MINERAL RESOURCE AND ORE RESERVE STATEMENT ON THE TALITSKY POTASH PROJECT, BEREZNIKI, RUSSIA

Prepared For

Verkhnekamsk Potash Company

Report Prepared by

srk consulting

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UK6597

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1 INTRODUCTION

This document is an extract from the JORC Code compliant report "A Feasibility Study on the Talitsky Potash Project, Berezniki, Russia", (SRK UK6597 / RU0528, May 2016). The Study was prepared by a team of consultants sourced from the SRK Group's offices in the UK, Russia and Kazakhstan. These consultants are specialists in the fields of geology, resource and reserve estimation and reporting, underground mining, rock engineering, potash processing, hydrogeology and hydrology, tailings management, infrastructure, environmental management and mineral economics. They have extensive experience in the mining industry and are members in good standing of appropriate professional institutions.

Tim McGurk (BEng (Hons), CEng, FIMMM) takes overall responsibility for the Talitsky Feasibility Study report and is the Competent Person for the statement of Ore Reserves.

Dr Mike Armitage (PhD, MIMMM FGS C.Geol, CEng) is the Competent Person for the statement of Mineral Resources.

2 MINERAL RESOURCE

2.1 Introduction

This report summarises the verification checks completed by SRK with regards to the GKZ verified resource estimate produced for the Talitsky project and presents an audited SRK Mineral Resource Statement in accordance with the JORC Code.

2.2 Legal Aspects

2.2.1 Available Permits and Licences

The subsoil licence for the Talitsky Project belongs to LLC Verkhnekamsk Potash Company. Specifically, Licence ПЕМ 14465 ТЭ was granted for exploration and mining of potassium and magnesium salts for the Talitsky site of the Verkhnekamsk salt deposit, Perm Kray. The licence was awarded via a bidding process on 12 March 2008, held in Perm, and was registered on 6 May 2008 in the Department of Subsoil Use.

In 2012 the Licence was re-issued with the new number ПЕМ 15349 ТЭ and registered on 10 April 2012. Addendum 1 to Licence ПЕМ 15349 ТЭ was registered on 29 March 2016. The Licence notes:

- The subsurface user: Limited Liability Company "Verkhnekamsk Potash Company" (VPC LLC).
- Name of the subsurface mine site provided for the usage: Talitsky.
- Location of the subsurface mine site: Perm Region.

- Type of subsurface usage: exploration and mining of minerals, including handling of the mining and associated processing wastes.
- Key (prevailing) types of minerals (group of minerals) contained within the subsurface mine site: potassium and magnesium salts

The licence area, which is valid through 15 April 2028, is located within the Usol'skiy district of Perm Kray covers an area of 69.56 km^2. It is surrounded by other licences, namely:

- Bygelsko-Troitsky site (Licence ПЕМ 02545 ТЭ) to the north;
- Duryimansky site (Licence ПЕМ 02546 ТЭ) to the west;
- Balakhontsevskiy site (partially mined and flooded) to the south-west;
- Sibirsky oil deposit (Licence ПЕМ 12416 НР) to the south (the northern boundary of Sibirskiy oil deposit is located 100 to 350 m to the south of the Talitsky area). Oil-bearing formations are located 2,045 to 2,368 m below the surface.

In the east, Talitsky borders with the unallocated subsurface reserve fund of Verkhnekamsky deposit. Potash has also been shown by exploration to exist to the east and south of the Project.

The location of the licence is shown in Figure 2-1 and the associated co-ordinates are shown in Table 2-1.

Table 2-1: Licence Coordinates for the Talitsky Project

	Northern Latitude			Eastern Latitude		
Number	Degrees	Minutes	Seconds	Degrees	Minutes	Seconds
1	59	18	48.7	56	55	09.6
2	59	18	41.6	56	59	40.7
3	59	20	08.3	56	59	37.9
4	59	21	18.2	56	59	32.2
5	59	23	08.5	56	59	53.7
6	59	23	02.4	57	3	41.1
7	59	22	52.0	57	7	45.8
8	59	20	48.8	57	7	51.6
9	59	20	05.3	57	6	59.3
10	59	19	00.7	57	5	22.0
11	59	17	27.2	57	2	50.8
12	59	18	01.7	56	57	40.9

