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The Directors,
Joint Stock Company National Atomic Company Kazatomprom,
17/12, E-10 Street,
Yessil District,
Astana,
010000,
Republic of Kazakhstan.

12/01/2019

Dear Sirs,

Ref: "Mineral Resource and Ore Reserve Statements for the Mineral Assets of Joint Stock Company National Atomic Company Kazatomprom, Republic of Kazakhstan with effective date of 31 December 2018".

# 1 INTRODUCTION

# 1.1 Background

SRK Consulting (UK) Limited ("SRK") has been appointed by Joint Stock Company National Atomic Company Kazatomprom ("Kazatomprom", "KAP", or the "Company") to prepare Mineral Resource and Ore Reserve statements (the "2018 Statements") reported in accordance with the terms and definitions of the JORC Code on its uranium mineral mining and exploration assets (the "Mineral Assets") located in the Republic of Kazakhstan ("Kazakhstan"). The 2018 Statements as presented herein are an update of the Mineral Resource and Ore Reserve statements, with effective date of 1 July 2018 (the "H1 2018 Statements") as previously reported in the "Competent Persons' Report on the Mineral Assets of Joint Stock Company National Atomic Company Kazatomprom, Republic of Kazakhstan" published in September 2018 (the "2018 CPR").

Kazatomprom is a joint stock company incorporated under the laws of Kazakhstan on 21 February 1997 which operates as Kazakhstan's national operator for the export and import of uranium and its compounds, nuclear power plant fuel, special equipment and technologies, as well as rare metals. The Company by measure of attributable production is the largest producer of natural uranium globally as well the second lowest cost producer as reported by Ux Consulting Company ("UxC"). For the 12 month period ended 31 December 2018 the Company together with its subsidiaries (the "Group") represented approximately 20% of total global uranium primary production and approximately 40% of global in-situ leach recovery ("ISR") uranium production.

The Group operates through a complex structure of subsidiaries, Joint Venture and Associate companies comprising three key segments: the "Uranium Segment"; the "UMP Segment"; and the "Other Segment". The Uranium Segment, includes uranium mining and processing operations from the Group's mines, the Group's purchases of uranium from the Group's joint ventures and associates engaged in uranium production, and external sales and marketing of uranium products, in each case other than production and sales of UO<sub>2</sub> powder and fuel pellets.

The Company's status as a national company in Kazakhstan allows the Group to benefit from certain privileges, including, among other things, obtaining subsoil use agreements through



SRK Consulting KAP CPR, 2019 – Audit Letter

direct negotiation with the Government of Kazakhstan ("**GoK**") rather than through a tender process which would otherwise be required. This effectively grants the Group priority access to such opportunities, including exploration, development and production of all natural uranium in Kazakhstan.

The scope of this "Audit Letter" is limited to the 2018 Statements pertaining to the mining and processing operations of the Uranium Segment, specifically all key activities relating to the extraction of uranium and production of the final saleable product in the form of U<sub>3</sub>O<sub>8</sub>. The Mineral Assets are located in three (Shu-Sarysu; Syrdarya; and North Kazakhstan) of the six uranium geological provinces of Kazakhstan covering a total licence area of 2,059.27km² which includes 30 deposits/blocks categorised as: 26 Producing Properties ("PPs"); one Development Property ("DP") and four Advanced Exploration Properties ("AEPs") based on the classifications as reported in Section (1.2.2). In addition the Company's "Exploration Programme" covers six Exploration Properties ("EPs") located in three regions in which the Company is active. The Mineral Assets are largely held through 14 subsidiaries, Joint Venture and Associate companies (the "Mining Subsidiaries" - Table 1-1) which in conjunction with the Company are directly responsible for uranium mining and downstream processing activities. Thirteen of the Mining Subsidiaries include PPs while one Mining Subsidiary only includes AEPs (Budenovskoye LLP).

Table 1-1:	Mineral Assets salient statistics	:

Mining Subsidiary	Equity	Geological	Deposits	Contracts	Licence	Discovery	Prdn	LoMp <sup>(</sup>	1)
	Interest	Region	/Prdn Units		Area		Start	Depletion	Prdn
	(%)		(No)	(No)	(km²)	(year)	(year)	(year)	(tU)
Operating Properties									
Kazatomprom-SaUran LLP	100.00	Shu-Sarysu	5	5	252.90	1963	1997	2040	2,050
Ortalyk LLP	100.00	Shu-Sarysu	2	2	186.40	1964	2007	2032	1,974
RU-6 LLP	100.00	Syrdarya	2	1	59.58	1979	1997	2034	987
Appak LLP	65.00	Shu-Sarysu	1	1	133.46	1976	2008	2036	1,000
JV Inkai LLP <sup>(2)</sup>	60.00	Shu-Sarysu	3	1	139.00	1976	2008	2052	4,000
Semizbai-U LLP	51.00	Syrdarya; Northern Kazakhstan	2	2	71.20	1973	2008	2041	1,201
JV Akbastau JSC	50.00	Shu-Sarysu	3	2	2.71	1976	2009	2039	1,931
Karatau LLP	50.00	Shu-Sarysu	1	1	17.28	1979	2007	2033	3,200
JV Zarechnoye JSC	49.98	Syrdarya	1	1	38.00	1977	2007	2023	837
JV Katco LLP	49.00	Shu-Sarysu	2	1	45.73	1976	2001	2033	4,013
JV Khorassan-U LLP	50.00	Syrdarya	1	1	70.80	1972	2008	2036	2,990
JV SMCC LLP	30.00	Shu-Sarysu	2	2	116.91	1976	2004	2036	3,080
Baiken-U LLP	52.50	Shu-Sarysu	1	1	350.00	1972	2009	2032	2,030
Subtotal			26	21	1,483.97	1963	1997	2052	28,372
<b>Advanced Exploration Prop</b>	erties								
Kazatomprom	100.00	Shu-Sarysu	2	2	424.00	1976	n/a	n/a	n/a
Budenovskoye LLP	51.00	Shu-Sarysu	2	1	151.30	1976	n/a	n/a	n/a
Subtotal			4	3	575.30	1976	n/a	n/a	n/a
Grand Total			30	24	2,059.27	1963	1997	2052	28,372

<sup>(1)</sup> LoMp: date of depletion of Ore Reserves; maximum production in the current Life of Mine plans for the Mineral Assets.

This Audit Letter presents the following key technical information as at 12 January 2019, this being the "Effective Date" of the opinion as expressed herein. The 2018 Statements for the Mineral Assets are reported as at 31 December 2018 and in accordance with the terms and definitions of the JORC Code (defined below). Certain units of measurements and technical terms defined in the JORC Code (defined below under Section 1.2.2) are defined in the glossaries, abbreviations and units included at the end of this "Audit Letter".

As at 31 December 2018, the 2018 Statement reports:

- Aggregated Ore Reserves (Table 1-2) as at 31 December 2018 of 859.1Mt grading 0.061%U and containing 520.6ktU and comprising:
  - Proved Ore Reserves of 474.9Mt grading 0.061%U and containing 291.5ktU,
  - Probable Ore Reserves of 384.2Mt grading 0.060%U and containing 229.0ktU; and
- Aggregated Mineral Resources as at 31 December 2018 of 1,373.7Mt grading 0.054%U and containing 740.0ktU and comprising:

For JV Inkai LLP, the Company's equity participation is determined based on a prescribed formula based on uranium production within the following bands: 0tU to 1,500tU (40.00%); 1,500tU to 2,000tU (50.00%); 2,000tU to 4,000tU (77.50%); 4,000tU (60%) for 2019 onwards.

- Measured Mineral Resources of 601.4Mt grading 0.058%U and containing 348.8ktU,
- Indicated Mineral Resources of 764.5Mt grading 0.051%U and containing 387.7ktU,
- Inferred Mineral Resources of 7.9Mt grading 0.045%U and containing 3.6ktU.

SRK's audited Mineral Resource statements are reported inclusive of those Mineral Resources converted to Ore Reserves. The audited Ore Reserve is therefore a sub set of the Mineral Resource and should not therefore be considered as additional to this.

Table 1-2: Aggregated Mineral Resources and Ore Reserves as at 31 December 2018 for the Mineral Assets

Mining Subsidiary	Deposits	Ore	Reserves		Minera	al Resources	
	(No)	(Mt)	(%U)	(ktU)	(Mt)	(%U)	(ktU)
Operating Properties							
Kazatomprom-SaUran LLP	5	71.9	0.041	29.8	73.6	0.042	30.6
Ortalyk LLP	2	62.4	0.045	28.0	106.9	0.040	42.3
RU-6 LLP	2	20.4	0.076	15.5	20.4	0.076	15.5
Appak LLP	1	53.6	0.035	18.8	53.6	0.035	18.8
JV Inkai LLP	3	262.1	0.054	141.8	262.1	0.054	141.8
Semizbai-U LLP	2	58.8	0.046	27.3	58.8	0.046	27.3
JV Akbastau JSC	3	49.0	0.088	43.0	49.0	0.088	43.0
Karatau LLP	1	58.4	0.080	46.9	58.4	0.080	46.9
JV Zarechnoye JSC	1	8.3	0.060	5.0	11.2	0.057	6.4
JV Katco LLP	2	55.5	0.105	58.1	55.5	0.105	58.1
JV Khorassan-U LLP	1	39.1	0.107	41.7	39.1	0.107	41.7
JV SMCC LLP	2	100.3	0.043	43.1	214.4	0.041	88.2
Baiken-U LLP	1	19.2	0.112	21.5	19.2	0.112	21.5
Subtotal	26	859.1	0.061	520.6	1,022.3	0.057	582.2
Advanced Exploration Properties							
Kazatomprom	2	n/a	n/a	n/a	306.1	0.041	125.1
Budenovskoye LLP	2	n/a	n/a	n/a	45.3	0.072	32.7
Subtotal	4	n/a	n/a	n/a	351.4	0.045	157.8
Grand Total	30	859.1	0.061	520.6	1,373.7	0.054-	740.0

## 1.2 Requirement, Reporting Standard, Reliance and Responsibility Statement

The Audit Letter is addressed to the Company and SRK has been informed by the Company, that the Audit Letter will be made available to certain advisors to the Company, for information purposes only, specifically the financial auditors appointed for reporting, inter alia the financial statements for the Company as at 31 December 2018.

#### 1.2.1 Requirement

Other than to support the Company's ongoing reporting requirements and distribution to certain of the Company's advisors, as noted above, this Audit letter will not be distributed to any third parties nor included in any of the Company's public domain reporting. As such other than to support the Company's reporting of Mineral Resources and Ore Reserve statements as at 31 December 2018, SRK is unaware of any further requirements regarding the authoring of this Audit Letter.

#### 1.2.2 Reporting Standard

The reporting standard adopted for the reporting of the Mineral Resource and Ore Reserve statements included in the CPR is the "The 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves as published by the Joint Ore Reserves Committee of the Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia" (the "JORC Code"). The JORC Code is a reporting code which has been aligned with the Committee for Mineral Reserves International Reporting Standards ("CRIRSCO") reporting template. Accordingly, SRK considers the JORC Code to be an internationally recognised reporting standard that is adopted worldwide for market-related reporting and financial investments.

The Mineral Assets as reported are classified into various groupings reflecting the development stage at the Effective Date of this CPR. The development stage groupings comprise:

• **Producing Property ("PP"):** mineral assets for which Ore Reserves are declared and mining and processing operations have been commissioned and are in full scale production.

- **Development Property ("DP"):** mineral assets for which Ore Reserves have been declared and are essentially supported by a minimum of a pre-feasibility study which on a multi-disciplinary basis demonstrates that the consideration is technically feasible and economically viable but which are not yet in full scale production;
- Advanced Exploration Property ("AEP"): mineral assets for which only Mineral Resources have been declared; and
- Exploration Property ("EP"): mineral assets for which no Mineral Resources have been declared.

#### 1.2.3 Reliance

This Audit Letter is addressed to and may be relied on by the Directors of the Company, specifically in respect of reporting the 2018 Statements for the Mineral Assets in accordance with the terms and definitions of the JORC Code.

SRK believes that its opinion must be considered as a whole and that selecting portions of the analysis or factors considered by it, without considering all factors and analyses together, could create a misleading view of the process underlying the opinions presented in this Audit Letter. The preparation of the Audit Letter is a complex process and does not lend itself to partial analysis or summary.

SRK has no obligation or undertaking to advise any person of any development in relation to Mineral Assets or the 2018 Statements which comes to its attention after the date of this Audit Letter or to review, revise or update the Audit Letter or opinion in respect of any such development occurring after the date of this Audit Letter.

## 1.3 Effective Date, Base Technical Information Date and Publication Date

The effective date of the Audit Letter is 12 January 2019 (the "Effective Date"). The 2018 Statements reflect SRK's review and modification of the Company's 31 December 2018 estimates reported in accordance with the State Commission of Kazakhstan on Mineral Reserves (the "GKZ System") to derive audited Mineral Resource and Ore Reserve statements for the Mineral Assets and reported in accordance with the terms and definitions of the JORC Code.

The Base Technical Information Date is defined as 1 January 2019 which is co-incident with the reporting date for the 2018 Statements. The Publication Date of the Audit Letter is 12 January 2019 and is coincident with the Effective Date.

As advised by the Company, as at the Publication Date of the Audit Letter no material change has occurred as of the Base Technical Information Date which would warrant further updating of the Mineral Resource and Ore Reserve statements as presented herein.

## 1.4 Verification, Validation and Reliance

This Audit Letter is dependent upon technical, financial and legal input from the Company. SRK has conducted a review and assessment of all material technical issues likely to influence: the 2018 Statements. The review comprised:

- Inspection visits to review the supporting geological data for the following deposits: Block 6, Budenovskoye; Block 7, Budenovskoye; and Block 4, Inkai;
- Enquiry of technical, financial and legal representatives of the Company both during site visits and during subsequent head office discussions held at various times from 1 December 2018 through 11 January 2019;
- Assessment of the Technico Economicheskiye Obosnovaniye ("TEO") and other supporting

technical, environmental, mineral tenure, mining contracts and other documents relating to the Mineral Assets, specifically where these were updated subsequent to publication of the 2018 CPR:

- Review of historical information for the 12 month financial periods ending 31 December 2018:
- Reliance on the Company for: macro-economic parameters including consumer price inflation and exchange rates of local currencies reported against the United States Dollar ("US\$"); and input-commodity price forecasts for key consumables, notably acid and other mining and processing related consumables; and
- Reliance on UXc for the annual real terms (1 January 2019) commodity price forecasts as reported in Section 3 of this Audit Letter and utilised t to assess the economic viability of the Ore Reserves as reported in the 2018 Statements.

SRK confirms that it has performed all necessary validation and verification procedures deemed necessary and/or appropriate by SRK in order to place an appropriate level of reliance on such technical information.

The Mineral Resource statements included in this Audit Letter are reported in accordance with JORC Code. SRK considers that with respect to all material technical-economic matters, it has undertaken all necessary investigations to ensure compliance with the JORC Code.

In consideration of all legal aspects relating to the Mineral Assets, SRK has placed reliance on the representations by the Company that the following are correct as at the Effective Date of the Audit Letter:

- That the Company is not aware of any legal proceedings that may have an influence on the rights to explore for minerals in respect of the Mineral Assets;
- That the Group is the legal owner of all relevant mineral and surface rights pertaining to the Mineral Assets; and
- That no significant legal issue exists which would affect the likely viability of the Mineral Assets and/or the estimation and classification of the Mineral Resources and Ore Reserves as reported herein.

# 1.5 Limitations, Responsibility Statement, Reliance on Information, Declarations and Copyright

## 1.5.1 Limitations

To the fullest extent permitted by law SRK does not assume any responsibility and will not accept any liability to any other person for any loss suffered by any such other person as a result of, arising out of, or in connection with this Audit Letter or statements contained therein, required by and given solely for the purpose of presenting the 2018 Statements.

The Company has confirmed in writing to SRK that, to its knowledge, the information provided by the Company (when provided) was complete and not incorrect or misleading in any material respect. SRK has no reason to believe that any material facts have been withheld and the Company has confirmed to SRK that it believes it has provided all material information.

Unless otherwise expressly stated all the opinions and conclusions expressed in this Audit letter are those of SRK. It should also be noted that this Audit Letter reflects SRK's review of information generated, and/or technical work completed, by others. This Audit Letter specifically excludes all aspects of legal issues, marketing, commercial and financing matters, insurance, land titles and usage agreements, and any other agreements and/or contracts that the Company may have entered into.

