. The mean variance in determining the depth of the ore intervals and their thicknesses is negligible and is 0.02% and 1.6%, respectively.

The reliability of gamma-ray production is also confirmed by comparison to the radium gamma instrumentation channels of UKP-77 and TSKU-91. Almost complete convergence of all parameters from 633 ore intervals with a total thickness of 1,181 m proves the high quality of the primary materials.

In the period of 1975-1985, in a comparison of 210 ore sections, the relative error of abnormal area is ± 3.9%, and the reserves error is 1.9%. The burial depth error is 0.14 m with a relative error of 0.02%, and the section thickness error is 0.03 m, with a relative error of 1.6%.

3.1.21 *Method of quantitative interpretation*

Quantitative interpretation was made in two stages. In the first stage, to provide timely information and control drilling operations, graphical interpretation of gamma-ray was conducted directly to the column using a known relationship:

$$C = S/(K_0 * m)$$

Where: C – Uranium content in%;

K_0 – Conversion factor (mcL/hx0.01% U);

m – The thickness of the ore interval;

S – Area gamma anomalies (mcL/hxcm).

In the second step in calculating the reserves of uranium, the interpretation of gamma-ray was performed on the computer SM-1 and EC via the program "hydrogenated logging". These program implements algorithms of differential interpretation of gamma-ray and the allocation of ore intervals, taking into account the dependence of the boundary radium content from its average content in the ore intervals.

Before getting the gamma-ray intensity data on the computer, all the anomalies greater than 50 mcL/h were digitized by a 0.1 m interval with access to the natural background on 8 points. The results were indicated by digitizing intervals of permeable and impermeable rocks (with geological columns) and the boundary geological situation (with geological sections on profiles).

3.1.22 *Caliper measurements*

Caliper measurements were performed uniformly in the deposit area. The processing caliper was held for drilling diameters of 112 mm and 118 mm, as their share in the total number of wells is more than 98%. The relative standard error of the caliper measurements does not exceed 1.5%.

3.1.23 *Inclination survey*

Inclination measurements were performed using inclinometer IR-2 in the 100 m deep wells with a 20 m pitch, and the seabed instruments were carried in the table ASE-2 at least once a month. The differences between the major and control observations (10-12%) of the zenith angle is ± 3°, the azimuth at zenith angles larger than 3° is ± 2-3° and was not measured at zenith angles less than 3°.

The inclination measurements have been performed in 1,821 wells with 860.8 km, among which 1116 wells with 510.6 km were measured in the detailed prospecting stage.

Statistical processing of the inclination survey on 289 wells showed that the deviation at the bottom depths of 160-180 m is 2.7-6.5 m, assuming that the deviation of vertically dumping wells occurs at a constant azimuth.

3.1.24 Bulk Density

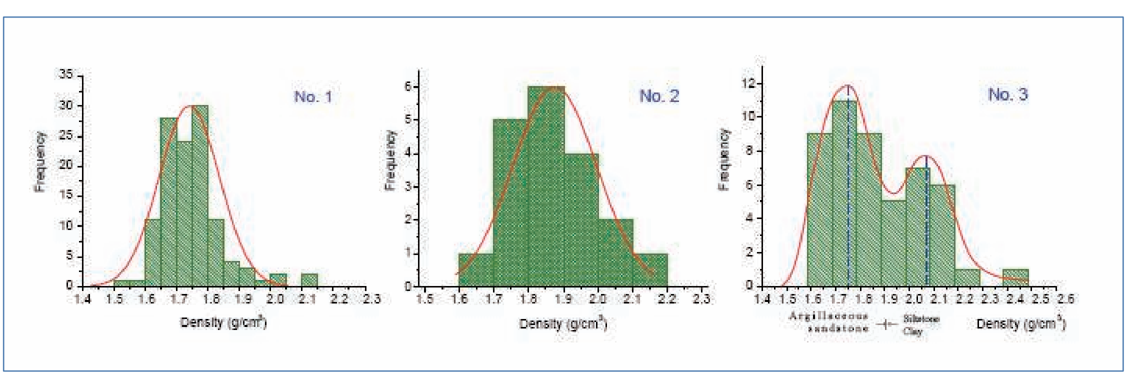
The bulk density of the air – dry state was determined for ore samples. There are about 189 specific gravity measurements of core from the Project that range between 1.74 t/m^3 to 1.88 t/m^3 with an average of 1.8 t/m^3. This average value of 1.8 t/m^3 was used for the current resource estimate.

As a result, BMA completed independent statistical analysis based on the original density measurement data which resulted in a regression analysis refers to Table 3-5 and Figure 3-6 Irkol Project – Bulk Density Statistic.

Table 3-5 Irkol Project – Bulk Density Measurement

No.	Ore types	Lithology	Quantity	Density	Mean square deviation *(g/cm3)*	Coefficient of variation
1	Penetration	Fine gravel-sand	118	1.74	0.096	5.5
2		Sand-fine gravel	19	1.88	0.118	6.3
3	Non-penetration	Sand, silt, clay	49	1.87	0.191	10.2

Figure 3-6 Irkol Project – Bulk Density Statistics



3.1.25 *Russian resource estimate*

Detailed prospecting work on the Irkol uranium deposits was conducted by the Soviet twenty-seventh Geological Brigade in 1975-1985. The resource and reserves estimate is completed by the Karamurunsk expedition No. 23 in 1986. While reports of exploration and reserves were completed in January 1, 1986 with technical parameters as below:

- Cut-off grade: 0.01%, or Grade-Thickness 0.06;
- Industry cut-off grade: 0.12;
- Minimum mineable thickness: 2 m;
- Maximum allowed barren gap width:1m;
- Minimum area of C1 reserves block: 200,000 m^2;
- Minimum size of the isolated block for resource estimation: 40,000 m^2;
- Average content of maximum block CO_2 allowable: 2%;
- Minimum value of the uranium-bearing aquifer permeability (filtration coefficient): 1.0 m/d;
- Maximum size of ores silty particles: minus 0.05 mm.

The off-balance reserves include reserves of independent blocks in permeable rocks, and were contoured for minimum uranium grade-thickness in hole without the limitation average uranium grade-thickness on the block. All other requirements were met.

3.1.25.1 *Contouring*

The contouring process was made for successive stages and isolated qualified ore blocks, linking them in a section and contour blocks.

The thicknesses of isolated intervals and their average uranium contents were determined using quantitative interpretation of gamma-ray logging. The following parameters and correction factors were used for interpretation:

- conversion factor: 115 mkr/h at 0.01% uranium equilibrium;
- correction for gamma radiation in washing liquid: 1.13 – 1.19;
- correction for ore's natural moisture (14% for the Coniacian ores and 16% for the Upper Turonian horizon);

- Contour productive blocks and define the mineralization parameters at intersections.

- The industrial index and principle of isolation and building blocks were considered in contouring in conjunction with the following principles: contouring volumetric blocks should be conducted within a common aquifer based on a local aquitard. For ease of calculation, the deposit is divided into 63 geological blocks including 31 blocks for Orebody 1, 13 blocks for Orebody 2, 4 blocks for Orebody 3, 11 blocks for Orebody4 and 4 blocks for Orebody 5.

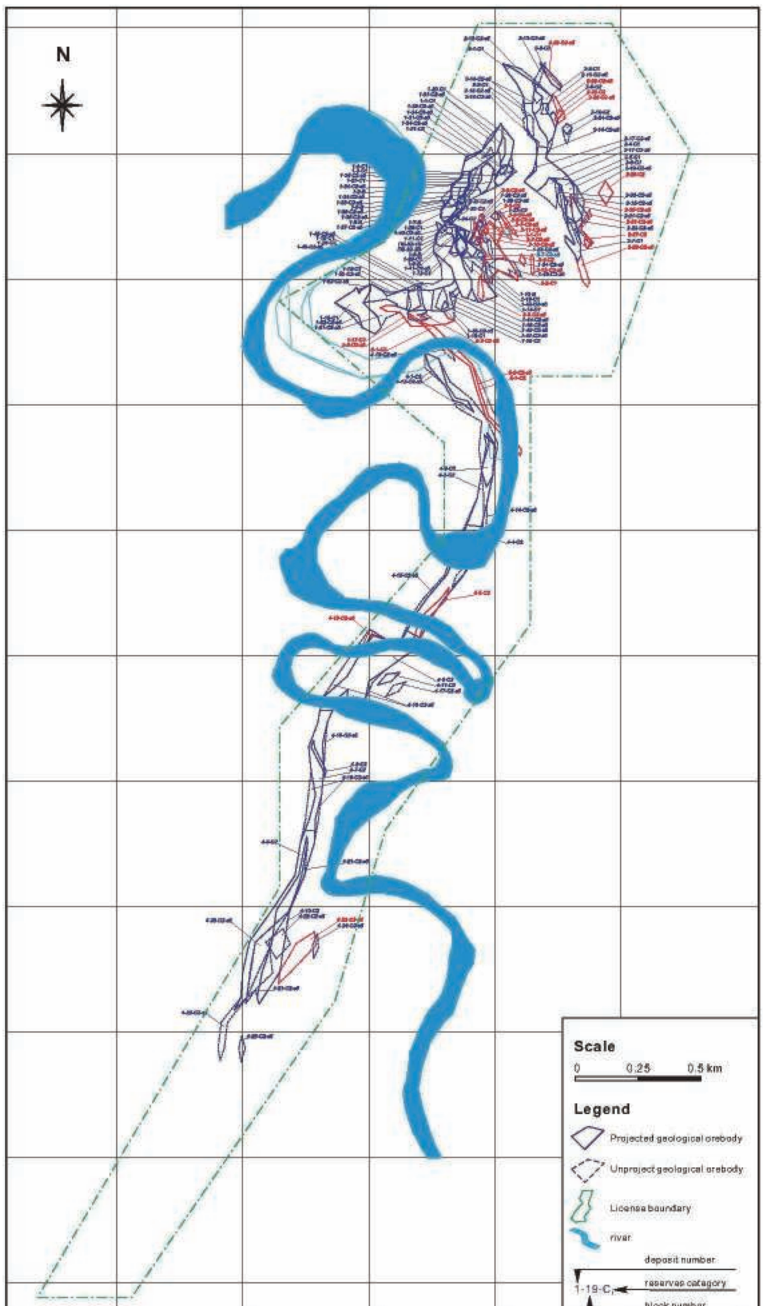


Figure 3-7 Irkol Project – General Geological Block Plan

3.1.26 General methods of the resources estimation

The reserve estimate for geological blocks was made with projection on the horizontal plane. The area is calculated by the uranium-bearing coefficient method. The ore block volume is calculated by the following formula:

$$V=S\times K\times M$$

V – volume of a block, in m^3;

S – area in km^2;

K – uranium-bearing coefficient;

M – average thickness of an ore block.

The formula for calculating resource tonnage is:

$$Q=V\times D$$

Q – Tonnage in t;

D – Density.

The category of each block for calculation of the ore reserves was determined, according to the standard operation requirements for application of uranium reserves category.

- Category B resource: located in the orebody centre where a drill hole network of (100~50 m) x (50~25 m) were explored. Reliability figures of section 9-18 for any single ore block were calculated, these were considered to indicate a high degree of reliability of the calculation parameters and reserves.

- Category C_1 resource: a 200 m × 50 m (locally 100 m × 50 m) network was explored within 9~10 sections of the large ore reserves. The geometric area error was confirmed within 20%, and the parameters determined for ore blocks were thus considered sufficiently reliable;

- Category C_2 resource are explored within a network 400m x 50m, these contain middle sized and small orebodies.

In the Republic of Kazakhstan and other countries of the Commonwealth of Independent States (CIS), mineral resources and reserves are classified according to the 1981 "System of Classification of Reserves and Resources of Mineral Deposits". This classification system uses seven categories in three groups based on the level of exploration performed. Table 3-6 presents a 'best estimate' correlation of the Kazakh classification system (CIS) to the JORC standard definitions.

Table 3-6 Irkol Project – Correlation of the Kazakh classification system to the JORC standard definitions

CIS Classification	CIS Categories	JORC Resources	JORC Resource
Explored Reserves	A and B	Measured	Proven/Probable
Explored Reserves	C1	Indicated	Probable
Evaluated Reserves	C2	Inferred	–
Prognosticated Resources	P1, P2 and P3	Potential	–

The two systems are not directly reconcilable. Primarily the JORC system does not depend to a high degree upon drill hole spacing to categorise or classify the resources and reserves. JORC classification requires a high degree of reliable and factual data on not only the mineralization grade but geology, geotechnical aspects, and hydrogeology in conjunction with significant economic factors to develop of level of confidence in the assessed data and mineralization from which a classification can be derived.

Reserves estimate results are shown in Table 3-7.

Table 3-7: Irkol Project – CIS balance uranium reserves

Index	Unit	Category B	Category C_1	Category $B+C_1$	Category C_2
Tonnage	kilotons	3962.7	35747.9	–	30627.2
Uranium grade	%	0.054	0.041	0.043	0.042
Uranium reserve	t	2145	14643	16788	12753

3.1.27 ***Results of Russian resource and minable quantity***

70,083.2 kt of uranium ores were estimated in the deposit with an average uranium grade of 0.043% containing 29,541 t uranium. The majority (44.7%) of $B+C_1$ category occurs at depths of 400-500 m, 63.3% of the proven amount is above 500 m, with 36.7% at depths of 500 – 600 m. The majority (56.5%) of C_2 category occurs at depths of 600 – 700 m and the rest (36.3%) at depths of 500 – 600 m.

The Syr Darya River passes through the deposit and divides it into three pieces. The balance of the Russian minable quantity are all located in the north and east bank of the river.

All $B+C_1$ and 8% of C_2 represent 63% of the $B+C_1+C_2$ reserves. The concentrated mineralization area within the category C_2 was converted to 16% of total minable quantity which is located in the southern and west bank of the river. In the intermediate central portion of the mineralization on banks of the river, the accumulated resource C_2 accounted for 3% of the $B+C_1+C_2$ resource.

The total uranium resource tonnes under Russian Reserve are 29,541 t uranium at grade of 0.0422%, including:

- Category B is 2,145 t with an average grade of 0.0541%;
- Category C_1 is 14,643t with an average grade of 0.041%; and
- Category C_2 is 12,753t with an average grade of 0.042%.

The resource estimate and quantity of the Irkol deposit was approved by the National Reserves Committee of the Soviet Union in 1987 based on No 10142 protocol. The minable quantity (No 10142 protocol) estimated in in March 11, 1987 was re-confirmed and ratified by Kazakhstan National Committee in 2005 (document No 200).

3.2 Semizbay Deposit

3.2.1 Location

The Semizbay deposit is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan. The geographic coordinates are 52°55'50"N, 72°52'10"E.

Semizbay-U LLP works on the basis of the certificate of state registration of legal entities for the 12/15/2008, number 75-1902-25, issued by the Department of Justice, Enbekshildersk District, and Akmoltnsk Oblast. The lease covers an area of 27.2 square kilometres and is certified for operations to 180 m depth.

3.2.2 Access

The Semizbay deposit is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan as shown in **Figure 3-8**. The Semizbay deposit area is one of the least economically developed regions in northern Kazakhstan. Large settlements and railway stations; Stepnogorsk (by 110 km), Zaozernoe (by 120km), Bestube (by 50 km) and the railway station Kzyltu (by 100 km) have transport links with the deposit but there is no direct rail link to Semizbay. A road passing through deposit connects the village Kirovo with the village Koytas, and a second road connects the village Baylyust and the final processing facility.

Figure 3-8 Semizbay Project – Location and Transportation Plan

3.2.3 Climate

The climate of the region is continental with hot summers, cold winters, and large fluctuations in temperature. The average temperature is between +18 to +22 °C (maximum +35 °C) in summer and -17 to -20 °C (minimum minus -44 °C) in winter. Winters are snowy and summers are long, hot and dry. Snow thickness rarely exceeds 10 cm, frozen depth of soil ranges from 1.6 m to 1.8 m, and up to 2.5 m in particularly harsh winters. Annual rainfalls do not exceed 300 mm, most of which are in the form of heavy rainfall that occurs in the summer. The amount of evaporation prevails over rainfall. The winds are dominantly from the southwest and northeast, with a maximum speed of 18-20 m/sec. The percentage of windy days per year is 70%. As an underground mining activity, the in-situ recovery (ISR) operation of the deposit continues during the winter, drilling activity is suspended between November and April.

3.2.4 Exploration and Mining Licenses

For the Semizbay Project, Semizbay-U holds the subsoil use License No 14-05-11615 contract dated 2 June 2006. This document allows uranium mining in Enbekshildersk District, Akmoltnsk Oblast, the Republic of Kazakhstan. The subsoil use (mining) rights are valid for 25 years from the date of execution of the subsoil use contract (i.e. until 2 June 2031). The term of the subsoil use rights is enough to cover the mine life years in 2012 Feasibility Study (which extends to 2031) while not enough to cover the extent life of the mine by BMA reserve (which extends to 2032).

According to the due diligence findings of the Kazakhstan Counsel, under the Subsoil and Subsoil Use Law, term of a production subsoil use contract can be extended provided that there are no breaches of contractual obligations by a subsoil user. In order to extend a contract, it is necessary to submit extension application not later than six months prior to the expiry date of the production contract with explanation of such extension's necessity. As at the Latest Practicable Date, the Company was not aware of any issues or legal obstacles in the renewal of subsoil use contracts. Although the Subsoil Law does not provide for detailed regulation of the procedures for extension of subsoil use contracts, during interview, the Semizbay-U's management assured us that there should be no issues with getting such extension. BMA has reviewed the mining licensing copy, location, strategy, un-formal legal opinion and legislative requirements and is of the view that it poses no significant risk to the company achieving its stated reserves.

On June 2, 2008, the Ministry of Energy and Mineral Resources of Kazakhstan Republic certificated for state registration the contract on subsoil use operations for uranium mining in the Semizbay deposit. The license boundary corner coordinates of the Semizbay Project are presented in Table 3-10.

Table 3-8 Semizbay Project – Permit Boundary coordinates

Number of points	Coordinate North latitude	Coordinate East longitude
1	52°58'36"	72°45'45"
2	52°58'37"	72°46'37"
3	52°57'31"	72°47'19"
4	52°57'33"	72°49'22"
5	52°56'37"	72°50'54"
6	52°56'22"	72°53'51"
7	52°56'48"	72°57'53"
8	52°56'31"	72°47'19"
9	52°55'54"	73°01'25"
10	52°56'23"	73°01'26"
11	52°55'56"	72°58'10"
12	52°55'44"	72°55'14"
13	52°56'14"	72°52'00"
14	52°56'52"	72°45'50"

3.2.5 Exploration and Development History

The Semizbay deposit was discovered in August 1973, and was developed as the first and only commercial uranium project of hydrogenous type uranium mineralization occurring in unconsolidated sediments. A series of geological studies have been carried out (refers to **Table 3-9**).

Table 3-9 Semizbay Project – Characteristic stages of prospecting and exploration

Work stages	Main procedure Activities
Regional Studies, 1970-1971	Regional geological, geophysical, hydrogeological Special Metallogenic analysis of collected materials Field reconnaissance studies
Deposit Studies, 1972 to August, 1973	Profile exploratory drilling and trench in gamma anomalies Complex magnetic survey Structure survey drilling 800-200 m and in anomalies areas with denser drilling to 100 m.

Work stages	Main procedure Activities
Studies and evaluation, September to December, 1973	Complex geophysical research through 3.2-6.4 km Structural profile drilling exploration wells on the networks of 6.4-3.2 km*800-200 m and 1.6 km*200-100 m, respectively Preliminary hydrogeological studies Preliminary mineralogical, geochemical, lithologic facial and technological research on ores and host rocks.
Preliminary exploration, 1974 to September 1976	Profile drilling in a networks 100*50 m^2 (category C1), 400-200*100-50 m^2 (category C2) and 1,600-800*400-100 m^2 (predicting resources); Laboratory and field studies on the experimental method ISR Feasibility report for mining of deposits Specialized mapping and search 1:50,000 Exploratory monographic study 1:200,000
Detailed exploration, October, 1976 to June, 1978	Development of mining area (50 m*100 to 50 m) Experimental drilling 12.6 m* 6.25 m and 200*100 m^2 Expand laboratory studies Hydrogeological and geological engineering

Census and economic evaluation of the deposit in the area are divided into 5 stages including:

- forecasting of Metallogenic regional studies stage,
- researching stage,
- research-evaluation stage,
- preliminary prospective stage
- Detailed exploration stage.

Appropriate economic calculations defined the studies required, identified priority areas for detailed exploration and proved methods of the extraction in the surface area of the deposit. Extensive hydrogeology, sampling, testing, and topographic surveying work were undertaken.

3.2.6 Regional Geology

The Semizbay deposit is a complex exogenous style formed from ancient epigenetic uranium mineralization. It is a multi-stage infiltration deposit defined by the direction and nature of the ore-forming processes.

Geologically, the Semizbay deposit area is located on the northern edge of the Ishkeolme anticlinorium, in the dipping zone of the folded basement of the north-eastern Kazakhs shield under the Mesozoic-Cenozoic sedimentary cover of the West Siberian Plate of the Epipaleozoic Ural-Siberian platform. The geological structure of this vast and complex area consists of the Paleozoic folded basement rocks and a Mesozoic-Cenozoic platform cover, the East Kazakhstan fold system.

The basic structure is the Semizbay erosion-tectonic depression, which is an ancient buried pale valley oriented in a sub latitudinal direction, filled with the terrigenous Mesozoic-Cenozoic rocks of alluvial-proluvial genotype.

The depression is over 40 km long from west to east, and is 3-6 km in wide. The thickness of the sedimentary rocks increases from 50 m in the upper depression up to 180 m or more in the lower eastern part. The Paleozoic foot of the depression along the valley bottom has a medium slope of 0.006 from west to east, with a height difference of about 200 m.

The foundation and frame of the depression are composed of Ordovician-Devonian granitoid of the Jaman-Koytas massif and a small area of Middle-Ordovician volcanic-sedimentary rocks. The Paleozoic basement was cut by numerous faults of different orientations, most of which are NW and NE trending. At the intersections of some faults occur markedly abnormal concentrations of gold, molybdenum and uranium. The sub latitudinal fault zone can be traced along the trough board, which defines the zone's configuration.

The almost horizontal Mesozoic-Cenozoic deposits in the depression plunge eastward toward the axial part of the depression. Sometimes, the occurrence was complicated by flexural bends. Linear folds and faults offset the strata by from tens of cm to 20-25 m.

The host rocks of the deposit have undergone significant changes under the influence of multi-stage epigenetic processes, which are associated with the formation and subsequent changes in mineralization, oxidation and reduction processes that transformed the rocks. These processes resulted in argillization, limonitization, iron accumulation, sulphidation, white-washing and carbonation. Under the influence of these processes, uranium-bearing sediments are formed to varying degrees along carbonized rocks to very dense, almost impermeable rocks with calcite cement. The conditions for localization of uranium mineralization are defined by two factors: first, confinement mainly to the rocks enriched in organic matter in the marginal parts of the alluvial facies-geochemical zone; and secondly, changes of in situ oxidation and reduction.

3.2.7 Local Geology

The Semizbay hydrogenizes uranium deposit is located at the boundary between the the Republic of Kazakhstan shield and the West Siberia platform. The depression is, from west to east, 40 km long and 6 ~ 8 km wide (and the narrowest width is 1.5 km). The depression formed as a result of a tectonic uplift and the fall of the Arctic level with a strong incision of the Jurassic channel. Changes in the distribution of lithofacies and lithology are instable in the depression. The upstream sedimentation thickness is up to 50 – 180 m. The substrate and the near edge part are composed of the Middle-Ordovician granites from the Jaman-Koytas massif and volcanic-sedimentary rocks where faults were developed. There are two horizons. The lower ore horizon comprises conglomerate and the sandstone horizon of the lower Semizbay subsuite, the thickness of which changes from 20 m to 60 m in the eastern depression. The majority of permeable sediments extend to the southern edge of the depression. The upper ore horizon comprises the silty sandstone horizon of the upper Semizbay subsuite, which is 10 ~ 40 m thick and dominated by red and mottled slope deposits.

3.2.8 Stratigraphy

The Semizbay deposit is an erosion-tectonic depression (palaeochannel), which is an ancient, long-developed valley filled with the terrigenous Mesozoic-Cenozoic deposits of the alluvial-proluvial genotype, enclosing industrial uranium mineralization.

The depression base and edge consist of the Precambrian crystalline basement and folded Paleozoic formations, which was composed of coarse-grained, strongly fractured biotitic-granite of the Borov intrusive complex from the Middle Ordovician Jaman-Koytas massif and volcano-sedimentary rocks (porphyry, tuff, sandstone, and siltstone).

The stratigraphy is simple, and the Mesozoic-Cenozoic geological profile can be conditionally divided into three layers: upper, middle and lower layers. The lower layer is the main part of the profile, composed of the Semizbay series of sediments. The lower layer's sediments belong to the continental river channel and floodplain deposits, the lithology of which is mainly grey coarse conglomerate, gravesite, inequigranular sandstone, siltstone, rich in clay and carbonized plant debris; the middle layer is the Pokur suite (Lower Cretaceous) and the Lyullinvor suite (Eocene), composed of marine, lacustrine, fluvial and bog facies, the lithology of which is conglomerate, sandstone, siltstone and clay. The upper layer is of Quaternary rocks only. Uranium mineralization is confined to the Upper Jurassic to Lower Cretaceous river sediments of the Semizbay suite.

The structure of the Semizbay suite section is divided into two megacycles, which correspond to two subseries: the lower Semizbay and the upper Semizbay. The lower one is dominated by alluvial facies, and the upper is by diluvial-proluvium deposits. The geological section of the Semizbay deposit is shown in **Figure 3-9**.

The main part of the depression section is composed of the Semizbay suite sediments, within which 6 horizons exist:

- Conglomerate (basal) and sandstone, combined into a single aquifer, which corresponds to the lower Semizbay ore horizon (J_3-K_1Sm_1);

- Clay horizon (intermediate aquitard);

- Siltstone-sandstone horizon, which corresponds to the upper Semizbay ore horizon (J_3-K_1Sm_2);

- Siltstone-clay and sand-clay horizon (regional aquitard).

The lower Semizbay subsuite occupies a recessed portion of the pale valleys and lies on the eroded surface of the Paleozoic basement granites. It is characterized by a generally weak cementation of material, varying degrees of screening and relatively high heterogeneity. The up section structure is marked by typical riverbed gravel and gravel stones caught in siltstone and clay with lignite near the board of the slope complexes.

The lower Semizbay deposits are divided into three horizons: conglomerate ($sm_1^{\,1}$), sandstone ($sm_1^{\,2}$) and clay ($sm_1^{\,3}$).

Their thickness varies from 20 m in the west to 60 m in the east depression. The bulk permeable sediments extend to the southern board of the depression.

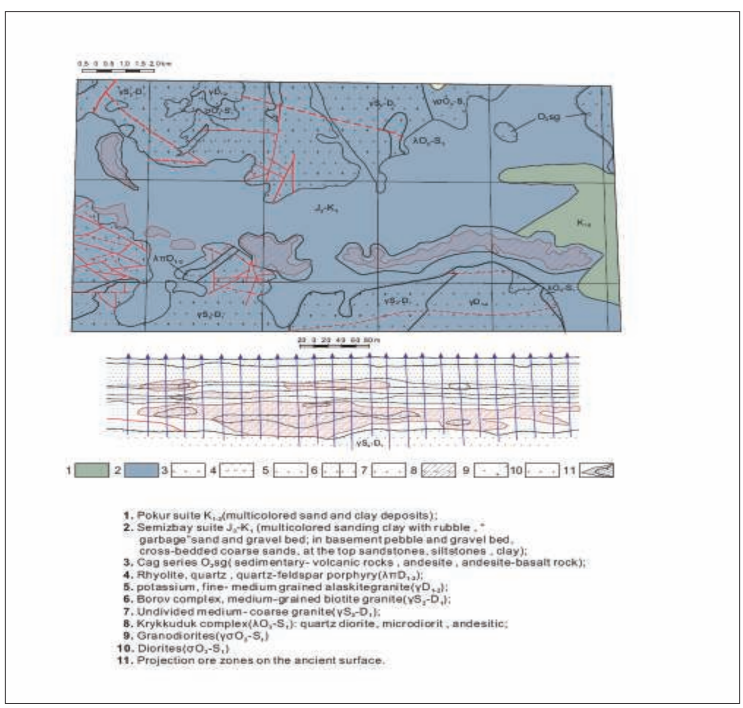


Figure 3-9 Semizbay Project – Geological section of the Semizbay deposit

Conglomerate ($sm_1^{\,1}$) occurs at the base of the lower Semizbay subsuite, with a thickness of up to 15 m and a very inhomogeneous structure, represented by sands, sandstones, grits, gravels and conglomerates on clay, sand-clay and carbonate cement. The horizon rocks that are enriched in carbonized plant remnants contain lenses of lignite.

Sandstone (sm_1^2) comprising a major ore of the lower ore horizon compose mainly of fine to coarse-grained clayey sands and arkosic, dense, and weakly cemented sandstones, grits, silts and clay. The horizon thickness ranges from 15 m to 20 m. The boundaries between these horizons are conditional.

Clay (sm_1^3) serves as an intermediate aquitard, which has a comparable stability to the cherry-red, red-brown dense clays with a thickness of 25-27 m in the region. The aquitard has clear boundaries with the overlying and to a lesser extent with the underlying sediments. Often, strongly sandy-clay exists with lenses of sand and gravel and a thickness of 2 m.

The upper Semizbay subsuite is more widely lying with erosion on the lower Semizbay subsuite. The upper Semizbay subsuite is also subdivided into 3 horizons:

- Siltstone-sandstone horizon (sm_2^1) consists of assorted sandstones, siltstones, and shales, containing many lenses and layers of cross-bedded arkosic sands and sandstones with carbonized remnants of ferns' roots and leaves. The horizon thickness is up to 10 m.

- Silty clay horizon (sm_2^2) is composed mainly of clays and silts interbedded with cross-bedded sandstones, the thickness of which varies from tens of centimetres to several meters. The horizon thickness is about 12 m.

- Sand-clay horizon (sm_2^3) is composed mainly of assorted clays with sandy lenses, characterized root residues substituted by clay minerals, and calcite. The horizon thickness is about 15 m.

3.2.9 Mineralization

Economic uranium mineralization of the Semizbay deposit is localized within the prospective strata of the upper Semizbay and lower Semizbay sub horizon, with a total thickness of 40-100m, and is concentrated in two linear extending mineralized zones explored over 28.8 km. 205 ore zones were identified, striking from 100 m to 5200 m in length and from 50 m to 800 m in width. The ore thicknesses vary from 0.2 m to 3 m or more, up to 13 m in some sections. Uranium mineralization in the deposit is located in a variety of sedimentary hosts. Uranium is mainly concentrated in the sandy-clay fraction, as shown in the cross section plan **Figure 3-10**.

The formation of the deposit was associated with intense oxidation and interlayer oxidation. In the upper and lower ore beds, the orebodies have an echelon distribution. On both sides of the valley, the sedimentary ore of uranium mineralization is in a ladder shape of group distribution, thus forming the North and South ore belts. No uranium mineralization occurs in the valley's sedimentary centre. Ore deposits are mainly distributed in the larger irregular ore belt. The southern boundary of the deposit belt has the leading industrial mineralization of 17.8 km long and 0.4-1.7 km wide, accounting for 93% of the total ore reserves. The orebody shape is complex, and the mineralization distribution is not continuous.

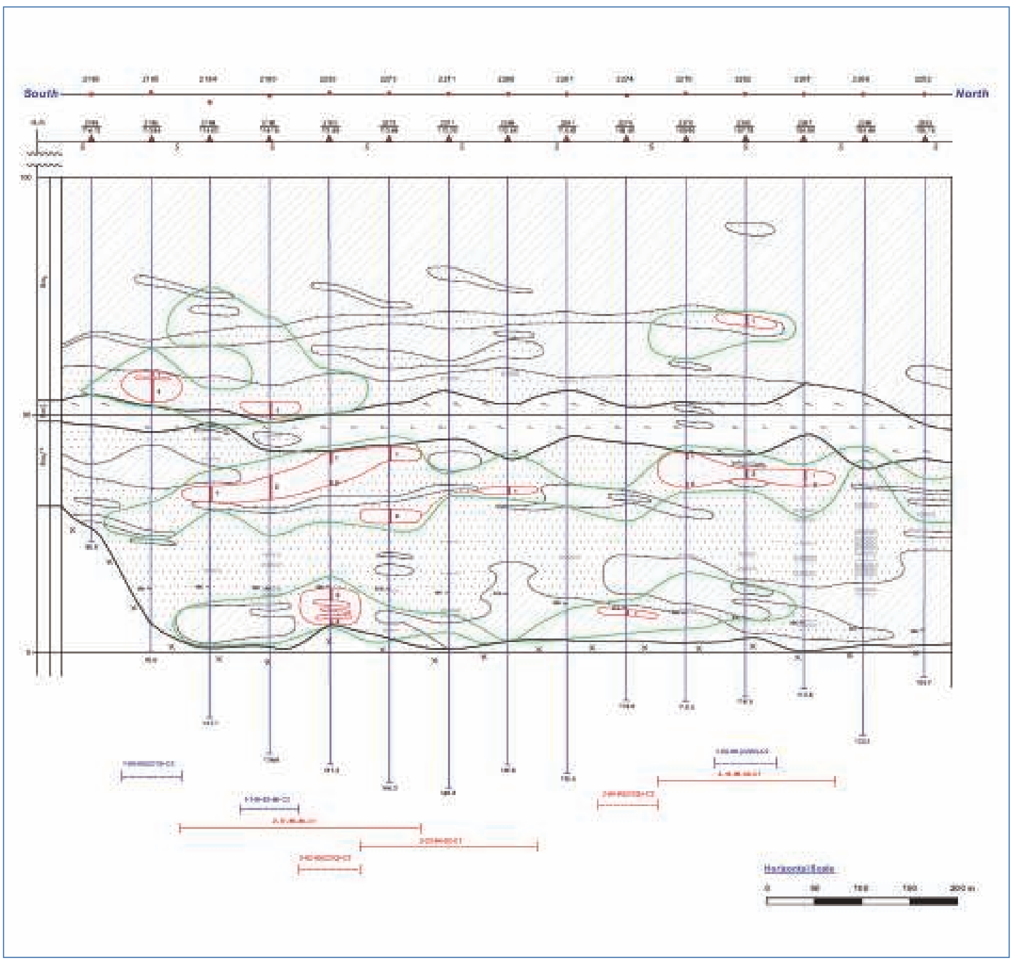


Figure 3-10 Semizbay Project – Geological Cross Section Plan

3.2.10 Morphology of ore bodies

The ore bodies in the deposit are a series of contiguous ore bodies located at multiple elevation levels as shown in **Table 3-10**.

The line of thinning industrial mineralization is in a winding configuration, which is not always along the stratification of the host rocks. It is mainly due to intricate lithofacies boundaries that define the position of ore concentrations.

Top and bottom of the ore bodies have very complex surface shapes, resembling aeolian weathering. The ore well intercept has a dramatically variable thickness.

According to the scale, the orebodies are divided into 4 types: small, medium, large and Very large.

Table 3-10 Semizbay Project – Characteristics of ore bodies

Classes of ore bodies	Extent of Ore body Average km^2	Amount of Ore bodies		Length/m (from-to) Average	Width/m (from-to) Average	Elongation	Thickness/m (from-to) Average	Proportion of reserves, metal%
		Piece	*%*					
Very large	More than 250 500	5	2.4	1,300-5,230 2,260	50-80 260	1.7-11.6	2.2-3.2 2.7	47.0
Large	100-250 150	11	5.4	715-1,400 1070	45-450 150	1.8-7.0	1.1-2.3 1.9	22.5
Medium	40-99 50	36	17.6	200-900 500	40-350 110	1.0-10.8	0.3-3.8 1.7	19.1
Total 1-3	More than 40	52	25.4				0.3-3.8 1.8	88.6
Small	To 409	153	74.6	75-600 150	20-300 50	0.5-12.1	0.2-7.3 1.5	11.4
Total 1-4		205	100.0				0.2-7.3 2.10	100.0

Note: the range of elongation coefficient was determined for individual ore bodies.

3.2.11 Ore Components

The ore of the deposit, in form is a monometallic uranium deposit, which usually does not differ in mineralogy significantly from the surrounding rocks. Uranium content is ordinary (uranium content of 0.25-0.09%) to poor (0.09-0.02%).

The ore types are divided only by their lithology, as on other grounds they do not differ significantly. The ores have mainly loose and cemented materials, and the carbonate ore in the deposit is up to about 20%.

The chemical compositions of uranium bearing ores are alumino-silicates, carbonate (less than 2% carbon dioxide), partially carbonized rocks (organic material less than 3%), and sulfurized rocks (sulphide less than 2% of total sulphuric). The organic matter is spread quite widely and its content, $C_{org,}$ varies from a few tenths up to 5%. Carbonized plant remnants occur. Other sorbents widely developed in the ores are iron hydroxides (goethite, hydrogoethite, and hydrohematite) and sulphide (pyrite, marcasite, rarely bravoite, sphalerite, chalcopyrite, and galena).

The mineral composition of the ores varies quite widely; refer to **Table 3-11**.

Table 3-11 Semizbay Project – Mineral composition of the ores

	Content %		
Minerals	**From**	**To**	**Average**
Quartz	47.4	58.0	53.6
Hydromica	10.3	24.5	17.2
Feldspar	7.1	14.8	10.7
Kaolinite, montmorillonite	0.0	8.5	5.3
Carbon	0.7	10.8	4.0
Pyrite, marcasite	1.9	4.0	2.8
Muscovite, biotite, chlorite	0	8.0	2.2
Iron oxides and hydroxides	0.6	1.9	1.3
Titanium minerals	0.2	1.0	0.8
Organic matter	0.2	1.5	0.3
Apatite	0.2	0.5	0.3
Uranium mineral	0.08	0.12	0.1
Zircon, garnet, topaz, epidote	0.1	2.2	0.9

The dominant component is quartz, a siliceous component insoluble in an acidic medium. Uranium minerals are in clay and carbonate cement in organic matter, and are associated with iron-hydroxides, pyrite, and marcasite. Moreover, a series of uranium-bearing minerals exist, and uranium is present in rock-forming minerals.

The ore in the deposit is in disequilibrium. There is a systematic shift from the equilibrium ores toward the industrial uranium ores. The off-balance uranium is explained by diffusion and redistribution of radium, a daughter element produced from the natural decay of uranium.

3.2.12 *Hydrogeology*

The hydrogeological conditions of the deposit are complex. The deposit is located in the Semizbay depression, on the binding site of the Republic of Kazakhstan hydrologic, geologic area and the Ertysh artesian basin in the West Siberia system.

The Semizbay depression is a water bearing system, a characteristic feature of which is the abundance of water and upward reduction of sandy aquifer layers in the section. A thick clay layer seals the aquifers of the upper Semizbay subsuite, making it difficult to supply the groundwater discharge. The lack of aquifers outside the borders of the depression makes the aquifers inside a relatively closed and stable hydrological unit; this is considered as favourable for the application of in-situ leaching of uranium mining.

The deposit hydrogeology is classified into 7 aquifers and water-bearing formations:

- The aquifer system of the Upper Quaternary and modern alluvial and lacustrine-alluvial deposits has a continuous distribution in eastern and central depression. The aquifer rocks are sand, gravel, and sandy-lam. The thickness of the complex is 1.0-11.5 m;

- The Eocene Lyuliiv aquifer is developed in the eastern part of the depression and is composed of quartz, glauconite-sandstones and sands. The horizon's thickness is 3.0-6.1 m with a level of 7.5-7.7 m. The flow rates in well are 7.4-18.0 m^3/day at depths of 2.7-4.5 m;

- The Lower-Upper Cretaceous Pokur aquifer is distributed in the eastern part of the depression, and is absent in the western and north western parts. Water-bearing rocks are inequigranular gravelly quartz sand and gravel-pebble deposits. The depth of the horizon roof is from 7.6 m to 16.5 m at a thickness of 1.0-10.0 m.

- The first upper Semizbay aquifer of the Upper Jurassic-Lower Cretaceous is widely distributed and integrates all aquifers with lenticular sands and sandstone interbeds within clays. The absolute level of the horizon roof varies from west to east from 130 m to 60 m. The bottom depth is 9.8-36.0 m in the west and is 37.2-88.0 m in the east;

- The second upper Semizbay aquifer is spread throughout the depression. The water-bearing rocks are stratigraphic horizons of clayey sands and sandstones. The absolute elevation of the horizon roof varies from northwest to east from +150.0 m to 0.0 m. The bottom depth is from +130.0 m to -30 m;

- The lower Semizbay aquifer system is developed throughout the depression and is composed of sandstone and conglomerate horizons with a clay layer atop, the detrital weathering crust of the rock foundation. The aquifer rocks are of two layers. The first layer is 3.2-47.0 m thick, made of clay sandstones, sands and silts. The lower layer is 5.2-41.8 m thick.

- High pressure water is pervasive within the fractured and veined massive rock complex of the basement. On the sides they have no pressure or little pressure, and under the depression head they reach 153.3 m. The absolute elevation of the roof rocks along the axial part of the depression decreases from west to east from +110 m to-100 m. The main pressure of the interstitial water is due to the infiltration of precipitation.

The first 4 aquifers are small and of no economic value in use because of high salinity. The second Semizbay aquifer (upper uranium-bearing layer) and lower Semizbay aquifer (lower uranium-bearing layer) are the uranium-bearing aquifers in the deposit.

Hydrogen chemistry of the deposit: water in fractures of the granitoid actively exchanges with water outside of these fractures, and thus are fresh with a salinity of about 1 g/L. While in zones of tectonic disturbances water exchange is difficult and the water is brackish with a salinity of about 7 g/L. Aquifers within the palaeochannel tend to have mineralization from 3 to 20 g/L with salinities of 4-7 g/L.

In the lower Semizbay horizon, the water contains sulphite and sodium chloride, with a salinity of 1-4 g/L. In the upper Semizbay horizon, the water is of high salinity. The uranium content in groundwater is usually $nx10^{-6}$ g/L, and in some wells up to $1.3x10^{-5}$ g/L. Thus, the modern hydrochemical environment of the deposit is unfavourable for intensive uranium migration.

The modern hydrogeological conditions of depression:

- Lateral (crosscutting) motion of interstitial water in the basement rocks is related to the sedimentary covers of the aquifers;

- The groundwater temperature is relatively low: $6\sim8^{o}$ C;

- All hydrogeological complexes and horizons have distinct boundaries;

Interstitial water is partially discharged into the basement aquifers in the Semizbay Formation, confirming a) the existence of a vertical hydrogeochemical zoning, where oxidative series are gradually attenuated up through the section; b) a violation of reservoir characteristics of the regional hydrogeochemical zones due to the appearance of oxygen-containing water;c) the presence of complex age relationships between aquifers and water, i.e., ancient aquifers and horizons that are closer to the base often contain "young" and desalinated water;

- According to the pumping tests, the ore-bearing horizons are characterized by relatively small permeability coefficients (1~10 m/day) and relatively flat weighted average working length of filters;

- In general, the consumption of the depression is low, reaching only the first litres per second.

Expected values of the permeability coefficient in lithological rock types were approximated by a parabolic relationship, depending on the dimension of the predominant particle size distribution. Private values of the permeability coefficient reach 22~30 m/day, the fluctuation for 80% of samples is within 0.25~10 m/day. Average values of the permeability coefficient do not exceed 4 m/day, which agree well with the pumping tests and flow meter measurements.

The Semizbay depression is a complex water-pressure system, a characteristic feature of which is the attenuation of water abundance. The effective thicknesses of the water-bearing layers are gradually reduced up through the section, from east to west, and from the depression center to its boundaries.

Resource generation occurs due to precipitation in the exit areas of the aquifers to the surface, as well as in granites. Along the hydrogeochemical zoning in the depression, the western part of the depression is mainly supplied by fresh water while in the east part the brackish and salty water dominates in the unloading area.

3.2.13 Geotechnical characteristics

The geotechnical conditions are highly relative to the following well field development and leaching. For the study of geotechnical conditions, 50 wells were drilled totalling 5610 m, of which 541 selected monoliths and 40 samples were detected. The particle size distribution, hygroscopic moisture and limits of plasticity were determined. The particle size distribution, and hygroscopic natural moisture, bulk density of natural moisture were determined for all types of rocks in-situ.

Generally, the terrain in the Semizbay deposit is flat, the vegetation cover is sparse, and the main flora is easily prepared for ground construction; No major river exists and no pollution is present in water. The strata are composed of the Upper Cretaceous conglomerate, sandstone, conglomerate, siltstone, clay and silt clay of the Paleogene – Neogene, and Quaternary aeolian sand, fine sand and silt. The "mud-sand-mud" sequence is obvious. The form of sandstone and conglomerate is loose unconsolidated, and the void growth is due to low pore cementation. The diagenetic degree is low and the water content is high, readily undergoing deformation. The mudstone has a low degree of consolidation with a low intensity, and therefore has a very strong plasticity. During the hole-drilling process, occurrences of wall collapse occur easily, and anti-collapse measures and seam wall need to be strengthened. The bulk density of ore horizons is 1.56-1.77 t/m^3. The water content is 16%.

The main characteristics and parameter of Upper and lower aquifer is summarised in **Table 3-12**.

Table 3-12 Semizbay Project – Geotechnical Parameters

Parameters	Northwest		West		East	
	Upper	Lower	Upper	Lower	Upper	Lower
Roof depth (m)	13.1-25.6	34.0-54.3	6.0-23.5	44.2-62.0	33.8-82.4	75.6-137.6
Bottom depth (m)		58.9-84.0	31.6-50	64.6-91.0	50.8-110.0	115.0-183
Water depth (m)	2.6-4.5	0.7-5.7	2.6-14.4	2.5-16.0	9.1-+1.7	14.9-+12.4
Thickness (m)	1.0-12.2	22.5-38.5	25.6-53.2	20.4-36.8	16.6-37.2	14.4-72
Roof head (m)	0-3.6	28.3-50.3	19.1	36.8-69.5	25.1-80.6	69.5-137.4
Drilling flow (m^3/d)	14-125	141.6-648	1.73-254	123.0-734.0		119.0-199.0
Drawdown (m)		11.1-30.0		9.4-25.2		5.4-46.3
Permeability coefficient (m/d)	0.1-6.0	1.3-10.0	0.1-6.0	1.3-10.0	0.1-6.0	1.3-10.0
Water conductivity (m^2/d)		12		26-28		41-49
Salinity (g/L)	1.6-3.9	1.0-2.0	0.7-1.7	1.0-2.0	3.8-4.5	1.4-4.7
pH	6.9-7.1	7-7.9	7-7.9	7.5-8.2	7-7.9	7.1-7.7
Chemical in water	Cl-HCO_3-SO_4	Cl-SO_4	Cl-Na	Cl-Na	Cl-Na	Cl-Na
	Na-Mg	Na-Mg	Cl-SO_4-Na	Cl-SO_4-Na		

3.2.14 Hydrogeology and geotechnical conclusion

Sufficient studies on the deposit geology, hydrogeology as well as geotechnical condition analysis have been undertaken which indicate that the Semizbay project has conditions applicable for the use of ISR leaching method, refer to **Table 3-13**. The operators employ management and staff with many years' experience in solving major technical issues in leaching, and have a high confidence level in the project development and technology used.

Table 3-13 Semizbay Project – Hydrogeology and Geotechnical Conclusion

Parameters	General case	Semizbay Project	ISR Adaptive
Minerals component	Fine gravel and loose sandstone, shale, silty particle content of minus 20%	Sand and gravel composition with clay content minus 20%	Suitable
Chemical composition	Aluminosilicate, SiO_2 content exceeding 60 to 80%	Aluminosilicate at SiO_2 of 40-70%	Relatively fine

Parameters	General case	Semizbay Project	ISR Adaptive
Minerals	Pitchblende, coffinite, autunite uranium and copper, mica	Pitchblende, coffinite	Suitable
Uranium occurrence	Adsorption and in form of minerals	Occur as mineral (uranium stone, pitchblende, uranium black) and ion adsorption	Suitable
Uranium grade (%)	0.01 – 0.15	0.057	Suitable
CO_2 content (%)	0.2 – 1.0	Aluminium silicate ore at 0.95	Suitable
Organic materials (%)	0.1 – 1.0	0.2-3.5	Suitable
Uranium-bearing aquifer thickness (m)	20 – 60	14.4-72.0	Suitable
Ore body thickness (m)	2-7	3.2 (upper), 4.3 (lower)	Suitable
Wall rock thickness (m)	20 – 50	–	Suitable
Impermeable rock ore interlayer thickness (m)	1-5	<5	Suitable
Mineralization location in the aquifer	Mainly located in the lower part, a minority in the upper	Mainly in the upper and middle	Suitable
GT (m%)	0.2-0.8	0.245	Suitable
Metal per area (kg/m^2)	2-10	2.06 (upper), 3.41 (lower)	Suitable
Seam depth (m)	50-700	34.0-137.6 (upper); 58.9-183.0 (lower)	Suitable
Permeability coefficient of orebody (m/d)	0.3-5	0.26-3.39	Suitable
Permeability coefficient of Wallrock (m/d)	0.5-7	0.26-3.39	Suitable
Permeability coefficient of mineralization (m/d)	0.4-8	1.5 – 2, 1.3 – 6.	Suitable
Groundwater pH value	6.5-7.5	6.3-9.2	Suitable
Groundwater Temperature (°C)	15-40	41,828	Lower
Groundwater Level(m)	5-80	0.7-16.0	Suitable
Ore aquifer head Roof (m)	20-200	28.3-137.4	Suitable

3.2.15 *Exploration and drilling program*

Exploration and drilling was based on the hydrogenic mineralization in the area being a sub-horizontal stratiform occurrence and is a hidden blind deposit. The basic methodology applied was the creation of a system of parallel sections based on core drilling of vertical wells in conjunction with geophysical investigations profiles. The key exploration work conducted is summarized in **Table 3-14**.

Table 3-14 Semizbay Project – main geological exploration work for Semizbay and South Semizbay deposit

Work	Unit	Search and evaluation, 1973	Preliminary exploration from 1974 to 1976	Detailed exploration from 1976 to 1978	Total
Prospecting and survey 1:50,000	km^2	–	750	–	750
	km^2	–	4.3	–	4.3
Survey 1:5,000	km	–	27.4	–	27.4
	m^3	–	1780	–	
Surface mine working, trench pit	m		29		29
Core drilling in Semizbay and South Semizbay	km	14.4	178.8	205.7	398.9
Geophysical prospecting	km	–	23.3	–	23.3
Airborne gamma survey, 1:10,000	km^2		535.2	–	535.2
Gravity prospecting, 1:50,000	km^2	–	283.8	–	283.8
Magnetic exploration, 1:25,000	km^2	–	230.8	–	230.8

3.2.15.1 *Exploration*

The drilling network of the preliminary exploration is 400 x 100 m, almost completely delineating the mineralized zone of the deposit. The exploration was evaluated with the uranium resource of the C_2 category. Parameters, configuration and localization conditions of the ore bodies were further defined. At the stage of detailed exploration with a 100 x 50 m network, the amount of ore wells allows for individual blocks of the resource category C_1. For translation reserves of the C_2 category, small blocks (10-40 km^2) in the category C_1 exploration network need to be further concentrated to 50 x 25 m, which provide at least 8 ore intersections in the block.

3.2.15.2 *Drilling*

Drilling units used were ZIF-300M, CBA-500 and ZIV-650A drilling rigs, powered by internal combustion engines, with heated derricks mounted mono-block on the general base together with the drilling mast copra WIUT-2. In summer, self-propelled drilling rigs SBU-300M and UCB-500C were also used. The drilling pipe used is of diameter 42-50 mm, without fixing wall casing. The parameters for washing with mud are: viscosity is 18-20 seconds, proportion is 1.18-1.20 g/cm^3, 25 cm^3 of water loss to 30 minutes, the sand content is not more than 4%.

Non-core drilling from the opening to the uranium-bearing horizon was carried out with special tips. The depth of the wells ranges from 28 m to 201 m, averaging 128 m. To test the uranium-bearing basement, two wells with depths of 401 m and 413 m, respectively were drilled.

Documentation of the wells includes two aspects: technical, and geological and geophysical. The first form includes standard geotechnical outfit, acts of pledging, closing and control measurement of well depths. Geological and geophysical documentation consists of logs, journals measurement distortions, primary documentation, ore column (scale 1:50) and geological column (scale 1:200). The entire set of documents is a "passport" of wells.

The core description was recorded in the journal according to the intervals with the separation of all lithological varieties of rocks, thickness of which was not less than 0.3 m. In the description, sampling for laboratory tests was included. After geologic description, the preliminary geologic column was established according to the documentation data. Linkage of documentation data and electric logging was then carried out and an adjusted geological column was built. In this final column, core description was documented, indicating the location of sampling and sample.

Besides the typical standard documentation for the well located on the specially selected profiles, more thorough studies of the core, including mineralogical, geochemical and lithofacies description, were conducted by mineralogists, sedimentologists and geochemists.

Before documentation, the ore core was subjected to radiometric soundings and linked to gamma ray logging. Documentation of the ore core was conducted on a round trip. After geological documentation, detuning of ore columns was made for core sampling and sampling.

The ore-geological sections on site profiles 128 were made at scales: 1:2,000 horizontally, 1:1,000 vertically. Geological sections across the palaeo-valley were made at a scale of 1:5,000.

3.2.15.3 Quality of exploration and testing methods of exploration

The deposit was principally explored using boreholes and the type of borehole drilling used and quality was determined by the level of exploration being conducted. All bore holes were geophysically probed. The quality of gamma ray logging will be explained in the geophysical exploration work.

It was not necessary to core all wells and/or all intervals from within the bore holes. About half the detailed exploration wells were drilled without coring, using a reverse circulation chip/spoil return drilling system. An electric log set was conducted throughout the first stages of non-core drilling, on barren parts of the drillhole intersection (except for individual key wells).

Evaluation and processing of information received was conducted to determine the quality of exploration drilling. Since the uranium content in ores was set according to gamma ray logging, it was an absolute requirement to hold all logs of wells drilled in the deposit.

All exploration wells traversed to the Paleozoic bed of the depression, and the minimum extension into the basement rocks was 3~5 m. Gamma ray anomalies were encountered in the basement rocks at the bottom of wells.

Poor core recovery systematically took place in the ores of the Low Semizbay conglomeratic horizon. A minimum required number of core samples were acquired from within the horizon to assess the radiology of the ores, and after that they were abandoned almost completely.

At the same time, 91 wells (3.0% of the total) had been drilled. These wells were either drilled without cores or with cores but no representative samples of the sandstone ores were obtained due to inefficiencies of the drilling teamwork. Thus these wells were not included in the scope of this work.

During the period of deposit exploration all wells, including wells in the "cross" – in the polygons of operational exploration, were tested using in situ leaching and hydrogeological methods. 2,588 ore intersections were completed and allocated by gamma ray logging with a cut-off grade of 0.01% uranium content without the restrictions of GT. The total thickness of all ore intersections is 6068 m. High-quality cores with more than 70% yield were obtained from 79% of ore intersections.

For wells drilled only within exploration networks of 400*100~100*50 m^2, according to the gamma ray logging, the total trunk thickness of all 2202 ore intersections is 5,204.2 m. The quality cores with 70% more yield were obtained at 1,212 (55%) intersections with a total thickness of 3331.2 m, which were included in the calculation of corrections for violation of radioactive equilibrium.

Documentation of the core of the ore shows that in some wells, especially in the sandy differential ores, there is a violation of the structure of the rock. The core was contaminated by the mud components of the drilling fluid. Layered injection of foreign material made up an almost universal clay "shirt", with thicknesses from 0.1 mm to 7~10 mm (approximately 3~6 mm). This layer of foreign material selectively destroyed the carbonized wood residues, including the ore. The abundance of the oriented foreign material is 3~5%, and in some cases is as high as 26~30%.

The above factors lead to some dilution of the ore in the core. Therefore in the processes of documentation and testing of the "shirt", the "shirt" was removed as much as possible. The intervals were either injected by intensive materials of mud without testing, or excluded from further testing. The results of gamma-ray logging were compared to the radiological parameters of the calculations. As a result, more than 70% of the total quantity of the ore intervals with core recovery was excluded from further processing, and about 25% of the samples were processed.

The above analysis of drilling quality has shown that despite some shortcomings in the deposit exploration, quite representative materials can be obtained from wells to justify the dismissal of radioactive equilibrium amendments and to obtain reliable data for the construction of geological sections of volumetric ores and the projection of ore blocks on a horizontal plane.

3.2.16 *Control methods of exploration*

In the target range of operational exploration and in situ leaching, the "Cross", just drilled 289 wells. The reserves are deemed to be ore bodies. A comparison with the inventory counted by 9 wells within a network of 100*50 m^2 in the ore body shows that all parameters were almost completely confirmed-ore and metal contents are 115.2%, 91.6%, and 104.8%, respectively.

In the in-situ leaching, a comparison was made about the total length of the ore bodies, medium thickness, content and linear reserves, area and area reserves of the ore bodies on the upper ore horizon. Sandstone and conglomerate packs of the lower ore horizon with analogical average data for the ore body were found in situ leaching of the network of 100*50 m^2.

From these comparative data it can be concluded that the network of 100*50 m^2 is a reliable geometrization of the ore body and the return from them can be determined with a high degree of reliability.

3.2.17 *Sample density and sampling methods*

3.2.17.1 *Core Recovery*

Core recovery by ore intervals of all wells by year is shown in **Table 3-15**.

Table 3-15 Semizbay Project – Core recovery by ore intervals of all wells

			Core Recovery							
Year	**Cores**	**Intervals**	**Minus 50%**		**50-70%**		**70-80%**		**More than 80%**	
		m	*Inters*	*%*	*Inters*	*%*	*Inters*	*%*	*Inters*	*%*
1973	91	97	15	16	16	16	29	30	37	38
1974	1,385	641	69	11	87	14	319	50	166	25
1976	1,878	542	49	9	86	16	249	46	158	29
1976	1,023	428	25	6	55	13	197	46	151	35
1977	1,459	780	51	6	58	7	305	39	366	46
1978	232	101	18	18	13	13	23	39	47	46
Total	6,068	2,589	227	9	315	12	1,122	43	925	36

The table data show that the high-quality cores with more than 70% yield were obtained from 79% of ore intersections. For wells drilled only within exploration networks of 400 x 100 ~ 100 x 50 m, according to the gamma logging set, the total trunk thickness of all 2,202 ore intersections is 5,204.2 m. The quality cores with 70% or more yields were obtained from 1,212 intersections (55%) for a total thickness of 3,331.2 m. These were used in the calculation of corrections for radiometric dis-equilibrium.

Thus, the analysis of the drilling quality show that, despite some shortcomings, in exploration deposits, used wells can help obtain quite representative materials to justify the dismissal of radioactive disequilibrium and reliable data for the compilation of ore-geological sections and ore blocks projections on the horizontal plane.

3.2.18 *Sample quality and representivity*

3.2.18.1 *Control exploration*

In the region of operational exploration, 289 quality control wells were drilled. The reserves are calculated based on ore bodies in a 100 x 50 m spacing.

3.2.18.2 *Topographical Survey Work*

The deposit has 9 points of the state triangulation 2-3 classes within it with a uniform density in 23 km^2. The triangulation Class 2 was laid in 1959-1962, now 6 Main Administration of Geodesy and Cartography. This is a solid network of triangles with sides of 8-15 km. The triangulation Class 3 is a separate grid, inserting points into the corners of the triangles with the Class 2 common side of 4-9 km. The positioning errors for network points do not exceed ±0.2 m and orientation errors do not exceed ±3.3.

For splitting and binding exploratory work, ordnance survey points were built in an analytic network, which is in separate systems and inserts into the state triangulation. The maximum length of the triangle sides of the network is up to 5 km.

The topography of the study area is mapped at a scale of 1:25,000 and smaller. Stereo-topographical mapping of a 183 km^2 area was performed at 1:5,000 in 1975-1976. 361 km of precision theodolite profiles were traversed at 1:2,000, 2,960 km of profiles were undertaken, and 1,800 km of technical levelling with 106 points were secured in the terrain geodetic observations.

Section length of sampling ranges from 0.1 m to 0.5 m depending on the thickness of the ore intervals, mineralization distribution within different lithology and the nature of epigenetic changes of the ores. In the transition zone, i.e., the marginal parts of the ore bodies and the boundaries of the various grades of ores, the thickness is 0.3-0.4 m, sections were tested at 0.1-0.2 m, the balance of the orebody were 0.3-0.5 m thick, and host rocks were up to 1 m thick. The off-balance intervals with thickness of up to 1 m were in one sample, half of which was split along the axis and the second part was put aside in a bag with the sample number and then placed in a box. These ore remnants were stored in the core sample library, but a large part of them were used for technological sampling.

3.2.19 *Sampling method*

The following complex testing was applied: gamma logging, core sampling, metallometric testing (term used by Russian authors for the chemical analysis of systematically collected samples), selection of monoliths to determine the physical properties of rocks and ores, technological testing, and hydrogeological testing.

Gamma logging is the primary method to isolate ore intervals and define mineralization. Core sampling was carried out to study the radiological features of the ores. Reliability assessment was based on the content of gamma logging, associated components and harmful impurities in the ore. The remaining ore core materials were used to produce metallurgical samples.

Metallometric testing was conducted to determine the geochemical spectrum of ores and to detect elevated concentrations of elements in the ore satellites, uranium-bearing rocks and formations of foundation. Monoliths selection was made from a core exploration and special technological wells to determine the physical properties of ores and rocks. The filtration and particle size distribution of rocks were measured to determine the bulk density, porosity, and plasticity limit etc.

Technological testing was also carried out for core materials from exploration wells by drawing combined (group) samples that representatively characterize the ores in the deposit.

Hydrogeological testing was conducted to study the mineralization of water. The chemical and radiological composition was studied to determine the equation, pressure units, watery, filtration variability of the bearing rocks. All wells experienced pumping of water.

In addition to these basic types, selection of flora was carried out to determine the age, organic matter, sulfides, iron hydroxides, etc. and to explore the possibility of non-ore minerals within the overburden.

The main samples for the assaying are presented in **Table 3-16**.

Table 3-16 Semizbay Project – main types of testing

Sample types	**Unit**	**Number**
Core	km	6.9
	k	20.7
Metallometric	k	16.5
Monolith for different purposes	Piece	1,785
Technological Sample: up to 50 kg		26
50-1, 200 kg		26

Core sampling was conducted, under conditions of good safety, leaving at least 70% destroyed, in intensely impregnated sand-clay material with mud of drilling fluid from the core untested.

Sampling preceded the radiometric survey of the core. The ore column charts have been built up at the scale of 1:50. Together with the results of electro-logging and geological documentation, these graphs were used to align the cut by wells and determine assay intervals.

3.2.20 *Sample preparation, analyses and security*

3.2.20.1 *Sample Preparation*

The samples for chemical and metallurgical test work were taken from the drill cores during the preliminary exploration. During detailed exploration, only basement rocks were tested. Sampling was carried out on a point of the interval to 5 m, based on lithology and types of epigenetic changes.

Sample preparation was carried out in the crushing plant of Central Research Laboratory of Combine according to attached chart. K=0.5 (refers to **Figure 3-11**). Radiometric analysis of the sample was performed with a final diameter of 0.1 mm and a weight of 250 g. For the final chemical analysis, 50 g were weighed from the same sample method of scooping, and were sieved to 0.074 mm.

Control of the correct sample preparation in accordance with the selected processing scheme was carried out on 123 randomly selected core samples. The control method requires the full use of all the material for analysis. For all the crushed material, was first crushed to 0.5 Q (50% wt%), and then down to 0.25 Q (25% wt%), the remainder materials were disposed of. Reductions were handled by the same technological "chain" to produce a material with the desired grain size. Thus, four independent samples were prepared for sample analysis.

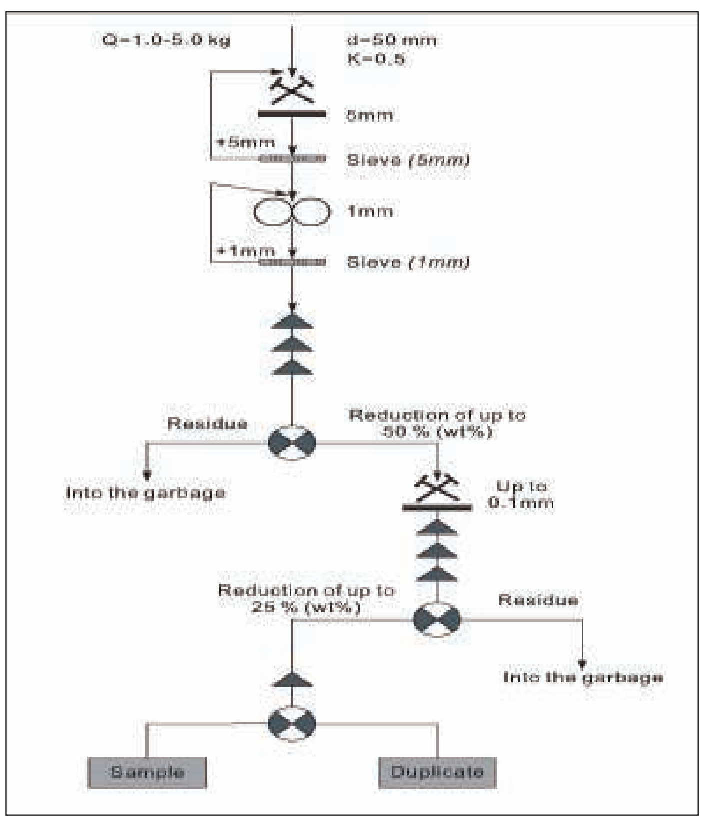


Figure 3-11 Semizbay Project – Scheme of core sample processing

3.2.20.2 Assaying

Basic analyses of the core samples were carried out in the analysis laboratory of Central Research Laboratory of Combine. External control radiometric and X-ray analyses for uranium and radium were performed using chemical and radiochemical methods in relevant laboratories of Central Research Laboratory, which, in turn, was controlled by All-Russian Research Institute of Chemical Technology.

The vast majority of tests for radioactive elements were performed by X-ray and radiometric methods. The chemical and radiochemical methods were used only for control of correctness of the results of basic analyses.

Radiometric analyses for uranium, thorium, uranium, and gamma-equivalent radon measurement were performed based on the results of the inherent beta and gamma radiation. A cell was placed in a lead housing between the two sensors. Beta radiation was recorded in a cassette by 7 gas-discharge counters STS-6, and gamma-radiation was measured by scintillation counter (80x80 m^2 and FEU-56).

The comparison of the results between the basic analyses and test analyses are listed in **Table 3-17**, which confirmed the reliability of analyses during the entire controlled period.

Table 3-17 Semizbay Project – Analytical Work Type and Amount

Assaying Method	Analytical component	Number of samples
Radiometric	Uranium	19.9
	Radium and K_{3M}	7.82
	Thorium	0.56
X-ray	Uranium	2.52
Radiochemical	Radium	1.12
	Thorium -230	0.062
Chemical	Uranium	1.03
Gas volume	C_{org}	8.06
	CO_2	5.16
Trilonometric	Fe_{total}	3.37
	Fe^{3+}	2.92
	MgO	0.7
	CaO	0.7
Dichromate	Fe^{2+}	3.2
Burning at 1100°C	S_{total}	4.2
Oxidemetric	V	1.15
Photometric	Se	1.8
Spectrum		
Semi quantitative	$5\text{-}33_{elec}$	17.31
Spectrographic aurometric	Au	2.64
Quantitative	Ge, Sc	1.09

3.2.21 *Quality assurance/quality control (QA/QC)*

The external control of chemical (uranium) and radiochemical (radium) analyses from the Central Research Laboratory (CRL) (**Table 3-18**) confirmed the validity of radiometric analyses with errors less than guidance tolerances. The exception was only in the results for samples containing more than 0.1% of radium and uranium equilibrium, where random divergence slightly exceeded tolerances due to poor reproducibility of the radiochemical analyses. External control of chemical analyses for uranium and radium radiochemical made in laboratories of All-Russian Research Institute of Chemical Technology (ARRICT) confirmed the good convergence of the average results and the absence of systematic differences.

Table 3-18 Semizbay Project – External Control (uranium)

Class of concentration 10^{-3}%	Year	Number of samples	Analysis results CRL	Analysis results ARRICT	The arithmetic mean of relative differences Actual	The arithmetic mean of relative differences Allowable
Less than 100	1973-74	40	50.1	49.2	3.2	9.2
	1975	29	45.8	45.5	1.8	9.3
	1976	30	47	47	3.9	9.3
Total		108	47.7	47.6	3	9.3
More than 100	1973-74	28	357.2	362.2	1.8	6.4
	1975	21	245	249.5	2.8	6.6
	1976	20	429	436.6	1.8	6.2
Total		69	343.6	349.4	2	6.4

In general, the results confirmed the satisfactory accuracy control tests for uranium and radium, made in CRL.

3.2.22 *Geophysical works*

The geophysical work includes a comprehensive study of wells using probe gamma survey and structural geophysics. The key survey work done in 1978 is shown in **Table 3-19**.

Table 3-19 Semizbay Project – Geophysical Work, 01-07-1978

Geophysical surveys of wells	Unit	Quantity
Gamma logging	100 m	4,222
Detailing ore intervals	100 m	386
Electric logging	100 m	3,996
Gamma survey at 1:10000	km^2	538.2
Profile gravity-magnetic survey and electrical sounding	km	44
Profile gravity survey	km	1,064
Profile magnetic survey	km	742
Electrical prospecting vertical electrical sounding 200-1000 m		
Gravity survey at 1:50000, 500*250 m^2	Point	1,855
Gravity survey at 1:50000, 500*200 m^2	km^2	710
Magnetic survey at 1:50000, 500*250 m^2	km^2	284
Electrical prospecting vertical electrical sounding, 100*50 m^2	km^2	231

3.2.23 *Gamma logging*

3.2.23.1 *Method and technique for field work*

The gamma logging held radiometers of PKC-1000 and in a very small amount, PRKS-2, which were mounted on logging stations AEKS-900 and AEKS-1500.

Gamma logging was conducted in depth at a scale of 1:200 with continuous recording of the curve. The lifting speed of hole parting with a time constant 2 sec was 300~400 m/h. All anomalous intensities above 50 mkR/h were detailed at a scale of 1:50 with a speed of 50~60 m/h. Standard graphics of integral gamma-ray spectrum of thallium isotope 204 for the detection threshold (A) and calibration (B) of logging radiometers is shown in Figure 3-12.

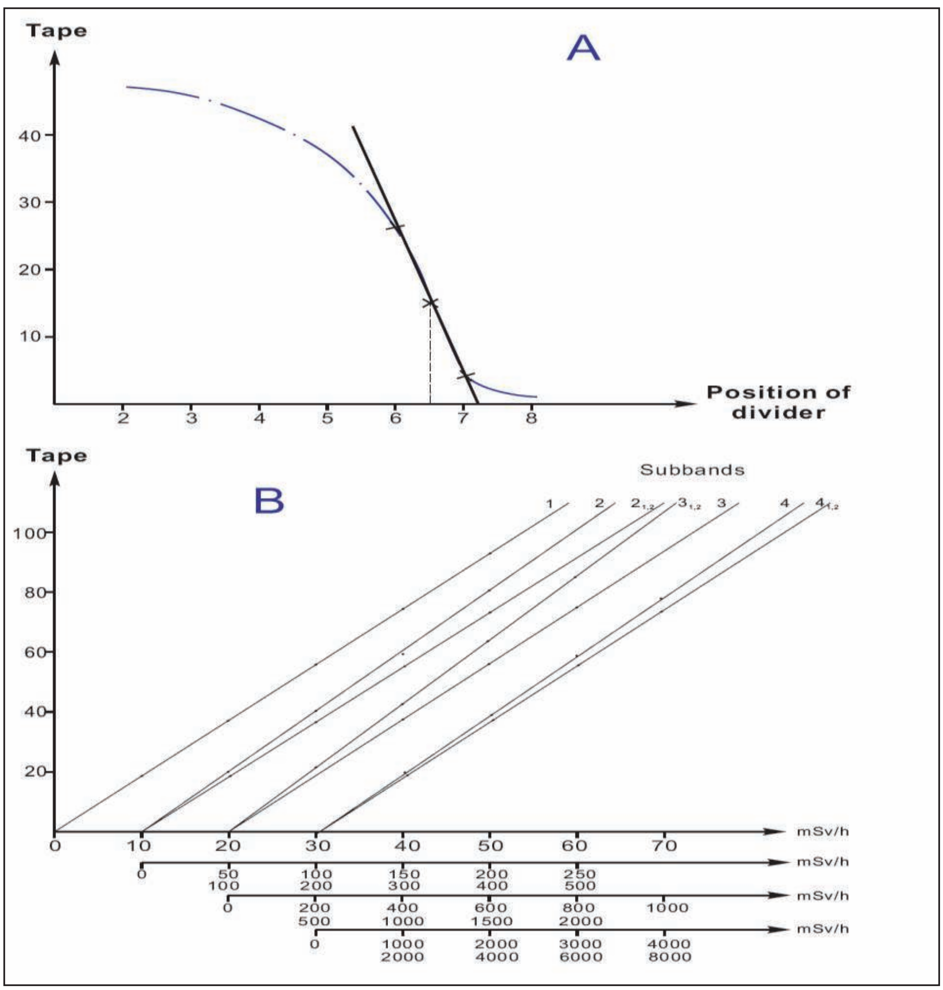


Figure 3-12 Semizbay Project – Standard graphics of integral gamma-ray spectrum of thallium isotope 204 for the detection threshold (A) and calibration (B) of logging radiometers

Quality assessment of gamma logging was carried out, by comparing the main control and basic repeated measurements, according to RMS discrepancies in the areas of anomalies and a maximum variation in depth. Relative errors in area anomalies for the period 1973-1975, again, do not exceed 5.4%, and are 0.02-0.07% for depth anomalies. Error evaluation for controlling exploration wells indicated that the relative mean square error in determining abnormalities is 2-6% and the maximum difference in depth anomalies does not exceed 0.35 m. Thus, the quality of gamma-logging is quite satisfactory.