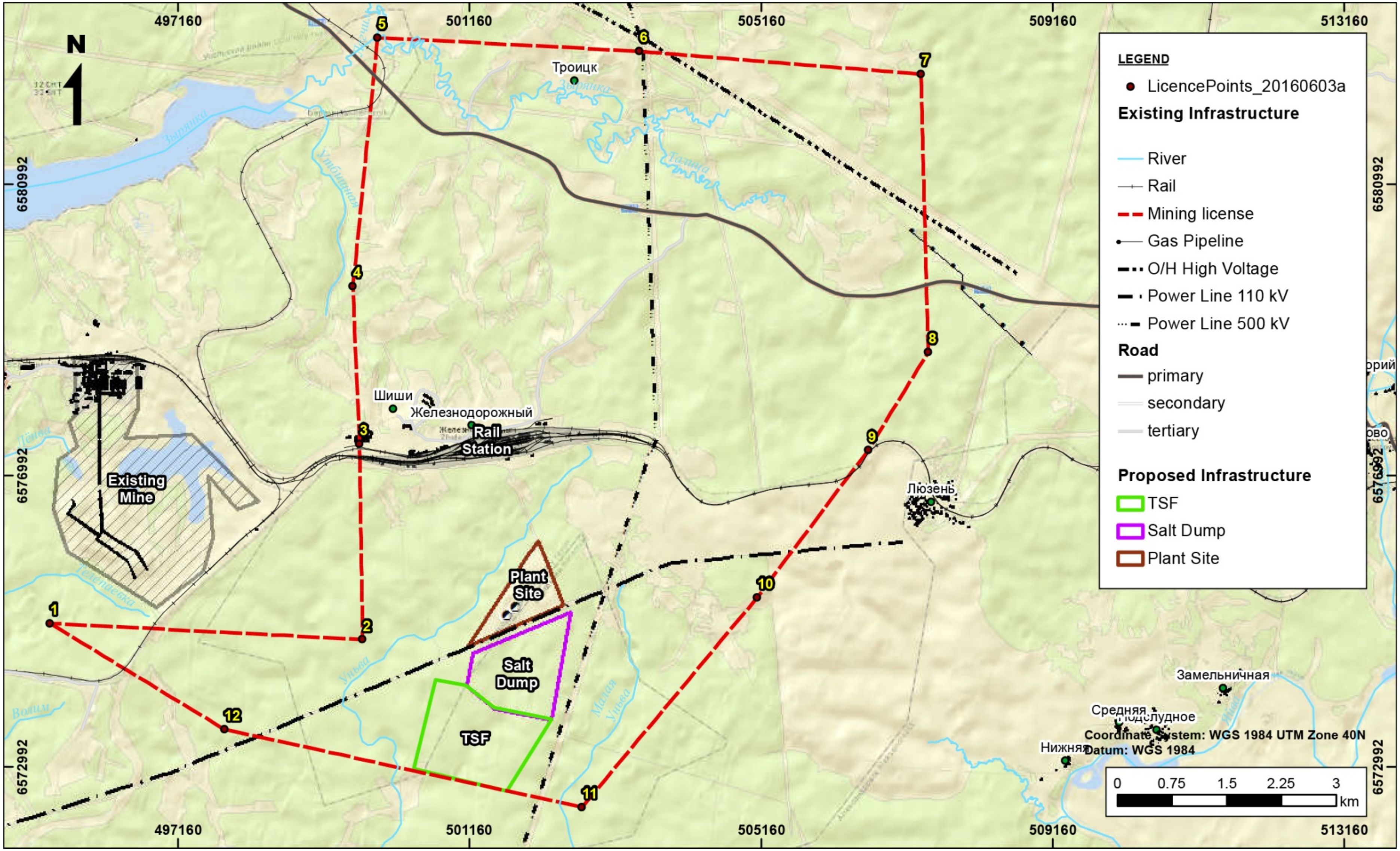


Figure 2-1: Licence ПЕМ 15349 ТЭ

2.2.2 Required Permits, Stages and Terms of Obtaining Permits

Royalties, Charges and Taxes

According to the licence conditions, the holder of the licence shall pay the following taxes:

- a single payment is not specified;
- mineral extraction taxes as per Russian Federation Laws;
- water taxes as per Russian Federation Laws; and
- other charges and taxes prescribed by the tax laws of the Russian Federation.

Permits

SRK understands that VPC has completed all investigations and received State approvals and permits for the construction of the mine and associated infrastructure, including:

- mine design, including dumps;
- processing plant;
- all access roads and railroad;
- infrastructure for power supply, including power lines and substations;
- water supply;
- gas supply; and
- mining camp design.