#### 1.5.2 Responsibility Statement

SRK accepts responsibility for the 2018 Statements as reported herein. The 2018 Statements have been derived by SRK and reported in accordance with the terms and definitions of the JORC Code. Having taken all reasonable care to ensure that such is the case, SRK declares that the information contained in the Audit Letter is, to the best of the knowledge of SRK, in accordance with the facts and contains no omission likely to affect its import. The scope of the Audit Letter is limited to the uranium mining assets as reported therein, and specifically excludes all other assets of the Group.

## 1.5.3 Reliance on Information

SRK believes that its opinion must be considered as a whole and that selecting portions of the analysis or factors considered by it, without considering all factors and analyses together, could create a misleading view of the process underlying the opinions presented in this Audit Letter.

SRK's opinions given in this document with respect to the 2018 Statements are effective at 12 January 2019 and are based on information provided by the Company throughout the course of SRK's investigations, which in turn reflects various technical-economic conditions prevailing at the date of this report and the Company's expectations regarding the uranium market, uranium prices and exchange rates as at the date of this report. Should these change materially the 2018 Statements could be materially different in these changed circumstances.

Whilst SRK has exercised all due care in reviewing the supplied information, SRK does not accept responsibility for finding any errors or omissions contained therein and disclaims liability for any consequences of such errors or omissions.

This Audit Letter includes technical information, which requires subsequent calculations to derive subtotals, totals and weighted averages. Such calculations may involve a degree of rounding and consequently introduce an error. Where such errors occur, SRK does not consider them to be material.

#### 1.5.4 Declarations

SRK will receive a fee for the preparation of this Audit Letter in accordance with normal professional consulting practice. This fee is not contingent on the outcome of any transaction and SRK will receive no other benefit for the preparation of this report. SRK does not have any pecuniary or other interests that could reasonably be regarded as capable of affecting its ability to provide an unbiased opinion in relation to the 2018 Statements for the Mineral Assets:

Neither SRK, the Competent Persons (as identified under Section 1.7, below) who are responsible for authoring this Audit Letter, nor any Directors of SRK have at the date of this report, nor have had within the previous two years, any shareholding in the Company, the Mineral Assets or the Advisors of the Company, or any other economic or beneficial interest (present or contingent) in any of the assets being reported on. SRK is not a group, holding or associated company of the Company. None of SRK's partners or officers are officers or proposed officers of any group, holding or associated company of the Company. Further, no Competent Person involved in the preparation of this Audit Letter is an officer, employee or proposed officer of the Company or any group, holding or associated company of the Company. Consequently, SRK, the Competent Persons and the Directors of SRK consider themselves to be independent of the Company, its directors, senior management and Advisors.

In this Audit Letter, SRK provides assurances to the Board of Directors of the Company, that the Mineral Resources and Ore Reserves are reasonable, given the information currently available and reported in compliance with the terms and definitions of the JORC Code.

#### 1.5.5 Copyright

Except where SRK has agreed otherwise (including pursuant to an agreement between SRK and the Company dated 28 December 2018 or any subsequent agreement (each, the "KAP Agreement")):

- neither the whole nor any part of this Audit Letter nor any reference thereto may be included by any party other than the Company, any of its direct and indirect subsidiaries, the Company's shareholder JSC Sovereign Wealth Fund Samruk-Kazyna or a competent state authority in Kazakhstan or any other relevant jurisdiction, as may be applicable (together, the "Recipients"), in any other document without the prior written consent of SRK save that in the case that the Audit Letter is not included in full in any other document, the Recipient shall present a draft of any document produced by it that may incorporate a part of this Audit Letter to SRK for review so that SRK may ensure that this is presented in a manner which accurately and reasonably reflects any results or conclusions contained in this Audit letter; and
- copyright of all text and other matters in this document, including the manner of presentation, is the exclusive property of SRK. It is an offence to publish this document or any part of the document under a different cover, or to reproduce and/or use, without written consent (whether granted by virtue of a KAP Agreement or otherwise), any technical procedure and/or technique contained in this document. The intellectual property reflected in the contents resides with SRK and shall not be used for any activity that does not involve SRK, without the written consent of SRK.

Neither the whole nor any part of this Audit Letter nor any reference thereto may be included in any other document without the prior written consent of SRK regarding the form and context in which it appears.

## 1.6 Indemnities Provided by the Company

The Company has provided the following indemnities to SRK:

- The Company has agreed that, to the extent permitted by law, it will indemnify SRK and its employees and officers in respect of any liability suffered or incurred as a result of or in connection with the preparation of this Audit Letter albeit that this indemnity will not apply in respect of any material negligence, wilful misconduct or breach of law. The Company has also agreed to indemnify SRK and its employees and officers for time incurred and any costs in relation to any inquiry or proceeding initiated by any person except to the extent SRK or its employees and officers have been materially negligent or acted with wilful misconduct or in breach of law in which case SRK shall bear such costs; and
- In order to assist SRK in the preparation of this Audit Letter the Company may be required
  to receive and process information or documents containing personal information in relation
  to SRK's project personnel. The Company has agreed to comply strictly with the provisions
  of the Data Protection Act 1998 of the United Kingdom ("DPA 1998") and all regulations and
  statutory instruments arising from the DPA 1998, and the Company will indemnify and keep
  indemnified SRK in respect of all and any claims and costs caused by breaches of the DPA
  1998.

#### 1.7 Statement of Qualification

SRK is an associate company of the international group holding company SRK Consulting (Global) Limited (the "**SRK Group**"). The SRK Group comprises some 1,400 professional staff offering expertise in a wide range of resource and engineering disciplines with 45 offices located in 20 countries.

The SRK Group's independence is ensured by the fact that it holds no equity in any project. This permits the SRK Group to provide its clients with conflict-free and objective recommendations on crucial judgment issues. The SRK Group has a demonstrated track record in undertaking independent assessments of resources and reserves, project evaluations and audits, Mineral Resource and Ore Reserve audits and independent feasibility studies on behalf of exploration and mining companies and financial institutions worldwide. The SRK Group has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs.

This Audit Letter has been prepared by a team of consultants sourced from the SRK Group's office in the United Kingdom of Great Britain and Northern Ireland ("**UK**"), the Russian Federation ("Russia") and Kazakhstan over a three month period. These consultants are specialists in the fields of geology, resource and reserve estimation and reporting, ISR Uranium operations, hydrogeology and hydrology, infrastructure, environmental management and life of mine planning.

The individuals listed in Table 1-3 have provided the material input to the 2018 CPR and this Audit Letter, have extensive experience in the mining industry and are members in good standing of appropriate professional institutions.

Table 1-3: SRK Project Team

Responsible Discipline	Consultant	Designation	Registration, Membership, Qualification	Years' Experience
Mineral Resources and ore Reserves	Dr Mike Armitage	Corporate	C.Eng, C. Geol, FGS, MIMMM	36
Mineral Resources	Liubov Egorova	Principal	MAuslMM, BSc	15
Ore Reserves	Dr lestyn Humphreys	Corporate	FIMMM, AIME, PhD	29
LoMp and Financial Modelling	Nick Fox	Principal	FGS, Prof Grad MIMMM, MICAEW, ACA, MSc	23
Geochemistry	Dr Rob Bowell	Corporate	Eur. Geol, C. Chem MRSC, C.Geol., FGS, FIMMM, PhD	32
Hydrogeology	Dr Vladimir Ugorets	Principal	NGWA, MSHA, PhD	41
Environment	Jane Joughin	Corporate	PNS, IAIA, MSc	34

The Competent Person who has overall responsibility for the CPR, Mineral Resources as reported herein is Dr Mike Armitage, C.Eng, C. Geol, FGS, MIMM, PhD. He is a Chartered Geologist which is a Recognised Professional Organisation ("RPO") included in a list promulgated by the Australian Securities Exchange ("ASX") from time to time. He is a full time employee of SRK, a corporate consultant and has over 36 years' experience in the mining and metals industry and also has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code. Mike Armitage has been responsible for the reporting of Mineral Resources and Ore Reserves on various properties internationally during the past 36 years.

The Competent Person who has responsibility for the Ore Reserves as reported herein is Dr lestyn Humphreys, FMIMM, AIME, PhD who is a Corporate Consultant, and Practice Leader with SRK. He is a Fellow of the IMMM which is a RPO included in a list promulgated by the ASX from time to time. Iestyn Humphreys has 29 years' experience in the mining and metals industry and also has been involved in the preparation of Competent Persons' Reports comprising technical evaluations of various mineral assets internationally during the past five years which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code.

## 2 THE MINERAL ASSETS

#### 2.1 Introduction

The following section includes contextual background to the Mineral Assets with specific focus on geographic location, mineral tenure, historical production statistics and summary technical

details pertaining to the Group's Mineral Resources and Ore Reserves statements as at 31 December 2018.

# 2.2 Background

The Mineral Assets are located in three of the six uranium geological provinces of Kazakhstan, have a combined total licence area of 2,059.27km² (Shu-Sarysu at 1,469.69km²; Syrdarya at 545.58km²; and North Kazakhstan at 44.00km²) and includes 30 deposits/blocks categorised as: 26 PP; one DP; and four AEPs. In addition the Company's Exploration Programme covers a further six EPs located in three regions in which the Company is active. The Mineral Assets are largely held through 14 Mining Subsidiaries (Table 2-1) which in conjunction with the Company are directly responsible for uranium mining and downstream processing activities.

Historical development of the Mineral Assets dates from initial discovery in 1963 with the latest deposit discovered in 1982. Initial production commenced at Kazatomprom-SaUran LLP and RU-6 LLP in 1997.

Table 2-1: Mineral Assets development stage, equity interest and tenure key dates and area

and a	rea									
Mining	Uranium	Stage	Equity			Tenure l	cey dates ar	d area		
Subsidiary/Deposit	Province		Interest	Expi	ry	Discovery	Op. Start	LoMp Dep	letion <sup>(1)</sup>	Area
				(year)	(years)	(year)	(year)	(date)	(years)	(km²)
Production										
Kazatomprom-SaUran LLP	01 0		100.00	0000		1000	4007	0000	0.5	04.40
Uvanas	Shu-Sarysu	PP		2022	4.5	1963	1997	2020	2.5	84.48
Eastern Mynkuduk	Shu-Sarysu	PP		2022	4.5	1973	1997	2026	8.5	28.97
Kanzhugan	Shu-Sarysu	PP		2022	4.5	1972	1997	2040	22.5	60.83
South Moinkum (Southern part)	Shu-Sarysu	PP		2019	1.5	1976	2001	2020	2.5	17.40
Central Moinkum	Shu-Sarysu	PP		2039	21.5	1974	2014	2040	22.5	61.22
Total			100.00		21.5	1963	1997	2040	22.5	252.90
Ortalyk LLP	Chu Con ou	DP	100.00	2022	4.5	1964	2018	2020	2.5	145.80
Zhalpak	Shu-Sarysu Shu-Sarysu	PP		2022	14.5	1904	2018	2020	14.5	40.60
Central Mynkuduk Total	Silu-Salysu	FF		2033	14.5	1976	2007 2007	2032	14.5	186.40
RU-6 LLP <sup>(2)</sup>			100.00		14.5	1304	2007	2032	14.5	100.40
Northern Karamurun	Syrdarya	PP	100.00							
Southern Karamurun	Syrdarya	PP		2022	4.5	1979	1997	2034	13.5	59.58
Total	Oyldarya				4.5	1979	1997	2034	13.5	59.58
Appak LLP			65.00		7.0	10.0	1007	2004	10.0	- 00.00
Western Mynkuduk	Shu-Sarysu	PP	05.00	2035	17.5	1976	2008	2036	18.5	133.46
JV Inkai LLP <sup>(2)</sup>	Onu-oarysu	- ' '	60.00	2000	17.5	1370	2000	2000	10.5	100.40
Blocks 1, Inkai (a)	Shu-Sarysu	PP	00.00	2045	27.5	1976	2008	2047	29.5	139.00
Blocks 1, Inkai (b)	Shu-Sarysu	PP		2045	27.5	1976	2008	2046	28.5	100.00
Blocks 1, Inkai (c)	Shu-Sarysu	PP		2045	27.5	1976	2015	2052	34.5	
Total	ona oaryou			20.0	27.5	1976	2008	2052	34.5	139.00
Semizbai-U LLP			51.00						0	
Semizbai	Northern	PP	••	2031	13.5	1973	2009	2040	22.5	27.20
	Kazakhstan									
Irkol	Syrdarya	PP		2030	12.5	1976	2008	2041	23.5	44.00
Total JV Akbastau JSC			F0 00		13.5	1973	2008	2041	23.5	71.20
Block 1 Budenovskoye	Shu-Sarysu	PP	50.00	2037	19.5	1976	2009	2037	19.5	1.586
Block 3 Budenovskoye	Shu-Sarysu	PP		2037	20.5	1976	2009	2037	21.5	1.123
Block 4 Budenovskoye	Shu-Sarysu	PP		2036	20.5	1976	2009	2039	21.5	1.123
Total	Onu-Oarysu				20.5	1976	2009	2039	21.5	2.71
Karatau LLP			50.00		20.0	1370	2003	2000	21.0	
Block 2, Budenovskoye	Shu-Sarysu	PP	30.00	2032	14.5	1979	2007	2033	15.5	17.28
JV Zarechnoye JSC	ona oaryou		49.98	2002	11.0	1010	200.	2000		
Zarechnoye	Syrdarya	PP		2028	10.5	1977	2007	2023	5.5	38.00
JV Katco LLP			49.00							
Southern Moinkum (Northern part)	Shu-Sarysu	PP		2039	21.5	1976	2001	2025	7.5	15.92
Tortkuduk	Shu-Sarysu	PP		2039	21.5	1976	2007	2033	15.5	29.81
Total					21.5	1976	2001	2033	15.5	45.73
JV Khorassan-U LLP(4)			50.00							
Block Kharassan 1, North	Syrdarya	PP		2058	40.5	1972	2008	2036	18.5	70.80
Kharassan	Cyraarya	• • •		2000	70.0	1072	2000	2000	10.0	70.00
JV SMCC LLP			30.00							
Akdala	Shu-Sarysu	PP		2026	8.5	1982	2004	2025	7.5	37.54
Block 4, Inkai	Shu-Sarysu	PP		2029	11.5	1976	2007	2036	18.5	79.37
Total					11.5	1976	2004	2036	18.5	116.91
Baiken-U LLP <sup>(4)</sup>			52.50							
Block Kharassan 2, North Kharassan	Syrdarya	PP		2055	37.5	1972	2009	2032	14.5	350.00
Exploration										
Kazatomprom			100.00							
Block 2 Inkai	Shu-Sarysu	AEP		2022	4.5	1976	2008	n/a	n/a	183.2
Block 3 Inkai	Shu-Sarysu	AEP		2022	4.5	1976	2015	n/a	n/a	240.8
Total	,				4.5	1976	2008			424.00
Budenovskoye LLP			51.00							
Block 6 Budenovskoye	Shu-Sarysu	AEP		2022	4.5	1976	2017	n/a	n/a	151.30
•	•									

Mining	Uranium	Stage	Equity	Tenure key dates and area							
Subsidiary/Deposit	Province		Interest	Expiry		Discovery	Op. Start	LoMp Depl	etion <sup>(1)</sup>	Area	
				(year)	(years)	(year)	(year)	(date)	(years)	(km²)	
Block 7 Budenovskoye	Shu-Sarysu	AEP		2022	4.5	1976	2017				
Total					4.5	1976	2017			151.30	
Grand Total										2,059.27	

<sup>(1)</sup> LoMp: date of depletion of Ore Reserves in the current Life of Mine plans for the Mineral Assets.

The Company either directly or through other subsidiaries also holds contracts with the GoK to undertake exploration at several assets including:

- Togusken and East Uvanas which are all located in the Shu-Sarysu Basin and have been explored since 2013 and 2017 respectively;
- Akkum which is located in the Syrdarya Basin where exploration started in 2017; and
- Inkai 2 and Inkai 3 which were formally part of JV Inkai LLP, and are located in the Shu-Sarysu Basin, but which were given up by JV Inkai LLP in H1 2018 and which the Company now has contracts in place to explore in its own right.