3.2.23.2 Interpretation of gamma logging

The quantitative interpretation of gamma logging data was performed on a computer "Mir-1" in accordance with the "instructions on the gamma logging" (1974).

3.2.24 Electric logging

Electric logging, including registration apparent resistivity rocks with natural potentials, was conducted in all exploratory wells in order to determine lithological partition and filtration properties of the rocks and ores.

Registration apparent resistivity and natural potentials were performed on logging stations AEKS-900 and AEKS-1500 at depth scales of 1:200 and 1:50. The scale of the apparent resistivity records was basically constructed at 5 ohm.m per 1 cm diagrams. For the high-resistance part of the section (carbonate rocks, pebbles, basement rocks), the scales were 25 and 125 ohm.m per 1 cm. The scale of natural potentials in most cases amounted to 2.5 mV at 1 cm scale registration.

3.2.25 Caliper survey

Caliper survey was carried out to determine the true diameters of the wells. Measurements were performed using CM-1 and CF-3A, which used seabed calibration, rings before and after recording caliper on the wells. By plotting the dependence of the deviation of the diameter of the pen recorder, the calibration ring used the average of two measurements. The calibration map was fixed at depth scales of 1:200 and 1:50, recording hole diameters of 2.0 ~ 2.5 cm to 1 cm of registrar. After accumulating a representative number of measurements for the main lithological type of the ores and various nominal diameters of the drill bits, a statistical average value of the diameters were then calculated.

Table 3-20 Semizbay Project – hole diameter measurement data and processing results

The ore rock composition	Nominal diameter drilling mm	Number of interval analysis	Statistic average well diameter *mm*	Standard deviation *mm*	Drilling fluid loss amendments	Error in determining the amendments %
Sandstone	76	69	115	16	0.86	3.4
Gravelite	93	275	127	14	0.84	3.4
	112	191	143	14	0.82	3.1
	132	135	165	15	0.80	3.1
Clay	76	23	123	10	0.85	2.4
Siltstone	93	115	134	11	0.83	2.4
	112	121	154	13	0.81	2.4
	132	64	182	16	0.79	3.1
Conglomerate and carbonate	76	29	94	13	0.89	2.8
	93	76	117	9	0.85	2.9
	112	75	131	10	0.84	2.4
	132	11	150	9	0.82	1.8

As can be seen from the table above, the differences in the amendments to the swallowing do not exceed allowable limits. Based on the data, the caliper volume was 10% of all outer intervals and was used for quantitative interpretation of the statistical average diameter of the wells.

3.2.26 *Resistivity*

The lowest values of the apparent resistivity are 7~9 ohm.m for clay, siltstone and carbonized wood residues of clay. These rocks are practically impermeable against all the reference frames used in determining the "line of clay".

Increased apparent resistivity values of 10~20 ohm.m are characteristic of sands and sandstones. Grits even have resistances up to 28 ohm.m. Conglomerates and shingles are characterized by relatively high apparent resistivity values (30~38 ohm.m), and for individual layers, the apparent resistivity values increase to 50~60 ohm.m and more. The greatest resistance occurs in carbonized rocks, and the thin interlayers within have apparent resistivity values up to 80 ohm.m, with sharp curves as distinguished local "peaks". For thick layers (1 m or more), the curve shape of the apparent resistivity and the amplitude were determined by the ratio of carbonate and clay material.

Reduced apparent resistivity values (1~2 ohm.m) were observed in zones of increased sulfide mineralization. The crystalline basement has apparent resistivity values from several dozen to hundreds of ohm.m in the weathering crust and up to thousands of ohm.m in the unaltered rocks.

3.2.27 *Bulk density*

Because the density of a uranium ore is mainly determined by the porosity and composition of the host rocks, the determination of the average bulk density for all lithological varieties in the ores was done separately for both mineralized horizons. Sampling (monoliths) was performed immediately after the lifting of the core hole. A 10 ~ 15 cm long monolith was immediately waxed in two layers of gauze and sent for analysis to the field laboratory on the basis of the rock unit (refers to Table 3-21).

Table 3-21 Semizbay Project – Average values of the bulk density

Mineralization section	Ore-bearing horizon	Lithological composition	Number of samples
Section 120-188	Upper	Sand	5
		Clay	3
		Total	8
	Lower	Sand	96
		Clay	18
		Carbonate rock	32
		Total	146
Section 188-206	Upper	Sand	41
		Clay	19
		Carbonate rock	3
		Total	63
	Lower	Sand	68
		Clay	8
		Carbonate rock	2
		Total	78
Section 82-116	Upper	Sand	13
		Clay	8
		Total	21
	Lower	Sand	37
		Clay	8
Total			45

Sources: final report for 1984-1989 situ leaching uranium mining

The test method for bulk density is clearly introduced as above, the original test data and relevant details are not available for reviewing. However, the bulk density information which was observed or cross checked in these documents listed in the Section 1.8 of the CPR is comprehensively analyzed and examined. Therefore, BMA considers that the bulk density driver from the various data sources is reliable, an average density of 1.65 t/m^3 was finally used in resource estimation, based on the following evidences:

- The average bulk density of the upper and lower ore horizon is about 1.60 t/m^3 and 1.65 t/m^3 respectively as shown in Table 3-22, according to the 2012 Feasibility Study Report, Album No. 12/02-GG-PZ and No. 12/02-OBOC ("PW-5" LLP, 2012).

- The average bulk density of ore-bearing rocks is 1.65 t/m^3 according to Section 6.7.2 of Album No. 12/02-GG-PZ, Section 7.7.2 of Album No. 12/02-OBOC of the 2012 Feasibility Study Report ("PW-5" LLP, 2012).

- The average bulk density of is about 1.647 t/m^3 for mineralisation in Akmola region, as shown in Table 3-23.

- The average density of the upper and lower ore horizon is approximately 1.60 t/m^3 and 1.65 t/m^3 respectively, as indicated in 22 validation drill holes of block 11, 15, 92 and 93 present in Table 3-24,

Table 3-22 Semizbay Project – Reserve category and bulk density, after "PW-5" LLP

Orebody №	**Category of reserves**	**Ore horizon**	**Geological block amount**	**Ore volume** *(m^3)*	**Bulk density** *(t/m^3)*
1	C1	Upper	6	697,608	1.60
		Lower	17	8,877,284	1.65
	C2	Upper	16	877,832	1.60
		Lower	5	1,111,431	1.65
	C2 (n<3)*	Upper	44	349,181	1.60
		Lower	52	378,869	1.65
2	C1	Upper	2	195,890	1.60
		Lower	9	3,799,838	1.65
	C2	Upper	4	245,320	1.60
		Lower	6	300,160	1.65
	C2 (n<3)*	Upper	11	147,355	1.60
		Lower	18	185,450	1.65
3	C1	Lower	3	858,479	1.65
	C2	Lower	3	171,894	1.65
	C2 (n<3)*	Lower	5	29,775	1.65
4	C1	Lower	3	449,638	1.65
	C2	Upper	2	122,241	1.60
		Lower	1	19,459	1.65
	C2 (n<3)*	Upper	5	44,550	1.60
		Lower	11	77,395	1.65
5	C1	Lower	6	975,440	1.65
	C2	Upper	1	69,573	1.60
		Lower	1	81,072	1.65
	C2 (n<3)*	Upper	2	14,000	1.60
		Lower	6	45,005	1.65
6	C2	Upper	2	499,685	1.60
Total	C1	Upper	8	893,498	1.60
	C2		25	1,814,651	
	C2 (n<3)*		62	555,086	
	C1	Lower	38	14,960,679	1.65
	C2		16	1,684,016	
	C2 (n<3)*		92	716,494	

Note: Source: "PW-5" LLP, the Feasibility Study 2012, (originally from "Conversion reserves on deposit Semizbay condition for MF as of 01.04.1988, the" Volume II, Table No. 1; 1.1; 2; 2.1; 3.1; 4; 4.11; 4.12; PSU "Tselinny Mining and Chemical Combine" Stepnogorsk fracturing of Stepnogorsk, 1988).

- *Album No.12/02-GG-PZ, Table 5 of Annex 4;*
- *Album No.12/02-OBOC, Table 5 of Annex 4;*

C2 (n<3) refers to Category C2 reserves built on 1-2 wells.*

Table 3-23 Semizbay Project – Bulk density of the Semizbay field in Akmola region

Orebody №	Category of reserves	Horizon	Geological block amount	Volume *(m^3)*	Bulk density *(t/m^3)*
Section 1 (пр 116-206),	C1	Upper	6	701,808	1.600
South ore-bearing zone		Lower	17	8,179,676	1.650
Total	C1		23	8,881,484	1.647
Section 2 (пр 82-104),	C1	Upper	2	195,890	1.600
South ore-bearing zone		Lower	9	3,799,838	1.650
Total	C1		11	3,995,728	1.647

Source: "PW-5" LLP, the application table 10, Album No. 12/12-T∋O of the Feasibility Study Report 2012.

Table 3-24 Semizbay Project – Bulk density of ore body through the validation wells

Block No.	Well	Ore horizon	Density *(t/m3)*
11	11-1-1P	Upper	1.60
		Lower	1.65
	11-1-2P	Upper	1.60
	11-1-3	Lower	1.65
	11-1-7	Lower	1.65
	11-1-8	Lower	1.65
	11-3-2P	Upper	1.60
		Lower	1.65
	11-3-6	Lower	1.65
	11-3-8	Lower	1.65

Block No.	Well	Ore horizon	Density *(t/m3)*
15	15-3-1	Upper	1.60
		Lower	1.65
	15-5-2	Lower	1.65
	15-5-3	Upper	1.60
		Lower	1.65
92	92-4-1	Lower	1.65
	92-7-4	Lower	1.65
	92-8-1	Lower	1.65
93	93-1-11	Lower	1.65
	93-1-41	Lower	1.65
	93-2-1	Lower	1.65
	93-2-12	Lower	1.65
	93-2-21	Lower	1.65
	93-2-22	Lower	1.65
	93-3-22	Lower	1.65
	93-5-31	Lower	1.65

Source: validation holes refers to Section 5.3

3.2.28 Resource estimate

The resource estimate of the Semizbay deposit was carried out by the Stepnogorsk geological prospecting team of the Virgin Mining and Chemical Combine in strict accordance with the reserves standard of Soviet Union and permanent conditions for the conversion of ores reserves. On July 1, 1978, estimation of the reserves was conducted according to the traditional standard method of Russia. On April 1, 1988, reestimation of the reserves was conducted in accordance to applying the in-situ leaching mining method.

The deposit was prospected using a 100x50 m network of drilling. In individual areas the network used was denser, where integrated geophysical research was carried out. The main mineralization area is not large; three 200x50 m networks were explored.

In the detailed exploration stage, a total of 5,180 core samples were collected and analyzed for CO_2 content. For the determination of in situ leachable lots of carbonate, 55 exploration drillings were added, with 263 core samples collected for analysis of the CO_2 content.

3.2.28.1 Russian estimation parameters

The conditions for the conversion of ores reserves of the Semizbay deposit were suitable for practicing the sulfuric acid in situ leaching method, and were approved by the Geological Survey of Business (No GR-254-c, 1987) and a refined protocol of Technical Consultation, P-6214-No 03-12-03, 1987.

The conditions for the conversion of reserves ores of the Semizbay deposit provided are:

- Cut-off grade: 0.01%;
- Maximum allowed barren gap width: 1 m.
- Maximum thickness of mining waste interlayer between the ore intervals of the section in a single block: 5.0 m;
- Minimum (linear reserve) of the intersection in the outline of the orebody (estimation block): 0.04;
- Minimum industry block estimation: 0.06;
- Minimum allowable value of the areal ratio of ore content, defined as the ratio of the number of wells with balance mineralization to the total number of wells in the block, on the category C_1 estimation block: 0.8%, and 0.5% for the category C_2;
- Minimum area of reserves in an ore block: 400 km^3;
- Maximum allowable average CO_2 content in a block: 2%;
- The number of wells is not less than 7 in C_1 blocks within a <5,000 m^2 network in wells on the horizontal projection;
- Minimum permeability (filtration coefficient) of the uranium-bearing aquifer: 0.5 m/day;
- Siltstone and clay content of particles <0.05 mm in ores: less than 30%;
- Local aquitard should be considered when contouring blocks within common aquifers.

Off-balance reserves were allocated reserves in blocks, permeable rocks and at each intersection of the wells to satisfy the requirements of conditions. But the average block parameters (mainly productivity) do not fit into the specified condition limits. The uranium reserves in tight (impermeable clay and carbonate rocks) rocks are related but were not counted.

3.2.28.2 General reserves estimation methods

The resource and minable quantity estimation method used is the same as that used for the Irkol project, as stated in Section 3.1.

3.2.28.3 Resource classification

In accordance with the hydrogeological and engineering-geological conditions, the deposit was assigned to a complex development object and to the third group as defined by the "Reserves specification" of SRC.

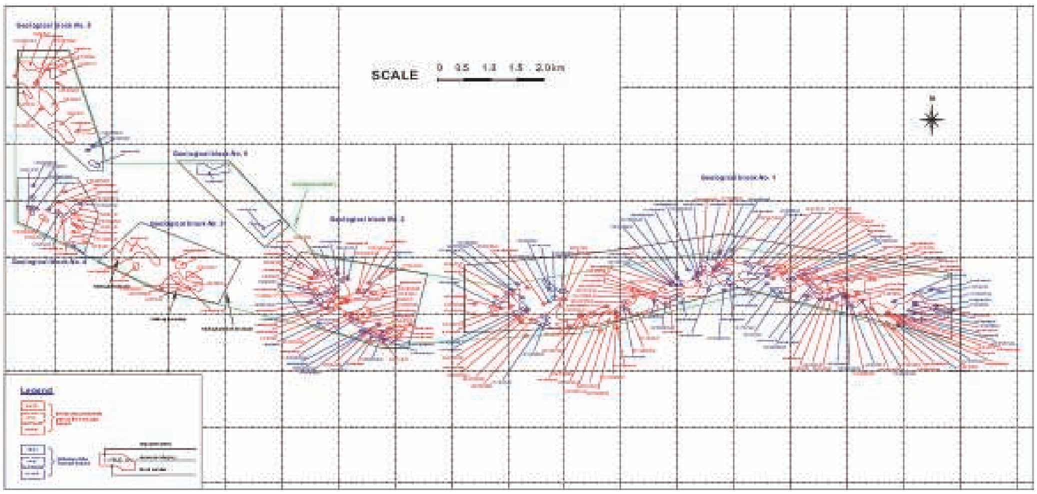


Figure 3-13 Semizbay Project – Geological block in each orebody

Six orebodies exist in the deposit (refers to **Figure 3-13**). The total reserves of these 6 uranium ore sections are 17,416 t, with 14,211 t for the C_1 reserves and 3,205 t for the C_2 reserves. The ore reserves in section No. 6 are minimal 296 t, while they are 1,160 t in No. 5, 515 t in No. 4, 582 t in No. 3, 4,362 t in No. 2, and 10,493 t (60% of the total reserves) in section No. 1. An in-situ leaching trial was performed mainly in the section No. 3, with production and extraction of 308 t uranium. The deposit retains 13,903 t C_1 reserves as shown in **Table 3-25**.

Table 3-25 Semizbay Project – Russian Reserves of Semizbay Deposit

Ore bodies	Category	Reserve *(1,000t)*	Uranium Grade *(10^{-3}%)*	Uranium *(t)*
1	C_1	14,619.4	60	8,796.1
	C_2	3,000.8	57	1,696.6
	C_1+C_2	17,620.2	59	10,492.7
2	C_1	6,583.0	54	3,568.6
	C_2	1,429.9	55	793.2
	C_1+C_2	8,012.9	54	4,361.8
3	C_1	1,242.8	44	547.8
	C_2	71.5	48	34.1
	C_1+C_2	1,314.3	44	581.9

Ore bodies	Category	Reserve (1,000t)	Uranium Grade (10^{-3}%)	Uranium (t)
4	C_1	741.9	40	294.0
	C_2	426.8	52	220.6
	C_1+C_2	1,169.7	44	514.6
5	C_1	1,609.6	62	1,004.2
	C_2	364.6	45	165.2
	C_1+C_2	1,974.2	59	1,169.4
6	C_1	–	–	–
	C_2	799.5	37	296.0
	C_1+C_2	799.5	37	296.0
Total	C_1	24,796.7	57	14,210.7
	C_2	6,093.1	53	3,205.7
	C_1+C_2	30,889.8	56	17,416.4

Uranium reserves in the Category C_1:

- Network density: <100x50 m;
- Number of wells: >6;
- Geological, structural and morphological structures of the ore bodies;
- Pumping of hexagonal well patterns and individual water wells based on the hydrogeological conditions of prospective zones;
- Definition of the filter coefficient according to the interpretation logging data, engineering and geological features and hydro-physical properties of rocks and ores, sampling and analysis of grain size and composition of carbonates;
- Laboratory studies of samples taken from sites submitted ore bodies.

Uranium reserves in the Category C_2:

- Based on the number of wells at a density of less than 7 exploration network no more than 100 x50 m;
- Exploration network for any number of wells (not less than 3): not more than 100x50 m or 200x50 m;
- Laboratory study of technologic properties of the ores, and processing of carbonate samples.

4 MINERAL RESOURCES AND ORE RESERVE

4.1 Irkol project mineral resource and ore reserve estimates

The estimated Mineral Resource and Ore Reserve are within five (5) domains (1, 2, 3, 4 and 5). Estimation was reviewed by Mr. Llyle Sawyer (Member of AIG), an independent Competent Person (CP) for the purpose of the mineral resource and Ore Reserve estimate, in accordance with JORC Code 2012 Edition. Surpac V6.3 software was used for mineral resource/reserve estimation by BMA colleagues and supervised by Mr. Llyle. The effective date is at 31 December 2013.

Mineral resource and Ore Reserve are derived from estimated quantities of mineralized material recoverable by in situ recovery (ISR) methods. Methodologies, assumptions and parameters used for the current mineral resources and Ore Reserves are described in this Section.

4.1.1 Resource estimate

4.1.1.1 Borehole database

Borehole data were provided by hard copy as image files during November to December 2013, and then mineralization and assay data were transcribed into Excel files manually by BMA. Finally, these data were imported to Surpac database and used for resource modelling.

BMA conducted a careful review of the database, followed by various checking and verification procedures in Surpac, and verified that the primary database met the basic requirements for use in a mineral resource estimate.

Based on the provided geological maps, there are a total of 1,221 surface boreholes in the Irkol deposit. 31 had missing collar coordinates and 303 missing assay data, these were treated as barren holes, giving a total 887 boreholes available for geological modelling. In addition, the database comprised a total available 3,522 assay samples. BMA notes that no downhole survey data were provided and all boreholes were treated as vertical holes. A summary of the borehole database is presented in **Table 4-1** below.

Table 4-1 Irkol Project – Summary of Borehole Database

Item	Original Data	Available Data	Remark
Collar	1,221	887	31 missing collar, 303 missing assay data
Assay	3,661	3,522	no BH collar for 80 assay data
Down hole Survey	0	0	treated as vertical BH

4.1.1.2 Mineralization wireframes

A geological uranium cut-off grade of 0.01% was used to define mineralization boundary. All boreholes were displayed in Surpac, and mineralization boundary strings for each five (5) domains (derfs) were manually digitised on a cross-sections basis, and then five mineralization domain wireframes were constructed accordingly. In practice, barren band solids were also created as part of this wireframe generation process and included in resource estimation. The general 3D View of mineralization domains for Irkol Deposit with outlier capping is shown in **Figure 4-1**.

The following technical parameters were also considered and included during construction of the mineral domain wireframe:

- Minimum mineable thickness: 1 m
- Maximum thickness of internal waste: 1 m
- Extrapolation and wedge out was constrained to around 50 m – 100 m, not exceeding 200 m

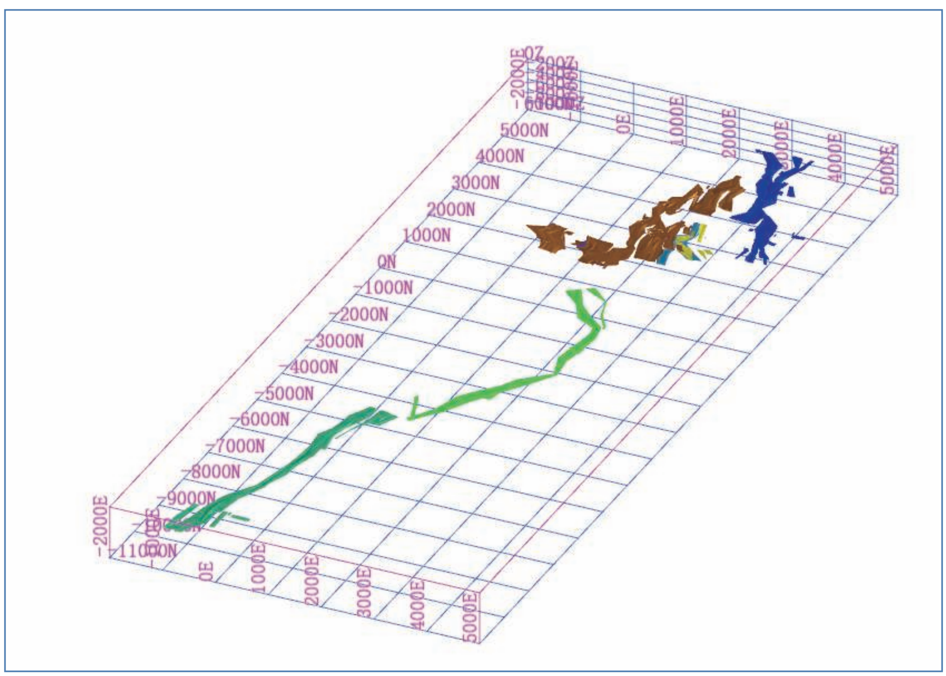


Figure 4-1 Irkol Project – Isometric 3D View of Mineralization Domains for Irkol Deposit Outlier Capping

The raw uranium grades distributions were analysed by histograms and cumulative probability plots in order to identify outliers and to determine if capping was required.

Raw uranium grade statistics are shown in **Figure 4-2**, **Figure 4-3**, **Figure 4-4** and listed in **Table 4-2**, these statistics indicate that the distribution for uranium grade at Irkol is moderately skewed. The coefficient of variation for uranium grade was greater than

200%. This reflects the low standard deviation of the dataset (0.085%) and the low mean of the samples uranium content (0.041%), i.e. a high population of low uranium contents in the dataset. This is not unusual for this type of uranium deposit.

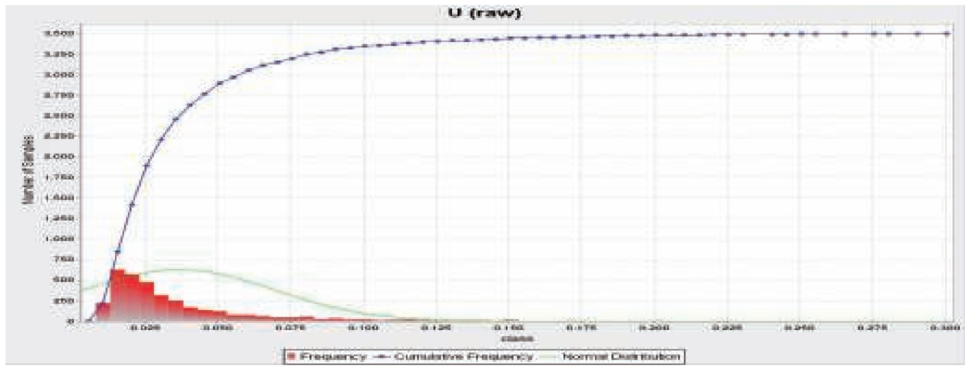


Figure 4-2 Irkol Project – Histogram and Cumulative Frequency of Raw U

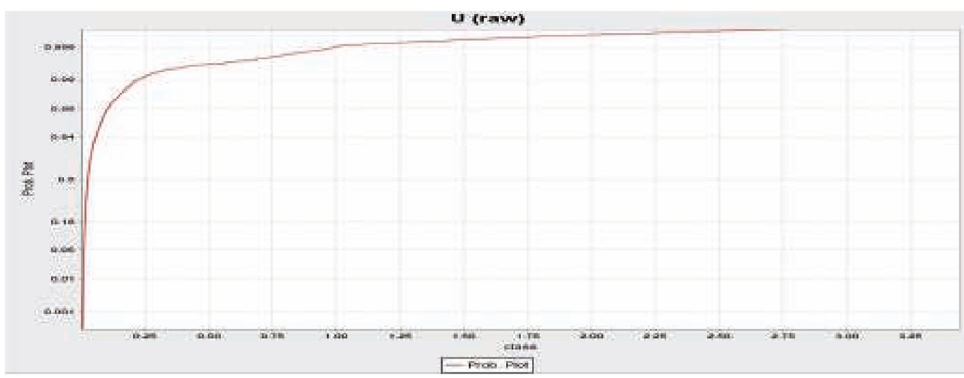


Figure 4-3 Irkol Project – Probability Curve of Raw U

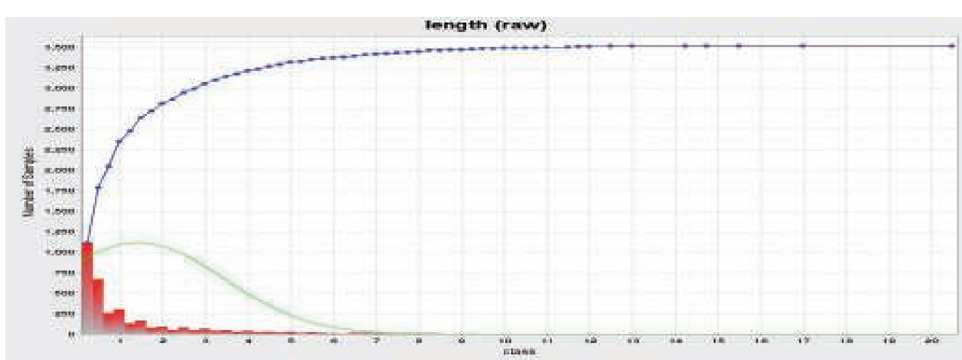


Figure 4-4 Irkol Project – Histogram and Cumulative Frequency of Raw Thickness (Assay Length)

Table 4-2 Irkol Project – Result of Classical Statistic for Raw Sample

Item	Raw Sample Uranium Grade (%)	Thickness/Length (m)
Number of Samples	3,522	3,522
Minimum Value	0.003	0.1
Maximum Value	3.439	20.6
Mean	0.041	1.429
Variance	0.007	4.007
Standard Deviation	0.085	2.002
Coefficient of Variation	2.067	1.401
Skewness	23.151	2.916
Kurtosis	796.31	14.301

BMA consider that an upper cap of 1% uranium grade is applicable. The outliers for which U grade is greater than 1.0% are listed in **Table 4-3**, these are replaced by 1.0% for purposes of resource estimation. Four assays have been capped to 1%.

Table 4-3 Irkol Project – List of Outlier Capping

Hole_id	Depth from *(m)*	Depth To *(m)*	Thickness *(m)*	Assay *(%)*	Figure No.	Drill Line 1	Drill Line 2
2870	45	45.4	0.4	1.806	027	∏P 70-3a	0
2908	30.2	30.4	0.2	1.027	035	∏P 70-5	0
2590	48.6	48.9	0.3	3.439	013	∏P 70-7	0
2929	46	47.9	1.9	1.025	031	∏P 70-6	0

4.1.1.3 Sample compositing

Statistical analysis results indicated that the sample range in length from 0.1 m to 20.6 m, with an average value of 1.43 m and median of 0.6 m. Therefor all assays were composited in a fix down-hole length of 0.6 m for resource estimation modelling. Only samples within the mineralization domains were considered during compositing.

4.1.1.4 Geostatistic analysis

Data analysis and geostatistical analysis were performed on composited assays using Surpac software. Summary statistics of composited sample analysis within mineralized domains are listed in **Table 4-4**.

Table 4-4 Irkol Project – Data analysis and geostatistics

	Raw U Samples					Composited U (0.6 m) Samples				
Item	**Domain 1**	**Domain 2**	**Domain 3**	**Domain 4**	**Domain 5**	**Domain 1**	**Domain 2**	**Domain 3**	**Domain 4**	**Domain 5**
Number of Samples	699	352	65	169	159	2,807	1,404	361	504	637
Minimum Value	0.01	0.01	0.013	0.012	0.011	0.01	0.01	0.013	0.012	0.011
Maximum Value	1	1	0.22	0.942	0.2	1	0.449	0.22	0.599	0.2
Mean	0.046	0.049	0.039	0.054	0.041	0.044	0.044	0.041	0.043	0.038
Median	0.033	0.029	0.028	0.033	0.028	0.033	0.031	0.03	0.031	0.027
Variance	0.003	0.006	0.001	0.008	0.001	0.002	0.002	0.001	0.003	0.001
Standard Deviation	0.053	0.079	0.033	0.092	0.035	0.047	0.045	0.03	0.05	0.03
Coefficient of Variation	1.15	1.621	0.824	1.707	0.841	1.078	1.017	0.739	1.155	0.79
Skewness	9.596	7.458	3.002	7.015	2.147	10.451	3.882	2.502	6.732	2.516
Kurtosis	157.847	75.62	15.602	61.113	8.149	191.395	23.527	12.46	66.042	11.358

Compositing to 0.6 m sample lengths has generally decreased the skewness of the dataset and relatively reduced the coefficient of variation in the mineralization domains.

Semivariograms for each domain were produced using Surpac software and a composite spherical variogram model was used to fix the experimental variograms with the character of geometrical anisotropy. The parameters of variograms were then referenced during resource estimation. Variograms for uranium values of each domain are shown in **Figure 4-5** to **Figure 4-8**.

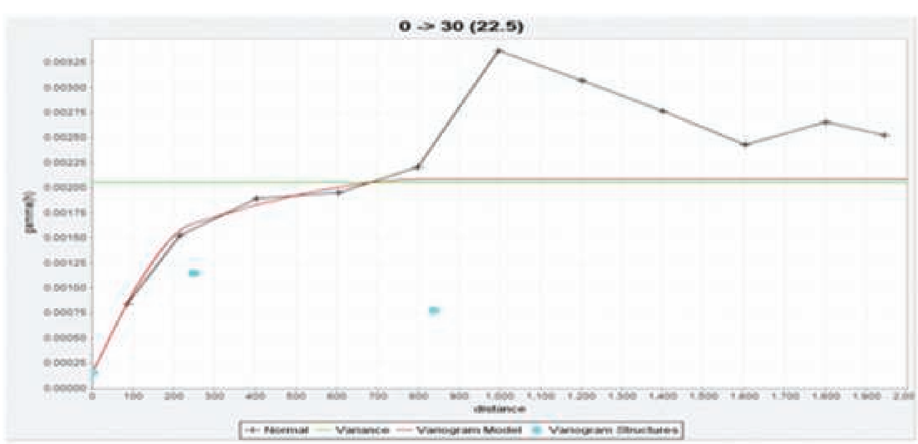


Figure 4-5 Irkol Project – Variogram Model of Major Axis for Domain 1 and 3

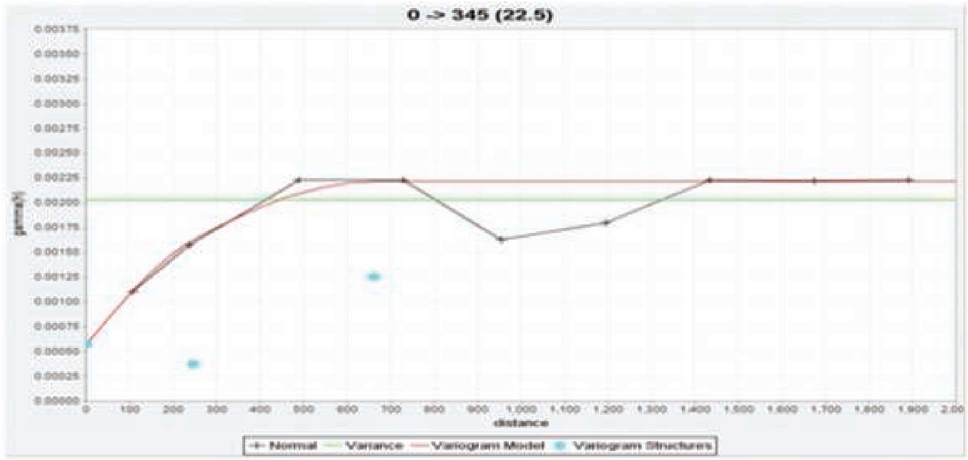


Figure 4-6 Irkol Project – Variogram Model of Major Axis for Domain 2

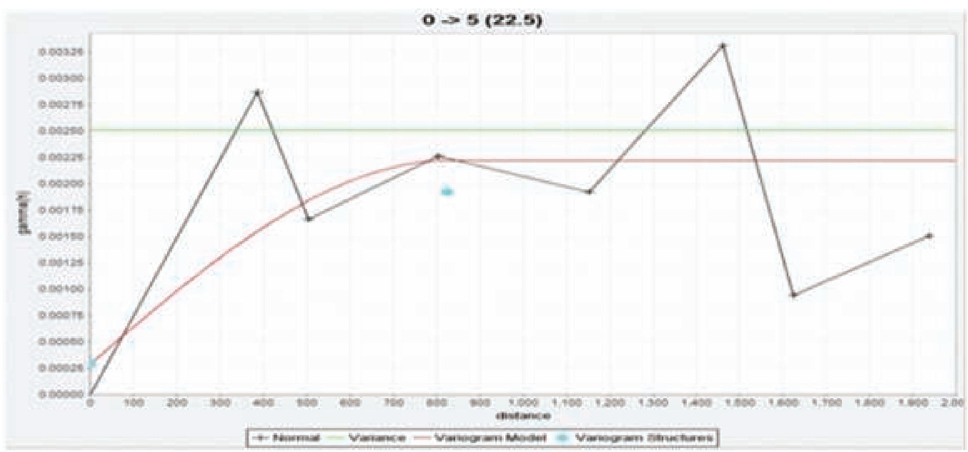


Figure 4-7 Irkol Project – Variogram Model of Major Axis for Domain 4

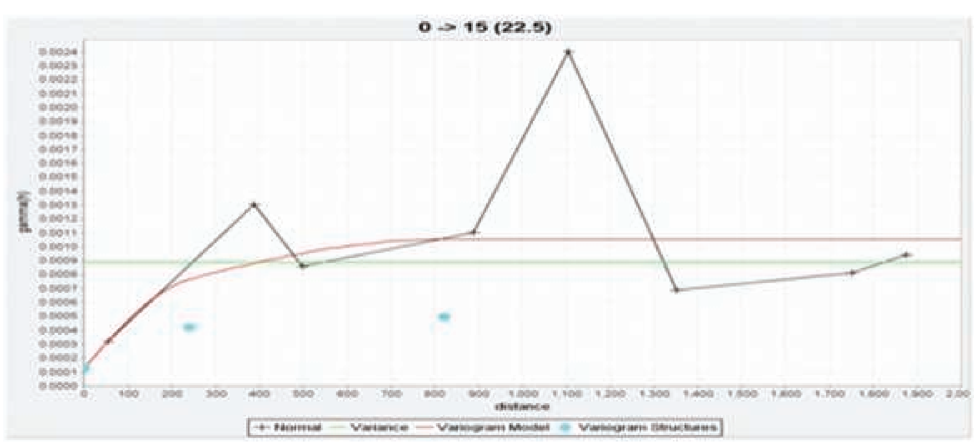


Figure 4-8 Irkol Project – Variogram Model of Major Axis for Domain 5

4.1.1.5 Block Model and Grade Interpolation

Figure 4-5 to Figure 4-8 in the report shows spatial correlation with a low nugget proportion, and major axis variograms have ranges out to at least 600 m well beyond the spacing of both exploration and extraction holes that are spaced at approximately 400 m and 100 m separately. As injectors are spaced at about 30 m to 50 m the panels are very well informed by samples at domain 1 of Irkol, and uranium grade has good continuity within domain 1. On the basis of variography, BMA considers that the drill hole spacing and thus data spacing is more than adequate to inform Measured or Indicated Resource. Estimation of uranium grade is expected to be precise as a consequence.

A block model was created in Surpac with the dimensions defined below in **Table 4-5**. The selection of normal block size of 20 m (X) by 20 m (Y) by 4 m (Z) is considered appropriate with respect to the drill hole distribution, the deposit type and scale. Sub-block cell dimensions of 10 m (X) by 10 m (Y) by 2 m (Z) was applied to the resource estimation. No rotation was applied.

Model block of 20 m (X) by 20 m (Y) by 4 m (Z) and sub-block of 10 m (X) by 10 m (Y) by 2 m (Z) is reflect continuity of mineral domain and hole spacing, Varity data search distance for grade estimate is selected accordingly. A minimum of 3 and a maximum of 30 samples were required to estimate a block.

Table 4-5 Irkol Project – Parameters of Block Model for Domains

Block Model	Items	Minimum *(m)*	Maximum *(m)*	User Block Size *(m)*	Min. Block Size *(m)*
	X	-30	3,710	20	10
Domain 1&3	Y	500	4,180	20	10
	Z	-420	-68	4	2
	X	2,700	4,860	20	10
Domain 2	Y	1,660	5,000	20	10
	Z	-360	-4	4	2
	X	-1400	960	20	10
Domain 4	Y	-10,570	-5,250	20	10
	Z	-510	-430	4	2
	X	480	3,160	20	10
Domain 5	Y	-5,600	80	20	10
	Z	-470	-358	4	2

Note: Coordinate is local system

The block grades were estimated using Ordinary Kriging (OK) method, grade interpolation was carried out in three (3) passes for domain 1 & 3, two (2) passes for domain 2 and one (1) pass both for domain 4 and 5, with an anisotropic search and limitation of composited sample number. Interpolation parameters are presented in **Table 4-6**.

Table 4-6 Irkol Project – Parameters of Grade Interpolation for Each Domain

Domain	Pass	Samples per hole	Min. Samples	Max. Samples	Bearing *(0)*	Plunge *(0)*	Dip *(0)*	Max. Search Distance *(m)*	Major/ Semi-major	Major/ Minor
1	1	2	10	30	30	0	0	140	2	3
	2	2	10	30	30	0	0	250	2	3
	3	2	4	30	30	0	0	350	2	3
3	1	2	10	30	30	0	0	140	2	3
	2	2	10	30	30	0	0	250	2	3
	3	2	4	30	30	0	0	350	2	3
2	1	2	10	30	345	0	0	250	2	3
	2	2	3	30	345	0	0	400	2	3
4	1	2	3	30	5	0	0	700	2	3
5	1	2	3	30	15	0	0	700	2	3

Based on established block model, the mineral tonnage, uranium metal and average grade for each domain were calculated both on series uranium and grade-thickness (GT) cut-off, and then summarised for all five (5) domains in **Table 4-7** and **Table 4-8**, and shown in **Figure 4-9** and **Figure 4-10**.

The reader is cautioned that the figures presented in both **Table 4-7** and **Table 4-8** should not be misconstrued as representing a Mineral Resource Statement. They are presented solely to illustrate the sensitivity of the block model estimates to the selection of cut-off grade.

Table 4-7 Irkol Project – Total Volume and Average Grade for 5 Domains on series U cut-off

U Cut-off *(%)*	Tonnage *(1,000 t)*	Uranium grade *(%)*	GT *(m%)*	Uranium Metal *(t)*
0.01	66,834	0.045	0.178	29,889
0.02	62,665	0.047	0.184	29,262
0.03	46,705	0.054	0.209	25,222
0.04	29,981	0.065	0.243	19,414
0.05	18,909	0.076	0.282	14,453
0.06	11,212	0.091	0.318	10,252
0.07	6,656	0.110	0.349	7,306
0.08	4,540	0.126	0.369	5,737
0.09	3,246	0.143	0.393	4,642
0.1	2,386	0.161	0.411	3,831
0.11	1,765	0.180	0.444	3,179
0.12	1,352	0.200	0.475	2,704
0.13	1,048	0.222	0.509	2,325

U Cut-off	Tonnage	Uranium grade	GT	Uranium Metal
(%)	*(1,000 t)*	*(%)*	*(m%)*	*(t)*
0.14	814	0.247	0.558	2,010
0.15	654	0.272	0.586	1,778
0.16	544	0.296	0.594	1,607
0.17	465	0.318	0.616	1,478
0.18	403	0.333	0.625	1,342
0.19	350	0.356	0.649	1,244
0.2	300	0.383	0.673	1,147

Note: 1. Figures may not add up due to rounding.

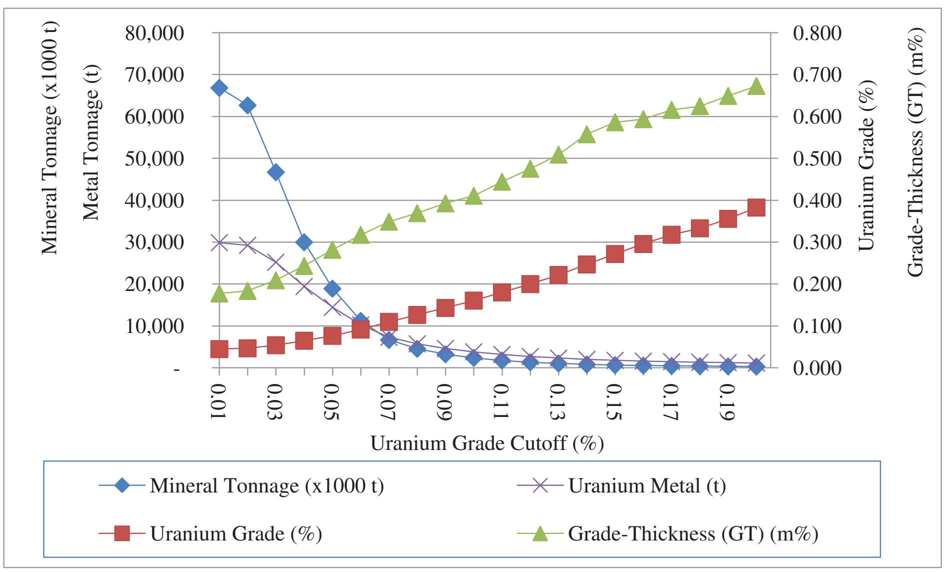


Figure 4-9 Irkol Project – Grade Tonnage Curves of All 5 Domains on Series U Cut-off

Table 4-8 Irkol Project – Total Volume and Average Grade for 5 Domains on series GT cut-off

GT Cut-off	Ore Tonnage	Uranium grade	Uranium grade-thickness	Uranium Metal
	(1,000 t)	*(%)*		*(t)*
0.01	66,825	0.045	0.178	29,885
0.02	66,717	0.045	0.178	29,862
0.03	66,209	0.045	0.179	29,754
0.04	65,215	0.045	0.181	29,506
0.05	63,232	0.046	0.185	28,969
0.06	60,538	0.047	0.191	28,180
0.07	57,319	0.047	0.198	27,194
0.08	53,819	0.048	0.206	26,044

GT Cut-off	Ore Tonnage	Uranium grade	Uranium grade-thickness	Uranium Metal
	(1,000 t)	*(%)*		*(t)*
0.09	50,053	0.049	0.215	24,764
0.1	46,137	0.051	0.226	23,372
0.11	42,391	0.052	0.236	21,957
0.12	38,926	0.053	0.247	20,595
0.13	35,615	0.054	0.259	19,255
0.14	32,648	0.055	0.27	18,051
0.15	29,804	0.057	0.282	16,883
0.16	27,158	0.058	0.294	15,758
0.17	24,935	0.059	0.306	14,795
0.18	22,996	0.061	0.317	13,942
0.19	21,307	0.062	0.327	13,201
0.2	19,633	0.063	0.338	12,454

Note: 1. Figures may not add up due to rounding.

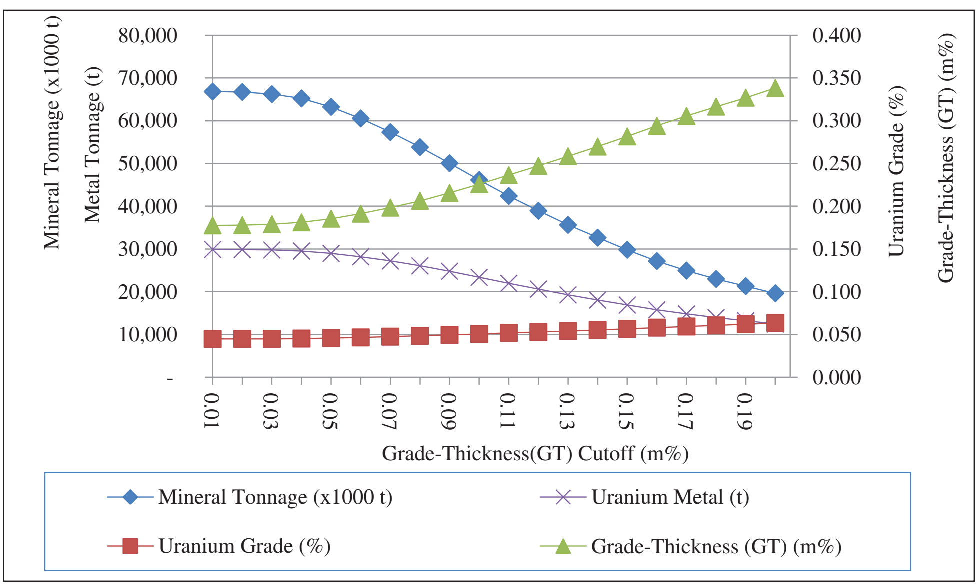


Figure 4-10 Irkol Project – Grade Tonnage Curves of All 5 Domains on Series GT Cut-off

It notes that the ore tonnes and uranium at Irkol Project decrease with the increasing of cut-off (both U grade and GT), as for Grade-tonnage cut-off diagram, a sharply decreasing represents a higher sensitivity, and a gentle decreasing in U grade cut-off diagram means a weaker sensitivity. Moreover, after cut-off over 0.12%, the variation appears to be gentle with weak sensitivity. As for average value of U grade and GT varies in conjunction with the variation of U grade cut-off and GT cut-off.

The Semizbay Project has same sensitivity nature as Irkol deposit.

4.1.1.6 Resource Classification

Mineral resource classification should consider the confidence in the geological continuity of the mineralized structures, and the quality and quantity of exploration data supporting the estimates and the geostatistical confidence in the tonnage and grade estimates.

Well established and documented USSR Geological Brigade standardized drilling protocols and sampling procedures with extensive QAQC standardized practices were used at both Irkol and Semizbay as they were at other U deposits throughout the Republic of Kazakhstan. Evidence from Semizbay early work and from other regional the Republic of Kazakhstan uranium deposits suggests that these standardized practices were strictly upheld throughout the exploration of these deposits and was of a high caliber. Hence, although the actual details are lost due to political and physical withdrawal by USSR there is no reason to assume the standardized practices were not employed at Irkol or that the data presented from the early work is not of a similar quality to that elsewhere. All available historical maps and plans indicate that these same high quality exploration and reporting procedures were in fact conducted at Irkol.

Geological continuity of the units with which the mineralization at Irkol is located is well documented and shown to be consistent in the 14 Km of drilling. A high level of confidence is attributed to the geology and the lack of intersecting major structures.

BMA considers that blocks estimated by pass 1 for domain 1 can be classified as Measured, pass 2 for Indicated and pass 3 for Inferred category. In regard to domain 3, the block estimated during passes 1 and 2 were classified to Indicated and other blocks were classified in the Inferred category.

For domain 2, the blocks estimated by pass 1 were classified as Indicated and others blocks were classified to Inferred category. All blocks within domain 4 and 5 were classified as Inferred category.

The areas classified as Measured, Indicated and Inferred Resources are shown graphically on below **Figure 4-11** to **Figure 4-14**.

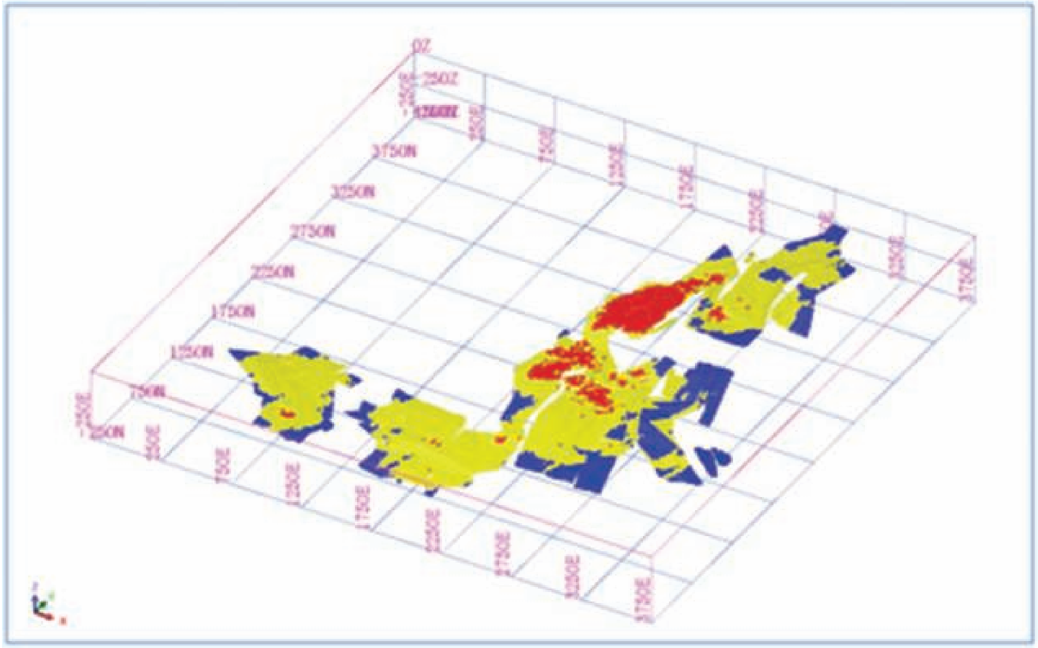


Figure 4-11 Irkol Project – Resource Category of Domain 1 and 3

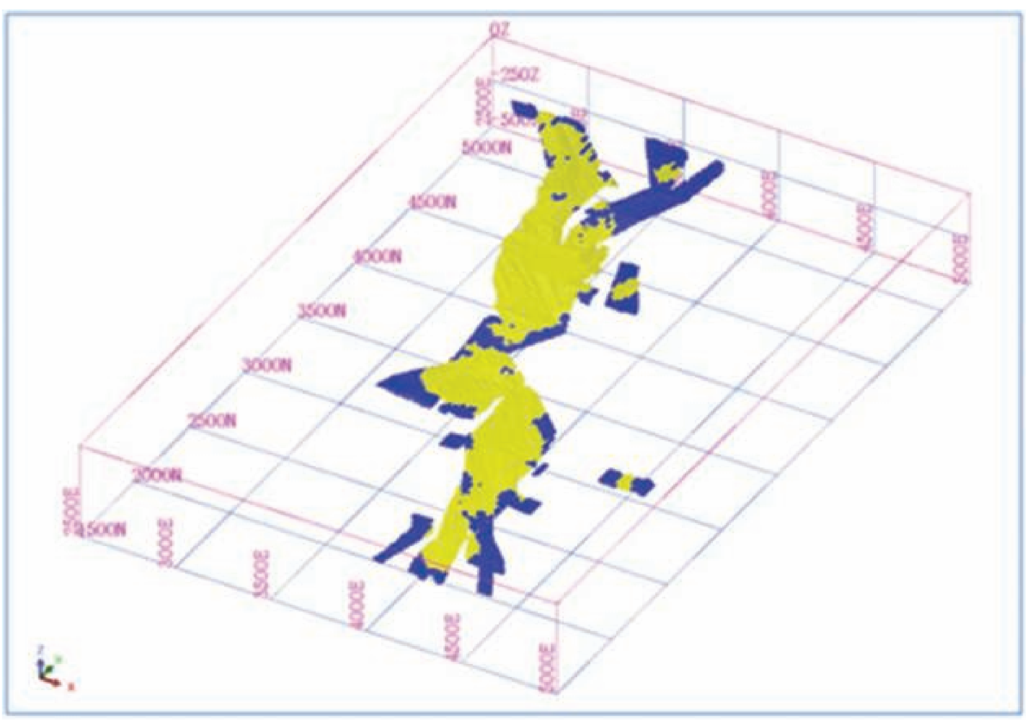


Figure 4-12 Irkol Project – Resource Category of Domain 2

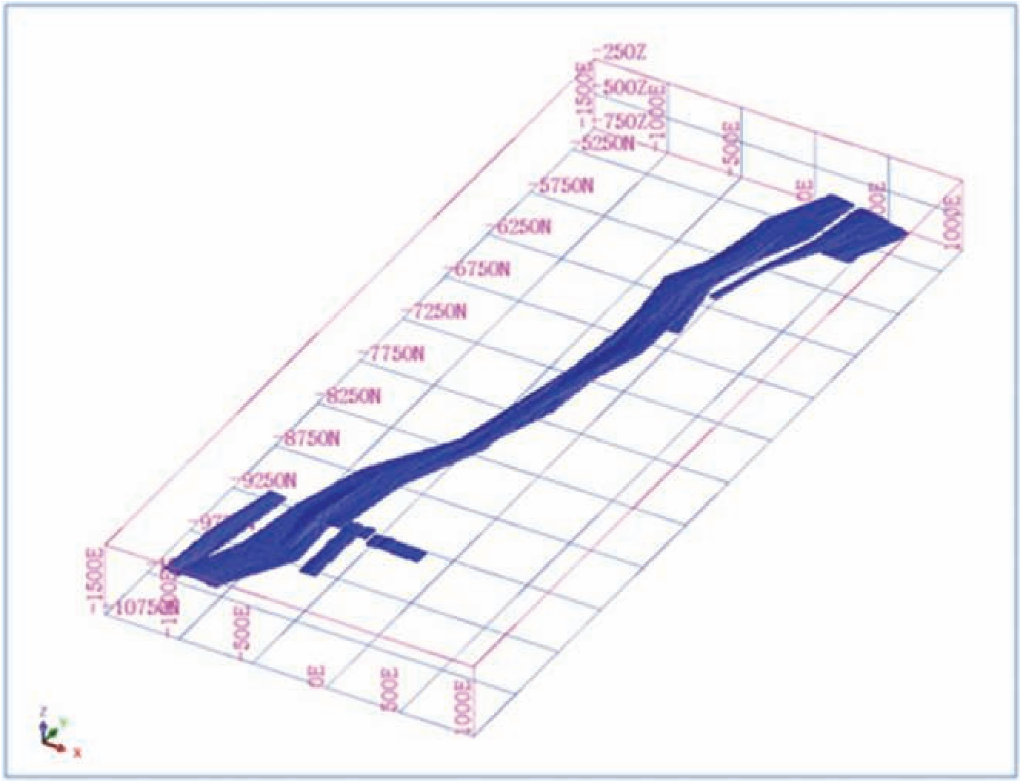


Figure 4-13 Irkol Project – Resource Category of Domain 4

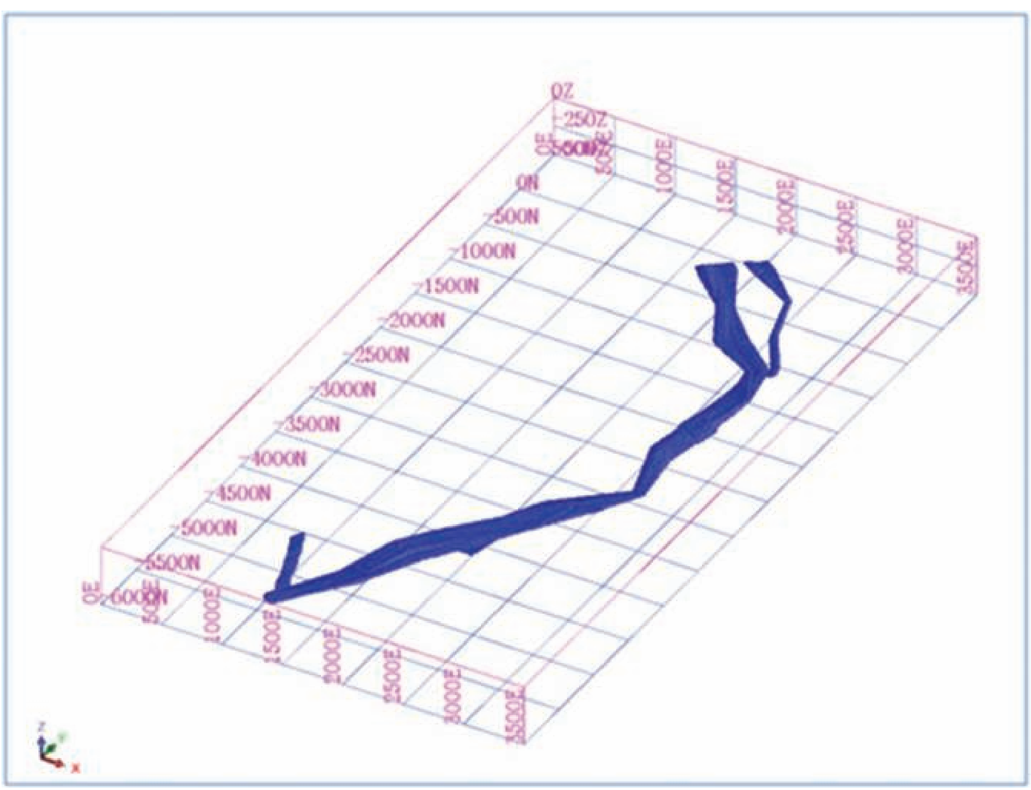


Figure 4-14 Irkol Project – Resource Category of Domain 5

4.1.2 Mineral Resource Statement

The ordinary block kriging estimation method used by BMA differs significantly from the polygonal GT methods used by previous estimators. It is not possible to reconcile the two methods in detail due to the number of rules and their local impacts in the previous resource method.

The Ordinary Kriging ("OK") technique used by BMA differs from the polygonal grade-thickness ("GT") methods traditionally applied in 1986 Geological Report that it gave similar estimating result in both grade and tonnages due to BMA's model constrained by 3D mineral wireframes based on previous geological sectional profiles. The small differences between grade and tonnage estimates were considered due to the different estimation techniques used and not to any intrinsic uncertainty in the contained uranium at Irkol. It was noted that the small difference in contained uranium was within the reasonable uncertainty for Resource estimation under JORC Code.

The actual barren intervals and number of barren holes were used to constructed 3D wireframe by BMA that limitation of grade and tonnage estimation. The previous sectional profiles are available for review.

In contrast, Kriging models use data from nearby holes in the local block averaging process prior to applying any cut-off grades for the purposes of estimating grades above cut-off. The weighting that each assay interval receives in the averaging process is controlled by the inherent spatial correlation of assays within the deposit, as measured by a variogram or auto correlation function determined from the data. Kriging estimation as conducted by BMA allows exclusion of grade below cut-off after the grade averaging process.

Under such a search block support on all sides were sufficiently informed by data to be notionally classified based on search distance and number of samples.

The mineral resources for the Irkol Project were independently estimated by BMA under the JORC Code 2012 edition as of 31 December 2013, and summarised in **Table 4-9** at a Uranium cut-off grade of 0.01%. The estimations are based on the initial exploration data collected by the Company, and then verified by BMA, as well as a simplified geological model. The Measured and Indicated mineral resources can be treated as potential ore and used for ore reserve estimation and mine planning according to JORC Code definition and guideline. Mineral resources are not Ore Reserves and the existence of mineral resources does not demonstrate economic viability.

Table 4-9 Irkol Project – Resource Statement of Irkol Deposit at a Uranium Grade Cut-off of 0.01%

Domain	Category	Volume (M m^3)	Tonnage (M t)	Uranium grade (%)	Uranium grade-thickness	Contained Uranium Metal (000 t)
1	Measured	2	4	0.05	0.23	2
	Indicated	11	19	0.05	0.18	9
	Meas. + Ind.	13	23	0.05	0.19	11
	Inferred	2	3	0.04	0.11	1
3	Indicated	2	3	0.04	0.21	1
	Inferred	1	1	0.05	0.21	1
2	Indicated	6	11	0.04	0.19	4
	Inferred	1	3	0.05	0.23	1
4	Inferred	6	10	0.05	0.15	5
5	Inferred	7	13	0.04	0.17	5
Total	Measured	2	4	0.05	0.23	2
	Indicated	18	33	0.05	0.18	15
	Meas. + Ind.	21	37	0.05	0.19	17
	Inferred	17	30	0.04	0.16	13

Notes:

- Figures may not add up due to rounding.
- Resources have not been depleted for mining; 3,759 tonnes of uranium has been extracted as at 31/12/2013.
- Minimum mineable thickness: 1 m;
- Maximum thickness of internal waste: 1 m;
- Extrapolation and wedge out was constrained to around 50 m to 100 m, not exceeding 200 m;
- Samples were capped by 1.0% U and composited to be 0.6 m;
- Minimum samples of 3 with maximum No. of 2 per hole;
- A bulk density: 1.8 t/m^3;
- Mineral resources have been estimated at a minimum Uranium cut-off grade: 1.0%.
- Mineral Resources are inclusive of Mineral Reserves.

- Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or any part of the inferred mineral resources will ever be upgraded to a higher category.

- The geological model employed involves geological interpretations on section and plan derived from surface drillhole information.

- Mineral resources were estimated on the assumption of using the in-situ recovery extraction method.

- No known environmental, permitting, legal, title, taxation, socio-economic, political, marketing or other issues are expected to materially affect the above estimate of mineral resources, other than a possible permitting issue. This possible permitting issue is discussed in Section 13.2.

- Mineral resources that are not ore reserves do not have demonstrated economic viability.

- In consideration of the relative accuracy and confidence level of the resource and reserve estimates in relation to historic nature of the data; sampling, analytical and estimation errors, rounding to a second decimal figure has been deemed to be appropriate.

There are about 189 specific gravity measurements of mineralized core from the Project that range from 1.74 t/m^3 to 1.88 t/m^3 with an average of 1.8 t/m^3. This average value of 1.8 t/m^3 was used for the current resource estimate. The detailed information of the bulk density refers to Section 3.1.24.

4.1.3 Model Validation and Analysis

BMA has conducted a thorough validation of the interpolated model, including visual inspection and carried out a comparison between Ordinary Kriging (OK) and block method using Inverse Distance Weighted (IDW) with power of 2 algorithm as well as comparison with result of geological report in 1986.

Visual inspection provides a validation of the interpolated block model on a local block scale, using visual assessments of composited sample grades versus estimated block grades, and there is a small difference in grade. The comparison results are presented in **Table 4-10**.

Table 4-10 Irkol Project – Model Validation and Analysis

	Kriging Model		**IDW Model**		**Geological Report, 1986**	
Domain	**Tonnage** *(M t)*	**Uranium Grade** *(%)*	**Tonnage** *(M t)*	**Uranium Grade** *(%)*	**Tonnage** *(M t)*	**Uranium Grade** *(%)*
1	26	0.05	26	0.05	25	0.04
3	5	0.04	4	0.04	3	0.04
2	13	0.04	13	0.04	13	0.04
4	10	0.05	10	0.05	10	0.04
5	13	0.04	13	0.04	–	–

Note: Figures may not add up due to rounding.

In general, there is little difference in tonnage approximately up to 1.5%, between OK and IDW methods, with similar grade. Model results were close to previous estimation in 1986. The data indicated that the block model constructed by BMA is reliable.

4.1.4 Reserve estimate

Ore Reserves are defined as the economically mineable part of the Indicated and Measured mineral resources. Ore Reserves at the projects are classified into Proved and Probable categories, Ore Reserves within the Measured Mineral Resources were classified as Proved, and within the Indicated Mineral Resources were classified as Probable in line with the JORC Code definitions and guidelines. All Inferred resources have been treated as waste material and are excluded from the reserve estimation. This Ore Reserve estimate was based on constructed resource model by BMA. The ore reserve estimation result is summarized in **Table 4-11**.

4.1.4.1 Key Assumptions

The geological model involves geological interpretations of information derived from initial exploration surface drilling using sections and plans. Ore Reserves have been estimated with no allowance for dilution, as dilution is not applicable to mining a deposit using the ISR extraction method. No environmental, permitting, legal, title, taxation, socio-economic, political, marketing, or other issues are expected to materially affect the above estimate of Ore Reserves.

Ore Reserves were estimated based on the use of the in situ recovery (ISR) extraction method and yellow cake production for Irkol project. Allowance dilution and mining loss are factors which are not relevant to the uranium extraction method of in situ recovery.

BMA has included all mining and processing modifying factors which are largely derived from the 2012 Feasibility Study report for Irkol Project, including reasonable production data and costs data. These data, records, statistic and reporting appear to be consistently reliable for use.

The projected mining facilities are sufficient for achieving the proposed production forecast and the processing capacity is in place to produce 711 tpa (tonnes per annum) uranium.

The Reserve estimate is based on forecast spot price US$55.86 per pound of U_3O_8 for 2014 with consideration of annual inflation rate 3.8% in the following up years. The general recovery of uranium mineral is 90%. The effective date is at 31 December 2013.

The environment, permitting, legal, taxation, socioeconomic, political, marketing or other issues are not expected to materially affect the mineral resource and Ore Reserve estimates.

4.1.4.2 *Cut-off*

The results of the leach tests as well as the 2009-2013 actual production data on initial mining area determined parameters used in the conversion of mineral resources to Ore Reserves. The minimum GT (grade-thickness) for individual reserve blocks was proposed to be 0.04. BMA is also reporting variable Ore Reserves at a uranium grade-thickness (GT) cut-off of 0.04/0.05/0.06/0.12.

4.1.4.3 *Key Parameters*

There are about 189 specific gravity measurements of mineralized core from the Project that range from 1.74 t/m^3 to 1.88 t/m^3 with an average of 1.8 t/m^3. This average value of 1.8 t/m^3 was used for the current resource estimate. The detailed information of the bulk density refers to Section 3.1.24.

Grades (% U_3O_8) were obtained from downhole gamma radiometric probing of drillholes, checked against assay results and prompt-fission neutron probing results in order to account for disequilibrium.

The following parameters and limitation were applied to the reserve estimate:

- Uranium Grade Cut off: 0.01%
- Minimum Grade-Thickness (GT): 0.04/0.05/0.06/0.12
- Maximum Allowed Barren Waste Width: 1 m
- Minimum Volume of Reserves in an Ore Block: 4,000 m^3
- Minimum samples of 11 with maximum No. of 2 per hole

A total uranium production of 3,759 t, including of 3,637 tonnes extracted in all production years from 2007 to 2013 and a total of 122 t extracted by pilot testing in 1982-1985, has been depleted from the reserve.

The reporting reserve cut-off defined by BMA, as discussed with the site management is most likely to be GT=0.04. During the site visit, BMA has viewed the actual minimum GT = 0.04 (called "mc") is used in practice. At the cut-off grade of GT=0.04, there is a total Proved Reserve of **2,000 t** uranium and a Probable Reserve of **14,000 t** uranium, totalling 16,000 uranium tonnes. Considering a reduction of a total uranium production of 3,759 t depleted in historical years, the remaining reserve for Irkol Project is estimated to be **13,000** tonnes uranium.

The accuracy of any mineral reserve and mineral resource estimation is the function of the quality of available data and of engineering and geological interpretation and judgment. Significant other factors include results from drilling, testing and production, as well as a material changes in the uranium price, subsequent to the date of the estimate; may justify revision of such estimates.

Table 4-11 Irkol Project – Reserve Statement of Irkol Deposit at Grade-Thickness (GT)

Domain	Category	Volume *($M\ m^3$)*	Tonnage *(M t)*	Uranium grade *(%)*	Uranium grade-thickness	Uranium Metal *(000 t)*
			Cut off of 0.04			
1	Proved	2	4	0.05	0.23	2
	Probable	10	19	0.05	0.18	9
	Proved + Probable	13	23	0.05	0.19	11
3	Probable	2	3	0.04	0.21	1
2	Probable	6	10	0.04	0.20	4
Total	Proved	2	4	0.05	0.23	2
	Probable	18	32	0.05	0.19	15
	Proved + Probable	20	36	0.05	0.19	16
Mined out						3
Remaining		20	36			13
			Cut off of 0.05			
1	Proved	2	4	0.05	0.24	2
	Probable	10	18	0.05	0.18	9
	Proved + Probable	12	22	0.05	0.19	11
3	Probable	2	3	0.04	0.21	1
2	Probable	6	10	0.04	0.20	4
Total	Proved	2	4	0.05	0.24	2
	Probable	18	32	0.05	0.19	14
	Proved + Probable	20	36	0.05	0.19	16

Domain	Category	Volume	Tonnage	Uranium grade	Uranium grade-thickness	Uranium Metal
		(M m^3)	*(M t)*	*(%)*		*(000 t)*
			Cut off of 0.06			
1	Proved	2	4	0.05	0.24	2
	Probable	10	18	0.05	0.18	9
	Proved + Probable	12	22	0.05	0.19	11
3	Probable	2	3	0.04	0.21	1
2	Probable	5	10	0.04	0.21	4
Total	Proved	2	4	0.05	0.24	2
	Probable	17	30	0.05	0.19	14
	Proved + Probable	19	34	0.05	0.19	16
			Cut off of 0.12			
1	Proved	2	3	0.06	0.29	2
	Probable	7	12	0.06	0.23	7
	Proved+ probable	8	15	0.06	0.24	8
3	Probable	1	2	0.04	0.25	1
2	Probable	3	6	0.05	0.28	3
Total	Proved	2	3	0.06	0.29	2
	Probable	11	20	0.05	0.25	11
	Proved+ probable	13	23	0.05	0.24	12

Note:

- Figures may not add up due to rounding.
- Mineral reserves were estimated based on the use of the ISR extraction method with no allowance for dilution, as dilution is not applicable to mining a deposit using the ISR extraction method.
- Pounds U_3O_8 are those contained in mineral reserves and are not adjusted for the estimated metallurgical recovery of 90%;
- reserves have been estimated at a GT (grade-thickness) cut-off of 0.04/0.05/0.06/0.12;
- Maximum allowed barren waste width is 1 m;
- Minimum volume of reserves in an ore block is 4000 m^3;
- Minimum samples of 11 with maximum No. of 2 per hole.
- The geological model involves geological interpretations on section and plan derived from surface drillhole information.
- The production rate is planned for 711 tonnes of uranium per year based on 90% recovery.

- A forecast spot price US$55.86 per pound of U_3O_8 for 2014 with consideration of annual inflation rate 3.8% in the following up years was used to estimate the mineral reserves.

- No known environmental, permitting, legal, title, taxation, socio-economic, political, marketing, or other issues are expected to materially affect the above estimate of mineral reserves other than a possible permitting issue (Section 12.2)

- In consideration of the relative accuracy and confidence level of the resource and reserve estimates in relation to historic nature of the data; sampling, analytical and estimation errors, rounding to a second decimal figure has been deemed to be appropriate.

4.2 Semizbay project Mineral Resource and Ore Reserve Estimates

The estimated mineral resource and Ore Reserve at Semizbay project are limited within three (3) domains (1, 2, and 3) due to lack of information at domain 4, 5 and 6. Estimation was reviewed by Mr. Llyle Sawyer (Member of AIG), an independent Competent Person (CP) for the purpose of the mineral resource and Ore Reserve estimate, in accordance with JORC Code 2012 Edition. Surpac V6.3 software was used for mineral resource/reserve estimation. The effective date is at 31 December 2013.

Mineral resource and Ore Reserve are derived from estimated quantities of mineralized material recoverable by in situ recovery (ISR) methods.

Methodologies, assumptions and parameters used for the current mineral resources and Ore Reserves are described in this Section.

4.2.1 Resource Estimate

4.2.1.1 Borehole Database

Borehole data were provided by hard copy as image files during November to December 2013, and then mineralization and assay data were input to Excel files manually by BMA. Finally, these data were imported to Surpac database and using for resource modelling.

BMA conducted a careful review of the database, followed by various checking and verification procedures in Surpac, and verified that the primary database met the basic requirements for use in a mineral resource estimate.

Based on provided geological maps there are in total 3,317 surface boreholes in the Semizbay deposit, of which there are 9 missing collar coordinates according to geological map, 1,640 missing collar and assay data; all were treated as barren holes and most are in No. 4, 5, 6 ore bodies defined in Russian exploration report. In total there are 1,668 boreholes available for resource modelling. In addition, the database comprised a total available 2,014 assay samples. BMA note that no downhole survey data were provided and all boreholes were treated as vertical holes. A summary of the borehole database is presented in **Table 4-12**.

Those boreholes with no collar elevation and depth data were mainly distributed over domain 4, 5 and 6, a few are around domain 1, 2 and 3 but these have no significant impact on the resource estimate.

BMA note that uranium grade was presented in unit of 10^{-5} on geological maps and converted to percent unit in Surpac database.

Table 4-12 Semizbay – Summary of Borehole Database at Semizbay Project

Item	Original Data	Available Data	Remark
Collar	3,317	1,668	9 holes indicated on maps but missing collar data, 1640 record miss collar elevation and depth
Assay	2,014	2,014	3 assay of borehole 364 without collar data
Downhole Survey	0	0	treated as vertical borehole

4.2.1.2 *Mineralization Wireframes*

A geological uranium cut-off grade of 0.01% was used to define mineralization boundary. All boreholes were displayed in Surpac, and mineralization boundary strings for each three (3) domains were manually digitalized on cross-sections basis, and then three mineralization domain wireframes were constructed accordingly. In practice, barren band solids were also created and used for the resource estimate.

4.2.1.3 *Key Parameters*

The follow technical parameters were also considered during constructing the mineral domain wireframe:

- Cut-off grade: 0.01%
- Minimum mineable thickness: 1 m
- Maximum thickness of internal waste: 1 m
- Extrapolation and wedged out around 50 m – 100 m, not exceeding 200 m

There is a paucity of density testing information provided for review, however based on historical data and figures from the mine design in 2012 an average density of 1.65 t/m^3 was used in current estimate.