2.2.3 Licence Conditions

The licensee has a right to refuse subsoil use at any time, but must give written notice six months before termination of the rights of subsoil utilisation. The term of use of the site can be extended by the licensee if it meets conditions specified in the Licence Agreement, and if the mine life needs to be extended and mine closure plan implemented.

The following requirements should also be met by the licence holder:

- compliance with legislation of Russian Federation, as well as duly approved standards (norms and rules) for conducting work related to subsoil use;
- compliance with requirements for Technical Projects and Technical documentation;
- the completion of geological studies inclusive of the production of a reliable resource estimate and mining plan;
- the extraction of reserves of primary and minor components, preventing excessive losses and selective mining of certain parts of the deposit;
- reliable accounting of mined and non-mined reserves;
- negotiations with adjacent mines about design documentation, including boundaries of mining permits, location of production buildings, rules of mining along mutual boundaries etc.;
- protection of the deposit from flooding and other factors which could decrease quality of mineral resources or make it challenging for mining;
- prevention from subsoil pollution during operations;
- prevention of unauthorised construction above the mineral deposit and control of utilisation of these areas for other purposes;
- compliance with the mine closure plan at the end of mine life;
- the completion of geological, survey and other types of documentation during exploration

and mining works, providing hazard analyses; and

- geotechnical studies of the areas for the production facilities to prevent them from restricting underground mining.

The licensee is also responsible for the reporting on a yearly basis (until 15 February of the year following the reporting year) to the relevant authorities of Federal agency on work carried out at the subsoil area given for use.

The geological information on subsoil is due to be presented to the federal and territory funds of geological information in accordance with established procedure.

2.2.4 Terms for Development

The licence for the right to explore and mine subsurface mineral resources contains the terms of development of the project and reporting documentation as well as of the exploration work. SRK notes that:

- The start of mining is not specified;
- the achievement of the designed production rate is determined by the agreed and confirmed Technical Mining Project prepared for the deposit; and
- the preparation and approval of a mine closure plan is required no later than 1 year prior to actual mine closure.

2.2.5 Licence Status

SRK confirms that on the date of the report sign-off VPC had completed following stages:

- Approval of a project design for geological investigation of subsurface mineral resources (early stage exploration) which has previously received a positive conclusion from State Expertise, including Rosnedra Expertise was granted before 15 February 2009.
- Exploration works were started in 2009, completion of exploration programme and submission of report with Resource Estimation, compliant to State requirements, to the State Appraisal of Reserves of Commercial Minerals (GKZ) was completed before 15 February 2012.
- Approval of a Technical Project for development of the licence area with approved resources, this project received positive conclusions from the State Expertise before 15 February 2014.
- Approval of the Technical Project for development of the mine, including engineering investigation for construction (roads, railroads, power lines, water and gas supply) and mine design.

SRK understands that VPC is now raising funds to start construction works on site.

2.2.6 Responsibility for Violation of the Licence Conditions

Rosnedra could freeze, limit or withdraw the right of the subsoil utilisation before the licence expiry date in accordance with Russian Federation laws. This can be done if there is any violation in relation to:

- the terms of development, particularly exploration and construction works;
- mining, safety and environmental State regulations;
- Russian Federation tax legislation; or

- reporting, notably provision of the reports to the State funds.

2.3 Geology

2.3.1 Regional Geology

The stratigraphic sequence of the region is shown in Figure 2-2. The sylvinite evaporite sequences (“SP”) occur at between 175 m and 360 m below the surface, are conformably overlain by a series of carbonates and evaporites and underlain by a thick halite layer (“PdKS”) as shown in Figure 2-2.