#### 2.3 Location

The Company's Mineral Assets are located in four (Figure 2-1) of the principal administrative provinces of Kazakhstan: Kyzylorda Province (Shieli and Zhanakorgan districts); Turkestan Province (Sozak district); and North-Kazakhstan Province (Ualikhanovsky district); and Amkola Province (Enbekshilder district). Uranium deposits in Kazakhstan are grouped into six uranium provinces (Figure 2-2).

With the exception of the Semizbai deposit located in Northern Kazakhstan, which straddles the North-Kazakhstan Province and the Amkola Province, the Company's deposits are located in the south of Kazakhstan within the Shu-Sarysu (23) and Syrdarya (6) uranium provinces. In administrative terms these southern provinces belong to the Turkestan Province and Kyzlorda Province and the deposits themselves are confined to the northern or southern limb of the Karatau Rise (Figure 2-3).

The Mineral Assets are generally accessible via a well-developed railway and tarred road network with the last sections of access normally comprise as dirt roads. The transportation of goods to and from the ISR operations is mostly undertaken by Trade and Transport Company LLP, a subsidiary of the Company. This company assists with both rail and road transport and also maintains 500km of private roads used for transportation.

On-site infrastructure is extensive and well maintained with the majority having become operational after 2005 with modern installations. Certain of the older installations were commissioned 30 to 40 years ago and appear weathered, notably: Uvanas and Eastern Mynkuduk (dating to1978), Kanzhugan (1982) and North Karamurun and South Karamurun (dating to 1981). Key installations at the Group's operations comprise:

- External power supply connected to the national grid via 110kV and 220kV transmission lines and local substations;
- Wellfields standard infrastructure at all operations comprise: power distribution lines; pregnant leach solution ("PLS") pipelines; portable cabins; access roads; mobile drill rigs; and drill slimes settling ponds;
- Wellfields supporting infrastructure comprising: acid tanks; PLS setting ponds; and drill slimes storage facilities; and
- Processing and Refining plants comprising: fencing and security; process plant and product storage; acid storage tanks; hydrogen peroxide tanks; potable and technical water supply; settling ponds (PLS, barren solution, process slimes, sewage, effluent); office and staff

For JV Inkai LLP, the Company's equity participation is determined based on a prescribed formula based on uranium production within the following bands: 0tU to 1,500tU (40.00%); 1,500tU to 2,000tU (50.00%); 2,000tU to 4,000tU (60.00%).

facilities; and other ancillary infrastructure.

Figure 2-1: Kazakhstan Country Map and location of the Mineral Assets mining and processing operations

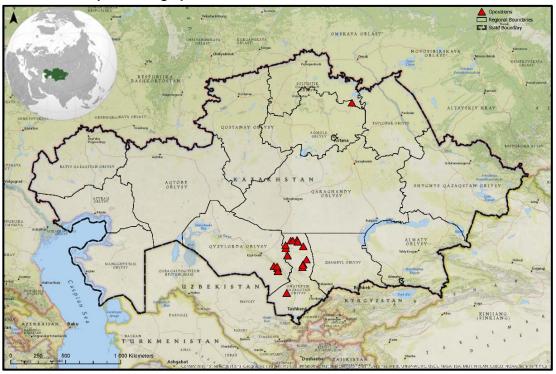
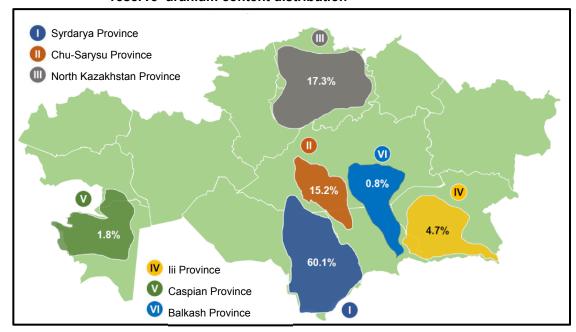


Figure 2-2: Kazakhstan Uranium Provinces indicating distribution of GKZ System 'reserve' uranium content distribution



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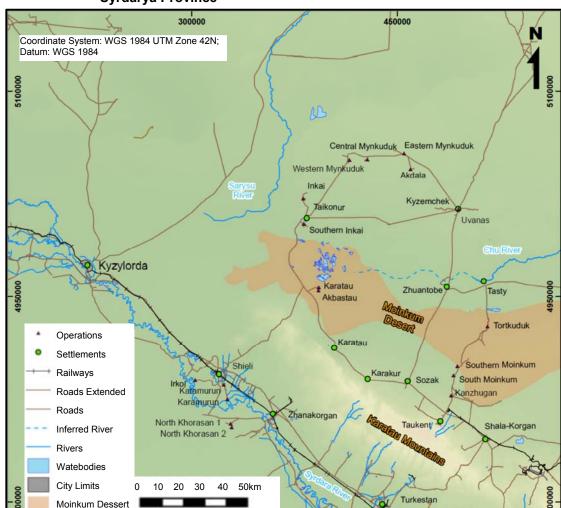


Figure 2-3: Regional location of Mineral Assets in the Shu-Sarysu Province and the Syrdarya Province

# 3 COMMODITY PRICES AND MACRO ECONOMICS

## 3.1 Introduction

The following section includes discussion and comment on the commodity prices and macroeconomic assumptions as relied on for the purpose of reporting the Mineral Resources and Ore Reserves statements as reported herein.

# 3.2 Commodity Prices

The Company has mandated a commodity market specialist, UxC, to provide an overview and analysis of the uranium market and specifically to provide to SRK annual schedules of the benchmark spot market price for  $U_3O_8$ , which is reproduced and expressly relied upon herein for the purpose of supporting the economic viability of the Ore Reserves and to ensure that the Mineral Resources are appropriately assessed with regards to economic potential.

Uranium is not traded in meaningful quantities on a commodity exchange and electric power generation companies purchase the majority of their uranium products under long-term contracts with suppliers and meet the rest of their requirements on the spot market. Furthermore, the market structure is typified by:

Demand which is directly linked to the level of electricity generated by nuclear power plants.
 In 2017 global uranium consumption was noted at 172.8MlbsU<sub>3</sub>O<sub>8</sub>;

• Supply is constrained by two primary sources namely: primary production from operating mines; and secondary supply which includes other sources including, excess inventories, uranium sourced from defence stockpiles, decommissioning of nuclear weapons, reenriched uranium tails and reprocessing of used reactor fuel. Mine production is dominated by a limited number of companies and in 2017 was estimated at 154.5MlbsU<sub>3</sub>O<sub>8</sub> compared with 2016 at 161.9MlbsU<sub>3</sub>O<sub>8</sub>: four countries supply some 78% of estimated world production, Kazakhstan (40%), Canada (22%), Australia (10%) and Niger (6%); and over 66% of global mine production is attributed to five key producers with the Company representing 19.4% in 2017; and

During 2018 the spot market price for U<sub>3</sub>O<sub>8</sub> ranged from a low of US\$20.50/lbU<sub>3</sub>O<sub>8</sub> to a high of US\$29.15/lbU<sub>3</sub>O<sub>8</sub> with an annual average of US\$24.49/lbU<sub>3</sub>O<sub>8</sub> and a year-end close of US\$26.00/lbU<sub>3</sub>O<sub>8</sub>.

The pricing forecasts (spot price forecast) as developed by UxC is derived using UxC's U-PRICETM econometric model which accounts for key factors influencing the uranium market, including UxC Requirements Model ("**URM**") Base Case Demand, Market Outlook & Perception, Primary Production (Base Case), Secondary Supplies, Separative Work Units ("**SWU**" – Enrichment Services) Market Developments and Exchange Rates. During periods of oversupply, the spot price has a history of trending lower as available inventories are offered at a discount to the market. Likewise, in periods of projected undersupply, the spot price has a history of strengthening to incentivize bringing more primary production online to meet higher demand levels.

The real terms (1 January 2019) US\$ price is forecast to increase from U\$31.50/lbU $_3$ O $_8$  in 2019 to US\$34.23/lbU $_3$ O $_8$  in 2025. UxC Base Case Demand growth is relatively flat during this period, but cuts to existing production and depletion of some existing mines, along with the drawdown of secondary supplies in the period, contribute to higher prices. Further, many long-term legacy contracts will end in the early 2020s, forcing some utilities to purchase greater quantities of uranium to meet forward reactor requirements.

For the 2026 through 2027 period, the spot price is forecast to increases more sharply to US\$37.59/lbU<sub>3</sub>O<sub>8</sub>. The spot price is forecast to continue to trend higher beyond 2027, albeit at a slower rate. From 2027 through 2035, the constant U.S. dollar midpoint is forecast to increase by 22% to US\$45.65/lbU<sub>3</sub>O<sub>8</sub> and remain at this level thereafter. The general approach adopted by commodity market specialists is to establish demand-supply-price (nominal) relationships and based on demand and supply forecasts determine pricing assumptions accordingly. The key outcomes from the market outlook assessment provided by UxC are:

- An assumed consumer price inflation rate of 2.00% per annum for the United States dollar (US\$); and
- In real (1 January 2019) terms mid-point prices of US\$31.50/lbU<sub>3</sub>O<sub>8</sub>, US\$32.68/lbU<sub>3</sub>O<sub>8</sub> and US\$41.52/lbU<sub>3</sub>O<sub>8</sub> for 2019, 2022 and 2030 respectively.

Table 3-1 and Table 3-2 present the annual pricing assumptions in 1 January 2019 real terms for the UxC pricing and the Consensus Market Forecast ("**CMF**") pricing where the assumed unit conversions comprise: 2,204.62262 lbs in one metric tonne; and U to  $U_3O_8$  mass conversion of 1.17925. The exchange rate between the US\$ and KZT is 370 which is assumed to remain constant in real terms. The CMF LTP (2024) at US\$34.37/lbU $_3O_8$  assumption is marginally lower with the UxC pricing to 2027, thereafter departing as there is no CMF specific forecast available beyond 2024. Historical pricing for the uranium spot market is included in Table 3-4 and Figure 3-1.

Table 3-1: Commodity Pricing Assumptions (1 January 2019 real terms): 2019 through 2027

Price Assumption	Units	2019	2020	2021	2022	2023	2024	2025	2026	2027
UxC										
High	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	35.13	37.70	38.78	39.50	40.32	41.61	45.04	47.84	49.52
Mid	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	31.50	32.43	32.68	32.60	32.68	32.95	34.23	35.71	37.59
Low	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	28.40	24.05	23.18	20.88	21.41	22.61	23.78	26.87	29.60
CMF										
High	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	53.53	53.71	56.27	56.75	58.79	60.73	60.07	60.32	60.32
Median	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	39.26	39.48	41.52	42.92	45.12	45.33	46.32	45.65	45.65
Low	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	32.24	32.80	34.36	35.58	36.16	36.00	36.60	36.39	36.39
Reporting Assumptions										
Base Case	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	31.50	32.43	32.68	32.60	32.68	32.95	34.23	35.71	37.59
	(US\$/lbU)	37.15	38.24	38.54	38.44	38.54	38.86	40.37	42.11	44.33
	(US\$/kg)	81.89	84.31	84.96	84.75	84.96	85.66	88.99	92.84	97.73
Exchange Rate	(KZT to 1 US\$)	370	370	370	370	370	370	370	370	370
	(KZT/lbU)	13,744	14,150	14,259	14,224	14,259	14,377	14,935	15,581	16,401
	(KZT/kgU)	30,301	31,195	31,436	31,359	31,436	31,695	32,927	34,350	36,159

Table 3-2: Commodity Pricing Assumptions (1 January 2019 real terms): 2028 through 2036

Price Assumption	Units	2028	2029	2030	2031	2032	2033	2034	2035	2036
UxC										
High	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	49.06	51.69	54.82	54.93	56.38	58.01	58.92	58.53	58.53
Mid	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	36.43	37.47	37.75	39.56	41.54	43.40	43.58	43.53	43.53
Low	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	29.98	30.66	32.28	33.55	34.18	34.08	34.71	34.53	34.53
CMF										
High	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	46.01	46.01	46.01	46.01	46.01	46.01	46.01	46.01	46.01
Median	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	34.37	34.37	34.37	34.37	34.37	34.37	34.37	34.37	34.37
Low	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
Reporting Assumptions										
Base Case	(US\$/lbU <sub>3</sub> 0 <sub>8</sub> )	39.26	39.48	41.52	42.92	45.12	45.33	46.32	45.65	45.65
	(US\$/lbU)	46.30	46.56	48.96	50.61	53.21	53.46	54.62	53.83	53.83
	(US\$/kg)	102.07	102.64	107.94	111.58	117.30	117.85	120.42	118.68	118.68
Exchange Rate	(KZT to 1 US\$)	370	370	370	370	370	370	370	370	370
	(KZT/lbU)	17,130	17,226	18,116	18,727	19,687	19,778	20,210	19,918	19,918
	(KZT/kgU)	37,765	37,977	39,939	41,286	43,402	43,604	44,556	43,912	43,912

Table 3-3: Consensus Market Forecast analysis (1 January 2019 real terms): 2028 through 2036

Statistic	Units	2019	2020	2021	2022	2023	2024
High	(US\$/lb)	39.21	48.19	52.07	55.80	54.81	46.01
Median	(US\$/lb)	29.41	29.88	36.92	37.20	34.92	34.37
Average	(US\$/lb)	30.96	32.70	35.79	38.61	38.00	35.69
Low	(US\$/lb)	26.21	26.99	26.51	27.90	27.41	28.00
STDEV	(US\$/lb)	3.99	6.45	7.44	8.70	9.57	8.81
Analysts	(No)	12	9	12	12	9	4

Table 3-4: Historical uranium price statistics for annual periods commencing 2000 through 2018 inclusive<sup>(1)</sup>

Period			Spot Market Ura	nium Price			
	Min	Max	Average	3YDMAV	Nominal Close	Real Close	LTP Real
	(US\$/IbU <sub>3</sub> O <sub>8</sub> )	(US\$/IbU <sub>3</sub> O <sub>8</sub> )	(US\$/IbU3O8)	(US\$/IbU3O8)	(US\$/IbU3O8)	(US\$/IbU3O8)	(US\$/IbU <sub>3</sub> O <sub>8</sub> )
2000	7.10	9.60	8.38	8.38	7.10	10.36	18.83
2001	7.10	9.60	8.62	8.50	9.60	10.52	19.97
2002	9.60	10.20	9.84	8.95	10.20	10.77	19.50
2003	10.10	14.50	11.25	9.52	14.50	10.97	19.14
2004	14.50	20.70	18.12	11.96	20.70	12.34	18.98
2005	20.70	36.25	27.39	16.65	36.25	17.44	25.19
2006	36.25	72.00	47.55	26.08	72.00	36.84	32.88
2007	72.00	136.00	98.19	47.81	90.00	62.51	46.39
2008	44.00	90.00	63.68	59.20	53.00	65.35	66.33
2009	40.00	54.00	46.47	63.97	44.50	64.27	66.12
2010	40.50	62.50	46.30	63.66	62.50	56.25	63.62
2011	49.00	73.00	57.10	53.39	52.50	60.60	60.67
2012	40.75	52.50	48.88	49.69	43.75	67.73	65.85
2013	34.00	44.00	38.60	47.72	34.50	70.60	64.88
2014	28.00	44.00	33.45	44.51	35.50	71.75	68.32
2015	34.25	39.50	36.87	39.45	34.25	72.27	67.83
2016	18.00	34.85	26.58	33.88	20.25	62.28	56.01
2017	19.25	26.50	21.98	29.72	23.75	49.57	36.80
2018	20.50	29.15	24.49	27.48	26.00	25.92	31.77

<sup>(1)</sup> Real terms defined as 1 January 2019 money terms.

<sup>(2)</sup> Historical data to 31 December 2018.

<sup>(3)</sup> Historical Long Term Price derived from median of Consensus Market Forecasts.

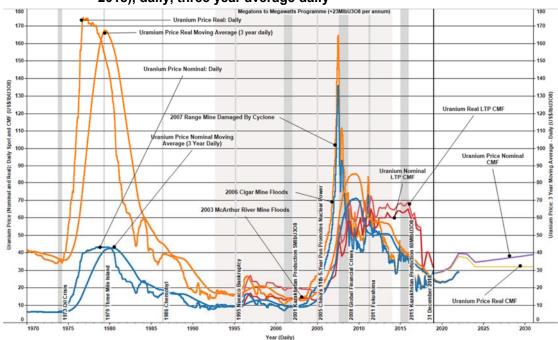


Figure 3-1: Historical Uranium Spot Market Prices (nominal and real 1 September 2018), daily, three year average daily

# 3.3 Macro-Economic Assumptions

Historical data for the exchange rate between the KZT and the US\$ and consumer price inflation ("**CPI**") is provided in Table 3-5, Figure 3-2, Figure 3-3 and Figure 3-4.