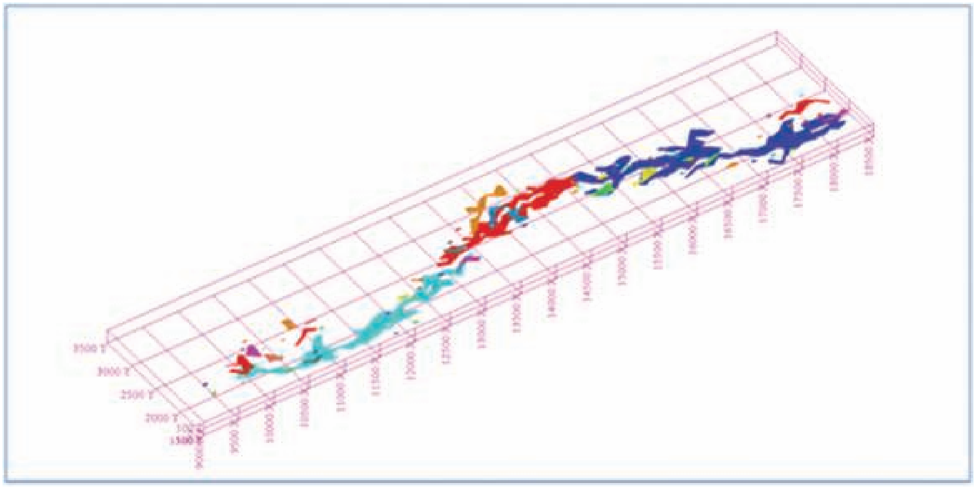


Figure 4-15 Isometric 3D View of Mineralization Domain 1 for Semizbay Deposit

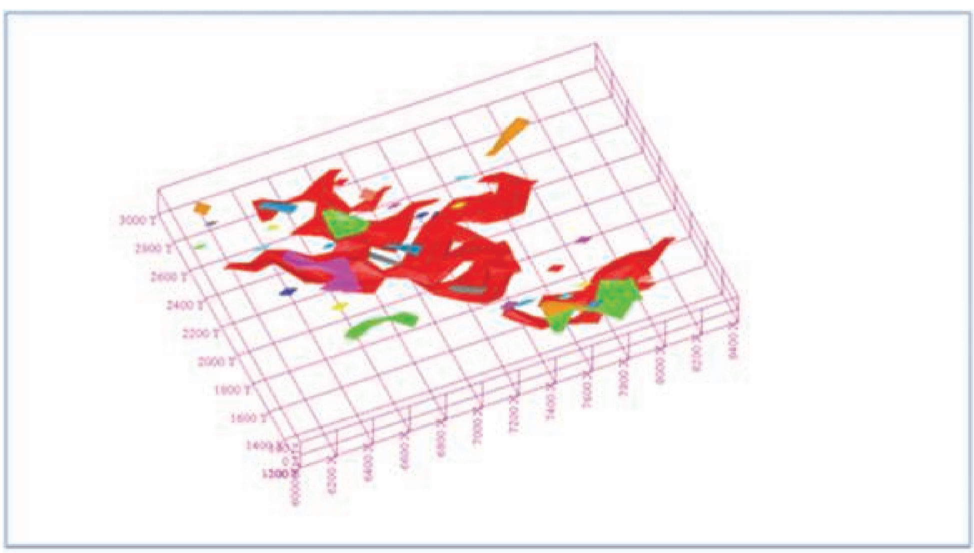


Figure 4-16 Isometric 3D View of Mineralization Domain 2 for Semizbay Deposit

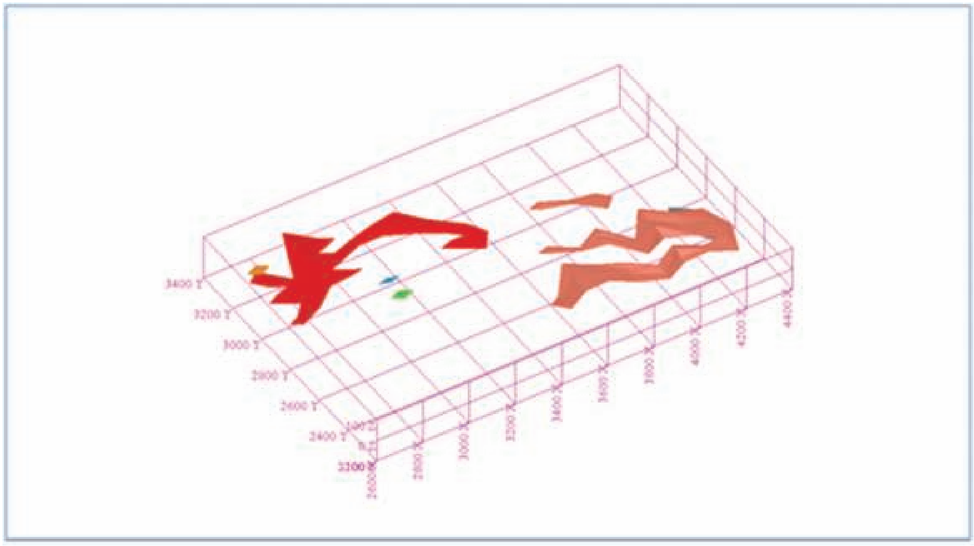


Figure 4-17 Isometric 3D View of Mineralization Domain 3 for Semizbay Deposit Outlier Capping

The raw uranium grades distributions were analysed by histograms and cumulative probability plots in order to identify outliers and to determine if capping was required.

Raw uranium grade statistics are shown in **Figure 4-18**, **Figure 4-19**, **Figure 4-20** and listed in **Table 4-13**, which indicate that the distribution for uranium grade is moderately skewed. The coefficient of variation for uranium grade was less than 130%, reflecting the low mean and standard deviation. Therefore BMA consider there is no need to cap raw samples.

Figure 4-18 Histogram and Cumulative Frequency of Raw U for Semizbay Project

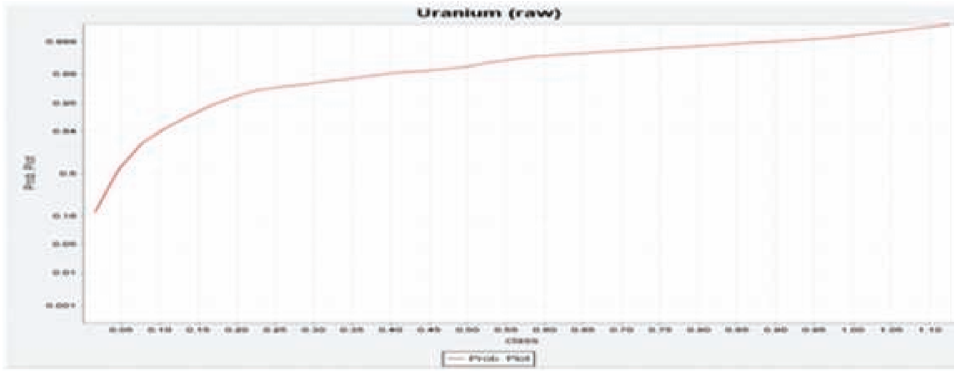


Figure 4-19 Probability Curve of Raw U for Semizbay Project

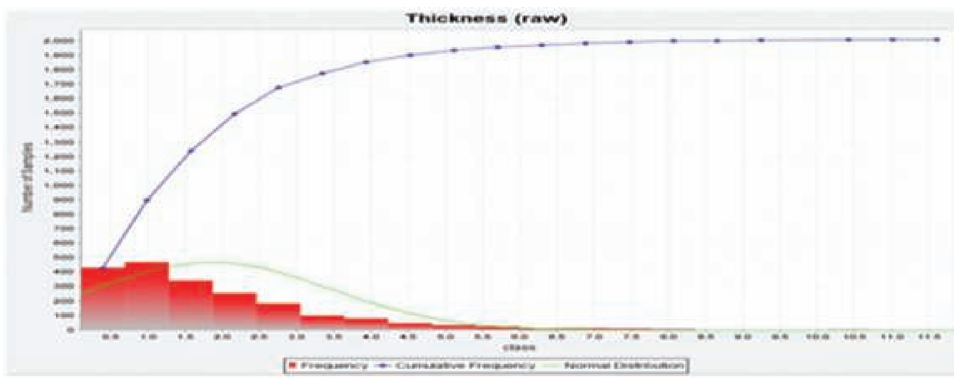


Figure 4-20 Histogram and Cumulative Frequency of Raw Thickness/Length for Semizbay Project

Table 4-13 Semizbay – Result of Classical Statistic for All Raw Samples

Item	Raw Sample Uranium Grade *(%)*	Raw Sample Thickness/Length *(m)*
Number of Samples	2,011	2,011
Minimum Value	0.001	0.1
Maximum Value	1.137	11.9
Mean	0.062	1.863
Median	0.040	1.400
Variance	0.006	2.519
Standard Deviation	0.076	1.587
Coefficient of Variation	1.225	0.852
Skewness	5.416	1.960
Kurtosis	50.126	8.568

4.2.1.4 Sample Compositing

Statistical results indicated that samples ranged from 0.1 m to 11.9 m in length, with an average value of 1.86 m and median of 1.4 m, thus all assays were composited in a fix downhole length of 1.0 m. Only samples within mineralization domains were considered during compositing.

4.2.1.5 Geostatistical Analysis

Data analysis and geostatistical analysis were performed on composited assays using Surpac software. The summary statistics of composite samples within mineralized domains are listed in **Table 4-14**.

Table 4-14 Semizbay – Result of Composites Statistic for Each Domain

Item	Composited (1.0 m) Samples – Uranium Grade (%)		
	Domain 1	Domain 2	Domain 3
Number of Samples	1,933	926	203
Minimum Value	0.007	0.008	0.014
Maximum Value	0.73	0.722	0.446
Mean	0.059	0.061	0.051
Median	0.043	0.043	0.032
Variance	0.003	0.004	0.003
Standard Deviation	0.059	0.063	0.051
Coefficient of Variation	0.998	1.04	1
Skewness	4.585	5.23	3.99
Kurtosis	38.553	45.577	24.985

Compositing sample lengths has generally decreased the skewness of the dataset and relatively reduced the coefficient of variation in the mineralization domains.

Semivariograms for each domain were produced using Surpac software and a composite spherical variogram model was used to fix the experimental variogram with the character of the geometrical anisotropy. The parameters of variogram were used in resource estimation. Variogram for uranium grade of each domain are shown in **Figure 4-21** to **Figure 4-23**. Figure 4-21 to Figure 4-23 in the report shows spatial correlation with a low nugget proportion, and major axis variograms have ranges out to at least 400 m well beyond the spacing of holes at approximately 100 m. As injectors are spaced at 50 m will be provided enough inform for estimation. On the basis of variography, BMA considers that the drill hole spacing and thus data spacing is more than adequate to inform Indicated Resource at Semizbay.

Model block of 20 m (X) by 20 m (Y) by 4 m (Z) and sub-block of 10 m (X) by 10 m (Y) by 2 m (Z) is reflect continuity of mineral domain and hole spacing, Varity data search distance for grade estimate is selected accordingly. A minimum of 10 and a maximum of 30 samples were required to estimate a block.

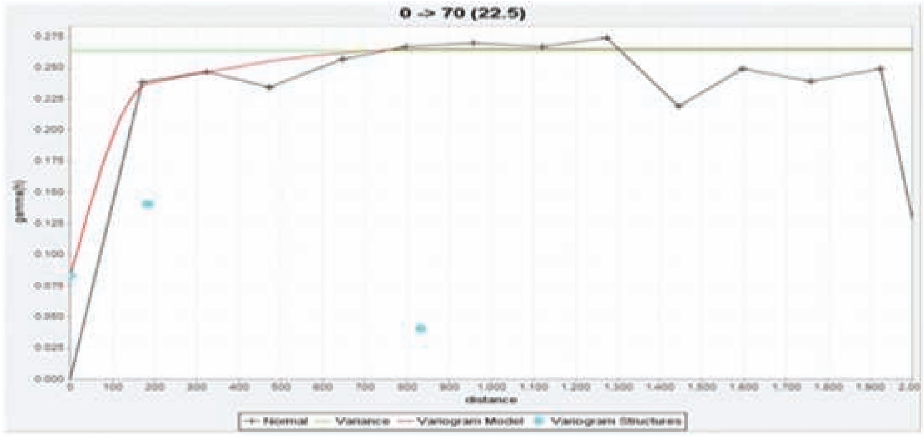


Figure 4-21 Variogram Model of Major Axis for Domain 1 at Semizbay Project

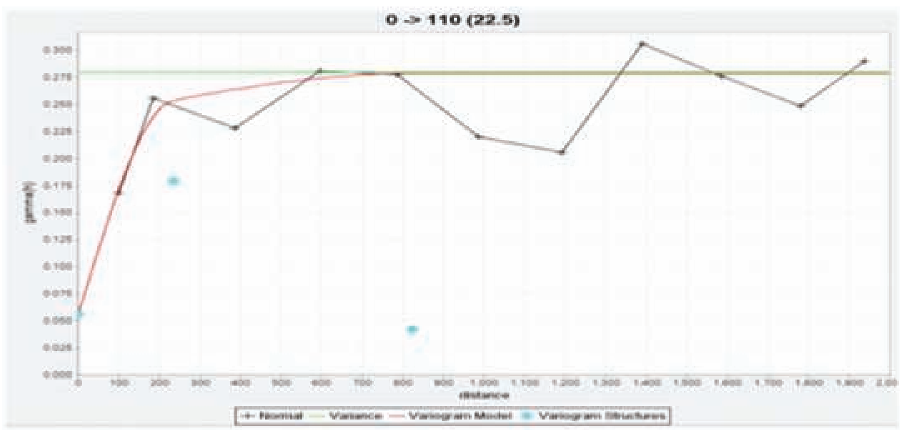


Figure 4-22 Variogram Model of Major Axis for Domain 2 at Semizbay Project

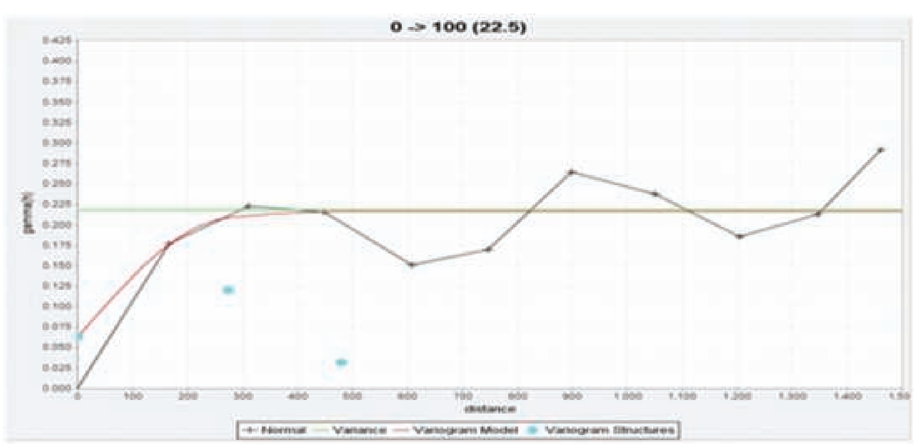


Figure 4-23 Variogram Model of Major Axis for Domain 3 at Semizbay Project

4.2.2 Block Model and Grade Interpolation

A Block model was created in Surpac with the dimensions defined below in **Table 4-15**. The selection of normal block size of 20 m (X) by 20 m (Y) by 4 m (Z) is considered appropriate with respect to the drillhole distribution, the deposit type and scale. Sub-block cell of dimensions 10 m (X) by 10 m (Y) by 2 m (Z) was applied to resource estimation. No rotation was applied.

Table 4-15 Semizbay – Parameters of Block Model for Each Domain

Block Model	Items	Minimum	Maximum	User Block Size	Min. Block Size
		(m)	*(m)*	*(m)*	*(m)*
	X	9,395.80	18,491.20	20	10
Domain 1	Y	1,621.28	3,159.44	20	10
	Z	-80.77	58.23	4	2
	X	6,017.43	8,294.45	20	10
Domain 2	Y	1,344.14	2,897.58	20	10
	Z	-17.30	77.64	4	2
	X	2,628.27	4,313.96	20	10
Domain 3	Y	2,340.86	3,321.86	20	10
	Z	29.20	82.70	4	2

The block grades were estimated using Ordinary Kriging (OK) method, grade interpolation was carried out in two (2) passes for each domain, with an anisotropic search and limitation of composited sample number. Interpolation parameters are present in **Table 4-16**.

Table 4-16 Semizbay – Parameters of Grade Interpolation for Each Domain

Domain	Pass	Samples per hole	Min. Samples	Max. Samples	Bearing	Plunge	Dip	Max. Search (m) Distance	Major/ Semi-major	Major/ Minor
					(0)	*(0)*	*(0)*	*(m)*		
1	1	2	10	30	70	0	0	190	2	3
	2	2	10	30	70	0	0	400	2	3
2	1	2	10	30	110	0	0	162	2	3
	2	2	10	30	110	0	0	400	2	3
3	1	2	10	30	100	0	0	200	2	3
	2	2	10	30	100	0	0	400	2	3

Based on the established block model, the mineral tonnage, uranium metal and average grade for each domain were calculated both on series of uranium grade and grade-thickness (GT) cut-offs. A summary for all three (3) domains are list in **Table 4-17** and **Table 4-18**, and shown in **Figure 4-24** and **Figure 4-25**.

The reader is cautioned that the figures presented in both **Table 4-17** and **Table 4-18** should not be misconstrued as representing a Mineral Resource Statement. They are presented solely to illustrate the sensitivity of the block model estimates to the selection of cut-off grade. All figures are initial estimate and do not deduct depleted minerals.

Table 4-17 Semizbay – Total Volume and Average Grade of 3 Domains on series U cut-off

U Cut-off	**Tonnage** *(1'000 t)*	**Uranium grade** *(%)*	**uranium grade-thickness**	**Uranium Metal** *(t)*
0.01	25,595	0.060	0.179	15,256
0.02	25,419	0.060	0.181	15,299
0.03	22,944	0.064	0.192	14,740
0.04	18,122	0.072	0.215	13,049
0.05	13,194	0.082	0.243	10,867
0.06	9,628	0.093	0.273	8,912
0.07	6,872	0.104	0.305	7,117
0.08	4,859	0.115	0.335	5,582
0.09	3,370	0.128	0.361	4,325
0.10	2,426	0.142	0.387	3,440
0.11	1,801	0.155	0.409	2,795
0.12	1,340	0.169	0.438	2,264
0.13	1,028	0.182	0.466	1,869
0.14	809	0.195	0.500	1,577
0.15	648	0.208	0.521	1,347
0.16	533	0.219	0.552	1,166
0.17	444	0.230	0.582	1,020
0.18	356	0.243	0.625	866
0.19	304	0.254	0.660	771
0.20	265	0.263	0.676	695

Note: Figures may not add up due to rounding.

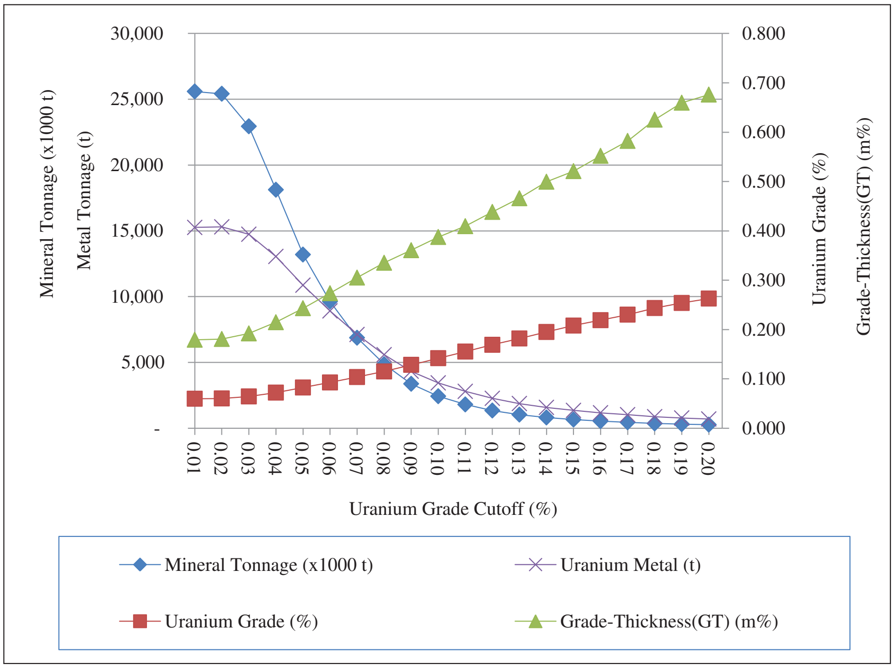


Figure 4-24 Grade Tonnage Curves of All 3 Domains on Series U Cut-off at Semizbay Project

Table 4-18 Semizbay – Total Volume and Average Grade of 3 Domains on series GT cut-off

GT Cut-off	Tonnage (1,000 t)	Uranium grade (%)	uranium grade-thickness	Uranium Metal (t)
0.01	25,528	0.060	0.180	15,366
0.02	25,525	0.060	0.180	15,364
0.03	25,476	0.060	0.181	15,334
0.04	25,243	0.061	0.182	15,358
0.05	24,656	0.061	0.185	15,088
0.06	23,688	0.063	0.191	14,815
0.07	22,426	0.064	0.198	14,260
0.08	20,906	0.066	0.206	13,721
0.09	19,331	0.067	0.217	13,035
0.10	17,853	0.069	0.227	12,405
0.11	16,439	0.071	0.237	11,702
0.12	15,074	0.073	0.248	10,980
0.13	13,873	0.075	0.258	10,388
0.14	12,670	0.077	0.270	9,733
0.15	11,557	0.079	0.283	9,105
0.16	10,600	0.081	0.294	8,554
0.17	9,680	0.083	0.306	8,013
0.18	8,951	0.085	0.317	7,577
0.19	8,242	0.086	0.328	7,097
0.20	7,552	0.089	0.340	6,686

Note: Figures may not add up due to rounding.

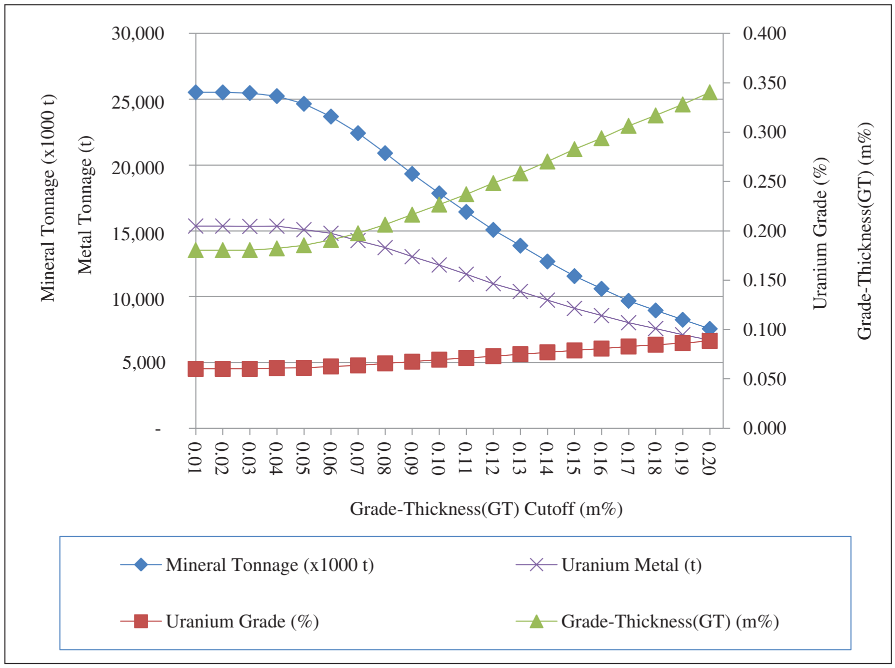


Figure 4-25 Grade Tonnage Curves of All 3 Domains on Series GT Cut-off at Semizbay Project

4.2.3 Resource Classification

Mineral resource classification should consider the confidence in the geological continuity of the mineralized structures, and the quality and quantity of exploration data supporting the estimates and the geostatistical confidence in the tonnage and grade estimates. BMA consider the geological continuity and geological data presented to be of sufficient quality and reliability to support a high level of confidence.

BMA considers that blocks estimated by pass 1 can be classified as Indicated and pass 2 for Inferred category as well.

The areas classified as Measured, Indicated and Inferred Resources are shown graphically below in **Figure 4-26** to **Figure 4-28**.

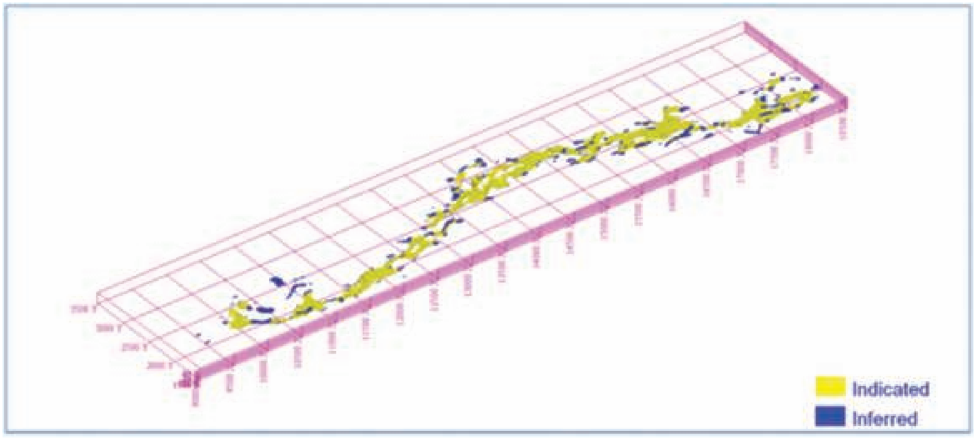


Figure 4-26 Resource Category of Domain at Semizbay Project

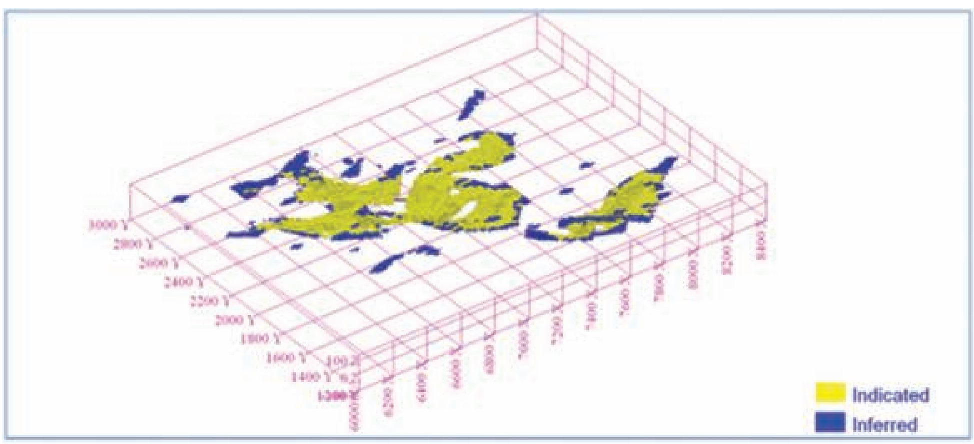


Figure 4-27 Resource Category of Domain 2 at Semizbay Project

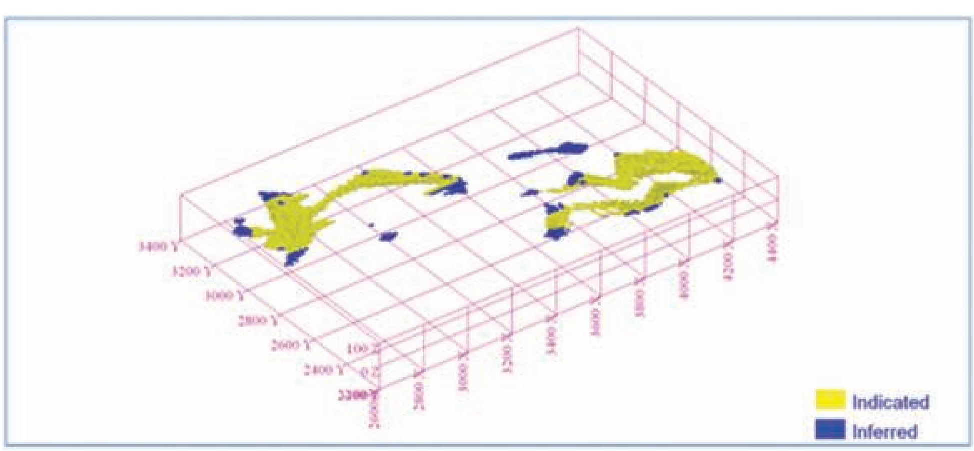


Figure 4-28 Resource Category of Domain 3 at Semizbay Project

4.2.4 Mineral Resource Statement

The ordinary block kriging estimation method used by BMA differs significantly from the polygonal GT methods used by previous estimators. It is not possible to reconcile the two methods in detail due to the number of rules and their local impacts in the previous resource method.

The Ordinary Kriging ("OK") technique used by BMA differs from the polygonal grade-thickness ("GT") methods traditionally applied in 1986 Geological Report that it gave similar estimating result in both grade and tonnages due to BMA's model constrained by 3D mineral wireframes based on previous geological sectional profiles. The small differences between grade and tonnage estimates were considered due to the different estimation techniques used and not to any intrinsic uncertainty in the contained uranium at Semizbay. It was noted that the small difference in contained uranium was within the reasonable uncertainty for Resource estimation under JORC Code.

The actual barren intervals and number of barren holes were used to constructed 3D wireframe by BMA that limitation of grade and tonnage estimation. The previous sectional profiles are available for review.

In contrast, Kriging models use data from nearby holes in the local block averaging process prior to applying any cut-off grades for the purposes of estimating grades above cut-off. The weighting that each assay interval receives in the averaging process is controlled by the inherent spatial correlation of assays within the deposit, as measured by a variogram or auto correlation function determined from the data. Kriging estimation as conducted by BMA allows exclusion of grade below cut-off after the grade averaging process.

A minimum of 11 and a maximum of 30 samples were required to estimate a block. Under such a search block support on all sides were sufficiently informed by data to be notionally classified based on search distance and number of samples.

The mineral resources for the Semizbay Project were independently estimated by BMA under the JORC Code 2012 edition as of 31 December 2013, at a Uranium cut-off grade of 0.01% and are summarised in **Table 4-19**. The estimations are based on the data collected by the geology team and the Company, and then verified by BMA. The Indicated Mineral Resources can be treated as potential ore and used for ore reserve estimation and mine planning according to JORC Code definitions and guidelines.

Mineral resources are not Ore Reserves and do not have demonstrated economic viability.

Table 4-19 Semizbay – Resource Statement of Semizbay Deposit at a Uranium Grade Cutoff of 0.01%

Domain	Category	Volume	Tonnage	Uranium grade	uranium grade-thickness	Uranium Metal
		(M m^3)	*(M t)*	*(%)*		*(000 t)*
1	Indicated	9	14	0.06	0.17	9
	Inferred	1	2	0.06	0.12	1
2	Indicated	4	6	0.06	0.25	4
	Inferred	1	1	0.05	0.17	1
3	Indicated	1	1	0.06	0.12	1
	Inferred	0	0	0.04	0.10	0
Total	Indicated	13	22	0.06	0.31	13
	Inferred	2	4	0.06	0.25	2

Note:

- Figures may not add up due to rounding.
- Minimum mineable thickness: 1 m;
- Maximum thickness of internal waste: 1 m;
- Extrapolation and wedge out was constrained to around 50 m to 100 m, not exceeding 200 m;
- Samples were uncapped and composited to be 1.0 m;
- Minimum samples of 11 with maximum No. of 2 per hole;
- A bulk density: 1.65 t/m^3 for upper horizon and 1.77 t/m^3 for the low horizon;
- Mineral resources have been estimated at a minimum Uranium cut-off grade: 1.0%.
- Mineral Resources are inclusive of Mineral Reserves.
- Inferred mineral resources have a great amount of uncertainty as to their existence and as to whether they can be mined economically. It cannot be assumed that all or any part of the inferred mineral resources will ever be upgraded to a higher category.
- The geological model employed involves geological interpretations on section and plan derived from surface drillhole information.
- Mineral resources were estimated on the assumption of using the in-situ recovery extraction method.
- No known environmental, permitting, legal, title, taxation, socio-economic, political, marketing or other issues are expected to materially affect the above estimate of mineral resources, other than a possible permitting issue. This possible permitting issue is discussed in Section 13.2.
- Mineral resources that are not ore reserves do not have demonstrated economic viability.
- In consideration of the relative accuracy and confidence level of the resource and reserve estimates in relation to historic nature of the data; sampling, analytical and estimation errors, rounding to a second decimal figure has been deemed to be appropriate.

There is a paucity of density testing information provided for review, however based on historical data and figures from the mine design in 2012, an average density of 1.65 t/m^3 was used in current estimate. The detailed information of the bulk density refers to Section 3.2.27.

4.2.5 Model Validation and Analysis

BMA has conducted a thorough validation of the interpolated model, including visual inspection and carried out a comparison between Ordinary Kriging (OK) and block method using Inverse Distance Weighted (IDW) with power of 2 algorithm as well as comparison with result of geological report in 1988.

Visual inspection provides a validation of the interpolated block model on a local block scale, using visual assessments of composited sample grades versus estimated block grades, and there is a small difference in grade. The comparison results are presented in **Table 4-20**.

Table 4-20 Semizbay – Comparison with IDW and Previouse Estimate in 1988

	Kriging Model		**IDW Model**		**Geological Report, 1988**	
Domain	**Tonnage** *(1,000 t)*	**Uranium Grade** *(%)*	**Tonnage** *(1,000 t)*	**Uranium Grade** *(%)*	**Tonnage** *(1,000 t)*	**Uranium Grade** *(%)*
1	16,671	0.060	16,671	0.060	17,620	0.059
2	7,625	0.061	7,625	0.061	8,013	0.054
3	1,374	0.057	1,374	0.058	1,314	0.044

In general, there is little difference in tonnage between OK and IDW methods with similar grade. Model results were close to previous estimation in 1988. The data indicated that the block model constructed by BMA is reliable.

4.2.6 Reserve Estimate

4.2.6.1 Key Assumptions

The geological model involves geological interpretations on information derived from initial exploration surface drilling using sections and plans. Ore Reserves have been estimated with no allowance for dilution, as dilution is not applicable to mining a deposit using the ISR extraction method. No environmental, permitting, legal, title, taxation, socio-economic, political, marketing, or other issues are expected to materially affect the above estimate of Ore Reserves.

Ore Reserves were estimated based on the use of the in situ recovery (ISR) extraction method and yellow cake production for Semizbay project. Allowance for dilution and mining loss is factors which are not relevant to the uranium extraction method of in situ recovery.

BMA has validated all mining and processing modifying factors which mostly derive from the 2012 Feasibility Study report for Semizbay Project, with a basis of reasonable production data and costs data produced monthly. These base data, records, statistic and reporting appear to be consistently reliable for use.

The current mining facilities are sufficient for achieving the production forecast and the processing capacity is in place to produce 508 tpa uranium (1.32 million lb U_3O_8). The Reserve estimate is based on forecast spot price US$55.86 per pound of U_3O_8 for 2014 with consideration of annual inflation rate 3.8% in the following up years. The general recovery of uranium mineral is 85%.

The effective date is at 31 December 2013.

4.2.6.2 Cut-off

The results of the leach tests as well as the 2009-2013 actual production conducted on initial mining area determined parameters used in the conversion of mineral resources to Ore Reserves. The minimum GT (grade-thickness) for individual reserve blocks was proposed by the site mine manager to be 0.04. BMA is also reporting Ore Reserves at a GT cut-off of uranium grade-thickness (GT) cut-off of 0.04/0.05/0.06/0.12 for the reserve estimate.

4.2.6.3 Key Parameters

There is a paucity of density testing information provided for review, however based on historical data and figures from the mine design in 2012, an average density of 1.65 t/m^3 was used in current estimate. The detailed information of the bulk density refers to Section 3.2.27.

BMA has run the reserve modelling at variable minimum Grade-Thickness (GT) at 0.04, 0.05, 0.06 and 0.12 respectively. From discussion with site management and economic considerations, an optimal minimum Grade-Thickness (GT) of 0.04 was advised. BMA notes that the total reserve tonnes run at 0.04, 0.05, 0.06 were close and that at 0.12 was considerably less.

Following parameters and limitation were applied to the reserve estimate:

- Uranium Grade Cut-off: 0.01%
- Minimum Grade-Thickness (GT): 0.04/0.05/0.06/0.12
- Maximum Allowed Barren Waste Width: 1 m
- Minimum Volume of Reserves in an Ore Block: 4,000 m^3
- Minimum samples of 11 with maximum No. of 2 per hole

4.2.6.4 Classification and Reserve Estimation Results

Ore reserves are defined as the economically mineable part of the Indicated and Measured mineral resources. Ore Reserves at the Semizbay project are classified into Proved and Probable categories, Ore Reserves within the Measured Mineral Resources were classified as Proven, and within the Indicated Mineral Resources were classified as Probable in line with the JORC Code definitions and guidelines. All Inferred resources are excluded in reserve estimation. This Ore Reserve estimate was based on constructed resource model by BMA.

Reserve estimate results under variable Grade-Thickness (GT) are presented in **Table 4-21**. BMA employed the Ore Reserve cut-off GT = 0.04, this resulted in a total Probable Reserve of ***13,000 t*** uranium. Considering a reduction of a total historical uranium production of 1,667 t, the remaining reserve for Semizbay Project is estimated at **11,000 t** uranium.

Table 4-21 Reserve Statement of Semizbay Deposit at Grade-Thickness (GT) Cut-off of 0.04

Domain	**Category**	**Volume** *($M\ m^3$)*	**Tonnage** *(M t)*	**Uranium grade** *(%)*	**uranium grade-thickness**	**Contained Uranium Metal** *(000 t)*
			Cut off of 0.04			
1	Probable	9	14	0.06	0.17	9
2	Probable	4	6	0.06	0.25	4
3	Probable	1	1	0.06	0.12	1
Total	Probable	13	21	0.06	0.31	13
Mined out						2
Remaining		13	21			11
			Cut off of 0.05			
1	Probable	8	14	0.06	0.17	9
2	Probable	4	6	0.06	0.25	4
3	Probable	1	1	0.06	0.13	1
Total	Probable	13	21	0.06	0.31	13
			Cut off of 0.06			
1	Probable	8	13	0.06	0.17	9
2	Probable	4	6	0.06	0.28	4
3	Probable	1	1	0.06	0.13	1
Total	Probable	13	20	0.06	0.31	13

Domain	Category	Volume	Tonnage	Uranium grade	uranium grade-thickness	Contained Uranium Metal
		(M m^3)	*(M t)*	*(%)*		*(000 t)*
			Cut off of 0.12			
1	Probable	5	8	0.07	0.23	6
2	Probable	3	5	0.07	0.31	3
3	Probable	0	0	0.08	0.18	0
Total	Probable	8	13	0.07	0.35	10

Note:

- Figures may not add up due to rounding.
- Mineral reserves were estimated based on the use of the ISR extraction method with no allowance for dilution, as dilution is not applicable to mining a deposit using the ISR extraction method.
- Pounds U_3O_8 are those contained in mineral reserves and are not adjusted for the estimated metallurgical recovery of 85%;
- reserves have been estimated at a GT (grade-thickness) cut-off of 0.04/0.05/0.06/0.12;
- Maximum allowed barren waste width is 1 m;
- Minimum volume of reserves in an ore block is 4000 m^3;
- Minimum samples of 11 with maximum No. of 2 per hole.
- The geological model involves geological interpretations on section and plan derived from surface drillhole information.
- The production rate is planned for 508 tonnes of uranium per year based on 85% recovery.
- A forecast spot price US$55.86 per pound of U_3O_8 for 2014 with consideration of annual inflation rate 3.8% in the following up years was used to estimate the mineral reserves.
- No known environmental, permitting, legal, title, taxation, socio-economic, political, marketing, or other issues are expected to materially affect the above estimate of mineral reserves other than a possible permitting issue (Section 12.2)
- In consideration of the relative accuracy and confidence level of the resource and reserve estimates in relation to historic nature of the data; sampling, analytical and estimation errors, rounding to a second decimal figure has been deemed to be appropriate.

5 DATA VERIFICATION

5.1 Verifications by BMA

BMA conducted an independent data verification program by desktop review on provided copies of data.

The geology and resource data relevant to the Irkol deposit which has been used in the CPR is generally based on the "Geological Exploration Report for Irkol Uranium Deposit 1975-1985 and 1986 by Russian geology institute as well as the attached tables and figures.

- The first Volume of the report text contains the Part 1 (105 pages, regarding mining history, the regional geological structure, etc.) and Part 2 (196 pages, regarding hydrogeology, technology, etc.). The second Volume of the report (79 pages, regarding resource/reserve estimation, etc.) and Part 1 (96 pages, on drilling, hydrogeology, engineering geology, etc.) and Part 2 (100 pages on geophysical etc.) of the third volume. Most of the text copies were provided but missing a portion of Part 2 of the third Volume (50 pages).

- The report also contains 7 Appendix Tables (they details information on drilling, geophysics, earth logging, testing, estimation of resource and reserves, hydrogeology, etc.). Only hard copies of appendix Tables 4 and Tables 5 are available and the remaining five were not copied in the schedules.
- The report contains 7 sorts of Appendix Drawings (e.g. geological maps, resource reserves estimation chart, seam diagrams profile etc.). A complete copy of 1-5 drawings has been copied except two missing ones.

The geology and resource estimate for the Semizbay deposit in the CPR is generally based on the copies of "Resource and Reserve Report for Semizbay-Uranium Deposit" by 1978 (155 pages) and by 1979 (136 pages) in Russian as well as the attached figures, and a Resource Recalculated Report of Semizbay-Uranium Deposit by April 1988 (3 copies, each 54 pages) by the Russian Geology Institute.

BMA also obtained access to the detailed drillhole data of current operational wells at approximately 10% of total exploration boreholes amount (120 wells for Irkol Project and 180 for Semizbay) which consisted of:

- Radioactivities for all anomalous zones (with their conversion into radium concentration);
- Geophysical graphs (radioactivity, resistivity, self potential);
- Assay results (radium and uranium) from individual drill hole log;
- Listings of filtration coefficients in the anomalous zones; and
- Graphic documents.

The available information was sufficient to allow comprehensive data verification and for validating the historic Kazakh mineral resource and reserve estimate.

BMA Conclusion of 2012 Feasibility Study

2012 Feasibility Study was prepared properly and based on valid test work and real information of previous operation, also provide opportunities to understand the implications of the development of the future production. BMA reviewed and accept most of the modifying factors which represent proper conditions studies and sufficient reasonable assumption of proposed facilities have been made in the report.

BMA notes that the design and studies procedure and calculation in the Feasibility Study have properly reflected the project status and development planning except some minus inconsistency in the economy analysis (BMA modified them in the updated economy analysis table). Most of the parameters in Feasibility Study are employed as basis of the modifying factors in this report.

2012 Project feasibility studies are not only an essential but also provide an opportunity to add real project value and certainty but also represent a careful and thorough evaluation of a project, therefore some risk from the inherent flaws in the plan derived from the study. BMA believes the full operation of current mine site and plant is likely to significantly reduce the key technical and costs risks of the project in future.

Based on the studies and design work done as well as actual operation, BMA considers the development design and studies are currently at a feasibility study level. The current operation has increased the accuracy of the costs estimation confidence to a definitive study level. BMA considers the operating costs and capital cost estimation may have an overall error margin within 15% since the design of the relevant facilities are completed and been proven in operation.

5.2 Drilling dataset

The key drill dataset for the resource/reserve modelling of Irkol and Semizbay was digitized, sourced from a large number of copies of the original cross section plans as Appendix Drawings. BMA digitized the drill holes data from the original exploration cross section plan prepared in the 1986 and formed a model. The cross section plans appears to be mapped manually in detail. An independent data verification program by desktop review on the provided copies was conducted as well.

The following information was digitized from reports, sections and maps and validated:

- Lists of mineralized intervals used in the 1991;
- The drill hole collars plan in the 2012 Feasibility Study report shown drill hole collars coordinates and deviations; and
- Lithology, oxidation level and filtration coefficients.

BMA notes that no downhole survey data were provided and all boreholes were treated as vertical holes.

There are a total of 1,221 surface boreholes in the Irkol deposit, of which there are 31 missing collar coordinates and 303 missing assay data (treated as barren holes). There are 887 boreholes available for geological modelling. In addition, the database comprised total available 3,522 assay samples.

Based on provided geological maps there are total of 3,317 surface boreholes in the Semizbay deposit, of which there are 9 missing collar coordinates according to geological map, 1,640 missing collar and assay data (treated as barren holes and most in No. 4, 5, 6 orebodies defined in Russian exploration report). There are 1,668 boreholes available for resource modelling. In addition, the database comprised total available 2,014 assay samples. These boreholes with no collar elevation and depth data were mainly distributed over domain 4, 5 and 6.

Provided raw data used for resource/reserve estimation purpose were all in Russian, composing of geological report, resource/reserve estimation report as well as geological cross-section maps with information of assay, lithology information and uranium mineral interpretation. BMA carried out a carefully review procedure and manually digitized and input into Excel (Collar, Assay), then imported into Surpac database for modelling.

The imported borehole database was checked with special procedures for the presence of the following errors as shown in **Table 5-1**. Some significant errors or missing data that would dramatically affect the resource and reserve accuracy was discussed and the following treatment method is accepted by the Competent Person.

Table 5-1 Drilling Dataset Validation

Error or Issues	**Issues Sources**	**Treatment**	**Degree of Impact on Resource**
		General	
Borehole number was duplicated in the collar files;	Original data error	Data was recognized and input from an original cross section plan. Corrected in database	No
Borehole coordinates in the collar file were not been provided;	Confidential concerning from the public of Kazakhstan	Borehole coordinate were all recognized and input from original cross section plan. An error of 0.05-0.1mm occurs in plan which would cause an actual distance error of 0.25-0.5 m. The distance error is considered to be acceptable	Moderate but acceptable by CP
Borehole missing total depth or collar elevation data in the collar file;	Minor error in Original plan or type error	Generally barren hole or within domain 4, 5 and 6 at Semizbay	Minor
Value of the field FROM greater than TO in the assay file;	Type error	Corrected in database	No
Sampling interval overlapping in the assay data file;	Type error	Corrected	No

Error or Issues	Issues Sources	Treatment	Degree of Impact on Resource
Sampling depth is greater than total depth of borehole;	Type error	Corrected	No
Graphic view borehole located without deposit area due to wrong input;	Type error	Corrected	No
Graphic view elevation of collar;	Type error	Corrected coordinate and elevation	No
Checking grade and grade-thickness (GT) against normal value;	Common error	Correct according to original data	No
All boreholes have no downhole survey data.	Data missing	BMA inspected all the holes in the cross section and they generally vertical as shown in Figure 3-5, Figure 3-9 and Figure 3-10. A discussion with the Company gives sufficient confidence to the Competent Person who considered the impact to be acceptable.	Moderate but acceptable by CP
		Irkol project	
There are 7 boreholes (No. 4448, No. 2558, No. 2596, No. 2758, No. 2714, No. 2589 and No. 4470) with collar elevation less than sampling depth due to type error	Type error	They are corrected in database and acceptable.	Minor

Error or Issues	Issues Sources	Treatment	Degree of Impact on Resource
There are 31 boreholes missing coordinate but appear on the cross section plan	Historical exploration holes and recent exploration holes with missing assaying data likely	Excluded in database.	No
There are 303 boreholes have collar coordinate but missing assay data	Barren hole	They are generally uranium-empty holes, but used in resource estimation, which is acceptable.	No
Eighty assays have no collar	Data Missing	Excluded in the resource estimate.	Minor
		Semizbay project	
There are 3 boreholes (2118, 2108 and 2197) far away deposit due to wrong coordinate input	Type error	Corrected in database.	No
Wrong borehole ID for 6017 and 5020, and rename as 5017 and 5920 separately	Minor error in original plan or type error	Corrected in database.	No
There are 9 boreholes missing coordinate but appears on the drilling location map	Missing data	They are ignored and excluded in database.	Minor
There are 1640 boreholes have collar coordinate but missing of uranium assay data	They are generally uranium-empty holes, or within domain 4, 5 and 6	Excluded in current resource estimation, which is acceptable.	Minor

Error or Issues	Issues Sources	Treatment	Degree of Impact on Resource
Borehole No. 364 have 3 assays data but missing collar	Missing data	Excluded in database.	Minor
Grade or grade-thickness (GT) errors for twenty-five boreholes with thirty-five assay were found	Minor error in Original plan or type error	Corrected in database.	No
All uranium grade indicated on geological maps were expressed in unit of 10^{-5}, and then converted to unit of percentage by BMA during database construction.	Different unit selected	Data was input in unit of percent for resource estimate.	No
Boreholes within mineral domains 4, 5 and 6 have none assay data.	No available data	They treat as barren holes. No impact for current resource estimate number which has excluded the domain 4, 5 and 6. It results in less potential Inferred resource of 1000 t to 1,500 t uranium.	No

Relative errors were fixed according to the provided graphical data in PDF format.

During the site visit, the impact to resource estimation from the missing of downhole survey data of all boreholes as well as borehole coordinates in the collar file was fully discussed. It was considered as the uranium mineralization occurs as alluvia deposit and appears to be generally continuous and flatted in nature, therefore the impact of the above is considered to be minus and does not cause materials impact of the resource estimation.

5.3 Radioactivity, Radium and Uranium Grades of the Validation Drillholes

A total of excess 300 production wells drilling in 2010 is selected as validation wells. Each validation drill hole has entirely carried out Gamma-ray logging in both Irkol and Semizbay Project in 2010, and the graphs of logging curves were found in the individual drill hole files. In the anomalous zones and nearby, the graphs were digitized, computerized and interpreted. The result was a list of radioactivity measures in micro-Roentgen per hour (mR/h) at 10 cm spacing.

All of the parameters used in interpretation were listed in detail, including the conversion factor of mR/h to 0.01% uranium (K_0) and calculated grade of the radium (C_6). The parameter of K_0 indicated a correlation between radioactivity and uranium content, which made it possible to convert the radioactivity into radium grade. In the well-logging files, neither a formula nor any comment for K_0 was provided, and it was only given a fixed value of 115 by TOO "GeoTehnoServis".

In contrast to K_0, calculating process of C_6 was rather complex and took into account the characteristics of the drill hole (diameter, fluid density and casing), the characteristics of the surrounding ground (density) and the characteristics of each individual probe. The C_6 was restrained by the regression formula, as follow:

$$C_6 = a\bar{c}^b$$

The parameters of "α" and "b" preferably doesn't have a single or constant value in different parts of the orebodies. In Semizbay mine, "a" is about 0.013, or 0.016, and "b" is 0 to both of the oxidized and non-oxidized rocks; and in Irkol mine, the values of "a" and "b" is about 0.0541 and 0.3589 respectively to the oxidized rocks, while 0.0408 and 0.3541 to non-oxidized rocks.

BMA confirmed that all of the parameters used in interpretation were reasonably selected according to the industry standards, which made the results quite reliable.

According to the well-logging data, the intensity of radioactivity, as well as the uranium and radium grade, was mainly dominated by the lithology and permeability of the ore body. Statistic result showed that the permeability of the two mines is mainly between 10 ~ 30%, locally up to 75%. Vertically, the value of radioactivity has an increasing tendency from the impermeable to the permeable rocks, which also clearly exhibits from the upper or lower edge to the inner part of the permeable strata.

The relationship between radioactive readings and calculated radium grades obtained from the use of the regression formula is studied in detail by BMA for validation drillholes. There is a very good relationship between radioactivity and radium grade in most locations. Arithmetic and logarithmic plots between the two variables give a criterion to find out the possibility of overestimating radium content in the high radioactivity zones.

The conversion of radium grade into uranium grade depends on the radium uranium equilibrium. A disequilibrium factor related to the interpreted location of the mineralized intervals is applied. Incomplete statistics show that the K_{pp}, which represents the conversion coefficient of Ra-226 into U-238, is about 1.136 in Semizbay mine, whilst 1.25 in Irkol mine as shown in Figure 5-1.

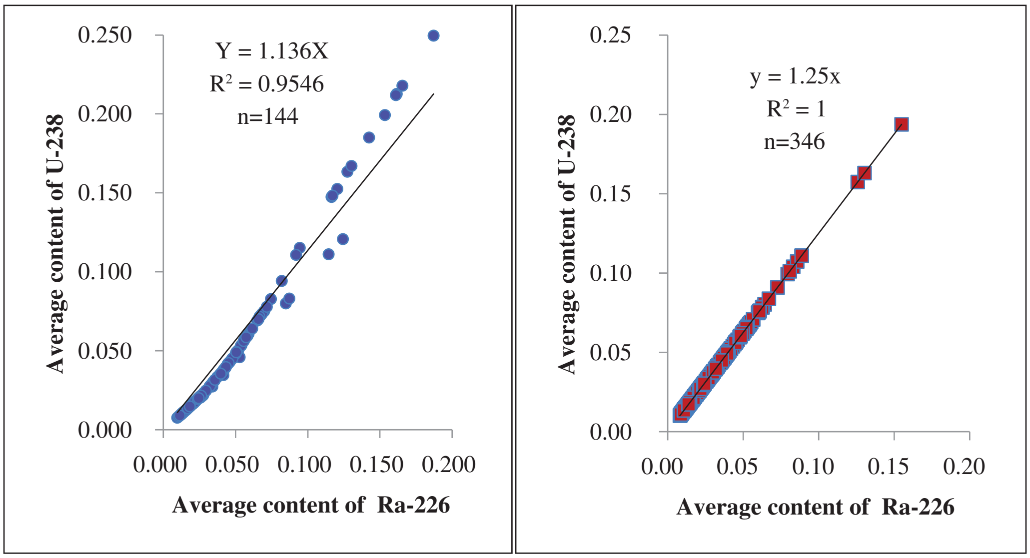


Figure 5-1 Relationship between the content of U-238 and Ra-226 of the validation drillhole

- Data of the left figure is collected from 22 wells in the geological blocks of No. 11, 15, 92 and 93 of Semizbay mine, and two abnormal values are removed.

- Data of the left figure is from 78 wells of Irkol mine, and one abnormal value is removed.

Correlation on grade-thickness from radioactivity and from uranium grade was reviewed and found excellent. The data validation work done by BMA showed that the grade and grade thicknesses used by GeoTehnoServis are considered quite reliable.

5.4 Comparison between actual production parameters with hydrogeology and geotechnical condition

Nº1 to Nº6 blocks are located in the initial mining area of Irkol Project and were selected for validation of the geology resource with the actual production data. Although ISR leaching had being performed from 2009, they were not completed up to 2013, meaning their extraction rate will be further increased in the future.

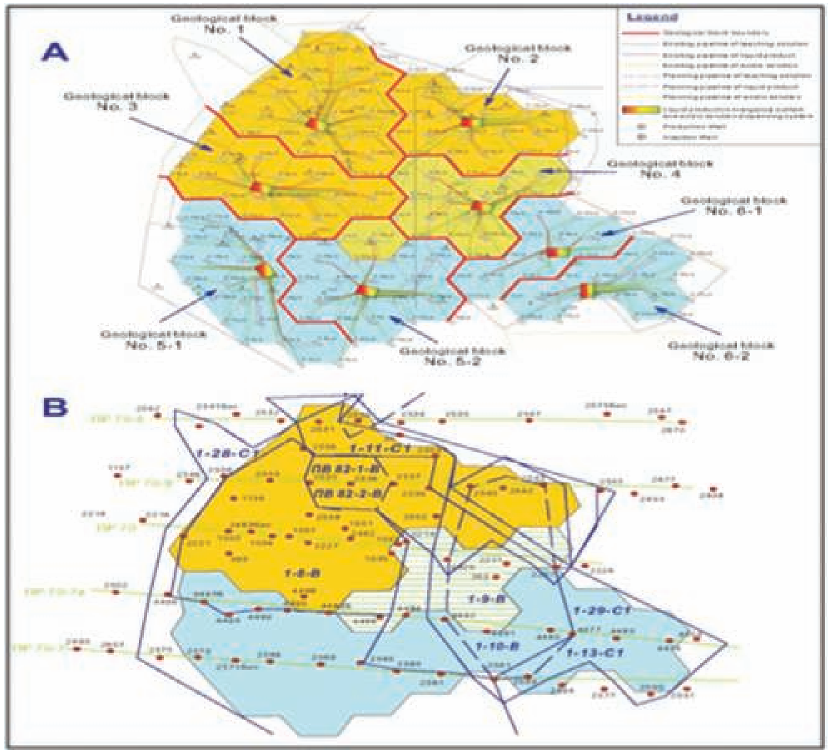


Figure 5-2 Irkol Project – №1-№6 Blocks Geological Distribution and Drilling Hole Vs. Blocks Mining

Using the actual production data of №1 to №6 blocks, BMA completed a comparison of this part of the resource with the calculated uranium resource tonnes in each geological block in terms of block area, ore seam thickness, grade etc., with the drill hole cross section plans for this area as shown in **Figure 5-2**. The calculated tonnes, area and thickness, etc. details from different information sources are generally consistent between them (refer to **Table 5-2** to **Table 5-4**).

BMA has validated them with the geological mineralization in the cross sections, which is generally consistent with the leaching conditions reported in the actual production of Block №1 to №6.

Table 5-2 Irkol Project-Resource tonnes Comparison of Block №1-№6

Blocks		**№1**	**№2**	**№3**	**№4**	**№5**	**№6**	**Total**
Industrial Reserve Estimated by Russian Standards	t	380	146	362	308	484	560	2,240
Actual development Reserve (2009-2013)	t	366	173	323	197	469	585	2,112

Table 5-3 Irkol Project – Resource Actual Production Details of Block №1-№6 during 2009-2013

Blocks	Ore Tonnes	Developed Tonnes	Uranium Content in Leaching Solution 2009	Uranium Content in Leaching Solution 2013	Mined Out Tonnes 2009 Tonnes	Mined Out Tonnes 2009 Recovery	Mined Out Tonnes 2013 Tonnes	Mined Out Tonnes 2013 Recovery	Acid Consumption 2009	Acid Consumption 2013
	(kt)	(t)	(mg/L)	(mg/L)	(t)	(%)	(t)	(%)	kg/kg U	kg/kg U
№1	1,516	365.771	69	49	175	47.9	236.8	64.7	67	45
№2	1,083	173.029	44	35	52.1	30.1	79.2	45.8	135	53
№3	1,370	323.399	92	71	240.3	74.3	335.4	103.7	53	61
№4	1,122	196.679	47	41	47.6	24.2	120.3	61.1	115	66
№5-1	1,568	307.084	67	53	69.9	22.8	152.4	49.6	110	54
№5-2	704	161.586	92	47	47.7	29.5	123.3	76.3	96	63
№6-1	1,491.2	369.683	76	54	45.8	12.4	153.7	48.1	148	54
№6-2	1,204.4	265.199	114	74	35.2	13.3	147.4	55.6	143	49

Source: BMA from monthly production report

Table 5-4 Irkol Project – Resource estimate Details of Block №1-№6

Block Name	Geological Sections	1-8-B	1-9-B	1-10B	1-11-C1	1-12-C1	1-13-C1	1-28-C1	1-29-C1	Total	Block Thickness *(m)*	
	Area/thickness (k m^2/m)	61.9/24.0	62.2/8.7	43.2/8.0	58.3/9.5	30.0/20.4	26.0/16.1	30.9/13.1	37.5/6.8	350.0/14.1		
	Uranium Total (t)	812	325	164	151	208	294	134	152	2,240		
Block 1	Block area/ore Tonnes (k m^2/kt)	19/829	5/78	–	11/179	–	–	17/402	–	52/1,488		
		Uranium Total(t)	252	26	–	27	–	–	75	–	15.9	380
Block 2	Area/Ore Tonnes (k m^2/kt)	–	5/78	4/56	26/449	–	–	5/124	4/41	44/747		
	Uranium Total (t)	–	26	15	68	–	–	23	14	146	9.4	
Block 3	Area/Ore Tonnes (k m^2/kt)	26/1,090	–	–	–	–	–	6/131	–	32/1,221		
	Uranium Total (t)	338	–	–	–	–	–	24	–	362	21.2	
Block 4	Area/Ore Tonnes (k m^2/kt)	4/180	19/302	16/236	18/299	–	–	–	6/71	63/1,089		
	Uranium Total (t)	52	101	62	45	–	–	–	48	308	9.6	
Block 5	Area/Ore Tonnes (k m^2/kt)	13/562	14/214	4/19	2/40	30/1,100	–	3/66	2/22	67/2,013		
	Uranium Total (t)	170	72	10	6	208	–	12	6	484	16.7	
Block 6	Area/Ore Tonnes (k m^2/kt)	–	19/302	20/292	2/30	–	26/739	–	25.5/301	92/1,665		
	Uranium Total (t)	–	100	77	5	–	294	–	84	560	10.1	

6 HISTORICAL TESTING PROGRAMME

6.1 Irkol Project

Uranium in situ recovery has a long and successful history in the Republic of Kazakhstan. The first field test work in Irkol project area started in 1970's.

Laboratory bench scale tests on a large number of samples and also field tests on uranium recovery were conducted to obtain in situ leaching parameters and evaluate the entire deposit. Process parameters for uranium extraction were determined by studying the geophysical and chemical characteristics of the ore, including permeability, mineralogy, chemical composition of solids and ground water.

6.1.1 Laboratory Test work

Each composite sample taken from Irkol Project for indoor leaching tests included 30 subsamples of massive conglomerates taken from Connie Senanayake group. The length of each sample was 5 cm. Common laboratory leaching tests were done to determine the major process parameters as below:

- Uranium recovery from ore to solution is 80%,
- Concentration of sulfuric acid in leach solutions is 12 – 15 g/L, and
- Uranium concentrate in solution is 52.56 mg/L

The major process parameters for 32 pieces of massive sandstone samples with a length of 5 cm from Coney Senanayake group were also determined as below:

- Uranium recovery from in situ ore to solution is 80%,
- Concentration of sulfuric acid in pregnant leach solutions is 12 – 15 g/L, and
- Uranium concentrate in solution is 95.81 mg/L

Laboratory test results for №4 and №113 drill core samples are summarized in **Table 6-1**.

Table 6-1 Irkol Project – Laboratory Test Results of Nº4 and Nº113 Drill Core Samples

Items	Unit	Original Samples		Composite Sample
Wells		113	4	4
Uranium grade	%	0.0298	0.0973	0.0644
Mud and silt content	%	13	14	12
Permeability coefficient (m/d)	Water	2.31	2	1.85
	Acid solution	0.23-1.47	0.07-1.3	0.008-0.48
Hydraulic Gradient		0.18	0.25	0.16
CO_2 content	%	0.93	0.48	0.46
Uranium in Pregnant Leach Solution	mg/L	42	61	87
Liquid to solid ratio	kg/t	7.8/1.47	16.6/1.47	5.1/1.47
Acid consumption	kg/kg	157	45	21

6.1.2 Project Field Test

During the detailed exploration work, a field test was performed from 1982 to 1985 aiming to provide design parameters (for instance, workload, production rate, raw material consumption, power consumption, equipment and product costs, etc.). The tests focused on geological exploration section Nº70-6 and Nº70-9 on Nº1 ore body on the B classified resource area.

It was concluded that the in-situ leaching uranium test programme was consistent with the actual production. 13 wells (3 production wells, 10 injection wells) were installed. The spacing between the rows of injection and production wells is around 50 m, whilst the spacing between wells in a row is 25 m. It involved 20 monitoring wells and a water injection hole. The wells used filter tubes (a diameter of 190 mm and depth of 437 to 447 m) installed in the middle of the sub-layer of Connie Senanayake group.

The key parameters determined for the uranium recovery during the wells field tests are as given in **Table 6-2**.

The pumping fluid rate was 9 – 13 m^3/h for extraction well and 2.5 – 4 m^3/h in the injection holes. The initial concentration (from June to September 1983) of sulfuric acid in uranium in-situ leaching is generally 13.6 to 29 g/L (pH<4); no additional oxidant was necessary. During the leaching stage from October 1983 to October 1985, the residual acid concentration in production solution was 7-22 g/L, and the typical concentration of uranium in production solutions was 161 mg/L.

Table 6-2 Irkol Project – Injection and Production Well Schematics for Block 2

Items	Unit	Block Center	Block Area	Maximum Leaching Area
Area	(m^2)	5,200	9,000	22,320
Thickness* grade		0.648	0.793	0.731
Bulk density	(t/m^3)			1.8
Uranium per square meter	(kg/m^2)	11.34	13.88	13.16
Uranium amount	(t)	58.9	125	293.7
Ore body thickness	(m)	9.94	11.82	9.85
Uranium grade	(%)	0.065	0.067	0.074
Average pregnant grade	(mg/L)		184	161
Uranium metal	(t)		52.1	111.2
Acid consumption per metal	(kg/kg)		78.6	–
Density	(t/m^3)		1.8	–
Extraction rate	(%)		80	37
Liquid-solid ratio			1.25	

A resultant 111.2 t of uranium were extracted in 690,700 m^3 solution with an average uranium content of 161 mg/L and a maximum of 350-520 mg/L (occurred in November-December 1983), then decreased to 40-45 mg/L in October 1985.

The test reports were jointly prepared by Red Hills Exploration Institute, Leninabad Chemical and All-Russian Joint Chemical Companies. Some practical parameters for situ leaching design as shown in **Table 6-3** were recommended.

Table 6-3 Irkol Project-In situ leaching parameters (whole deposit)

Mainly leaching process indicators	Unit	Recommended
Leach recovery	(%)	80
Average sulphuric acid concentration for leaching	(g/L)	13
Pumping solution rate	(m^3/h)	10
Liquid-solid ratio		1.62
Average uranium in pregnant leach solution	(mg/L)	61
Unit acid consumption	(kg/kg U)	213
Acid in rock	(%)	2.1
Resin adsorption efficiency	(%)	95

6.1.3 Historical testing conclusion

Extensive test work has been performed on extracting uranium pregnant leach solutions from the test well fields. Laboratory tests and field tests were conducted in accordance to procedures, test results truly reflected consistence between the geological tests and characteristics and hydrogeological conditions of the ore blocks. The parameters obtained from in situ leaching process provide sound valuable basis in the design work of the whole deposit.

The tested block has indicated variable hydro-geological conditions throughout the whole deposit (Nº3, 2 and 1 ore body). Moreover, an impervious floor in the tested ore block was observed, while as in the whole deposit there is no obvious impermeable floor, which will reduce the uranium in the pump solution.

As the deposit head grade has not been sufficiently represented among the whole deposit (average grade 0.042% U) in the laboratory testing and in situ testing (average grade 0.075% U), modification of the processing factors is necessary to reflect the real practice. The assessment of the testing representatively should consider many factors, such as ore grade, ore body thickness, mineralization and rock permeability, square meters of uranium, seam depth, CO_2 levels and groundwater locations.

The leaching tests resulted in a variation relationship of the pregnant grade and the extraction during the leaching process as shown in **Figure 6-1**.

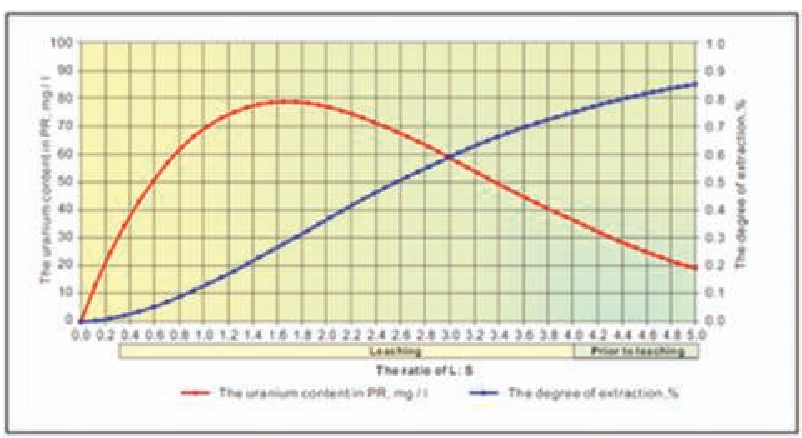


Figure 6-1 Irkol Project – Relationship between pregnant grade and extraction established by test work

6.2 Semizbay Project

The leaching tests on Semizbay-Uranium deposits commenced in January 1984, the acid leaching work commenced in September 1984, and solution handling commenced in January 1985.

The leaching testing of Nº1 block commenced in March 1985, while from 1986 to 1987, the production of block Nº2, 12, and 3 commenced with the block Nº4 being developed. These block sections are verified to be in a similar geological condition. Nº12 block presents slightly different conditions and relatively higher uranium grade and multi-layered seam, the testing of Nº12 block is for the purpose of gaining additional meaningful information for the geological parameters. During 1988 to 1989, the testing leaching of Nº20, 21, 22, 23, 24, 51, 54 blocks was gradually put into production.

By deciding mineralization and geological parameters, mineralization within Nº3 is close to other sections (Nº1, 2, 4, 5), and is considered representative of the whole deposit. The results of comparison of design and actual testing results are shown in **Table 6-4**.

Table 6-4 Semizbay Project – Comparison of Design and Actual Testing Results

			Testing Results			
Items	**Unit**	**Planned Average**	**Unit 2**	**Unit 1**	**Block Nº1**	**Block Nº20**
Average ore body thickness	m	4.2	3.9	3.8	4.4	5.2
Head grade	%	0.079	0.088	0.087	0.076	0.080
Ore body thickness	m	14.1	7.2	13.0	17.9	9.8
Uranium by area	kg/m^2	4.7	3.9	4.0	3.5	6.2
Network	m*m	10x20	10x20	12.5x25	12.5x25	12.5x25
Liquid-solid ratio		2.5	4.1	11	5.1	1.6
Duration time	d	340	635	1,392	1,144	329
Pregnant grade	mg/l	64/5	52/6	37/3.6	55.6/3.2	79.0/2.4
Acid consumption	kg/kg U	250	227.5	354.2	206.7	189.5
Acid consumption	kg/t ore	40	46.4	73.4	33.34	23.5
Uranium recovery	%	81	61.4	170.3	136.8	50.7

Some indicators have been concluded in testing as below:

- Drilling grid of 12.5 mx 25m
- Liquid to solid ratio of 2.5
- The overall extraction 70% for whole resource deposit and total recovery of 85% for the minable reserve
- Average pregnant uranium grade t is 45-55 mg/L
- Average acid content in leaching is 10-15 g/L
- Total acid consumption is 190-200 kg/kg uranium, and
- Operation duration time is 23-36 months

7 ISR MINING AND PROCESSING

ISR mining is conducted to produce uranium bearing pregnant leach solution, which goes to settling ponds prior to the main processing plant for production of uranium as yellow cake. The uranium is leached with sulfuric acid without addition of an oxidant.

In the ISR leaching practice, the pregnant solution is pumped to the treatment plant where uranium is recovered via ion exchange, followed by precipitation with hydrogen peroxide. If necessary a solvent extraction purification stage can be added. The optimum design is often unique for each ISR operation.

Well field development practices uses an optimal pattern design to distribute barren lixivant (a solution of sulfuric acid and water) to the well field injectors, which carries the dissolved uranium back to the main processing plant or satellite plant. The satellite plant produces uranium loaded ion exchange resin which is taken to the main processing plant for processing.

The Irkol deposit was discovered in 1971, and exploration work was resumed in 1975-1977. Further exploration at the Irkol deposit was conducted in 1978-1981, followed by detailed exploration. The first field test work started in 1970's. During the detailed exploration work, a field test was performed during 1982 to 1985 aiming to provide operational design parameters.

The results of predictive calculations of basic geotechnical parameters were reflected in processing design. Based on the 2012 Feasibility Study report, the proposed mining plan of Irkol mine plan involves right bank of the river № 1, 2, and 3 orebodies while № 4 and 5 ore bodies was not included in the plan.

The initial well fields of Irkol mine involved 8 ore blocks on the middle of № 1 ore body. According to the current Irkol mining plan for in situ leaching well fields, the annual production rate for the processing plant is 711 t uranium (1.85 million lb U_3O_8).

Commercial operations at the Irkol Mine commenced in 2007 using the in situ recovery (ISR) extraction method. Full production capacity was achieved in 2010. Irkol Mine produced approximately 711.8 tonnes and 654.4 tonnes of uranium in 2012 and 2013, respectively.

Exploration activities in the Semizbay region have been undertaken since 1960. The Semizbay deposit was discovered in August 1973, and was the first and only commercial hydrogenous type uranium deposit occurring in unconsolidated riverine sediments. Testing of in-situ leaching mining was conducted from April 1984 to 1989.

The mining design commenced in 2006 and construction of Semizbay Project was completed in October 2007. The treatment plant was commissioned in 2009. The Semizbay Project produced approximately 508.6 tonnes and 507.0 tonnes of Uranium in 2012 and 2013, respectively. The proposed mining plan of Semizbay Project involved № 1, 2 ore body while № 3, 4, 5, 6 had not been included in the design. The overall design of Semizbay Project has an annual production capacity of 508 tonnes of uranium (1.32 million lb U_3O_8).

The total historical production from 2007 to 2013 is shown in **Table 6-5**.

Table 6-5 Irkol and Semizbay – Historical Production Tonnes, 2007-2013

Mine Name	Items	Unit	2007	2008	2009	2010	2011	2012	2013
Irkol	Leached Uranium in Pregnant solution	t	–	–	516.7	747.3	655.4	721.0	663.1
	Processed Uranium in U_3O_8 Product	t	50.0	300.0	502.1	750.0	651.5	711.8	654.4
Semizbay	Leached Uranium in Pregnant solution	t	0	0	15.6	230.1	416.4	532.0	521.6
	Processed Uranium in U_3O_8 Product	t	0	0	8.5	224.0	409.9	508.6	507.0
Total	Leached Uranium in Pregnant solution	t	–	–	532.3	977.4	1071.8	1253.0	1,184.7
	Processed Uranium in U_3O_8 Product	t	50.0	300.0	510.6	974.0	1061.4	1220.4	1,161.4

As at 31 December 2013, 300 employees and 33 casual and contract workers were engaged in the operation of the Semizbay Project and the Irkol Project has 204 employees and 23 casual and contract workers.