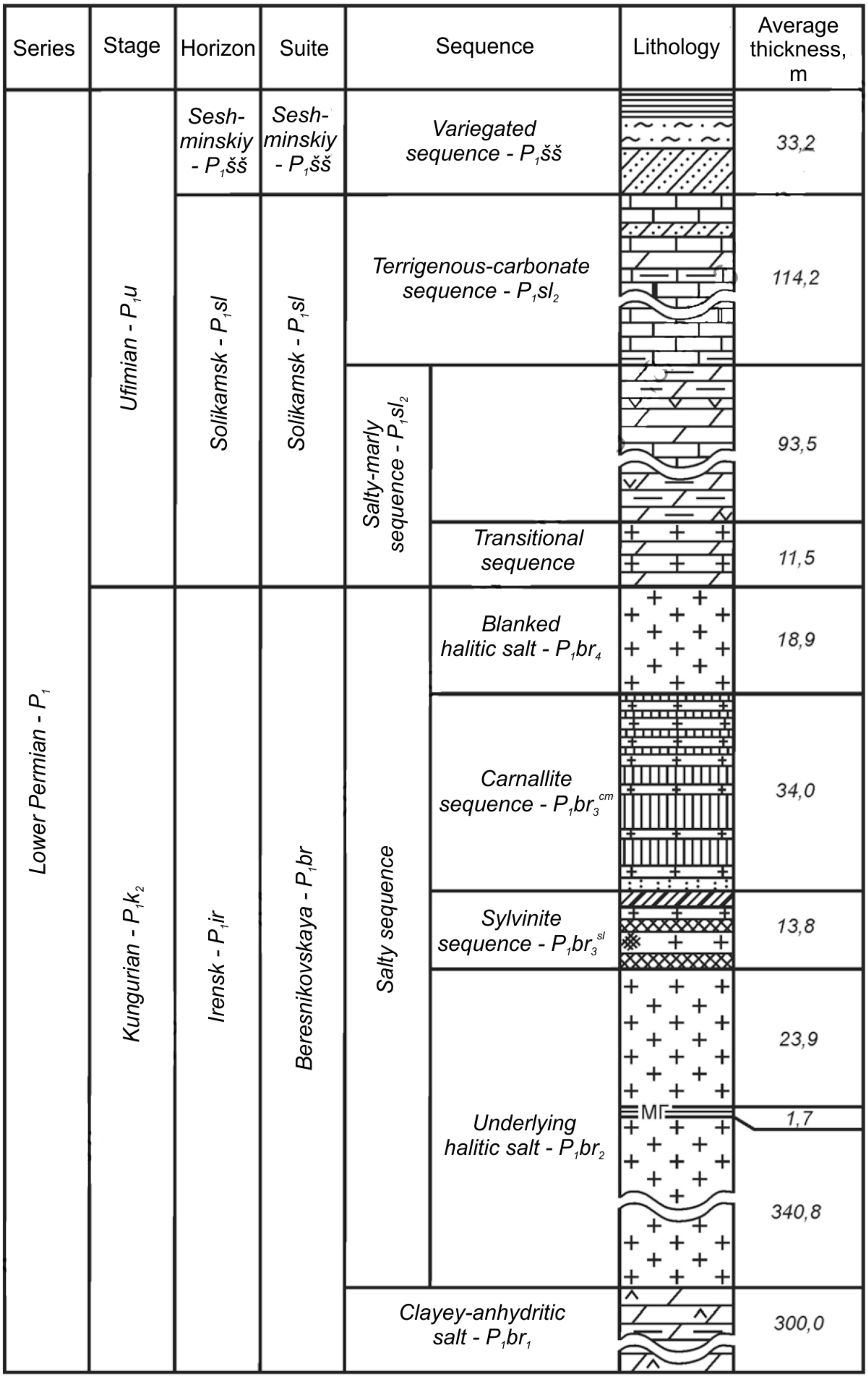


Figure 2-2: Stratigraphic Sequence of the Region, after TEO Konditsiy prepared by "Galurgiya" in 2011

2.3.2 Stratigraphy

The Talitsky deposit consists of two major of evaporite sequences. The upper sequence, the carnallite sequence, is mainly comprises halite with interbedded layers of variegated sylvinite, carnallite and mixed salts, Figure 2-3. The base of this sequence contains a horizon, of variegated sylvinite, approximately 1.25 m thick, termed the B horizon. The lower sequence, the sylvinite sequence, is made up of with red and banded sylvinite horizons interbedded with halite. There are six sylvinite horizons which from the top to the base of the sequence are termed A, Red 1, Red 2, Red 3a, Red 3b and Red 3v. The bottom three horizons have thin (<1 m) intercalations of halite and are combined to form the Red 3 horizon. The top horizon A occurs directly beneath the B horizon from the carnallite sequence and these are combined to form the AB horizon.