For the 12-month period ended 31 December 2018 the historical exchange rate of the KZT against the US\$ has ranged from a low of 319KZT to a high of 381KZT with an average of 345KZT and a year-end close of 371KZT.

For the 12-month period ended 31 December 2018 the year on year CPI for Kazakhstan and the United States was noted as 3.86% and 2.76% respectively.

i abie 3-3.	Thistorical Macro-Economics			
Year	End of Year	Average	CPI (YoY%)	
	(KZ to 1 US\$)	(KZ to 1 US\$)	KZ	US
2000	146	142	9.78	3.39
2001	151	147	6.42	1.55
2002	156	153	6.58	2.38
2003	143	149	6.74	1.88
2004	130	136	6.92	3.26
2005	134	133	7.38	3.42
2006	127	126	8.36	2.54
2007	121	123	18.77	4.08
2008	121	120	9.47	0.09
2009	148	148	6.20	2.72
2010	147	147	7.75	1.50
2011	148	147	7.36	2.96
2012	150	149	5.96	1.74
2013	154	152	4.78	1.50
2014	183	179	7.42	0.76
2015	341	223	13.61	0.73
2016	334	342	8.40	2.07
2017	333	326	7.52	2.11
2018(1)	371	345	3.86	2.76

Table 3-5: Historical Macro-Economics

<sup>(1)</sup> Historical data through to 31 December 2018.

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Figure 3-2: Historical Exchange Rates against the US\$ (daily close) to 31 December 2018

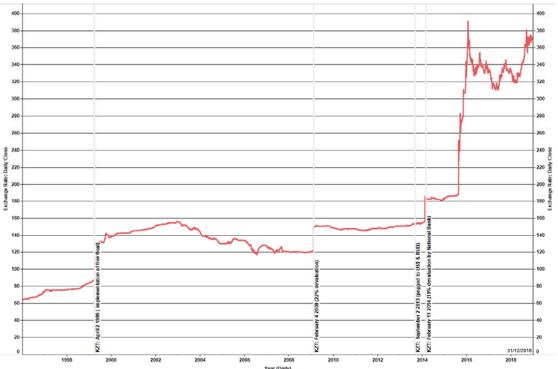
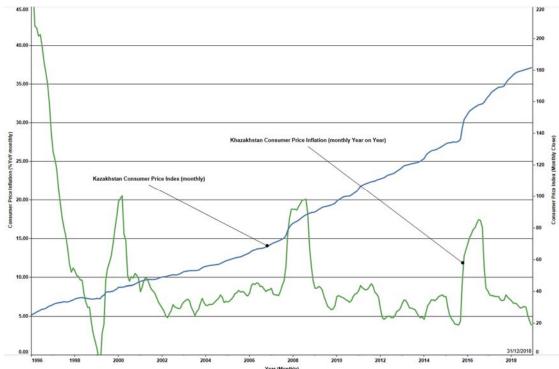


Figure 3-3: Historical Consumer Price Index and Inflation for Kazakhstan to 31 December 2018



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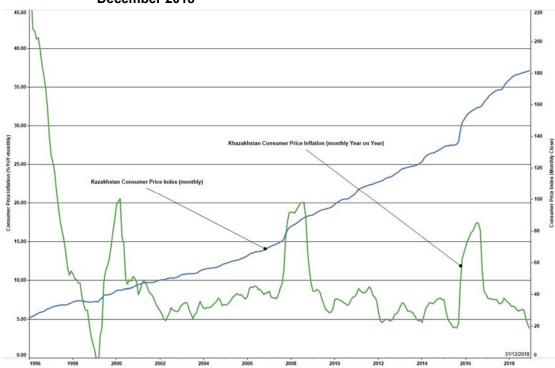


Figure 3-4: Historical Consumer Price Index and Inflation for the United States to 31 December 2018

# 4 MINERAL RESOURCE AND ORE RESERVE STATEMENTS

#### 4.1 Introduction

The following section presents the basis for derivation of the Mineral Resource and Ore Reserve Statements for the period ending 31 December 2018. Detailed technical information in respect of the 2018 Statements is not re-reported herein and accordingly the reader is referred to the 2018 CPR for all aspects relating to the following: geology; quantity and quality of data; resource estimation; hydrogeology and chemistry; in-situ uranium extraction and recovery; supporting infrastructure; environmental and social management; Life-of-Mine plans; and risks and opportunities.

Furthermore it is important to note that other than depletion for 2018 H2 as reported by the Company there have been no other adjustments to the Mineral Resources and Ore Reserves as reported in the 2018 CPR, save for:

- The revised Mineral Resource estimates for Block 4, Inkai; and
- The new maiden Mineral Resource estimate for Block 6 Budenovskoye and Block 7 Budenovskoye.

Notwithstanding the above, SRK also notes that as no detailed test wells have yet been completed for the above revised Mineral Resource estimates and that no further mine plans developed, there are no additional (Block 4, Inkai) or new (Block 6 Budenovskoye; Block 7, Budenovskoye) Ore Reserves reported for these Mineral Assets.

# 4.2 The Company's GKZ System Statements

#### 4.2.1 Quality and Quantity of Data

The uranium mineralisation being exploited by the Company has been explored by drilling only. The drilling was typically undertaken during several stages of exploration and comprised both core and conventional mud rotary drilling. The mud drilling was used in most cases to drill to

the hangingwall of the mineralisation horizon which was then cored. The mud drilling diameter varied between 118mm and 132mm, and the core drilling diameter between 93mm and 112mm.

In general, for all deposits (which are categorised in the second complexity according to the Kazakh guidelines), the exploration drilling grid was 200m to 400 by 50m for the C2 category and 100m to 200m by 50m for the C1 category.

The targeted core recovery was not less than 70% for mineralisation intervals and 50% for the host rock.

All core samples were systematically logged primarily for grain size, clay content, texture, structure and mineralisation. The drillholes are geophysically and radiometrically logged with various down-hole instruments to determine indirectly the uranium content in the rocks and other parameters. The geophysical parameters measured include gamma radioactivity (measured as  $\mu R/hr$ ), resistivity, self-potential ("SP"), prompt-fission neutron logging (control holes only), caliper log, thermal log and deviation survey.

The uranium grade is predominantly estimated from downhole gamma-logging which is an internationally accepted standard procedure for the determination of uranium grade. Correction factors are then applied to reflect the following: thorium and potassium correction; moisture; radon release; disequilibrium; and ore density.

The thorium and potassium content are determined from core assay at the first stage of exploration. Radon release is determined from specific tests. Disequilibrium between radium and uranium is determined from the core sampling data based on the representative selection of the samples. The ore density is determined from standard measurements carried out on the core.

Resistivity and self-potential logging is used to help determine the lithology of the host rocks. The three main lithologies that can be determined in this way being clays/siltstones, fine-medium grained sandstones and coarse sandstones/gravels. The quality of the resistivity and self-potential logging is determined from re-logging of the same holes and the control holes.

Sampling of the core is performed only for those intervals where the core recovery is above 70% and the gamma intensity based on downhole logging is above 40MkRh/h. The core is split in half and sampled using 0.1m to 1.0m intervals. The sampling intervals are selected based on lithology and the results of hand spectral logging.

For assaying the core is usually split in two halves. The first half is used for uranium and radium determination. All samples are analysed for uranium content using X-ray spectral fluorescent analyses. A selection of samples are analysed for radium using gamma-ray in complex with X-ray spectral analyses of uranium and thorium. The remaining half core is used to help interpret the gamma-logs, for density measurements, moisture determination, for chemical control analyses, selenium grade determination, and to measure the physical properties of the host rocks (density, granulometry), and for geotechnical information.

The quality of gamma logging data is determined based on the systematic re-logging of the holes and the results of logging based on control holes which are set up at each deposit. The quality of the uranium grade determination from gamma data can only be measured by comparing to assay results or to prompt-fission neutron logging data. The results of comparison are analysed for potential systematic and random error. The systematic error is calculated using the following criteria: average squared error for the thickness and grade determinations should be within 25cm for thickness 25% for the uranium grade.

The quality of the uranium and radium grade obtained using X-ray spectral fluorescent analyses is determined using control re-assay of the samples in the same laboratory (internal control),

analyses of the samples using wet chemistry techniques in an external laboratory (between-method control) and analyses of the sample using same analytical method in the arbitrage laboratory (external control). The control analyses are undertaken using industry standards which determine the amount of samples (not less than 30 samples for each grade class).

The quality of determination of filtration coefficient from electric logging data is determined by comparing to hydrogeological pumping results.

# 4.2.2 Estimation Methodology

Resource estimation is undertaken using the accepted standard in-country polygonal approach based on sections and plans. The practice of 3D modelling is not currently widely used in Kazakhstan. The mine planning and reconciliation performed is also undertaken using these polygon estimates.

The key parameters that are estimated for each polygon are:

- **Filtration:** Unique filtration parameters are typically developed for each lithology within each deposit based on resistivity and self-potential logging;
- Clay content: The clay content is also determined based on resistivity and self-potential logging;
- Uranium grade: The uranium grade is determined from the gamma logging data. The
  correction factors which are used to convert gamma logging data into uranium grade, and to
  account for equilibrium effects, radon content etc are determined via correlation with actual
  assay data. Unique factors are developed for each host rock and each deposit; and
- Density: The host rock density is determined from determinations undertaken on core material. In general, during the exploration stage some several hundred samples are collected from different lithological intervals and a different density is calculated for each lithology.

In general, the resource polygons/blocks are delineated as hard boundaries using the following criteria:

#### • For the Shu-Sarysu Basin:

- The blocks are delineated within the same water-bearing horizon taking into account the local confining layer,
- The thickness of any diluting interval should not exceed 6m for C1 but is not limited for C2.
- The minimum grade should be 0.01%U,
- The minimum grade\*thickness accumulation value is 0.04%Um to 0.08%Um (deposit specific),
- The minimum Filtration Ratio is 1m/day,
- The minimum ore/waste factor is 0.75
- The maximum clay content is 30%; and

#### • For the Syrdarya Basin:

- The blocks are delineated within the same water-bearing horizon taking into account the local confining layer,
- The thickness of the diluting interval should not exceed 8m,
- The minimum grade should be 0.01%U,
- The minimum grade\*thickness value is 0.06%Um,
- The minimum Filtration Ratio is 1m/day,
- The minimum ore/waste factor is 0.8,

The maximum clay content is 20%.

For both basins, the individual blocks/polygons are derived based on uranium grade, filtration parameter and clay content, the minimum size for a C1 category polygon being 30,000m<sup>3</sup>. Intersections which do not meet the above criteria are included to ensure continuity but are limited such that the minimum ore/waste factor is honoured. In addition, all of the intersections included in an individual block/polygon should:

- · Have similar structural and morphological characteristics;
- Correspondence to the same part of the geological structure (fold limb for example);
- Have similar filtration characteristics; and
- · Be on a regular intersection grid.

The extent of each polygon is then limited to:

- one quarter of the drilling grid in case where the neighbouring intersection is barren; and
- one half of the drilling grid in case where the neighbouring intersection is low grade.

After delineation of the polygons/blocks, each is allocated a thickness and uranium grade calculated as an arithmetical mean of all of the intersections within the polygon that honour the criteria. The area of the polygons is then in most cases estimated using GIS software (Mapinfo, ArcGIS). After that, the specific productivity of each area is calculated by multiplying the average grade, average thickness and density. The metal content of each block is then estimated by multiplying the specific productivity of an area by an ore/waste factor.

# 4.2.3 GKZ System Statements

The Company reports its estimates using the GKZ System and the most up to date complete statements (the "GKZ System Statements") available as at the date of this report are those derived for the annual 8GR reports which give the status as of 31 December 2018. The 8GR reports are also supported by TO-25 production reports and Balanced Movement reports with the 8GR reports being a statutory requirement filed with the GoK. These estimates were produced using classical Kazakh techniques and are essentially based on calculations made in previous years adjusted for mining during 2018. This section therefore comments primarily on the GKZ System Statements.

The A and B categories are the highest confidence in the GKZ System categories and are only used where the stated tonnage and grade estimates are considered to be known to a very high degree of accuracy. The C1 and C2 categories are lower confidence categories, with C2 denoting the least level of confidence of the four categories. All of these categories are considered by the Company to be appropriate for use in supporting mining plans and feasibility studies.

The actual resource classification assigned to each resource block takes into account the exploration grid and the complexity of the deposit. The complexity is determined using the characteristics of the deposits which is a reflection of the ore/waste factor, the grade variability and the thickness variability.

According to the industry standard the complexity can vary from 1 to 4 (4 being most complex). All of the deposits of the Syrdarya and Shu-Sarysu basins, except for Zarechnoye have been classified as complexity 2 while the Zarechnoye deposit after the start of production was downgraded to a complexity of 3.

In the case of the Company, blocks are rarely assigned to the A or B category and so the vast majority of the resources reported by the Company are in the C1 and C2 categories, the typical drilling grid used to support a C2 classification being 400m to 800m by 50m to 100m and that

for C1 being 200m by 50m.

Table 4-1 below summarises SRK's understanding of the resource statements prepared by the Company to reflect the status of its assets as of 31 December 2018. The information used to derive this was sourced from the 8GR reports which the Company is required to submit to the GoK on an annual basis. Typically, the Company reports the contained U (not U<sub>3</sub>O<sub>8</sub> as is typically used in Europe and the United States for example) and not tonnes and grade. SRK notes that all of the estimates given below reflect the resource remaining at each asset on an aggregated basis and not just the portion attributable to the Company.

SRK has reviewed the estimation methodology used by the Company to derive the above estimates and the geological assumptions made and considers these to be reasonable given the information available. SRK has also undertaken various re-calculations of the remaining resource using actual mining statistics from TO-25 reports, 8GR reports and resource depletion reports and has in all cases found no material errors or omissions. Given this, SRK considers the resource estimates reported by the Company to be a reasonable reflection of the total quantity and quality of material demonstrated to be present at the assets as of 31 December 2018 and to have been reported appropriately using the GKZ System.