7.1 Mining Method

Two basic types of leaching systems are used in the world today, acid leach and alkaline leach. In an acid leach system, the dilute sulfuric acid is normally used as the complexion agent and to generate an oxidant from iron minerals present in the deposit. In an alkaline system, bicarbonate, either as a direct addition or as liberated from the reaction of carbon dioxide and carbonates is used as the complexion agent. Both Irkol and Semizbay projects employ the acid leach system.

ISR extraction is conducted by injecting a suitable leach solution into the ore zone below the water table for oxidizing, complexing and mobilizing the uranium. Production wells were constructed for recovering the pregnant leach solutions. The uranium bearing leach solution is pumped to the surface for further processing. ISR leaching well site facilities mainly includes the well field production wells, monitoring wells and surface facilities.

7.2 In situ leaching well arrangement

In situ leaching wells configurations typically includes grid and hybrid as well as combined types. The configurations pattern depends on the ore body shape and location, depth as well as hydrogeological conditions.

7.2.1.1 Irkol Project

In this case, the Irkol Project uses a variety of well configurations patterns with the technical indicators as shown in **Table 7-1**. In the two initial mining areas, the grid style was applied as shown in **Figure 7-1**.

Table 7-1 Irkol Project – Wells Configurations

	Raster		**Determinant**	
Irkol Deposit	**Head**	**Wing**	**Head**	**Wing**
Line spacing between extraction well and injection well (m)	60	60	45	45
Well spacing of extraction wells (m)	30	25	90	90
Well spacing of injection wells (m)	25	15	45	40
Area of leaching unit (m^2)	3,600	3,000	5,300	5,300

In the initial mining area, the upper and lower wings of the ore body were respectively equipped with filtration tubes for solving the great gap between the upper and lower wings of the larger ore body. The layout of the development wells of upper and lower wings is consistent with a constant 10 m space between them.

In both of the first mining areas, due to the distance between the lower wings up to 20-30 m, the upper and lower wings were installed with two ore mined filter tubes; the development and arrangement in the form of lower wing seam drilling is consistent with the position of each other on the same plane.

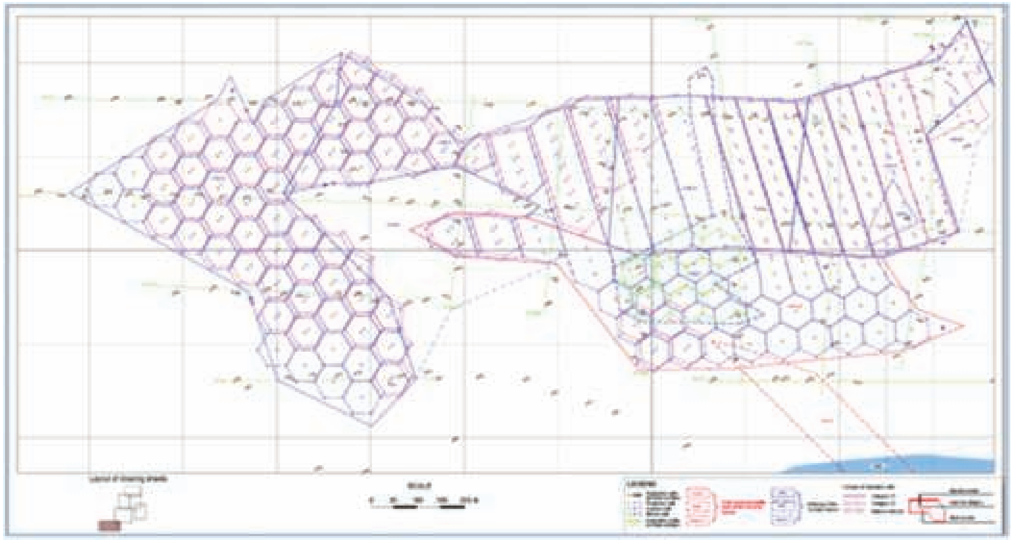


Figure 7-1 Irkol Project – projected wells configuration plan

7.2.1.2 Semizbay wells

The Semizbay Project uses raster well configuration patterns with the technical indicators as shown in **Table 7-2** and **Figure 7-2**. The spacing of extraction wells and injection wells are 25 m and average well depth is 180 m. In the two initial mining areas, the grid style was applied.

Table 7-2 Semizbay Project – Well Configurations

Semizbay Deposit	**Raster Head**
Line spacing between extraction and injection well (m)	21.65
Well spacing of extraction wells (m)	25
Well spacing of injection wells (m)	25
Area of leaching unit (m^2)	1,623.75

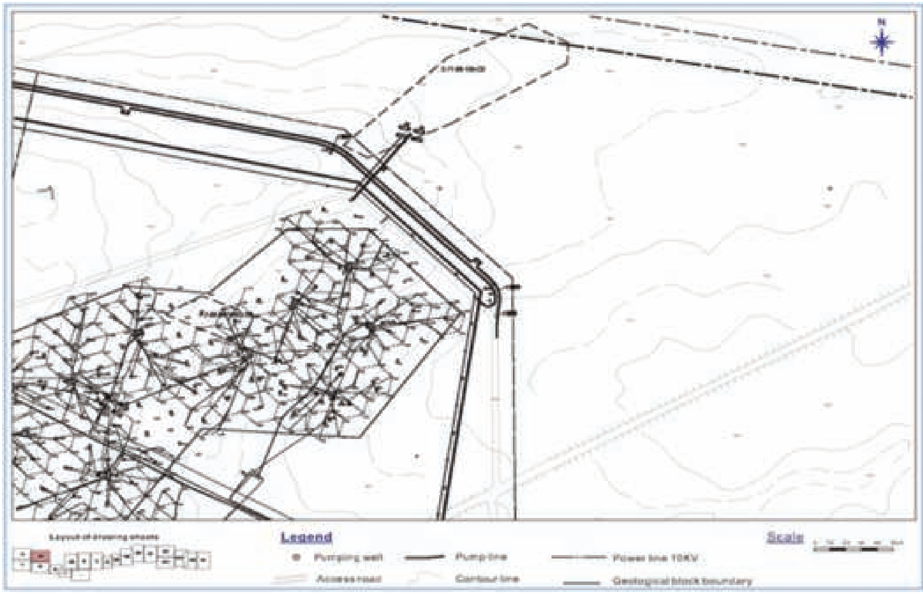


Figure 7-2 Semizbay Project – projected wells configuration plan

7.3 Well fields

7.3.1 Irkol

The Injection and Extraction and observation wells criteria of Irkol Project area are demonstrated in **Figure 7-3**. Well drilling of Irkol Project is undertaken by contractors "Wall Markov Geological Team", which are subjected to some detailed specifications as following.

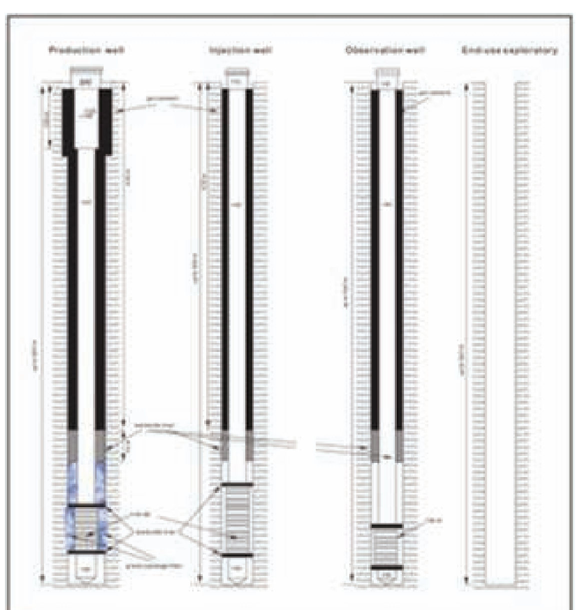


Figure 7-3 Irkol Project – Injection and extraction and observation wells

The technological wells are approximately 428 m deep on average at diameter of 130 mm. The core is recovered in the mineralization area but not in the non-mineralization area.

Drilling mud (specific gravity of 1.15-1.2 t/m^3) and yellow mud (specific gravity of 1.05-1.08 t/m^3) are washed in the mineralization area. After drilling wells were cleaned, testing such as apparent resistivity logging, logging potential, current induction logging and gamma logging were conducted. Gamma logging is practiced in all drill holes to determine the mineralization boundary and uranium measurement.

Situ leaching wells use a single tube in which a gravel filter tube and cement ring sealing is set up in the upper impermeable layer. The colloidal cement grout is filled in space from the cement ring to the pipe.

The orifice tube head were equipped in all extraction orifices with submersible pumps. The piping system consists of larger main pipelines fed by small lines from the production areas. Drip samplers are used to collect solution samples at the well houses.

Construction of wells is based on an independent engineering design and in accordance with the requirements in terms of working performance as below:

- The deviation distance between the mouth and the bottom-hole on a horizontal plane should not exceed 1 meter by 100 meter depth, and totally no more than 4.7 m,
- System tightness (continuity) of the casing. It is verified during the construction of wells in their operation by the current logging between the movable probes in the well and fixed on the surface,
- Spacing the filter in the borehole to the height of the upper and lower edges of the filter during the construction of the well logging. The depth deviation of filter is no more than 1 meter in one direction,
- Suspended solids in the pumped solution should not exceed 50 mg/L,
- Duration time for development wells to achieve a stable flow rate should be at least 8 hours. Mastering should be started for less than 72 hours at the end of construction,
- Wellhead slice casing must be provided on the head part and not less than 0.3 meters to the ground, and
- Casing materials must be integrated during operation at least for three years under current geological nature of the deposit.

The main materials for installing wells employ PVC195 × 14-tube, PVC90 × 8-tube, Φ-118 type filter tube, Φ-110 type filter tube, PVC90 × 8 sedimentation tubes, SCHAPP-50I-pressure hose, port and cement hole, and clay mud. The main equipment for installing wells use Φ-1200 rig, CA-320M type slurry injection, YCP-50-type grout mixer, AC-5M2 type slurry tanker, logging station and PV-10E mobile air compressor.

7.3.2 Semizbay

Construction of technological wells of Semizbay Project was based on independent technical designs which are in accordance with the requirements of the operational characteristics as following:

- The projection distance between the mouth and the bottom-hole on the horizontal plane should not exceed 1 meter by 100 meter depth, in this case is not more than 1.2 m,
- Fixed height of the upper and lower edges of the filter in construction,
- Suspended solids in the pumped solution is estimated to not exceed 50 mg/L,
- Length of settler of production wells should be 5 to 10 m,
- Duration time for development wells to achieve a stable flow rate is at least 8 hours,
- Mastering should be started for less than 72 hours after the end of construction, and
- Wellhead slice casing must be provided on the head part and is not less than 0.3 meters to the ground.

In the construction of wells, the main materials including PVC-200 × 14 mm × 195mm tube or PVC-U PP-lengths 60 m tube, IPA 110/18 mm or 90mm×NPVH PP, length of about 50 m with filters CDP-120 (BKD-118) were employed as extraction wells casings. As for injection and observation wells, HDPE 110/18 mm or PVH PP × 90 mm at length of about 110 m CDP-120 (BKD-118) filters were used. The detailed well criteria of Semizbay Project are shown in **Figure 7-4**.

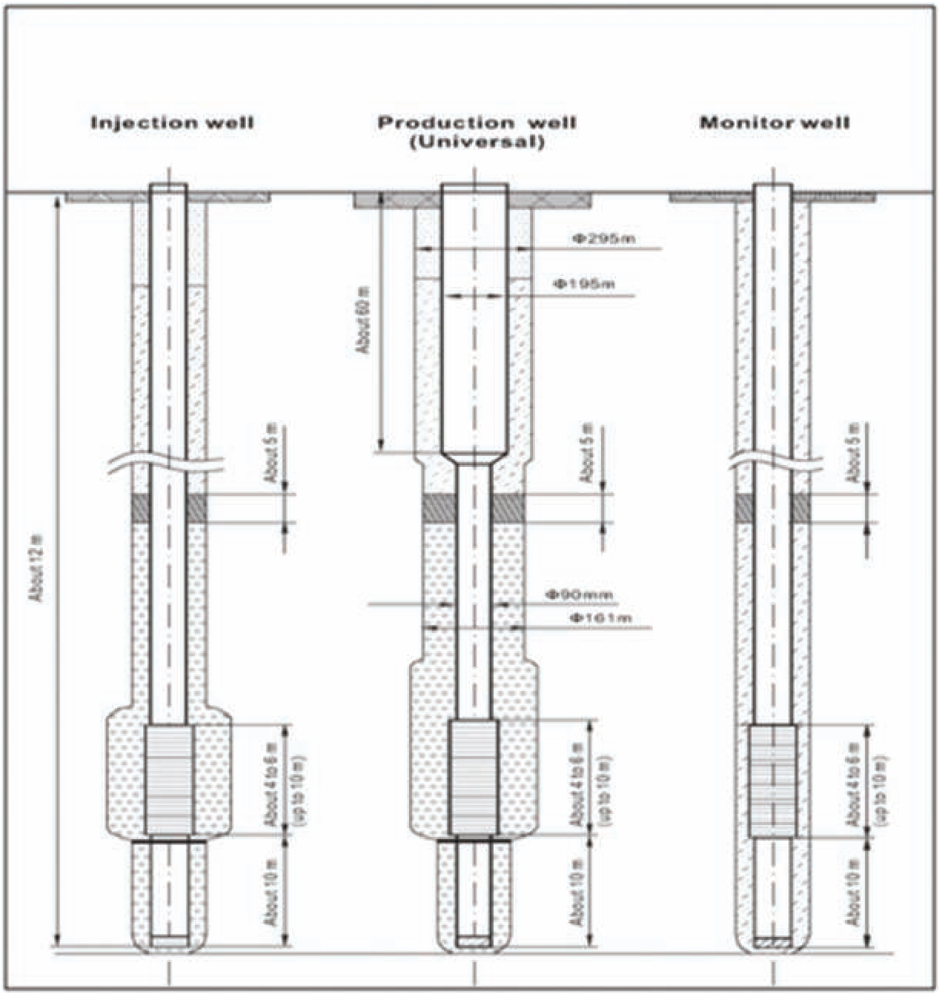


Figure 7-4 Semizbay Project – Injection and extraction and observation wells Schematics

7.4 Geophysical Exploration Wells

Geophysical exploration wells (GIS) are conducted during the development process. BMA reviewed the information on hundreds of the GIS for production wells.

The logging is currently carried out for all wells at least once a year to determine the integrity of the casing. Induction logging is conducted in the production and observation wells once per month at the beginning of acidification and quarterly thereafter to monitor its course.

After acidification, the gamma logging is conducted at the request of the GHB of Irkol Mine to determine the migration of productive solutions in the presence of a defect of the casing above and below the ore horizon once a year to control the spreading of solutions in areas beyond the impermeable horizon.

7.5 Acidification

Acidification is a continuous process aimed at transferring uranium into solution and the enrichment of solutions, creating solutions for pumping within a suitable geochemical environment of the uranium-bearing aquifer.

Based on previous experience, at the initial stage of acidification the concentration is stepwise increased to 20-25 g/L in the solution. In the stabilization stage the acidity of solutions remain at the level of 20 g/dm^3 before reaching the maximum of the pregnant uranium content. After completion of acidification, the acidity of solutions gradually decreases to 10-8 g/L.

Generally, at the completion stage of acidification, CO_2 for carbonate ores and their host rocks are less than 1.5% (carbonate less than 0.64% for orebody 1, 2 and 3 of Irkol project). In accordance with the requirements of the applicable "Instructions for ISR Uranium", the pregnant uranium grade of most extraction wells should be above 30 mg/L, and the pH in pump solutions should reach 2.5.

Specific time for completion of acidification is determined individually for each block (area).

7.6 Observation and balance testing

Observation and testing of the wells are conducted to control the pregnant solutions grade and oversee the chemistry of uranium leaching. At the initial stages, in preparation for testing, parameters tested include suspended solids, pH, uranium levels and measured static level etc.

From observations of volumes of solutions block by block, costs of uranium mining and leaching reagent (sulfuric acid) are accounted for, as well as operational control.

7.7 Leaching process

Acidification in the leaching process is classified into several stages including initial leaching, final leaching and decommissioning phase, depending on the concentration of the acid.

Generally, the sulfuric acid solution is pumped into the mineralized zone through a network of injection wells and extracted by production wells. While passing through the ore zones, the leach solution dissolves the uranium which is pumped to the surface in the pregnant leach solution. The below are typical conditions and process in leaching. The actual operation would differ depending on each block for different deposits.

- At the acidification stage, the sulfuric acid concentration remains typically at 5-20 g/L for three months and acidification is completed when uranium grade is up to 40 mg/L and pH< 3. Prior to the acidification, all wells should be washed with water or barren water.

- At the active leaching stage, the uranium is dissolved into the solution which is pumped to the surface. The acid concentrate remains 6-8 g/L, pH=2-2.2 and Eh =400-500 mV.

- After 70-80% of the uranium has been dissolved, the acid in the solution decrease to the final barren, then non-acid solution is injected.

- After the leaching completed, a suitable solution is employed for washing the block. Moreover, the underground environment should be restored.

7.8 Well abandonment

Upon completion of uranium mining all wells will be eliminated except some observation wells in the network for long-term observations in the recovery process of halo reservoir water under natural demineralization.

7.9 Rehabilitation

Various impurities are pumped to a depth of 100 m by airlift pumping – washing treatment is most effective, as a supplement the following methods can be used.

- Swabbing – pumping wells is carried upwards.
- Pneumatic impulse effect – a feature of this method is the impact on wells in the immediate area filters.
- Chemical treatment – the essence of this method consists in the destruction of bridging structures by treating chemicals (acids, alkalis, etc.)
- Furthermore, other hydrodynamic and ultrasound methods can be used.

Condition of the wells is monitored periodically by GIS methods which are performed annually for complete inventory of wells.

7.10 Sulfuric Acid Amounts

The amount of required sulfuric acid in acidification is based on many factors such as the schedule of mining and preparatory work, the average flow rate of pumped wells and their number on each block (on site), time for acidification, acidification mode as well as acidity of the working solutions.

7.11 Processing Facilities

7.11.1 Summary

In 2007, the Irkol commercial facility was commissioned where the processing of solutions from Block 1 was started. Full production was commissioned in 2010. The present facility consists of a main processing plant with an ion exchange (IX) capacity of 711 t uranium per year.

The Semizbay processing plant in the overall design has an annual production capacity of 508 t uranium (1.32 million lb U_3O_8). The construction of the entire treatment plant was commissioned in 2009; 50 t uranium production was achieved in the 2008 trial production. The existing processing facilities overview is present in Table 7-3.

Table 7-3 Existing Processing Plant Overview

Name of Plant	Design Pregnant Grade	Annual Capacity	Products Type	Operating Status
	Uranium mg/L	*tpa uranium*		
Irkol	45	711	"Yellow Cake"*	Operating
Semizbay	50	508	Desorbate**	Operating

Note: 8000 operating hours per year

* "Yellow Cake" is further refined to U_3O_8 as final salable product

** Desorbate is further processed to "yellow cake" and then U_3O_8

All the yellow cake is further report and refined in contracted refinery plant which located in Wulibing city into U_3O_8 for sale.

BMA understand the Company currently produce a final saleable product U_3O_8 containing approximately 711 tpa contained uranium (1.85 million lb U_3O_8) for Irkol Project and 508 tpa contained uranium (1.32 million lb U_3O_8) for Semizbay Project and do not produce any further refined uranium concentre products (e.g. approximately 700 t for Irkol Project and 500 tpa for Semizbay Project) in any downstream refinery plants.

7.11.2 *Flowsheet*

The flow sheet of process facility is shown in Figure 7-5.

During the site visit, BMA inspected the processing facilities of Irkol and Semizbay Project. The process flow sheet for Irkol and Semizbay Project appears to be similar and divided into major unit processing areas within the uranium recovery facility as follows. The main difference between them includes:

- The desorbing process route using sulfuric acid at Semizbay Project and ammonium nitrate at Irkol Project.

- In Irkol Project, the uranium-bearing pregnant solution is processed in a mine-site processing facilities which straightforward produced "yellow cake". In the Semizbay Project, the desorbate at grade of approximately 30 g/m^3 concentrated on leaching site is tanked and transported by 120 km to the contracted "yellow cake" plant located in Stepnogorsk city for further processing to "yellow cake". BMA did not inspect the plant which is not owned by the Company. It is notes that the processing costs from desorbate to U_3O_8 in Semizbay Project are higher than that in Irkol Project.

BMA was advised during site visit, the overall recoveries for processing the desorbate solution to U_3O_8 is at a range of 96 to 98%.

- Main Processing Plant: in the processing plant, an anion type ion exchange unit is employed to extract soluble uranium from the well field.

- Elution Section: in this unit, uranium is flushed from saturated resin and, in sequence regenerates the ion form and loading capabilities of the resin. A relatively concentrated aqueous uranium solution (eluate) is produced after nitrate desorption is saturated. The uranium anion exchanger in devices, such as sorption-desorption circuit using KFOR-1500, is used to obtain a uranium-bearing desorbate (Specification ASTM-C967-02a).

- The purified uranium solution is chemically treated to create insoluble uranium precipitate, thickened, filtered and dried producing the final uranium product as yellow cake, which is packaged for shipment.

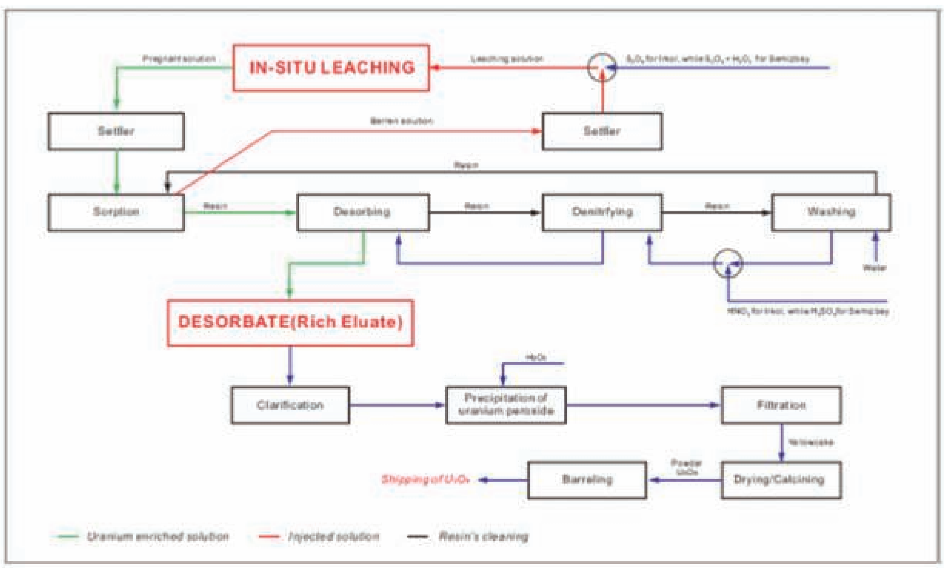


Figure 7-5 Processing Flowsheet Plan

Adsorption and desorption the pregnant solution with solubilized uranium extracted from the well is collected into two ponds (two 300 m^3 for Semizbay Project and two 500 m^3 for Irkol Project) and is pumped to the ion exchange circuits for adsorption. In the resin adsorption column (8 units for Irkol Project and 8 units for Semizbay Project), once the resin is fully loaded with uranium the column is isolated from the continuous circuit and the resin (specification Amberlite IRA-910CI, Lematitmp-600ZIU) is transferred to an empty elution vessel. After the column has been emptied, another batch of regenerated barren resin from an elution vessel is transferred back. At this time, the column is put back into service as the tail vessel in 3 sets for Irkol Project and Semizbay Project respectively to restart the uranium loading cycle. The barren solution is refortified with sulfuric acid and recycled to the well field for leaching.

Stripping and Denitrification In the elution or stripping process, the adsorbed uranium on the resin is removed in the loading cycle using ammonium nitrate in Irkol Project or sulfuric acid solutions in Semizbay Project. The loaded resin is contacted with ammonium nitrate solution/sulfuric acid solutions in various batch stages. The elution section yields a pregnant eluent (30 g/L uranium as advised in site visit) stored in pregnant eluant tanks.

The resin is denitrified into a sulphite or ammonium nitrate for re-use. The denitrification solution is a strong acid solution comprising recycled barren solution, 93% sulfuric acid and process water.

The pregnant eluent of Semizbay Project is transported to a contracted "yellow cake" plant for further processing to "yellow cake". BMA has not inspected it while it is considered to have similar process route to that of Irkol Project as illustrated below.

Precipitation and Thickening and Dewatering the pregnant eluant is fed to the precipitation circuit. Hydrogen peroxide is added to the precipitation tanks at a rate depending on the uranium content for precipitation (eg impurities element Al, Ca, Cl, Fe, etc.). The anhydrous ammonia is employed to adjust the pH of this stream during precipitation. The precipitated slurry from the precipitation circuit is reported to a thickener. The yellow cake slurry is thickened and is pumped to one of two filter presses for additional washing prior to dewatering.

Filtration The yellow cake slurry by the thickener is then fed to the filter presses. After thickening, the thickener underflow slurry is pumped using an automatic cycle to filter presses for further washing to remove undesired dissolved salts.

Drying and Packaging the dewatered yellow cake then reports to one of rotary vacuum dryers where the final yellow cake product is produced. The dryers are totally enclosed via specific measures during the drying cycle to assure zero emissions.

7.11.3 Processing equipment

The main equipment in the processing circuit composes of 8 units absorption column and 3 desorption column for both Irkol and Semizbay Project, as well as various precipitation tanks, tanks for sulphuric acid storage, pumps, thickener, filters and transportation trucks.

During the site visit, BMA was informed that the processing capacity of facilities or equipment for Irkol and Semizbay Project were designed at 711 tpa (1.85 million lb U_3O_8) and 508 tpa uranium (1.32 million lb U_3O_8) prospectively, by treating a average pregnant solution of approximately 46 to 60 mg/L in design.

However, the actual pregnant solution grade has decreased to approximately 38 and 34 mg/L in 2013 in Irkol and Semizbay Project prospectively. A lower pregnant grade would have resulted in an increasing volume of solution required for treatment, more the grade lower; more volume of solution is required for processing.

During the site visit, BMA was advised the actual utilization of equipment of the two plants would have exceeded 100% of design. Some new additional equipment (including resin column units) has been planned to be erected further to meet the processing requirement. BMA believes the new additional columns would eliminate the current over-product status.

7.11.4 *Site assaying and production control*

BMA inspected both the Irkol and Semizbay Project 'assaying laboratory that for leaching and process control in terms of instrumentation such as weight meter, sample cutters for taking samples for assaying, mass balancing and performance evaluation. Samples are taken by handling at two times per day sampling of composites at extraction and injection wells in site pumping station, as well as at processing plants in terms of pregnant and barren solution, absorption, desorption and products etc.

A comprehensive quality management system was implemented using modern technical standards with a new approach for assaying uranium. Based on the analysis of the defective performances in the leaching and processing, measures to eliminate negative influences are developed and implemented.

All the elements assaying were conducted in each site laboratory in both the Irkol Project and Semizbay Project.

8 HISTORICAL PRODUCTION AND MINE DEVELOPMENT

BMA reviewed the monthly production reports (2009 to 2013) for both the Irkol and Semizbay projects prepared by Semizbay– U LLP. The reports appear to be properly recorded and calculated. In the data provided, the breakdown production statistics for each month and each block, as well as total materials consumed had been detailed monthly and yearly. The base data and records for production and costs statistics were provided, suggesting the use of a good statistics procedure and work manner.

Based on the consistent and tractable records observed, BMA considers the figures in these reports and statistics are reliable for reporting.

Unsurprisingly, both projects were using short term mining planning monthly and yearly and long studies for future 3 years for guided mining production. The plans were generally being executed, and if the actual performance did not match, an analysis was done to explain the reason. Based on data review, actual production items are generally in line with plans. Monthly analysis as a technical guideline was conducted regularly for purpose of discovering material issues for management.

In conclusion, the key production data provide a solid basis for the projects' nature. Using these production and costs basis, BMA has valid mining and processing modifying factors that were derived from the 2012 Feasibility Study reports for Irkol and Semizbay projects.

The scheduled production is expected to be achievable and relies on the successful implementation and management of the leaching process. The operating issues and findings were summarised below.

- Cold weather at site in winter season causes serious freezing of wells and halts pumping of liquid resulting in lower uranium content in pregnant solution. It requires well preparation and effective measure for prevention of freezing especially in winter weather.

- ISR mining requires large quantities of sulfuric acid due to the relatively high levels of carbonate in the ore bodies. Because some new supply contracts often take place in April of each year, the contractors are not willing to supply sufficient acid in advance in January, February and March of each year so it caused untimely acid supply during this time. The acid transportation in bad weather also had caused the under production of well fields. However, in the Republic of Kazakhstan, a number of new sulfuric acid plants have a commenced production and several have been planned recently. In addition, sulfuric acid can be sourced from Russia.

- At the both Irkol and Semizbay Project, delay of the drilling work by drilling contractor or too long acidification duration time are potential risks. The exploration and drilling work were undertaken by outsourced manpower which sometime may cause ineffective or untimely service. Thus, the sound engagement in management of contracts and materials supply and technical support is essential.

- Further more, at the Semizbay Project, the lack of technical expertise and engineers taken place in the Initial years and would be eliminated as the production ramp up. It seems no such type of risks in Irkol Project.

8.1 Irkol Project

8.1.1 Historical Production

Table 8-1 shows that a total of 1,618 wells had been developed while currently only 1,396 wells are active to achieve the scheduled uranium production per year. In some years more wells exceeding the planning were re-drilled, which may be due to cease and breakdown of some wells. The maintenance and reconstruction of some wells resulted in extra costs as well, increasing operating costs. In the initial mining years, more new wells were developed than planned.

Table 8-1 Irkol Project – Historical Wells Construction 2009-2013

Items	2009	2010	2011	2012	2013	Total
Total Well Constructed	253	410	415	303	237	1,618
Operational Well	248	370	385	211	222	1,436
New Extraction well	70	102	133	62	82	449
New Injection well	178	265	247	149	136	975
Observation well	0	3	5	0	4	12
Exploration well	5	23	20	20	9	77
Re-drilled well	0	17	10	72	6	105
Extraction	0	17	8	60	5	90
Injection	0	0	2	12	1	15
Active well	380	587	937	1263	1,396	–
Extraction	106	149	245	288	364	–
Injection	274	438	692	975	1032	–

Source: BMA summary based on monthly production report

The production performance of Irkol Project over 2009-2013 is shown in **Table 8-2**, which suggested a constant uranium production in the first years with a maximum of 711 t uranium(1.85 million lb U_3O_8) in 2010 and reaching the design capacity.

However, the pregnant solution grade decreased from 81.6 mg/L in 2009 to 38.6 mg/L in 2013. The low pregnant solution grades result in increasing processing costs. Therefore, a relatively higher pregnant solution uranium grade is critical in terms of production rate and grade.

BMA notes that the field testing has achieved a pregnant solution grade of 61-68 mg/L. In the experience of other similar deposits located in the Republic of Kazakhstan, eg. North Carla Moron mine, a pregnant grade of 44-70 mg/L is practiced.

The overall uranium recovery for processing solution to yellow cake from 2009 to 2013 was in the range of 97.6%-100%, which is common in ISR uranium leaching industrial processing.

Table 8-2 Irkol Project – Historical Production 2009-2013

Items	**Unit**	**2009**	**2010**	**2011**	**2012**	**2013**
Extraction Flow	m^3/h	8.3	8.4	6.2	7.4	4.6
Injection Flow	m^3/h	3	2.8	2.2	2.2	2.3
Acidity						
Acidity in Acidification	g/L	25	25.1	15.7	17.3	21.0
Acidity in Leaching	g/L	9.7	8.8	6.6	6.3	4.6
Pregnant solution grade	mg/L	81.6	76.3	51.54	45.4	38.6
Uranium in solution	t	516.7	747.3	655.4	721.0	663.1
Recovery from solution to yellow cake	%	97.6	100	100	99	98
Uranium in yellow cake	t	506.1	745.8	655.4	715.0	656.2
Product uranium in U_3O_8	t	502.1	750.0	651.5	711.8	654.4

Source: BMA summary based on monthly production report

The production block numbers developed from 2009 to 2013 are listed in **Table 8-3** which shows approximately 5 to 8 new blocks were developed in each year which ensured sufficient production rate. It is noted that as longer leaching duration times were used than planned, more wells were developed than planned.

Table 8-3 Irkol Project – Productive Active Blocks 2009-2013

2009	2010	2011	2012	2013
№ 1	№ 1	№ 1	№ 1	№ 1
№ 2	№ 2	№ 2	№ 2	№ 2
№ 3	№ 3	№ 3	№ 3	№ 3
№ 4	№ 4	№ 4	№ 4	№ 4
№ 5-1	№ 5-1	№ 5-1	№ 5-1	№ 5-1
№ 5-2	№ 5-2	№ 5-2	№ 5-2	№ 5-2
№ 6-1	№ 6-1	№ 6-1	№ 6-1	№ 6-1
№ 6-2	№ 6-2	№ 6-2	№ 6-2	№ 6-2
№ 8-1	№ 8-1	№ 8-1	№ 8-1	№ 8-1
№ 8-2	№ 8-2	№ 8-2	№ 8-2	–
№ 8-3	№ 8-3	№ 8-3	№ 8-3	№ 8-3
№ 8-4	№ 8-4	№ 8-4	№ 8-4	№ 8-4
№ 7-1	№ 7-1	№ 7-1	№ 7-1	–
№ 7-2	№ 7-2	№ 7-2	№ 7-2	№ 7-2
№ 7-3	№ 7-3	№ 7-3	№ 7-3	№ 7-3
	№ 7-4	№ 7-4	№ 7-4	№ 7-4
	№ 9-1	№ 9-1	№ 9-1	–
	№ 9-2-1	№ 9-2-1	№ 9-2-1	№ 9-2-1
	№ 9-2-2	№ 9-2-2	№ 9-2-2	№ 9-2-2
	№ 9-3-1	№ 9-3-1	№ 9-3-1	№ 9-3-1
	№ 9-3-2	№ 9-3-2	№ 9-3-2	№ 9-3-2
	№ 9-4-1	№ 10-1-1	№ 10-1-1	№ 10-1-1
	№ 9-4-2	№ 10-1-2	№ 10-1-2	№ 10-1-2
		№ 9-4-1	№ 9-4-1	№ 9-4-1
		№ 9-4-2	№ 9-4-2	№ 9-4-2
		№ 10-2-1	№ 10-2-1	№ 10-2-1
		№ 10-2-2	№ 10-2-2	№ 10-2-2
		№ 8-5	№ 8-5	№ 8-5
		№ 8-6-1	№ 8-6-1	№ 8-6-1
		№ 9-6	№ 9-6	№ 9-6
			№ 8-6-2	№ 8-6-2
			№ 11-1	№ 11-1
			№ 11-2	№ 11-2
			№ 11-6	№ 11-6
			№ 11-7	№ 11-7
				№ 11-5-2
				№ 11-3
				№ 11-5-1
				№ 11-4
				№ 11-8
				№ 9-7

Source: BMA summary based on monthly production report

The performance of each active industrial block is summarized in **Table 8-4**, which shows, up to 2013, around 6,196 t uranium has been developed via 41 blocks or sub-blocks, while around 3,637 t has been extracted in the previous years.

It was noted that Nº 8-2 and Nº 7-1 has operated for 4 years and Nº 9-1 has operated for 3 years, all beginning in 2009 and not completed until 2013. The three wells have contributed an overall extraction of 90% with additional six wells with extraction in excess of 80%.

It was noted that while some of the minimum content is as low as 10 mg/L which is much lower than the planed cut-off uranium content of 20 mg/L.

Table 8-4 Irkol Project – Block Leaching performance in 2013

Blocks	Calculated Ore Tones *(Kt)*	In-situ Uranium *t U*	Pregnant solution grade by end of 2013 *mg/L*	Extracted Uranium *t U*	Extraction by 2013 *%*	Acid consumption *Kg/kg U*
Nº 1	1,516	365.8	26.8	238.3	65.1	45
Nº 2	1,088	173.1	28.3	81.0	46.8	53
Nº 3	1,370	323.4	10.1	335.4	103.7	61
Nº 4	1,122	196.7	35.1	122.5	62.3	66
Nº 5-1	1,568	307.0	30.0	153.1	49.9	54
Nº 5-2	704	161.6	27.7	124.6	77.1	63
Nº 6-1	1,491	319.7	35.8	156.3	48.9	54
Nº 6-2	1,204	265.2	48.4	150.6	56.6	50
Nº 8-1	422	55.4	31.0	45.1	81.5	167
Nº 8-2	515	77.9	0	70.1	90.0	141
Nº 8-3	730	130.0	26.3	992	76.3	92
Nº 8-4	684	105.2	25.9	83.2	79.1	116
Nº 7-1	933	230.7	0	207.6	90.0	57
Nº 7-2	973	217.2	43	193.6	89.1	74
Nº 7-3	1,306	288.1	47.3	207.6	72.1	60
Nº 7-4	1,258	242.1	34.7	183.5	75.8	75
Nº 9-1	636	123.5	0	111.2	90.0	181
Nº 9-2-1	1,006	160.9	334	82.3	51.2	125
Nº 9-2-2	642	99.4	47.2	34.1	34.3	163
Nº 9-3-1	566	86.9	28.6	61.9	71.2	124
Nº 9-3-2	485	78.7	34.0	41.3	525	132
Nº 10-1-1	1,042	187.9	75.9	89.6	47.7	65
Nº 10-1-2	1,287	206.9	41.8	90.1	43.5	27
Nº 9-4-1	I,061	93.7	22.0	28.3	30.2	139
Nº 9-4-2	1,260	130.8	241	56.8	43.4	95
Nº 10-2-1	1,298	147.2	42.8	53.0	36.0	67

Blocks	Calculated Ore Tones *(Kt)*	In-situ Uranium *t U*	Pregnant solution grade by end of 2013 *mg/L*	Extracted Uranium *t U*	Extraction by 2013 *%*	Acid consumption *Kg/kg U*
№ 10-2-2	1,294	124.9	42.9	34.0	27.2	58
№ 8-5	983	104.6	23.9	47.4	45.3	34
№ 8-6-1	874	95.3	30.0	85.4	89.6	36
№ 9-6	585	82.8	26.4	42.3	51.0	147
№ 8-6-2	572	111.6	34.3	51.4	46.1	53
№ 11-1	983	166.1	45.1	59.9	36.1	40
№ 11-2	958	113.0	622	40.6	35.9	62
№ 11-6	458	75.5	37.7	42.9	56.8	94
№ 11-7	481	79.2	41.0	26.9	33.9	43
№ 11-5-2	673	108.1	64.4	31.0	28.6	29
№ 11-3	711	74.1	59.1	142	19.2	23
№ 11-5-1	604	94.8	76.7	24.8	26.1	13
№ 11-4	657	84.17	104.5	23.6	28.1	14
№ 11-8	781	69.9	100.1	11.2	16.0	8
№ 9-7	212	36.4	26.5	8.0	2.2	0
Total	36,993	6,195.5	44.4	3,636.6*	58.7	–

Source: BMA based on monthly production report, 2013

* refers to, up 31,Dec 2013,the total theoretical uranium amount that have been mined out, which should be larger than the quoted tonnes of products(3619 t by 31,Dec 2013) as shown in Table 2-1. Because some tonnes of uranium could have not been come into product(running within the mining and processing lines).

The operation conditions from 2009 to 2013 are summarized in **Table 8-5** which represents typical leaching conditions for ISR uranium leaching in the Republic of Kazakhstan.

Table 8-5 Irkol Project – Operation conditions summary, 2009-2013

	Uranium content (mg/L)		Acid concentration (g/L)						
Year	Acid solution	Pregnant solution	Leaching	Barren Solution	pH	Eh (mV)	Fe^{2+} (g/L)	Fe^{3+} (g/L)	Oxidation rate
2009	1.24	96.96	13.73	0.67	2.26	343.73	0.31	1.20	0.21
2010	0.00	57.05	15.56	0.61	2.68	324.37	1.02	0.18	0.14
2011	0.00	44.87	5.77	0.35	2.86	304.53	0.76	0.33	0.32
2012	0.39	41.00	6.25	0.58	2.22	302.97	0.81	0.32	0.69
2013	0.37	45.13	4.42	0.46	2.13	244.71	0.81	0.19	0.74

Source: BMA based on monthly production report

8.1.2 Well Field Design and Development

Schedules of the Irkol field is based on the 2012 Feasibility Study which includes the mining of uranium only for geological blocks of № 1, 2 and 3 orebodies, located on the right bank of the Syr Darya River, as shown in **Figure 8-1** and **Figure 8-2**.

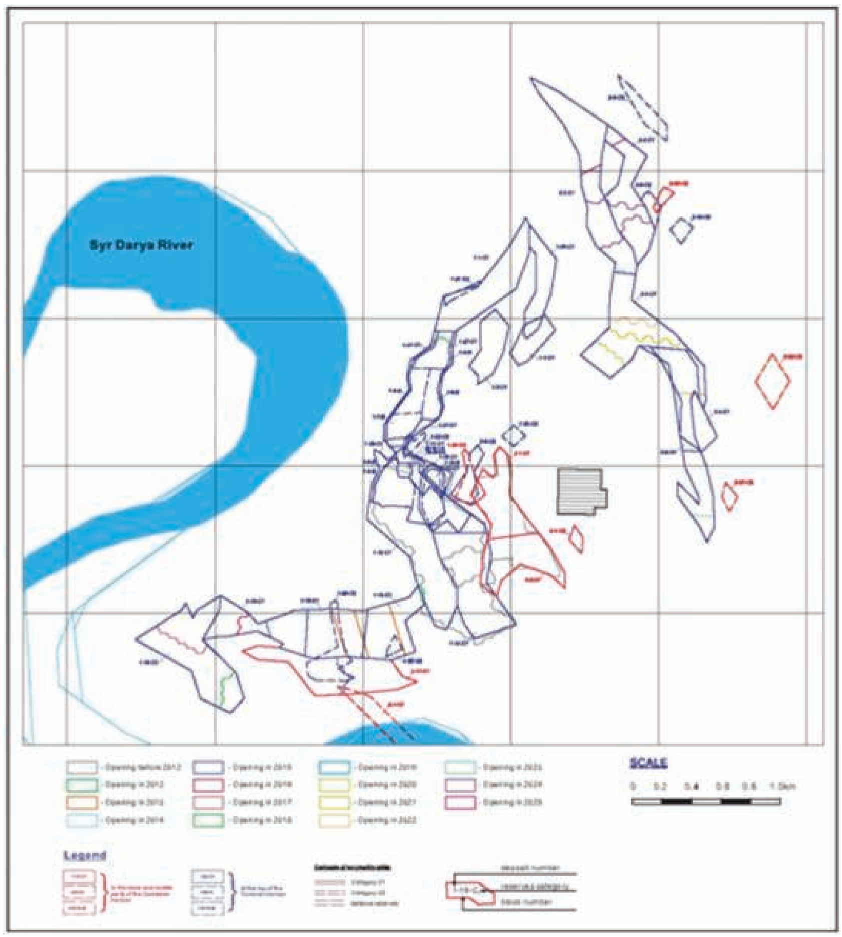


Figure 8-1 Irkol Project – Life of Mining Plan, 2012 Feasibility Study

Figure 8-2 Irkol Project – General Proposed Layout Plan, 2012 Feasibility Study

Naturally, the schedules of uranium mining on the Irkol deposit will be adjusted and corrected annually with development plans for mining, depending on the actual results of mining blocks. In the mining plan, the forecast acidification, pregnant grade, acid consumption extraction tonnes as well as productive wells for each geological section were considered. These factors form a basis of mining planning for costs.

The wells for commercial operation were designed to meet the annual requirement of reserves and ensure specified production. The development sequence has considered the testing of geological № 1, 2 and 3 orebodies, historical mining operational results as well as the mining factors shown as below:

- production of previous wells,
- characteristics of deposits,
- location of ore bodies in individual areas of work sites in several horizons,
- inconsistency of orebodies,
- width of geological units and the nature of their location,
- geotechnological characteristics of the blocks, and
- Basic geotechnological parameters forecast of mining stocks.

The projected geological sections were detailed in **Table 8-6**, which show key hydrogeology and geotechnical conditions impacting leaching factors for each mining year. These proposed parameters appear to be reasonable by considering previous production performance.

Table 8-6 Irkol Project – Designed Geological Blocks Details

Section number	**Acidification** *month*	**Leaching Years** *year*	**Pregnant grade** *mg/L*	**Acid Consumption** *kg/kg U*	**Proposed Wells**
		2014			
1-C1-18 (part 1)	2.5-3.0	4.4	37	134.6	180
1-17-C (part 1)	3	5.3	57	87.2	109
1-23-C	3	5.4	53	95.1	30
		2015			
1-17 - C (residues)	2.5-3.0	4.5	57	87.2	169
1-18-S (two part)	2.5-3.0	3.8	39	128.7	52
3-4-C	2.5-3.0	5.5	38	132.6	22
1-26-C2 (part 1)	3	5.8	53	94.2	72
		2016			
1-18-C (residues)	3	5.6	43	115.8	113
1-C-19 (part 1)	3	4.9	37	134.2	134
1-24-C	3.0-3.5	5.8	42	120.1	39
3-3-C2	3	5.6	32	154	55
		2017			
1-19-C 1 (part 2)	3	4.9	41	121.1	234
1-3-C1	3	5.9	54	92.8	86
		2018			
1 19-C - 1 (residues)	3	5.6	55	91.1	50
1-C1-1	3	4.7	42	120.4	261
		2019			
1-20-C1	3	4.8	52	95.5	133
1 4-C1	3	4.9	40	126.4	99
2-4-C 1 (part 1)	3	4.7	61	82.3	74
		2020			
2-4-C 1 (part 2)	3	4.5	58	86	147
2-C1-5 (part 1)	3.0-3.5	6.1	47	107.5	74
2-C 6 - 1 (part 1)	3	4.8	35	142.3	77
		2021			
2-4-C 1 (part 3)	3.0-3.5	5.1	64	78.1	87
2-6-C1 (residues)	3	5.4	37	135.5	77
2-5-C1 (residues)	3.0-3.5	5.2	47	106.3	80
2-26-C2 (part 1)	3.0-3.5	5.9	54	92.9	52

Section number	Acidification *month*	Leaching Years *year*	Pregnant grade *mg/L*	Acid Consumption *kg/kg U*	Proposed Wells
		2022			
2-4-C 1 (residues)	3.0-3.5	6	66	75.4	139
2-C 7 - one (part 1)	3	5	49	102.7	147
		2023			
2-2-C (part 1)	3	5.6	92	54.6	91
3-C (part 1)	3	4.5	58	86.4	81
2-S-7 (residues)	3	4.8	59	84.5	52
2-27-C	3.0-3.5	7.4	42	118.4	26
		2024			
2-2-C (part 2)	3	4.9	84	59.5	128
3-C (part 2)	3.0-3.5	5.1	63	78.9	49
2-10-C	3.0-3.5	5.9	70	71.1	46
		2025			
2-2-C (residues)	3.0-3.5	5.2	84	59.6	67
2-2-C (part 3)	3	4.9	58	86.3	133
2002-9-2	3	4.6	40	125	31
2-25-C	3	4.7	44	113.7	23

Source: 2012 Feasibility study

Construction of technological wells in the field is provided by contractors. It should be noted that the specific and detailed commissioning issues, respectively, depend on the volume of mining and preparatory work on data mining stocks, as well as the weather conditions during the cold season in drilling and well construction. Appropriate changes can be made under the mining development plan. Basic requirements for the construction of wells are as below:

- The average depth of wells for № 1, 2 and 3 orebody is 470 meters,
- The depth of the groundwater level is 5-15 meters to the surface,
- The static lowering level during pumping is 15 - 20 meters,
- Specific gravity of filling liquid is 1.05 - 1.08 t/m^3,
- The average percentage of uranium-bearing rocks is 1.7 t/m^3,
- Design flow rate of extraction wells is 6.8 - 7.0 m^3/h,
- Design flow rate of injection wells is 2.0 - 3.0 m^3/h, and
- Average thickness of the ore body is 4 - 7 m.

The proposed well details for each year in the 2012 Feasibility Study are presented in **Table 8-7**. BMA considers the well design and planning are reasonable based on the reviewing of the proposed geological sections as well as historical production performance.

Table 8-7 Irkol Project – Proposed Wells Number

		Number of wells				
Year	**Uranium**	**Total wells**	**Injection wells**	**Extraction wells**	**Monitoring and Exploration wells**	**Depth of wells**
	t					
2014	711	223	66	137	20	506
2015	711	241	60	159	22	519
2016	711	293	74	198	21	473
2017	711	256	66	166	24	442
2018	711	283	79	194	10	353
2019	711	269	66	185	18	406
2020	711	244	68	163	13	468
2021	711	234	59	156	19	472
2022	711	215	51	144	20	481
2023	711	182	44	119	19	375
2024	711	153	42	95	16	325
2025	711	213	53	140	20	311
Total	9,949	3,404	909	2,249	246	426

Source: 2012 Feasibility Study

8.1.3 *Production Schedule*

The 2012 Feasibility Study has proposed a reasonable production schedule which is considered to be achievable. The productive schedules for uranium solutions and finished product of refinery production for all mining life years has considered the following factors:

- schedule of uranium mining;
- production amount of natural uranium concentrate – "yellow cake"; and
- Release of natural uranium oxide in refinery plant.

The forecast production schedule proposed in the 2012 Feasibility Study has a constant extractable uranium of 711 t saleable uranium (1.85 million lb U_3O_8) product with an overall recovery of 90% and pregnant leach solution grade of approximately 46 to 60 mg/L. Based on the above modified mining and processing factors, pregnant solution grade and production rate are achievable based on the reviewing of the plan as well as the actual production performance.

BMA's independent production schedule for Irkol Project is based on current JORC Ore Reserves of 13,000 t uranium and 11,000 t uranium product recovered by the mill, these reserve numbers are slighter more than the minable reserve being projected in 2012 Feasibility Study in line with Russian estimation standard. Based on average annual production of 711 t uranium (1.85 million lb U_3O_8) products, the mining life was expected to be until year to 2025 in the Feasibility Study and 2029 by BMA's schedule in the projected mining area.

Table 8-8 Irkol Project – Forecast Production Schedule (Ramp up Years)

Year	**Total Uranium Reserve**	**Extractable uranium tons**		**Extraction**	**Uranium in pregnant leach solution**	**Pregnant solution grade**
	t	*t U*	*million lb U_3O_8*	*%*	*t U*	*mg/L*
2014	789.6	710.7	1.85	90.0	739.8	50.8
2015	789.6	710.7	1.85	90.0	740.4	49.8
2016	789.6	710.7	1.85	90.0	741.8	47.6
2017	789.6	710.7	1.85	90.0	742.3	46.9
2018	789.6	710.7	1.85	90.0	742.9	46
2019	789.6	710.7	1.85	90.0	742.7	46.4
2020	789.6	710.7	1.85	90.0	742.7	46.4
2021	789.6	710.7	1.85	90.0	741.1	48.7
2022	789.6	710.7	1.85	90.0	739.8	50.7

Year	Total Uranium Reserve	Extractable uranium tons		Extraction	Uranium in pregnant leach solution	Pregnant solution grade
			million lb			
	t	*t U*	*U_3O_8*	*%*	*t U*	*mg/L*
2023	789.6	710.7	1.85	90.0	738.2	53.6
2024	789.6	710.7	1.85	90.0	736.1	58
2025	789.6	710.7	1.85	90.0	735.2	59.9
2026*	789.6	710.7	1.85	90.0	739.8	46 to 60**
2027*	789.6	710.7	1.85	90.0	738.2	46 to 60**
2028*	789.6	710.7	1.85	90.0	736.1	46 to 60**
2029*	789.6	710.7	1.85	90.0	735.2	46 to 60**

* Refers to extended years mine life from additional JORC reserve estimated by BMA, in excess of the 2012 Feasibility Study schedule

** Refers to a assumed pregnant grade range by BMA

The above studies have concluded that the planned mining facilities are sufficient for achieving the proposed production forecast and the processing capacity has been properly in place to produce 711 t uranium (1.85 million lb U_3O_8). The achievement of the scheduled production relies on the successful management of the leaching process.

BMA considers that an overall recovery of approximately 90% achieved in some ceased blocks, the forecast extraction of 90% in ISR leaching which including a recovery of 96% for processing pregnant leach solution to yellow cake in above are reasonable based on the extensive operational results.

The forecast overall pregnant leach solution uranium grade of approximately 46-60% is achievable based on the actual production.

8.2 Semizbay Project

8.2.1 Historical Production

BMA reviewed the monthly production reports of Semizbay from 2009 to 2013. The production report system is the same as Irkol Project.

Table 8-9 shows that a total of 1,816 wells have been constructed during 2009-2013 and currently 1,420 wells are actively operating to achieve scheduled production.

Table 8-9 Semizbay Project – Historical Wells Numbers, 2009-2013

Items	2009	2010	2011	2012	2013	Total
Total well constructed	125	526	455	374	336	1,816
Operational well	100	404	338	299	233	1,374
Extraction well on the new block	26	115	126	124	70	461
Injection well on the new block	61	256	196	169	157	839
Observation well	13	21	16	6	6	62
Exploration well	25	113	87	56	63	344
Re-drilled well	0	21	30	19	40	110
Extraction	0	20	22	16	27	85
Injection	0	1	8	3	13	25
Total active well	309	608	867	1,218	1,420	
Extraction	89	183	246	344	392	
Injection	220	425	621	874	1028	

Source: BMA summary based on monthly production report

The operation performance of Semizbay Project over 2009-2013 is shown in **Table 8-10**. The Semizbay Project production commenced in 2009 and full production was not been achieved until 2012 and not consistent afterwards. The production report indicated that unexpected technical management issues resulted in the failure of planned production in the initial mining years, for instance:

Delay of the drilling work by drilling contractor, long acidification duration time and temporary shortage of material supplies and acid supply, caused the lower extraction and production rate from wells. These issues generally occur in the ramp up of a project by several years and have been overcome through continual strengthening of operational and contract management by the Company. Furthermore lack of technical expertise and engineers in the Initial years was subsequently eliminated.

It was noted that the average pregnant solution uranium grade of 55 mg/L in 2009 decreased to 34 mg/L in 2013. BMA understand the actual lower pregnant solution grade than design was due to a balance between nominate higher uranium recoveries requirement and comprehensive economic considerations.

Table 8-10 Semizbay Project – Historical Production Performance, 2009-2013

Items	Unit	2009	2010	2011	2012	2013
Acidity in acidification	g/L	22.2	27	22	19.20	15.3
Acidity in leaching	g/L	20.4	10,2	8.3	9.30	6.3
Sulfuric acid in leaching solution	g/L			2.3	2.79	1.90
Pregnant uranium grade	mg/L	–	54.8	51.9	51.70	35.8
Uranium in solution	t	15.6	–	416.4	532.0	521.6
Recovery from solution to yellow cake	%	100.0	95.2	98.0	96.0	97
Planned uranium in yellow cake	t	15.0	230.1	408.4	509.1	507.1
Product uranium in U_3O_8	t	8.5	224.0	409.9	508.6	507

Source: BMA summary based on monthly production report

The productive blocks details from 2009 to 2013 are listed in **Table 8-11**. Approximately 8 new blocks were developed annually in the initial years, ensuring a sufficient production rate.

Table 8-11 Semizbay Project – Productive Active Blocks, 2009-2013

2009	2010	2011	2012	2013
№0	№0	№0	№0	№0
№1	№1	№1	№1	№1
№2	№2	№2	№2	–
№3	№3	№3	№3	№3
№4	№4	№4	№4	№4
№5	№5	№5	№5	№5
№6	№6	№6	№6	№6
№7	№7	№7	№7	№7
	№8	№8	№8	№8
	№9-1	№9	№9	№9
	№9-2	№10	№10	№10
	№9-3	№11-1	№11-1	№11-1
	№10-1	№10a	№10a	№10a
	№10-2	№12	№12	№12
	№10-3	№15	№15	№15
	№11	№11	№11	№11
	№12	№ 15a	№15a	№15a
		№16	№16, 16-1	№16, 16-1
		№17	№17, 17-1	№17, 17-1
		№12a	№12a	№12a

2009	2010	2011	2012	2013
			Nº13	Nº13
			Nº14	Nº14
			Nº21	Nº21
				Nº52
				Nº52a
				Nº52-1
				Nº54
				Nº53
				Nº55

Source: BMA summary based on monthly production report

The production performance of each block is shown in **Table 8-12**. A total of around 3093 t uranium product has been developed from 2009 to 2013 from 29 blocks or sub-blocks, and a total of 1,667 t uranium was extracted in previous years.

The operation of Nº1 to Nº7 block blocks initially from 2009 has an overall extraction of 70%. Most blocks will produce further uranium, and the only temperately completed Nº2 block has a uranium recovery of 85%.

Based on the operation of previous blocks from 2009 (e.g. from Nº1 to Nº7 block), the overall extraction is 70% and most of these blocks will produce further uranium and an extended leaching period to attain the 85% extraction. These blocks need to be reviewed in more detail to assess if the overall extraction is achievable.

The average pregnant liquor grade is approximately 48.8 mg/L, with a minimum of 10 mg/L. The forecast pregnant liquor grades of approximately 37.6 – 68 mg/L are achievable. It was noted that some of the minimum content are as low as 10 mg/L, which is much lower than the planned cut-off uranium grade (20 mg/L). It is supposed to via recovery lower grade uranium for purpose of obtained a higher recovery rate.

Table 8-12 Semizbay Project – Block Leaching performance by 2013

Blocks	Calculated Ore Tonnes	In-situ Uranium	Pregnant uranium grade by the end of 2013	Extracted Uranium Tonnes	Extraction Rate by the end of 2013	Acid consumption
	kt	*t*	*mg/L*	*t*	*%*	*kg/kg U*
№0	455.1	83.1	17.5	62.2	74.89	140
№1	474	113.3	199.0	62.1	54.84	178
№2	566.8	110.0	0	93.5	85.00	122
№3	515	51.6	19.5	40.6	78.70	155
№4	516.8	61.2	19.0	51.0	83.32	152
№5	548.8	100.0	208.0	69.2	69.19	135
№6	619.6	112.8	21.8	71.8	63.63	121
№7	581.5	100.7	19.9	62.5	62.07	143
№8	334.2	98.2	19.6	48.3	49.22	128
№9	1,072.9	450.1	19.7	219.2	48.71	103
№10	813.8	256.9	269.0	155.7	60.62	121
№11-1	99.2	100.0	17.9	15.8	15.80	188
№10a	96.3	24.9	359.0	12.8	51.40	139
№12	158.6	66.0	138.0	45.1	68.37	139
№15	541.7	50.0	29.1	28.5	57.08	131
№11	189.4	69.3	179.0	20.7	29.84	133
№15a	50.4	6.0	11.7	2.6	43.40	195
№6, 16-1	850.2	197.2	24.4	76.7	38.90	150
№17, 17-1	463.2	83.3	315.0	55.7	66.87	206
№12a	475.8	43.2	203.0	15.5	35.88	148
№13	747.8	97.6	393	44.9	46.00	152
№14	334.1	122.6	186.0	104.2	85.00	104
№21	231.5	53.2	208	25.7	48.24	143
№52	1,828.8	411.7	59.7	232.3	56.42	132
№52a	47.8	16.2	374.0	5.3	32.98	231
№52-1	146.2	38.7	103.5	15.5	39.99	40
№54	293.1	41.9	171.5	17.1	40.74	95
№53	517.6	93.6	28.8	4.7	5.07	0
№55	237.8	39.9	106.6	7.6	19.10	69
Total	13,808.1	3,093	48.8	1,667.0	54.00	131

Source: BMA based on monthly production report

The operational conditions of Semizbay Project are summarized in **Table 8-13**, which are similar to the Irkol Project except for higher oxidization leaching conditions, and represents a typical leaching condition for ISR uranium leaching.

Table 8-13 Semizbay Project – Operation conditions summary in 2007-2013

	Uranium content (mg/L)		Acid concentration (g/L)						
Year	Acid Solution	Pregnant solution	Leaching Solution	Barren Solution	pH	Eh *(mV)*	Fe^{2+} *(g/L)*	Fe^{3+} *(g/L)*	Oxidation
2009		–	–	0.06	3.01	237.17	–	–	0.97
2010	2	63.83	10.75	1.64	1.64	270.06	0.05	3.40	0.92
2011	1	49.67	6.55	1.99	1.75	371.80	0.10	3.64	0.97
2012	2	51.91	8.74	2.42	1.66	355.56	0.10	3.26	0.97
2013	1	48.80	2.00	2.89	1.70	334.26	0.05	5.41	0.94

Source: BMA based on monthly production report

8.2.2 Well Field Design and Development

Schedules of uranium development of Semizbay Project are based on the 2012 Feasibility Study (2012-2031) for the Semizbay Project. In accordance with the design documentation, Nº1 and Nº2 blocks stripping activity were started from 2007 at the central geological block of Nº2-18-89-99S1. In 2008-2009, the industrial blocks Nº0, 3, 4, 5, 6, 7, 8, 9, 10, 10a, 10b continued operation in the central and eastern parts of the geological block of Nº2-18-89-99S1 and 2-24-93-96-C1. From 2010 to 2011, the development wells of blocks No 11-17 in the landfill south of the geological section Nº2-18-89-99S1, 2-13-95-98S1, 2-14-99-103S1, 2-15-97-104-C1, 2-16-97-102-C were further conducted.

According to the 2012 Feasibility Study, the projected mining area involved Nº1, 2 and 3 orebodies as shown in **Figure 8-3** and **Figure 8-4**. The other orebodies have not been projected yet, and thus have not been included in the reserve estimation.

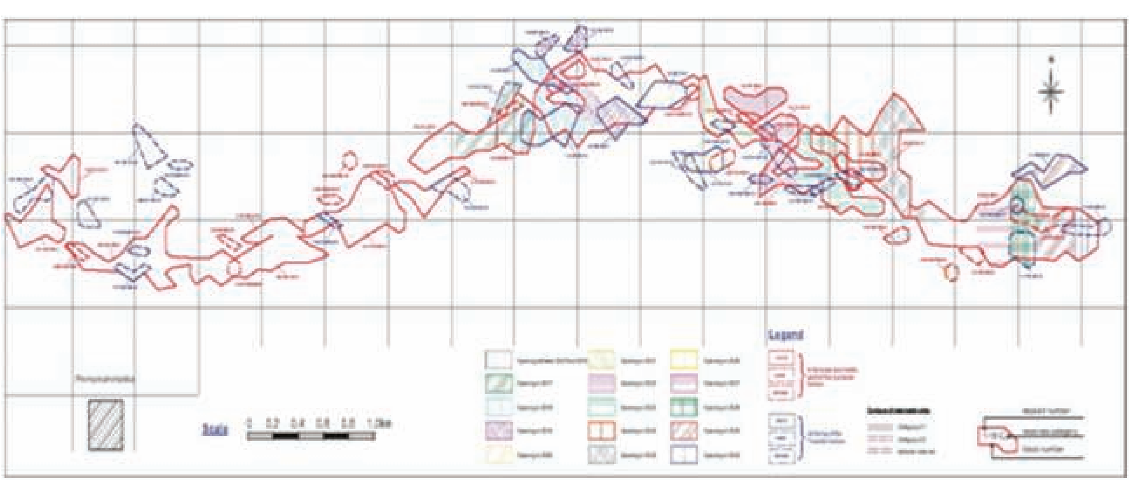


Figure 8-3 Semizbay Project – Projected Well Fields

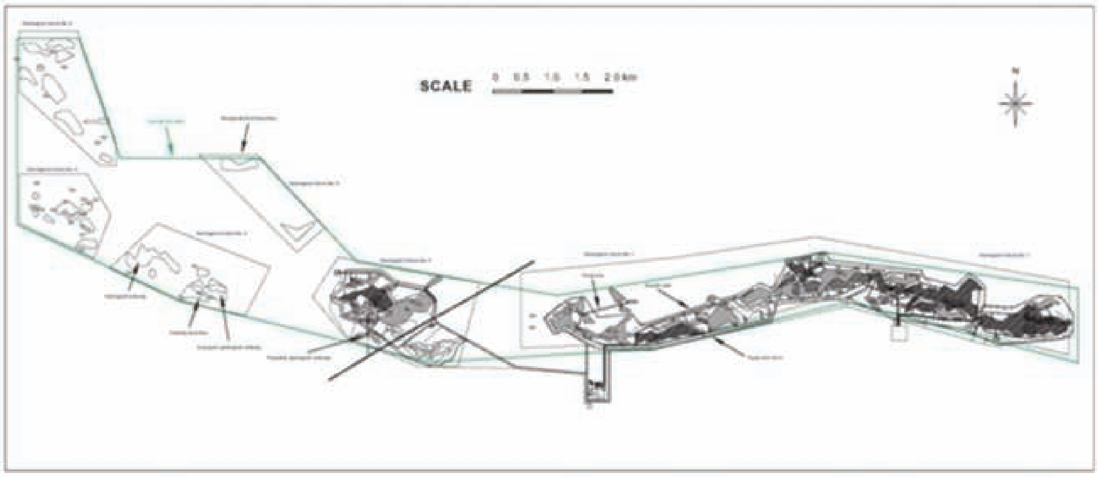


Figure 8-4 Semizbay Project – Projected General Layout Plan

The projected geological sections were detailed in **Table 8-14**, which shows key hydrogeology and geotechnical conditions impacting mining factors for each year. These proposed parameters appear to be reasonable with reviewing of previous production performance.

Table 8-14 Semizbay Project – Proposed Well Fields

Section number	Acidification	Leaching Years	Pregnant grade	Acid Consumption
	month	*year*	*mg/L*	*kg/kg U*
2014				
2-6-134-144-C (rest)	2.5-3.0	4.4	48	145.5
2-52-137(3 820)-C	3	6.9	64	110.2
2-3-136(788)-C_2	2.5-3.0	3.5	23	308.4
1-67-129-131-C	2.5-3.0	3.9	31	223.4
1-66-131-132-C_2	2.5-3.0	3.9	32	217.8
1-65-132(694)-C2	2.5-3.0	3.6	33	209.7
2-18-89-99-C1 (rest)	2.5-3.0	4.6	44	160.2
2-84-88(2160)-C2	2.5-3.0	2.5	27	256.5
2015				
2-10-138-142-Ci	2.0-2.5	3.8	40	173.7
2-11-143-150-Ci (part 1)	2.0-2.5	3.4	60	116.1
1-62-144(3934)-C_2	2.0-2.5	3	53	131.2
2-46-144(1079)-C2	2.0-2.5	4.2	36	195
2-45-146(5100)-C_2	2.0-2.5	3.7	37	189.2
1-8-87-90-C1	2.0-2.5	2.9	60	115.9

Section number	Acidification	Leaching Years	Pregnant grade	Acid Consumption
	month	*year*	*mg/L*	*kg/kg U*
2016				
2-11-143-150-C1 (rest)	2.0-2.5	3.5	60	116.1
2-12-150-155-C1	2.0-2.5	3.6	61	115.4
2-5-151-157-C1 (part 1)	3	5	35	199
1-54-153-155-C_2	2.0-2.5	3.8	59	117.7
2-40-148-149-C2	3	5.9	59	118
1-7-87-89-C_1	2.5	4.4	52	135.4
2-106-91-92-C2	2.0	2.8	37	189.2
2-92-91(2172)-C2	2.5	4.2	41	170.8
2017				
2-5-151-157-C1 (rest)	3	5.3	31.9	219.6
2-5-158-160-Ci	2.0-2.5	3.9	45.5	153.9
1-49-157-159-C_2	3	5	39.8	175.7
2-36-158(5070)-C_2	2.5-3.0	4.4	63.5	110.2
1-88-85(2210)-C_2	3	5.2	34.5	202.8
2-17-86-89-C_1	2.5-3.0	4.3	36.2	193.6
2-96-89-90-C_2	2.0-2.5	3.7	33.6	208.3
1-108-88-90-C_2	3	6.1	40.9	171.1
2018				
1-5-160-164-C1	2.0-2.5	3.9	46.5	150.5
2-5-161-173-C1 (part 1)	2.5-3.0	4.7	48	145.9
1-4-159-163-C1 (part 1)	2.0-2.5	3.7	31.5	222.3
1-106-83-86-C2	2.5-3.0	4.7	26.8	261.1
2-23-84-92-C1 (part 1)	2.0-2.5	4.8	30.2	231.6
2019				
1-4-159-163-C1 (rest)	2.0-2.5	3.6	26.9	260.6
2-23-84-92-C1 (rest)	2.0-2.5	4	30.2	231.9
1-92-91-92-C_2	2.5-3.0	4.3	31.9	219.1
1-46-161-162-C_2	2.0-2.5	4.2	33	211.9
1-44-163-164-C_2	3	5.5	38.9	179.9
2-34-162(2146)-C_2	2.5-3.0	4.5	36.2	193.6
1-6-166-169-C	3	4.9	49.3	142.1
2-5-161-173-C (part 2)	2.5-3.0	4.5	39	179.4

Section number	Acidification	Leaching Years	Pregnant grade	Acid Consumption
	month	*year*	*mg/L*	*kg/kg U*
2020				
2-77-98-100-C_2	2.5-3.0	4.2	34.3	204
1-3-169-172-C_1	2.5-3.0	4.2	49.2	142.2
1-42-167-168-C_2	2.5-3.0	4.4	32	219
2-5-161-173-C1 (rest)	2.5-3.0	4.8	53	132
2-30-173(2605)-C_2	2.5-3.0	4.8	30.2	231.8
2-80-85(2325)-C2	2.5-3.0	4.4	44.2	158.3
2021				
2-19-86-90-C1	2.5-3.0	4.4	37	189.1
1-90-86(2262)-C2	2.0-2.5	4	35.4	197.7
2-78-83(2392)-C_2	2.0-2.5	3.8	25.5	274.5
1-37-172-174-C_2	2.0-2.5	4.1	44.5	157.5
1-2-173-175-C_1	2.0-2.5	3.7	30.9	226.6
2-28-175-176-C_2	2.5-3.0	5	53.1	131.9
1-36-176(642)-C_2	2.5-3.0	4.4	22.7	307.7
2-5-174-181-C (part 1)	2.5-3.0	4.5	66.4	105.4
2-27-177(2058)-C_2	2.0-2.5	3.5	67.7	103.4
2022				
2-5-174-181-C1 (rest)	2.5-3.0	4.6	66.5	105.2
2-5-176-180-C	2.5-3.0	4.3	46.1	152
2-26-178(2057)-C_2	2.0-2.5	3.8	27.9	250.5
1-29-179-181-C_2	2.0-2.5	3.7	21.8	321.1
1-32-178(2450)-C2	2.5-3.0	4.3	50.6	138.4
2-2-179-186-C1 (part 1)	2.5-3.0	4.9	67.1	104
2023				
2-2-179-186-C (rest)	2.5-3.0	4.4	53.1	131.7
1-27-181-183-C2	2.5-3.0	4.4	51.1	136.9
2-3-184-188-C1	2.5-3.0	4.5	43.6	160.6
1-23-183(50)-C_2	2.5-3.0	4.5	19.5	359.8
2024				
1-61-185-186-C2	2.5-3.0	4.3	55.6	125.8
2-4-185-188-C1	2.5-3.0	4.5	36.3	193
2-8-183-191-C (part 1)	2.5-3.0	4.5	56.8	123.1

Section number	Acidification *month*	Leaching Years *year*	Pregnant grade *mg/L*	Acid Consumption *kg/kg U*
2025				
2-8-183-191-C1 (rest)	2.5-3.0	4.5	67.6	103.5
2-8-191-205-C (14)	3	5.6	88	79.5
2-16-189-190-C_2	2.5-3.0	4.3	28.2	248
2026				
2-8-191-205-C (part 2)	3	6	76.1	92
2-10-194(2118)-C_2	3	6.4	80.6	86.8
2-7-195-196-C_2	2.5-3.0	3.9	69.8	100.3
2027				
2-8-191-205-C1 (part 3)	3	5.7	66.6	105.2
2028				
2-8-191-205-C1 (part 4)	3	6	76.1	92
1-7-199-200-C	2.5-3.0	4	37.9	184.8
1-10-199(1908)-C2	3	6.4	67.4	103.9
2-2-199-203-C2 (part 1)	2.5-3.0	4	75.7	92.4
2029				
2-8-191-205-1 (part 5)	3.0-3.5	7.5	84.3	83.1
2-2-199-203-C2 (rest)	2.5-3.0	4	58.1	120.4
1-1-199-204-C_1	2.0-2.5	4.2	28.9	242.3
2030				
2-8-191-205-C (rest)	2.5-3.0	4.3	84.1	83.2
1-1-203-206-C_2	3	4.2	31.3	223.4

Source: 2012 Feasibility Study

Construction of technological wells in the field is undertaken by contractors e.g. High-Tech Institute and Geological Services Company. It should be noted that the specific and detailed commissioning units depend on the volume of mining and preparatory work on mining stocks, the weather condition during the freezing season, as well as the appropriate changes in drilling and well construction.

Forecast geotechnical parameters are in accordance with the Protocol discussed in the technical meeting by specialists from Semizbay-U LLP in May 21, 2012. The defined parameter requirements for the technological wells are as follows:

- Flow rate of extraction well is 3.5-4.0 m/h
- Flow rate of injection wells is 1.5-2.0 m/h
- Acidification time is about 3 months
- Liquid to solid ratio in leaching is 5.0-6.0
- Working acidification of solutions is about 25 g/L
- Working acidification step by step through the various process leaching stages by 15, 6 and 3 g/L
- Annual operating time is 8000 hours per year
- The average well depth is 100 – 120 meters
- The depth of the groundwater from surface is 10 – 15 meters
- The static lowering level during pumping is 15 – 20 meter
- The average percentage of uranium-bearing rocks is 1.65 t/m^3, and
- Average thickness of the ore body is 4 – 6 m

The proposed wells details in the 2012 Feasibility Study are presented in **Table 8-15**. BMA considers that the well design and planning are reasonable based on the review of the proposed geological sections as well as historical performance. The well numbers to be constructed will gradually decline in the final years of the project.