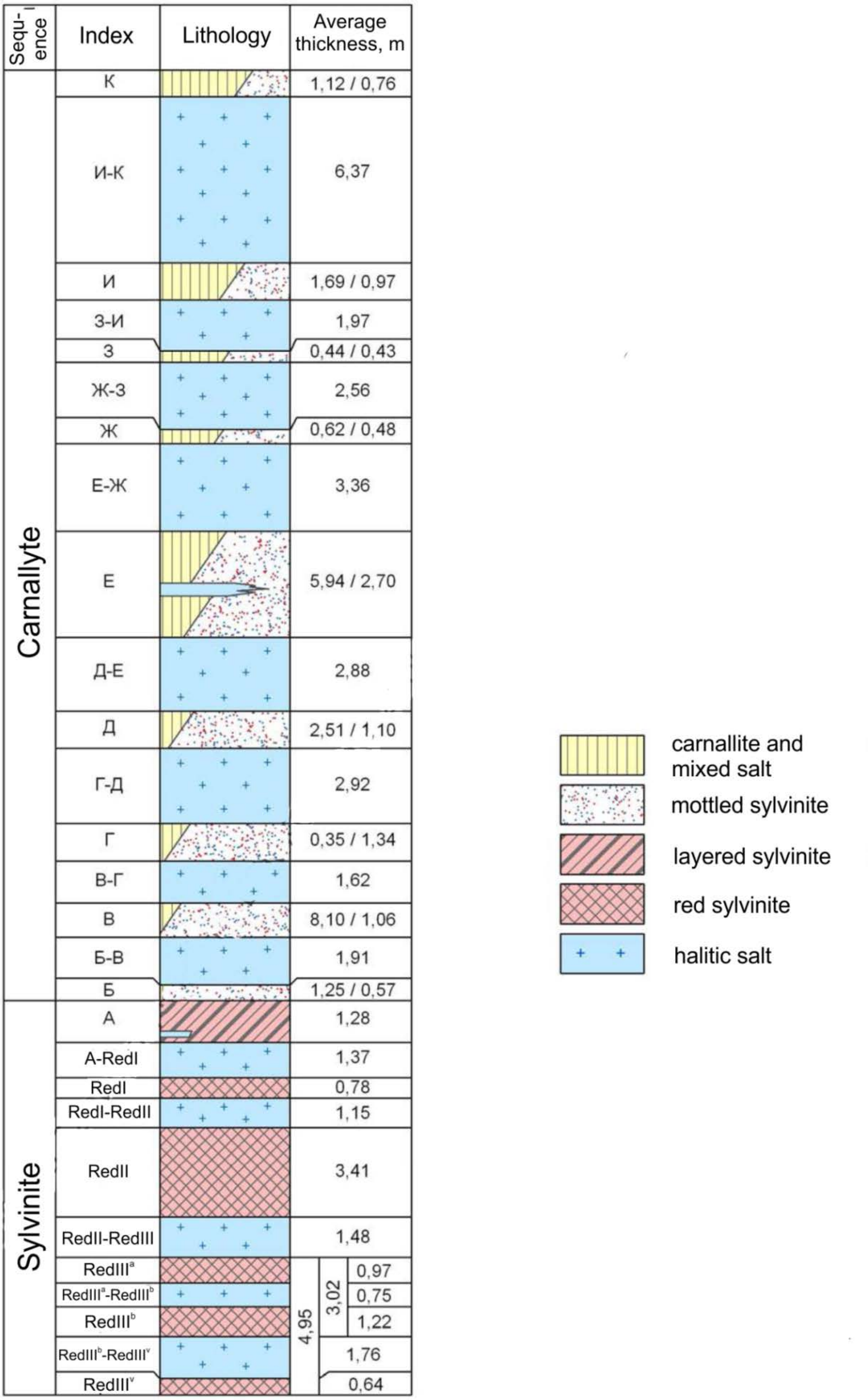


Figure 2-3: General Stratigraphy of the Talitsky Deposit, after TEO Konditsiy Report prepared by "Galurgiya" in 2011

2.3.3 Mineralisation

To the east and northeast of the licence, in the geologically distal part of the basin, the sylvinite horizons thin and are replaced by halite with increased silt content (insoluble remnants). In these areas, the sequence dips at up to 3º at between 40 m and -100 mRL. Across the majority of the licence the overall dip varies between 0.4 degrees and 2º; however, folding within the evaporites is observed in the drill core and the dips here vary from 5-10º up to 45º and higher. This evidence of flow within the evaporite horizons means there will be greater variation in thickness and dip at a smaller scale than can be interpreted through wide spaced sampling. In addition, it must be emphasised that there is greater vertical variation than lateral variation within the horizons due to the nature of mineral deposition.