Table 4-1: Company's GKZ System Statement (Aggregated basis) as at 31 December 2018 (tonnes contained U)

Entity/Deposit				stem Stateme			
	A	В	C1	C2	Subtotal	P1	Tota
Kazatomprom-SaUran LLP	(tU)	(tU)	(tU)	(tU)	(tU)	(tU)	(tU)
Uvanas							
Eastern Mynkuduk	-	-	4,946	2,428	7,374	-	7,374
Kanzhugan	-	-				-	
South Moinkum (Southern part)		-	11,043	5,122	16,165	-	16,16
Central Moinkum	-	-	4.550	1,116 7,206	1,116 11,756	-	1,116 11,756
Total	-	-	20,539		36,412	-	
Ortalyk LLP	-	-	20,539	15,872	36,412	-	36,412
Zhalpak			8.147	6,249	14.396		14.396
Central Mynkuduk	-		22,418	5,477	27,895	-	27,89
Total	-	-	30,565	11,726	42,291	-	42,29
RU-6 LLP	٦	-	30,303	11,720	42,231	-1	42,23
Northern Karamurun			5,882	4,789	10,671		10,67
Southern Karamurun	-	-	6,223	1,216	7,439		7,43
Total	-	_	12,105	6,005	18,109	-	18,10
Appak LLP	-	-	12,105	6,003	10,109	-	10,10
Western Mynkuduk	_		3,996	14,797	18,793		18,79
JV Inkai LLP	-	-	3,990	14,797	16,793	-	10,79
	_	741	26,830	5,661	33,231		22.22
Block 1 Inkai (a)		741		43.942		-	33,23
Block 1 Inkai (b)	-	-	18,591	- , -	62,533	-	62,53
Block 1 Inkai (c)			37,575	8,496	46,071	-	46,07
Total	-	-	82,995	58,099	141,835	-	141,83
Semizbai-U LLP			0.044	0.004	40.504		40.50
Semizbai	-	-	9,641 8,769	2,894	12,534	-	12,53
Irkol Total	-	-	-,	12,753	21,522	-	21,52
	-	-	18,410	15,647	34,057	-	34,05
JV Akbastau JSC	_		10.010	4.000	44.040		44.04
Block 1 Budenovskoye		-	10,213	4,636	14,849	-	14,84
Block 3 Budenovskoye	-	-	15,634	5,543	21,177	-	21,17
Block 4 Budenovskoye Total	-	-	3,422	3,554	6,976	-	6,97
	-	-	29,269	13,733	43,002	-	43,002
Karatau LLP							
Block 2 Budenovskoye	-	-	28,848	18,044	46,892	-	46,892
Zarechnoye	_	94	6,783	2,678	9,554	_	9,55
JV Zarechnoye JSC		0-1	0,700	2,070	0,004		0,00
Southern Moinkum (Northern part)	-	-	5,578	3.040	8.618	_	8.61
Tortkuduk	-	_	23,650	25.834	49,484	_	49,48
Total	-	_	29,228	28,874	58,102	_	58,10
JV Katco LLP			20,220	20,014	00,102		00,10
Block Kharassan 1, North Kharassan	-	-	13,120	28,618	41,738	_	41,73
JV SMCC LLP			10,120	20,0.0	11,700		,
Akdala	_	_	3.906	1.503	5.409	_	5.409
Block 4, Inkai	_	-	46,830	33,847	80,676	2,158	82,83
Total	_	_	50,736	35,350	86,085	2,158	88,24
Baiken-U LLP			00,100	00,000	00,000	2,100	55,24
Block Kharassan 2, North Kharassan	_		12,270	9,211	21,481		21,48
Kazatomprom	-	-	12,210	ا ۱ کی	21,701	-	21,40
Block 2 Inkai			_	42,004	42,004	_	42,00
Block 3 Inkai	-	-	40,402	42,734	83,137	-	83,13
DIOOK O HINGI	-	-	40,402	84,739	125,141	-	125,14

Entity/Deposit			GKZ	System Staten	nent		
	Α	В	C1	C2	Subtotal	P1	Total
	(tU)	(tU)	(tU)	(tU)	(tU)	(tU)	(tU)
Budenovskoye LLP							
Block 6 Budenovskoye	-	-	-	-	-	7,558	7,558
Block 7 Budenovskoye	-	-	-	32,665	32,665	11,938	44,602
Total	-	-	-	32,665	32,665	19,495	52,160
Grand Total	-	94	379,266	376,057	756,157	21,653	777,811
Regional							
Shu-Sarysu	-	741	316,579	313,898	631,218	21,653	652,871
Syrdarya	-	94	53,918	49,406	103,418	-	103,418
Northern Kazakhstan	-	-	8,769	12,753	21,522	-	21,522
Total	-	835	379,266	376,057	756,157	21,653	777,811

# 4.3 Audit Methodology and Approach

SRK has reviewed the reports which provide the details of exploration process for each of the deposits, the exploration process being in general the same for all of these, and considers that the selected method of exploration is effective and sufficient for all of the deposits at the Mineral Assets as reported herein.

While the technique of estimating the uranium grade from gamma logging data has been well developed and applied, the challenge when using this technique is the derivation of the various correction factors required to be applied when calculating the uranium grade from gamma data. For most of the parameters, such as thorium and potassium content and density, such approach is quite acceptable as these parameters have a low variability. On the other hand, radon release and disequilibrium have a high variability, notably in this case within the deposits of Syrdarya and Shu-Sarysu provinces (between 0.4 and 1.55), and the behaviour of these coefficients is therefore quite complex. While work to determine the relationship between the disequilibrium rate and lithology and mineralisation has been carried out, the Company has typically used an average correction factor for radon release and disequilibrium either for the whole deposit or for areas of the deposit.

In SRK's opinion, the use of an average in this manner can result in the underestimation (more common) or overestimation of the uranium grade in certain areas of the deposit and so while on average the assumed uranium grades will be reliable it does mean that variations exist which have not been modelled and this results in some blocks experiencing lower extraction factors than envisaged and some higher (sometimes exceeding 100%).

Notwithstanding the above comment on variations within individual deposits, overall SRK considers that the exploration approach followed by the Company has been appropriate and specifically aimed at collecting the data appropriate to the estimation of uranium resources and that sufficient data of sufficient quality has been collected to support the resource estimates as derived by the Company and as presented here.

SRK has re-classified the resource estimates in accordance with the terms and definitions proposed in the JORC Code. Definitions for the different categories used by this reporting code are given in the glossary provided in the 2018 CPR. In doing this, SRK has typically reported those blocks classified as B or C1 by the Company as Measured and those blocks classified as C2 by the Company as Indicated.

Notwithstanding the above SRK has, in specific instances adjusted the above approach to account for:

- Cases where the production blocks delineated by production drilling have been consistently different (±20%) to the original resource, even where there was not a systematic bias. In these cases, SRK has classified the C1 mineralisation as Indicated and only that part of the C1 which has been delineated by production drilling as Measured.
- Cases where the drilling undertaken as part of the production process has consistently delineated less resource than originally estimated (notably at Zarechnoye). In these cases

SRK has reduced the estimated resource by a factor reflecting this and where the reconciliation has been poor or variable SRK has re-reported blocks classed as C1 by the Company as Indicated and C2 by the Company as Inferred. In the case of Zarechnoye, SRK applied a factor of 0.7. For the 31 December 2018 statements the adjustment to Zarechnoye reflects a deduction of 3,157tU;

- Cases where the current GKZ statements comprise elements which SRK consider should be excluded due to infrastructural constraints or historically mined areas comprising remnant blocks, the potential extraction of which is considered technically challenging and/or not economic at currently assumed commodity prices. In these cases, SRK has made adjustments which collectively represent a negative adjustment of 15,143tU comprising: Semizbai (1,585tU); Irkol (5,175tU); Eastern Mynkuduk (1,065tU); Kanzhugan (4,426tU); South Monikum (304tU); South Karamurun (424tU); and North Karamurun (2,165tU); and
- Cases where 'Prognostic' P1 Mineral Resources have been defined: These have either been:
  - Considered sufficiently defined to support reporting as Inferred Mineral Resources, specifically Block 4, Inkai, or
  - Considered insufficiently defined to consider inclusion as Inferred Mineral Resources, notably Budenovskoye Block 6 which reports 7,558tU in accordance with the GKZ System.

SRK's audited Mineral Resource statements are reported inclusive of those Mineral Resources converted to Ore Reserves. The audited Ore Reserve is therefore a sub set of the Mineral Resource and should not therefore be considered as additional to this.

SRK has not attempted to optimise the Company's LoMps. Consequently, SRK's audited Mineral Resource statements are confined to those areas that both have the potential to be mined economically and which are currently being considered for mining only. They also reflect the quantity of in-situ uranium planned to be extracted and do not take account of metallurgical recovery both as part of the in-situ leaching process and within the plant itself which typically varies between 80% and 90%.

## 4.4 Mineral Resources and Ore Reserve Statements

The Mineral Resource and Ore Reserve statements reported in this Audit Letter result from a review of all available information provided by the Company to support the updating of the Mineral Resource and Ore Reserve statements as previously reported in the 2018 CPR.

#### 4.4.1 Mineral Resources

As at 31 December 2018 the aggregated Mineral Resources for the Mineral Assets (Table 4-2; Table 4-3) total 1,373.7Mt grading 0.054%U and containing 740.0ktU and comprising:

- Measured Mineral Resources of 601.4Mt grading 0.058%U and containing 348.8ktU;
- Indicated Mineral Resources of 764.5Mt grading 0.051%U and containing 387.7ktU; and
- Inferred Mineral Resources of 7.9Mt grading 0.045%U and containing 3.6ktU.

As at 31 December 2018 the attributable Mineral Resources for the Mineral Assets (Table 4-4) total 932.7Mt grading 0.051%U and containing 476.7ktU comprising Measured and Indicated Mineral Resources of 929.8Mt grading 0.051%U and containing 475.3ktU.

Figure 4-1 provides a graphical representation of the contribution of the Mining Subsidiaries and the reporting categories within each of the Mining Subsidiaries to the aggregated Mineral Resources reported in the 2018 Statements.

Table 4-2: SRK Audited Mineral Resource Statement (Measured and Indicated) as at 31 December 2018 by Mining Subsidiary and Regional sub-division

Entity/Deposit		sured Mineral			ndicated		Measured + Indicated		
		lesources	(1-411)		al Resources			al Resource:	
Kazatomprom-SaUran LLP	(Mt)	(%U)	(ktU)	(Mt)	(%U)	(ktU)	(Mt)	(%U)	(ktU)
Uvanas	_	_	_		_	_	_	_	_
Eastern Mynkuduk	14.3	0.030	4.3	6.7	0.030	2.0	21.0	0.030	6.3
Kanzhugan	3.1	0.030	1.3	27.5	0.038	10.4	30.6	0.038	11.7
South Moinkum (Southern part)	0.1	0.039	0.1	1.6	0.048	0.8	1.7	0.047	0.8
Central Moinkum	0.5	0.056	0.3	19.8	0.058	11.5	20.3	0.058	11.8
Total	18.0	0.033	5.9	55.6	0.044	24.7	73.6	0.042	30.6
Ortalyk LLP	10.0	0.000	0.0	00.0	0.044	2-7-1	70.0	0.0-12	00.0
Zhalpak	0.5	0.045	0.2	44.3	0.032	14.2	44.8	0.032	14.4
Central Mynkuduk	47.7	0.047	22.4	14.4	0.038	5.5	62.1	0.045	27.9
Total	48.2	0.047	22.6	58.7	0.033	19.7	106.9	0.040	42.3
RU-6 LLP		0.0			0.000		100.0	0.0.0	
Northern Karamurun	6.0	0.069	4.2	2.2	0.050	1.1	8.3	0.064	5.3
Southern Karamurun	7.0	0.081	5.7	5.1	0.089	4.6	12.1	0.084	10.2
Total	13.0	0.075	9.8	7.4	0.077	5.7	20.4	0.076	15.5
Appak LLP		0.0.0	0.0		0.01.	• • •		0.0.0	
Western Mynkuduk	12.5	0.032	4.0	41.1	0.036	14.8	53.6	0.035	18.8
JV Inkai LLP	.2.0	0.002			0.000		00.0	0.000	10.0
Block 1 Inkai (a)	35.9	0.076	27.3	9.7	0.061	5.9	45.6	0.073	33.2
Block 1 Inkai (b)	32.7	0.051	16.7	86.5	0.053	45.8	119.2	0.052	62.5
Block 1 Inkai (c)	79.9	0.047	37.6	17.3	0.033	8.5	97.3	0.032	46.1
Total	148.6	0.055	81.6	113.6	0.053	60.3	262.1	0.054	141.8
Semizbai-U LLP		0.000	0		0.000	00.0		0.00.	
Semizbai	16.9	0.057	9.6	2.5	0.053	1.3	19.4	0.056	10.9
Irkol	21.4	0.041	8.8	18.0	0.042	7.6	39.4	0.041	16.3
Total	38.3	0.048	18.4	20.5	0.043	8.9	58.8	0.046	27.3
JV Akbastau JSC	55.5	0.0.0			0.0.10	0.0	00.0	0.0.0	
Block 1 Budenovskoye	9.5	0.107	10.2	5.3	0.088	4.6	14.8	0.100	14.8
Block 3 Budenovskoye	22.0	0.071	15.6	5.5	0.100	5.5	27.6	0.077	21.2
Block 4 Budenovskoye	2.4	0.141	3.4	4.2	0.084	3.6	6.7	0.105	7.0
Total	34.0	0.086	29.3	15.0	0.091	13.7	49.0	0.088	43.0
Karatau LLP									
Block 2 Budenovskoye	29.7	0.097	28.8	28.6	0.063	18.0	58.4	0.080	46.9
JV Zarechnoye JSC									
Zarechnoye	4.3	0.060	2.6	4.0	0.060	2.4	8.3	0.060	5.0
JV Katco LLP		0.000			0.000		0.0	0.000	0.0
Southern Moinkum (Northern part)	8.9	0.063	5.6	5.3	0.057	3.0	14.2	0.061	8.6
Tortkuduk	19.4	0.122	23.7	21.9	0.118	25.8	41.3	0.120	49.5
Total	28.2	0.104	29.2	27.2	0.106	28.9	55.5	0.105	58.1
JV Khorassan-U LLP									
Block Kharassan 1, North Kharassan	12.4	0.106	13.1	26.7	0.107	28.6	39.1	0.107	41.7
JV SMCC LLP			,						
Akdala	6.9	0.057	3.9	2.6	0.057	1.5	9.5	0.057	5.4
Block 4, Inkai	116.3	0.040	46.8	83.7	0.040	33.8	200.0	0.040	80.7
Total	123.1	0.041	50.7	86.3	0.041	35.3	209.5	0.041	86.1
Baiken-U LLP	,	,	,				,	,	
Block Kharassan 2, North Kharassan	10.8	0.114	12.3	8.5	0.109	9.2	19.2	0.112	21.5
Kazatomprom									
Block 2 Inkai	_	-	-	133.8	0.031	42.0	133.8	0.031	42.0
Block 3 Inkai	80.3	0.050	40.4	92.1	0.046	42.7	172.3	0.048	83.1
Total	80.3	0.050	40.4	225.9	0.038	84.7	306.1	0.041	125.1
Budenovskoye LLP									
Block 6 Budenovskoye	-	-	-	-	-	-	-	-	-
Block 7 Budenovskoye	-	-	-	45.3	0.072	32.7	45.3	0.072	32.7
Total	-	-	-	45.3	0.072	32.7	45.3	0.072	32.7
Grand Total	601.4	0.058	348.8	764.5	0.051	387.7	1,365.9	0.054	736.4
Regional							,		
Shu-Sarysu	522.7	0.056	292.6	697.4	0.048	332.8	1,220.0	0.051	625.4
Syrdarya	61.8	0.075	46.5	64.7	0.083	53.5	126.5	0.079	100.1
Northern Kazakhstan	16.9	0.057	9.6	2.5	0.053	1.3	19.4	0.056	10.9
NUITIETTI NAZAKIISIATI									

Table 4-3: SRK Audited Mineral Resource Statement (Inferred and Total) as at 31 December 2018 by Mining Subsidiary

Mining Subsidiary /Deposit		nferred al resources	Total Mineral Resources			
	(Mt)	(%U)	(ktU)	(Mt)	(%U)	(ktU)
Kazatomprom-SaUran LLP						
Uvanas	-	-	-	-	-	-
Eastern Mynkuduk	-	-	-	21.0	0.030	6.3
Kanzhugan	-	-	-	30.6	0.038	11.7
South Moinkum (Southern part)	-	-	-	1.7	0.047	0.8
Central Moinkum	-	-	-	20.3	0.058	11.8
Total	-	-	-	73.6	0.042	30.6
Ortalyk LLP						
Zhalpak	-	-	-	44.8	0.032	14.4
Central Mynkuduk	-	-	-	62.1	0.045	27.9
Total	-	-	-	106.9	0.040	42.3
RU-6 LLP						
Northern Karamurun	-	-	-	8.3	0.064	5.3

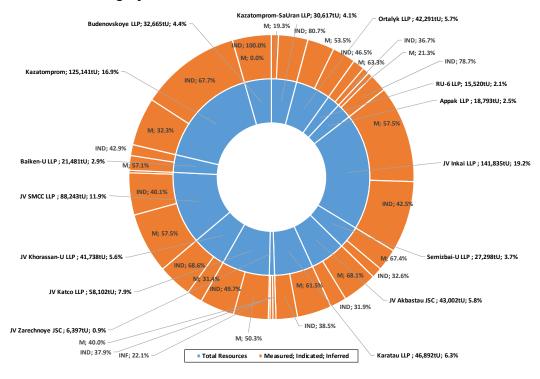
Mining Subsidiary		nferred	Total			
/Deposit		al resources	(IzALI)		al Resources	
Southern Karamurun	(Mt)	(%U)	(ktU)	(Mt) 12.1	(%U) 0.084	(ktU 10.:
Total	-	-	-	20.4	0.084	10
	-	-	-	20.4	0.076	15.
Appak LLP	_			53.6	0.035	18.
Western Mynkuduk  JV Inkai LLP	-	-	-	53.0	0.035	10.
Blocks 1, Inkai (a)	-			45.6	0.073	33.
		-	-	119.2		62.
Blocks 1, Inkai (b)	-	-	-	97.3	0.052	62. 46.
Blocks 1, Inkai (c)	-	-	-		0.047	
Total	-	-	-	262.1	0.054	141.
Semizbai-U LLP						
Semizbai	-	-	-	19.4	0.056	10.
Irkol	-	-	-	39.4	0.041	16.
Total	-	-	-	58.8	0.046	27.
JV Akbastau JSC						
Block 1 Budenovskoye	-	-	-	14.8	0.100	14.
Block 3 Budenovskoye	-	-	-	27.6	0.077	21.
Block 4 Budenovskoye	-	-	-	6.7	0.105	7.
Total	-	-	-	49.0	0.088	43.
Karatau LLP						
Block 2, Budenovskoye	-	-	-	58.4	0.080	46.
JV Zarechnoye JSC						
Zarechnoye	2.9	0.049	1.4	11.2	0.057	6.
JV Katco LLP						
Southern Moinkum (Northern part)	-	-	-	14.2	0.061	8.
Tortkuduk	-	-	-	41.3	0.120	49.
Total	-	-	-	55.5	0.105	58.
JV Khorassan-U LLP						
Block Kharassan 1, North Kharassan	-	-	-	39.1	0.107	41.
JV SMCC LLP		,			,	
Akdala	-	_	-	9.5	0.057	5.
Block 4, Inkai	5.0	0.043	2.2	204.9	0.040	82.
Total	5.0	0.043	2.2	214.4	0.041	88.
Baiken-U LLP			,	,		
Block Kharassan 2, North Kharassan	-	-	-	19.2	0.112	21.
Kazatomprom	,		,	,		
Block 2 Inkai	-	_	-	133.8	0.031	42.
Block 3 Inkai	_	_	_	172.3	0.048	83.
Total	_	_	-	306.1	0.041	125.
Budenovskoye LLP					0.0	
Block 6 Budenovskoye	_					
Block 7 Budenovskoye		-	-	45.3	0.072	32.
Total		-	-	45.3	0.072	32.
Grand Total	7.9	0.045	3.6		0.072	740.
	7.9	0.045	3.0	1,373.7	0.054	740.
Regional	F 0	0.042	2.2	1 225 0	0.051	607
Shu-Sarysu	5.0	0.043	2.2	1,225.0	0.051	627.
Syrdarya	2.9	0.049	1.4	129.4	0.078	101.
Northern Kazakhstan	-	-	-	19.4	0.056	10.
Total	7.9	0.045	3.6	1,373.7	0.054	740.