Table 8-15 Semizbay Project – Wells Development Forecast

			Number of wells			
Year	Production	Total wells	Injection wells	Extraction wells	Monitoring wells	Exploration wells
	t					
2014	507.6	428	221	170	37	118
2015	507.6	437	221	178	38	120
2016	507.6	420	208	173	39	116
2017	507.6	519	258	214	47	142
2018	507.6	510	257	207	46	141
2019	507.6	404	205	162	37	110
2020	507.6	417	205	173	39	113
2021	507.6	385	192	157	36	105
2022	507.6	363	188	142	33	99
2023	507.6	327	168	129	30	89
2024	507.6	257	135	98	24	70
2025	507.6	190	97	76	17	52
2026	507.6	157	90	53	14	43
2027	507.6	217	111	87	19	60
2028	507.6	191	96	78	17	52
2029	507.6	130	69	49	12	36
2030	507.6	0	0	0	0	0
2031	507.6	0	0	0	0	0

Source: 2012 Feasibility Study

8.2.3 Production Schedule

The forecast production schedule for the mine is summarised in **Table 8-16**, which shows a constant 508 t (1.32 million lb U_3O_8) sable uranium would be produced at an overall recovery of 85% and pregnant solution grade of 37.6 to 68.8 mg/L.

The JORC Ore Reserves of Semizbay deposit is 11,000 t uranium and 10,000 t uranium product recovered by the mill. Based on average annual production of 508 t uranium (1.32 million lb U_3O_8), there are more than enough Ore Reserves for a mine life extending to year 2031 in 2012 Feasibility Study and 2032 by BMA's schedule. The current mining facilities are sufficient for achieving the production forecast and the processing capacity is in place to produce 508 tpa uranium (1.32 million lb U_3O_8).

Table 8-16 Semizbay Project – Forecast Production Schedule (Ramp up Years)

Year	Total Reserve	Extractable uranium		Extraction	Pregnant leach solution uranium grade
	t	*t U*	*million lb U_3O_8*	*%*	*mg/L*
2014	597.2	507.6	1.32	85.0	45.4
2015	597.2	507.6	1.32	85.0	43.8
2016	597.2	507.6	1.32	85.0	45.4
2017	597.2	507.6	1.32	85.0	46.4
2018	597.2	507.6	1.32	85.0	42.6
2019	597.2	507.6	1.32	85.0	37.7
2020	597.2	507.6	1.32	85.0	37.6
2021	597.2	507.6	1.32	85.0	39.6
2022	597.2	507.6	1.32	85.0	43.2
2023	597.2	507.6	1.32	85.0	43.7
2024	597.2	507.6	1.32	85.0	46.0
2025	597.2	507.6	1.32	85.0	50.9
2026	597.2	507.6	1.32	85.0	62.0
2027	597.2	507.6	1.32	85.0	67.8
2028	597.2	507.6	1.32	85.0	68.8
2029	597.2	507.6	1.32	85.0	62.8
2030	597.2	507.6	1.32	85.0	59.7
2031	597.2	507.6	1.32	85.0	52.6
2032*	597.2	507.6	1.32	85.0	52.6

Source: 2012 Feasibility Study

* *Refers to extended years mine life from additional JORC reserve estimated by BMA, in excess of the 2012 Feasibility Study schedule*

The above studies have concluded that the planned mining facilities are sufficient for achieving the proposed production forecast and the processing capacity is in place for 508 t uranium. Based on the forecast overall pregnant solution uranium grade of approximately 37.6 – 68 mg/L, and the above modified mining and processing factors, these pregnant solution grades are achievable.

8.3 Extraction

BMA notes that a total of three wells of Irkol Project have contributed an overall extraction of 90%, there are many technological blocks which may require an extended leaching period to attain the 90% extraction.

BMA notes that the extraction rate of Semizbay Project temperately completed blocks № 2 which began from 2009 is approximately 85%, while the rest of other blocks from 2009 have not been completed, generally reaching an extraction rate exceeding 70%. BMA considers the forecast extraction rate of 85% for the mineral reserves in ISR leaching is reasonable based on the operational results. These blocks need to be reviewed in more detail to see the overall extraction is achievable. Moreover, the previous testing results have indicated an overall extraction of 85% for the minable reserve ore area.

However, it is considered in the ISR processing practice, a mount of lower grade mineralization that not been included in reserve tonnes would be extracted at the same time. The actual extraction deems to be relatively higher. Furthermore, BMA was informed that it is the Republic of Kazakhstan' industrial rule has nominated an overall recovery of 90% for Irkol Project and 85% for Semizbay Project should be achieved. During the site visit, BMA also notes that the Company has being practicing some measures to meet the proposed recoveries requirement, including prolongation of the leaching duration time and lowering the pregnant solution grade (minimum 10 mg/l uranium in pregnant solution was observed) than design in same block cases. Therefore, BMA considers the proposed recoveries for both projects are achievable.

8.4 Mine Contracts

BMA notes some contracts issued by the Semizbay-U LLP in the operation, including but not limited to:

- The production exploration and drilling projected is contracted to the local geological team.
- The contract for the mining of uranium.
- The construction of wells in the field is undertaken by contractors.
- Supplier provides sulfuric acid from three sources with rates and charges at industry norms.
- Semizbay-U LLP has a number of important supply contracts for reagents and fuels, transportation contract.
- Long term uranium sales contract between Semizbay-U LLP Joint Stock Company, "NAC" Kazatomprom and CGNPC Uranium Resource Company Limited in China.

It is noted that contractor management are key issues in site, BMA believes rates and charges for these contracts reflect industry norms. We believe that a sound management of contracts is critical for achieving the schedule production performance.

9 URANIUM MARKETS AND PRICING

The operation produce a uranium concentrate U_3O_8, or yellow cake which is used in nuclear power plants.

9.1 Uranium Demand

Uranium is principally used as fuel for nuclear power plants. Reactor-related demand for uranium is fundamentally driven by installed nuclear capacity, which is ultimately driven by the demand for electricity. According to World Nuclear Association ("WNA"), approximately 12% of the world's electricity is generated from uranium in nuclear reactors.

9.1.1 Uranium Consumption by Region

As at April 2014, according to WNA there were about 434 nuclear reactors operating worldwide with combined capacity of approximately 374 GW which required approximate 65,908 tonnes of uranium annually.

The US is the largest producer of electricity from nuclear reactors with approximately 771 billion kWh generated in 2012, accounting for approximately 19% of its total electricity generation. France has the largest dependency on nuclear with approximately 75% of its total electricity generated from nuclear reactors.

Table 9-1 summarises top 10 countries with largest nuclear electricity generation in 2012 and number of operating reactors, reactors under construction and reactors planned and proposed as at April 2014 according to WNA.

Table 9-1 Top 10 countries with largest nuclear electricity generation 2012

	Nuclear electricity generation 2012		As of April 2014 Reactors operable		Reactors under construction		Reactors planned		Reactors proposed		Uranium required 2014
Country	*Billion kWh*	*% e*	*No.*	*MWe net*	*No.*	*MWe gross*	*No.*	*MWe gross*	*No.*	*MWe gross*	*Tonnes uranium*
USA	770.7	19.0	100	99,098	5	6,018	5	6,063	17	26,000	18,816
France	407.4	74.8	58	63,130	1	1,720	1	1,720	1	1,100	9,927
Russia	166.3	17.8	33	24,253	10	9,160	31	32,780	18	16,000	5,456
South Korea	143.5	30.4	23	20,656	5	6,870	6	8,730	–	–	5,022
Germany	94.1	16.1	9	12,003	–	–	–	–	–	–	1,889
China	92.7	2.0	20	17,055	29	33,035	57	61,235	118	122,000	6,296
Canada	89.1	15.3	19	13,553	–	–	2	1,500	3	3,800	1,784
Ukraine	84.9	46.2	15	13,168	–	–	2	1,900	11	12,000	2,359
UK	64.0	18.1	16	10,038	–	–	4	6,680	7	8,920	1,738
Sweden	61.5	38.1	10	9,508	–	–	–	,	–	–	1,516
Rest of world	371.8	N/A	131	91,886	22	19,535	65	68,147	134	156,550	11,105
World total	2,346.0	c.11.0	434	374,348	72	76,338	173	188,755	309	346,370	65,908

Source: WNA

Because of the cost structure of nuclear power generation, with high capital and low fuel costs, the demand for uranium fuel is much more predictable than with probably any other mineral commodity. Once reactors are built, it is very cost-effective to keep them running at high capacity and for utilities to make any adjustments to load trends by cutting back on fossil fuel use. Demand forecasts for uranium thus depend largely on installed and operable capacity, regardless of economic fluctuations.

The global uranium demand is expected to increase by 48% during the period from 2013 to 2023 and the global nuclear reactor capacity will increase by 34% during the same period, as estimated by WNA. Many countries (China in particular) are forging ahead with construction of new power plants with the objective to add significant nuclear generating capacity in the next 20 years. According to WNA, as at April 2014 there were 72 reactors under construction with combined capacity of approximately 76 GW and 173 reactors on order or planned with combined capacity of approximately 189 GW. In addition, there were also 309 reactors proposed with total combined capacity of 346 GW. WNA estimates there will be 272 new reactors coming online compared to 74 reactors closing (exclude closed Japanese reactors) by 2030, which imply a net addition of 198 reactors during the period.

9.1.2 China Demand and Growth

Nuclear power has an important role in China, especially in the coastal areas remote from the coalfields and where the economy is developing rapidly. China's concerted nuclear expansion began with the National Development and Reform Commission's ("NDRC's") Tenth Economic Plan for the years 2001-2005, with increased self-reliance. As at April 2014, China has 20 operating nuclear power reactors with a total capacity of 17 GW according to WNA, with another 29 reactors under construction, 57 reactors on order or planned and 118 reactors proposed with total combined capacity of approximately 233 GW, approximately 12.7 times the current capacity. The "Nuclear Power Mid & Long-term Development Plan issued by the PRC government in Oct 2012 plans to expand nuclear power plant capacity to 42 GW by 2015 and 60-64 GW by 2020.

9.2 Uranium Supply

9.2.1 Uranium resources

Availability of uranium resources around the world is a critical variable in the long term viability of the nuclear industry. Total world resources of uranium, as is the case for other metals and minerals, are not known with an absolute degree of accuracy. The only reliable measure of long-term security of supply is the known resources in the ground capable of being mined.

Uranium is not a rare element and occurs in potentially recoverable concentrations in many types of geological settings. As with other minerals, investment in geological exploration generally results in increased known resources. Table9-2 summarises top 10 countries with largest current known recoverable resources of uranium (reasonably assured resources plus inferred resources) based on price up to US$130/kg uranium (equivalent to approximately US$50/lb U_3O_8).

Table 9-2 Known recoverable resources of uranium (2011)

	Tonnes uranium	% of the world
Australia	1,661,000	31%
The Republic of Kazakhstan	629,000	12%
Russia	487,000	9%
Canada	468,000	9%
Niger	421,000	8%
South Africa	279,000	5%
Brazil	276,000	5%
Namibia	261,000	5%
USA	207,400	4%
China	166,100	3%
Rest of world	470,000	9%
World total	5,327,200	100%

Source: WNA

9.2.2 Uranium production

Production from world uranium mines now supplies about 86% of the requirements of power utilities. Primary production from mines is supplemented by secondary supplies, principally by ex-military material and other inventories.

Approximately 64% of global production of uranium from mines is from the Republic of Kazakhstan, Canada and Australia. The Republic of Kazakhstan is the largest primary producer of uranium, with 21,317 tonnes uranium in 2012, approximately 36.5% of global production, followed by Canada with approximately 8,999 tonnes uranium (approximately 15.4% of global production) and Australia with approximately 6,991 tonnes uranium (approximately 12.0% of global production).

Table 9-3 summarises top 10 countries with the largest uranium production in 2012 and its historical production since 2005.

Table 9-3 top 10 countries with the largest uranium production in 2012

Country	2005	2006	2007	2008	2009	2010	2011	2012
The Republic of Kazakhstan	4,357	5,279	6,637	8,521	14,020	17,803	19,451	21,317
Canada	11,628	9,862	9,476	9,000	10,173	9,783	9,145	8,999
Australia	9,516	7,593	8,611	8,430	7,982	5,900	5,983	6,991
Niger (est.)	3,093	3,434	3,153	3,032	3,243	4,198	4,351	4,667
Russia	3,147	3,067	2,879	4,366	4,626	4,496	3,258	4,495
Namibia	3,431	3,262	3,413	3,521	3,564	3,562	2,993	2,872
Uzbekistan	2,300	2,260	2,320	2,338	2,429	2,400	2,500	2,400
USA	1,039	1,672	1,654	1,430	1,453	1,660	1,537	1,596
China (est.)	750	750	712	769	750	827	885	1,500
Malawi	–	–	–	–	104	670	846	1,101
Rest of world	2,458	2,265	2,427	2,357	2,428	2,372	2,544	2,456
World total	41,719	39,444	41,282	43,764	50,772	53,671	53.493	58,394
Tonne(s) U_3O_8	49,199	46,516	48,683	51,611	59,875	63,295	63,084	68,864
% of world demand	65%	63%	64%	68%	78%	78%	85%	86%

Source: WNA

The uranium production industry is relatively small, with few companies accounting for majority of uranium produced. In 2012, eight companies marketed 88% of the world's uranium mine production, according to WNA. KazAtomProm, the Republic of Kazakhstan state-owned company, is the world's largest uranium producer in 2012 with approximately 15% of total global production.

Table 9-4 Major uranium companies in the world

Company	Tonnes uranium	% of the world
KazAtomProm	8,863	15%
Areva	8,641	15%
Cameco	8,437	14%
ARMZ-Uranium One	7,629	13%
Rio Tinto	5,435	9%
BHP Billiton	3,386	6%
Paladin	3,056	5%
Navoi	2,400	4%
Other	10,548	18%
Total	58,394	100%

Source: WNA

There is also a high concentration of production with the 15 largest uranium mines accounting for approximately 64% of total global uranium production in 2012, refers to Table 9-5 according to WNA.

Table 9-5 Largest top 15 producing uranium mines in 2012

Mine	Country	Main owner	Type	Production (tonnes uranium)	% of world
McArthur River	Canada	Cameco	Underground	7,520	13%
Olympic Dam	Australia	BHP Billiton	By-product/ underground	3,386	6%
Ranger	Australia	ERA (Rio Tinto 68%)	Open pit	3,146	5%
Arlit	Niger	Somair/Areva	Open pit	3,065	5%
Torkuduk (est.)	The Republic of Kazakhstan	Katco JV/Areva	ISL	2,661	5%
Rossing	Namibia	Rio Tinto (69%)	Open pit	2,289	4%
Budenovskoye 2	The Republic of Kazakhstan	Karatau/ Kazatomprom-Uranium One	ISL	2,135	4%
Kraznokamensk	Russia	ARMZ	Underground	2,011	3%
Langer Heinrich	Namibia	Paladin	Open pit	1,955	3%
South Inkai	The Republic of Kazakhstan	Betpak Dala JV/Uranium One	ISL	1,870	3%
Inkai	The Republic of Kazakhstan	Inkai JV/Cameco	ISL	1,701	3%
Central Mynkuduk	The Republic of Kazakhstan	Ken Dala JV/Kazatomprom	ISL	1,622	3%
Akouta	Niger	Cominak/Areva	Underground	1,506	3%
Rabbit Lake	Canada	Cameco	Underground	1,479	3%
Budenovskoye 1 & 3	The Republic of Kazakhstan	Akbastan/ Kazatomprom-Uranium One	ISL	1,203	2%
Top 15 total				37,549	64%

Source: WNA

9.3 Uranium Products

The finished products for Semizbay-U LLP in the form of natural uranium oxide satisfy the specifications of international standard "Standard Specification for Uranium Concentrate L8TM C 967-02a" or Standard for JSC Uranium oxide "NAC" Kazatomprom" -ST CON 1.02-2007"

9.4 Sale Contracts

Subsoil user has established itself in the market as a reliable and promising partner since 2009.The main buyer of "Semizbay-U" LLP uranium product is Beijing Sino-Kazakh Company of Uranium Resource Company Limited in China. There is an updated uranium sales contract between Semizbay-U LLP Joint Stock Company, "NAC" Kazatomprom and CGNPC Uranium Resource Company Limited (CGNPC-URC) for a mined product by 2013.

On 29 March 2013, CGNPC-URC and KAP, which indirectly controlled 49% and 51% partnership interest in Semizbay-U, respectively, entered into the Off-take Agreement. Pursuant to the Off-take Agreement, CGNPC-URC and KAP are entitled to and shall acquire 49% and 51% of Semizbay-U's total annual production respectively, with effect from 1 January 2013. CGNPC-URC and KAP are permitted, with prior agreement of both parties in writing, to assign part or all of their respective uranium product quantities to be purchased from Semizbay-U to their respective affiliates, including their subsidiaries.

The purchase price of the uranium under the Off-take Agreement that is applicable to each of CGNPC-URC and KAP is determined based on their respective fixed formulas.

The purchase price of uranium under the Off-take Agreement applicable to CGNPC-URC and, upon Completion, to the Company and its subsidiaries represents a 2% discount over the international uranium spot price. Combined with the Company and its subsidiaries experience in uranium trading where most of the Group's uranium sales are priced with reference to long-term benchmark pricing, which is typically higher than spot prices, the Group would be able to maximise value within the entire uranium product supply chain. Where the international uranium market is in a down turn and the uranium spot price is at a low position, the purchase price under the Off-take Agreement will be very competitive as compared with other sources of uranium supply available to the Company and its subsidiaries. While Semizbay-U will record lower revenue, the Group would benefit from the lower purchase cost from Semizbay-U and enjoy higher trading margin, which will offset the loss of revenue for their 49% stake in Semizbay-U.

On the contrary, where the international uranium market picks up and the uranium spot price rises, the purchase price of uranium under the Off-take Agreement may increase as a result and the Company and its subsidiaries will have higher purchase cost from Semizbay-U and therefore lower trading margin. However, Semizbay-U will record higher revenue as the total annual production of Semizbay-U shall be fully underwritten by KAP and CGNPC-URC under the Off-take Agreement, and therefore, the Group, as the owner of the 49% partnership interest in Semizbay-U, would be able to enjoy the benefit of the increase in the revenue of Semizbay-U through profit sharing.

Regarding the Off-take Agreement, we understand that the Company has obtained a written consent dated 31 March 2014 from KAP for the assignment of Off-take Quantity from CGNPC-URC to the Group. Assuming the Company execute the Off-take Agreement upon completion of the Acquisition, the Group will purchase uranium at a 2% discount over the international uranium spot price and then sell at higher price with positive margin over spot price. According to the experience in the past years, most Group's uranium sales are priced with reference to long-term benchmark pricing, which is typically higher than spot prices. Therefore, the realized price from an integrated company perspective is higher than spot price and the effect from the Off-take Agreement is to be eliminated through inter-company transaction.

9.5 Uranium Market Price

There is no uranium commodity exchange or common trading platform where international market prices for uranium can be determined. According to U.S. Geological Survey ("USGS"), worldwide uranium purchases fall into two categories: spot purchases (delivery within one year), and contracts (medium- and long-term delivery).

Monthly and weekly price indicators for uranium products are generally used in spot transaction pricing. The Ux Consulting Company LLC (http://www.uxc.com), TradeTech (http://www.uranium.info/) and the Euratom Supply Agency (http://ec.europa.eu/euratom/) all track uranium prices. In 2011, the volume of uranium in the spot market was approximately 16,000 tonnes uranium (equivalent to approximately 41.6 million pounds of U_3O_8), or 20% total demand and 30% of production, according to USGS. The spot market exists through various traders, brokers, producers and utilities on a bilateral basis.

Most natural uranium is sold through long-term contracts. These contracts are typically at a fixed price with provisions for fluctuations in market price, and the duration of long-term contracts depends upon where the buyer is physically situated. The predominant pricing mechanism is through a base-escalation method, according to which the contract price is equal to the sum of (i) a percentage of base price (determined at the time of contracting, as adjusted for an escalation) and (ii) a percentage of the spot price published the month preceding the month of delivery. An alternative to the base-escalation method is to determine the contract price using a market mechanism, namely, the spot price for uranium at the end of the month prior to the delivery month. In the cases where the market mechanism is applied, minimum and maximum price limits are set.

Generally, long-term contract prices are higher than spot prices, mainly because the base price used is often greater than or equal to spot price indicators at the time the contract is executed. However, because of the volatile nature of spot prices, spot prices may exceed long-term prices at any given time. For price indicators, the industry relies on market research because these contracts are generally not publicly available; the exception being contracts in European Union countries which are reviewed by the EURATOM Supply Agency.

According to the data of Ux historical prices provided by the Company, the average spot uranium prices for 2011, 2012 and 2013 are respectively US$ 56.75, 48.50 and 38.24 per pound of U_3O_4, refers to Table 9-6.

Table 9-6 Historical prices data provided by the Company

	Unit	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Spot price	US$/lb U_3O_8	99.33	61.75	46.27	46.96	56.75	48.50	38.24
Long term price	US$/lb U_3O_8	90.83	82.50	65.50	60.50	67.42	60.17	54.08

Source: the Company ordered from Ux Consulting Company

Based on the uranium spot price and price forecast by Energy&Metals Consensus Forecasts as show in Table 9-7.

Table 9-7 Projected Uranium Sales Prices, US$ /lb U_3O_8

	Consensus (Mean)	**High**	**Low**	**Standard Deviation**
Jun, 2013	47.3	62.5	40.8	6.1
Sep, 2013	49.5	65	42	6.7
Dec, 2013	51.4	65	45	6.3
Mar, 2014	55.6	72.5	46.2	8.3
% change from spot	46.50%			
Jun, 2014	56.7	72.5	47.6	8.7
Sep, 2014	58.5	75	49.1	8.9
Dec, 2014	57.6	72.5	50	7.8
Mar, 2015	61.8	75	50	8.4
Jun, 2015	62.2	75	50	8.4
Sep, 2015	63.5	75	50	8.1

Source: Energy&Metals Consensus Forecasts

9.6 Uranium Price Forecast

The projected uranium price in 2014 was estimated based on market consensus. According to the Energy & Metals Consensus Forecasts published by Consensus Economics Inc. in June 2013, the average consensus forecasted U_3O_8 price published by various external sources (including but not limited to Credit Suisse, Commonwealth Bank, Investec, Macquarie Bank, etc.) in 2014 ranges from US$55.6/lb to US$58.5/lb, with forecasted prices above US$61/lb in 2015. Therefore the competent person considered this prices adopted as basis for the reserve at the effective date (December 31, 2013) of the CPR Report are reasonable and acceptable.

The credentialed source of the pricing forecast is Consensus Economics with its detailed information referring to below website at: www.consensuseconomics.com/download/energy_and_metals_price_forecasts.htm.

Established in London in 1989, Consensus Economics™ prepares monthly compilations of country economic forecasts and topical analyses covering the G-7 industrialised nations, Asia Pacific, Eastern Europe, Latin America that are published in its Consensus Forecasts™ publications, as well as specialised publications on Foreign Exchange forecasts and Energy and Metal price forecasts. Over the past two decades Consensus Economics has cultivated a growing network of economists, drawing upon the expertise of well-established local consultancies and large teams of professionals in the banks who are dedicated to particular countries and regions.

Consensus Economics is often seen as the macroeconomic forecast benchmark by investment and planning managers, as well as government and public sector institutions, who find our data effective, timely and accurate. Energy & Metals Consensus Forecasts is the result of a comprehensive quarterly survey of over 40 of the world's most prominent commodity forecasters covering over 25 individual commodities.

While we note that after that date (December 31, 2013), the spot prices has decreased significantly from approximately US$35 at the beginning of 2014 to US$28 per pound of U_3O_8 at April 2014. Accordingly, the average 2014 price forecast from Consensus Economics decreased to US$40.9/lb. However, we believe the price forecast we adopted in CPR is fair and reasonable with reasons as below:

First, to reflect the potential impact on Reserve Estimates, the competent person has conducted a scenario analysis based on updated April 2014 price forecast from Consensus Economics, and confirmed that there is no change on Reserve and its classification. Please refer to Section 2.9 for more details.

Second, as stated before, Consensus Economics is a well-established source of reliable price forecast. The sources of Consensus Economics forecast are from over 15 institutions, including but not limited to BoA Merrill Lynch, UBS, Morgan Stanley, Commonwealth Bank, Deutsche Bank, Credit Suisse, etc. The price forecast of Consensus Economics is seen as a broadly accepted forecast benchmark by investment managers, government and public sector institutions.

Thirdly, as part of the due diligence process, the Competent Person reviewed various external sources to verify the reasonableness of price forecast for the Reserve estimates as of December 31, 2013. For the price forecast as of April 2014, the Competent Person also reviewed various external sources and confirmed that the April 2014 price forecast is in line with broader market consensus.

Table 9-8 outlines the projected uranium sales prices, taking into account the Republic of Kazakhstan's transfer pricing law and the independent spot price projections. The spot price projection is consistent with various independent forecasts of supply and demand fundamentals and price projections at that time.

BMA' economy model used an Energy&Metals Consensus price US$145/kg uranium (US$56/lb U_3O_8) for 2014 with consideration of inflation of average rate 3.8% per year for the following ramp up years, which is in line with prices inflation of most cost items used in 2012 Feasibility Study.

Table 9-8 Projected Uranium Prices

	Inflation for capital expenditures *(%)*	**Inflation for operating costs** *(%)*	**Rate of change in salary** *(%)*	**Inflation of uranium price** *(%)*	**Forecast US$/kg U**	**Forecast US$/lb U_3O_8**
2014	1.00	1.00	1.00	1.00	145.24	55.86
2015	1.05	1.08	1.02	1.04	150.78	57.99
2016	1.05	1.07	1.02	1.04	156.53	60.20
2017	1.05	1.05	1.02	1.04	162.50	62.50
2018	1.05	1.05	1.03	1.04	168.69	64.88
2019	1.05	1.05	1.02	1.04	175.13	67.36
2020	1.05	1.05	1.02	1.04	181.80	69.92
2021	1.04	1.04	1.03	1.04	188.74	72.59
2022	1.04	1.04	1.02	1.04	195.93	75.36
2023	1.04	1.04	1.02	1.04	203.41	78.23
2024	1.04	1.04	1.02	1.04	211.16	81.22
2025	1.04	1.04	1.02	1.04	219.21	84.31
2026	1.04	1.02	1.02	1.04	227.57	87.53
2027	1.04	1.02	1.02	1.04	236.25	90.87
2028	1.04	1.02	1.01	1.04	245.26	94.33
2029	1.04	1.02	1.00	1.04	254.61	97.93
2030	1.04	1.02	1.00	1.04	264.32	101.66
2031	1.04	1.02	1.00	1.04	274.40	105.54
Average	1.04	1.04	1.02	1.04	203.42	78.24

Source: 2012 Feasibility Study and modification

Note: Contained uranium is expressed as pounds of U_3O_8 or tonnes of U and grades are expressed as % U or %U_3O_8. The conversion factor to convert tonnes of U to pounds of U_3O_8 is 2.6. The conversion factor to convert %U to %U_3O_8 is by multiplying %U by 1.179. Inflation rate weighting factors: Capital costs 0.47; Operating costs 0.49 and Labour 0.03.

10 CAPITAL AND OPERATING COST ESTIMATES

10.1 Capital Costs

The remaining capital costs for Irkol and Semizbay Projects were based on the 2012 Feasibility Study, and calculated from the projected facilities needed to meet the requirement of the overall development schedule in mining life years. A variable inflation rate from 3.8% was considered.

Based on the reviewing of historical production, these costs are reasonable and analogous with similar local operations, thus there is a high confidence in using the estimated capital expense as modify factors in the reserve estimate. The overall costs are dominated by well and pipeline construction.

10.1.1 Irkol Project

The design and the technical work on the Irkol Project began in 2006, including the construction of the facilities necessary to start work in the mine and to ensure the release of the finished product, as well as other facilities such as warehouses, water and electricity facilities, air supply, etc. In 2008, the processing complex at a capacity of 711 tons of uranium (1.85 million lb U_3O_8) was commissioned. It was noted that US$54.3 million has been budgeted in the commission of the mine and US$54 million of capital expense was spent as advised in site visit. The main production facilities (mine site) commissioned is as below:

- Solution product processing plant
- Tanks for sulfuric acid storage (2x300 m^3)
- Acid pump warehouse
- Emergency facilities
- Storage plant of ammonium nitrate
- Decontamination
- Central pumping station
- Filter facilities

Auxiliary facilities of the mine include the following:

- Material workshops and warehouse
- Substation 10/0, 4 kV
- Sewage pumping station
- Fire tanks and stations
- Open storage area
- Water wells, ponds and treatment ponds

The accommodation facilities completed during 2012-2013 are following:

- Mine expansion building and sorption-pressure columns
- Expanded building of central pumping station and additional pumping units
- 22 km regional mine concrete road

Based on the 2012 Feasibility Study, the remaining capital costs for Irkol Project, as of January 1, 2014 to 2025, are estimated to be **US$388** million, which includes **US$275** million for well field development (refer to "ODA" below) and **US$113** million for fixed assets investment.

Table 10-1 shows the overall capital cost estimate from 2014 to 2025. The fixed asset investment from 2014 to 2025 is presented Table 10-2.

All the drilling work was contracted to the local geological team and the Company provides the materials, such as pipes, pumps, etc. During the site visit, it was advised that the overall average costs of well drilling are approximately US$40,000 per wells in historical, which has verified that the forecast ODA costs are reasonable.

As discussion during the site visit, the fixed assets items include equipment and machines that does not within the well development costs, and includes costs for pump, liquid injection machines, flow meters, pressure gauges, liquid immersion tank, acid injection machines, air compressors, automotive, electrical equipment and laboratory equipment, etc.

Table 10-1 Irkol Project-Summary of Estimated Capital Costs for well development, 2014-2025

Items of cost		Unit	US$	Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Uranium	t			8532	711	711	711	711	711	711	711	711	711	711	711	711
Wells Length	m	426		1,211,099	112,832	125,102	138,642	113,232	99,810	109,261	114,095	110,529	103,320	68,228	49,797	66,251
Extraction	m			314,243	33,394	31,146	35,015	29,193	27,862	26,808	31,797	27,869	24,509	16,495	13,670	16,485
Injection	m			800,714	69,318	82,536	93,690	73,424	68,421	75,143	76,219	73,686	69,201	44,611	30,920	43,545
Observation	m			96,147	10,119	11,420	9,937	10,616	3,527	7,311	6,079	8,975	9,611	7,123	5,208	6,221
The cost of building wells	US$000			119,921	11,205	12,370	13,724	11,204	9,918	10,810	11,329	10,936	10,204	6,738	4,933	6,550
Extraction	US$000		106	33,308	3,540	3,301	3,712	3,094	2,953	2,842	3,370	2,954	2,598	1,748	1,449	1,747
Injection	US$000		97	77,669	6,724	8,006	9,088	7,122	6,637	7,289	7,393	7,148	6,712	4,327	2,999	4,224
Observation	US$000		93	8,941	941	1,062	924	987	328	680	565	835	894	662	484	579
Internal piping	US$000			10,669	559	596	717	812	853	895	940	978	1,017	1,058	1,100	1,144
Trunk pipelines	US$000			1,464	93	98	103	108	114	119	125	130	135	141	146	152
Distribution of leaching and productive solutions (OSHD)	US$000	40	120 k	8,418	669	723	879	768	849	807	732	702	645	546	459	639
Site preparation for leach (UPVR)	US$000	40	110 k	7,718	613	663	806	704	778	740	671	644	591	501	421	586
Pumping stations	US$000	4%		4,796	448	495	549	448	397	432	453	437	408	270	197	262
Objects energy supply	US$000	3%		3,597	336	371	412	336	298	324	340	328	306	202	148	196
GIS services	US$000	6%		7,194	672	742	823	672	595	649	680	656	612	404	296	393
Metrological support	US$000	1%		1,197	112	124	137	112	99	108	113	109	102	67	49	65
Dispatching geotechnological field	US$000	0.1%		62	6	6	7	6	5	6	6	6	5	3	3	3
Transformer rated substation	US$000			0	0	0	0	0	0	0	0	0	0	0	0	0
Other expenses	US$000	1.5%		1,799	168	186	206	168	149	162	170	164	153	101	74	98
Acidification*	US$000	52.8	140	28,660	2,653	2,477	3,264	2,950	444	2,834	2,927	2,683	2,335	1,872	1,870	2,351
Total capital costs	US$000			275,292	19,333	21,821	26,287	23,341	19,429	25,168	27,312	27,309	26,390	19,781	16,758	22,363

Source: 2012 Feasibility Study Report;

Note: * refers to a inflation rate was considered and the total is not round up

Table 10-2 Irkol Project – Fixed asset investment from 2014 to 2025

Cost item	Costs Items	Buildings	Machinery and Equipment	Computers	Others	Total Fixed Assets
Unit	*US$000*	*US$000*	*US$000*	*US$000*	*US$000*	*US$000*
Total	3210	109,008	162	213	112,593	112,593
2014	253	9,278	13	17	9,561	9,561
2015	256	7,492	13	17	7,778	7,778
2016	258	7,611	13	17	7,899	7,899
2017	261	9,551	13	17	9,842	9,842
2018	263	9,688	13	17	9,982	9,982
2019	266	10,743	13	18	11,040	11,040
2020	269	10,197	14	18	10,497	10,497
2021	271	10,589	14	18	10,892	10,892
2022	274	9,270	14	18	9,576	9,576
2023	277	10,870	14	18	11,180	11,180
2024	280	10,870	14	19	11,182	11,182
2025	282	2,849	14	19	3,164	3,164

Source: 2012 Feasibility Study Report

10.1.2 Semizbay Project

The Semizbay mine was designed in 2007 and 2008, including the facilities which are necessary for the release of the finished product, as well as auxiliary facilities such warehouses, water supply facilities and power supply, air supply, etc. In 2009, the construction was commissioned. The main mine facilities include:

- Technological pumping station (TPS)
- Processing plant
- Warehouse for commodity
- Slime pit (600 m^3)
- Ponds for sulfuric acid (2 *300 m^3)
- Overpass for acid tank
- Emergency facilities

Auxiliary facilities of the mine site includes following:

- An air compressor station
- Storage shop of equipment and materials
- Shop for repair and mechanical pumping equipment and vehicles
- Temporary storage of solid low-level waste
- Two power transformers (110/10 kV)
- Pumping station and tank for drinking water (V = 2x100 m^3)
- 3 boilers
- Warehouses for non-hazardous gas cylinders and explosive gases
- Refuel operator
- Storage of petroleum products
- Biological treatment plant (120 m^3)

Other infrastructure includes:

- Administrative building and dining room
- Special laundry
- Household housing
- Access roads, and
- Fencing area

Main facilities of the №2 mining polygon mine

- Pumping stations for landfill mining
- Warehouse for sulfuric acid (2x100 m^3)
- Off-site technological communications from mining to industrial landfill site
- Overpass for acid tank
- Emergency facilities
- Composition infrastructure
- Residential building (206 people)
- Pumping and Reservoirs of drinking water (2x100 m^3)
- Sewage pumping station
- Transformer substation
- Fencing area

The accommodation facilities completed in 2013 are:

- Parking site at industrial site for 4 acid tankers

- Parking site for emergency vehicles
- A 110 km sandy gravel-coated road from the mine to the village

Based on the 2012 Feasibility Study, the remaining capital costs of Semizbay mine, as of 2014, are estimated to be **US$461** million, which includes **US$279** million for well field development(ODA) and **US$182** million for fixed assets investment in future years.

Table 10-3 shows the overall capital cost estimate from 2014 to 2031. The breakdown fixed asset investment from 2014 to 2031 is present Table 10-4. ODA costs items and fixed assets items refer to above that for Irkol project.

Table 10-3 Semizbay – Summary of Estimated Capital Costs for well field development, 2014-2031

Items of cost		Rate	Price US$	Total	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Uranium P	t			9144	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508
Wells Length	m	120		634,834	45,796	47,633	46,620	58,647	58,650	47,268	49,623	46,585	44,649	40,875	32,639	24,510	20,410	28,427	25,212	17,290	–	–
Extraction	m			323,017	23,647	24,089	23,088	29,154	29,555	23,985	24,395	23,232	23,124	21,000	17,145	12,513	11,700	14,541	12,672	9,177	–	–
Injection	m			254,261	18,190	19,402	19,203	24,182	23,805	18,954	20,587	18,997	17,466	16,125	12,446	9,804	6,890	11,397	10,296	6,517	–	–
Observation	m			57,556	3,959	4,142	4,329	5,311	5,290	4,329	4,641	4,356	4,059	3,750	3,048	2,193	1,820	2,489	2,244	1,596	–	–
The cost of building wells	US$000			64,256	4,639	4,821	4,713	5,930	5,934	4,784	5,014	4,710	4,523	4,139	3,308	2,481	2,078	2,878	2,551	1,753	–	–
Extraction	US$000		106	34,238	2,507	2,553	2,447	3,090	3,133	2,542	2,586	2,463	2,451	2,226	1,817	1,326	1,240	1,541	1,343	973	–	–
Injection	US$000		97	24,664	1,764	1,882	1,863	2,346	2,309	1,839	1,997	1,843	1,694	1,564	1,207	951	668	1,106	999	632	–	–
Observation	US$000		93	5,352	368	385	403	494	492	403	432	405	377	349	283	204	169	231	209	148	–	–
Internal piping	US$000			16,233	559	596	717	812	853	895	940	978	1,017	1,058	1,100	1,144	1,190	1,237	1,287	1,850	–	–
Trunk pipelines	US$000			1,958	93	98	103	108	114	119	125	130	135	141	146	152	158	165	171	0	–	–
Distribution of leaching and productive solutions (OSHD)	US$000	40	120000	16,056	1,284	1,311	1,260	1,557	1,530	1,212	1,251	1,155	1,089	981	771	570	471	651	573	390	–	–
Site preparation for leach (UPVR)	US$000	40	110000	14,720	1,177	1,202	1,155	1,427	1,403	1,111	1,147	1,059	998	899	707	523	432	597	525	358	–	–
Pumping stations	US$000	4%		2,570	186	193	189	237	237	191	201	188	181	166	132	99	83	115	102	70	–	–
Objects energy supply	US$000	3%		1,927	139	145	141	178	178	144	150	141	136	124	99	74	62	86	77	53	–	–
GIS services	US$000	6%		3,855	278	289	283	356	356	287	301	283	271	248	198	149	125	173	153	105	–	–
Metrological support	US$000	1%		642	46	48	47	59	59	48	50	47	45	41	33	25	21	29	26	18	–	–
Dispatching geotechnological field	US$000	0.10%		30	2	2	2	3	3	2	3	2	2	2	2	1	1	1	1	1	–	–
Transformer rated substation	US$000			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	–	–
Other expenses	US$000	2%		964	70	72	71	89	89	72	75	71	68	62	50	37	31	43	38	26	–	–
Acidification	US$000	41	150	56,196	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3,122	3122	3122
Total capital costs	US$000			279,051	12,785	13,774	14,345	17,713	18,597	16,867	18,290	18,264	18,517	18,253	16,711	15,059	14,532	17,688	17,441	16,287	6827**	7101**

Source: 2012 Feasibility Study Report

Note: * refers to an inflation rate was considered and the total is not round up;

** the details of capital items except acidification for 2030 and 2031 were unknown

Table 10-4 Semizbay – Fixed asset investment, 2014 – 2031

Cost item	Buildings	Machinery and Equipment	Computers	Others	Total Fixed Assets
Unit	*US$000*	*US$000*	*US$000*	*US$000*	*US$000*
Total	4965	177,187	251	329	182,728
2014	253	11,873	13	17	12,155
2015	256	12,478	13	17	12,763
2016	258	6,192	13	17	6,480
2017	261	7,585	13	17	7,876
2018	263	6,850	13	17	7,144
2019	266	7,205	13	18	7,502
2020	269	8,938	14	18	9,238
2021	271	7,889	14	18	8,192
2022	274	9,806	14	18	10,112
2023	277	8,551	14	18	8,860
2024	280	10,765	14	19	11,078
2025	282	9,268	14	19	9,583
2026	285	11,765	14	19	12,083
2027	288	10,044	15	19	10,365
2028	291	12,837	15	19	13,162
2029	294	10,883	15	19	11,211
2030	297	12,467	15	20	12,798
2031	300	11,791	15	20	12,126

Source: 2012 Feasibility Study Report

10.2 Operating Costs

10.2.1 Historical Operating Cost Review

The historical operating cost details from 2009 to 2013 for Semizbay Project and Irkol Project are shown in **Table 10-5**. The data suggested a total operating costs including depreciation and amortization of approximately US$77-105/kg uranium (US$30-40/lb U_3O_8) and US$53-74/kg uranium (US$20-28/lb U_3O_8) in Semizbay Project and Irkol Project respectively. The unit costs are considered to be reasonable and close to similar ISR operations in the Republic of Kazakhstan.

Main consumables includes sulfuric acid, submersible pumps, lubricating oil, resin, steam, ammonium nitrate, compressed air, filter cloth, stainless steel wire, etc. The workshop expenses include the housing, equipment, amortization, resin for processing and all other expenses in the workshop.

Based on the analysis of the historical operating costs data, Semizbay project has higher operating costs in terms of three aspects mainly for following reason.

The Irkol Project is located on the western flank of the Irkol ore field characterized by a calm tectonic setting, as the entire area of the field is not bounded by any faults. The majority of the Irkol deposit is hosted by sedimentary rocks of the Upper Turonian-Coniacian ages (the Irkol ore bearing horizon). It is a geochemically homogenous deposit. While the Semizbay deposit is a complex exogenous style formed from ancient epigenetic uranium mineralization. It is a multi-stage infiltration deposit. Although the Semizbay deposit has higher in-situ uranium grade, while geologically it presents poor operational condition, which would result in significantly higher consumers requirement (eg. acid costs) and other workshop expense. Moreover, the Semizbay project is located in the northeast area where represents a poor infrastructure for production (longer access road and acid transportation) and requires higher capital and operating costs for at same product rate.

BMA notes that the cost of processing services for BLD for Semizbay project is higher than Irkol because the Semizbay Project has contracted a service to a non-own processing plant while the Irkol processing plant has its own uranium production line which produces the "yellow cake".

BMA understand the MET (Subsoil Use Tax) of for Semizbay project is higher than Irkol due to the tax basis, the overall operating cost of Semizbay project is relatively higher.

Table 10-5 Historical Production Costs of 2009-2013

Items	**Unit**	**2009**	**2010**	**2011**	**2012**	**2013**
	Semizbay					
Consumables	US$/kg U		33.5	19.3	26.1	29.6
Power	US$/kg U		1.9	2.2	2.6	4.3
Major wage	US$/kg U		1.5	1.1	1	1.2
Workshop expenses	US$/kg U		47.9	32.7	33.1	28.9
Processing services to BLD	US$/kg U		9.5	12	12.5	13
Actual Production Costs	US$/kg U		94.3	67.3	75.3	77
	US$/lb U_3O_8		36.3	25.9	29	29.6
Depreciation of mining assets	US$/kg		2.7	1.9	1.9	2.1
Depreciation of social costs, training, cleaning, historical cost	US$/kg U		0.1	0.2	0.2	0.3
Repayment of well fields construction	US$/kg U		7	7.5	8.7	11.4
Other expenses for maintenance of the production	US$/kg U		0	0	0.5	0.7
Resin amortization	US$/kg U		1	0.4	0.1	0.1
Actual Total Operating Costs	US$/kg		105.1	77.3	86.7	91.6
	US$/lb U_3O_8		40.4	29.7	33.3	35.2
Property Tax	US$/kg U		0	1.6	1.1	0.9
MET (Subsoil Use Tax)	US$/kg U		22	16.1	18.2	20.3
Actual Total Cost and Taxation	US$/kg U		127.1	95	106	112.8
	US$/lb U_3O_8		48.9	36.5	40.8	43.4
	Irkol					
Consumables	US$/kg U	25.8	19.7	17.1	24.8	23.9
Power	US$/kg U	1.7	1.6	2.4	2.2	3
Major wage	US$/kg U	0.4	0.6	0.7	0.9	1.3

Items	Unit	2009	2010	2011	2012	2013
Workshop expenses	US$/kg U	15.6	13.8	17.2	17.8	19.9
Processing services to BLD	US$/kg U	5.6	7.9	7.7	7.6	7.4
Actual Production Costs	US$/kg	49.1	43.6	45.1	53.3	55.5
	US$/lb U_3O_8	18.9	16.8	17.3	20.5	21.3
Depreciation of mining assets	US$/kg U	0	0	0.4	0.4	0.5
Depreciation of social costs, training, cleaning, historical cost	US$/kg U	0.2	0.2	0.4	0.3	0.4
Repayment of well fields construction	US$/kg U	7.5	9.1	14.3	15.7	16.1
Other expenses for maintenance of the production	US$/kg U	0	0	0	3.4	1
Resin amortization	US$/kg U	0.3	0.3	0.2	0.3	0.1
Total Operating Costs	US$/kg U	57.1	53.2	60.4	73.4	73.6
	US$/lb U_3O_8	21.8	20.3	23.2	28.1	28.3
Property Tax	US$/kg U	0	0	0.3	0.3	0.3
MET(Subsoil Use Tax)	US$/kg U	12.9	10.8	10.9	15.9	16.8
Actual Total Cost and Taxation	US$/kg U	70	64	71.6	89.6	90.7
	US$/lb U_3O_8	26.9	24.6	27.5	34.5	34.9

Source: Provided by the client

Note: BLD refers to processing facilities to produce U_3O_8

BMA reviewed the material and consumers in the historical operating cost details from 2009 to 2013 for Semizbay Project and Irkol Project, refer to Table 10-6 and Source: Monthly production reports Table 10-7.

The main materials cost for ISR leaching is the acid consumption, which dominated the production costs.

The historical acid consumption has an average of approximately 125 kg/kg uranium for Irkol Project and approximately 132 kg/kg uranium for Semizbay project. This number is generally consistent with the projected acid costs in Feasibility Study, and allows confidence on the forecast costs. Other historical materials consumption also provides a reliable basis for forecasting of future materials costs.

Table 10-6 Irkol Project – Acid and Materials Consumptions from 2009 to 2013

Items	Unit	2009	2010	2011	2012	2013	Average
Acid in Acidification	kg/t ore	5	5	5	5	5	5
Acid in Leaching	kg/kg U	110	115	129	141	109	119
Acid in Hydrometallurgy	kg/kg U	1.09	1.5	1.5	1.50	2	1
Total acid	kg/kg U	116	122	136	148	115	125
Ammonium nitrate	kg/kg U	2.65	2.7	2.63	2.59	3.00	3.00
Sodium hydroxide	kg/kg U	0.61	0.6	0.64	0.68	0.69	0.64
Heat	Gcal/kg U	0.0051	0.00359	0.0025	0.0018	0.0020	0.0031
Filter clothes	m^2/kg U	0.004	0.004	0.004	0.0009	0.0004	0.0023
Ion exchange resins	kg/kg U	0.03	0.07154	0.036	0.057	0.0004	0.0397
Stainless steel mesh	m^2/kg U	0.0008	0.0008	0.0008	0.0002	0.00015	0.0005
Power for leaching	kW h/m^3	1.4	1.2	1.28	1.25	1.18	1.26
Power for facilitation	kW h/m^3	1.35	0.8	1.29	0.00	0.89	0.76
Power for processing	kWh/kg U	2.0	2.0	1.96	2.0	2.00	2.00
Compressed air	m^3/kg U	31.0	30.9	31.0	31.0	31.00	30.97
Water	m^3/kg U	0.12	0.1	0.12	0.12	0.12	0.12

Source: Monthly production reports

Table 10-7 Semizbay Project – Acid and materials consumptions from 2009 to 2013

Items	Unit	2009	2010	2011	2012	2013	Average
Acid in Acidification	kg/kg U	142.3	150.87	117	131.98	128.39	125.79
Acid in Leaching	kg/kg U	6.12	5.6	5.9	5.99	6.82	6.41
Sodium hydroxide	kg/kg U	–	3.7	2.58	3.94	3.04	3.49
Ion exchange resins	kg/kg U	0.03	0.229	0.072	0.03	0.03	0.03
Stainless steel mesh	m^2/kg U	0.001	0.01	0.0007	0.00	0.0001	0.00025
Power for extraction	kWh/m^3	–	0.967	1.54	1.01	1.43	1.33
Processing Power	kWh/kg U	–	4.50	1.74	1.90	1.9	1.85
Water	km^3	–	8.7	6,32	23.91	25.10	24.51

Source: Monthly production reports

10.2.2 *Forecast Operating Cost*

The forecast total costs of the 2012 Feasibility Study in the ramp up years for both Irkol Project and Semizbay Project are shown in **Table 10-8**. For purpose of economic analysis, BMA extended the forecast costs (2025-2029 for Irkol Project and 2032 for Semizbay Project) in accordance with the extended mine life from additional JORC reserve estimated by BMA which exceeds the 2012 Feasibility Study schedule.

BMA has reviewed the 2012 Feasibility Study of Irkol Project and forecasted a total Production Cost of average US$49/kg uranium (US$19/lb U_3O_8) and a total Operating Cost of average US$89/kg uranium (US$34/lb U_3O_8) during 2014 to 2029.

Based on the 2012 Feasibility Study of Semizbay Project, BMA has estimated a total Production Cost of average US$69/kg uranium (US$/lb 27 U_3O_8) and a total Operating Cost of average US$113/kg uranium (US$/lb 44 U_3O_8) during 2014 to 2031. The minimum costs are considerably lower due variation in the sulphide, materials and manpower costs etc. proportionally (reduction of 70%) in series with the proceeding last 3 years in the BMA model.

BMA considers that generally operating costs are reasonable based on viable feasibility studies and actual operation practice. BMA understands a local similar operation requires an overall operating cost of approximately US$90/kg uranium (US$35/lb U_3O_8).

It is noted that the forecast operating cost is increasing and significantly higher than the current operating cost, due to a price inflation of most cost items (average rate 3.8% per year).

However, the costs breakdown reflects the consumption of projected materials and consumers for each year under a reasonable price inflation consideration.

Table 10-8 Summary of total forecast Operating Costs

	Semizbay				**Irkol**			
	Unit production cost		**Unit Operating cost**		**Unit production cost**		**Unit Operating cost**	
Unit	*US$/kg U*	*US$/lb U_3O_8*	*US$/kg U*	*US$/lb U_3O_8*	*US$/kg U*	*US$/lb U_3O_8*	*US$/kg U*	*US$/lb U_3O_8*
2014	51.76	19.91	95.18	36.61	41.14	15.82	81.68	31.42
2015	55.26	21.25	100.33	38.59	43.16	16.60	86.07	33.10
2016	58.82	22.62	105.22	40.47	45.79	17.61	92.39	35.53
2017	62.62	24.08	116.16	44.68	49.50	19.04	97.39	37.46
2018	65.56	25.22	120.93	46.51	50.07	19.26	96.24	37.02
2019	67.42	25.93	118.79	45.69	52.82	20.32	101.08	38.88
2020	70.82	27.24	121.89	46.88	56.65	21.79	107.23	41.24
2021	73.18	28.15	127.88	49.18	57.56	22.14	109.70	42.19
2022	75.69	29.11	130.10	50.04	59.00	22.69	111.50	42.88
2023	78.13	30.05	130.98	50.38	58.95	22.67	107.58	41.38
2024	80.17	30.83	130.36	50.14	58.62	22.55	102.93	39.59
2025	82.26	31.64	128.43	49.40	59.80	23.00	105.32	40.51
2026*	83.41	32.08	129.98	49.99	62.08	23.88	108.85	41.87
2027*	86.02	33.08	139.57	53.68	43.46	16.72	52.27	20.10
2028*	88.6	34.08	143.52	55.20	30.43	11.70	36.60	14.08
2029*	91.27	35.10	147.62	56.78	21.31	8.20	25.62	9.85
2030*	63.9	24.58	76.20	29.31				
2031*	44.74	17.21	53.35	20.52				
2032*	31.32	12.05	37.35	14.37				
Average	69.00	26.54	113.36	43.60	49.40	19.00	88.90	34.19

Source: BMA summary based on 2012 Feasibility Study

Note: *Refer to extended mine life from additional JORC reserve estimated by BMA, in excess of the 2012 Feasibility Study schedule.

A overall weighting costs inflation of 3.8% is considered.

BMA varied the sulphide, materials and manpower costs etc. proportionally (reduce 70%) in series with the proceeding last 3 years.

BMA reduced the fix assets capitals and repayment for ODA for last 3 years considering no drilling exploration and production wells may not be the case. It is assumed no well requirement in last 3 years (wells life more than 3 years actually).

The 2012 Feasibility Study has detailed operating costs of all years of operation. **Table 10-9** shows the summary of the average operating cost for future years. The cost is dominated by sulfuric acid and key materials as well as repayment for wells field construction.

The breakdown of the cost in each mine life years is shown in Table 10-16. The costs are increasing in the first few years due to price inflation. In the later mining years, the material cost as well as the total processing costs will decrease since no new well fields will be required for further development.

Table 10-9 Forecast Operating Costs as of 2014 to mine life years

		Irkol Project				Semizbay Project			
Items of cost	**Unit**	**Consumption**	**Price per unit**	**Costs per kg U**	**Total Costs 2014-2025**	**Consumption**	**Price per unit.**	**Costs per kg U**	**Total Costs 2014-2031**
				US$/kg				*US$/kg*	
			US$	*U*	*US$000*		*US$*	*U*	*US$000*
Total Uranium tonnes					8,532 t				9,144t
Construction and exploration wells	US$000	426 m	78	3.94	36,258	120 m	89	4	32,763
Wage fund	US$000			3.25	28,205			5	44,692
Social tax	US$000			0.32	2,792			0	4,425
Tax on land	US$000			0.00	0			0	0
Land	US$000			0.00	12			0	18
Tax on transportation	US$000			0.00	8			0	13
Property Tax	US$000			0.02	150			0	304
Environment Fee	US$000			0.02	156			0	234
Consumables, maintenance and repair									

Items of cost	Unit	Consumption	Irkol Project Price per unit	Costs per kg U	Total Costs 2014-2025	Consumption	Semizbay Project Price per unit.	Costs per kg U	Total Costs 2014-2031
			US$	*US$/kg U*	*US$000*		*US$*	*US$/kg U*	*US$000*
Sulfuric acid	US$000	–	117-153	27.62	248,112	127	114-209	33	300,353
Power	US$000	1.42	40	1.36	12,187	2	40	2	20,364
Other materials	US$000		0.05	1.10	9,851		0	2	16,461
PBP and service wells	US$000	0.7	2,000	3.52	31,515	1	2,000	6	52,663
Submersible Pump	US$000	0.7	8,740	3.09	27,797	1	8,740	7	65,936
Household spending mine	US$000	4.32		5.18	46,340	4		10	87,001
Fix Assets Repairs and maintenance	US$000	5%		0.09	855	0		0	1,674
Preparation of local personnel	US$000	1.00%		0.43	3,862	0		1	6,457
Social services	US$000	70		0.10	840	100		0	1,800
Liquid fund	US$000	1.00%		0.50	4,481	0		1	6,825
Total liabilities	US$000			0.60	5,321			1	8,625
Total production costs	US$000 and US$/kg U			49.93	448,096			75	682,291
	US$/lb U_3O_8			19.20				29	
Depreciation of fixed assets	US$000			12.47	106,356			17	159,534
Repayment of well site development	US$000			31.95	285,296			30	276,939
Repayment of assets	US$000			0.07	564			0	612
Depreciation on LF	US$000			0.05	468			0	504
	US$000 and US$/kg U			94.48	840,783			122	1,119,875
Total operating costs	US$/lb U_3O_8			36.34				47.10	

Source: 2012 Feasibility Study

10.2.3 Forecast Acid Consumption

As the dominant production cost item, the sulfuric acid consumption is projected in the 2012 Feasibility Study as shown in **Table 10-10**. The estimate is based on acid consumption for leaching through the mine life years, ranging from 112 to 148 kg/kg uranium for Irkol Project, and 106 to 202 kg/kg uranium for Semizbay Project. The review of the variable geological conditions of ore body in the mine planning, and the review of the 2009-2013 production data suggest that the projected sulfuric acid consumption for both Irkol Project and Semizbay Project are reasonable.

Table 10-10 Forecast Acid Consumption

	Irkol Project		**Semizbay Project**	
	Acid for Processing	**Acid for Leaching**	**Acid for Processing**	**Acid for Leaching**
Unit	*kg/kg U*	*kg/kg U*	*kg/kg U*	*kg/kg U*
2014	5	133.1	6.5	165.7
2015	5	135.9	6.9	171.4
2016	5	142.6	6.4	165.0
2017	5	144.8	6.7	161.3
2018	5	147.6	6.6	176.6
2019	5	146.4	6.6	201.9
2020	5	146.5	6.6	202.4
2021	5	139.1	6.9	191.3
2022	5	133.4	6.8	173.9
2023	5	125.9	6.8	172.0
2024	5	116.1	6.8	162.7
2025	5	112.2	6.8	146.1
2026			6.0	118.6
2027			6.0	108.0
2028			6.3	106.3
2029			6.0	117.1
2030			7.1	123.5

Source: 2012 Feasibility Study

10.2.4 Taxes and Royalties

Table 10-11 shows taxes and royalties payable under the Tax Code applicable based on projected production.

The actual taxes and royalties paid could differ from the estimate as there is uncertainty in how the new Tax Code will be interpreted and applied by the Kazakh government.

The rate of the corporate income tax on aggregate income was set at 20% during the period January 1, 2009 to January 1, 2010; 17.5% during the period January 1, 2010 to January 1, 2011; and 15% commencing January 1, 2014. However, these rates have been suspended until 2014, with government setting the corporate income tax rate at 20%. The corporate tax rate has been maintained at 20% over the life of the operation as there is uncertainty if the 15% rate contemplated by the new Tax Code will take effect in 2014.

The Tax has replaced the previous royalty regime with a new tax-the Tax on Production of Useful Minerals, a mineral extraction tax previously defined as MET. The MET rate is assumed to be 22% over the life of the mine. MET must be paid on minerals and certain other substances extracted. Under the prior law, the Company would pay royalties, calculated on a graduated scale, based on the sales price of production in each year.

Within all the taxation items, the MET (22%) and corporation income tax (20%) are the dominant factors which could significantly impact the project's economy. BMA notes that the economic model contained in the 2012 Feasibility Study has properly reflected the taxation costs in each step and the numbers appear to be reasonable.

Table 10-11 Estimated Taxes and Royalties

Taxation	Rate %	Taxable basis
Corporate income tax	20%	Taxable income.
VAT	12	Taxable turnover. By the size of the taxable turnover and taxable imports – 12%.
MET	22 %	The cost of production volume increased by 20% eg 2013 MET formula is: total operating costs*1.2/(1-1.2*18.5%)*18.5%
EPT	interest progression	Part of net income for the tax period in which the ratio of the SRS and deductions exceeds 1.25
Social tax	11%	income for workers
Property Tax	1.50%	The average annual cost of carrying objects of taxation
Tax on land	Based on the category of the land plot on the basis of base rates	Plot
Vehicle Tax	Multiplicity of the monthly calculation index	Transportation

Source: 2012 Feasibility Study

10.3 Economy Analysis

The independent economic analysis is based on the resources and reserves estimated as well as the mining schedule of BMA, employing costs and expense items detailed in the 2012 Feasibility Study after verification by BMA.

The annual cash flow projections were estimated over the life of the mine based on capital expenditures, costs and sales revenue. The financial indicators examined for each option of the project include after-tax net cash flow and net present value (NPV). This section incorporates a number of the project schedules, products prices that have been adopted in the 2012 Feasibility study which is considered to be reasonable by BMA. The factors adopted in excess years upon that of 2012 Feasibility Study (2025-2029 for Irkol and 2032 for Semizbay) were modified aiming to reflect the most likely scenario for project development as well as the leaching and processing schedules and costs.

No assumptions have been made for project financing in the economic model. All costs have provision for inflation escalation. Exchange rates were the Republic of Kazakhstan currency to US$ of 144-146 during 2008 to 2013.

Net Present Value (NPV)

The NPV Sensitivity to discount rate for the Irkol Project and Semizbay Project is shown in Table 10-12 and Table 10-13, respectively. This analysis suggested positive NPV figures for both projects.

Table 10-12 Irkol – Cumulative NPV Sensitivity to Discount Rate

Discount Rate *(%)*	**NPV** *(US$000)*
8.0%	340.9
13.6%	221.4
15.5%	195.0

Table 10-13 Semizbay – Cumulative NPV Sensitivity to Discount Rate

Discount Rate *(%)*	**NPV** *(US$000)*
8.0%	173.8
13.6%	98.7
15.5%	83.6

Cumulative NPV Sensitivity (at 13.6%)

As the production rate of the Irkol Project and Semizbay Project are most likely to be constant in the next few years, the cumulative NPV sensitivities on the sulfuric acid costs, production costs, operating costs, capital cost and prices are shown Figure 10-1 and Figure 10-2.

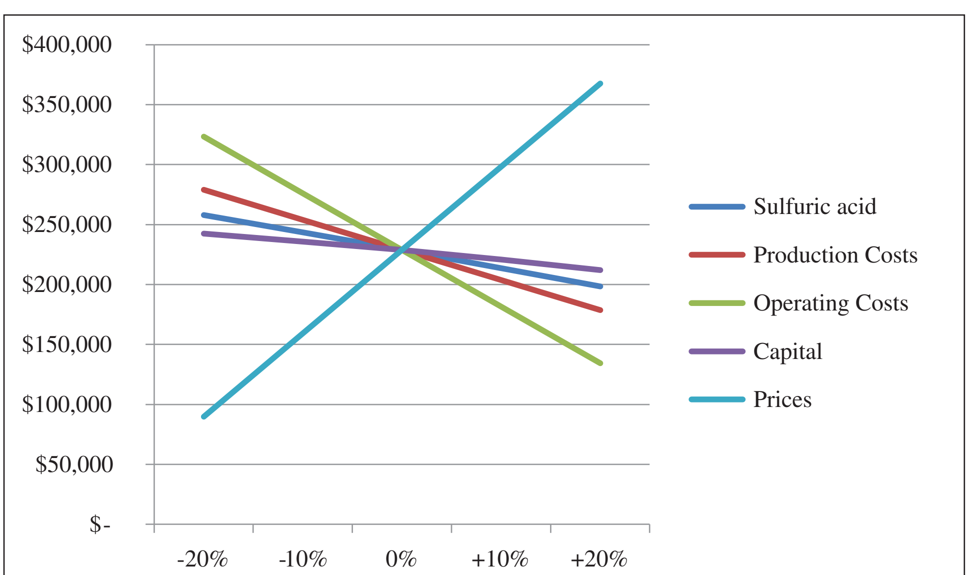


Figure 10-1 Irkol – Cumulative NPV sensitivity

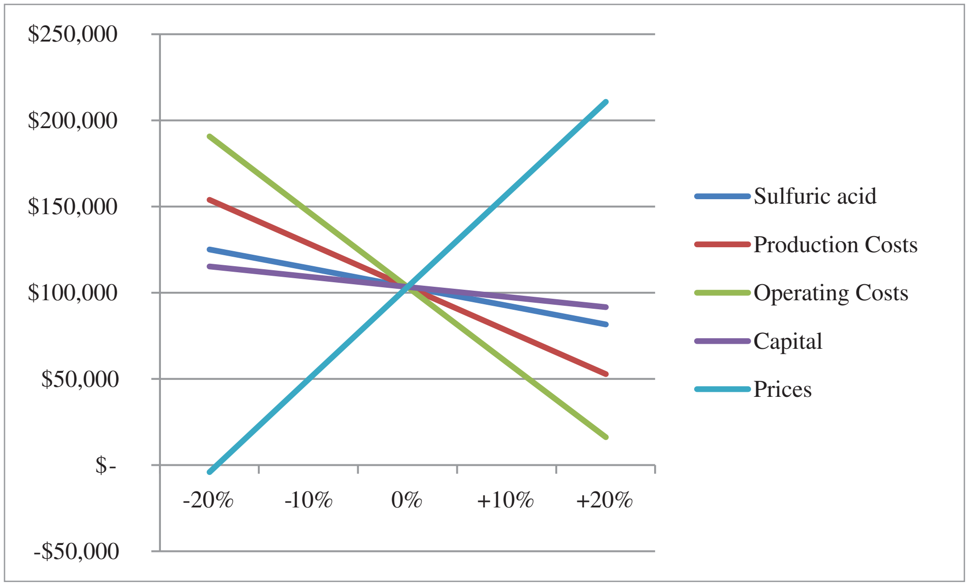


Figure 10-2 Semizbay – Cumulative NPV sensitivity

They cumulative NPV sensitivity analyses show that the prices of products and operating costs for the Irkol Project and Semizbay Project were the most sensitive factors to the financial returns of the projects. The sensitivity analysis demonstrates that both project can withstand a certain level of financially negative events, such as increasing costs, or decreased prices, and continue to deliver positive cash flows. The cash flow is more sensitive to the uranium price.

We also note that as Semizbay-U is both operator and off take partner within the joint venture the cut off price has been tolerant to the current depressed uranium prices but has caused significant negatively impact to the operation. BMA notes that cut off price for both mines are higher than current spot prices up to April 2014.

Although the operation of Semizbay-U would be impacted by depressed uranium prices, the integration of Off-Take agreement would mitigate the negative price impact and create strategic benefit when evaluating the mining projects and Beijing Sino-Kazakh as a whole.Also, the continuing operation is beneficial for the purpose of maintaining employment and local economy development. Therefore, Semizbay-U is expected to continue operations and receive support from the shareholders.

According to the Joinder Agreement entered into between Beijing Sino-Kazakh, KAP and The Mining Company LLP (a wholly-owned subsidiary of KAP), KAP and The Mining Company LLP commit to provide assistance to Semizbay-U in obtaining: i) all necessary licenses and approvals relating to the operation of Semizbay-U and sales of uranium products of Semizbay-U in the Republic of Kazakhstan; and ii) working visas for the representatives and employees seconded by Beijing Sino-Kazakh to work in the Republic of Kazakhstan. Beijing Sino-Kazakh commits to obtain all necessary PRC licenses and approvals relating to the importation and exportation of the uranium products of Semizbay-U.

Pursuant to the Joinder Agreement, the partnership (i.e. Semizbay-U) is established for a fixed term from the date of the Joinder Agreement to 2035 and such term may be extended by mutual agreement of Beijing Sino-Kazakh, KAP and The Mining Company LLP. The term of the partnership exceeds the mining lives of the Irkol Mine and the Semizbay Mine.