Sylvinite can be visually differentiated from halite through geological logging, and the boundaries between the layers are sharp in the central and western part of the licence. In the eastern part of the basin, halite replacement causes the thinning of the sylvinite horizons. Where replacement textures occur, the boundaries between the halite and sylvinite are gradational but still visible.

Of the sylvinite horizons within the sequences, only AB, Red 2 and Red 3 are considered of economic interest. Red 1, for example, is less than 1 m in thickness and sits between two thick halite layers (>1 m), which does not warrant its consideration as a mineral resource.

The stratigraphically lowest horizon is Red 3, which varies between 0.1 m and 4.6 m in thickness from east to west. Red 3 varies in quality between 15% and 40% KCl, with poorer quality zones associated with distal facies in the south, west and northwest of the licence. The $MgCl_2$ content varies between 0.1% and 0.7% and insoluble remnants between 2% and 14%.

Red 3 is separated from Red 2 by a halite zone of approximately 0.6 m to 9.8 m thick. The halite interburden increases in thickness consistently with the rest of the sequence towards the centre of the basin in the west.

Red 2 is the thickest sylvinite horizon and constitutes approximately 49% of the three potentially economic potash mineralisation within the licence area. The KCl content varies between 28% and 49%, the $MgCl_2$ content between 0.09% and 0.62% and insoluble remnants of between 1% and 12%.

The AB Seam is separated from Red 2 by two halite layers (average thickness 1.15 m and 1.37 m respectively) with a sylvinite layer (with an average thickness is 0.78 m) in between them.

The AB horizon consists of main A layer with minor B and A’ layers developed only in the western part of the licence. This is the only sylvinite horizon with such a banded structure. The thickness of the horizon increases from 0.2 m to 5.55 m from east to west. KCl content varies from 28% to 58%, $MgCl_2$ from 0.07% to 0.8% (one intersection demonstrates 7.19%) and insoluble remnants from 2.2% to 15.6%.

There are three fault zones interpreted within the licence boundary in the central part of the basin, Figure 2-4. The fault zones are orientated NNW-SSE and are interpreted from offsets observed in the 2D seismic profiles completed across the area. The amplitude of these offsets is unknown and the interpretation is speculative at this time. Further investigation of these areas is required for conclusive measurement of displacement and evidence of thrust faulting.

These areas have been classified in the GKZ as structurally weakened zones with complex geology and have been partially excluded from the GKZ verified on-balance reserve statement.