Table 4-4: SRK Audited Mineral Resource Statement (Attributable) as at 31 December 2018 by Mining Subsidiary

Mining Subsidiary /Deposit	Equity Interest	Uranium Mining		tributable red + Indica	4 n of		butable Tota ral Resource	
Deposit	(%)	Province	(Mt)	red + Indica (%U)	(ktU)	(Mt)	(%U)	(ktU)
Kazatomprom-SaUran LLP	100.00	TTOVINCE	(ivic)	( /00 )	(KtO)	(ivit)	(700)	(RtO)
Uvanas		Shu-Sarysu	-	-	-	-	-	_
Eastern Mynkuduk		Shu-Sarysu	21.0	0.030	6.3	21.0	0.030	6.3
Kanzhugan		Shu-Sarysu	30.6	0.038	11.7	30.6	0.038	11.7
South Moinkum (Southern part)		Shu-Sarysu	1.7	0.047	0.8	1.7	0.047	0.8
Central Moinkum		Shu-Sarysu	20.3	0.058	11.8	20.3	0.058	11.8
Total		· ·	73.6	0.042	30.6	73.6	0.042	30.6
Ortalyk LLP	100.00	'	,				,	
Zhalpak		Shu-Sarysu	44.8	0.032	14.4	44.8	0.032	14.4
Central Mynkuduk		Shu-Sarysu	62.1	0.045	27.9	62.1	0.045	27.9
Total			106.9	0.040	42.3	106.9	0.040	42.3
RU-6 LLP	100.00							
Northern Karamurun		Syrdarya	8.3	0.064	5.3	8.3	0.064	5.3
Southern Karamurun		Syrdarya	12.1	0.084	10.2	12.1	0.084	10.2
Total			20.4	0.076	15.5	20.4	0.076	15.5
Appak LLP	65.00							
Western Mynkuduk		Shu-Sarysu	34.8	0.035	12.2	34.8	0.035	12.2
JV Inkai LLP	60.00							
Blocks 1, Inkai (a)		Shu-Sarysu	27.4	0.073	19.9	27.4	0.073	19.9
Blocks 1, Inkai (b)		Shu-Sarysu	71.5	0.052	37.5	71.5	0.052	37.5
Blocks 1, Inkai (c)		Shu-Sarysu	58.4	0.047	27.6	58.4	0.047	27.6
Total			157.3	0.054	85.1	157.3	0.054	85.1
Semizbai-U LLP	51.00							
Semizbai		Northern Kazakhstan	9.9	0.056	5.6	9.9	0.056	5.6
Irkol		Syrdarya	20.1	0.041	8.3	20.1	0.041	8.3
Total			30.0	0.046	13.9	30.0	0.046	13.9
JV Akbastau JSC	50.00							
Block 1 Budenovskoye		Shu-Sarysu	7.4	0.100	7.4	7.4	0.100	7.4
Block 3 Budenovskoye		Shu-Sarysu	13.8	0.077	10.6	13.8	0.077	10.6
Block 4 Budenovskoye		Shu-Sarysu	3.3	0.105	3.5	3.3	0.105	3.5

Mining Subsidiary /Deposit	Equity Interest	Uranium Mining		tributable red + Indica	ted		outable Tota al Resource	
	(%)	Province	(Mt)	(%U)	(ktU)	(Mt)	(%U)	(ktU)
Total			24.5	0.088	21.5	24.5	0.088	21.5
Karatau LLP	50.00			,	· ·			
Block 2, Budenovskoye		Shu-Sarysu	29.2	0.080	23.4	29.2	0.080	23.4
JV Zarechnoye JSC	49.98							
Zarechnoye <sup>(9)</sup>		Syrdarya	4.2	0.060	2.5	5.6	0.057	3.2
JV Katco LLP	49.00							
Southern Moinkum (Northern part)		Shu-Sarysu	7.0	0.061	4.2	7.0	0.061	4.2
Tortkuduk		Shu-Sarysu	20.2	0.120	24.2	20.2	0.120	24.2
Total			27.2	0.105	28.5	27.2	0.105	28.5
JV Khorassan-U LLP	50.00			· ·				
Block Kharassan 1, North Kharassan		Syrdarya	19.6	0.107	20.9	19.6	0.107	20.9
JV SMCC LLP	30.00							
Akdala		Shu-Sarysu	2.8	0.057	1.6	2.8	0.057	1.6
Block 4, Inkai		Shu-Sarysu	60.0	0.040	24.2	61.5	0.040	24.9
Total			62.8	0.041	25.8	64.3	0.041	26.5
Baiken-U LLP	52.50							
Block Kharassan 2, North Kharassan		Syrdarya	10.1	0.112	11.3	10.1	0.112	11.3
Kazatomprom	100.00							
Block 2 Inkai		Shu-Sarysu	133.8	0.031	42.0	133.8	0.031	42.0
Block 3 Inkai		Shu-Sarysu	172.3	0.048	83.1	172.3	0.048	83.1
Total			306.1	0.041	125.1	306.1	0.041	125.1
Budenovskoye LLP	51.00			· ·				
Block 6 Budenovskoye		Shu-Sarysu	-	-	-	-	-	-
Block 7 Budenovskoye		Shu-Sarysu	23.1	0.072	16.7	23.1	0.072	16.7
Total			23.1	0.072	16.7	23.1	0.072	16.7
Grand Total			929.8	0.051	475.3	932.7	0.051	476.7
Regional								
Shu-Sarysu			845.6	0.049	411.3	847.1	0.049	411.9
Syrdarya			64.1	0.087	55.7	65.5	0.086	56.4
Northern Kazakhstan			20.1	0.041	8.3	20.1	0.041	8.3
Total			929.8	0.051	475.3	932.7	0.051	476.7

Figure 4-1: Mineral Resource distribution by Mining Subsidiary and classification category as at 31 December 2018



## 4.4.2 Ore Reserves

The tables below present SRK's audited Ore Reserve statements which are reported in accordance with the terms and definitions of the JORC Code. It should be noted that these statements cover the operating Mineral Assets only as none of the exploration projects (inclusive of Block 2 Inkai and Block 3 Inkai) are sufficiently advanced in terms of drilling and technical assessment to enable the reporting of Ore Reserves.

These statements reflect the audited Mineral Resource Statements above but have been

restricted to mineralisation planned to be exploited according to the LoMps developed by the Company and are supported by the mine project documents which are in turn based on its licence/contract agreements.

Notwithstanding this, in some cases these statements assume mining will continue subsequent to the expiry of the current contract in place with GoK reflecting SRK's understanding that it would be highly unlikely that these would not be extended ahead of the expiry date assuming that the Company has fulfilled all of its contractual requirements to that point.

The Ore Reserve statements reflect the total quantity of in-situ uranium planned to be mined and do not take account of metallurgical recovery both as part of the in-situ leaching process and within the surface processing plants themselves which typically varies between 80% and 90%.

As part of its review process, SRK has compared the planned contractual recovery figures with actual recoveries achieved for each deposit for the depleted blocks which were presented by the Company in its TO-25 reports (these documents give a detailed analysis of the blocks which were extracted during last few years therefore do not represent the whole mining statistics for the deposit). For the deposits where mining had recently been started or have not started yet the recovery statistic is not representative and was not considered (Table 4-5). In general the recovery into solution is close to the predicted figures and most often higher. Actual recoveries higher than 85% to 90% are usually typical for the deposits with long extraction history and could be explained by acid spreading or disequilibrium issues.

Table 4-5: Planned contractual recovery and historical recovery

Company	Reporting Region	Deposit	Extraction	on
			Historical	Contractual
			(%)	(%)
JV SMCC LLP	Shu-Sarysu Basin	Akdala	102.00	90.00
JV SMCC LLP	Shu-Sarysu Basin	Block 4, 4	91.00	90.00
Semizbai-U LLP	Syrdarya Basin	Irkol	93.00	90.00
Semizbai-U LLP	Northern Kazakhstan	Semizbai	85.00	85.00
Appak LLP	Shu-Sarysu Basin	Western Mynkuduk	86.00	90.00
JV Inkai LLP	Shu-Sarysu Basin	Inkai 1 (a)	88.00	85.00
JV Inkai LLP	Shu-Sarysu Basin	Inkai 1 (b)	101.00	85.00
JV Inkai LLP	Shu-Sarysu Basin	Inkai 1 (c)	85.00	85.00
JV Khorassan LLP	Syrdarya Basin	Block 1 Kharassan, North Kharassan	117.00	90.00
Baiken-U LLP	Syrdarya Basin	Block 2 Kharassan, North Kharassan	93.00	90.00
JV Zarechnoye JSC	Syrdarya Basin	Zarechnoye	86.00	80.00
JV Katco LLP	Shu-Sarysu Basin	Southern Moinkum (Northern Part)	81.00	90.00
JV Katco LLP	Shu-Sarysu Basin	Tortkuduk	87.00	90.00
Karatau LLP	Shu-Sarysu Basin	Block 2, Budenovskoye	90.00	90.00
JV Akbastau JSC	Shu-Sarysu Basin	Block 1, Budenovskoye	95.00	90.00
JV Akbastau JSC	Shu-Sarysu Basin	Block 3, Budenovskoye	89.00	85.00
JV Akbastau JSC	Shu-Sarysu Basin	Block 4, Budenovskoye	86.60	85.00
Kazatomprom-SaUran LLP	Shu-Sarysu Basin	Uvanas	n/a	90.00
Kazatomprom-SaUran LLP	Shu-Sarysu Basin	Eastern Mynkuduk	91.00	90.00
Kazatomprom-SaUran LLP	Shu-Sarysu Basin	Kanzhugan	100.00	90.00
Kazatomprom-SaUran LLP	Shu-Sarysu Basin	South Moinkum (Southern Part)	79.00	85.00
Kazatomprom-SaUran LLP	Shu-Sarysu Basin	Central Moinkum	85.00	85.00
Ortalyk LLP	Shu-Sarysu Basin	Zhalpak	n/a	90.00
Ortalyk LLP	Shu-Sarysu Basin	Central Mynkuduk	85.00	90.00
RU-6 LLP	Syrdarya Basin	Southern Karamurun	98.00	93.00
RU-6 LLP	Syrdarya Basin	Northern Karamurun	99.00	90.00

Table 4-6 provide details relating to the determination of relative cut-off grades for each Mining Subsidiary including operating expenditure, sales price assumptions, price discounts, realised prices, overall recovery factors, Ore Reserve (2P) cut-off grades, Mineral Resource (3R: assuming a 30% price premium) which are juxtaposed against the average grade mined in each of the Mining Subsidiaries over the LoMp. This indicates that the margin expressed by the Ore Reserve average grade over the Ore Reserve cut-off-grade ranges from a low of 20% to a high of 75% at currently assumed average LoMp assumptions.

Table 4-6: Cut-off Grade analysis for the Mineral Assets as reported in the 2018 CPR

Entity/Deposit	Opex	Sales Price	Price Discount	Realised Price	MRF	2P-OCOG	3R-OCOG	2PGrade
	(US\$/t)	(US\$/IbU <sub>3</sub> O <sub>8</sub> )	(%)	(US\$/IbU₃O <sub>8</sub> )		(%U)	(%U)	(%U)
Kazatomprom-SaUran LLP	18.65	35.10	-	35.10	88.09	0.032	0.025	0.041

Entity/Deposit	Opex (US\$/t)	Sales Price (US\$/IbU <sub>3</sub> O <sub>8</sub> )		Realised Price	MRF	2P-OCOG	3R-OCOG	2PGrade
			(%)	(US\$/IbU₃O <sub>8</sub> )		(%U)	(%U)	(%U)
Ortalyk LLP	11.62	32.80	-	32.80	88.82	0.021	0.016	0.045
RU-6 LLP	30.91	34.24	-	34.24	89.85	0.054	0.041	0.076
Appak LLP	12.77	35.46	3.50	34.22	90.00	0.022	0.017	0.035
JV Inkai LLP	10.87	38.90	3.50	37.54	85.00	0.018	0.014	0.054
Semizbai-U LLP	16.68	36.41	3.50	35.14	86.78	0.029	0.023	0.046
JV Akbastau JSC	13.27	36.39	3.50	35.11	86.73	0.023	0.018	0.088
Karatau LLP	11.04	33.46	3.50	32.29	90.00	0.020	0.016	0.080
JV Zarechnoye JSC	19.10	28.39	3.50	27.39	78.80	0.047	0.036	0.060
JV Katco LLP	21.70	33.07	3.50	31.91	90.00	0.040	0.031	0.105
JV Khorassan-U LLP	26.60	34.12	3.50	32.93	89.48	0.048	0.037	0.107
JV SMCC LLP	8.44	34.33	3.50	33.12	90.00	0.015	0.012	0.043
Baiken-U LLP	26.00	31.06	3.50	29.98	90.00	0.052	0.040	0.112

The current sales contracts between the Company, its Joint Venture partners and the Mining Subsidiary companies are subject to various sales contracts whereby the attributable sales price assumptions are subject to various adjustments. These adjustments are incorporated into the various governing agreements and are defined in accordance with the GoK uranium concentrate pricing regulations (effective 3 February 2011), whereby the saleable product is purchased by the JV partners at a commercial price equal to the uranium spot price, less a subsidiary specific price discount (maximum allowable). The Company has informed SRK that the specific price discounts as incorporated into each JV agreement is both confidential and as such may not be publically disclosed. Accordingly, in conjunction with the Company SRK has determined the weighted average price discount based on a combination of the LoMp sales forecasts and the UxC price forecast. This analysis indicates that the weighted average price discount for all Mining Subsidiaries (excluding the wholly owned mining subsidiaries of Kazatomprom-SaUran LLP, Ortalyk LLP and RU-6 LLP) is approximately 3.50%. SRK has therefore been requested by the Company to incorporate the following into the forecast data as reported herein with respect to the price discount assumptions:

- For Kazatomprom-SaUran LLP, Ortalyk LLP and RU-6 LLP a price discount factor of 0.00%;
   and
- For all other mining subsidiaries (JV SMCC LLP; Semizbai-U LLP; Appak LLP; JV Inkai LLP; JV Khorassan-U LLP; Baiken-U LLP; JV Zarechnoye JSC; JV Katco LLP; Karatau LLP; JV Akbastau JSC: hereinafter the "JV Companies") a price discount factor of 3.50%.