Table 10-16 Irkol Project – Economy Analysis (US$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue																
Annual Production(t)	711	711	711	711	711	711	711	711	711	711	711	711	711	711	711	711
Unit Price (US$/kg U)	145	151	157	162	169	175	182	189	196	203	211	219	228	236	245	255
Revenue	103,266	107,203	111,291	115,535	119,941	124,515	129,263	134,192	139,309	144,622	150,137	155,862	161,805	167,975	174,381	181,030
Cost of sales																
Operational cost of construction and exploration wells	(3,652)	(3,012)	(2,091)	(2,927)	(1,345)	(1,866)	(2,859)	(3,414)	(4,066)	(4,050)	(4,335)	(4,500)	(4,672)	(3,270)	(2,289)	(1,602)
Wage fund	(2,103)	(2,145)	(2,188)	(2,232)	(2,276)	(2,322)	(2,368)	(2,416)	(2,464)	(2,513)	(2,563)	(2,661)	(2,762)	(1,934)	(1,353)	(947)
Social tax	(208)	(212)	(217)	(221)	(225)	(230)	(234)	(239)	(244)	(249)	(254)	(264)	(274)	(192)	(134)	(94)
Land Tax	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
The fee for use of the land	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tax on transportation	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Property Tax	(4)	(6)	(7)	(9)	(10)	(12)	(13)	(15)	(16)	(18)	(19)	(20)	(20)	(14)	(10)	(7)
Fee for the issue to the environment	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
The cost of the sulfuric acid leaching	(15,160)	(16,569)	(18,599)	(19,835)	(21,222)	(22,096)	(23,216)	(22,924)	(22,869)	(22,448)	(21,537)	(21,637)	(22,462)	(15,723)	(11,006)	(7,704)
Power	(751)	(803)	(859)	(902)	(948)	(995)	(1,045)	(1,086)	(1,130)	(1,175)	(1,222)	(1,269)	(1,317)	(922)	(645)	(452)
Other materials	(607)	(649)	(695)	(730)	(766)	(804)	(844)	(878)	(913)	(950)	(988)	(1,026)	(1,065)	(745)	(522)	(365)
PBP and service wells	(1,940)	(2,077)	(2,222)	(2,334)	(2,450)	(2,573)	(2,701)	(2,810)	(2,922)	(3,039)	(3,160)	(3,281)	(3,406)	(2,384)	(1,669)	(1,168)
Submersible Pump	(1,698)	(1,856)	(2,084)	(2,222)	(2,378)	(2,476)	(2,601)	(2,568)	(2,562)	(2,515)	(2,413)	(2,505)	(2,601)	(1,820)	(1,274)	(892)
Household spending mine	(2,854)	(3,054)	(3,268)	(3,431)	(3,603)	(3,783)	(3,972)	(4,131)	(4,296)	(4,468)	(4,647)	(4,824)	(5,008)	(3,506)	(2,454)	(1,718)
Current repairs and maintenance of fixed asset	(24)	(33)	(42)	(50)	(59)	(68)	(76)	(84)	(92)	(101)	(109)	(113)	(117)	(82)	(58)	(40)
Local personnel	(238)	(254)	(272)	(286)	(300)	(315)	(331)	(344)	(358)	(373)	(388)	(403)	(418)	(293)	(205)	(143)
Depreciation of fixed assets	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(6,204)	(4,343)	(3,040)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Repayment of ODA	(19,868)	(21,560)	(24,185)	(25,101)	(23,878)	(25,367)	(27,016)	(28,124)	(28,378)	(25,629)	(22,556)	(23,416)	(24,309)			
Depreciation of assets	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(33)	(23)	(16)
Depreciation of LF	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(27)	(19)	(13)
Total Cost before MET	(58,071)	(61,194)	(65,693)	(69,244)	(68,424)	(71,871)	(76,240)	(77,997)	(79,274)	(76,492)	(73,155)	(74,881)	(77,395)	(37,164)	(26,020)	(18,218)
MET	(15,331)	(16,155)	(17,343)	(18,280)	(18,064)	(18,974)	(20,127)	(20,591)	(20,928)	(20,194)	(19,313)	(19,769)	(20,432)	(9,811)	(6,869)	(4,810)
Total Cost before MET	(73,401)	(77,349)	(83,036)	(87,524)	(86,488)	(90,845)	(96,367)	(98,588)	(100,202)	(96,686)	(92,468)	(94,650)	(97,827)	(46,976)	(32,889)	(23,028)
Other Operating Expenses																
Indirect costs of the activities of the contract	(338)	(354)	(372)	(386)	(400)	(415)	(431)	(444)	(458)	(473)	(491)	(510)	(529)	(370)	(259)	(182)
Total contract cost	(1,154)	(1,235)	(1,322)	(1,388)	(1,457)	(1,530)	(1,606)	(1,670)	(1,737)	(1,806)	(1,875)	(1,946)	(2,021)	(1,414)	(990)	(693)
Total Operating Expenses	(1,492)	(1,589)	(1,694)	(1,774)	(1,857)	(1,945)	(2,037)	(2,114)	(2,195)	(2,279)	(2,366)	(2,456)	(2,550)	(1,785)	(1,249)	(875)
Tax																
Profit before tax	28,372	28,266	26,562	26,237	31,597	31,725	30,859	33,490	36,912	45,657	55,303	58,756	61,428	119,215	140,243	157,128
Tax expenses	(5,674)	(5,653)	(5,312)	(5,247)	(6,319)	(6,345)	(6,172)	(6,698)	(7,382)	(9,131)	(11,061)	(11,751)	(12,286)	(23,843)	(28,049)	(31,426)
Net Profit	22,698	22,612	21,250	20,990	25,277	25,380	24,687	26,792	29,530	36,526	44,242	47,005	49,143	95,372	112,194	125,703
Cash Flow Movement																
CAPEX	(9,561)	(7,778)	(7,899)	(9,842)	(9,982)	(11,040)	(10,497)	(10,892)	(9,576)	(11,180)	(11,182)	(11,608)	(12,051)	(8,436)	(5,905)	(4,134)
Tax savings on CAPEX	1,594	1,296	1,317	1,640	1,664	1,840	1,750	1,815	1,596	1,863	1,864	1,935	2,009	1,406	984	689
Working capital	(293)	(307)	(326)	(352)	(356)	(376)	(403)	(409)	(419)	(419)	(416)	(432)	(448)	(314)	(220)	(154)
Historical costs (payments)	(155)	(155)	(155)	(155)	(155)	(155)	0	0	0	0	0	0	0	0	0	0
Working capital required	(2,244)	(709)	(736)	(764)	(793)	(823)	(855)	(887)	(921)	(956)	(993)	(1,031)	(1,070)	(1,111)	(1,153)	31,389
D&A	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	6,264	4,385	3,070
Net Cash Inflow/(Outflow)	20,987	23,909	22,399	20,466	24,604	23,775	23,631	25,368	29,159	34,783	42,464	44,817	46,531	93,182	110,286	156,562

Table 10-17 Semizbay Project – Economy Analysis(US$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Revenue																			
Annual Production	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508
Unit Price	145.24	150.78	156.53	162.50	168.69	175.13	181.80	188.74	195.93	203.41	211.16	219.21	227.57	236.25	245.26	254.61	264.32	274.40	284.87
Revenue	73,782	76,595	79,516	82,548	85,696	88,964	92,357	95,879	99,535	103,330	107,271	111,361	115,608	120,016	124,593	129,344	134,276	139,396	144,712
Cost of sales																			
Operational cost of construction and exploration wells	(1,895)	(2,067)	(2,170)	(2,778)	(2,886)	(2,382)	(2,586)	(2,495)	(2,429)	(2,278)	(1,871)	(1,428)	(1,204)	(1,702)	(1,767)	(1,834)	(1,284)	(899)	(629)
Wage fund	(2,103)	(2,145)	(2,188)	(2,232)	(2,276)	(2,322)	(2,368)	(2,416)	(2,464)	(2,513)	(2,563)	(2,615)	(2,667)	(2,720)	(2,824)	(2,931)	(2,052)	(1,436)	(1,005)
Social tax	(208)	(212)	(217)	(221)	(225)	(230)	(234)	(239)	(244)	(249)	(254)	(259)	(264)	(269)	(279)	(290)	(203)	(142)	(99)
Land Tax	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
The fee for use of the land	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tax on transportation	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Property Tax	(4)	(6)	(7)	(9)	(10)	(12)	(13)	(15)	(16)	(18)	(19)	(21)	(22)	(24)	(25)	(26)	(18)	(13)	(9)
Fee for the issue to the environment	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
The cost of the sulfuric acid leaching	(11,071)	(11,846)	(12,675)	(13,309)	(13,975)	(14,673)	(15,407)	(16,023)	(16,664)	(17,331)	(18,024)	(18,745)	(19,120)	(19,502)	(19,892)	(20,290)	(14,203)	(9,942)	(6,959)
The cost of hydrogen peroxide	(1,804)	(1,930)	(2,065)	(2,168)	(2,277)	(2,390)	(2,510)	(2,610)	(2,715)	(2,823)	(2,936)	(3,054)	(3,115)	(3,177)	(3,298)	(3,424)	(2,397)	(1,678)	(1,174)
Power	(751)	(803)	(859)	(902)	(948)	(995)	(1,045)	(1,086)	(1,130)	(1,175)	(1,222)	(1,271)	(1,296)	(1,322)	(1,372)	(1,425)	(997)	(698)	(489)
Other materials	(607)	(649)	(695)	(730)	(766)	(804)	(844)	(878)	(913)	(950)	(988)	(1,027)	(1,048)	(1,069)	(1,110)	(1,152)	(806)	(565)	(395)
PBP and service wells	(1,940)	(2,077)	(2,222)	(2,334)	(2,450)	(2,573)	(2,701)	(2,810)	(2,922)	(3,039)	(3,160)	(3,287)	(3,352)	(3,420)	(3,550)	(3,686)	(2,580)	(1,806)	(1,264)
Submersible Pump	(2,430)	(2,601)	(2,783)	(2,922)	(3,068)	(3,221)	(3,382)	(3,518)	(3,658)	(3,805)	(3,957)	(4,115)	(4,197)	(4,281)	(4,444)	(4,614)	(3,230)	(2,261)	(1,583)
Household spending mine	(3,207)	(3,431)	(3,672)	(3,855)	(4,048)	(4,250)	(4,463)	(4,641)	(4,827)	(5,020)	(5,221)	(5,430)	(5,538)	(5,649)	(5,864)	(6,088)	(4,262)	(2,983)	(2,088)
Current repairs and maintenance of fixed asset	(24)	(33)	(42)	(50)	(59)	(68)	(76)	(84)	(92)	(101)	(109)	(117)	(123)	(128)	(133)	(138)	(97)	(68)	(47)
Local personnel	(238)	(254)	(272)	(286)	(300)	(315)	(331)	(344)	(358)	(373)	(388)	(403)	(411)	(420)	(436)	(453)	(317)	(222)	(155)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Depreciation of fixed assets	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(6,204)	(4,343)	(3,040)
Repayment of ODA	(13,131)	(13,973)	(14,645)	(18,272)	(19,205)	(17,171)	(17,016)	(18,863)	(18,720)	(17,926)	(16,574)	(14,530)	(14,734)	(18,278)	(18,975)	(19,699)			
Depreciation of assets	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(24)	(17)	(12)
Depreciation of LF	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(20)	(14)	(10)
Total Cost before MET	(48,353)	(50,967)	(53,452)	(59,008)	(61,433)	(60,346)	(61,916)	(64,962)	(66,092)	(66,541)	(66,226)	(65,242)	(66,031)	(70,901)	(72,910)	(74,989)	(38,707)	(27,100)	(18,974)
MET	(12,765)	(13,455)	(14,111)	(15,578)	(16,218)	(15,931)	(16,346)	(17,150)	(17,448)	(17,567)	(17,484)	(17,224)	(17,432)	(18,718)	(19,248)	(19,797)	(10,219)	(7,154)	(5,009)
Total Cost before MET	(61,118)	(64,422)	(67,563)	(74,586)	(77,651)	(76,277)	(78,261)	(82,112)	(83,540)	(84,107)	(83,709)	(82,466)	(83,463)	(89,619)	(92,158)	(94,786)	(48,926)	(34,254)	(23,983)
Other Operating Expenses																			
Indirect costs of the activities of the contract	(338)	(354)	(372)	(386)	(400)	(415)	(431)	(444)	(458)	(473)	(488)	(503)	(522)	(542)	(563)	(584)	(409)	(286)	(200)
Total contract cost	(1,154)	(1,235)	(1,322)	(1,388)	(1,457)	(1,530)	(1,606)	(1,670)	(1,737)	(1,806)	(1,879)	(1,954)	(1,993)	(2,032)	(2,109)	(2,190)	(1,533)	(1,073)	(751)
Total Operating Expenses	(1,492)	(1,589)	(1,694)	(1,774)	(1,857)	(1,945)	(2,037)	(2,114)	(2,195)	(2,279)	(2,367)	(2,457)	(2,515)	(2,574)	(2,672)	(2,774)	(1,942)	(1,359)	(952)
Tax																			
Profit before tax	11,172	10,585	10,259	6,189	6,188	10,742	12,058	11,653	13,800	16,944	21,194	26,439	29,630	27,824	29,762	31,784	83,408	103,783	119,777
Tax expenses	(2,234)	(2,117)	(2,052)	(1,238)	(1,238)	(2,148)	(2,412)	(2,331)	(2,760)	(3,389)	(4,239)	(5,288)	(5,926)	(5,565)	(5,952)	(6,357)	(16,682)	(20,757)	(23,955)
Net Profit	8,938	8,468	8,207	4,951	4,951	8,594	9,647	9,322	11,040	13,555	16,955	21,151	23,704	22,259	23,810	25,427	66,726	83,027	95,822
Cash Flow Movement																			
CAPEX	(12,155)	(12,763)	(6,480)	(7,876)	(7,144)	(7,502)	(9,238)	(8,192)	(10,112)	(8,860)	(11,078)	(9,583)	(12,083)	(10,365)	(13,162)	(11,211)	(7,848)	(5,493)	(3,845)
Tax savings on CAPEX	2,026	2,127	1,080	1,313	1,191	1,250	1,540	1,365	1,685	1,477	1,846	1,597	2,014	1,728	2,194	1,869	1,308	916	641
Working capital	(263)	(281)	(299)	(318)	(333)	(343)	(360)	(372)	(384)	(397)	(407)	(418)	(424)	(437)	(444)	(447)	(218)	(153)	(107)
Historical costs (payments)	(155)	(155)	(155)	(155)	(155)	(155)	0	0	0	0	0	0	0	0	0	0	0	0	0
Working capital required	(1,604)	(506)	(526)	(546)	(567)	(588)	(611)	(634)	(658)	(683)	(709)	(736)	(764)	(794)	(824)	(855)	(888)	(922)	25,091
D&A	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	6,248	4,373	3,061
Net Cash Inflow/(Outflow)	5,712	5,814	10,753	6,294	6,868	10,181	9,903	10,415	10,496	14,016	15,532	20,936	21,371	21,316	20,499	23,708	65,328	81,748	120,663

11 INFRASTRUCTURE

11.1 Irkol project

11.1.1 Accessibility

The Irkol mine is geographically located in the Kyzylorzhinsk area, 20 km from the Chiili town, the Republic of Kazakhstan. The mining lease area covers 44 square kilometers at depth of from 400 to 700 m from the surface. The nearby village has a major railway station with a national highway passing through the regional centre. The distance from the Irkol deposit to the railroad is up to 40 km with a minimum of 15 km. A sealed road leads direct to the Irkol deposit.

11.1.2 Water

The Irkol Mine employs the river water as well as groundwater in quaternary and artesian sediments. The river has heavy stream flow periods from May to June and the maximum water flow during this period varies from 300 to 1000 m^3/s. At that time, the water consumption is 40 - 100 m^3/s.

Part of the water supply for drinking and industrial needs are sourced from wells at the industrial site, including two wells (one backup) for drinking purposes with an output of 10 m^3/hr and two wells (one backup) for industrial purposes with an output 16 m^3/hr. These wells were drilled on the upper Maastricht an aquifer at a depth of 230 - 270 m.

11.1.3 Power

The proposed demand for power is a maximum of 27248 kWh in 2018 and minimum 18347 kWh in 2025. The power supply to the area is fed by 220 kV power lines in the network of Central Asia and Southern Kazakhstan. A 0.4 kV power cable from the 630 kVA substations transformer is available for access by the processing plant and wells fields. The 630 kVA substations transformers are connected to an existing 110/10 kV substation, located on the south side of the main building. When necessary, a backup power supply will be made from the existing diesel-powered stations at the industrial site.

11.1.4 Acid and materials supply

There is need for raw materials and sulfuric acid with a maximum requirement of 135 kt in 2016 and minimum of 104 kt in 2024. The warehouses of the liquid reagents are located at the industrial site and the proposed divisional industrial site.

The Semizbay-U LLP supplies the sulfuric acid and also controls, accounts for and manages the raw materials (including sulfuric acid and mother solution).

11.2 Semizbay project infrastructure

11.2.1 *Access*

The Semizbay deposit is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan. The geographic coordinates are 52°55'50"N, 72°52'10"E. The Semizbay deposit area is one of the least economically developed regions in northern Kazakhstan. Large settlements and railway stations-Stepnogorsk (by 110km), Zaozernoe (by 120km), Bestube (by 50 km) and the railway station Kzyltu (by 100 km) have transport links with the deposit but there is no direct rail link to Semizbay Project. A road passing through deposit connects the village Kirovo with the village Koytas, and second road connects the village Baylyust and the processing plant.

11.2.2 *Water supply*

The water for the field area is fed by the nearby lake, temporary streams and rivers. The rivers are fed mainly by snowmelt and characterized by a brief peak during spring floods. River runoff is carried to a local lake basin. Underground water, due to their high mineral content (2 to 20 g/L) is not employed as drinking water and only suitable for production purposes.

Due to the fact that the Semizbay deposit is 100 km to nearby residential village (Stepnogorsk), the drinking water can be sourced from an abandoned well in the nearby village (15 km from the field). It was assayed and found to be well suited for use in living conditions. Two tanks as drinking water destination have volume of 100 m^3 for each.

The water from polyethylene pipes report to fill two reservoirs of production water with a volume of 150 m^3 for fire fighting and production water.

11.2.3 *Power supply*

A power line of 110 kW is connected from the local village. Power supply to the area is from the 220 kV power lines within the network of Central Asia and Southern Kazakhstan. A 0.4 kV power cabling from the 630 kVA substations transformer is available for access by the processing plant and wells fields. The substations transformers are connected to an existing 110/10 kV substation, located on the south side of the main building.

11.2.4 *Local suppliers*

The sourcing arrangements (e.g. commendations, food, communication etc.) for the production is entirely in place and no risk is forecasted to materially impact the deposit development.

12 OTHER RELEVANT DATA AND INFORMATION

12.1 The subsoil law

The subsoil use rights held by Semizbay-U LLP came into the issuance of its two licenses in 2007, i.e., the conclusion of its Resource Use Contract and approval of the Resource Use Contract by applicable State entities.

In accordance with the August 1999 amendments to the Subsoil Law, BMA believes the licenses held by Semizbay-U are governed by the version of the Subsoil Law in effect at the time of their issuance in April, 1999.

Under Kazakhstan's Subsoil and Subsoil Use Law, in order to conduct exploration and production of natural resources, an entity needs to enter "subsoil use contract" with the competent body (currently, the Ministry of Industry and New Technologies is the competent body for the mining sector). A subsoil use contract is a type of title document confirming the exclusive right of a subsoil user to explore and extract natural resources within the outlined contract territory.

In addition to a subsoil use contract, an entity engaged in exploration and production of natural resources may need special operational licenses. In particular, under Kazakhstan's Licensing Law, certain types of activity connected with high level of danger cannot be conducted without getting a special license from state authorities. The following licenses, among other things, may be applicable to Semizbay-U in connection with development of the deposits:

- design (technological) and/or exploitation of mining facilities;
- extraction of natural resources;
- opening up and development of deposits by open-pit and underground methods;
- technological works at deposits.

In order to conduct mining (exploration and production) operations, Semizbay-U needs both subsoil use contracts and operational licenses. Semizbay-U may subcontract certain types of activities conducted at the deposits. In such case, the relevant subcontractors need to have the applicable operational licenses.

Semizbay-U provided with copies of the following operational license related to mining activity:

- state license for design and exploitation of mining facilities, processing of minerals dated 15 June 2009.

On the basis of review of permitted operations listed in the license, this license is enough to cover mining operations of Semizbay-U.

12.2 Permitting

Please see Section 13.1 on Environmental Assessment and Licensing and Section 13.2 on Permitting.

Based on the due diligence findings of the Kazakhstan Counsel, Semizbay-U may need, among other things certain additional licenses in view of specifics of its activity (i.e. extraction of uranium):

- works connected with stages of life cycle of nuclear energy objects;
- use of nuclear materials;
- use of radioactive substances, devices and apparatus containing radioactive substances;
- use of devices and apparatus generating ionizing radiation;
- purchase, storage, use of precursors;
- transportation of dangerous cargo;
- transportation of radioactive materials;
- license for export of uranium products.

Semizbay-U provided the Kazakhstan Counsel with copies of the following operational licenses:

- state license for works connected with stages of life cycle of nuclear energy objects dated 18 December 2008;
- state license for transportation of radioactive substances within the territory of the Republic of Kazakhstan dated 17 January 2011;
- state license for purchase, storage, use, transportation, delivery and destruction of precursors dated 30 October 2009 (valid until 13 May 2014);
- state license for transportation of dangerous cargo dated 12 July 2010 (valid until 12 July 2011). Although we do not have any details in this regard, we assume that Semizbay-U obtained new licenses for the period after 2011, provided that such licenses are necessary for its operations;
- state license for use of devices and apparatus generating ionizing radiation dated 18 May 2009;
- state license for use of radioactive substances dated 23 January 2009;
- three licenses for export of uranium products (the latest of which is valid until 19 April 2011).

Although there is no any details in this regard, the Kazakhstan Counsel assumes that Semizbay-U has obtained additional export licenses to cover export deliveries after April 2011.

On the basis of review of the aforementioned licenses, they are enough to cover operations of Semizbay-U.

12.3 Procurement requirements

Under the Republic of Kazakhstan law, all subsoil users, including Semizbay-U LLP, must procure goods, works and services for subsoil use operations under prescribed statutory procedures. In particular, subsoil users are required, not later than 30 calendar days from the date of approval of an annual work program, to approve an annual procurement program for the following year.

12.4 Owner's Commitment

According to the Joinder Agreement entered into between Beijing Sino-Kazakh, KAP and The Mining Company LLP (a wholly-owned subsidiary of KAP), KAP and The Mining Company LLP commit to provide assistance to Semizbay-U in obtaining: i) all necessary licenses and approvals relating to the operation of Semizbay-U and sales of uranium products of Semizbay-U in the Republic of Kazakhstan; and ii) working visas for the representatives and employees seconded by Beijing Sino-Kazakh to work in the Republic of Kazakhstan. Beijing Sino-Kazakh commits to obtain all necessary PRC licenses and approvals relating to the importation and exportation of the uranium products of Semizbay-U.

Pursuant to the Joinder Agreement, the partnership (i.e. Semizbay-U) is established for a fixed term from the date of the Joinder Agreement to 2035 and such term may be extended by mutual agreement of Beijing Sino-Kazakh, KAP and The Mining Company LLP. The term of the partnership exceeds the mining lives of the Irkol Mine and the Semizbay Mine.

13 ENVIRONMENTAL CONSIDERATIONS

13.1 Environment liabilities

Semizbay-U's mining activities must comply with the environmental requirements of Kazakhstan legislation and regulations. The environmental protection legislation in Kazakhstan has evolved rapidly, especially in recent years. As the subsoil use sector has evolved, there is presently a trend towards greater regulation, heightened enforcement and increased liability for non-compliance with respect to environmental issues. The most significant development was the adoption of the Ecological Code dated January 9, 2007 (and effective from February 3, 2007), which replaced the three principal prior laws on environmental protection.

Kazakhstan environmental legislation requires that a State environmental expert examination precede the making of any legal, organizational or economic decisions with respect to an operation that could impact the environment and public health. One of the documents that the subsoil user must provide in connection with the State environmental expert examination is an environmental impact assessment (EIA or OVOS). The Ecological Code requires that the subsoil user obtain environmental permits to conduct its operations. A permit certifies the holder's right to discharge emissions into the environment, provided that it introduces the "best available technologies" and complies with specific technical guidelines for emissions as set forth by the environmental legislation. Government authorities and the courts enforce accordance with these permits and violations may result in civil or criminal penalties, the curtailment or cessation of operations, orders to pay compensation, orders to remedy the effects of violations and orders to take preventative steps against possible future violations. In certain situations, the issuing authority may modify, renew or revoke the permits.

As an industrial company, Semizbay U also required to undertake programs to reduce control or eliminate various types of pollution and to protect natural resources. The Resource Use Contract specifically requires the implementation of environmental controls based on an industrial environmental control program developed by "Semizbay U which is to be approved by the environmental protection authorities. "Semizbay U must also actively monitor specific air emission levels, ambient air quality, and quality of nearby surface water, groundwater quality, levels of contaminants in soil and the creation of solid waste. It must also submit annual reports on pollution levels to the Kazakhstan environmental, tax and statistics authorities. The authorities conduct tests to validate Semizbay-U's results.

If Semizbay-U's emissions were to exceed the specified levels, this would trigger additional payment obligations. Moreover, in the course of, or as a result of, an environmental investigation, regulatory authorities in Kazakhstan have the power to issue an order reducing or halting production at a facility that has violated environmental standards.

The Ecological Code and the Resource Use Contract set out requirements with respect to environmental insurance. Legal entities carrying out environmentally hazardous activities are required to obtain insurance to cover these activities, in addition to the civil liability insurance which must be held by owners of facilities, the activities of which may cause harm to third parties. Semizbay U subject to decommissioning liabilities which are largely defined by the terms of the Resource Use Contract.

Current Kazakhstan regulations regarding development are being followed. For the operation, the environmental issues relative to the operations can be expected to be minimized. In view of the depth of the zones being mined and the relative isolation of the aquifer, there is no aquifer remediation planned as part of the closure. The surface disturbances will be reclaimed and process facilities will be removed.

13.2 Laws and regulations

Ecological Code of the Republic of Kazakhstan is the principal legislation dealing with the protection of the environment. Although it does not specifically refer to uranium, there are general provisions regulating production wastes which apply to uranium. More specific provisions are provided in other regulations and State Standards.

In the civil field, most legal relations, such as the rights of foreign companies and citizens to enter into transactions and to own properties, are governed principally by *the* Civil Code in the Republic of Kazakhstan. These rights are established in the Constitution of the Republic of Kazakhstan and may be limited only by those restrictions set forth in the legislation of the Republic of Kazakhstan.

Although the Republic of Kazakhstan has well-developed legislation, many provisions are sufficiently vague as to give government officials discretion in their application, interpretation and enforcement. Consequently, laws are subject to changing and different interpretations. This means that even best efforts of Semizbay-U LLP to comply with applicable law may not always result in recognized accordance and that non-compliance may have consequences disproportionate to the violation. The uncertainties in the Republic of Kazakhstan laws, as well as in their interpretations and applications, represent a significant risk for current operations and plans to increase production of Semizbay-U LLP.

In addition, the regulation of business in the Republic of Kazakhstan continues to be influenced by historical notions of strong governmental control and regulation. This legacy, coupled with state institutions and a judicial system in which many foreign investors still lack confidence, present a challenging environment for business. To maintain and increase production, on-going support, agreement and co-operation from Kaza Atom Prom and the Kazakh government is required.

Accordance with environmental, social, health and safety regulations is critical for an entity engaged in mining operations. Generally, such accordance is one of the obligations of a mining company under a subsoil use contract executed with the competent body.

Under the Republic of Kazakhstan laws, failure to comply with a subsoil use contract (including the relevant obligation to comply with environmental, social, health and safety regulations) can be the grounds for termination of the relevant subsoil use contract by the state.

According to due diligence findings of the Kazakhstan Counsel and explanations of Semizbay-U's management, currently there are no environmental, social, health and safety issues which may have material impact on the operations and mining activities of Semizbay-U and mines owned by it.

According to due diligence findings of the Kazakhstan Counsel and explanations of Semizbay-U's management, currently there are no cases of environmental liabilities which may have a material impact on the operations and mining activities of Semizbay-U and mines owned by it.

13.3 Permitting

Semizbay-U LLP required holding certain permits and licenses to operate the mine.

13.4 Environmental impact assessment

Assessment of the environmental influences of the mining activities was carried out for both in Irkol and Semizbay mining area. Irkol project was designed by PW-5 company during the feasible study, in order to evaluate environmental impacts and effective protection measures, while the Semizbay was designed by TOO "Kazekosistems", with the objectives of finding out the main pollution sources and calculating the Emission/Effluent Limit Values (ELVs).

13.4.1 Environmental influence of planned activity

Although the method of in-situ recovery (ISR) is recognized as the most environmentally friendly and safest way to deposit processing by International Atomic Energy Agency (IAEA), mining activities unavoidably results in negative impacts on the environment. The main impact on the environment is through discharges, emissions and wastes during the following activities:

- Exploration;
- Mineral extraction;
- Mineral Processing;

In the EIA part of the feasibility study, engineers of PW-5 have examined the short-term environmental influences of planned activities for the period of 2012-2016, which are mainly shown in the following aspects:

- Impact on air;
- Impact on surface water and groundwater;
- Impact on soils;

- Impact on property, plant and fauna;
- Electromagnetic impact, noise and vibration;
- Integrated impact

For Irkol and Semizbay mining areas, PW-5 concluded that the main potential risk of environment is leakage of pollutants from landfill site, and the leakage will be accompanied by radiation contamination of soils that require remediation and subsequent disposal. Outside the industrial zone, planned activities do not have significant impact on the environment. Analysis suggested that extra human activities will not cause a significant impact on environment in the legal constraints of the Republic of Kazakhstan.

13.4.2 *Main pollution sources and MPE/MPD*

In 2011, assessment drafts of pollution sources and their ELVs of Irkol and Semizbay were developed, including standards for maximum permissible emissions (MPE), regulations disposal of production and consumption, and maximum permissible discharge (MPD). According to the drafts, pollution materials can be divided into the following categories: air pollutant, water pollutant, waste, noise, electromagnetic radiation, etc.

13.4.2.1 *Pollutants of Irkol mining area*

Air pollutants

According to the assessment draft, 21 harmful emission sources are found in the Irkol mining area, and 13 of which are organized. Pollution by harmful substances occur 20 names, annual emission amount of 50.173 t offered the ELVs for air pollution sources of Irkol mining area. In addition, 10 groups of these substances can cause the superposition effects. However, annual amount of pollutants come from production between 2012 and 2016 is far more than the ELVs (see in Table 13-1).

Table 13 – 1 Quantities of pollutants expected to release to the atmosphere (Not counting radionuclides)

Year	**2012**		**2013**		**2014**		**2015**		**2016**	
Type	**solid**	**gaseous**	**solid**	**gaseous**	**solid**	**gaseous**	**solid**	**gaseous**	**solid**	**gaseous**
Amount (t)	48.02	93.622	52.1795	102.485	34.322	72.5846	38.488	80.003	48.50	97.8823
Total (t)	141.644		154.664		106.907		118.491		146.3826	

Water pollutants and waste water

Water supply for domestic and drinking and industrial needs of the enterprise is from groundwater. During 2012-2016, the annual amount of water consumed for domestic needs is 57295.9 m^3 and for production needs is 42752.5 m^3; meanwhile, 22511.4 m^3 of household wastewater, with 14.743 tons of pollutants, will be discharged into bio ponds every year.

Composition of household waste water discharged from the septic tanks is shown Table 13-2:

Table 13 – 2 Composition of household waste water

Name of indicators	Concentrations of pollutants, mg/L Before purification	After purification
pH	8.9	7.4
Suspended solids	3.5	11
BOD5	24	20.3
Chloride	205	252
Sulfates	286.72	306
Ammonia nitrogen	7	7.8
Nitrite nitrogen	0,9	1.9
Nitrogen nitrate	22.15	43.8
Polyphosphates	3	6
Synthetic Surfactants	0.08	0.88

Proposed standards for maximum permissible discharge (MPD) of pollutants from sewage are presented below:

Table 13 – 3 MPD of pollutants from sewage

Name of ingredient	Sewage water flow m^3/hour	m^3/day	m^3/year	Concentration mg/L	Maximum permissible discharge (MPD) g/hour	kg/day	t/year
Suspended solids				11	28.6	0.7	0.25
BOD5				20.3	52.78	1.3	0.5
Chloride				252	655.2	15.5	5.7
Sulfates				306	795.6	18.9	6.9
Ammonia nitrogen	2.6	61.675	22 511.4	7.8	20.28	0.5	0.2
Nitrite nitrogen				1.9	4.94	0.12	0.043
Nitrogen nitrate				43.8	113.88	2.7	0.99
Polyphosphates				6	15.6	0.4	0.14
Synthetic Surfactants				0.88	2.288	0.05	0.02
Total					1689.168	40.17	14.743

Production and consumption wastes

According to the assessment draft, production and consumption wastes and their hazard levels are shown in Table 13-4:

Table 13 – 4 hazard levels of production and consumption wastes

Name of waste		Quantity (t per year)	Hazard level of waste
Municipal solid waste		49.962	G
Construction waste		20	G
Used fluorescent lamps		0.097t (456pcs)	A
Used batteries		0.7739	A
Waste oils		8,42	
Waste oils from ATX		6,72	
Waste oils of compressor		1.7	A
Used tires		12.245	G
Scrap metal		65	G
Non-ferrous scrap		0,5	G
Stainless steel scrap		27	G
Metal shavings		1.42097	G
Stubs of welding electrodes		0.0224	G
Polyethylene pipes		10	G
Overburden drill cuttings	2012	6,457	
	2013	6,417	
	2014	5,852	
	2015	6,180	
	2016	6,180	

13.4.2.2 Pollutants of Semizbay mining area

Water pollutants and waste water

In accordance with the technical solutions at the site of the enterprise, networks of sewer system were designed as follows:

- Domestic sewage
- Industrial sewage
- Rainwater drainage
- Drainage saline solution.

Daily and annual amount of domestic wastewater from the site and camp separately is 106.47 m^3 and 38861.55 m^3.

Industrial waste water from decontamination prior to discharge to the outside network is cleaned in the local wastewater treatment plants.

Production and consumption wastes

According to the calculation results of Too "Kazekosistems", annual emissions of radioactive waste are:

- Spent sorbent in the sorption process up to 15 tons;
- Sludge from radioactive contamination resulting from the washing machines and cars up to 37.8 tons;
- Soils contaminated straits productive solutions up to 5 m^3 (8 tons);
- Tools, PPE, cutting pipes, valves, etc. up to 2 tons.

That is, about 62.8 tons of radioactive wastes will be stored on site for temporary storage of the NRA with subsequent removal in HMP.

The total annual amount of non-radioactive wastes stored at the landfill of Semizbay is about 114.365 tons, which including:

- Debris, used parts and the material (20 tons/year),
- Household wastes, with a maximum number of employees amount to 234 persons (84.24 tons/year),and
- Pollutants of the wastewater in the form of sand and debris (10,125 tons/year)

13.5 Protection measures

13.5.1 Measures to control air pollution

According to the EIA report by PW-5, the weather of Kyzylorda city and adjacent areas, including the mining area, is under unfavorable conditions which are difficult to make accurate forecasts (quoted by the research report of National Department for Hydrometeorology and Environmental Control, Kazakhstan, Mar 10th, 1983). Therefore, subsection of "Measures to control air pollutants" as part of their project is not provided.

13.5.2 Measures to prevent the impact of wastewater on surface water and ground water

Protection measures against pollution of surface and groundwater water resources are shown as follows:

- Using acid-resisting materials,
- Closed loop circulation of drilling fluid,
- Prohibition of uncontrolled discharge of wastewater into the environment,
- Monitoring wells are arranged to determine the level of possible contamination of groundwater. The observation interval is 1 week for 2 months,
- Grouting these wells, and
- An effective drainage of surface wastewater;

In addition, other tough measures will be taken in the Irkol mining area for the existence of Sri Darya River:

- Mining landfill must located at a distance of more than 1500 meters from the shoreline of the Syr Darya River;
- Regularly clean the water protection zones;
- Well operation strictly observes the rules of health protection.
- Regularly select control samples from other observation wells as a contrast during the production.

13.5.3 *Technical solutions for the collection, storage, recycling and disposal of production and consumption wastes*

According to the requirement of the Environmental Code of Kazakhstan (2007), production and consumption waste must be collected, stored, disarm, transported and landfilled in view of the impact on the environment.

According to the environmental assessment draft, waste management system in Semizbay-U LLP is as follows:

- Separate collection to optimize further means of disposal;
- Identification of waste generated;
- Accumulation, accommodation and temporary storage of waste before removal;
- Store in labelled containers for each type of waste;
- Strict control of radiological waste;
- Transport under strict control.

13.5.4 *Soil pollution control*

In order to reduce the cost of post-operational reclamation, as well as reducing the exposure of workers and the public, the total radiation of the soil should not exceed the following limits:

- Gamma radiation is 1 m Sv/h;
- Alpha activity of soil is 15,000 Bq/kg compare to the level of natural background values for similar soils of the area;
- Density of the aqueous extract of soil residue is not exceeding 1.5% than that of the average natural background level; and
- pH value is not less than 6.

PW-5 indicates that, the estimation of pollution should be made once a year on the results of terrestrial gamma survey. In addition, soil sampling is performed to determine the contents of radioactive substances.

13.5.5 *Radiation protection*

The main measure to protect workers and the public is to limit access to places with high radiation and toxic hazard provides:

- Assessment to control system;
- Fencing, the construction of separate where necessary, isolated areas;
- Warning system in the field (setting warning and information signs);
- Process automation as much as possible; and
- Personal Protective Equipment (PPE) when working in the environment of on the third class of radiation hazard;

Besides, travel outside the industrial site is prohibited if the vehicles and equipment are characterized by excess of permissible levels.

13.5.6 Technical solutions for electromagnetic impact, noise and vibration

Pw-5 deems that there is no significant electromagnetic effect in the projected mine areas. Although there are many sources of electromagnetic radiation, such as the high voltage transmission lines, their radiation intensities are not exceeding acceptable levels.

Expected noise levels in the workplace are less than 80 dB, which corresponds to the requirements of construction standards. To reduce noise and vibration, the following measures will be adopted:

- Install damping materials on the soundproofing walls;
- Install foundations or anti-vibration mounts for individual machines and mechanisms.

1.1.1 Radiation safety

Organization and activities provided radiation protection measurement to limit radiation of workers from all internal and external sources of radiation which at a total dose not exceeding the basic dose limits set by NRB-99 for the relevant category of persons.

Reducing the impact of radiation on the environment, personnel and population reasonably achievable the condition level of not exceeding the relevant dose limits and levels.

- Assessment of radiation and toxic security object.
- The adoption of protective measures on the basis of assessment of radiation and toxi.

13.5.7 Integrated impact

Anthropogenic stress in the development of uranium mining facilities are experiencing all the elements of the environment, including air, water, soil and vegetation, biotic systems, that is there is a complex effect on all components of the ecosystem.

Analysis of environmental impacts of uranium production facilities revealed potentially possible environmental problems arising from the interaction of man-made objects and the environment, and ranks the main factors of anthropogenic impact on the extent of their impact on the natural environment. Similar effects will be manifested and operation of the object.

The main factors influence on the environment are emissions of pollutants into the atmosphere, pollution of ecosystems process fluids, mechanical soil disturbance;changes in the hydrological and hydrogeological regime of the territory; anthropological factor influences on faunal complexes.

Environmental pollution may entail habitat alteration and destruction of ecological communities, in extreme cases leading to ecocide.

Substances released into the environment, immediately drawn into the chain of various processes: Physical (mechanical agitation, precipitation, adsorption and desorption, volatilization, photolysis, etc.) chemical (dissociation, hydrolysis, complex formation, redox reactions, etc.), biological (uptake by living organisms, destruction and other transformations, including involving enzymes and metabolites); geological (burial in soil and porodobrazovanie, as well as others).

Negative impact of atmospheric pollution on soil and vegetation due to both the loss of acidic precipitation, leaches calcium, humus and micro-elements of the soil, and in violation of the processes of photosynthesis, leading to stunted growth and death of plants. The combined action of both factors leads to a significant decrease in soil fertility in general.

Forecast of the atmosphere is carried out on complex data. These primarily include results of monitoring observations, patterns of migration and transformation of pollutants in the atmosphere, especially at anthropogenic and natural processes of air pollution in the territory, the influence of meteorological parameters, topography and other factors on the distribution of pollutants in the environment.

Risk of contamination of groundwater is that the underground hydrosphere is the ultimate reservoir of accumulation of pollutants, both surface and deep.

Environmental pollution by industrial waste has negative consequences for the environment components, primarily for soil and water pollution. Disposal of waste in the environment leads to disruption of soil-plant structures, soil compaction, the risk of soil erosion, disruption of oxygen balance, exacerbating the danger of ecocide.

Soil is a contrasting geochemical barrier, which accumulates heavy metals, radionuclides, pesticides and many other dangerous pollutants. Humic substances and microorganisms in the soil cause their transformation, the formation of highly toxic compounds.

13.6 Restoration

Under the regulations of Republic of Kazakhstan, Semizbay-U LLP must submit a documented plan for decommissioning the mining facility to the government six months before completion of mining activities. The decommissioning plan considers the issues and costs under a "decommission now" scenario. Under the Subsoil Use Contract, Semizbay-U LLP is required to contribute to a reclamation fund each year.

Surface reclamation following the completion of mining will include the removal of all buildings, re-contouring of all disturbed areas of the mine site, and removal of any contaminated material based on a detailed post-mining gamma radiation survey. Material exceeding baseline conditions will be removed and replaced with clean material. Contaminated material will be removed to an approved waste facility for permanent disposal.

No active restoration of post-mining groundwater is done in the Republic of Kazakhstan. Natural attenuation of ion constituents as a passive form of groundwater restoration is determined to be sufficient.

As the ISR method is environment friendly mining method which could not cause major surface damage, BMA has not aware any fund was set up for the asset retirement obligation the successful decommissioning, reclamation and long-term care of surface and well-field facilities and above rehabilitation actions. BMA notes that no other official reclamation program was approved except an annually environment payments to cover the future reclamation liabilities (approximately US$13,000 per year was budgeted for each mine as shown in the economy model).

13.7 Social and Communities Requirements

BMA observed the property are located in a sparsely populated area and the aquifers are not used for drinking, livestock or irrigation. No settlement requires to be relocated. Many of the typical social risks, eg. resettlement and implement of corporate social initiatives in the other mining operation would be not applicable in this project.

BMA also notes that the both mines were operated by Semizbay-U, the subsidiary of the Atomic Company Kazatomprom (KAP), which is experienced and largest state-owning uranium miner in the Public of Kazakhstan. Thus, it is reasonable to assume the Company has sufficient experience in dealing with concerns of local government and communities although no details information is provided. The social issues need not represent a major risk, a planning and expectation management are done to ensure the social impacts is adequately managed.

BMA was informed there are no land claims of material importance that may exist over the land on which exploration or mining activity of the two mines owned by Semizbay-U is being carried out.

14 RISKS

Mining is a business with high risk when compared to other industrial and commercial operations. Each mine has unique characteristics and responses during mining and processing, which can never be fully predicted. BMA's review of the assets indicate Project risk profiles typical of mining projects at similar levels of mineral resource estimation, mine planning and Project development. During its review, BMA did not discover any critical or fatal Project flaws.

BMA has classified risks for the Project based on the general mining industry definition such as listed below. BMA notes that in most instances, it is likely that through provision of further documentation and additional technical studies, these risks will be mitigated.

Likelihood of Risk	Consequence of Risk		
(within 7 years)	Minor	Moderate	Major
Likely	Moderate	High	High
Possible	Low	Moderate	High
Unlikely	Low	Low	Moderate

H – High Risk: This implies that there are key Project parameters as presented in the current documentation, which if uncorrected, will have a material effect (for example >15% to 20%) on the Project cash flow and performance, and could possibly lead to Project failure.

M – Moderate Risk: This implies that there is a danger of failure of a critical Project parameter as presented in the current documentation, which if uncorrected, may have a material effect (for example 10% to 15%) on the Project cash flow and performance unless mitigated by some corrective action.

L – Low Risk: Implies that if some factors are uncorrected, they will have little or no effect (<10%) on Project production rates or Project economic performance.

The specific risks identified for the Mineral Assets are set out below.

14.1.1 Commodity Price Risk

Long term price forecasts for uranium are not established and available in the economy analysis. The contracts relate to the spot price, in this case there is a general risk of variation in spot price and exchange rate. BMA used a spot price of US$145/kg uranium with consideration of inflation of average rate 3.8% per year, which is in line with prices inflation of most cost items used in 2012 Feasibility Study.

14.1.2 Foreign Exchange and CPI Risk

The Consumer Price Index (CPI) also known as the cost-of-living index or the retail price index indicates the change in price of an average consumer's purchase of basket of goods including services. CPI for each country or currency is affected by the relationship between exchange rates and the differential in inflation between the respective currencies.

14.1.3 Geology Risks

At the Semizbay Project, there are six ore bodies which show different geological, hydro geological conditions and varying mining parameters. Further exploration work and continuous technical studies are to be conducted to adjust the process and design parameters, such as different sulfuric acid dose is to be employed at different acidification/oxidation stages and production increased gradually.

The Semizbay Project deposit is an ancient valley-type uranium deposit with complex morphological characteristics; therefore it is difficult to delineate the mineralization. Some resources risk exists, although sufficient infilling drilling work of the No 3 ore body has delineated the ore body outline. More drilling holes would be required to fully delineate mineralization.

14.1.4 Resource Reserve Estimation

At the both Irkol and Semizbay Project, the dataset used in BMA resource modeling is based on the digitized figures input from previous cross section figures and there is no available original drilling dataset. Due to lack information of original geological exploration, all boreholes are treated as vertical hole, thus some error in the digitization is deemed to occur.

At the Irkol Project, the data regarding exploration, drilling logging, sampling, assaying, lab QAQC etc. sections for Irkol Project is not available for reviewing for these were lost in the time of transferring geology documents by the institute of Soviet twenty-seventh Geological Brigade of USSR during the disintegration of the Soviet Union. Thus, the relevant information is not available.

However, based on numerous QA/QC controls in Semizbay project, including internal checks and inter-laboratory checks, the repeatability of the results for uranium and radium could be used to confirm the accuracy specified by the detailed documented procedures. It could be able to verified by similar practices in Semizbay Project. All drilling, logging, core drilling, and subsequent core splitting and assaying could be completed under the direction various geological expeditions of the USSR Ministry of Geology which has a rigorous QA/QC used in other areas of sampling and on strict regulations imposed by the Kazakh government.

At the Irkol Project, currently №4 and №5 ore bodies have a lower resource classification (inferred) due to wide spaced drilling. Further exploration and resource upgrade process may increase reserve; it may reduce the risk of certain resources.

The mine planning of №4 and №5 ore bodies has not yet been undertaken. At the mineral domain 4 and 5 is classified to be Inferred category. Currently no reserve for №4 and №5 orebody has been estimated. Further drilling program and high level mining study should be carried out for resource upgrade and illustrate eventual economic extraction and reduce the resource risk. The proper geotechnical and hydrogeological management as well as environmental monitoring and management will reduce mining risk. This geotechnical and hydrogeological work will determine the amount able to be retained as resource and hence reserve.

At the Semizbay Project, the borehole within domain 4, 5 and 6 have no any assay data and these mineral domains were excluded in resource/reserve estimate for Semizbay project.

For the Irkol Mine, the term of the subsoil use rights is enough to cover the mine life years in 2012 Feasibility Study (which is up to 2024) while not enough to cover the extent life of the mine by BMA reserve (which extends to 2029). At the same time, we note that, under the Subsoil and Subsoil Use Law, term of a production subsoil use contract can be extended provided that there are no breaches of contractual obligations by a subsoil user. In order to extend a contract, it is necessary to submit extension application not later than six months prior to the expiry date of the production contract with explanation of such extension's necessity. According to due diligence findings of the Kazakhstan Counsel and explanations of Semizbay-U's management, there should be no issues with getting such extension.

14.1.5 *ISR leaching Risk*

At the both Irkol and Semizbay Project, the cold weather at site in winter season causes serious freezing of wells and halts pumping of liquid resulting in lower uranium content in pregnant solution. Well preparation and effective measures for prevention of freezing especially in winter weather is essential. Such measures are under ongoing development at existing operations and application to existing and future extraction areas should reduce this risk.

At the both Irkol and Semizbay Project, the mining parameters for ISR leaching production process may be subjected to significant fluctuations and deviations, especially in terms of the uranium content of pregnant solution and acid consumption. On-going progressive technical studies on the leaching conditions in the future detail design and operation of production are being conducted as priority in conjunction with sound technical management to minimise the impact of this risk.

At the both Irkol and Semizbay Project, the previous production identified significantly reduced uranium content in pregnant solution and longer leaching duration time than planned Low uranium content but larger volume of pregnant solution would cause higher processing costs and lower annual production rate. It requires strengthening of hydrogeology research, technical studies and operational management.

At the Irkol Project, the deposit has a characteristic big and thick in-continuous aquifer with high water flow. There is no impermeable bottom in some orebodies. These factors result in lower uranium content in pregnant solution. Dynamic studies and proper management of water flow and uranium loss would be required.

At the Irkol Project, a regional river flows in the mine lease area crossing Nº4 and Nº5 ore body which may partly affect economic viability although the impacted proportion of the mine area has not been identified as no mining planning has been projected yet. The river is also in the vicinity to Nº1, 2 and 3 ore bodies, which would cause environmental risk in mining of them.

At the Semizbay Project, the exploration and drilling work were undertaken by outsourced manpower which sometime may cause ineffective or untimely and insufficient supplies of acid and other materials. Engagement in management of contracts and materials supply and technical support would be necessary.

14.1.6 Management Risk

At the both Irkol and Semizbay Project, the delay of the drilling work by drilling contractor, too long acidification duration time and temporary shortage of material supplies and acid supply (transportation in bad weather) often caused extraction production issues from wells. These issues often occurred in the ramp up years and been subsequently overcome through continual strengthening of operational and contract management. Furthermore, the lack of technical expertise and engineers in the Initial years was eliminated in the ramp up years.

The exploration and drilling work were undertaken by outsourced manpower which sometime may cause ineffective or untimely and insufficient supplies of acid and other materials. Engagement in management of contracts and materials supply and technical support is essential.

14.1.7 Capital Risk

At the both Irkol and Semizbay Project, the forecast capital costs are reasonable and analogous with similar local operations, thus there is a high confidence in using the estimated capital expense as modify factors. However, possible low uranium content but larger volume of pregnant solution would cause higher capital costs for more well construction and acid treatment plant is required.

14.1.8 *Operating Costs Risk*

The cost is dominated by sulfuric acid and key materials as well as repayment for wells field construction. The costs remain increasing in the first few years due to price inflation. MET (22%) and corporation income tax (20%) are the dominant and substantial taxation factors which could be relatively higher and significantly impact the project's economy.

At the Semizbay Project a lower pregnant uranium content but higher acid consumption in the leaching process caused higher operating costs. This would require strengthening of hydrogeology research, technical studies and operational management.

14.1.9 *Human Resources*

In the Semizbay Project, the lack of technical expertise and engineers in the Initial years and would be eliminated as the production ramp up. It seems no such type of risks in Irkol Project.

14.1.10 *Logistic*

ISR mining requires large quantities of sulfuric acid due to the relatively high levels of carbonate in the ore bodies. In the Republic of Kazakhstan, a number of new sulfuric acid plants have a commenced production and several have been planned. In addition, sulfuric acid can be sourced from Russia.

14.1.11 *Environmental and Occupational Health and Safety Risks*

Although the method of in-situ recovery (ISR) is recognized as the most environmentally friendly and safest way to deposit processing by International Atomic Energy Agency (IAEA), mining activities unavoidably provide negative impacts on the environment. The main impact on the environment is through discharges, emissions and wastes during the following activities:

- Exploration;
- Mineral extraction;
- Mineral Processing;

In the EIA part of the feasibility study, engineers of PW-5 have examined the short-term environmental influences of planned activities for the period of 2012-2016, which are mainly shown in the following aspects:

- Impact on air;
- Impact on surface water and groundwater;
- Impact on soils;
- Impact on property, plant and fauna;
- Electromagnetic impact, noise and vibration;
- Integrated impact

For the Irkol and Semizbay mining areas, PW-5 concluded that the main potential risk of environment is leakage of pollutants from landfill site, and the leakage will be accompanied by radiation contamination of soils that require remediation and subsequent disposal.

The most significant radiation risk on the industrial site of ISR operation are emergency spills of productive solutions with average uranium content of about 80 mg/l in the building of the central pumping station. The results of calculation of concentrations at emergency straits performed show that the concentration of radionuclides in the air of the working area in the building of CENTRAL NERVOUS SYSTEM does not exceed the permissible average volume. Therefore, emergency building pumping straits will not have a significant impact on staffs and the public.

14.1.12 *Specific Risk Assessment*

The results of the specific risk assessment as considered applicable to the Mineral Assets are set out in Table 14-1.

Table 14-1 Mineral Assets Risk Assessment

Risks	Likelihood	Consequence Rating	Overall Risk
Commodity Price Risk			
Variation in spot prices and exchange rate	Likely	Moderate	Medium
Exchange rates and differential in inflation	Possible	Minor	Low
Geology Risk			
Complex morphological characteristics for Semizbay Project	Likely	Major	Medium
Big and thick in-continuous aquifer at the Irkol Project	Likely	Major	Medium
Resource Reserve Estimation Risk			
At the Irkol Project, the data regarding exploration, drilling logging, sampling, assaying, lab QAQC etc. sections is not available	Likely	Major	Medium
At the Irkol Project, №4 and №5 ore bodies cross a river	Likely	Major	Medium
Resource modeling for both Irkol and Semizbay Project is based on the digitized figures input other than assaying dataset	Likely	Major	Medium
No any assay data of domain 4, 5 and 6 in Semizbay Project	Likely	Lower	Low

Risks	Likelihood	Consequence Rating	Overall Risk
ISR Operation Risk			
Impact from cold weather for both Irkol and Semizbay Project	Likely	Major	Medium
Mining parameters fluctuations and deviations for both Irkol and Semizbay Project	Likely	Major	Medium
Decreasing of uranium content in pregnant solution and longer leaching duration time for both Irkol and Semizbay Project	Likely	Major	Medium
At the Irkol Project, a river flows crossing №4 and №5 ore bodies	Likely	Major	Medium
At Semizbay Project, untimely and insufficient supplies of acid and other materials	Possible	Moderate	Low
Management Risk			
At both Irkol and Semizbay Project, impact of production from contract management	Possible	Minor	Low
Capital Risk			
At both Irkol and Semizbay Project, low uranium content but larger volume of pregnant solution	Likely	Minor	Low
Operating Costs Risk			
Inflation for prices	Likely	Moderate	Medium
Lower pregnant grade for both Irkol and Semizbay Project	Possible	Minor	Low
Economy impact by higher taxation	Likely	Moderate	Medium
Logistic			
Local sulfuric acid and materials supply issue for both Irkol and Semizbay Project	Possible	Minor	Low
Human Resources			
Lack of technical expertise and engineers of Semizbay Project	Possible	Minor	Low

Risks	Likelihood	Consequence Rating	Overall Risk
Environmental and Occupational Health and Safety Risks			
Negative impacts on the environment by radiant	Likely	Moderate	Medium
Leakage of pollutants or emergency spills	Possible	Minor	Low

ANNEXURE A – QUALIFICATIONS AND EXPERIENCE (SENIOR PROJECT TEAM)

Llyle Sawyer (BAppSc, MAppSc, MAIG)

Mr. Sawyer is a broadly experienced geologist in both exploration and mining with more than 20 years' experience in uranium, gold, base metals, iron, manganese, and lithium. He is currently employed as a Project Manager/Senior Geologist for Geos Mining in Sydney. He has worked in Australia, PNG, Southeast Asia and South America, has contributed to a number of independent technical/competent persons reports. Mr. Sawyer is a Member of the Australian Institute of Geoscientists.

Mr. Sawyer is a Competent or Qualified Person as defined in the Australasian Code for Reporting or Mineral Resources and Ore Reserves. He has sufficient relevant experience to qualify as competent persons as defined in the 2012 edition of the Australasian Code for Reporting of Mineral Resources and Ore Reserves (JORC) and the Listing Rules.

Sue Border – (BSc Hons, Gr Dip, FAIG, FAusIMM, MMICA)

Ms. Border has 35 years experience in the minerals industry working mainly in Africa, Australia and Asia. Sue specializes in project assessment, exploration management and resource and reserve estimation. Sue's broad experience includes periods as a mine geologist, consultant, academic, and exploration manager before starting Geos. Sue is the principal of Geos Mining, a consultancy company providing specialist exploration services to the coal, uranium, gold, base metals, iron ore and industrial minerals sectors.

Sue has specialist experience in a wide variety of metals and industrial minerals and supervises all independent geological reports produced by Geos. Sue has carried out exploration for magnetite iron ore, valuations and assessments of hematite and magnetite deposits, and most recently managed resource upgrade and reserve estimation for a magnetite iron ore deposit in Chile. Sue has been involved in preparation of numerous independent technical reports for stock exchange listings since the early 1980s.

Sue Border is a Fellow of AusIMM (Australasian Institute of Mining & Metallurgy) and a Fellow of AIG (Australian Institute of Geoscientists).

Dr Nursen Guresin – Consultant Principal Processing Engineer

Dr. Nursen Guresin is a metallurgical and materials engineer with 26 years of experience. She is specialized in physical, pyrometallurgical and hydrometallurgical ore processing in the Australian and international resources industry.

She is experienced on a variety of commodities such as iron ore, gold, silver, copper, zinc, lead, nickel, antimony, tungsten, lithium, uranium, phosphate, potash and coal and a wide range of traditional and novel processes applied to these commodities. She took various roles in academia, engineering firms, consultancy firms, and commercial test work laboratories and as site based engineer in processing plants.

She gained knowledge and experience in all types of project work. These are bench scale test work, pilot plant work, engineering studies at different levels (scoping, pre-feasibility, feasibility, bankable feasibility), project evaluation, project valuation, technical project development, independent engineering studies and report, audits, due-diligence, NI 43-101 reports, project construction and commissioning, process optimization, troubleshooting and site trials.

She successfully transferred fundamental knowledge and theory into practice in processing plants. She also presented training courses to the industry.

Mr. Jack Gao – Principal Mining Consultant, Bachelor of Mining Engineering, MAusIMM

Jack has over 20 years experience in the mining industry involved predominantly in base metals, gold, silver, iron ore, and mineral bauxite etc. He is an expert in the use of mine optimisation, design, and scheduling software. He has involved in numerous independent technical review and assessment minerals projects under JORC Code guidelines and requirements. Jack is a member of AusIMM (Australasian Institute of Mining & Metallurgy).

Mr. Huang Shi Qiang – Senior Geologist, Xinjiang Institute of Geology Department

Mr. Huang has more than 40 years' experience working for a number of mining companies and engaged in massive geological work for commodities involving zinc, copper, tin-silver-copper, iron, rear earth etc. Mr. Huang has engaged in prospecting and exploration of rare earth deposits for Inner Mongolia Bayan Obo and rare earth pegmatite sampling survey for Bureau of Xinjiang Non-ferrous as well as exploration and reserve reports preparation of Qian'an Mopanshan deposits in China. Mr. Huang is former first and second member of national professional committee for mathematics geology. Mr. Hang knows Russian and English.

Jim Jiang – Senior Processing Consultant, Bachelor and Master of Mineral Processing Engineering, MAusIMM

Jim has over 10 years processing experience in a wide range of mineral processing and practical mine site experience in China, worked as processing engineer with China Gold Group Corporation. Prior to joining BMA, Jim had performed many technical review projects for Minarco/Runge/RPM Global for numerous HKEx circulars. Jim provided some technical consulting in uranium project in Mongolian.

His wide range of experience includes the review of processing plant design and performance, pre-feasibility studies, metallurgical test work and flowsheet development in a wide range of commodity types. Jim also has extensive experience in due diligences for capital raisings and IPO related projects for various metalliferous deposits including iron ore under the recommendations of the JORC reporting code.

Jim is a member of AusIMM (Australasian Institute of Mining & Metallurgy).

ANNEXURE B – Glossary of Terms

The key terms used in this report include:

- **AIG** Australian Institute of Geoscientist
- **AUSIMM** stands for Australasian Institute of Mining and Metallurgy
- **Client** means CGN Mining Company Limited
- **Company** means Semizbay-U LLP, 49% by Beijing Sino-Kazakh (Beijing Sino-Kazakh Uranium Resources Investment Company Limited, a limited liability company incorporated in PRC), 11% by National Atomic Company Kazatomprom (KAP) and 40% by The Mining Company LLP, a wholly-owned subsidiary of KAP, a joint-stock company established according to the laws of the Republic of Kazakhstan
- **Competent Person** stands for Competent Person under the recommendations of the JORC Code 2012 and or HKEx Chapter 18 listing rules.
- **Cut-Off Grade ('cog')**

  Resource cog: is the lowest grade of mineralized material that qualifies as having reasonable economic potential for eventual extraction and supports a geologically justifiable and continuous mineralization domain.

  Economic/Reserve cog: is the lowest grade of mineralized material that qualifies as economically mineable and available in a given deposit after application of modifying factors and economic assessment at given commodity prices. It may be defined on the basis of economic evaluation, or on physical or chemical attributes that define an acceptable product specification.
- **g/t** stands for grams per tone
- **mg/L** stands for milligrams per litre
- **US$/lb** stands for United States dollar/lb
- **US$/kg** stands for United States dollar per kilogram
- **lb** stands for pound
- **HKEx** stands for Hong Kong Stock Exchange
- **ITR** stands for Independent Technical Review
- **JORC** stands for Joint Ore Reserves Committee
- **JORC Code** refers to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves 2012 edition, which is used to determine resources and reserves, and is published by JORC of the Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Minerals Council of Australia
- **km** stands for kilometre
- **kt** stands for 000's of tonnes

- **ktpa** stands for 000's tonne per annum
- **GT** stands for Grade * Thickness
- **LOM plan** stands for Life of Mine Plan
- **m** stands for metres
- **m^3** stands for cubic metres
- **mine production** is the total raw production from any particular mine
- **mining rights** means the rights to mine mineral resources and obtain mineral products in areas where mining activities are licensed
- **Ml** stands for mega litre which is equal to one million litres
- **BMA** refers to Blackstone Mining Associate Limited
- **Mt** stands for mega tonnes which is equal to one million tonnes
- **ROM** stands for run-of-mine, being material as mined before beneficiation
- **t** stands for tonne
- **U** stands for uranium
- **tonne** refers to metric tonne
- **WNA** refers World Nuclear Association
- **VALMIN Code** refers to the code and guidelines for technical assessment and or valuation of mineral and petroleum assets and mineral and petroleum securities for independent expert reports
- **$** refers to United States dollar currency

Note: Where the terms Competent Person, Inferred Resources and Measured and Indicated Resources are used in this report, they have the same meaning as in the JORC Code(2012 Edition).

ANNEXURE C – CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA, JORC TABLE 1

The table below is a description of the assessment and reporting criteria used in the Mineral Resource and Ore Reserve estimation that reflects those presented in Table 1 of The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2012).

Section 1: Sampling Techniques & Data

Sampling Techniques Diamond drill coring,

Drilling Techniques

Irkol deposit

Detailed drill sampling data was not available and lost in 1980', explanation refers to Section 3.1.11

Semizbay deposit

- Diameter 42-50 mm Diamond drilling, without fixing wall casing.
- Drilling units were ZIF-300M, CBA-500 and ZIV-650A drilling rigs.
- Wells drilled within exploration networks of 400 x 100~100 x 50 m.
- The depth of the non-core drilling wells ranges from 28 m to 201 m, averaging 128 m.
- Vertical drill holes.
- Cores were not oriented.

Drill Sample Recovery

Irkol deposit

- Detailed data was not available and lost in 1980', explanation refers to Section 3.1.11

  Well established and documented USSR Geological Brigade – standardised drilling protocols and sampling procedures with extensive QAQC standardised practices were used at both Irkol and Semizbay as they were at other U deposits throughout the Republic of Kazakhstan. Evidence from Semizbay early work and from other the Republic of Kazakhstan deposits suggests that these standardised practices were strictly upheld throughout the exploration of these deposits and is of a high calibre. Hence although the actual details are lost due to political and physical withdrawal by USSR there is no reason to assume the standardised practices were not employed at Irkol or that the data presented from the early work is not of a similar quality to that elsewhere.

Semizbay deposit

- Core recovery was calculated based on ore intervals of all wells.

- Good core recovery > 70% yield were obtained from 79% of ore intersections.

		Core Recovery							
	Intervals	Minus 50%		50-70%		70-80%		More than 80%	
Cores	*(m)*	*Inters*	*%*	*Inters*	*%*	*Inters*	*%*	*Inters*	*%*
6068	2588	228	9	315	12	1122	43	925	36

- The quality cores, according to the gamma logging set, with 70% or more yield were obtained from 1,212 intersections (55%) at total thickness of 3,331.2 m, were used in the calculation of corrections for radiometric dis-equilibrium.

- Sampling wells were selected at random and discretely distributed, that is, no preferential well was adopted in the sampling process.

- Sample interval varied for geological boundaries.

- Measures to maximising sample recovery were not supplied.

Logging

Irkol and Semizbay deposit

- Drill core geological and geotechnical aspects logged in sufficient detail to support mineral resource estimate.

- Total length of core being logged was 6,068 m for Semizbay deposit.

- Lithology, alteration, mineralogy, structures, geotechnical data captured.

- Logging is a mixture of qualitative and quantitative data, while major parameters are quantitative.

- Core photos are not obtained because cores have been buried.

- Geophysical exploration work as follows:

Irkol deposit:

The parameters details refers to Section 3.1.20

Semizbay deposit

The parameters details refers to Section 3.2.24

Sub-sampling techniques & sample preparation

- Sample preparation was carried out in the crushing plant of Central Research Laboratory of Combine.
- Radiometric analysis of the sample was performed with a final diameter of 0.1 mm and a weight of 250 g.
- For the final chemical analysis, 50 g were weighed from the same sample method of scooping, and were sieved to 200 mesh.
- To maximising the representivity of sample, crushing and sieving process has been repeated for three times (mesh size 5mm, 1mm, 0.1 mm, respectively), and reduction process for two times.
- Sampling style and size is representative for the style of mineralization.

Quality of assay data & laboratory tests

Irkol deposit

Detailed data was not available and lost in 1980', explanation refers to Section 3.1.11.

Semizbay deposit

- Basic Analyses (refers to Section 3.1.16):
    - Basic analyses of the core samples were carried out in the analysis laboratory of Central Research Laboratory of Combine.
    - The vast majority of tests for radioactive elements were performed by X-ray and radiometric methods. The chemical and radiochemical methods were used only for control of correctness of the results of basic analyses.
    - Radiometric analyses for uranium, thorium, uranium, and gamma-equivalent radon measurement were performed based on the results of the inherent beta and gamma radiation.

- QA/QC(refers to Section 3.1.17)

  - External control radiometric and X-ray analyses for uranium and radium were performed using chemical and radiochemical methods in relevant laboratories of Central Research Laboratory, which, in turn, was controlled by All-Russian Research Institute of Chemical Technology. The result confirmed the validity of radiometric analyses with errors less than guidance tolerances.

  - External control of chemical analyses for uranium and radium radiochemical were undertaken in laboratories of All-Russian Research Institute of Chemical Technology (ARRICT) which confirmed a good convergence of the average results and the absence of systematic differences.

Verification of sampling & assaying

Irkol deposit

Detailed data was not available and lost in 1980', explanation refers to Section 3.1.11.

Semizbay deposit (refers to Section 3.1.13)

- Site visit was conducted by BMA.

- Currently no twinned holes, however, vertical grade profile comparison to geology was persistent between points of observation to instil confidence in reported & logged intersections.

- Field logs are provided in a consistent format (Microsoft Excel) & imported using a software importer (Microsoft Access) to minimise human errors.

- Original laboratory files were used to populate exploration database assay table's manual transfer. Human handling error of assay data was checked visually.

- Any errors flagged during data import were reconciled in consultation with site personnel and original datasheets.

Location of data points

Semizbay deposit

- Most sites survey was conducted by certified survey.
- The deposit has 9 points of the state triangulation 2-3 classes within it with a uniform density in 23 km^2.
- The positioning errors for network points do not exceed ±0.2 m and orientation errors do not exceed ±3.3.
- For splitting and binding exploratory work, ordnance survey points were built in an analytic network, which is in separate systems and inserts into the state triangulation. The maximum length of the triangle sides of the network is up to 5 km.

Data spacing & distribution

Irkol deposit

Detailed data was not available and lost in 1980', explanation refers to Section 3.1.11.

Semizbay deposit

- Both of density and distribution of these data are sufficient:
  - The deposit was prospected using a 100x50 m network of drilling. In individual areas the network used was denser, where integrated geophysical research carried out. The main mineralization area is not large; three 200x50 m networks were explored.
  - In the detailed exploration stage, a total of 5,180 core samples were collected and analyzed for CO_2 content. For the determination of in situ leachable lots of carbonate, 55 exploration drillings were added, with 263 core samples collected for analysis of the CO2 content.

Orientation of data in relation to geological structure

- Drill holes are spaced regularly over the project area and are not judged to result in significant bias to sampling, or over-thickening of the mineralized horizon.

Sample security & audits

- Sampling procedures were not witnessed by competent person; no sampling was being undertaken at time of visit.

Section 2: Reporting of Exploration Results

Mineral tenement & land tenure status	**Irkol deposit** (refers to Section 3.1.3): • License SPC Series No. 1527 of March 4th, 1999 and State license No. 0001278 of September 26th, 2006 are a mining concession and allows for the mining uranium in the mining license in Kyzy-lorda oblast, the Republic of Kazakhstan. • The mining lease area covers 44 square kilometres for extraction operations at a depth of from 400 to 700 m from the surface. **Semizbay deposit** (refers to Section 3.2.4): • Mining concession with the License of No 14-05-11615 (12/14/2007) • The lease of the Semizbay deposit covers an area of 27.2 km^2. • Semizbay-U LLP works on the basis of the certificate of state registration of legal entities for the 12/15/2008, number 75-1902-25.
Exploration done by other parties	**Irkol deposit:** • Was discovered in 1971, through several wells drilled on a grid network of (3.2-1.6) x (0.8-0.2) km **Semizbay deposit:** The deposit was discovered in August 1973

Geology

Irkol deposit (refers to Section 3.1.5):

- An infiltration uranium deposit formed by oxidation.

- The ore bearing sediments and wall rocks are of similar mineral compositions, mainly consist of quartz (65-75%) and feldspar (5-7%),and minor clasticchert (3-5%).

- Belongs to a single type of uranium deposit associated with selenium, rhenium, and scandium, which do not reach the commercial grades.

- located in the central part of the Syrdarynck depression at the Syrdarynck uranium province in the northeast part of Zapazhnoy-Karamurunsk ore field.

- Irkol project was located on the western flank of the Irkol ore field.

- The sedimentary assemblage is divided into 3 structural stages: lower and middle including poorly positioned platform deposits of late Cretaceous, Paleogene and Miocene, and the upper exposed sub-orogenic sediments of Pliocene-Quaternary ages.
- configuration of epigenetic uranium-bearing oxidation zoning:

  - 1) A zone of primary redness;

  - 2) An interlayer oxidation zone of barren rocks;

  - 3) A zone of mineralization;

  - 4) A zone of grey barren rocks.

The proportions of major rock-forming clastic components are quartz and fragments of chert (60-80%), feldspars (3-12%), clay minerals (6-20%) and various accessory minerals.

Semizbay deposit (refers to Section 3.2.6 and 3.2.7):

- A complex exogenous subject of the epigenetic type, that is, a multi-stage infiltration deposit.

- Belongs to an erosion-tectonic depression, which located at the boundary between the the Republic of Kazakhstan shield and the West Siberia platform. The depression is an ancient, long-developed valley filled with the terrigenous Mesozoic-Cenozoic deposits of the alluvial-proluvial genotype.

- The stratigraphy of Mesozoic-Cenozoic can be divided into three layers: Quaternary rocks, lacustrine/fluvial/bog faciesconglomerate, sandstone, siltstone and clay (Lower Cretaceous to Eocene); and river channel/floodplain facies conglomerate, sandstone, siltstone (pre-Cretaceous).

- The mineralization is associated with intense oxidation and interlayer oxidation.

- Uranium is concentrated in the sandy-clay fraction in two linear extending mineralized zones.

- Ore thicknesses vary from 0.2 to 3 m or more, up to 13m in some sections.

Drill hole information

- Detailed lists about the drill-hole information of Irkol and Semizbay deposit were not provided, because there were so many drill-holes used in the CP Report and not possible to list them out in the report (the details hole information refers to Section 4.1.1 and Section 4.2.1).

- It is need to point out that all of the drill-hole information, obtained from the original connecting-well profiles, is credible and verifiable. The lacking of the information lists does not materially influence the accuracy of the data used in reserve models and estimation processes

Data aggregation methods	**For both Irkol and Semizbay deposit:** • Intercepts are calculated using the length-weighted averages of individual samples. • Minimum grade truncations are applied. Cut-off grade: 0.01% • High grade was not eliminated.

Relationship between mineralization widths and intercept lengths	**For both Irkol and Semizbay deposit** (refers to Section 4.1 and Section 4.2):
	• Intercept length is the down-hole length, while true width of mineralization was not calculated.
	  • Top and bottom of the ore bodies have very complex surface shapes, resembling aeolian weathering.
	  • The ore well intercept has a dramatically variable thickness.
	  • Inclination measurements were performed using inclinometer, and most of the zenith angles were less than 3°, which indicated that most of the well is approximately vertical.
	• Although the true width is unknown, 3D model used for reserve estimate is correct and not influenced. This is because the 3D model is based on the spatial coordinates rather than width, length and height of the ore body.

Diagrams	• Plan views and sectional views as well as 3D views are included in this report (refers to Section 4.1 and Section 4.2
Balanced reporting	• All drill hole intersections, both high and low grade are included in this report.

Other substantive exploration data

Irkol deposit:

- Gamma logging: gamma-ray logging was undertaken to provide data on the following issues:
    - Refining the geologic section,
    - Estimating the infiltration properties of the rocks,
    - Determination of the ore body parameters,
    - Rock lithology of the uranium-bearing horizon,
    - Refining the filtration rock properties of other uranium-bearing horizons The standard error of determining the area is 3.7%
- Inclination survey:
    - Been performed in 1,821 wells with 860.8 km, among which 1,116 wells with 510.6 km were measured in the detailed prospecting stage.
    - Statistical on 289 wells showed that the deviation at the bottom depths of 160-180 m is 2.7-6.5 m, assuming that the deviation of vertically dumping wells occurs at a constant azimuth.
- Bulk density: range from 1.74 t/m^3 to 1.88 t/m^3 with an average of 1.8 t/m^3.
- Geotechnical characteristics:
    - Major uranium occurrences are located in permeable and highly permeable sand and gravel-sandy sediments (hydraulic conductivity (Kf) from 1 up to 12 m/hr);

- Hydrogeological conditions

  - The groundwater of the ore-bearing horizon in the central part of the deposit has a chloride-sulfate mineralization of up to 2.7 g/L, and in the north and south the mineralization of bicarbonate and sulfate sodium-potassium is 0.6-1.0 g/L, with a uranium content of 9.8*10-6 to 3.8*10-5.

  - The aquifers are composed of gravel-sand, sand and gravel;

  - The thickness of permeable rocks varies from 30 to 50 m.

  - The watery degree of the aquiferous rocks is moderate with the specific yield of 0.22-1.27 L/s from wells;

  - The host rocks are permeable to highly permeable with a filtration coefficient of 6-11 m/day.

Semizbay deposit:

- Topographical Survey Work

  - The topography is mapped at a scale of 1:25,000 and smaller.

  - Stereo-topographical mapping of a183 km^2 area was performed at 1:5,000 in 1975-1976.

  - 361 km of precision theodolite profiles were traversed at 1:2000, 2,960 km of profiles were undertaken, and 1,800 km of technical levelling with 106 points were secured in the terrain geodetic observations.

- Testing project:

  - Gamma logging, core sampling, metallometric testing, selection of monoliths to determine the physical properties of rocks and ores, technological testing, and hydrogeological testing.

- Bulk density: a bulk density of 1.65 g/cm^3 was used for the upper horizon and 1.77 g/cm^3 for the lower horizon.

- Gamma logging:

  - Gamma logging was conducted in depth at a scale of 1:200 with continuous recording of the curve. The lifting speed of hole parting with a time constant 2 sec was 300~400 m/h. All anomalous intensities above 50 mkR/h were detailed at a scale of 1:50 with a speed of 50~60 m/h.

  - Quality assessment of gamma logging was carried out, too.

- Electric logging:

  - The apparent resistivity records were about 5 ohm.m per 1 cm.

  - For the high-resistance part of the section, the scales were 25 and 125 ohm.m per 1 cm.

  - The scale of natural potentials in most cases amounted to 2.5 mV at 1 cm scale registration.

- Caliper survey:

  - The calibration map was fixed at depth scales of 1:200 and 1:50, recording hole diameters of 2.0~2.5 cm to 1 cm of registrar.

  - Based on the data, the caliper volume was 10% of all outer intervals and was used for quantitative interpretation of the statistical average diameter of the wells.

- Geotechnical characteristics:

  - The deposit hydrogeology is classified into 7 aquifers and water-bearing formations, The second Semizbay aquifer and lower Semizbay aquifer are the uranium-bearing aquifers in the deposit;

- water in fractures have a salinity of about 1 g/L, while within the palae channel tend to have mineralization from 3 to 20 g/L with salinities of 4-7 g/L.;
- The groundwater temperature is relatively low: 6~8 °C;
- Average values of the permeability coefficient do not exceed 4 m/day;

Further work

- The figure of typical mining plan gives a visual display of the further work for both of the two deposits.

Section 3: Estimation & Reporting of Mineral Resources

Section 3

- Estimation and Reporting of Mineral Resources

Database integrity

- The Irkol and Semizbay project resource data are managed using MS Access and Excel software.
- Data was logged and present on geological maps, which were then entered into the data system manually by geologists working on the Project.
- Data are imported into Surpac mineral software and a verification process was carried out for:
- The same number of records contained in the database was in the Surpac files, after the data was imported.
- All collar co-ordinates were within the deposit area.
- Duplicate drill holes.
- Borehole missing coordinates.
- Field FROM or TO is missing or overlap in the file with assay intervals.
- No down hole survey data and borehole treat as vertical.
- Duplicate records.

- Any anomalous assay values.

- Sampling depth is greater than total depth of borehole.

- Graphics view data in Surpac

- All holes have local mine grid and co-ordinates. All mine production and thus estimation work is in local mine grid.

- Follow errors were found at Irkol project and corrected according to original data:

  - There are 7 boreholes (4448, 2558, 2596, 2758, 2714, 2589 and 4470) with collar elevation less than sampling depth due to typo error;

  - There are 31 boreholes missing coordinate but appears on the geological map;

  - There are 303 boreholes have collar coordinate but missing assay data

- Follow errors were found at Semizbay project and corrected according to original data:

  - There are 3 boreholes (2118, 2108 and 2197) far away deposit due to input wrong coordinate

  - Wrong borehole ID for 6017 and 5020, and rename as 5017 and 5920 separately

  - There are 9 boreholes missing coordinate but appears on the geological map

  - There are 1640 boreholes have collar coordinate but missing assay data and total depth data

  - Borehole 364 have 3 assays data but missing collar

- Twenty-five boreholes with thirty-five assay were found of grade or grade-thickness (GT) errors

- All uranium grade indicated on geological maps were expressed in unit of 10^{-5}, and then converted to unit of percentage by BMA during database construction

- Boreholes within mineral domains 4, 5 and 6 have no any assay data

Site visits

- The Competent Person visits site

- 2 site inspections from 17 February 2014 to 20 February 2014 and from 07 April to 11 April 2014

Geological interpretation

- All geological data available has been used to update the geological interpretation.(refers to Section 4.1 and Section 4.2)

  - The geological interpretation for the mineralized domain were derived from original maps which considered lithology, hydrogeology

  - The interpretation has been undertaken on cross sections. This has been converted to digital strings which have been snapped to the drill holes data point.

  - The sectional strings were wireframe to make a three-dimensional (3D) solid.

  - Care was taken to not expand mineralization beyond the known data points and thus increase tonnage without data support.

Dimensions

- No geological interpretation for domain 4, 5 and 6 at Semizbay project due to lack of information.

- Irkol: in plan orientation, the deposit is approximately 160,000 metres long and 600~2,400 metres wide. Mineralization has vertical extents ranging between 0.6m and 450m below surface. Domains vary from 0.1 – 20.6m in thickness with an averaging 1.42 m thickness.

- Semizbay: in plan orientation, the deposit is approximately 15,900 metres long and 50~660 metres wide. Mineralization has vertical extents ranging between 31.4 and 165 m below surface. Domains vary from 0.1 – 11.9 m in thickness with an averaging 1.86 m thickness.