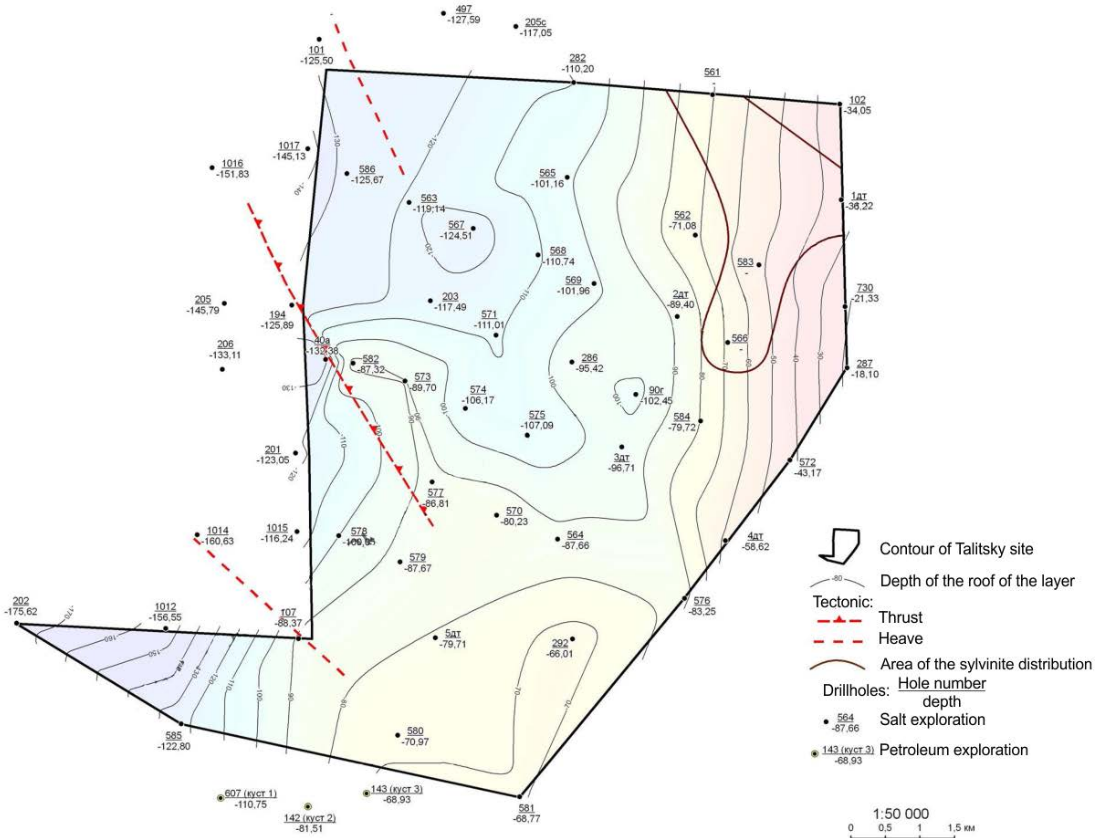


Figure 2-4: Elevation of the Red 2 Horizon and Interpreted thrust faults for the Talitsky Deposit, after TEO Konditsiy Report prepared by "Galurgiya" in 2011

2.3.4 Summary Comments

In summary, SRK considers the regional understanding of the potash occurrence and also the specific knowledge of the potash mineralisation on the Talitsky licence is sufficient to support the audited mineral resource statement presented later in this report.

2.4 History

2.4.1 Regional Exploration

Talitskiy is located in the southeast of the extensively explored and mined Verkhnekamsk deposit of potassium and magnesium salts and located. The deposit area is completely or nearly completely covered by the following survey types:

- geological mapping (scale1:50 000 Kharitonov, 1992, 2002);
- hydrogeological surveys (scale 1: 200,000 Moshkowsky, 1968; Popovtsev, 1968; Melekhov, 1975; Ikonnikov, 1981);
- gravimetric surveys (scale 1: 200,000 Golomb, 1951; scale 1:25,000 Bukin, 1970-1971; Petrov, 1974-1978; Noyaksova, 1986-1989);
- aeromagnetic surveys (scale 1: 200,000 Konoplin, 1959; of Maurichev, 1999-2000; scale

1:100,000 Gafarov, 1955);

- seismic surveys (trust "Permneftegeofizika", 1977-1984); and
- IP survey, separate profiles over selected areas.

In addition, within some individual parts of the deposit above mentioned geophysical surveys were conducted by the denser grid spacing.

In total, more than 1600 prospecting, structural, control and hydrogeological and other special drillholes have been in the region to date and since the discovery of potash in 1925.

To date, eleven sites within the deposit have been explored in detail: four in the central part of the deposit (Solikamsk, Novo-Solikamsk, Polovodovsky, Borovsky) and seven in the southern part (Berezniki, Duryman, Balakhontsevsky, Bygelsko-Troitsky, Talitsky, Palashersky, Ust-Yaivinsky). The total area of detailed exploration is about 1055 km^2 (approximately 29% of the area of Verkhnekamsk potash deposit).

Five active mines are currently working the deposit. Three mines (Solikamsk-1, Solikamsk-2 and Solikamsk-3) operate in the Solikamsk and Novo-Solikamsk areas. Two mine are in production at Durimanskiy (BKPRU-2) and Bygelsko-Troitskiy (BKPRU-4) areas. Two mines (BKPRU-3 at Balakhontsevsky site and BKPRU-1 at Berezniki site) were flooded as a result of accidents in 1986 and 2006. Other sites were transferred for development: Ust-Yaivinsky to PJSC Uralkali; Talitsky to LLC "Verkhnekamsk Potash Company"; Palashersky and Balakhontsevsky to JSC "Kovdor GOK"; and Polovodovsky to JSC "Kama Mining Company”.

2.4.2 Exploration of Talitsky

Type and Volume of Works

Based on State triangulation stations (total of 11 stations), a grid of geodetic control points (total of 90 points) was created. The entire licence area was covered by aerial stereo-topographic survey. The location of aircraft was determined by a geodetic-class GPS system. Reference pictures were taken by an Ultra Cam-X aerial camera. Topographic plans were produced with utilisation of “Photomod” software. Details of amounts of work performed are summarised in Table 2-2.

Table 2-2: Topographic Survey of Talitsky Area.