The determination of operating expenditures at the Mining Subsidiaries are largely based on a combination of historical and planned statistics with modifications for changed circumstances, suppliers etc as considered appropriate. In summary the process incorporates:

- Establishing labour compliments for mining, processing and G&A activities;
- Establishing unit physical consumables for mining and processing which is either related to Uranium content or PLS volumes;
- Application of unit cost rates (including transportation costs) to the determined consumable volumes for both mining and processing activities;
- Determination of additional expenditures and recovery of these expenditures in relation to services provided by one Mining Subsidiary to another, specifically processing to final product;
- Determination of refining charges for conversion of site-products to U<sub>3</sub>O<sub>8</sub> (where the final site product is not U<sub>3</sub>O<sub>8</sub>);
- Determination of terminal benefits liabilities or retrenchment costs based on the current minimum legal requirements in Kazakhstan being 1 month salary assumed as 1/12th of the annual labour bill relating to the labour movement determination on closure.
- Determination of both other cash and non-cash costs required to establish the Mineral Extraction Tax, Exploration Depreciation, Property Tax;

Determination of mining contract related expenditures/provisions specifically:

- Social Commitments included within the G&A costs and based on annual costs per deposit,
- Liquidation provisions (cash cost which is included as a capital item, is not directly tax deductible and not included in any depreciation determinations) which is based on a percentage of mining related expenditures inclusive of: direct mining costs; Mineral Extraction Tax ("MET" or royalty); mining depreciation, wellfield development depreciation ("PGR"), mining exploration depreciation. These expenditures are then accumulated and compared with the LoMp closure costs whereby any shortfall or excess is then incorporated on the last period of operations; and
- The Company has assessed its exposure of key activity cost centres to currency fluctuations and given the high local content for labour, key consumables such as acid and power the average currency exposure distributions amongst the following key site activities are considered to be appropriate: mining (95% KZT and 5% US\$); processing (80% KZT and 20% US\$); and on-site G&A (95% KZT and 5% US\$).

As at 31 December 2018, the 2018 Statements reports:

- Aggregated Ore Reserves (Table 4-7) as at 1 January 2019 of 859.1Mt grading 0.061%U and containing 520.6ktU and comprising:
  - Proved Ore Reserves of 474.9Mt grading 0.061%U and containing 291.5ktU,
  - Probable Ore Reserves of 384.2Mt grading 0.060%U and containing 229.0ktU; and
- Attributable Ore Reserves (Table 4-8) as at 31 December 2018 of 521.6Mt grading 0.059%U and containing 305.6ktU.

Figure 4-2 provides a graphical representation of the contribution of the Mining Subsidiaries and the reporting categories within each of the Mining Subsidiaries to the aggregated Ore Reserves reported in the 2018 Statements.

Table 4-7: SRK Audited Ore Reserve Statement (Proved and Probable) as at 31 December 2018 by Mining Subsidiary and Regional sub-division (Aggregated 100% basis)

Entity/Deposit	C	Proved Dre Reserve		C	Probable Fre Reserve		C	Total Dre Reserves	
	(Mt)	(%U)	(ktU)	(Mt)	(%U)	(ktU)	(Mt)	(%U)	(ktU)
Kazatomprom-SaUran LLP									
Uvanas	-	-	-	-	-	-	-	-	-
Eastern Mynkuduk	14.3	0.030	4.3	6.7	0.030	2.0	21.0	0.030	6.3
Kanzhugan	3.1	0.042	1.3	27.5	0.038	10.4	30.6	0.038	11.7
South Moinkum (Southern part)	0.0	0.039	0.0	0.1	0.048	0.0	0.1	0.047	0.03
Central Moinkum	0.5	0.056	0.3	19.8	0.058	11.5	20.3	0.058	11.8
Total	17.9	0.033	5.9	54.1	0.044	24.0	71.9	0.041	29.8
Ortalyk LLP								,	
Zhalpak	0.3	0.045	0.1	-	-	-	0.3	0.045	0.1
Central Mynkuduk	47.7	0.047	22.4	14.4	0.038	5.5	62.1	0.045	27.9
Total	48.0	0.047	22.5	14.4	0.038	5.5	62.4	0.045	28.0
RU-6 LLP									
Northern Karamurun	6.0	0.069	4.2	2.2	0.050	1.1	8.3	0.064	5.3
Southern Karamurun	7.0	0.081	5.7	5.1	0.089	4.6	12.1	0.084	10.2
Total	13.0	0.075	9.8	7.4	0.077	5.7	20.4	0.076	15.5
Appak LLP									
Western Mynkuduk	12.5	0.032	4.0	41.1	0.036	14.8	53.6	0.035	18.8
JV Inkai LLP									
Block 1 Inkai (a)	35.9	0.076	27.3	9.7	0.061	5.9	45.6	0.073	33.2
Block 1 Inkai (b)	32.7	0.051	16.7	86.5	0.053	45.8	119.2	0.052	62.5
Block 1 Inkai (c)	79.9	0.047	37.6	17.3	0.049	8.5	97.3	0.047	46.1
Total	148.6	0.055	81.6	113.6	0.053	60.3	262.1	0.054	141.8
Semizbai-U LLP								,	
Semizbai	16.9	0.057	9.6	2.5	0.053	1.3	19.4	0.056	10.9
Irkol	21.4	0.041	8.8	18.0	0.042	7.6	39.4	0.041	16.3
Total	38.3	0.048	18.4	20.5	0.043	8.9	58.8	0.046	27.3
JV Akbastau JSC									
Block 1 Budenovskoye	9.5	0.107	10.2	5.3	0.088	4.6	14.8	0.100	14.8
Block 3 Budenovskoye	22.0	0.071	15.6	5.5	0.100	5.5	27.6	0.077	21.2
Block 4 Budenovskoye	2.4	0.141	3.4	4.2	0.084	3.6	6.7	0.105	7.0
Total	34.0	0.086	29.3	15.0	0.091	13.7	49.0	0.088	43.0

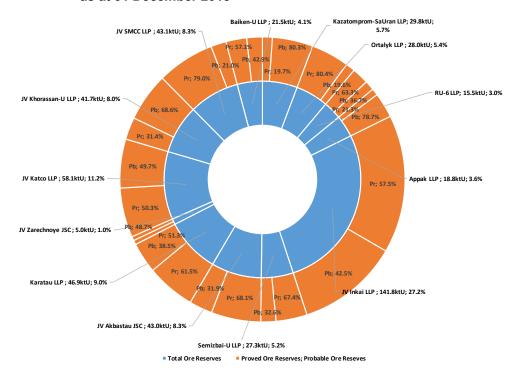
Entity/Deposit	0	Proved Fre Reserve		,	Probable Ore Reserve		0	Total re Reserves	
	(Mt)	re Reserve (%U)	(ktU)	(Mt)	re Reserve (%U)	(ktU)	(Mt)	(%U)	(ktU)
Karatau LLP	()	(700)	(1110)	(1110)	(700)	(1110)	()	(700)	(1110)
Block 2 Budenovskoye	29.7	0.097	28.8	28.6	0.063	18.0	58.4	0.080	46.9
JV Zarechnoye JSC				,		,			
Zarechnoye	4.3	0.060	2.6	4.0	0.060	2.4	8.3	0.060	5.0
JV Katco LLP									
Southern Moinkum (Northern part)	8.9	0.063	5.6	5.3	0.057	3.0	14.2	0.061	8.6
Tortkuduk	19.4	0.122	23.7	21.9	0.118	25.8	41.3	0.120	49.5
Total	28.2	0.104	29.2	27.2	0.106	28.9	55.5	0.105	58.1
JV Khorassan-U LLP									
Block Kharassan 1, North Kharassan	12.4	0.106	13.1	26.7	0.107	28.6	39.1	0.107	41.7
JV SMCC LLP									
Akdala	6.9	0.057	3.9	2.6	0.057	1.5	9.5	0.057	5.4
Block 4, Inkai	70.4	0.043	30.1	20.4	0.037	7.5	90.8	0.042	37.7
Total	77.2	0.044	34.1	23.0	0.039	9.1	100.3	0.043	43.1
Baiken-U LLP									
Block Kharassan 2, North Kharassan	10.8	0.114	12.3	8.5	0.109	9.2	19.2	0.112	21.5
Kazatomprom									
Block 2 Inkai	-	-	-	-	-	-	-	-	-
Block 3 Inkai	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-
Budenovskoye LLP	· ·		· ·	· ·		· ·		· ·	
Block 6 Budenovskoye	-	-	-	-	-	-	-	-	-
Block 7 Budenovskoye	-	-	-	-	-	-	-	-	-
Total	-	-	-	-	-	-	-	-	-
Grand Total	474.9	0.061	291.5	384.2	0.060	229.0	859.1	0.061	520.6
Regional									
Shu-Sarysu	396.1	0.059	235.4	317.1	0.055	174.2	713.2	0.057	409.6
Syrdarya	57.3	0.083	47.4	49.1	0.096	47.3	106.4	0.089	94.7
Northern Kazakhstan	21.4	0.041	8.8	18.0	0.042	7.6	39.4	0.041	16.3
Total	474.9	0.061	291.5	384.2	0.060	229.0	859.1	0.061	520.6

Table 4-8: SRK Audited Ore Reserve Statement (Attributable) as at 31 December 2018 by Mining Subsidiary

Mining Subsidiary	Equity	Uranium		ributable		
/Deposit	Interest	Mining		Reserves		
	(%)	Province	(Mt)	(%U)	(ktU)	
Kazatomprom-SaUran LLP	100.00					
Uvanas		Shu-Sarysu	-	-	-	
Eastern Mynkuduk		Shu-Sarysu	21.0	0.030	6.3	
Kanzhugan		Shu-Sarysu	30.6	0.038	11.7	
South Moinkum (Southern part)		Shu-Sarysu	0.1	0.047	0.03	
Central Moinkum		Shu-Sarysu	20.3	0.058	11.8	
Total			71.9	0.041	29.8	
Ortalyk LLP	100.00					
Zhalpak		Shu-Sarysu	0.3	0.045	0.1	
Central Mynkuduk		Shu-Sarysu	62.1	0.045	27.9	
Total			62.4	0.045	28.0	
RU-6 LLP	100.00					
Northern Karamurun		Syrdarya	8.3	0.064	5.3	
Southern Karamurun		Syrdarya	12.1	0.084	10.2	
Total			20.4	0.076	15.5	
Appak LLP	65.00					
Western Mynkuduk		Shu-Sarysu	34.8	0.035	12.2	
JV Inkai LLP	60.00					
Blocks 1, Inkai (a)		Shu-Sarysu	27.4	0.073	19.9	
Blocks 1, Inkai (b)		Shu-Sarysu	71.5	0.052	37.5	
Blocks 1, Inkai (c)		Shu-Sarysu	58.4	0.047	27.6	
Total		ona caryou	157.3	0.054	85.1	
Semizbai-U LLP	51.00		101.0	0.00		
Semizbai	000	Northern Kazakhstan	9.9	0.056	5.6	
Irkol		Syrdarya	20.1	0.041	8.3	
Total		Syradiya	30.0	0.046	13.9	
JV Akbastau JSC	50.00		00.0	0.040	10.0	
Block 1 Budenovskoye	00.00	Shu-Sarysu	7.4	0.100	7.4	
Block 3 Budenovskoye		Shu-Sarysu	13.8	0.077	10.6	
Block 4 Budenovskoye		Shu-Sarysu	3.3	0.077	3.5	
Total		Silu-Sarysu	24.5	0.103	21.5	
Karatau LLP	50.00		24.5	0.000	21.5	
Block 2, Budenovskoye	50.00	Shu-Sarysu	29.2	0.080	23.4	
JV Zarechnoye JSC	49.98	Silu-Sarysu	29.2	0.000	23.4	
Zarechnove JSC	49.90	Cumdonia	4.2	0.060	2.5	
JV Katco LLP	49.00	Syrdarya	4.2	0.060	2.5	
	49.00	Ob.: 0	7.0	0.004	4.0	
Southern Moinkum (Northern part)		Shu-Sarysu	7.0	0.061	4.2	
Tortkuduk		Shu-Sarysu	20.2	0.120	24.2	
Total			27.2	0.105	28.5	
JV Khorassan-U LLP	50.00					
Block Kharassan 1, North Kharassan		Syrdarya	19.6	0.107	20.9	
JV SMCC LLP	30.00					
Akdala		Shu-Sarysu	2.8	0.057	1.6	
Block 4, Inkai		Shu-Sarysu	27.2	0.042	11.3	
Total			30.1	0.043	12.9	
Baiken-U LLP	52.50					
Block Kharassan 2, North Kharassan		Syrdarya	10.1	0.112	11.3	
Kazatomprom	100.00					

Mining Subsidiary /Deposit	Equity Interest	Uranium Mining	Attributable Ore Reserves		
	(%)	Province	(Mt)	(%U)	(ktU)
Block 2 Inkai		Shu-Sarysu	-	-	-
Block 3 Inkai		Shu-Sarysu	-	-	-
Total			-	-	-
Budenovskoye LLP	51.00				
Block 6 Budenovskoye		Shu-Sarysu	-	-	-
Block 7 Budenovskoye		Shu-Sarysu	-	-	-
Total			-	-	-
Grand Total			521.6	0.059	305.6
Regional					
Shu-Sarysu			437.4	0.055	241.5
Syrdarya			74.3	0.079	58.5
Northern Kazakhstan			9.9	0.056	5.6
Total			521.6	0.059	305.6

Figure 4-2: Ore Reserve distribution by Mining Subsidiary and classification category as at 31 December 2018



# 4.5 SRK Summary Comments

In SRK's opinion the Mineral Resource and Ore Reserve statements as included herein are reported in accordance with the terms and definitions of the JORC Code and are valid as at 31 December 2018.

The differences between these estimates and those reported by the Company in accordance with the GKZ System as at 31 December 2018 are a result of:

- The removal of material which is sterilised by surface infrastructure or which, following the design process, are no longer planned to be exploited by the Company;
- Technical work undertaken by the Company during the 2018; and
- The preparation of updated LoMps by the Company.

It should, however, be noted work is ongoing by the Company and so, in addition to normal changes in Mineral Resources and Ore Reserves as a result of production, these may also change during 2019 as this work is completed. Notably:

- The Company continues to undertake exploration at several of its operations which may enable the reporting of additional Mineral Resources to those presented in this Audit Letter;
- The Company may undertake further technical work on several of its operations which will

enable it to convert more of its currently reported Mineral Resources as Ore Reserves; and

• The Company may negotiate changes to its contracts with the GoK and so the stated Ore Reserves may change to reflect these.

## 5 CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

The following sections provide a summary SRK's principal findings in respect of the review of the Company's Mineral Assets as reported upon herein with specific focus on the Mineral Resource and Ore Reserves reported as at 31 December 2018.

## 5.2 Mineral Resources

As at the Effective Date of the CPR, the total Mineral Resources (Table 15 5) reported by SRK in this Audit Letter for the Mining Subsidiaries, as at 31 December 2018, total 1,373.7Mt grading 0.054%U and containing 740.0ktU and comprising:

- Measured Mineral Resources of 601.4Mt grading 0.058%U and containing 348.8ktU;
- Indicated Mineral Resources of 764.5Mt grading 0.051%U and containing 387.7ktU; and
- Inferred Mineral Resources of 7.9Mt grading 0.045%U and containing 3.6ktU.

As at 31 December 2018 the attributable Mineral Resources for the Mineral Assets total 932.7Mt grading 0.051%U and containing 476.7ktU comprising Measured and Indicated Mineral Resources of 929.8Mt grading 0.051%U and containing 475.3ktU.

In all instances SRK concludes that:

- The Mineral Resource statements have an effective date of 31 December 2018;
- The Mineral Resources statements as reported herein are reported in accordance with the terms and definitions of the JORC Code;
- The Mineral Resources have been assessed with regards to economic potential assuming appropriate modifying factors and cut-off-grade determinations as reported in Table 4-6 and assuming a 30% premium in respect of the Long Term Prices utilised to support the reporting of Ore Reserves; and
- The Measured and Indicated Mineral Resources are inclusive of those Mineral Resources modified to produce the Ore Reserves.