Estimation and modelling techniques

- Estimated into the model is uranium grade (%) and grade-thickness (GT) (m%).
  - Samples were composited to 0.6m at Irkol and 1m at Semizbay in down hole length.
  - Top-cap was applied to the composted samples with threshold of 1.0% at Irkol and no need to capping at Semizbay.
  - The wireframe solid has been filled with cells.
- Mineral domain wireframe were defined by a nominal uranium grade cut off of 0.01%.
- Resource was estimated to be initial result due to current ISR blocks are still in operating. Depletion tonnages were considered according to production record.
  - Drill spacing is from 25 to 50m x 10 to 30m to an average depth of 50m to 80m below topographic surface.
  - The block model parent cells are 20m x 20m x 4m in X x Y x Z, and sub-block is 10m x 10m x 2m.
- Each block model was constructed on domain basis except domain 1 and 3 due to very close and covered by one model at Irkol.
  - Semi-variograms where generated for all data inside the 3D wireframe solid on domain basis. A nested structure spherical model was fitted to the variograms.
- One or multiple estimate pass were applied to grade interpolation, and search distance refer to the variogram ranges and drill spacing in order to honours geological structure and quality continuity within mineral domains.

- Irkol estimate parameters refer to Section 4.1.1
- Semizbay estimate parameters refer to Section 4.1.1
  - The minimum samples 5 and maximum 20 with a minimum of 3 drill holes needing to be sourced to inform the grade.
  - Ordinary kriging was used to grade estimation.
- A percentage model was used to report precisely the volume of material within each block
- The model was inspected using visual assessments of composited sample grades versus estimated block grades, and these show reasonable correlation between the block model grades and the composite samples
  - Resource was also comparison with pervious figure in 1986-1988, there is a small difference in ground tonnage with a similar grade.

Moisture	• Dry bulk density has been used to calculate tonnage.
Cut-off parameters	• Based on 2012 mining study and resource estimation in 1986-1988, the resource was estimated using uranium grade cut-off of 0.01%.
Mining factors or assumptions	• Lithology of sedimentary host rock and hydrogeology were considered. • The resource statement was based on an ISR mining methods and minimum mineable thickness was assumed to be 1m, maximum thickness of internal waste was selected to be 1m (refers to Section 4.1.4 and Section 4.2.6).
Metallurgical factors or assumptions	• No metallurgical assumptions have been built into the resources because there is no intent at this point in time to convert the Mineral Resource into a Mineral Reserve.
Environmental factors or assumptions	• At this time all material included in the Measured and Indicated Mineral Resource is understood to be able to be mined under the current environmental permitting.

- The Inferred Mineral Resource material will require additional concept mining and feasibility studies which will address the potential environmental impact of mining.

Bulk density

- Irkol: bulk density calculation is based on testing result for 189 historic samples and refers to figures derived from 2012 mining study and resource estimation in 1986. An average value of 1.8t/m^3 has been applied.

- Semizbay: bulk density calculation is based on testing result for 361 historic samples and refer to figures in resource estimation in 1988 has been used in the current tonnage estimation but bulk density sampling is required to validate. A derived value of 1.65t/m^3 has been applied.

Classification

The classification criteria is based on (refers to Section 4.1.1 and Section 4.2.1):

- Drill hole spacing across and along strike.

- Geostatistic analysis and variogram parameters

- Continuity of grade and structure geological for mineralized domain

- Irkol: Deposit has more stable mineralization. Domain 1&3: mineralization was about 3,700 m long and 100~2,500 m wide with drill hole spacing of 100-200 m x 50 m, variogram range was more than 800 m. block within estimate pass 1 with search distance of 140 m and limitation of sample number were categorised to be Measured resource, meanwhile, block within pass 2 with search distance of 250 m were classified to Indicated resource. Other blocks were classified to Inferred category. Domain 2: mineralization was about 3,300 m long and 50~500 m wide with drill hole spacing of 200 m x 50 m, partly 100 m x 50 m, variogram range was more than 600 m. block within estimate pass 1 and 2 with maximum search distance of 250 m and limitation of sample number were categorised to be Indicated resource, other blocks were classified to Inferred category. Domain 4 and 5: mineralization was approximately 5,400 m long and 50~260 m wide with drill hole spacing of 400 m x 50 m, variogram range was about 800 m. All blocks were classified to Inferred resource due to large hole spacing.

	• Semizbay: Deposit has relative unstable mineralization both in long and wide. Domain 1: mineralization was about 3,500~5,400 m long and 50~550 m wide with drill hole spacing of 100 m x 50 m, variogram range was more than 800 m. block within estimate pass 1 with search distance of 190 m and limitation of sample number were categorised to be Indicated resource, other blocks were classified to Inferred category. Domain 2: mineralization was about 900~1,600 m long and 50~ 600 m wide with drill hole spacing of 100 m x 50 m, variogram range was more than 800 m. block within estimate pass 1 with maximum search distance of 162 m and limitation of sample number were categorised to be Indicated resource, other blocks were classified to Inferred category. Domain 3: mineralization was approximately 260~800 m long and 50~340 m wide with drill hole spacing of 100 m x 50 m, variogram range was about 500 m, block within estimate pass 1 with maximum search distance of 200 m were categorised to be Indicated resource, other blocks were classified to Inferred resource.
Block Model verification	• For each deposit, the OK model was comparison with the IDW model and validated against input drill-hole composites for each domain by visual comparisons carried out against the composited drill-hole samples for each domain against the modelled block grade.
Audits or reviews	• The estimated grades were validated against average uranium grade statistics for each domain. • No other independent reviews or audits have been completed on the Mineral Resource estimate.
Discussion of relative accuracy/confidence	• Analysis of the production from 2009-2013 against the Resource tonnes indicates a neutral reconciliation for uranium tonnes and grade.

Section 4: Estimation and Reporting of Ore Reserves

Mineral Resource estimate for conversion to Ore Reserves	• Details of the development of the Mineral Resource estimate are contained in Chapter 4 including resource estimation separately for both Irkol project and Semizbay project • Mineral Resources were reported additional to the Ore Reserves.

Site visits	• The team undertook two site visits to the Project over BMA's Competent Persons (Llyle Sawyer) and Processing Engineer was responsible for reviewing the ITR report and the JORC Mineral Resource and Ore Reserve
Study status	• The basis of the report is the 2012 Feasibility Study report separately for Irkol project and Semizbay project by Limited Liability Partnership "PW-5", 2012. BMA reviewed the details of the report.(refers to Chapter 7)
	• The key parameters and underlying data in the 2012 Feasibility Study were reviewed by BMA and mining planning designs further adjusted by BMA to extend the mining life years based on the independent reserve estimate. An independent economy analysis by BMA shown a positive NPV for the project.
Cut-off parameters	• BMA conducted a calculation of variable uranium grade-thickness (GT) cut-off of 0.04/0.05/0.06/0.12 cut-off for both Irkol project and Semizbay project under the operating cost, recovery rate and concentrate price assumptions
Mining factors or assumptions	• As for both Irkol project and Semizbay project(refers to Section 4.1.4 and Section 4.2.6), BMA has included all mining and processing modifying factors which are largely derived from the 2012 Feasibility Study report for Irkol Project, including reasonable production data and costs data.
	• Ore Reserves were estimated based on the use of the in situ recovery (ISR) extraction method and yellow cake production for Irkol project. Allowance dilution and mining loss are factors which are not relevant to the uranium extraction method of in situ recovery. An average uranium price of 203 US$ per kilogram (kg) was used to estimate the Ore Reserve with general recovery of uranium mineral of 90%.
	• As for Irkol project and Semizbay project, the resource model were developed Measured or Indicated mineral resources were considered as ore in reserve estimation and mine planning. All Inferred Resource were treated as waste material.
	• Uranium Grade Cut off: 0.01%

	• Minimum Grade-Thickness (GT): 0.04/0.05/0.06/0.12
	• Maximum Allowed Barren Waste Width: 1 m
	• Minimum Volume of Reserves in an Ore Block: 4,000 m^3
	• Minimum samples of 11 with maximum No. of 2 per hole
	• The reserve estimate for mining plan and economy analysis is based on a uranium grade-thickness (GT) cut-off of 0.04 for Irkol project and Semizbay project.
Metallurgical factors or assumptions	• As for both Irkol project and Semizbay project, ISR mining is conducted to produce a uranium-bearing lixivant pregnant leach solution, which goes to settling ponds prior to the main processing plant for production of uranium as yellow cake. The uranium is leached with sulfuric acid without the addition of an oxidant.
	• The ISR method has common industrial application, includes some current operations in the world.
	• BMA reviewed the various metallurgy testing studies, the details of the reviewing results refers to section 6.1 for Irkol project and 6.2 for Semizbay project. BMA verified extraction as 90% for Irkol project and 85% for Semizbay project from the 2012 feasibility studies d with the actual recovery in existing production.
	• As for both Irkol project and Semizbay project, no deleterious element is not applicable for ISR product. The ore reserve estimation was based on right mineralogy analysis.
Environmental	• the details of the environment reviewing results refers to Chapter 13.
	• The environmental influences assessment of the mining activities both in Irkol and Semizbay mining area were undertaken and the Irkol project was designed by PW-5 company during the feasible study, in order to evaluate environmental impacts and effective protection measures, while the other was designed by TOO "Kazekosistems", with the objectives of finding out the main pollution sources and calculating the Emission/Effluent Limit Values (ELVs).

	• The waste disposal and sulphides are not applicable in these projects
Infrastructure	• the details of the infrastructure reviewing results refers to Chapter 11.
	• As for both Irkol project and Semizbay project, the existing infrastructure of adequate size and condition to support extraction, processing and shipping.
Costs	• the details of the capital cost and operating costs reviewing results refers to Chapter 10.
	• Both Irkol project and Semizbay project are operating mines.
	• The capital cost assumption is based on current mining and plants. Capital estimates were used in conjunction with historical costs as estimates of capital and operating costs.
	• The consumers based on the feasibility studies and with viable inflation unit price. BMA reviewed the main consumer items for operating cost (acid and PVC materials), and results in the total price.
	• The forecast prices used consensus spot pricing with an inflation rate as same as that applied for costs inflation, in conjunction with forward sales contracts to support pricing assumptions.
	• Publicly available bank published rates used as basis of exchange rate.
	• Transportation (Freight) charges based on past history
	• Past and current royalty rates applied to future
Revenue factors	• the details of the economy analysis results refers to Chapter 10.3.
	• Publicly available bank published rates used as basis of exchange rate.
	• No penalty rates are used.

	• Transportation (Freight) charges based on past history of nature for vessels as well as planned vessels.
	• The forecast prices consensus pricing is used, in conjunction with forward sales contracts to support pricing assumptions.
Market assessment	• Demand and supply analysis, customer and competitor analysis, refers to Chapter 9 of the report
	• The forecast prices is based on consents price from several banks as refers to Section 9.8 in conjunction with forward sales contracts to support pricing assumptions.
	• Existing 2013 sales contracts are in place, which lists the sale quantity and pricing method
Economic (NPV)	• the details of the economy and NPV analysis results refers to Chapter 10.3.
	• The inputs and economy analysis as well as discount rate refer to Section 10.3. Discount rate 8.0%, 13.6% and 15.5% were considered.
	• NPV variation and sensitivity variation by 10% and 20% were considered.
	• The project is insensitive to economic fluctuations. Comprehensive inflation is 3.8% derived from the inflation rates subjected to capital and operating and labour.
Social	• As for both Irkol project and Semizbay project, all agreements are in place and of good standing with current stakeholders. These agreements have remained in place with previous operators and are expected to continue for the life of the Ore Reserve.
Other	• As for both Irkol project and Semizbay project, the key risks analysis have been identified refer to risk chapter 14.

Classification

- The Ore Reserve estimate is based on the Mineral Resource contained within the mining plan and classified as "measured and Indicated" for Irkol project and only Indicated for Semizbay project after consideration of all extraction, processing, economy, social, environmental and financial aspects of the Project. The Ore Reserve classification results appropriately reflect the Competent Persons view of the project.
- Proven and Probable Ore Reserves for Irkol project and Probable for Semizbay project were estimated

Audits or reviews

- Ore Reserve estimates are reviewed internally and no external independent audits or reviews have been conducted on the Ore Reserve estimate.

Discussion of relative accuracy/confidence

- Analysis of the production from 2009-2013 against the Ore Reserve indicates a neutral reconciliation for uranium tonnes and grade. CP is confidence with the extraction and processing, and relevant to production for both Irkol project and Semizbay project. All the modify factors for reserve estimate were proven by actual production; an overall inaccuracy rate of minus 15% is estimated.

Blackstone Mining Associates Limited

15/F, 100 Queens Road,

Central, Hong Kong

Telephone No: (852) 2824 8529

ANNEXURE D – Competent Person's Consent Form

Pursuant to the requirements of HKEx Chapter 18 Listing Rules and clause 8 of the 2012 JORC Code (Written Consent Statement)

Report Description

Competent Persons Report regarding the Semizbay-U; Irkol and Semizbay Uranium Projects in Republic of Kazakhstan for CGN Mining Company Limited.

This Report refers to the Semizbay-U; Irkol and Semizbay Uranium Projects, Republic of Kazakhstan

April 2014

(Date of Report)

Statement

I, Lyle Sawyer confirm that:

- I am a Member of the Australian Institute of Geoscientists included in a list promulgated by ASX from time to time.
- I have read and understood the requirements of the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves ("2012 JORC Code").
- I am a Competent Person as defined by the 2012 JORC Code, having fifteen years direct experience, exceeding the required five years relevant experience to the style of uranium mineralisation and type of deposits of: sedimentary palaeochannel roll-front, calcrete hosted, sandstone hosted roll-front, unconformity style mineralisation, and intrusive related mineralisation. I am also a competent person in due diligence activities for these type of deposits.
- I hold a Masters of Applied Science Degree: Engineer Geology – Hydrogeology – Environmental Geology from University of New South Wales (1991); in addition to a Bachelor of Applied Science Degree: Geology issued by University of Technology, Sydney (1989). I am a practicing geologist with in excess of 20 years direct involvement in exploration, geological modelling and mining for a variety of commodities including uranium, thorium, lithium, gold, silver, copper, lead, zinc and magnetite (hydrothermal – iron), manganese, potash.
- I am a consultant working for Geos Mining; who has been engaged by Blackstone Mining Associates Limited (BMA). Under a commercial contract to review data, documentation for the 'Competent Persons Report For the Semizbay-U ISR Uranium Projects in the Republic of Kazakhstan' project, Kazakhstan on which an independent competent persons technical report has been compiled, and to undertake a site visit during 2014.

I am independent of CGN Mining Company Limited and Blackstone Mining Associates Limited.

	17 May 2014
Signature of Competent Person:	Date:
Australian Institute of Geoscientists	3512
Professional Membership:	Membership Number:
(insert organisation name)	
	Geoff Lomman, Lavender Bay, NSW, Australia
Signature of Witness:	Print Witness Name and Residence (eg. Town/Suburb):

AVISTA Valuation Advisory
艾 華 迪 評 估 諮 詢

EXPERT VALUATION REPORT

VALUATION OF
100% EQUITY INTEREST OF
BEIJING SINO-KAZAKH URANIUM RESOURCES INVESTMENT COMPANY LIMITED

Prepared for:

CGN MINING COMPANY LIMITED

As of 31 December 2013

Prepared By:
John S Dunlop

VALUATION OF 100% EQUITY INTEREST OF BEIJING SINO-KAZAKH URANIUM RESOURCES INVESTMENT COMPANY LIMITED

EXPERT VALUATION REPORT

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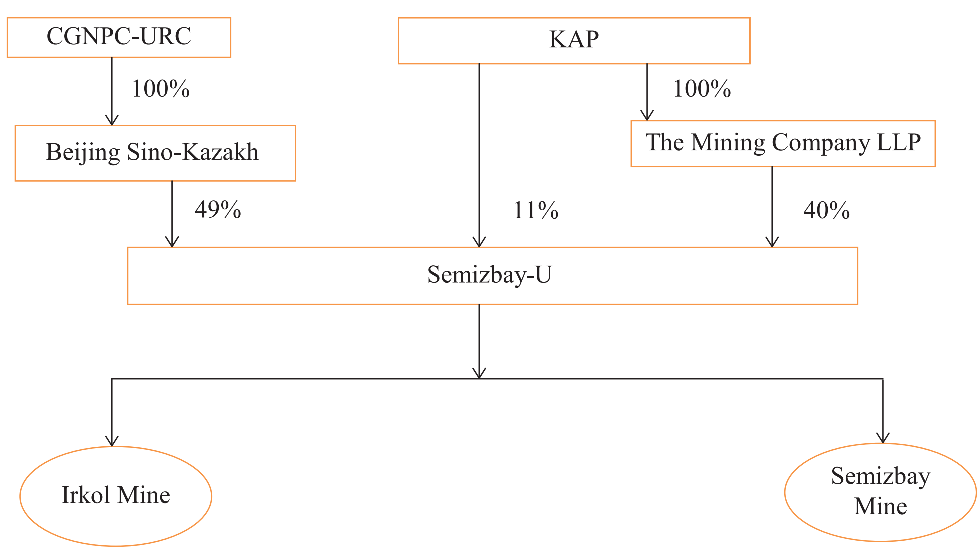
1.0 INTRODUCTION

CGN Mining Company Limited ("CGN" or the "Company" or the "Commissioning Entity") is a company listed on the Stock Exchange of Hong Kong Limited ("Stock Exchange") (stock code: 1164). The Company currently operates in three segments: a uranium trading segment, which is engaged in trading of natural uranium resources, a pharmaceutical and food segment, which is engaged in selling, distributing and manufacturing of pharmaceutical and food products and a property investment segment, which is engaged in leasing, developing and selling of office premises and residential properties.

Beijing Sino-Kazakh Uranium Resources Investment Company Limited ("Beijing Sino-Kazakh" or the "Target") is an investment holding company incorporated in Beijing. It is wholly owned by **CGNPC Uranium Resources Co. Ltd.** ("CGNPC-URC" or the "Seller"), which is ultimately owned by **China General Nuclear Power Group** ("CGNPC"). CGNPC is also one of the major shareholders of the Company (i.e. CGN and the Target are related parties owned by CGNPC in majority and in entirety respectively).

The Target owns 49% shareholding in **Semizbay-U LLP** ("Semizbay-U"), which operates the mining and processing of a uraniferous ore deposit with the sale of triuranium octoxide (U_3O_8). Semizbay-U owns the subsoil use right for two producing uranium mines in the Republic of Kazakhstan: Semizbay Mine and Irkol Mine (the "Mines").

The following chart shows the shareholding structure of Semizbay-U as well as its mineral assets as of 31 December 2013:



The Company intends to acquire 100% equity interest in the Target (the "Acquisition"). Upon completion, the Company will, through the Target, hold 49% partnership interest in Semizbay-U and CGNPC-URC will designate the Company to perform the rights and obligations under the off-take agreement dated 29 March 2013 entered into between National Atomic Company Kazatomprom ("KAP") and CGNPC-URC on the basic principles of marketing (sale) policy with respect to the products of Semizbay-U.

In connection with the Acquisition, the Company has commissioned AVISTA Valuation Advisory Limited ("AVISTA") as the Competent Evaluator to prepare a valuation report (the "Valuation Report"). The Valuation Report is to determine the value of 100% equity interest in the Target as of 31 December 2013 (the "Valuation Date"), which includes valuation of the Mines under the requirements of Chapter 18 of the Rules Governing the Listing of Securities on the Stock Exchange ("Listing Rules") ("Chapter 18 Valuation").

2.0 THE COMMISSIONING ENTITY

The commissioning entity is **CGN Mining Company Limited**.

The Company's commissioning letter is attached as Appendix 2.

The scope and purpose of the valuation services set out in that letter is as follows:

2.1 Purpose of the Report

Pursuant to Chapter 18 of the Listing Rules, a mineral company proposing to acquire assets which are solely or mainly mineral assets as part of a Relevant Notifiable Transaction (as defined under the Listing Rules) must include a valuation report as part of the relevant circular to be distributed to the shareholders of the Company. The valuation report is defined as a public valuation report prepared by a Competent Evaluator on mineral assets in compliance with Chapter 18 of the Listing Rules and the applicable Reporting Standards (as defined under the Listing Rules).

The Company expects that the Acquisition will constitute a major transaction by the Company, which is one of the Relevant Notifiable Transactions defined in the Listing Rules. Therefore, a valuation report prepared by a Competent Evaluator will be required.

This Valuation Report has been prepared for the benefit of the Directors and shareholders of the Company and is to be appended and form part of the shareholder circular to be issued in connection with the Acquisition.

The Valuation Report is required to meet the requirement under Chapter 18 of the Listing Rules in connection with the Acquisition.

2.2 Scope of Work

This Valuation Report is prepared to determine the value of 100% equity interest in the Target as of 31 December 2013, which includes valuation of the Mines under the requirements of Chapter 18 of the Listing Rules.

2.3 Basis of Evaluation

The Chapter 18 Valuation has been prepared in compliance with Chapter 18 of the Listing Rules. In particular, Listing Rule 18.34 states that:

- any valuation of mineral assets must be prepared under the VALMIN Code[1], SAMVAL Code[2], CIMVAL[3] or such other code approved by the Exchange from time to time;
- the basis of the valuation, relevant assumptions and the reason why a particular method of valuation is considered most appropriate having regard to the nature of the valuation and the development status of the asset must be clearly stated; and
- if more than one valuation method is used and different valuations results, how the valuations compare and the reason for selecting the value adopted must be explained.

According to the VALMIN Code, Fair Market Value of a Mineral Asset or Security is the amount of money (or the cash equivalent of some other consideration) determined by the valuer in accordance with the provisions of the VALMIN Code for which the Mineral Asset or Security should change hands on the Valuation Date in an open and unrestricted market between a willing buyer and a willing seller in an "arm's length" transaction, with each party acting knowledgeably, prudently and without compulsion. It is usually comprise of two components, the underlying or "Technical Value" of the Mineral Asset or Security, as defined in the glossary of the Valuation Report (Appendix 3), and a premium or discount relating to market, strategic or other considerations. It should be selected as the most likely figure from within a range after taking account of risk and the possible variable in ore grade, metallurgical recovery, capital and operating costs, commodity prices, exchange rates and the like.

Nonetheless, Listing Rule 18.30(3) states that measured and indicated resources are only included in economic analyses if the basis on which they are considered to be economically extractable is explained and that valuations for inferred resources are not permitted. The exclusion of these sources of potential value as well as the exclusion of a premium or discount related to market, strategic or other considerations means that the value for the Mines does not reflect a Fair Market Value as defined under the VALMIN Code.

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1 VALMIN Code represents the Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports (2005 edition), as prepared by the VALMIN Committee, a joint committee of The Australasian Institute of Mining and Metallurgy, the Australian Institute of Geoscientists and the Mineral Industry Consultants Association as amended from time to time.

2 SAMVAL Code represents the South African Code for the Reporting of Mineral Asset Valuation (2008 edition) as amended from time to time.

3 CIMVAL represents the Standards and Guidelines for Valuation of Mineral Properties endorsed by the Canadian Institute of Mining, Metallurgy and Petroleum, February 2003 (final version) as amended from time to time.

3.0 DECLARATIONS

3.1 Codes and Rules Compliance Statement

This mineral asset valuation has been prepared in compliance with Chapter 18 of the Listing Rules and the VALMIN Code.

It is also considered to be compliant with the *CIMVAL* (2003) and the TSXV Appendix 3G entitled *Valuation Standards and Guidelines for Mineral Properties* (2004).

The valuer of this evaluation is John S Dunlop of AVISTA.

3.2 Qualifications of the Valuer

The qualifications are listed as follows:

- BE (Mining) (Hons), 1970; MEng Sc (Mining), 1979; University of Melbourne
- PCertArb 2002; University of Adelaide
- Fellow AusIMM, Fellow IMMM, Member SME AIME, Member CIMM
- Member (National Chairman), Mineral Industry Consultants Association (MICA)
- Member, Australasian Institute of Mineral Valuers and Appraisers (MAIMVA)
- Chartered Professional Mining Engineer CP (Min)
- Certified Mineral Valuer CPV

3.3 Valuer's Relevant Mineral Valuation Experience

The Valuer's mineral valuation experience is presented in **Appendix 1**.

The Valuer has performed a range of mineral property and project valuations since 1999. These include a recent valuation on the Stock Exchange involving a transaction related to the change of ownership of some gold mines located in Shandong Province, PRC. The Valuer has visited the Republic of Kazakhstan on several occasions prior to the relevant site visit and is familiar with prevailing mineral rights and regulations of the Republic of Kazakhstan.

3.4 Report Date and Sign Off

This Valuation Report is signed at section 11 and dated 30 June 2014.

3.5 Limitations and Exclusions

Information regarding property titles, licensing agreements and environmental liabilities were provided by the Company. The valuer has not been advised any material change or event likely to cause material change of mine production since the date of engagement.

The scope of work for this project is in full compliance with the requirements of an independent asset evaluation and as such, relies upon information relating to legal, commercial and financing matters, license and approvals, land titles and agreements provided by those parties mentioned above.

3.6 Qualifying Statements

AVISTA was selected for this assignment on the basis of its specialist experience with mineral asset and mineral project valuation. This Valuation Report was prepared by AVISTA's Principal Consultant mining engineer, John Dunlop, who has specific experience with general uranium mining and in situ leaching in particular.

Neither AVISTA nor its representatives have any ownership or shareholder interest in the Company or related companies and assets. AVISTA and its representatives have completed their work in accordance with the VALMIN Code, international reporting and the Australasian Institute of Mining and Metallurgy Code of Ethics standards for professional engineering. AVISTA has exercised all reasonable care in reviewing the information provided and have assumed all historical data to have been accurately reported and documented.

The accuracy of the results and conclusions of this Valuation Report are contingent on the information provided. Neither AVISTA nor its representatives are responsible for any material errors or omissions in the information provided and have no reason to believe that any material facts have been withheld or that a more detailed analysis would result in the discovery of additional material information.

This Valuation Report has been completed in accordance with VALMIN Code guidelines, the Australasian Institute of Mining and Metallurgy Code of Ethics and generally accepted standards and practices employed in the international mining industry. AVISTA notes that all data provided for the compilation of this Valuation Report have been prepared by competent institutes, engineers and geologists. AVISTA has conducted its own limited due diligence in checking for consistency and reasonableness in technical and financial mining issues and believe our conclusions are reasonable assessments based on the information provided.

The Valuation Report is necessarily dependent on present and future uranium prices. AVISTA has not independently assessed existing or future uranium markets but rather relied on consensus forecasts and other publicly available price forecast data in the evaluation scenarios.

4.0 SOURCES OF DATA RELIED UPON

It is a compliance requirement that all data used in this valuation are appropriately sourced and identified.

4.1 Data Supplied by the Commissioning Entity

The Commissioning Entity provided the following information under the terms of the commissioning entity letter set out as Appendix 2. That letter contains a warranty that the information provided is correct and accurate in every respect and may be relied upon by the valuer.

- Project background notes;
- Audited financial statements of Semizbay-U LLP for the year ended 31 December 2013 issued by Deloitte LLP on 1 March 2014; and
- Audited financial statements of Beijing Sino-Kazakh for the year ended 31 December 2013 issued by Deloitte Touche Tohmatsu on 30 June 2014.

4.2 Data Supplied from Other Sources

The technical advisor of the Company, Blackstone Mining Associates ("BMA"), provided the following technical information as part of its role to produce a Competent Person's Report (the "CPR") on Semizbay-U's uranium assets:

- CPR For the Semizbay-U ISR Uranium Project in the Republic of Kazakhstan, prepared for CGN Mining Company Limited of 30th Floor, Building A, the International Centre of Times, No. 101, North ShaoYaoJu, Chaoyang District, Beijing, PRC China, with effective date of 31 December 2013, Report No. BMA-01613.

The CPR contains mineral resource estimates, ore reserve estimates and a mine production schedule for the Semizbay-U, including both Semizbay Mine and Irkol Mine operations. The CPR is prepared by a Competent Person under the Australasian Institute of Mining and Metallurgy Joint Committee for the reporting of Mineral Resources and Ore Reserves (JORC Code, (JORC, 2012)). Those estimates have been relied upon in the preparation of this Valuation Report, which should therefore be read in conjunction with the CPR.

Sections 5.1 and 5.2 are derived from the CPR.

5.0 DESCRIPTION OF THE MINERAL ASSET

A detailed description of the project regional and local setting could be found in the CPR (BMA, 2014).

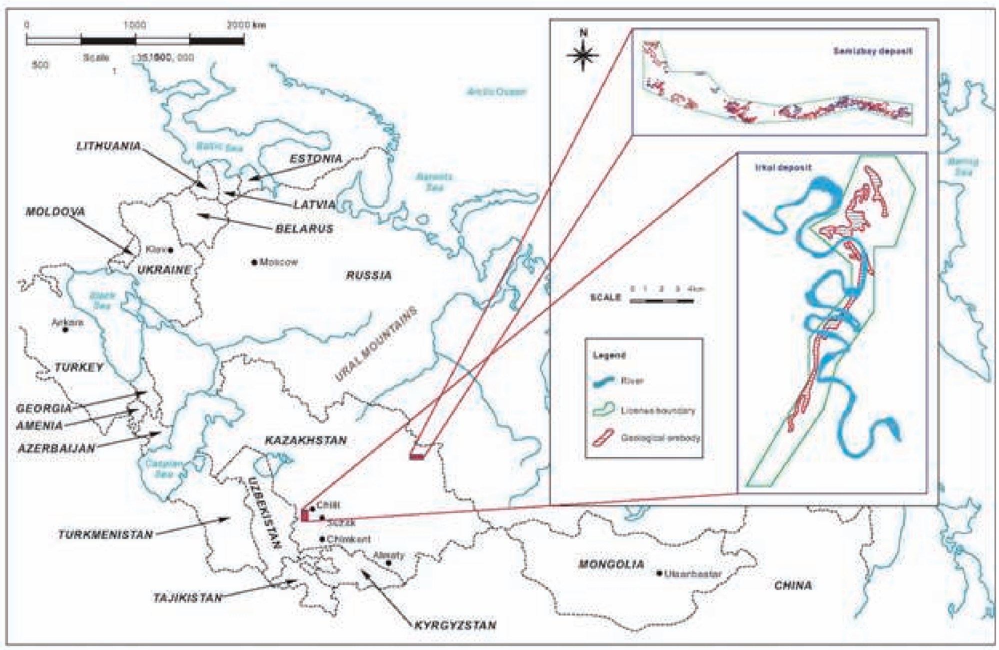
5.1 General Description

The Irkol Mine is geographically located in the Kyzylorzhinsk area, 20 km from Chiili town, the Republic of Kazakhstan (refer to Figure 5.1). The mining lease area covers 44 square kilometres for extraction operations at a depth of from 400 to 700 m from the surface. The nearby town has a major railway station with a national highway connected through to the regional centre. The distance from the Irkol Mine to the railroad is up to 40 km with a minimum of 15 km. A sealed road leads directly to the Irkol Mine processing facilities.

The Semizbay Mine is located in the Valihanov District of Akmoltnsk Oblast, the Republic of Kazakhstan. The geographic coordinates are 52°55'50"N, 72°52'10"E. The mining lease covers 27.2 square kilometres for extraction operations to 180 m depth. The Semizbay

Mine deposit area is one of the least economically developed regions in northern Kazakhstan. Large settlements and railway stations are: Stepnogorsk (by 110 km), Zaozernoe (by 120 km), Bestube (by 50 km) and the railway station Kzyltu (by 100 km) have transport links with the deposit but there is no direct rail link to the Semizbay Mine. A road passing through the mine lease connects the village Kirovo with the village Koytas, and a second road connects the village Baylyust and the final processing facility.

Figure 5.1: General Location Plan



5.2 Tenement Details

The Irkol Mine and the Semizbay Mine are owned and operated by Semizbay-U. The operations are licensed on the basis of the certificate of state registration of legal entities 2008, number 75-1902-25, issued by the Department of Justice, Enbekshildersk District, Akmoltnsk Oblast. Semizbay-U is owned as to 49% by Beijing Sino-Kazakh Uranium Resources Investment Company Limited, 11% by National Atomic Company Kazatomprom ("KAP") and 40% by The Mining Company LLP, a wholly-owned subsidiary of KAP.

5.3 Site Inspections

Site inspections were conducted by a Principal Mining Engineer, Mr John Dunlop, from 27 April to 1 May 2014.

During the visits, Mr John Dunlop has conducted general inspections of the surrounding countryside and had detailed discussions with mine management and technical staff concerning uranium resources and both current and future mining/extraction and processing plans. He inspected the project landscape, mining/extracting activities, well fields and processing facilities. He interviewed the operations team on site and collected relevant information.

6.0 RELEVANT EXPLORATION AND PRODUCTION HISTORY OF THE MINERAL ASSET

Sections 6.1 to 6.6 following are extracted from the CPR (BMA, 2014). They are re-produced here for ease of reference.

6.1 Exploration and Development History

The Irkol Mine was discovered in 1971, and exploration work was resumed in 1975-1977. Further exploration at the Irkol Mine was conducted in 1978-1981, followed by detailed exploration. The first field test work started in 1970's. During the detailed exploration work, a field test was performed during 1982 to 1985 aiming to provide operational design parameters.

In 2007, commercial operations of the Irkol Mine were commenced The processing of solutions from No. 1 block was started and full production was commissioned in 2010. The initial well fields involved 8 ore blocks on the middle of No. 1 geological ore body. The present facility consists of a main processing plant with an ion exchange (IX) and product recovery capacity of 711 t uranium (1.85 million lb U_3O_8) per year. During 2007 and 2013, approximately 5 to 8 new blocks were developed each year which ensured sufficient production rate. During this time, a total of 1618 wells were developed, of which 1396 wells are actively run to achieve a scheduled constant production rate, with a maximum design capacity achieved in 2010.

Exploration activities in the Semizbay region have been undertaken since 1960. The Semizbay Mine was discovered in August 1973, and was the first and only commercial hydrogenous type uranium deposit occurring in unconsolidated riverine sediments. Testing of in-situ leaching mining was conducted from April 1984 to 1989.

The overall design of Semizbay Project has an annual production capacity of 508 t uranium (1.32 million lb U_3O_8). The mining design commenced in 2006 and construction was completed in October 2007. The treatment plant was commissioned in 2009.

Well field development of the Semizbay Mine uses an optimal pattern design to distribute barren lixivant (a solution of sulphuric acid and water) to the well field injectors, which carries the dissolved uranium back to the main processing plant. The processing plant produces uranium loaded pregrant solution taken to the main processing plant in Stepnogorsk for further processing.

The total uranium production tonnes for the Irkol Project and the Semizbay Project from 2007 to 2013 are shown in Table 6.1.

Table 6.1: Historical Production Tonnes, 2007 – 2013

Mine Name	Items	Unit	2007	2008	2009	2010	2011	2012	2013
Irkol	Leached Uranium in Pregnant Solution	t	–	–	516.7	747.3	655.4	721.0	663.1
	Processed Uranium in U_3O_8 Product	t	50.0	300.0	502.1	750.0	651.5	711.8	654.4
Semizbay	Leached Uranium in Pregnant Solution	t	0.0	0.0	15.6	230.1	416.4	532.0	521.6
	Processed Uranium in U_3O_8 Product	t	0.0	0.0	8.5	224.0	409.9	508.6	507.0
Total	Leached Uranium in Pregnant Solution	t	–	–	532.3	977.4	1,071.8	1,253.0	1,184.7
	Processed Uranium in U_3O_8 Product	t	50.0	300.0	510.6	974.0	1,061.4	1,220.4	1,161.4

6.2 Geology and Mineralisation

The Irkol Mine is located in the central part of the Syrdarynck depression within the Syrdarynck uranium province in the northeast part of the Zapazhnoy-Karamurunsk ore field. The Irkol Project is located on the western flank of the Irkol mineralization field characterized by a calm tectonic setting, as the entire area of the field is not bounded by any faults. The majority of the deposit is hosted by sedimentary rocks of the Upper Turonian-Coniacian ages (the Irkol ore bearing horizon). It is a geochemically homogenous – deposit.

The deposit is associated in a regional oxidation zone developed in sandy gravel deposits of the Upper Turonian and lower Santonian Stage of the Upper Cretaceous. The host formation is stacked assorted fine-grained sands and gravel interbeds, with interbedded clays, siltstones minor carbonates and salts, and sandstones of about 60 m thick. The mineralization is at depths of 180 – 750 m and extends for 20 km in a northerly direction and is 250 – 2000 m in width, partially passing under the Syr Darya River. About 40% of the uranium mineralization is located directly in the flood plain. This mineralization has not been drilled, for environmental reasons.

The Irkol Mine is mainly composed of unequal sands and fine particles. The uranium-bearing sand is characterized by uneven granularity. The uranium ore consists of siliceous rock debris of quartz-arkose, in which the clay content is about 15-20%, mainly hydromica containing montmorillonite and kaolinite impurities.

The mineral compositions of the ores and wall rocks are similar, but with different metal minerals grades. The minerals consist of quartz (65-75%) and feldspar (5-7%), sometimes kaolinized, and minor clastic chert (3-5%). The exploration, laboratory and field test results on the Irkol Mine show that the hydrological conditions are favourable for in-situ leaching mining of the uranium mineralization. The Irkol Mine is capped by an extensive thick siltstone aquiclude.

The Semizbay uranium deposit is a complex exogenous mineralization of epigenetic type. The ore-forming processes were multi-stage infiltration and/or replacement.

Geologically, the Semizbay deposit area is located within in extensive palaeochannel on the northern edge of the Ishkeolme anticlinorium, in the dipping zone of folded basement of the north-eastern Kazakhs shield under Mesozoic-Cenozoic sedimentary cover of the West Siberian Plate; of the Epipaleozoic Ural-Siberian platform. The geological structure of this vast and complex area consists of the Paleozoic folded basement rocks and a Mesozoic-Cenozoic platform cover, the East Kazakhstan fold system.

Economic uranium mineralization of the Semizbay Mine is localized within the productive strata of the upper Semizbay and lower Semizbay horizon, with a total thickness of 40-100 m between 35 to 165 m depth, and is concentrated in two mineralized zones explored over 28.8 km. 205 ore zones were identified, striking from 100 m to 5200 m in length and from 50 m to 800 m in width. Their ore thicknesses vary from 0.2 m to 3 m or more, up to 13 m in some sections. Uranium mineralization in the deposit is located in a variety of sedimentary hosts. Uranium is mainly concentrated in the sandy-clay fraction. The depth of mineralisation is based from mineralised intersections recorded in assay tabulation.

6.3 Mineral Resources and Ore Reserves

Ore Reserves are defined as the economically mineable/extractable part of the Indicated and Measured mineral resources. Ore Reserves at the projects are classified into Proved and Probable categories, Ore Reserves within the Measured Mineral Resources were classified as Proved, and within the Indicated Mineral Resources were classified as Probable in line with the JORC Code definitions and guidelines. All Inferred resources are treated as waste material and are excluded in reserve estimation. This Ore Reserve estimate was based on constructed resource model by BMA.

Ore Reserves have been estimated with no allowance for dilution, as dilution is not applicable to mining a deposit using the ISR extraction method. No environmental, permitting, legal, title, taxation, socio-economic, political, marketing, or other issues as outlined by the client are expected to materially affect the above estimate of Ore Reserves.

Irkol Mine

Ore Reserves at the Irkol Project were estimated based on the use of the ISR extraction method and yellow cake production. A forecast spot price US$55.86/lb of U_3O_8 for 2014 with consideration of annual inflation rate 3.8% in subsequent years was used to estimate the Ore Reserve with general uranium recovery of 90%. The reserve estimate is based on a uranium grade-thickness (GT) cut-off of 0.04. A summary of the estimated Ore Reserves for the Irkol Project based on Grade-Thickness (GT) Cut-off of 0.04 with an effective date of 31 December 2013 is presented in Table 6.2.

A total uranium production of 3,759 t, including of 3,637 t extracted in all production years from 2007 to 2013 and a total of 122 t extracted by pilot testing in 1982-1985, has been depleted from the reserve, as indicated above.

Table 6.2: JORC Reserve Statement for Irkol Mine at Grade-Thickness (GT) Cut-off of 0.04

Domain	Category	Volume ($M\ m^3$)	Tonnage (M t)	Uranium grade (%)	Uranium grade-thickness	Contained Uranium Metal (000 t)
Total	Proved	2	4	0.05	0.23	2
	Probable	18	32	0.05	0.19	15
	Proved &Probable	20	36	0.05	0.19	16
Mined out						4
Remaining		20	36			13

Note: Figures may not add up due to rounding.

Following parameters and limitation were applied to reserve estimate:

- Uranium Grade Cut-off: 0.01%
- Minimum Grade-Thickness (GT): 0.04
- Maximum Allowed Barren Waste Width: 1 m
- Minimum Volume of Reserves in an Ore Block: 4,000 m^3
- Minimum samples of 11 with maximum no. of 2 per hole

Semizbay Mine

A summary of the estimated Ore Reserves for the Semizbay Project based on Grade-Thickness (GT) cut-off of 0.04 with an effective date of 31 December 2013 is presented in Table 6.3. Ore Reserves were estimated based on the use of the in-situ recovery (ISR) extraction method and yellow cake production. Allowances for dilution and mining loss are factors which are not relevant to the uranium extraction method of in situ leaching. The recovery obtained from the in situ leaching process is included in the metallurgical recovery.

A forecast spot price US$55.86/lb of U_3O_8 for 2014 with consideration of annual inflation rate 3.8% in subsequent years was used to estimate the Ore Reserve with general extraction of uranium mineral of 85%. Reserve estimate is based on a uranium Grade-Thickness (GT) cut-off of 0.04.

Table 6.3: JORC Reserve Statement for Semizbay Mine at Grade-Thickness (GT) Cut-off of 0.04

Domain	Category	Volume (M m^3)	Tonnage (M t)	Uranium grade (%)	Uranium grade-thickness	Contained Uranium Metal (000 t)
Total	Proven	–	–	–	–	–
	Probable	13	21	0.06	0.31	13
Mined out						2
Remaining		13	21			11

Note: Figures may not add up due to rounding.

Following parameters and limitation were applied to reserve estimate:

- Uranium Grade Cut-off: 0.01%
- Minimum Grade-Thickness (GT): 0.04
- Maximum Allowed Barren Waste Width: 1 m
- Minimum Volume of Reserves in an Ore Block: 4000 m^3
- Minimum samples of 11 with maximum no. of 2 per hole

6.4 ISL Mining and Processing

Both Irkol and Semizbay projects employ ISR mining method to produce a uranium-bearing lixivant, which goes to settling ponds prior to the main processing plant for production of uranium as yellow cake. The mining and processing methodology used at each project are similar.

The well field development and extraction of Irkol uranium has to date been in geological blocks of No. 1, 2 and 3 ore bodies located on the east bank of the Syr Darya River to support the current production plan.

At Irkol Mine from 2007 to 2013, around 6,196 t of reserve has been developed via extraction of 41 blocks or sub-blocks and 3,637 t of uranium has been extracted, in which blocks No. 8-2 and No. 7-1 have being operated for 4 years. Three worked out blocks achieved an overall extraction of 90% and six additional blocks have extraction in excess of 80%. The forecast extraction of 90% ISR leaching is reasonable based on the extensive operational results and previous field testing. The average historical pregnant solution grade is stated to 38.6 mg/L. Based on the 2012 Feasibility Study, the forecast overall pregnant solution grade is approximately 46-61 mg/L.

The operation of Semizbay Project commenced in 2009 and full production rate was achieved in 2012. Approximately 8 new blocks were developed annually in the initial years, ensuring a sufficient production rate. Only No. 2 block which started production in 2009, has been exhausted, ceasing production in 2013 after being run for 4 years.

In Semizbay Project, a total of around 3,093 t uranium product has been developed from 2009 to 2013 via the uranium extraction from 29 blocks or sub-blocks, and a total of 1,667 t uranium has been extracted in these years. Field development and commercial operation of Semizbay projects were designed to reach a production rate of 508 tons of uranium (1.32 million lb U_3O_8) per year. The operation of No. 1 to No. 7 blocks initiated from 2009 has an overall extraction of 70%. Most blocks will produce further uranium, and only No. 2 block has been temperately completed, with a uranium extraction of 85% estimated from production figures.

The forecast extraction rate of 85% for the Ore Reserves ISR leaching is reasonable based on the extensive operational results as well as field testing in exploration stage for the Semizbay Mine. The average pregnant liquor grade in 2013 is approximately 36mg/L, based on production figures, and the forecast pregnant liquor grades of approximately 38-68 mg/L are achievable.

The Irkol and Semizbay projects produce a dry U_3O_8 uranium product meeting the quality specifications of uranium refining and conversion facilities. The main buyers are the founders of Semizbay-U.

6.5 Production Plans and Mine Life

BMA's production plan for Irkol Project is based on current JORC Ore Reserves of 13,000 t uranium; with 11,000 t uranium recoverable by processing plant. These reserve numbers are slightly more than the mineable reserves projected in the 2012 Feasibility Study by the Limited Liability Partnership "PW-5" – a Kazakh company offering a full range of design and survey services for the development and coordination of design and estimate documentation for the uranium mining industry under Russian estimation standards.

Based on average annual production totalling 711 t uranium (1.85 million lb U_3O_8), the mining life has been determined being up to year 2025 in the 2012 Feasibility Study and to year 2029 by BMA scheduling in the projected mining area, all focusing on No. 1, 2 and 3 ore bodies.

The projected well field facilities are sufficient for achieving the proposed production forecast and the processing capacity is in place to produce 711 tpa uranium (1.85 million lb U_3O_8).

The forecast extraction of 90% in ISR leaching is reasonable based on the extensive operational results.

The JORC Ore Reserves of Semizbay deposit total 11,000 t uranium; with 10,000 t uranium product recoverable by the processing plant. Based on average annual production of 508 t uranium (1.32 million lb U_3O_8), there are more than enough Ore Reserves for a mine life extending to the year 2031 as in the 2012 Feasibility Study and to year 2032 by BMA's schedule. The current well field facilities are sufficient for achieving the production forecast and the processing capacity is in place to produce 508 tpa uranium (1.32 million lb U_3O_8).

The forecast uranium extraction is 85% for the Ore Reserves in ISR leaching and is reasonable based on the extensive operational results.

6.6 Sales Contract

On 29 March 2013, CGNPC-URC and KAP, which indirectly controlled 49% and 51% partnership interest in Semizbay-U, respectively, entered into the Off-take Agreement. Pursuant to the Off-take Agreement, CGNPC-URC and KAP are entitled to and shall acquire 49% and 51% of Semizbay-U's total annual production respectively, with effect from 1 January 2013. The term of the Off-take Agreement is for the period of the duration of Semizbay-U and will be terminated on the date on which Beijing Sino-Kazakh ceases to be a holder of the partnership interest in Semizbay-U. CGNPC-URC and KAP are permitted, with prior agreement of both parties in writing, to assign part or all of their respective uranium product quantities to be purchased from Semizbay-U to their respective affiliates, including their subsidiaries.

The purchase price and the uranium under the Off-take Agreement that is applicable to each of CGNPC-URC and KAP is determined based on their respective fixed formulas which are fixed for the entire term of the Off-take Agreement. The general principle is to offer 2% discount over the international uranium spot price for the sale to CGNPC-URC and KAP of the uranium produced by Semizbay-U.

7.0 VALUATION PROCESS

This section includes a brief explanation of the valuation process adopted.

7.1 The Accepted Valuation Process

The recommended mineral asset valuation process has been established gradually over the last two decades and has been published in numerous technical papers[1]. Useful guidelines could be found in the papers by Lawrence (1994) and Bruce et al (1994).

Simply put, the process involves identification of the relevant valuation methods for the mineral assets under consideration; evaluation of the mineral assets using each method; grouping and comparison of the resulting estimates; consideration of sensitivities; identification of a valuation range; and finally adoption of a "preferred valuation".

7.2 The Nature of Value

Value is the Fair Market Value of a Mineral Asset or Security. It is the amount of money (or the cash equivalent of some other consideration) determined by the valuer in accordance with the provisions of the VALMIN Code for which the Mineral Asset or Security transaction

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1 Reference may be made to the VALMIN series of Symposia, organised by the Australasian Institute of Mining and Metallurgy and the Mineral Industry Consultants Association: Sydney, 1989, 1994 and 2001.

should happen on the Valuation Date in an open and unrestricted market between a willing buyer and a willing seller in an "arm's length" transaction, with each party acting knowledgeably, prudently and without compulsion.

Value is usually comprised of two components, the underlying or 'Technical Value' of the Mineral Asset or Security, as defined in the glossary of this Valuation Report (Appendix 3), and a premium or discount relating to market, strategic or other considerations.

Value should be selected as the most reasonable figure within a range after taking account of risk and the possible variation in ore grade, metallurgical recovery, capital and operating costs, commodity prices, exchange rates, etc.

AVISTA has concluded on the basis of Listing Rule 18.30(3) that the Chapter 18 Valuation only takes into account the estimated value of Measured and Indicated resources that are considered to be economically extractable, which will generally means that the Chapter 18 Valuation will be limited to an estimated of the value of Ore Reserves (i.e. that portion of Measured and Indicated Resources that have been demonstrated to be economic). Of particular significance, Listing Rule 18.30(3) states that valuations for Inferred Resources are not permitted.

Market based valuations of resources assets generally take into account, where appropriate, Measured, Indicated and Inferred Resources, the potential for exploitation of additional mineralisation not yet classified as resources, and broader exploration prospectivity. The exclusion of these sources of potential value from the Chapter 18 Valuation means that the Chapter 18 Valuation does not reflect a market value: it does not represent an estimate of the value that might be realised through an arm's length transaction. Rather, the Chapter 18 Valuation is essentially an estimate of the underlying value notionally attributable to the Ore Reserves only.

8.0 VALUATION METHODS ADOPTED

In this section, the available mineral valuation methods are listed with comment made on the relevance of each method to this particular mineral valuation.

8.1 Recognized Valuation Methods

The recognized mineral valuation methods (Bruce et al, 1994) are summarized as follows:

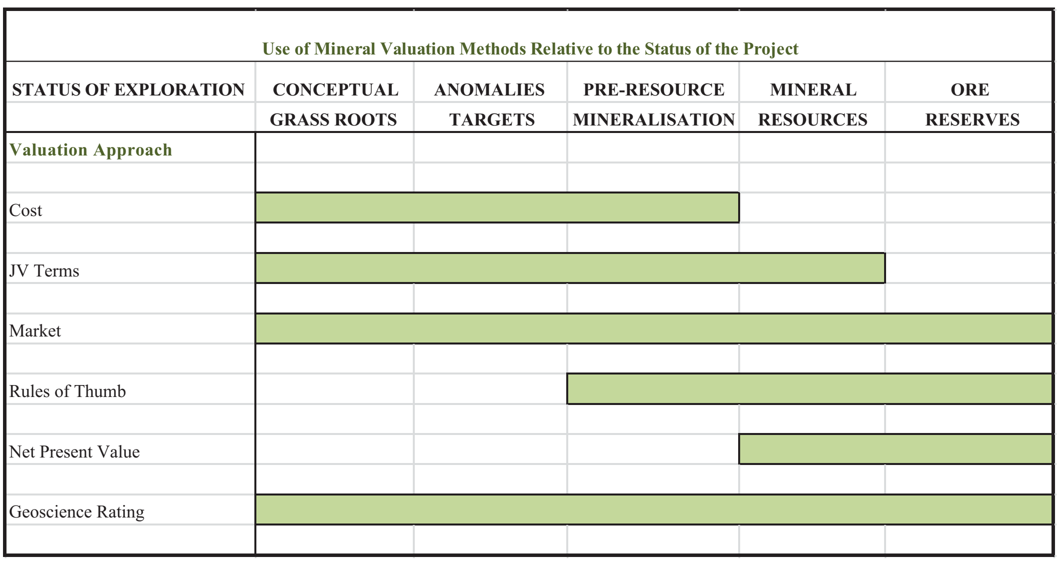
- Cost – based on past exploration expenditure (and book value);
- Market – similar to a real estate valuation;
- Joint Venture ("JV") Terms – where a farm-in agreement is involved;
- Rules of Thumb – such as in situ mineral value;

- Net Present Value ("NPV") – where a discounted cash flow may be modelled; and

- Geoscience Rating Methods – the modified Kilburn method.

8.2 Valuation Methods Relevant to this Case

Of the generally accepted mineral evaluation methods, it is rarely the case that all of the methods will be suited to every situation. Appleyard (1994) discussed this point and illustrated his views in a diagram which has been adapted here to reflect the six mineral valuation methods listed above.



The column marked "Ore Reserves" is relevant to this case, as the mineral assets are currently in production and producing saleable uranium product. The status of assets suggests that the relevant methods are Market, NPV and, to a lesser extent, Geoscience Rating.

8.2.1 Net Present Value Method

The NPV valuation method relies upon, as its name implies, net present value estimation of present and future cash flows from the current mining operations. This valuation method is recommended in the VALMIN Code (VALMIN, 2005) as the *primary* valuation method to be used for operating mineral operations, which is not only applicable to this case considering the development status of the Mines, but also the preferred methodology.

8.2.2 Market Method

The basis of Comparable Market Value (or Real Estate) Method is the application of the prices paid for similar or nearby tenements as a guide to current value. It is a difficult method to use as there are rarely comparable resource asset sales available in terms of prospectivity, grade or size. In addition, there are timing issues plus the fact that the market itself may be relatively inactive.

For these reasons, the Market Method is generally not used as the *primary* valuation method.

8.3 Valuation Methods Inapplicable in this Case

8.3.1 Geoscience Rating Method

This method (Kilburn, 1990) is based on determining a value estimate by applying a formal points rating system to a series of geoscientific parameters displayed by the mineral tenement in question.

The method, still not widely used, is similar to the Cost Method, though it arrives at a value estimate by following a slightly different path. After considering the preponderance of actual operating cost and production data available, this valuation method was not selected.

8.3.2 Cost Method

This approach is used where no operating or production data exists, which is usually the case with exploration properties. It is clearly not applicable in this case, was therefore rejected and will not be discussed further here.

8.3.3 Joint Venture Terms

This approach is used where a farm-in may take place where entity A pays $X for Y% of the project under consideration, or a similar project nearby or of similar size and grade. It is not considered to be relevant in this case, was therefore rejected and will not be discussed further here.

8.3.4 Rules of Thumb

This approach is used as a preliminary value process where, for example, it may be useful to place a value on the in situ minerals within the property, with a suitable discount for JORC "modifying factors". It is rarely, if ever, used as a primary mineral valuation tool. It is not considered to be relevant in this case, was therefore rejected and will not be discussed further here.

9.0 OTHER MATERIAL FACTORS OR ISSUES

It is a Code requirement that other material facts or issues are set out in this Valuation Report. It is the author's belief that no material factors have been overlooked in this valuation, though the following issues are noted.

9.1 Exploration or Production Timing Issues

No issues related to exploration or production timing are known to be relevant to this valuation.

9.2 Exploration or Production Administration Issues

No issues related to exploration or production administration are known to be relevant to this valuation.

9.3 The Time Value of Money Issue

In this Valuation Report, all references to exploration costs are expressed in US dollars of the day and are not adjusted for timing effects such as escalation.

9.4 NPV Discount Factor

Any NPV-based discounted cash flow valuation will be influenced by the discount factor (or rate) selected. In this valuation, the standard methodology to determine an appropriate discount rate is set out below in Table 9.1.

Table 9.1: Weighted Average Cost of Capital Analysis for Semizbay-U as of 31 December 2013

	Scenario 1	Base Case	Scenario 2
Nominal risk free rate[1]	3.97%	3.97%	3.97%
Equity risk premium[2]	5.00%	5.00%	5.00%
Unlevered beta	0.86	0.86	0.86
Re-levered beta[3]	1.19	1.19	1.19
Country risk premium[2]	2.85%	2.85%	2.85%
Small size risk premium[4]	2.70%	2.70%	2.70%
Company specific risk[8]	0.00%	2.75%	5.50%
Cost of equity	15.48%	17.48%	19.48%
Cost of debt (pre-tax)[5]	5.00%	5.00%	5.00%
Tax[6]	20.00%	20.00%	20.00%
After tax cost of debt	4.00%	4.00%	4.00%
Proportion of equity[7]	67.47%	67.47%	67.47%
Proportion of debt[7]	32.53%	32.53%	32.53%
WACC	11.75%	13.60%	15.46%
Rounded	**11.70%**	**13.60%**	**15.50%**

Notes:

1. Yield on a 30-year US Federal Reserve Treasury Bond as of the Valuation Date.

2. Based on 5.0% equity risk premium for the US market published by various research reports and adjusted for country risk premium of 2.85% of the Republic of Kazakhstan published by Aswath Damodaran in January 2014.

3. Re-levered beta based on data in Damodaran database for Metals & Mining Industry.

4. Sourced from SBBI Year Book 2013.

5. Based on the central bank benchmark interest rate reported by the National Bank of Kazakhstan.

6. Corporate tax rate applicable to Semizbay-U.

7. Based on industry benchmark debt-to-equity ratio from Damodaran database for Metals & Mining industry.

8. Company specific risk is the risk premium adopted to reflect current and future specific risks of Semizbay-U, based on expert opinion of AVISTA. A range of risk premium has been considered for sensitivity analysis purpose.

From the assessment in Table 9.1, it would appear that the appropriate discount rate is 13.6% within a range of 11.7% to 15.5%.

The final selected discount rate contains a number of subjective assumptions, suggesting that sensitivity to discount rate be tested in the final project evaluation.

9.5 Production Schedules

The production schedules for Irkol Mine and Semizbay Mine have been based on the Ore Reserves for each mine derived by BMA, together with a metallurgical recovery percentage proven by operational track record. The schedules were considered by the valuer to be the most appropriate production forecasts to use.

9.6 Capital and Operating Costs

The capital and operating costs used in this valuation were based on the projections contained in the CPR (BMA, 2014). These cost estimates are not only the most recent available, but were also based on BMA's site visits and cost audits carried out at the two mines. In addition, consumable prices, local wages and applicable taxes and fees were all checked and taken up in the BMA estimates. Accordingly, the valuer has relied on these estimates, which should have a high degree of accuracy.

9.7 Economic and Market Overview

Uranium is generally considered as one of the most environmentally friendly energy sources. According to World Nuclear Association ("WNA"), approximately 12% of the world's electricity is generated from uranium in nuclear reactors.

According to WNA, as of April 2014, there were about 434 nuclear reactors operating worldwide. There were 72 reactors under construction, and 173 reactors on order or planned. WNA estimates there will be 272 new reactors coming online compared to 74 reactors closing (exclude closed Japanese reactors) by 2030, which imply a net addition of 198 reactors during the period.

9.7.1 Uranium Demand at a Glance

Currently, less than 60% of the demand is satisfied by the current production, while the remaining 40% are covered by inventory left over from the arms race, which is expected to be depleted in 2015. In the context of increasing energy dependence of growth of most economies in the world as well as high volatility of hydrocarbon prices, many states are looking for new sources of energy.

9.7.2 Uranium Supply at a Glance

Uranium supply sources include primary mine production and secondary sources such as excess inventories, uranium made available from the decommissioning of nuclear weapons, re-enriched depleted uranium tails, and used reactor fuel that has been reprocessed.

According to WNA, about 64% of the world's production of uranium from mines is from the Republic of Kazakhstan, Canada and Australia. The Republic of Kazakhstan accounted for approximately 36.5% in 2012, followed by Canada (15.4%) and Australia (12.0%). About 36.5% of world supply from mines in 2012 and increasing proportion of uranium, now 45%, is produced by in situ leaching. World output of uranium has generally meets 86% of demand for power generation.

9.7.3 Main Uranium Producers at a Glance

According to WNA, in 2012, approximately 64% of world production comes from the 15 largest mines as shown in Table 9.2.

Table 9.2: Main Uranium Producers in 2012

Mine Name	Country	Main Owner	Mine Method	Production (t U)	% of world
McArthur River	Canada	Cameco	Underground	7,520	14
Olympic Dam	Australia	BHP Billiton	By-product/ Underground	3,386	6
Ranger	Australia	ERA (Rio Tinto 68%)	Open pit	3,146	5
Arlit	Niger	Somair/Areva	Open pit	3,065	5
Tortkuduk	The Republic of Kazakhstan	Katco JV/ Areva	ISL	2,661	5
Rossing	Namibia	Rio Tinto (69%)	Open pit	2,289	4
Budenovskoye 2	The Republic of Kazakhstan	Karatau JV/ Kazatomprom-Uranium One	ISL	2,135	4
Kraznokamensk	Russia	ARMZ	Underground	2,011	3

Mine Name	Country	Main Owner	Mine Method	Production (t U)	% of world
Langer Heinrich	Namibia	Paladin	Open Pit	1,955	3
South Inkai	The Republic of Kazakhstan	Betpak Dala JV/Uranium One	ISL	1,870	3
Inkai	The Republic of Kazakhstan	Inkai JV/ Cameco	ISL	1,701	3
Central Mynkuduk	The Republic of Kazakhstan	Ken Dala JV/ Kazatomprom	ISL	1,622	3
Akouta	Niger	Cominak/Areva	Underground	1,506	3
Rabbit Lake	Canada	Cameco	Underground	1,479	3
Budenovskoye 1&3	The Republic of Kazakhstan	Akbastau JV/ Kazatomprom-Uranium One	ISL	1,203	2
Total				37,549	64

Source: WNA

9.7.4 Market Outlook

The global uranium reactor demand is estimated to increase by approximately 50% during the period from 2013 to 2030 according to 2013 WNA Market Report.

As a result of the significant growth in uranium demand worldwide, there would be a substantial need for significant additional uranium production from existing and new operations. This outcome is clearly possible, given the good underlying uranium resource base, but will require continuation of recent investment in production capacity.

The dependence of uranium supply on large individual uranium properties and countries adds uncertainty to estimates of future supply. Major producers Cameco, Areva, KazAtomProm, Rio Tinto, ARMZ/Uranium One, and BHP Billiton are expected to continue to maintain their large market share into the future.

Unless new large-capacity mines come online in the near future, prices are expected to rise, and this increase should at the same time stimulate additional exploration and make some unconventional resources more attractive.

10.0 CHAPTER 18 VALUATION

The various valuation estimates are set out below.

10.1 Estimates for Each Valuation Method

10.1.1 NPV Method Estimate

Discounted cash flow analyses were run for both mines, with the following assumptions:

- BMA production schedules, with annual production of 711 t uranium (1.85 million lb U_3O_8) and estimated life up to year 2029 for Irkol Mine and annual production of 508 t uranium (1.32 million lb U_3O_8) and estimated life up to year 2032 for Semizbay Mine respectively;

- Operating expenses, capital expenditures, depreciation expenses, working capital and income tax expenses were sourced from the CPR with no adjustments adopted;

- Uranium prices in 2014 of US$145/kg for uranium (approximately US$56/lb for U_3O_8), determined based on Consensus Economics, a well-established source of reliable price forecast broadly accepted by the market, with reference to the expert opinion of Competent Person, whom has conducted due diligence process and reviewed various external sources to verify the reasonableness of price forecast; the prices are escalated with consideration of inflation of average rate of 3.8% per year for subsequent years, which is consistent with the BMA assumptions and the valuer considers reasonable;

- Regarding the Off-take Agreement, we understand that the Company has obtained a written consent dated 31 March 2014 from KAP for the assignment of Off-take Quantity from CGNPC-URC to the Group. As the valuation is performed on the Group basis (i.e. assuming that the assignment of the Off-take Quantity from CGNPC-URC to the Group pursuant to the undertaking given by CGNPC-URC dated 16 May 2014 will take effect from completion of the Acquisition), the effect from the Off-take Agreement is assumed to be eliminated when valuing the Mines and the Target as a whole.

Summaries of the cash flow projections of the Semizbay Mine and the Irkol Mine are presented in table 10.1 and table 10.2 as follows:

Table 10.1: Cash Flow Projection of Semizbay Mine (US$000)

	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**
Revenue																			
Annual Production	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508	508
Unit Price	145.24	150.78	156.53	162.50	168.69	175.13	181.80	188.74	195.93	203.41	211.16	219.21	227.57	236.25	245.26	254.61	264.32	274.40	284.87
Revenue	73,782	76,595	79,516	82,548	85,696	88,964	92,357	95,879	99,535	103,330	107,271	111,361	115,608	120,016	124,593	129,344	134,276	139,396	144,712
Cost of sales																			
Operational cost of construction and exploration wells	(1,895)	(2,067)	(2,170)	(2,778)	(2,886)	(2,382)	(2,586)	(2,495)	(2,429)	(2,278)	(1,871)	(1,428)	(1,204)	(1,702)	(1,767)	(1,834)	(1,284)	(899)	(629)
Wage fund	(2,103)	(2,145)	(2,188)	(2,232)	(2,276)	(2,322)	(2,368)	(2,416)	(2,464)	(2,513)	(2,563)	(2,615)	(2,667)	(2,720)	(2,824)	(2,931)	(2,052)	(1,436)	(1,005)
Social tax	(208)	(212)	(217)	(221)	(225)	(230)	(234)	(239)	(244)	(249)	(254)	(259)	(264)	(269)	(279)	(290)	(203)	(142)	(99)
Land Tax	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
The fee for use of the land	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tax on transportation	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Property Tax	(4)	(6)	(7)	(9)	(10)	(12)	(13)	(15)	(16)	(18)	(19)	(21)	(22)	(24)	(25)	(26)	(18)	(13)	(9)
Fee for the issue to the environment	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
The cost of the sulfuric acid leaching	(11,071)	(11,846)	(12,675)	(13,309)	(13,975)	(14,673)	(15,407)	(16,023)	(16,664)	(17,331)	(18,024)	(18,745)	(19,120)	(19,502)	(19,892)	(20,290)	(14,203)	(9,942)	(6,959)
The cost of hydrogen peroxide	(1,804)	(1,930)	(2,065)	(2,168)	(2,277)	(2,390)	(2,510)	(2,610)	(2,715)	(2,823)	(2,936)	(3,054)	(3,115)	(3,177)	(3,298)	(3,424)	(2,397)	(1,678)	(1,174)
Power	(751)	(803)	(859)	(902)	(948)	(995)	(1,045)	(1,086)	(1,130)	(1,175)	(1,222)	(1,271)	(1,296)	(1,322)	(1,372)	(1,425)	(997)	(698)	(489)
Other materials	(607)	(649)	(695)	(730)	(766)	(804)	(844)	(878)	(913)	(950)	(988)	(1,027)	(1,048)	(1,069)	(1,110)	(1,152)	(806)	(565)	(395)
PBP and service wells	(1,940)	(2,077)	(2,222)	(2,334)	(2,450)	(2,573)	(2,701)	(2,810)	(2,922)	(3,039)	(3,160)	(3,287)	(3,352)	(3,420)	(3,550)	(3,686)	(2,580)	(1,806)	(1,264)
Submersible Pump	(2,430)	(2,601)	(2,783)	(2,922)	(3,068)	(3,221)	(3,382)	(3,518)	(3,658)	(3,805)	(3,957)	(4,115)	(4,197)	(4,281)	(4,444)	(4,614)	(3,230)	(2,261)	(1,583)
Household spending mine	(3,207)	(3,431)	(3,672)	(3,855)	(4,048)	(4,250)	(4,463)	(4,641)	(4,827)	(5,020)	(5,221)	(5,430)	(5,538)	(5,649)	(5,864)	(6,088)	(4,262)	(2,983)	(2,088)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Current repairs and maintenance of fixed asset	(24)	(33)	(42)	(50)	(59)	(68)	(76)	(84)	(92)	(101)	(109)	(117)	(123)	(128)	(133)	(138)	(97)	(68)	(47)
Local personnel	(238)	(254)	(272)	(286)	(300)	(315)	(331)	(344)	(358)	(373)	(388)	(403)	(411)	(420)	(436)	(453)	(317)	(222)	(155)
Depreciation of fixed assets	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(6,204)	(4,343)	(3,040)
Repayment of ODA	(13,131)	(13,973)	(14,645)	(18,272)	(19,205)	(17,171)	(17,016)	(18,863)	(18,720)	(17,926)	(16,574)	(14,530)	(14,734)	(18,278)	(18,975)	(19,699)			
Depreciation of assets	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(34)	(24)	(17)	(12)
Depreciation of LF	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(28)	(20)	(14)	(10)
Total Cost before MET	(48,353)	(50,967)	(53,452)	(59,008)	(61,433)	(60,346)	(61,916)	(64,962)	(66,092)	(66,541)	(66,226)	(65,242)	(66,031)	(70,901)	(72,910)	(74,989)	(38,707)	(27,100)	(18,974)
MET	(12,765)	(13,455)	(14,111)	(15,578)	(16,218)	(15,931)	(16,346)	(17,150)	(17,448)	(17,567)	(17,484)	(17,224)	(17,432)	(18,718)	(19,248)	(19,797)	(10,219)	(7,154)	(5,009)
Total Cost before MET	(61,118)	(64,422)	(67,563)	(74,586)	(77,651)	(76,277)	(78,261)	(82,112)	(83,540)	(84,107)	(83,709)	(82,466)	(83,463)	(89,619)	(92,158)	(94,786)	(48,926)	(34,254)	(23,983)
Other Operating Expenses																			
Indirect costs of the activities of the contract	(338)	(354)	(372)	(386)	(400)	(415)	(431)	(444)	(458)	(473)	(488)	(503)	(522)	(542)	(563)	(584)	(409)	(286)	(200)
Total contract cost	(1,154)	(1,235)	(1,322)	(1,388)	(1,457)	(1,530)	(1,606)	(1,670)	(1,737)	(1,806)	(1,879)	(1,954)	(1,993)	(2,032)	(2,109)	(2,190)	(1,533)	(1,073)	(751)
Total Operating Expenses	(1,492)	(1,589)	(1,694)	(1,774)	(1,857)	(1,945)	(2,037)	(2,114)	(2,195)	(2,279)	(2,367)	(2,457)	(2,515)	(2,574)	(2,672)	(2,774)	(1,942)	(1,359)	(952)
Tax																			
Profit before tax	11,172	10,585	10,259	6,189	6,188	10,742	12,058	11,653	13,800	16,944	21,194	26,439	29,630	27,824	29,762	31,784	83,408	103,783	119,777
Tax expenses	(2,234)	(2,117)	(2,052)	(1,238)	(1,238)	(2,148)	(2,412)	(2,331)	(2,760)	(3,389)	(4,239)	(5,288)	(5,926)	(5,565)	(5,952)	(6,357)	(16,682)	(20,757)	(23,955)
Net Profit	8,938	8,468	8,207	4,951	4,951	8,594	9,647	9,322	11,040	13,555	16,955	21,151	23,704	22,259	23,810	25,427	66,726	83,027	95,822
Cash Flow Movement																			
CAPEX	(12,155)	(12,763)	(6,480)	(7,876)	(7,144)	(7,502)	(9,238)	(8,192)	(10,112)	(8,860)	(11,078)	(9,583)	(12,083)	(10,365)	(13,162)	(11,211)	(7,848)	(5,493)	(3,845)
Tax savings on CAPEX	2,026	2,127	1,080	1,313	1,191	1,250	1,540	1,365	1,685	1,477	1,846	1,597	2,014	1,728	2,194	1,869	1,308	916	641
Working capital	(263)	(281)	(299)	(318)	(333)	(343)	(360)	(372)	(384)	(397)	(407)	(418)	(424)	(437)	(444)	(447)	(218)	(153)	(107)
Historical costs (payments)	(155)	(155)	(155)	(155)	(155)	(155)	0	0	0	0	0	0	0	0	0	0	0	0	0
Working capital required	(1,604)	(506)	(526)	(546)	(567)	(588)	(611)	(634)	(658)	(683)	(709)	(736)	(764)	(794)	(824)	(855)	(888)	(922)	25,091
D&A	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	8,925	6,248	4,373	3,061
Net Cash Inflow/(Outflow)	5,712	5,814	10,753	6,294	6,868	10,181	9,903	10,415	10,496	14,016	15,532	20,936	21,371	21,316	20,499	23,708	65,328	81,748	120,663

Table 10.2: Cash Flow Projection of Irkol Mine (US$000)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Revenue																
Annual Production(t)	711	711	711	711	711	711	711	711	711	711	711	711	711	711	711	711
Unit Price (US$/kg U)	145	151	157	162	169	175	182	189	196	203	211	219	228	236	245	255
Revenue	103,266	107,203	111,291	115,535	119,941	124,515	129,263	134,192	139,309	144,622	150,137	155,862	161,805	167,975	174,381	181,030
Cost of sales																
Operational cost of construction and exploration wells	(3,652)	(3,012)	(2,091)	(2,927)	(1,345)	(1,866)	(2,859)	(3,414)	(4,066)	(4,050)	(4,335)	(4,500)	(4,672)	(3,270)	(2,289)	(1,602)
Wage fund	(2,103)	(2,145)	(2,188)	(2,232)	(2,276)	(2,322)	(2,368)	(2,416)	(2,464)	(2,513)	(2,563)	(2,661)	(2,762)	(1,934)	(1,353)	(947)
Social tax	(208)	(212)	(217)	(221)	(225)	(230)	(234)	(239)	(244)	(249)	(254)	(264)	(274)	(192)	(134)	(94)
Land Tax	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
The fee for use of the land	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Tax on transportation	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
Property Tax	(4)	(6)	(7)	(9)	(10)	(12)	(13)	(15)	(16)	(18)	(19)	(20)	(20)	(14)	(10)	(7)
Fee for the issue to the environment	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)	(13)
The cost of the sulfuric acid leaching	(15,160)	(16,569)	(18,599)	(19,835)	(21,222)	(22,096)	(23,216)	(22,924)	(22,869)	(22,448)	(21,537)	(21,637)	(22,462)	(15,723)	(11,006)	(7,704)
Power	(751)	(803)	(859)	(902)	(948)	(995)	(1,045)	(1,086)	(1,130)	(1,175)	(1,222)	(1,269)	(1,317)	(922)	(645)	(452)
Other materials	(607)	(649)	(695)	(730)	(766)	(804)	(844)	(878)	(913)	(950)	(988)	(1,026)	(1,065)	(745)	(522)	(365)
PBP and service wells	(1,940)	(2,077)	(2,222)	(2,334)	(2,450)	(2,573)	(2,701)	(2,810)	(2,922)	(3,039)	(3,160)	(3,281)	(3,406)	(2,384)	(1,669)	(1,168)
Submersible Pump	(1,698)	(1,856)	(2,084)	(2,222)	(2,378)	(2,476)	(2,601)	(2,568)	(2,562)	(2,515)	(2,413)	(2,505)	(2,601)	(1,820)	(1,274)	(892)
Household spending mine	(2,854)	(3,054)	(3,268)	(3,431)	(3,603)	(3,783)	(3,972)	(4,131)	(4,296)	(4,468)	(4,647)	(4,824)	(5,008)	(3,506)	(2,454)	(1,718)
Current repairs and maintenance of fixed asset	(24)	(33)	(42)	(50)	(59)	(68)	(76)	(84)	(92)	(101)	(109)	(113)	(117)	(82)	(58)	(40)
Local personnel	(238)	(254)	(272)	(286)	(300)	(315)	(331)	(344)	(358)	(373)	(388)	(403)	(418)	(293)	(205)	(143)
Depreciation of fixed assets	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(8,863)	(6,204)	(4,343)	(3,040)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Repayment of ODA	(19,868)	(21,560)	(24,185)	(25,101)	(23,878)	(25,367)	(27,016)	(28,124)	(28,378)	(25,629)	(22,556)	(23,416)	(24,309)			
Depreciation of assets	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(47)	(33)	(23)	(16)
Depreciation of LF	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(39)	(27)	(19)	(13)
Total Cost before MET	(58,071)	(61,194)	(65,693)	(69,244)	(68,424)	(71,871)	(76,240)	(77,997)	(79,274)	(76,492)	(73,155)	(74,881)	(77,395)	(37,164)	(26,020)	(18,218)
MET	(15,331)	(16,155)	(17,343)	(18,280)	(18,064)	(18,974)	(20,127)	(20,591)	(20,928)	(20,194)	(19,313)	(19,769)	(20,432)	(9,811)	(6,869)	(4,810)
Total Cost before MET	(73,401)	(77,349)	(83,036)	(87,524)	(86,488)	(90,845)	(96,367)	(98,588)	(100,202)	(96,686)	(92,468)	(94,650)	(97,827)	(46,976)	(32,889)	(23,028)
Other Operating Expenses																
Indirect costs of the activities of the contract	(338)	(354)	(372)	(386)	(400)	(415)	(431)	(444)	(458)	(473)	(491)	(510)	(529)	(370)	(259)	(182)
Total contract cost	(1,154)	(1,235)	(1,322)	(1,388)	(1,457)	(1,530)	(1,606)	(1,670)	(1,737)	(1,806)	(1,875)	(1,946)	(2,021)	(1,414)	(990)	(693)
Total Operating Expenses	(1,492)	(1,589)	(1,694)	(1,774)	(1,857)	(1,945)	(2,037)	(2,114)	(2,195)	(2,279)	(2,366)	(2,456)	(2,550)	(1,785)	(1,249)	(875)
Tax																
Profit before tax	28,372	28,266	26,562	26,237	31,597	31,725	30,859	33,490	36,912	45,657	55,303	58,756	61,428	119,215	140,243	157,128
Tax expenses	(5,674)	(5,653)	(5,312)	(5,247)	(6,319)	(6,345)	(6,172)	(6,698)	(7,382)	(9,131)	(11,061)	(11,751)	(12,286)	(23,843)	(28,049)	(31,426)
Net Profit	22,698	22,612	21,250	20,990	25,277	25,380	24,687	26,792	29,530	36,526	44,242	47,005	49,143	95,372	112,194	125,703
Cash Flow Movement																
CAPEX	(9,561)	(7,778)	(7,899)	(9,842)	(9,982)	(11,040)	(10,497)	(10,892)	(9,576)	(11,180)	(11,182)	(11,608)	(12,051)	(8,436)	(5,905)	(4,134)
Tax savings on CAPEX	1,594	1,296	1,317	1,640	1,664	1,840	1,750	1,815	1,596	1,863	1,864	1,935	2,009	1,406	984	689
Working capital	(293)	(307)	(326)	(352)	(356)	(376)	(403)	(409)	(419)	(419)	(416)	(432)	(448)	(314)	(220)	(154)
Historical costs (payments)	(155)	(155)	(155)	(155)	(155)	(155)	0	0	0	0	0	0	0	0	0	0
Working capital required	(2,244)	(709)	(736)	(764)	(793)	(823)	(855)	(887)	(921)	(956)	(993)	(1,031)	(1,070)	(1,111)	(1,153)	31,389
D&A	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	8,949	6,264	4,385	3,070
Net Cash Inflow/(Outflow)	20,987	23,909	22,399	20,466	24,604	23,775	23,631	25,368	29,159	34,783	42,464	44,817	46,531	93,182	110,286	156,562

The results are tabulated in table 10.1 following:

Table 10.1: NPV Analysis of Semizbay Mine and Irkol Mine (100% post-tax basis)

NPV US$M	**8.0%**	**13.6%**	**15.5%**
Semizbay Mine	173.8	98.7	83.6
Irkol Mine	340.9	221.4	195.0
TOTAL	514.6	320.1	278.6

When considering these results, with the consideration of the fact that the mines have commenced commercial operations for a few years, the discount rate is not expected to exceed the estimate of 15.5% based on the valuer's judgement, pointing to a lower point in the valuation range of US$278.6M for the NPV-based valuation methods (and similar to a uranium price less 5%).