The Competent Person who has overall responsibility for the Mineral Resources as reported herein is Dr Mike Armitage, C.Eng, C. Geol, FGS, MIMM, PhD. He is a full time employee of SRK, a corporate consultant and has over 36 years' experience in the mining and metals industry and also has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code. Mike Armitage has been responsible for the reporting of Mineral Resources and Ore Reserves on various properties internationally during the past 36 years.

Table 5-1: Mining Subsidiary Mineral Resources: 100% and Attributable

Classification/Mining Subsidiary	Aggregated (100%)		Equity	Attributable			
	Tonnage	Grade	Content		Tonnage	Grade	Content
	(Mt)	(%U)	(ktU)	(%)	(Mt)	(%U)	(ktU)
Measured							
Kazatomprom-SaUran LLP	18.0	0.033	5.9	100.00	18.0	0.033	5.9
Ortalyk LLP	48.2	0.047	22.6	100.00	48.2	0.047	22.6
RU-6 LLP	13.0	0.075	9.8	100.00	13.0	0.075	9.8
Appak LLP	12.5	0.032	4.0	65.00	8.1	0.032	2.6
JV Inkai LLP	148.6	0.055	81.6	60.00	89.2	0.055	48.9
Semizbai-U LLP	38.3	0.048	18.4	51.00	19.5	0.048	9.4
JV Akbastau JSC	34.0	0.086	29.3	50.00	17.0	0.086	14.6

Classification/Mining Subsidiary	Aggregated (100%)		Equity			Attributable	
outside in mining outsided y	Tonnage	Grade	Content		Tonnage	Grade	Content
	(Mt)	(%U)	(ktU)	(%)	(Mt)	(%U)	(ktU)
Karatau LLP	29.7	0.097	28.8	50.00	14.9	0.097	14.4
JV Zarechnoye JSC JV Katco LLP	4.3 28.2	0.060 0.104	2.6 29.2	49.98 49.00	2.1 13.8	0.060 0.104	1.3 14.3
JV Khorassan-U LLP	12.4	0.106	13.1	50.00	6.2	0.106	6.6
JV SMCC LLP	123.1	0.041	50.7	30.00	36.9	0.041	15.2
Baiken-U LLP	10.8	0.114	12.3	52.50	5.7	0.114	6.4
Kazatomprom	80.3	0.050	40.4	100.00	80.3	0.050	40.4
Budenovskoye LLP Subtotal	601.4	0.058	348.8	51.00	372.9	0.057	212.6
Indicated	001.4	0.000	340.0		372.3	0.037	212.0
Kazatomprom-SaUran LLP	55.6	0.044	24.7	100.00	55.6	0.044	24.7
Ortalyk LLP	58.7	0.033	19.7	100.00	58.7	0.033	19.7
RU-6 LLP	7.4	0.077	5.7	100.00	7.4	0.077	5.7
Appak LLP JV Inkai LLP	41.1 113.6	0.036 0.053	14.8 60.3	65.00 60.00	26.7 68.1	0.036 0.053	9.6 36.2
Semizbai-U LLP	20.5	0.043	8.9	51.00	10.5	0.043	4.5
JV Akbastau JSC	15.0	0.091	13.7	50.00	7.5	0.091	6.9
Karatau LLP	28.6	0.063	18.0	50.00	14.3	0.063	9.0
JV Zarechnoye JSC	4.0	0.060	2.4	49.98	2.0	0.060	1.2
JV Katco LLP JV Khorassan-U LLP	27.2 26.7	0.106 0.107	28.9 28.6	49.00 50.00	13.3 13.4	0.106 0.107	14.1 14.3
JV SMCC LLP	86.3	0.107	35.3	30.00	25.9	0.041	10.6
Baiken-U LLP	8.5	0.109	9.2	52.50	4.4	0.109	4.8
Kazatomprom	225.9	0.038	84.7	100.00	225.9	0.038	84.7
Budenovskoye LLP	45.3	0.072	32.7	51.00	23.1	0.072	16.7
Subtotal Measured + Indicated	764.5	0.051	387.7		556.9	0.047	262.8
Kazatomprom-SaUran LLP	73.6	0.042	30.6	100.00	73.6	0.042	30.6
Ortalyk LLP	106.9	0.040	42.3	100.00	106.9	0.042	42.3
RU-6 LLP	20.4	0.076	15.5	100.00	20.4	0.076	15.5
Appak LLP	53.6	0.035	18.8	65.00	34.8	0.035	12.2
JV Inkai LLP	262.1	0.054	141.8	60.00	157.3	0.054	85.1
Semizbai-U LLP	58.8	0.046	27.3	51.00	30.0	0.046	13.9
JV Akbastau JSC Karatau LLP	49.0 58.4	0.088 0.080	43.0 46.9	50.00 50.00	24.5 29.2	0.088 0.080	21.5 23.4
JV Zarechnoye JSC	8.3	0.060	5.0	49.98	4.2	0.060	23.4
JV Katco LLP	55.5	0.105	58.1	49.00	27.2	0.105	28.5
JV Khorassan-U LLP	39.1	0.107	41.7	50.00	19.6	0.107	20.9
JV SMCC LLP	209.5	0.041	86.1	30.00	62.8	0.041	25.8
Baiken-U LLP	19.2	0.112	21.5	52.50	10.1	0.112	11.3
Kazatomprom Budenovskoye LLP	306.1 45.3	0.041 0.072	125.1 32.7	100.00 51.00	306.1 23.1	0.041 0.072	125.1 16.7
Total	1,365.9	0.072	736.4	31.00	929.8	0.072	475.3
Inferred	,						
Kazatomprom-SaUran LLP	-	-	-	100.00	-	-	-
Ortalyk LLP	-	-	-	100.00	-	-	-
RU-6 LLP Appak LLP	-	-	-	100.00 65.00	-	-	-
JV Inkai LLP	-	-	_	60.00	-	-	-
Semizbai-U LLP	-	-	_	51.00	_	-	-
JV Akbastau JSC	-	-	-	50.00	-	-	-
Karatau LLP	-	-	-	50.00	-	-	-
JV Zarechnoye JSC	2.9	0.049	1.4	49.98	1.4	0.049	0.7
JV Katco LLP JV Khorassan-U LLP	-	-	-	49.00 50.00	-	-	-
JV SMCC LLP	5.0	0.043	2.2	30.00	1.5	0.043	0.6
Baiken-U LLP	-	-		52.50	-	-	-
Kazatomprom	-	-	-	100.00	-	-	-
Budenovskoye LLP			-	51.00	-	<del>-</del>	
Subtotal Mineral Resources	7.9	0.045	3.6		2.9	0.046	1.4
Kazatomprom-SaUran LLP	73.6	0.042	30.6	100.00	73.6	0.042	30.6
Ortalyk LLP	106.9	0.040	42.3	100.00	106.9	0.040	42.3
RU-6 LLP	20.4	0.076	15.5	100.00	20.4	0.076	15.5
Appak LLP	53.6	0.035	18.8	65.00	34.8	0.035	12.2
JV Inkai LLP	262.1	0.054	141.8	60.00	157.3	0.054	85.1
Semizbai-U LLP JV Akbastau JSC	58.8 49.0	0.046 0.088	27.3 43.0	51.00 50.00	30.0 24.5	0.046 0.088	13.9 21.5
Karatau LLP	58.4	0.080	45.0 46.9	50.00	24.5 29.2	0.080	23.4
JV Zarechnoye JSC	11.2	0.057	6.4	49.98	5.6	0.057	3.2
JV Katco LLP	55.5	0.105	58.1	49.00	27.2	0.105	28.5
JV Khorassan-U LLP	39.1	0.107	41.7	50.00	19.6	0.107	20.9
JV SMCC LLP	214.4	0.041	88.2	30.00	64.3	0.041	26.5
Baiken-U LLP Kazatomprom	19.2 306.1	0.112 0.041	21.5 125.1	52.50 52.50	10.1 306.1	0.112 0.041	11.3 125.1
Razatomprom Budenovskoye LLP	45.3	0.041	32.7	52.50 52.50	23.1	0.041	125.1
Total	1,373.7	0.054	740.0	02.00	932.7	0.051	476.7
	,- ,-						

# 5.3 Ore Reserves

As at the Effective Date of the CPR, the total Ore Reserves (Table 5-2) reported by SRK in this Audit Letter for the Mining Subsidiaries as at 31 December 2018, totalled 859.1Mt grading 0.061%U and containing 520.6ktU comprising:

• Proved Ore Reserves totalling 474.9Mt grading 0.061%U and containing 291.5ktU; and

- Probable Ore Reserves totalling 384.2Mt grading 0.060%U and containing 229.0ktU.
- On an attributable basis (Table 5-2) the total Ore Reserves reported by SRK in this CPR for the Mining Subsidiaries totalled 521.6Mt grading 0.059%U and containing 305.6ktU comprising:
- Proved Ore Reserves totalling 278.5Mt grading 0.060%U and containing 167.0ktU; and
- Probable Ore Reserves totalling 243.1Mt grading 0.057%U and containing 138.6ktU.

In all instances SRK concludes that:

- The Ore Reserve statements have an effective date of 31 December 2018;
- The Ore Reserve statements as reported herein are reported in accordance with the terms and definitions of the JORC Code; and
- The principal technical and economic inputs relied on for reporting the Ore Reserves have been assessed for each of the Mining Subsidiaries and are reported in Table 4-6 where the uranium price is assumed to increase from US\$27.81/lbU<sub>3</sub>O<sub>8</sub> to US\$43.53/lbU<sub>3</sub>O<sub>8</sub>.

The Competent Person who has responsibility for the Ore Reserves as reported herein is Dr lestyn Humphreys, FMIMM, AIME, PhD who is a Corporate Consultant, and Practice Leader with SRK. He is a Fellow of the IMMM which is a RPO included in a list promulgated by the ASX from time to time. lestyn Humphreys has 29 years' experience in the mining and metals industry and also has been involved in the preparation of Competent Persons' Reports comprising technical evaluations of various mineral assets internationally during the past five years which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code.

Table 5-2: Mining Subsidiary Ore Reserves: Aggregated and Attributable

Classification/Mining Subsidiary	Aggregated (100%)		Equity		Attributable		
	Tonnage	Grade	Content		Tonnage	Grade	Content
	(Mt)	(%U)	(ktU)	(%)	(Mt)	(%U)	(ktU)
Proved							
Kazatomprom-SaUran LLP	17.9	0.033	5.9	100.00	17.9	0.033	5.9
Ortalyk LLP	48.0	0.047	22.5	100.00	48.0	0.047	22.5
RU-6 LLP	13.0	0.075	9.8	100.00	13.0	0.075	9.8
Appak LLP	12.5	0.032	4.0	65.00	8.1	0.032	2.6
JV Inkai LLP	148.6	0.055	81.6	60.00	89.2	0.055	48.9
Semizbai-U LLP	38.3	0.048	18.4	51.00	19.5	0.048	9.4
JV Akbastau JSC	34.0	0.086	29.3	50.00	17.0	0.086	14.6
Karatau LLP	29.7	0.097	28.8	50.00	14.9	0.097	14.4
JV Zarechnoye JSC	4.3	0.060	2.6	49.98	2.1	0.060	1.3
JV Katco LLP	28.2	0.104	29.2	49.00	13.8	0.104	14.3
JV Khorassan-U LLP	12.4	0.106	13.1	50.00	6.2	0.106	6.6
JV SMCC LLP	77.2	0.044	34.1	30.00	23.2	0.044	10.2
Baiken-U LLP	10.8	0.114	12.3	52.50	5.7	0.114	6.4
Subtotal	474.9	0.061	291.5		278.5	0.060	167.0
Probable							
Kazatomprom-SaUran LLP	54.1	0.044	24.0	100.00	54.1	0.044	24.0
Ortalyk LLP	14.4	0.038	5.5	100.00	14.4	0.038	5.5
RU-6 LLP	7.4	0.077	5.7	100.00	7.4	0.077	5.7
Appak LLP	41.1	0.036	14.8	65.00	26.7	0.036	9.6
JV Inkai LLP	113.6	0.053	60.3	60.00	68.1	0.053	36.2
Semizbai-U LLP	20.5	0.043	8.9	51.00	10.5	0.043	4.5
JV Akbastau JSC	15.0	0.091	13.7	50.00	7.5	0.091	6.9
Karatau LLP	28.6	0.063	18.0	50.00	14.3	0.063	9.0
JV Zarechnoye JSC	4.0	0.060	2.4	49.98	2.0	0.060	1.2
JV Katco LLP	27.2	0.106	28.9	49.00	13.3	0.106	14.1
JV Khorassan-U LLP	26.7	0.107	28.6	50.00	13.4	0.107	14.3
JV SMCC LLP	23.0	0.039	9.1	30.00	6.9	0.039	2.7
Baiken-U LLP	8.5	0.109	9.2	52.50	4.4	0.109	4.8
Subtotal	384.2	0.060	229.0		243.1	0.057	138.6
Ore Reserves							
Kazatomprom-SaUran LLP	71.9	0.041	29.8	100.00	71.9	0.041	29.8
Ortalyk LLP	62.4	0.045	28.0	100.00	62.4	0.045	28.0
RU-6 LLP	20.4	0.076	15.5	100.00	20.4	0.076	15.5
Appak LLP	53.6	0.035	18.8	65.00	34.8	0.035	12.2
JV Inkai LLP	262.1	0.054	141.8	60.00	157.3	0.054	85.1
Semizbai-U LLP	58.8	0.046	27.3	51.00	30.0	0.046	13.9
JV Akbastau JSC	49.0	0.088	43.0	50.00	24.5	0.088	21.5
Karatau LLP	58.4	0.080	46.9	50.00	29.2	0.080	23.4
JV Zarechnoye JSC	8.3	0.060	5.0	49.98	4.2	0.060	2.5
		0.405	<b>50.4</b>		07.0	0.405	28.5
JV Katco LLP	55.5 39.1	0.105 0.107	58.1 41.7	49.00 50.00	27.2 19.6	0.105 0.107	20.5

Classification/Mining Subsidiary	Aggregated (100%)			Equity	Attributable		
	Tonnage	Grade	Content		Tonnage	Grade	Content
	(Mt)	(%U)	(ktU)	(%)	(Mt)	(%U)	(ktU)
JV SMCC LLP	100.3	0.043	43.1	30.00	30.1	0.043	12.9
Baiken-U LLP	19.2	0.112	21.5	52.50	10.1	0.112	11.3
Total	859.1	0.061	520.6		521.6	0.059	305.6

# 5.4 Summary Conclusions

This Audit Letter is addressed to and may be relied upon by the Company, the Directors of the Company and its advisors in support of the declaration of Mineral Resource and Ore Reserve statements for the Mineral Assets reported in accordance with the terms and definitions of the JORC Code and reported as at 31 December 2018.

Accordingly, SRK has confirms that it:

- Accepts reliance as regards the Audit Letter for any benefit of the Company and its Advisors;
- Takes responsibility for the Audit Letter and declares that it has taken all reasonable care to
  ensure that the information contained in the Audit Letter is, to the best of its knowledge, in
  accordance with the facts and contains no omission likely to affect its import.

SRK believes that its opinion must be considered as a whole and that selecting portions of the analysis or factors considered by it, without considering all factors and analyses together, could create a misleading view of the process underlying the opinions presented in this Audit Letter. SRK has no obligation or undertaking to advise any person of any development in relation to Mineral Assets which comes to its attention after the date of this Audit Letter or to review, revise or update the Audit Letter or opinion in respect of any such development occurring after the date of this Audit Letter.

The work completed by SRK in preparing this report has enabled it to present Mineral Resource and Ore Reserve estimates for all of the Company's operating mines, Development Projects and Advanced Exploration Properties as at 31 December 2018.

The observations, comments and conclusions presented in this report represent SRK's opinion as of 12 January 2019 and are based on a review of documentation provided by the Company, site visits to all operations conducted in the authoring of the 2018 CPR, follow up site visits to review the basis of determination for the revised Mineral Resources and discussions with the Company's management and representatives. SRK cannot accept any liability, either direct or consequential for the validity of information that has been accepted in good faith.

For and behalf of SRK Consulting (UK) Limited

Dr lestyn Humphreys,

Corporate Consultant (Due Diligence),

SRK Consulting (UK) Limited.

Dr Mike Armitage,

Corporate Consultant (Geology),

SRK Consulting (UK) Limited.