According to the CPR, BMA ran NPV sensitivities on sulphuric acid cost, operating costs as a whole, production costs, capital costs and finally uranium price. Of these, operating costs and uranium price were the most sensitive, with uranium price the most sensitive.

Taking the "base case" discount rate of 13.6%, sensitivities were run on the uranium selling price, with the results presented in Table 10.2. The range of uranium price movement was determined based on the previous experience of the valuer for similar valuation projects.

Table 10.2: Base Case NPV Sensitivity to Uranium Price

NPV Variance US$M	**-10%**	**-5%**	**0%**	**+5%**	**+10%**
Semizbay Mine	47.4	73.0	98.7	124.3	150.0
Irkol Mine	154.5	188.0	221.4	254.8	288.3
TOTAL	201.9	261.0	320.1	379.2	438.3

Figures 10.1 and 10.2 illustrate the results of the sensitivity analyses of the Mines on the discount rate and the uranium prices respectively.

Figure 10.1: Sensitivity Analysis on the Discount Rate of the Mines

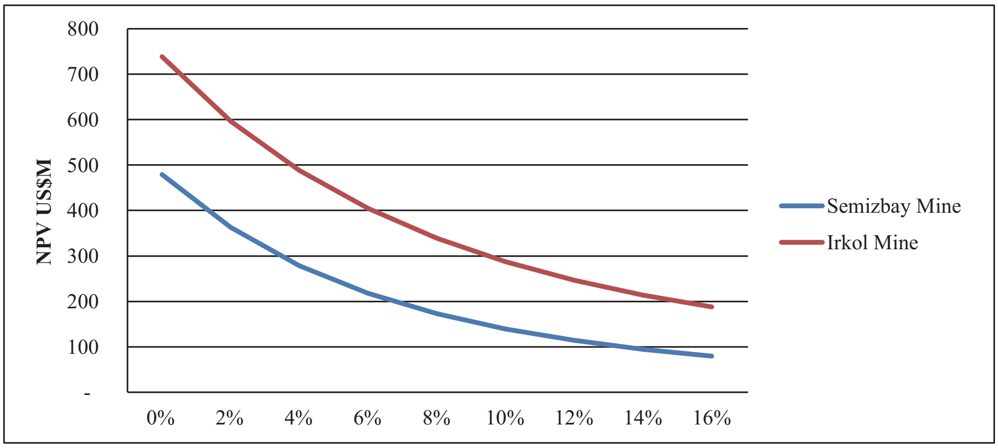
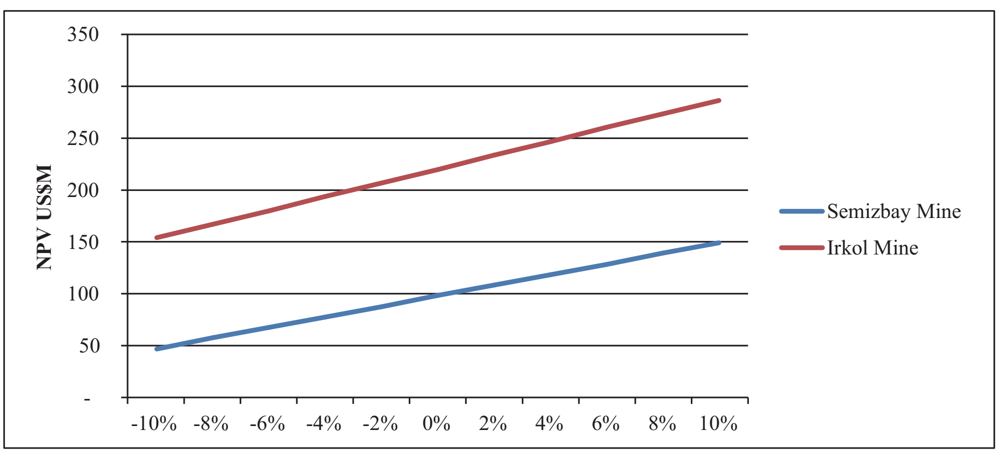


Figure 10.2: Sensitivity Analysis on the Uranium Price of the Mines



10.1.2 Market (Real Estate) Method Estimate

A market based valuation has, as its foundation, a comparison with other similar sales which are uranium-based transactions in this case. The approach involved grouping of similar transactions, followed by identification of relevant transactions, and finally, an averaging of the relevant transactions to arrive at a market-based unit cost. From this figure, a value can be obtained by multiplying the unit cost by the appropriate mineral resource size.

The valuer selected the relevant transactions based on some recent projects in which the valuer was directly involved or where details of the transaction are in the public domain, and according to criteria including but not limited to: transaction size, timing and size of the deposit. The transactions considered are set out in the following table 10.3.

These transactions do not represent an exhaustive list of all transactions conducted historically. Nonetheless, the valuer considered that the transactions selected were sufficiently illustrative of the transaction cost range – a point borne out by the relatively close clustering of the unit values.

Table 10.3: Overview of Relevant Uranium Projects

Project	Location	Seller	Location	Project Status	Acquisition Time	% Acquired
Husab	CGNPC	Swakop U	Namibia	Commissioning	2012	90%
Kintyre	Cameco	Rio Tinto	E Pilbara region, W Australia	Development on hold	2008	70%
4 Mile	Internal valuation		Australia	Commissioning	2014	N/A
Azelik	CNNC	SOMINA	Niger	Further production on hold	2010	37.2%

Those transactional values are set out in the following table 10.4.

Table 10.4: Relevant Uranium Project Transactional Values

Project	Buyer	Seller	Resource, M lb of U_3O_8	Price, US$M	US$/lb of U_3O_8
Husab	CGNPC	Swakop U	280	2,200	7.85
Kintyre	Cameco	Rio Tinto	55	452	8.22
4 Mile	Internal valuation		50	300	6.00
Azelik	CNNC	SOMINA	22	138	6.27

Notes: The Husab, Kintyre and Azelik transactions are in the public domain; the 4 Mile valuation is not public, but the details are extracted from an independent valuation by a competent person. In addition, these resources are considered to exclude Inferred Resources, as required by Chapter 18 of the Listing Rules.

Grouping these well clustered unit values, and applying no particular weighting, it is suggested that a reasonable average price would be US$7.1/lb of recoverable U_3O_8. Based on factors including but not limited to the size, the timing and the development stage of the relevant uranium projects, together with the professional judgment of the valuer, it is considered that the appropriate price range would be US$6.0/lb to US$7.1/lb of recoverable U_3O_8.

On this basis, we can deduce a value for Irkol Mine and Semizbay Mine as follows:

Semizbay recoverable U_3O_8 (excl. Inferred Resources)	24.9 M lbs
Irkol recoverable U_3O_8 (excl. Inferred Resources)	28.0 M lbs
Total recoverable U_3O_8	52.9 M lbs
Unit Value (US$/lb of U_3O_8)	6.0 – 7.1
Implied Project Value (US$M)	317.4 – 375.6
Mid-point Project Value (US$M)	346.5

Note: The amounts of resources for each mine are determined with reference to the resources amounts and the recovery in the BMA Resource Statements, with modest discount adopted based on the previous experience of the valuer for similar valuation projects.

Note that this estimate is for 100% of the project and may include commercial premium for control. As the Target owns 49% of the Mines, the valuer would suggest that limited control premium should be considered, with a 10% premium to be the maximum range applicable for valuation. Assuming a 10% control premium, the underlying project value would be 90% of the above figure, namely US$285.7M – 338.0M, or mid-point value of US$311.9M.

Based on the NPV analysis reported already, the above lower-end of the unadjusted market value of US$317.4M would require a discount rate of approximately 13.7%. This is close to the 13.6% discount rate of NPV base case.

On the other hand, looking at the uranium price sensitivities as shown in Table 10.2, it is evident that the market figure of US$346.5M is located between the 0% and +5% NPV base case price sensitivities.

With limited extent by knowledge of the details of the uranium projects in the public domain, while the unadjusted lower-end estimate derived a value close to the base case of the primary valuation method of NPV method as illustrated, and this estimate is also represented by the transaction closest to the effective date of this Valuation Report, the valuer has adopted the unadjusted lower-end estimate of US$317.4 M for this valuation.

10.2 Relevant Valuation Sensitivities

Compliance with the VALMIN Code requires that relevant valuation sensitivities be considered. The valuation ranges suggested above are considered to satisfy this requirement, particularly since the uranium price sensitivity discussed above is by far the most significant factor.

The sensitivity analyses isolate a limited number of assumptions and show the impact of the expressed variations to those assumptions. No opinion is expressed as to the probability or otherwise of those expressed variations occurring. Actual variations may be greater or less than those modelled. In addition to not representing best and worst case outcomes, the sensitivity analyses do not, and do not purport to, show all the possible variations to the business model. The actual performance of the business may be negatively or positively impacted by a range of factors including, but not limited to:

- changes to the assumptions other than those considered in the sensitivity analyses;
- greater or lesser variations to the assumptions considered in the sensitivity analyses than those modelled; and
- combinations of different assumptions that may produce outcomes different to those modelled.

10.3 Grouping of the Estimates

Grouping together the NPV-based valuations, and adopting the base case as the preferred value, the author arrived at a value of US$320.1 M.

With the market based valuations, the values arrived at an unadjusted lower-end estimate of US$317.4 M.

There is good alignment between the base case of the NPV-based valuation and the unadjusted lower-end estimate of the market based valuation. The valuer considers appropriate to assign equal weighting to each of the result arrived to derive the Chapter 18 Valuation of the Mines.

Applying an equal weighting to each valuation approach, the weighted average of the two values is US$318.7 M. That value is very close to the 13.6% discount factor within the "base case" cost and pricing assumptions. Also, it assumes a uranium price assumption that is marginally less than those used in the model, which the valuer considers conservative.

10.4 Recommended Valuation Range

Given the established nature of the mining tenements at this stage, the valuation range recommended to be applied is necessarily narrow and put at ± 10%. Accordingly, the maximum and minimum values recommended are as follows:

- Minimum US$286.9 M
- Mid-point US$318.7 M
- Maximum US$350.6 M

10.5 Preferred Valuation

	US$M
Preferred Value (mid-point of valuation range)	318.7
Less: Non-operating Liabilities of Semizbay-U LLP	90.3
100% Equity Interest of Semizbay-U LLP	228.5
49% Equity Interest of Semizbay-U LLP	112.0
Add: Net Asset Value of Beijing Sino-Kazakh (excl. investment in Semizbay-U)	10.7
Chapter 18 Valuation of 100% Equity Interest of Beijing Sino-Kazakh	**122.7**

Note: The amount of non-operating liabilities is determined based on the audited financial statements of Semizbay-U LLP, which have been excluded from the valuation of the Mine Assets due to the nature of the items.

10.6 Subsequent Analysis

Based on the CPR, it is noted that the spot prices have decreased significantly from approximately US$35/lb at the beginning of 2014 to US$28/lb of U_3O_8 in April 2014. In addition, the average market consensus forecasted U_3O_8 price in April 2014 have been adjusted to US$40.90/lb, US$50.22/lb, US$59.52/lb, US$63.92/lb and US$67.67/lb of U_3O_8 from 2014 to 2018 respectively.

Based on the abovementioned adjusted forecasted prices, escalated with consideration of inflation of average rate of 3.8% per year for subsequent years same as the BMA assumptions, with all other assumptions and parameters remain static as those illustrated in Sections 10.1 to 10.5, a subsequent analysis has been performed, and the results are tabulated in table 10.5 following:

Table 10.5: Chapter 18 Valuation Sensitivity to Uranium Price Forecast Change

US$M	**Preferred Valuation**	**Sensitivity Analysis with April 2014 Forecasted Prices**
Value of the Mines	318.7	309.7
Less: Non-operating Liabilities of Semizbay U-LLP	90.3	90.3
100% Equity Interest of Semizbay-U LLP	228.5	219.4
49% Equity Interest of Semizbay-U LLP	112.0	107.5
Add: NAV of Beijing Sino-Kazakh (excl. investment in Semizbay-U)	10.7	10.7
Chapter 18 Valuation of 100% Equity Interest of Beijing Sino-Kazakh	122.7	118.2

Note: This analysis has been performed assuming all assumptions and parameters remain the same as those adopted in the valuation as of 31 December 2013 as illustrated in Sections 10.1 to 10.5, with the only variation adopted over the forecasted uranium prices.

Based on the CPR, the price forecast information is referenced from Consensus Economics, which is a well-established source of reliable price forecasts. The sources of Consensus Economics forecast are from over 15 institutions, including but not limited to BoA Merrill Lynch, UBS, Morgan Stanley, Commonwealth Bank, Deutsche Bank, Credit Suisse, etc. The price forecast of Consensus Economics is seen as a broadly accepted forecast benchmark by investment managers, government and public sector institutions. It is further noted that the Competent Person has reviewed various external sources to verify the reasonableness of the price forecast, and confirmed that the updated price forecast as of April 2014 is in line with broader market consensus.

According to the sensitivity analysis as shown above, the valuer considers that the adjusted forecasted prices would not have significant impact on the valuation results, and thus the fairness and the reasonableness of the valuation conclusion as illustrated in Section 10.5 are not considered to be impacted.

10.7 Risk Factors

Valuations of this type should always be accompanied by a reference to the valuation risk, including an analysis of the uncertainties inherent in the assumptions made and the effects they may have on the evaluation.

Risks and uncertainties can arise from the availability and quality of data and other information concerning each of the following factors (with those not considered to be applicable indicated in brackets):

a. Geology and the extent to which the valuation is reliant upon a Mineral Resource or Ore Reserve estimate;

b. Geological prospectivity and the possibility that further exploration may fail to demonstrate any economic mineralization (of lesser significance in this case);

c. Mining risk (not applicable in this case);

d. Ore processing risk (not applicable in this case);

e. Permitting and construction risk (not applicable in this case);

f. Environmental risk;

g. Marketing risk (not applicable in this case);

h. Country risk (possibly applicable in this case).

11.0 SUMMARY

11.1 Evaluation Summary

11.1.1 The Semizbay-U uranium operations

The Chapter 18 Valuation of 100% of the assets described in this Valuation Report, as of 31 December 2013, is considered to be US$318.7 M. This value excludes consideration of all Inferred Resources and any commercially agreed control premium. This means that the Chapter 18 Valuation does not reflect a fair market value.

The appropriate valuation range is considered to be US$286.9 M to US$350.6 M.

11.1.2 The 100% Equity Interest of Beijing Sino-Kazakh

Based on the Chapter 18 Valuation of 100% of the assets of the Semizbay-U uranium operations described in this Valuation Report, as of 31 December 2013, the Chapter 18 Valuation of 100% equity interest in Beijing Sino-Kazakh is considered to be US$122.7 M.

11.2 Report Date and Sign Off

Report date: 30 June 2014

Signed by John S Dunlop:

Seal affixed:

JOHN S F DUNLOP
MINING

Mineral Industry Consultants Association (MICA)

12.0 REFERENCES

AusIMM, 2005. *Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports* (The VALMIN Code), 2005 edition, The Australas. Inst. Min. Metall.

Appleyard GR, 1994 *Joint venture Terms as a Basis for Valuation*, Mineral Valuation Methodologies Conference, The Australas. Inst. Min. Metall. Sydney, October 1994, p167.

BMA, 2014 *Competent Persons Report For the Semizbay-U ISR Uranium Project in the Republic of Kazakhstan*, prepared for CGN Mining Company Limited of 30th Floor, Building A, the International Centre of Times, No. 101, North ShaoYaoJu, Chaoyang District, Beijing PRC China, with effective date of 31 December 2013, Report No. BMA-01613.

Bruce PF, Clarke DE and Bucknell WR, 1994 *The Company Perspective on Valuation Methods for Exploration Properties*, Mineral Valuation Methodologies Conference, The Australas. Inst. Min. Metall. Sydney, October 1994, p199.

CIMM, 2003 *Special Committee of the Canadian Institute of Mining, Metallurgy and Petroleum on Valuation of Mineral Properties* (CIMVAL), February 2003.

KAP CGNC Agreement, 2013 *Agreement on the basic principles of marketing (sales) policy with respect to Semizbay-U LLP products*, a stamped agreement between KAP and CGNC-URC dated 29 March 2013.

Kilburn LC, 1990 *Valuation of Mineral Properties which do not Contain Exploitable Reserves*, CIM Bulletin 83, No. 940, pp90-93, Canad. Inst. Min. & Metall., Montreal, Canada.

Lawrence MJ, 1994 *An Overview of Valuation Methods for Exploration Properties*, Mineral Valuation Methodologies Conference, The Australas. Inst. Min. Metall. Sydney, October 1994, p205.

Onley PG, 1994	*Multiples of Exploration Expenditure as a Basis for Mineral Exploration*, Mineral Valuation Methodologies Conference, The Australas. Inst. Min. Metall. Sydney, October 1994, p191.
TSXVE, 2004	*Valuation Standards and Guidelines for Mineral Properties*, Appendix 3G, Toronto Stock Exchange Venture Exchange, January 2004.
VALMIN, 2005.	*Code for the Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports,* The VALMIN Code, 2005 edition, prepared by the VALMIN Committee of the AusIMM, AIG and MICA.

APPENDIX 1

Qualifications and Mineral Valuation Experience of the Valuer

The Australasian Institute of Mining & Metallurgy

The Board of Chartered Professionals hereby certifies that, in accordance with Clause 5.1 of the Bye Laws for Chartered Professionals

JOHN STUART FRANCIS DUNLOP

has been accredited

Chartered Professional (Mining)

on this twentieth day of April 1999

President

Chairman of the Board of Chartered Professionals

Registration number 100161

AIMVA

Australasian Institute of Valuers & Appraisers

Carlos Sorentino
Secretary 2012-13
cmrs26@gmail.com

Mr John S. F. Dunlop
jsdunlop@bigpond.com

Dear John,

I have the pleasure to inform you that on the 6 September 2012 the Board of Directors accepted your Application for membership with the Association. Your Unique Membership Number is 120806 001.

If you wish, you can indicate your full membership of the association with the postnominal "MAIMVA." Also you can indicate your certification as a *Professional Valuer with the postnominal "CPV" after the MAIMVA.*

As soon as practicable, we will provide you with a Seal that you can use in your correspondence.

On behalf of the Board I wish to welcome you to the Association.

Best regards

Carlos Sorentino, MAIMVA CPV
Secretary

14 September 2012

Year	Client	Stock Exchange & Stock Code	Project	Commodity	Country	Engagement Details	Nature of Report	Reporting Standard	Role & Responsibility	Use of Report
2013	Alliance Resources		Four Mile U JV	Uranium	Australia	Evaluation of mine plan & production schedule				
	Kingwell	1195.HK	Shandong Gold Mines	Gold	China	VALMIN compliant evaluation	Mineral Valuation Report	VALMIN	Competent Evaluator	HKEx Public circular disclosure & compliance
	Wilton Resources Hldgs Pte Ltd		Ciemas	Gold	Indonesia	VALMIN compliant evaluation	Mineral Valuation Report	VALMIN	Qualified Person	SGX Public circular disclosure & compliance
	Golden Pogada		Ovut Ovoo	Magnetite	Mongolia	VALMIN compliant evaluation	Mineral Valuation Report	VALMIN	Competent Evaluator	SGX Public circular disclosure & compliance
	Cairns Mining Australia	ASX:CMA	Kangaroo Hills	Gold	Australia	VALMIN compliant evaluation	Mineral Valuation Report	VALMIN	Competent Evaluator	ASX Public circular disclosure & compliance
	Aust. Jade Exploration		ML 80098	Jade	Australia	VALMIN compliant evaluation	Mineral Valuation Report	VALMIN	Competent Evaluator	Used as expert report in Court case

Year	Client	Stock Exchange & Stock Code	Project	Commodity	Country	Engagement Details	Nature of Report	Reporting Standard	Role & Responsibility	Use of Report
2012	Alkane Resources	ASX:ALK	Tomingley Gold	Gold	Australia	DCF project evaluation	Project valuation report	VALMIN	Qualified Person	Internal company use
			Dubbo zirconia	Zirconia, niobium	Australia	DCF project evaluation				
	Copper Strike Ltd	ASX:CSE	Take over	Whole company	Australia	Target statement and F&R report				
	Gippsland Ltd	ASK:GIP	Abu Dabbab	Tin tantalum	Egypt	DCF valuation for project finance				
			Abu Dabbab	Tin tantalum	Egypt	DCF valuation of alluvial tin project				
2011	Promet Engineers		Mt Webber	Hematite	Australia	DCF modelling of an iron ore project	Mining Cost Study	JORC	Qualified Person	Internal company use
	Sphere Minerals	ASX:SPH	Guelb Moghrain	Hematite	Mauritania	Audit of project feasibility model	Project valuation report	JORC	Qualified Person	Internal company use
2010	Drummond Gold	ASX:DGO	Mt Coolon	Gold	Australia	Project evaluation	Project valuation report	VALMIN	Qualified Person	Internal company use
			Mt Carbine	Tungsten	Australia	Project evaluation				
			White Dam	Gold	Australia	Project evaluation	Project valuation report	VALMIN	Qualified Person	Internal company use
	Promet Engineers		McPhee Creek	Hematite	Australia	Project evaluation				

Year	Client	Stock Exchange & Stock Code	Project	Commodity	Country	Engagement Details	Nature of Report	Reporting Standard	Role & Responsibility	Use of Report
2009	Rand Mining NL		Kundana JV	Gold	Australia	Evaluation of JV% share	Project valuation report	VALMIN	Competent Evaluator	Internal company use
2008	Copper Resources		Kinsenda Project	Copper	DRC	Project evaluation & feasibility				
2007	BHP Billiton	ASX:BHP	Yandi Iron	Hematite	Australia	Audit of project evaluation				
	FMG		Christmas Creek	Manganese	Australia	Project evaluation				
2006	Mittal Steel		Krivorishtal	Hematite	Ukraine	Project evaluation	Not completed			
			Jharkhand State	Hematite	India					
	Imi Fabi			industrial minerals	Australia	Project evaluation				
	Uruguay Minerals	TSX:ORS	Whole company	Gold	Uruguay	NI 42-101	Not completed			
	Sundance Minerals			Hematite	DRC	Project evaluation				
2005	Independent Engrs		Maud Creek	Gold	Australia	Project evaluation				
	Kimberley Nickel		Sally Malay	Nickel	Australia	Project evaluation				
	Legend Mining		Gidgee mine	Gold	Australia	Project evaluation	Project valuation report	JORC	Qualified Person	Internal company use
	NGM	ASX:NGM	Lontaushan	Gold	PRC	Project evaluation	Project valuation report	JORC	Qualified Person	Internal company use

Year	Client	Stock Exchange & Stock Code	Project	Commodity	Country	Engagement Details	Nature of Report	Reporting Standard	Role & Responsibility	Use of Report
	Thundellara		Copernicus JV	Nickel	Australia	Evaluation of JV% share				
	Oceana Gold	ASK:OGC	Blackwater	Gold	New Zealand	Project evaluation	Project valuation report	JORC	Qualified Person	Internal company use
2004	GMA	ASX:GMA	Tirek, Amesmessa	Gold	Algeria	Project evaluation	Project valuation report	JORC	Qualified Person	Internal company use
2003	Diamond Rose		Lake Carey assets	Gold	Australia	Project evaluation	Project valuation report	JORC	Qualified Person	Internal company use
	Giant's Reef		Giant Reef project	Gold	Australia	Project evaluation				
	Ravensthorp Nickel	ASX:BHPB	RNO project	Nickel	Australia	Project evaluation				
	Barrick Gold		Lawler's	Gold	Australia	Project evaluation	Mining Cost Study	JORC	Qualified Person	Internal company use
	Bank of WA		Miitel	Nickel	Australia	Bank audit				
2002	Morobe Consolidated		Hidden Valley	Gold	PNG	Cost study	Mining Cost Study	JORC	Qualified Person	Internal company use

Year	Client	Stock Exchange & Stock Code	Project	Commodity	Country	Engagement Details	Nature of Report	Reporting Standard	Role & Responsibility	Use of Report
2000	Sons of Gwalia		Greenbushes	Tantalum	Australia	Project evaluation				
	Encore Metals	not listed	Zeehan Tin	Tin	Australia	Project evaluation				
1999	Taipan Minerals		Paulsen's	Gold	Australia	Project evaluation	Feasibility Study	JORC	Qualified Person	Internal company use

APPENDIX 2

Commissioning Entity Briefing Letter

中廣核 CGN

核能服務
Nuclear Power Services

善用自然的能量
Natural Energy, Powering Nature

AVISTA Valuation Advisory Limited
Suite 807, 8th Floor, AXA Centre
151 Gloucester Road
Wan Chai, Hong Kong

Attention: John Dunlop

Dear Sir

Request for Mineral Property Valuation: Expert Commissioning Letter

CGN Mining Company Limited ("**CGN**" or the "**Company**" or the "**Commissioning Entity**") is a company listed in Hong Kong (HKSE: 1164). The Company currently operates in three segments: a pharmaceutical and food segment, which is engaged in the selling, distributing and manufacturing of pharmaceutical and food products; a property investment segment, which is engaged in leasing, developing and selling of office premises and residential properties, and uranium trading segment, which is engaged in trading of natural uranium resources.

Beijing Sino-Kaz Uranium Resources Investment Company Limited ("**BJ Sino-Kaz**" or the "**Target**") is an investment holding company incorporated in Beijing. It is wholly owned by CGNPC Uranium Resources Co. Ltd. ("**CGNPC-URC**" or the "**Seller**"), which is ultimately owned by China General Nuclear Power Group ("**CGNPC**"). CGNPC is also one of the major shareholders of the Company (i.e. CGN and the Target are related parties owned by CGNPC in majority and in entirety respectively).

The Target owns 49% shareholding in Semizbay-U LLP ("**Semizbay-U**"), which operates the mining and processing of a uraniferous ore deposit with the sale of triuranium octoxide (U_3O_8). Semizbay-U owns the subsoil use right for two producing uranium mines in the Republic of Kazakhstan: Semizbay and Irkol (the "**Mines**").

The Company intends to acquire 100% equity interest in the Target (the "**Acquisition**"). Upon completion, the Company will, through the Target, hold 49% partnership interest in Semizbay-U, and CGNPC-URC will designate the Company to perform the rights and obligations under the agreement dated 29 March 2013 entered into between National Atomic Company Kazatomprom and CGNPC-URC on the basic principles of marketing (sale) policy with respect to the products of Semizbay-U..

In connection with the Acquisition, the Company has commissioned AVISTA Valuation Advisory Limited ("**AVISTA**") as the Competent Evaluator to prepare a valuation report (the "**Valuation Report**"). The Valuation Report is to determine the value of 100% equity interest in the Target as of 31 December 2013 (the "**Valuation Date**"), which includes valuation of the Mines under the requirements of Chapter 18 of the Listing Rules of the **Stock Exchange of Hong Kong Limited** ("**HKEx**") ("**Listing Rules Chapter 18**").

In order to comply with the Code from the outset, this commissioning letter is set out in the fashion required by clause 43 of the Code, as follows:

a) The detailed scope and purpose of the report is set out in **Appendix A** to this letter;

b) The Expert responsible for the preparation of the Valuation Report will be yourself, John S Dunlop, whose qualifications and relevant experience are set out in **Appendix B** to this letter;

c) CGN acknowledges that you, as the Expert, are both Independent and Competent (as defined in the VALMIN Code) to undertake this valuation;

d) The valuation date, as agreed between us, is 31st December 2013;

中廣核礦業有限公司
CGN Mining Company Limited

香港灣仔港灣道18號中環廣場67樓6706-6707室
Suites 6706-07, 67/F., Central Plaza, 18 Harbour Road, Wanchai, Hong Kong.

中廣核 CGN 善用自然的能量
Natural Energy, Powering Nature

核能服務
Nuclear Power Services

e) The names of the Mineral Assets to be valued are as follows:

- Semizbay-U LLP mines: Semizbay and Irkol mines and associated mineral rights

f) We acknowledge that the basis for the cost of the report will be dictated by its complexity and time taken to prepare it and is in no way whatsoever contingent on the success or otherwise of the subsequent transaction;

g) We further acknowledge that, should the Expert find it to be impossible or impractical to provide a valuation as a result of insufficient accurate or reliable data, then that right to abort the valuation rests with the Expert alone;

h) You will be the sole Expert in the preparation of this report, save for the required site visits, where you will be accompanied by those associated with the related Competent Person's Report (CPR);

i) We confirm the Report is to be compliant with the Code;

j) The anticipated programme for completion of the scope of works is estimated to be as follows:

- Formal go-ahead (1st March 2014);
- Data review (in the weeks of 2nd to 22nd March 2014);
- Report drafting (in the weeks of 23rd March to 4th April 2014);
- Site visit (in the week of 20th April 2014);
- Review and completion (ASAP thereafter).

k) You will be required to retain copies of all material source documents, due diligence notes, notes of discussions with us as Commissioning Entity, and a list of all documents referred to in the Valuation Report;

As soon as we are able to confirm your Competence and Accreditation with HKEx, we will be keen to proceed with this assignment. In the meantime we would suggest you commence with the finalisation of the Valuation Report as per the schedule referred to in item j) above, and following that, completion of the work.

中廣核礦業有限公司
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Yours faithfully,

CGN Mining Company Limited
中廣核礦業有限公司

Chief Executive Officer or Director

Attachments: Appendix A
Appendix B

中廣核礦業有限公司
CGN Mining Company Limited

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APPENDIX A

THE SCOPE AND PURPOSE OF THE REPORT

PURPOSE OF THE REPORT

The purpose of the report is to produce and provide an independent VALMIN compliant valuation of the 100% equity interest of the Target.

The Report is required to satisfy the Listing Rules Chapter 18, in association with CGN's proposed movement to 100% ownership of the above Target.

SCOPE OF WORK

This Valuation Report is prepared to determine the value of 100% equity interest in the Target as of the Valuation Date, which includes valuation of the Mines under the requirements of Listing Rules Chapter 18.

The work required will be to perform valuation over the value of the 100% equity interest in the Target in accordance with Listing Rules Chapter 18 as at 31st December 2013.

中廣核礦業有限公司
CGN Mining Company Limited

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APPENDIX B

QUALIFICATION OF THE INDEPENDENT VALUER

Qualifications as a Competent Mineral Valuer:

The qualifications are listed as follows:

- BE (Mining) (Hons), 1970; MEng Sc (Mining), 1979; University of Melbourne
- PCertArb 2002; University of Adelaide
- Fellow AusIMM, Fellow IMMM, Member SME AIME, Member CIMM
- Member (National Chairman) Mineral Industry Consultants Association (MICA)
- Member (Australasian Institute of Mineral Valuers and Appraisers (MAIMVA);
- Chartered Professional Mining Engineer CP (Min),
- Certified Mineral Valuer CPV.

Relevant Mineral Valution Experience:

The valuer has performed a range of mineral property and project valuations since 1999, which will be detailed in the Valuation Report.

These include a recent valuation for the HKEx involving a transaction related to the change of ownership of some gold mines located in Shandong Province, PRC.

The valuer has visited Kazakhstan on several occasions prior to the relevant site visit and familiar with prevailing Kazakh mineral rights and regulations.

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APPENDIX 3

Glossary of VALMIN Terms

GLOSSARY OF USEFUL VALUATION TERMS

Compiled by MJ Lawrence, September 2012

BSc (Hons1), GDPSM, HonFAusIMM (CPGeo),
FAIG, FIOM (CEng), MMICA, MIAMA
Managing Director & Chief Valuer, Minval Associates, Croydon, NSW 2132, Australia
1999 President, The Australasian Institute of Mining and Metallurgy

A

'**Appraiser**' **USA** – see '**Valuer**'

B

'**Bankable Feasibility Study**' – see '**Feasibility Study**'

C

'**Conceptual Study**' – see '**Scoping Study**'

'**Competence**' – means having relevant education, qualifications and experience, professional expertise and holding appropriate licences (where required) so as to have a reputation that gives authority to statements made in relation to a particular matter (*VALMIN Code*, Definition D7 and see Clauses 18-23).

E

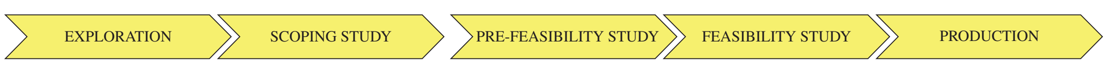
'**Expert**' – it means a '**Competent**' (and '**Independent**', where relevant) natural person who prepares and has overall responsibility for the Valuation Report. He/she must have at least 10 years of relevant '**Minerals Industry**' experience, using a relevant '**Specialist**' for specific tasks in which he/she is not '**Competent**'. An '**Expert**' must be a corporate member of an appropriate, recognised professional association having an enforceable Code of Ethics, or explain why not (for the full definition see *VALMIN Code*, Definition D10 and its Clause 17).

F

'**Fair Value**' – it is an accountancy term used for values envisaged to be derived under any and all conditions, not just those prevailing in an open market for the normal orderly disposal of assets. Being a transaction price it reflects both existing and alternative uses, too. It is also a legal term for values involved in dispute settlements which may not also meet the strict '**Market Value**' definition. Commonly, it reflects the service potential of an asset ie, value derived by DCF/NPV analysis, not merely the result of comparable sales analysis. It is still the "*amount for which an asset could be exchanged, or a liability settled, between knowledgeable willing parties in an arm's length transaction*" (IVS definition).

'**Feasibility Study**' (also called a '**Bankable Feasibility Study**' – results and conclusions in techno-financial studies should be increasingly more accurate/precise and thus more reliable as they progress from initial '**Scoping Study**' to final '**(Bankable) Feasibility Study**' status. The initial focus involved strategic thinking, seeking to exploit all avenues to define the goal for the project. Finally, the tactics are identified that will deliver the goal defined by the earlier work. The content and conclusions of a '**Feasibility Study**' are the most comprehensive, detailed, rigorous, definitive and reliable as is possible. It has to satisfy the core criteria of '**Competence**', '**Materiality**', '**Transparency**', '**Independence**' and '**Reasonableness**', **but** it must be fit-for-purpose. It is more an unequivocally concluded business plan, than just a study about the construction of a mine and its facilities ie, it is so reliable that an investment decision seeking the internal or external allocation of funds can be reasonably based upon it. The graphic below shows the study stages as the mineral deposit is developed from exploration into a mine.

It outlines what will the mineral project be eg, what are the likely risks and rewards involved with the chosen project configuration/parameters and optimised design basis for design specifications; and the investment case that is unlikely to vary significantly because of the high level of thoroughness and due diligence exercised when selecting the scenario adopted. It is a holistic technical, economic, environmental and socio-political analysis that has identified and proposed management of all the possible 'project killer' risks; and provide a reasonable and reliable estimate of project value upon which an investment decision and allocation of funds can be made. Often the terms '*definitive*' or '*bankable*' are added to emphasise this primary purpose. It is expected to have **study inputs accurate to ±10% to 15%** (but the actual level of risk must be divulged).



'**Forced Sale Value**' **(Liquidated Value)** – it is the amount reasonably expected to be received from the sale of an asset within a short time frame for completion that is too short to meet the '**Market Value**' definition. This definition requires a reasonable marketing time, having taken into account the asset's nature, location and the state of the market). Usually it also involves an unwilling seller and buyers who have knowledge to the disadvantage of the seller.

G

'**Going Concern Value**' – it is a business valuation concept rather than one relating to individual property valuation. It is the value of an operating business/enterprise (ie one that is expected to continue operating) as a whole and it includes goodwill, special rights, unique patents or licences, special reserves, etc. Apportionment of this total value may be made to constituent parts, but none of these components constitute a basis for '**Market Value**'.

H

'**Highest-and-Best-Use**' – for physical property, it is the reasonably probable and legal use of property, which is physically possible, appropriately supported and financially feasible, that results in the highest value. In the case of personal property, it is the same with the additional qualification that the highest value must be in the appropriate market place, consistent with the purpose of the appraisal. It may be, in volatile markets, the holding for a future use.

I

'**Independent/Independence**' – means that the '**Expert**' and/or '**Specialists**' must be able to satisfy any relevant legal tests of '**Independence**' and must be, and be perceived to be, willing and able to undertake an impartial assessment or valuation and to prepare an Independent Expert Report that is free of bias. To this end, the '**Expert and/or Specialists**' and their immediate families may not have a significant pecuniary or beneficial interest in the Commissioning Entity; or the owners or promoters (or parties associated with them) of any of the '**Mineral Assets**' or Securities that are the subjects of the '**Technical Assessment/Valuation**' to be prepared; or the offeror and target companies in takeover situations; or in any of the '**Mineral Assets**' or Securities that are the subjects of the '**Technical Assessment/Valuation**'; or the outcome of the '**Technical Assessment Valuation**'. In April 2005, *ASIC Policy Statement 75*, *Independent Expert Reports to Shareholders*, *ASIC Practice Note 42 Independence of Experts' Reports* and *ASIC Practice Note 43 Valuation Reports and Profit Forecasts* provided instructions and guidance concerning the Independence of Experts and the preparation/content of Reports and valuation statements required for purposes regulated by the Australian Corporations Act (*VALMIN Code*, Definition D13 and see Clauses 24-27; and Clause 50). From 5 July 2007, *Policy Statements* and *Practice Notes* were withdrawn and superseded by *Regulatory Guides (RG)*. Their replacements were *RG 111 Content of Expert Reports* & *RG 112 Independence of Experts*, but now dated October 2007. Hence, the person making the '**Valuation**' must have no '**Material**' pecuniary or beneficial (present or contingent) interest in any of the '**Mineral Assets**' being assessed or valued, other than professional fees and reimbursement of disbursements paid in connection with the assessment or Valuation concerned; or any association with the commissioning entity, or with the owners or promoters (or parties associated with them) likely to create any apprehension of bias.

'**Independent Expert Reports**' – are '**Public Reports**' that may be required by the Australian Corporations Act, the Listing Rules of ASX or of other recognised stock exchanges or for any other purpose that may involve the '**Technical Assessment and/or Valuation**' of '**Mineral or Assets**' and/or Securities. It must be prepared by an '**Expert**' who is '**Independent**'. The assistance of '**Specialists**' who are also '**Independent**' may be necessary, depending on whether or not the '**Expert**' has expertise in all aspects of the '**Technical Assessment and/or Valuation**', and on the magnitude of the task (*VALMIN Code*, Definitions D14 and see Clause 12).

'**Investment Value**' (Worth) – this is the value of a specific asset to a specific investor(s) for identified investment objectives or criteria. It may be higher or lower than '**Market Value**' and is associated with '**Special Value**'.

M

'**Market Value**' (IVS Definition) – it is the result of an objective Valuation of specific identified ownership rights to a specific asset as at a given date. It is the value in exchange not '**Value-in-Use**' set by the market place. It is the "*estimated amount for which a property should exchanged on the date of valuation between a willing buyer and a willing seller in an arm's length transaction after proper marketing wherein the parties had acted knowledgeably, prudently, and without compulsion*".

(‘**Fair**’) ‘**Market Value**’ (VALMIN Definition) – (see ‘**Value**’) is the estimated amount of money (or the cash equivalent of some other consideration) for which the ‘**Mineral Asset**’ should change hands on the ‘**Valuation Date**’. It must be between a willing buyer and a willing seller in an ‘arm’s length’ transaction in which each party has acted knowledgeably, prudently and without compulsion. It is usually comprised of two components, the underlying or ‘**Technical Value**’ and a premium or discount, relating to market, strategic or other considerations (*VALMIN Code*, Definition D43).

‘**Material/Materiality**’ – means that the contents and conclusions of a Report, any contributing assessment, calculation or the like and data and information are of such importance that their inclusion or omission from a ‘**Technical Assessment**’ or ‘**Valuation**’ may result in a reader of the Report reaching a different conclusion than would otherwise be the case. The determination of what is Material depends on both qualitative and quantitative factors. Something may be Material in the qualitative sense because of its very nature, such as, for example, country risk. In the case of quantitative issues, the Materiality of data can be assessed in terms of the extent to which the omission or inclusion of an item could lead to changes in total value according to the guidelines of the Australian Society of Accountants’ Standard AAS5 ie, ‘**Material**’ data (or information) is such that the omission or inclusion of it could lead to changes in total value of greater than 10% – between 5% and 10% it is discretionary (*VALMIN Code*, Definition D16). ‘**Material**’ data (or information) is also that which would be reasonably required in order to make an informed assessment of the subject of the Report. Also the Supreme Court of New South Wales has stated that something is ‘**Material**’ if it is significant in formulating a decision about whether or not to make an investment or accept an offer.

‘**Mineral(s)**’ – any naturally occurring material found in or on the Earth’s crust, that is useful to and/or has a value placed on it by humankind, excluding crude oil, natural gas coal-based methane, tar sands and oil shale which are classified as Petroleum as defined in D25 (*VALMIN Code*, Definition D19). The term specifically includes coal; shale and materials used in building and construction; uranium and gemstones (eg, diamonds).

‘**Mineral Asset(s)**’ (Resource Assets or Mineral Properties) – means all property including, but not limited to ‘**Real Property**’, intellectual property, mining and exploration tenements held or acquired in connection with the exploration of, the development of and the production from those tenements; together with all plant, equipment and infrastructure owned or acquired for the development, extraction and processing of Minerals in connection with those tenements. Most can be classified as ‘**Exploration Areas**’, ‘**Advanced Exploration Areas**’, ‘**Pre-Development Projects**’, ‘**Development Projects**’ or ‘**Operating Mines**’ (*VALMIN Code*, Definition D20).

> ‘**Exploration Areas**’ – Mineral Properties where mineralisation may or may not have been identified, but where a Mineral Resource has not been identified (*VALMIN Code*, Definition D20).

'**Advanced Exploration Areas**' – Mineral Properties where considerable exploration has been undertaken and specific targets have been identified that warrant further detailed evaluation, usually by drill testing, trenching or some other form of detailed geological sampling. A Mineral Resource estimate may or may not have been made but sufficient work will have been undertaken on at least one prospect to provide both a good understanding of the type of mineralisation present and encouragement that further work will elevate one or more of the prospects to the Mineral Resource category (*VALMIN Code*, Definition D20).

'**Pre-development Projects**' – Mineral Properties where Mineral Resources have been identified and their extent estimated (possibly incompletely) but where a decision to proceed with the development has not been made. Mineral Properties at the early assessment stage, properties for which a decision has been made not to proceed with development, properties on care and maintenance and properties held on retention titles are included in this category if Mineral or Petroleum Resources have been identified, even if no further Valuation, Technical Assessment, delineation or advanced exploration is being undertaken. (*VALMIN Code*, Definition D20).

'**Development Projects**' – Mineral Properties for which a decision has been made to proceed with construction and/or production, but which are not yet commissioned or are not yet operating at design levels (*VALMIN Code*, Definition D20).

'**Operating Mines**' – Mineral Properties, particularly mines and processing plants, that have been commissioned and are in production (*VALMIN Code*, Definition D20).

'**Mining Industry**' (also Minerals Industry and Extractive Industry) – the business of exploring for, extracting, processing and marketing '**Minerals**' (*VALMIN Code*, Definition D23).

P

'**Personal Property**' – it covers all items other than '**Real Estate**' and may be tangible (like a chattel or goods) or intangible (like a patent or debt). It has a moveable character.

'**Pre-Feasibility Study**' – it outlines what should the mineral project be, proposing the optimum way forward (project configuration and techno-financial, environmental and socio-political parameters been identified) by examining and reviewing all of the available options/alternatives. Data are sufficient to determine if all (or part) of the Mineral Resources can be classified as Ore Reserves. It's a precursor study to the final *Feasibility Study* with **study inputs expected to be accurate to ±20% to 25%** (but the actual level of risk must be divulged).

'**Price**' – it is the amount paid for a good or service and it is a historical fact. It has no real relationship with '**Value**', because of the financial motives, capabilities or special interests of the purchaser; and the state of the market at the time.

'**Property-with-Trading-Potential**' – refers to the valuation of specialised property (eg, hotel, petrol station, restaurant, etc) that is sold on an operating or going concern basis. It recognises that assets other than land and buildings are to be included in the '**Market Value**' and it is often difficult to separate the component values for land and property.

'**Public Reports**' include, but are not limited to company annual and quarterly and other reports to ASX or other recognised stock exchanges or as may be required by law. By way of guidance if the report is likely to be sent to all, or substantially all the shareholders of a company, it will be a '**Public Report**'; or if the report is likely to be released to ASX or another recognised stock exchange, it will be a '**Public Report**'. If the Commissioning Entity is not a listed company and the report is likely to be read by entities from which funds may be raised under the Corporations Act without the use of a disclosure document, it is unlikely to be a '**Public Report**' (*VALMIN Code*, Definition D28).

R

'**Real Estate**' – it is a physical concept, including land and all things that are a natural part of the land (eg, trees and Minerals). In addition it includes all things effectively permanently attached by people (eg, buildings, site improvements, and permanent physical attachments, like cooling systems and lifts) on, above or below the ground.

'**Real Property**' – it is a non-physical, legal concept and it includes all the rights, interests and benefits related to the ownership of '**Real Estate**' and normally recorded in a formal document (eg, deed or lease). The rights are to sell, lease, enter, bequeath, gift, etc. There may be absolute single or partial ownership (subject to limitations imposed by Government, like taxation, planning powers, appropriation, etc). These rights may be affected by restrictive covenants or easements affecting title; or by security or financial interests, say conveyed by mortgages.

'**Reasonableness Test**' means an impartial assessment to determine if the overall valuation approach used is rational, realistic and logical in its treatment of the inputs to a '**Valuation**' to the extent that, having the same data and information about that '**Mineral Asset**', another '**Expert**' or '**Specialist**' would make a similar '**Technical Assessment**' of and/or value it at approximately the same level. Such a test will serve to identify '**Technical Assessments**' or '**Valuations**' that may be out of line with industry standards and norms (*VALMIN Code*, Definition D29).

S

'**Salvage Value**' – it is the expected value of an asset at the end of its economic life (ie, being valued for salvage disposal purposes rather than for its originally intended purpose). Hence, it is the value of property, excluding land, as if disposed of for the materials it contains, rather than for its continued use, without special repairs or adaptation.

'**Scoping Study**' (see **Conceptual Study**) – it outlines what could the mineral project be eg, is it sensible to continue to fund exploration of it? It is a preliminary (initially geologically focused) review involving only low confidence Resources, conceptual designs and order-of-magnitude costings so that it is expected to have **study inputs accurate to only ±40% to 50%** (but the actual level of risk must be divulged).

'**Scrap Value**' (Residual Value) – it is the remaining value (usually a net value after disposal costs) of a wasting asset at the end of a prescribed or predictable period of time (usually the end of its effective life) that was ascertained upon acquisition.

‘**Specialist**’ – it means a ‘**Competent**’ (and ‘**Independent**’, where relevant) natural person who is retained by the ‘Expert’ to provide subsidiary reports (or sections of the Valuation Report) on matters on which the ‘Expert’ is not personally expert. He/she must have at least 5 years of suitable and preferably recent ‘**Minerals Industry**’ experience relevant to the subject matter on which he/she contributes. A ‘**Specialist**’ must be corporate member of appropriate, recognised professional association having an enforceable Code of Ethics, or explain why not (for the full definition see *VALMIN Code*, Definition D10 and its Clause 17).

‘**Special Value**’ – an extraordinary premium over and above the ‘**Market Value**’, related to the specific circumstances that a particular prospective owner or user of the property attributes to the asset. It may be a physical, functional or economic aspect or interest that attracts this premium. It is associated with elements of ‘**Going Concern Value**’ or ‘**Investment Value**’ since it also represents synergistic benefits. In a strict sense it could apply to very specialised or special purpose assets which are rarely sold on the open market, except as part of a business, because their utility is restricted to particular users. In some circumstances, it may be the lower value given by ‘**Value-in-Use**’.

T

‘**Technical Assessment Reports**’ – involve a review of those project elements such as mining engineering, metallurgy, environmental impacts, capital and operating costs and actual and/or projected production that may contribute to the actual and/or potential economic output from ‘**Mineral Assets**’ as may be required to assess the economic benefit of those Assets and then to determine their ‘**Technical Value**’ (*VALMIN Code*, Definition D35).

‘**Technical Value**’ – it is an assessment of a ‘**Mineral Asset’s**’ future net economic benefit at the ‘**Valuation Date**’ under a set of assumptions deemed most appropriate by an ‘**Expert**’ or ‘**Specialist**’ (the ‘**Valuer**’) excluding any premium or discount to account for such factors as market or strategic considerations (*VALMIN Code*, Definition D36).

‘**Transparent/Transparency**’ – literally means “*easily seen through, through, clear and unmistakable, free from affectation and disguise*.” For the purposes of the VALMIN Code, these qualities **must** apply to the data and information used as the basis of a ‘Valuation’ or a ‘Technical Assessment’, including the assessment of resources/reserves, mining, processing and marketing issues, the valuation approach adopted and the methodology or methodologies used, all of which must be clearly set out in the Report (*VALMIN Code*, Definition D31 and see Clauses 28-31).

V

‘**Valuator**’ **Canada** – see ‘**Valuer**’.

'**Value**' – it is the estimated likely future '**Price**' of a good or service at a specific time, but it depends upon the particular qualified type of value (eg '**Market Value**', '**Salvage Value**', '**Scrap Value**', '**Special Value**', etc). There is also a particular value for tax and rating, or insurance purposes. In Australasia. '**Fair Market Value**' is the object and result of the '**Valuation**' and is the estimated amount of money (or the cash equivalent of some other consideration) for which the '**Mineral Asset**' should change hands on the '**Valuation Date**'. It must be between a willing buyer and a willing seller in an 'arm's length' transaction in which each party has acted knowledgeably, prudently and without compulsion. It is usually comprised of two components, the underlying or '**Technical Value**' and a premium or discount, relating to market, strategic or other considerations (*VALMIN Code*, Definition D43).

'**Value-in-Use**' – in contrast to '**Highest-and-Best-Use**', it is the specific value of a specific tangible asset that has a specific use to a specific user. It is not market-related. The focus is on the value that a specific property contributes to the enterprise of which it is a part (being part of a '**Going Concern Valuation**'). It measures the contributory value of a specified asset(s) used within that specific enterprise, although it is not the '**Market Value**' for that individual asset. It is the Value-to-the-Owner/Entity/Business in accountancy terms and may be the lower of net current replacement cost and its recoverable amount. It is also the net present value of the expected future net cash flows from the continued use of that asset, plus its disposal value at the end of its useful life ('**Scrap Value**'). At the '**Valuation Date**', there must be recognition of its existing use by a particular user. This is in contrast to the alternative reasonable use to which an asset might be put by unspecified owner(s).

'**Valuer**' (also Valuator Canada or Appraiser USA) – it is either the '**Expert**' or '**Specialist**' (Qualified Person in Canada) who is the natural person responsible for the Valuation to determine the '**Fair Market Value**' after consideration of the technical assessment of the '**Mineral Asset**' and other relevant issues. They must have demonstrable '**Competence**' (and '**Independence**', when required).

'**Valuation**' – it is the '**Value**' of a '**Mineral Asset**', Mineral Property or Security (*VALMIN Code*, Definition D40).

'**Valuation Date**' – it means the reference date to which a '**Valuation**' applies. Depending on the circumstances, it could be different to the date of completion or signing of the Valuation Report or the cut-off date of the available data (VALMIN Code, Definition D41).

1. RESPONSIBILITY STATEMENT

This circular, for which the Directors collectively and individually accept full responsibility, includes particulars given in compliance with the Listing Rules for the purpose of giving information with regard to the Enlarged Group. The Directors, having made all reasonable enquiries, confirm that to the best of their knowledge and belief the information contained in this circular is accurate and complete in all material respects and not misleading or deceptive, and there are no other matters the omission of which would make any statement herein or this circular misleading.

2. DISCLOSURE OF INTERESTS

(a) Interests of Directors and chief executives of the Company

As at the Latest Practicable Date, the interests and short positions of the Directors and chief executive of the Company in the shares, underlying shares and debentures of the Company and its associated corporations (within the meaning of Part XV of the SFO) which (i) were required to be notified to the Company and the Stock Exchange pursuant to Divisions 7 and 8 of Part XV of the SFO (including interests and short positions which the Directors and chief executive of the Company were taken or deemed to have under such provisions of the SFO); or (ii) were required to be entered in the register kept by the Company pursuant to section 352 of the SFO; or (iii) were required to be notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers in the Listing Rules were as follows:

Long positions in shares and underlying shares

(i) Interests in the shares

Name of Director	Capacity	Number of Shares held	Approximate percentage of the total issued share capital of the Company
Mr. Huang Jianming	Beneficial owner	8,500,000 (L)	0.26%

As at the Latest Practicable Date, none of the Directors or chief executives of the Company or their spouses or children under 18 years of age were granted or had exercised any right to subscribe for any equity or debt securities of the Company or any of its associated corporations (within the meaning of Part XV of the SFO).

(ii) Other interests

As at the Latest Practicable Date,

(i) none of the Directors had any interest, direct or indirect, in any assets which have been acquired or disposed of by or leased to any member of the Group, or were proposed to be acquired or disposed of by or leased to any member of the Group since 31 December 2013, the date to which the latest published audited financial statement of the Group was made up;

(ii) none of the Directors was materially interested in any contract or arrangement entered into by any member of the Group which was significant in relation to the business of the Group taken as a whole;

(iii) none of the Directors and their respective associates had any interest in a business which competes or may compete with the business of the Group or had any other conflict of interest with the Company; and

(iv) save as disclosed below, no other Directors are directors or employees of a company which has an interest or short position in the shares and underlying shares of the Company which would fall to be disclosed to the Company under the provision of Division 2 and 3 o Part XV of the SFO:

Name of Directors	**Company**	**Titles**
Yu Zhiping	CGNPC-URC	President and Director
He Zuyuan	CGNPC-URC	Vice President
	China Uranium Development	Director
Zhou Zhenxing	CGNPC-URC	Chairman
Chen Qiming	CGNPC-URC	Director
	CGNPC	General Manager of Capital Operation Department
	Silver Grant International Industries Limited	Non-executive director
Yin Engang	CGNPC-URC	Director
	CGNPC	General Manager of Financial Department
Huang Jianming	Perfect Develop Holding Inc.	Director

Note:

1. The letter "L" denotes the person's/entity's long position in the shares.

(b) Substantial Shareholders' and other Shareholders' interests

As at the Latest Practicable Date, save as disclosed below, so far as is known to the Directors or chief executive of the Company, no other person has an interest or short position in the shares and underlying shares which would fall to be disclosed to the Company under the provisions of Divisions 2 and 3 of Part XV of the SFO, or, who were, directly or indirectly, interested in 10 per cent (10%) or more of the nominal value of any class of share capital carrying rights to vote in all circumstances at general meetings of any members of the Group:

Long positions in shares

Name of Shareholder	Nature of interests	Number of Shares	Approximate percentage of the total issued share capital of the Company
Perfect Develop Holding Inc.	Beneficial owner	522,526,940 (L) 225,000,000 (S) *(Note 1)*	15.68% 6.75%
China Uranium Development	Beneficial owner	4,503,695,652 (L) 550,354,609 (S) *(Notes 4 & 5)*	135.14% 16.51%
CGNPC-URC	Interest in a controlled corporation	4,503,695,652 (L) 550,354,609 (S) *(Notes 2 & 4)*	135.14% 16.51%
CGNPC	Interest in a controlled corporation	4,503,695,652 (L) 550,354,609 (S) *(Notes 3 & 4)*	135.14% 16.51%
Silver Grant International Industries Limited	Beneficial owner	550,354,609 (L) *(Note 5)*	16.51%

Notes:

1. The issued share capital of Perfect Develop Holding Inc. is beneficially owned as to 58.28% by Mr. Tao Lung, 30.67% by Mr. Huang Jianming and 11.05% by Mr. Liu James Jin. Mr. Tao Lung and Mr. Liu James Jin are founders of the Group and former executive Directors of the Company. Mr. Huang Jianming is a founder of the Group and is currently a non-executive Director of the Company. Pursuant to a share charge dated 1 April 2011 (the "**Share Charge**"), Perfect Develop Holding Inc. charged 450,000,000 Shares ("**Charged Shares**") in favour of China Uranium Development. Subsequently, pursuant to a supplemental deed dated 18 February 2014 ("**Supplemental Deed**"), 225,000,000 Charged Shares will be released and subject to a lock up which will expire on 31 December 2014. The remaining 225,000,000 Charged Shares will continue to be charged in favour of China Uranium Development until 31 December 2014. Please refer to the announcement of the Company dated 18 February 2014 for further details of the Supplemental Deed.

2. CGNPC-URC holds 100% of the issued share capital of China Uranium Development. Therefore, it is deemed to be interested in 4,503,695,652 Shares by virtue of its shareholding of China Uranium Development.

3. CGNPC (formerly known as China Guangdong Nuclear Power Holding Corporation, Ltd.) holds 100% of the equity interests of CGNPC-URC. Therefore, it is deemed to be interested in the interest held by CGNPC-URC.

4. The long position represents (i) the 1,670,000,000 Shares held by China Uranium Development; (ii) the interests in the 2,608,695,652 Shares to be allotted and issued upon the full exercise of the conversion rights attached to the convertible bonds in the principal amount of HK$600.00 million at an initial conversion price of HK$0.23 issued by the Company on 18 August 2011 (the "**Convertible Bonds**") and (iii) the interest in the remaining 225,000,000 Shares held under the Share Charge as stated in Note 1 above.

5. China Uranium Development and Silver Grant International Industries Limited ("**Silver Grant**") entered into a subscription agreement dated 23 March 2012 (the "**Subscription Agreement**"). Upon completion of the Subscription Agreement on 1 June 2012, China Uranium Development had issued and Silver Grant had subscribed for an exchangeable bond in the principal amount of HK$776,000,000 (the "**Exchangeable Bond**"), pursuant to which Silver Grant can exercise the exchange right (the "**Exchange Right**") at the exchange price of HK$1.41 (subject to adjustment) to request China Uranium Development to transfer to it the shares of the Company held by China Uranium Development. Assuming that Silver Grant fully exercises the Exchange Right, China Uranium Development will transfer an aggregate of 550,354,609 Shares (representing approximately 16.51% of the then existing share capital of the Company) to Silver Grant.

6. The letter "L" denotes the person's/entity's long position in the shares.

   The letter "S" denotes the person's/entity's short position in the shares.

3. DIRECTORS' INTERESTS IN CONTRACTS AND ASSETS

As at the Latest Practicable Date, none of the Directors is materially interested in any contract or arrangement subsisting as at the Latest Practicable Date which is significant in relation to the business of the Enlarged Group.

As at the Latest Practicable Date, none of the Directors had any direct or indirect interests in any assets which have been acquired or disposed of by, or leased to, or which are proposed to be acquired or disposed of by, or leased to, any member of the Enlarged Group since 31 December 2013, being the date to which the latest published audited accounts of the Enlarged Group were made up.

4. DIRECTORS' INTERESTS IN COMPETING BUSINESS

As at the Latest Practicable Date, none of the Directors or their respective associates had an interest in a business which operates in or may operate in significant competition with the business of the Enlarged Group and any other conflicts of interest which any such person has or may have with the Enlarged Group.

5. SERVICE CONTRACTS

As at the Latest Practicable Date, none of the Directors had any service contracts with any member of the Enlarged Group which does not expire or is not determinable by the employer within one year without payment of compensation (other than statutory compensation).

6. LITIGATIONS

So far as the Directors are aware, as at the Latest Practicable Date, none of the member of the Enlarged Group was engaged in any litigation, arbitration or claim of material importance and no litigation, arbitration or claim of material importance is known to the Directors to be pending or threatened against any member of the Enlarged Group.

7. EXPERT AND CONSENT

The following sets out the qualifications of the expert who has given opinions or advices in this circular:

Name	**Qualification**
Deloitte Touche Tohmatsu	Certified Public Accountants, Hong Kong
SHINEWING (HK) CPA Limited	Certified Public Accountants, Hong Kong
Gram Capital Limited	A corporation licensed to carry on Type 6 (advising on corporate finance) regulated activity under the SFO
Blackstone Mining Associates Limited	Competent Person
AVISTA Valuation Advisory Limited	Competent Evaluator

As at the Latest Practicable Date, all the experts above did not have any shareholding directly or indirectly in any member of Group or any right (whether legally enforceable or not) to subscribe for or to nominate persons to subscribe for any securities in any member of the Group.

As at the Latest Practicable Date, all the experts above did not have any direct or indirect interest in any assets which had been acquired or disposed of by, or leased to, or which were proposed to be acquired or disposed of by, or leased to, any member of the Group since 31 December 2013, the date to which the latest published audited consolidated financial statements of the Group were made up.

Each of the experts above has given and has not withdrawn its written consent to the issue of this circular with inclusion of its letter and references to its name in the form and context in which it appears.

8. GENERAL

(a) The registered office of the Company is at Cricket Square, Hutchins Drive, P.O. Box 2681, Grand Cayman, KY1-1111, Cayman Islands. The principal place of business and head office of the Company in Hong Kong is at Suites 6706-6707, 67/F., Central Plaza, 18 Harbour Road, Wanchai, Hong Kong.

(b) The Hong Kong branch share registrar and transfer office of the Company is Union Registrars Limited, whose office is at 18th Floor, Fook Lee Commercial Centre, Town Place, 33 Lockhart Road, Wanchai, Hong Kong.

(c) The joint secretaries of the Company are Ms. Zheng Xiaowei and Ms. Lai Siu Kuen respectively. Ms. Zheng received a Master of Informatics degree from China Defense Science and Technology Information Center* (中國國防科技信息中心) in 1992 and a Bachelor of Automatic Control degree from Zhejiang University* (浙江大學) in 1988. Ms. Zheng became a qualified accountant in the PRC since 2006. In 2012, Ms. Zheng acquired the qualification of corporate legal adviser* (企業法律顧問資格) in the PRC. Ms. Zheng has over 18 years' experience in project investment and financial management, and over 7 years' experience in legal affairs management. Ms. Zheng also has extensive experience in corporate governance. Ms. Lai is a manager of KCS Hong Kong Limited. Ms. Lai has over 15 years' experience in the company secretarial field. She is a fellow member of the Hong Kong Institute of Chartered Secretaries and the Institute of Chartered Secretaries and Administrators in the United Kingdom.

(d) In the event of any inconsistency, the English language text of this circular shall prevail over the Chinese language text.

9. MATERIAL ADVERSE CHANGE

As at the Latest Practicable Date, the Directors are not aware of any material adverse change in the financial or trading position of the Group since 31 December 2013, the date to which the latest published audited financial statements of the Group were made up.

10. MATERIAL CONTRACTS

The following contracts (not being contracts in the ordinary course of business) have been entered into by members of the Enlarged Group within the two years immediately preceding the Latest Practicable Date which are or may be material to the operations of the Enlarged Group:

(a) the amicable agreement on the corporate dispute settlement among the participants of Semizbay-U dated 9 August 2012 and the supplemental agreement dated 23 May 2013 entered into among Beijing Sino-Kazakh, KAP and The Mining Company LLP;

(b) the supplemental agreements dated 4 February 2013 and 23 May 2013 to the contact of sale and purchase of the participatory interest in Semizbay-U entered into among Beijing Sino-Kazakh and KAP;

(c) the revolving loan facility agreement dated 15 October 2013 entered into between the Company as lender and China Uranium Development as borrower in connection with the provision of the revolving loan facilities of an amount not exceeding US$150.00 million;

(d) the framework agreement dated 22 January 2014 and entered into between the Company and CGNPC Huasheng Investment Limited in relation to the provision of certain intra-group financial services by CGNPC Huasheng Investment Limited to the Group; and

(e) the Share Purchase Agreement.

11. DOCUMENTS AVAILABLE FOR INSPECTION

Copies of the following documents will be available for inspection at the principal place of business of the Company in Hong Kong at Suites 6706-6707, 67/F, Central Plaza, 18 Harbour Road, Wanchai, Hong Kong during normal business hours from the date of this circular up to and including the date of the EGM and will also be available for inspection at the EGM:

(a) the material contracts of the Company set out in the sub-paragraph headed "10. Material Contracts" in this appendix;

(b) the annual reports of the Group for the financial years ended 31 December 2011, 2012 and 2013 respectively;

(c) the memorandum and articles of association of the Company;

(d) the letter from the Independent Board Committee to the Independent Shareholders, the text of which is set out on page 34 of this circular;

(e) the letter of advice from Gram Capital to the Independent Board Committee and the Independent Shareholders, the text of which is set out on page 35 to 50 of this circular;

(f) the written consent referred to in the sub-paragraph headed "7. Expert and Consent" in this appendix;

(g) the accountants' report of Beijing Sino-Kazakh prepared by Deloitte Touche Tohmatsu for the period from the three years ended 31 December 2013, the text of which is set out in Appendix II to this circular;

(h) the accountants' report of Semizbay-U prepared by Deloitte Touche Tohmatsu for the period from the three years ended 31 December 2013, the text of which is set out in Appendix III to this circular;

(i) the report on unaudited pro forma financial information of the Enlarged Group, the text of which is set out in Appendix IV to this circular;

(j) the Competent Person's Report dated 31 December 2013 prepared by Blackstone Mining Associates Limited, the text of which is set out in Appendix V to this circular;

(k) the Valuation Report dated 31 December 2013 prepared by AVISTA Valuation Advisory Limited, the text of which is set out in Appendix VI to this circular;

(l) the circular dated 28 February 2014;

(m) any contracts referred to in this circular; and

(n) this circular.

中廣核礦業有限公司*
CGN Mining Company Limited

(Incorporated in the Cayman Islands with limited liability)
(Stock code: 1164)

NOTICE OF EXTRAORDINARY GENERAL MEETING

NOTICE IS HEREBY GIVEN that the extraordinary general meeting (the "**EGM**") of CGN Mining Company Limited (the "**Company**") will be held at Boardroom 3-4, Mezzanine Floor, Renaissance Harbour View Hotel Hong Kong, 1 Harbour Road, Wanchai, Hong Kong on 23 July 2014 (Wednesday) at 10:30 a.m. for the following purpose:

ORDINARY RESOLUTION

"**THAT**

(1) the share purchase agreement dated 16 May 2014 entered into between the Company as purchaser and CGNPC Uranium Resources Co., Ltd.* (中廣核鈾業發展有限公司). as seller in relation to the sale and purchase of the entire equity interest of Beijing Sino-Kazakh Uranium Investment Company Limited* (北京中哈鈾資源投資有限公司), a copy of which has been produced to the EGM marked "**1**" and signed by the chairman of the EGM for the purposes of identification, and the terms and conditions thereof and all transactions contemplated thereunder and the implementation thereof and any other agreements or documents in connection therewith be and are hereby approved, ratified and confirmed; and

(2) any one Director be and is hereby authorised for and on behalf of the Company to take all steps necessary or expedient in his opinion to implement and/or give effect to the terms of the share purchase agreement dated 16 May 2014 and to agree such variations, amendments or waivers thereof as are, in the opinion of such Director, in the interests of the Company."

By Order of the Board of
CGN Mining Company Limited
Zhou Zhenxing
Chairman

Hong Kong, 30 June 2014

* *For identification purposes only*

Notes:

(1) A member entitled to attend and vote at the meeting convened by the above notice is entitled to appoint one or more proxy to attend and, subject to the provisions of the articles of association of the Company, in the event of a poll, to vote in his place. A proxy need not be a member of the Company. In order to be valid, the form of proxy together with a power of attorney or other authority, if any, under which it is signed (or a notarially certified copy of that power or authority) must be deposited at the Company's Hong Kong branch share registrar and transfer office, Union Registrars Limited at 18th Floor, Fook Lee Commercial Centre, Town Place, 33 Lockhart Road, Wanchai, Hong Kong not later than 48 hours before the appointed time for holding the meeting or any adjourned meeting.

(2) Delivery of an instrument appointing a proxy should not preclude a member from attending and voting in person at the meeting or any adjournment thereof and, in such event, the instrument appointing a proxy shall be deemed to be revoked.

(3) In the case of joint holders of a share, any one of such joint holders may vote, either in person or by proxy, in respect of such share as if he/she were solely entitled thereto; but if more than one of such joint holders are present at the above meeting, the vote of the senior who tenders a vote, whether in person or by proxy, shall be accepted to the exclusion of the votes of the other joint holders. For this purpose, seniority shall be determined by the order in which the names stand in the register of members of the Company in respect of the joint holding.

As at the date of this notice, the board of Directors of the Company comprises two executive Directors: Mr. Yu Zhiping (chief executive officer) and Mr. He Zuyuan, four non-executive Directors: Mr. Zhou Zhenxing (chairman), Mr. Chen Qiming, Mr. Yin Engang and Mr. Huang Jianming, and three independent non-executive Directors: Mr. Ling Bing, Mr. Qiu Xianhong and Mr. Huang Jinsong.