Type	Scale of survey	Contour intervals, m	Area, km^2
Stereo-topographic	1:25,000	5	69.8
	1:5,000	2	90.22
	1:2,000	1	6.17
	1:2,000	0.25	0.68
Digitizing of topographic plans	1:25,000	5	69.8
	1:5,000	2 and 1	90.22
	1:2,000	1	6.17
	1:500	1	0.68

A total of 68 holes are mentioned in the text and text appendixes of the 2011 TEO Konditsii Report. The number of holes drilled during different exploration campaigns are provided in Table 2-3. It should to be noted that two holes have no information on the date of drilling. These holes, 101a and UCN1, are mentioned only in one table and have no coordinates and their origin is unclear. According to VPC’s report, a total of 48 exploration holes intersected the sylvinite domain in the licence area. Hole depths vary from 220.0 m to 431.0 m (average depth 353.4 m). Only two holes, 102 and 4dt, with depths 620.3 m and 646.6 m, respectively, intersected the underlying domain of mainly halitic salts. Another 16 drillholes were drilled for engineering and hydrological purposes and did not intersect the sylvinite domain. Their depths vary from 180 m to 286.5 m (average 247.7 m). Another two holes, 1st and 2st, were drilled for engineering survey purposes during 2010-11 engineering survey for shaft construction.

Table 2-3: Holes by Exploration Campaigns

Years of campaign	Number of holes
1955-56	7
1960-63	4
1967-69	43
1972-77	2
1988-94	3
2009-10	5
2010-11	2
No data	2

During the 2009-2011 exploration campaign, hole locations were surveyed by a high-precision differential GPS system. The technical specifications of this equipment were not provided. The 2009-2011 exploration campaign also attempted to survey the collar locations of all historical holes.

The precision of the survey for the X coordinate varies from 3.6 to 590.1 mm (average 41 mm), the precision of the Y coordinate varies from 2.2 to 535 mm (average 37 mm) and the precision of the elevation varies from 9.9 to 1052 mm (average 74 mm). The report notes that 45 historical collars were surveyed during the 2009-2011 exploration, 15 holes were not found and the status of 8 holes is not stated. The source of information for holes which were not surveyed is not mentioned in the report, but it is very likely these coordinates were taken from historical survey data.

SRK notes that the method of survey of collar location is presented only for the exploration campaigns completed between 1967-69 and 2009-11. Despite this, and despite the fact that some historical holes were not found during the recent campaign, SRK is of opinion that historical coordinates presented in the TEO Kondicii are precise enough for the purpose of supporting the resource estimates presented later in this report. This opinion is supported on the very strict GKZ requirements on precision of collar survey, and the fact that all holes had passed GKZ approval (otherwise they could not be included into the TEO Konditsii report).

Exploration Database

SRK has completed verification modelling for the deposit based on the database that was used to derive the GKZ reviewed reserve statement.

The database comprises 70 surface drillholes for a total of approximately 23,634 m that have been completed within or close to the Talitsky Licence area. Of these, 48 drillholes intercepted the potassium horizons and were used to create the GKZ model (Table 2-4). A total of 144 composite samples for a total of 313.4 m were coded and utilised for modelling. Drillhole intercepts achieve a grid spacing of approximately 1,000 m to 1,200 m in the central part of the deposit and approximately 2,000 m to 2,200 m in the periphery. The average depth of the drillholes is approximately 338 m. Five of the drillholes were completed between 2009 and 2010 and the remainder were completed in the 1960s. Figure 2-5 shows the locations of the drillholes across the Talitsky licence area.

Table 2-4: Final Database for Resource Estimation

N	Drillhole	Year
1	1ДТо	2010
2	2ДТ	2009
3	3ДТ	2009
4	4ДТ	2010
5	5ДТ	2010
6	40a	1968
7	90г	1968
8	101	1955
9	102	1955
10	107	1955
11	194	1955
12	201	1956
13	202	1956
14	203	1956
15	282	1960
16	286	1960
17	287	1960
18	292	1961
19	561	1967
20	562	1968
21	563	1968
22	564	1968
23	565	1968
24	566	1968
25	567	1968
26	568	1968
27	569	1968
28	570	1968
29	571	1968
30	572	1968
31	573	1968
32	574	1968
33	575	1968
34	576	1968
35	577	1968
36	578	1968
37	579	1968
38	580	1968
39	581	1968
40	582	1968
41	583	1968
42	584	1968
43	585	1968
44	586	1968
45	730	1972

N	Drillhole	Year
46	1012	1994
47	1015	1989
48	1017	1988

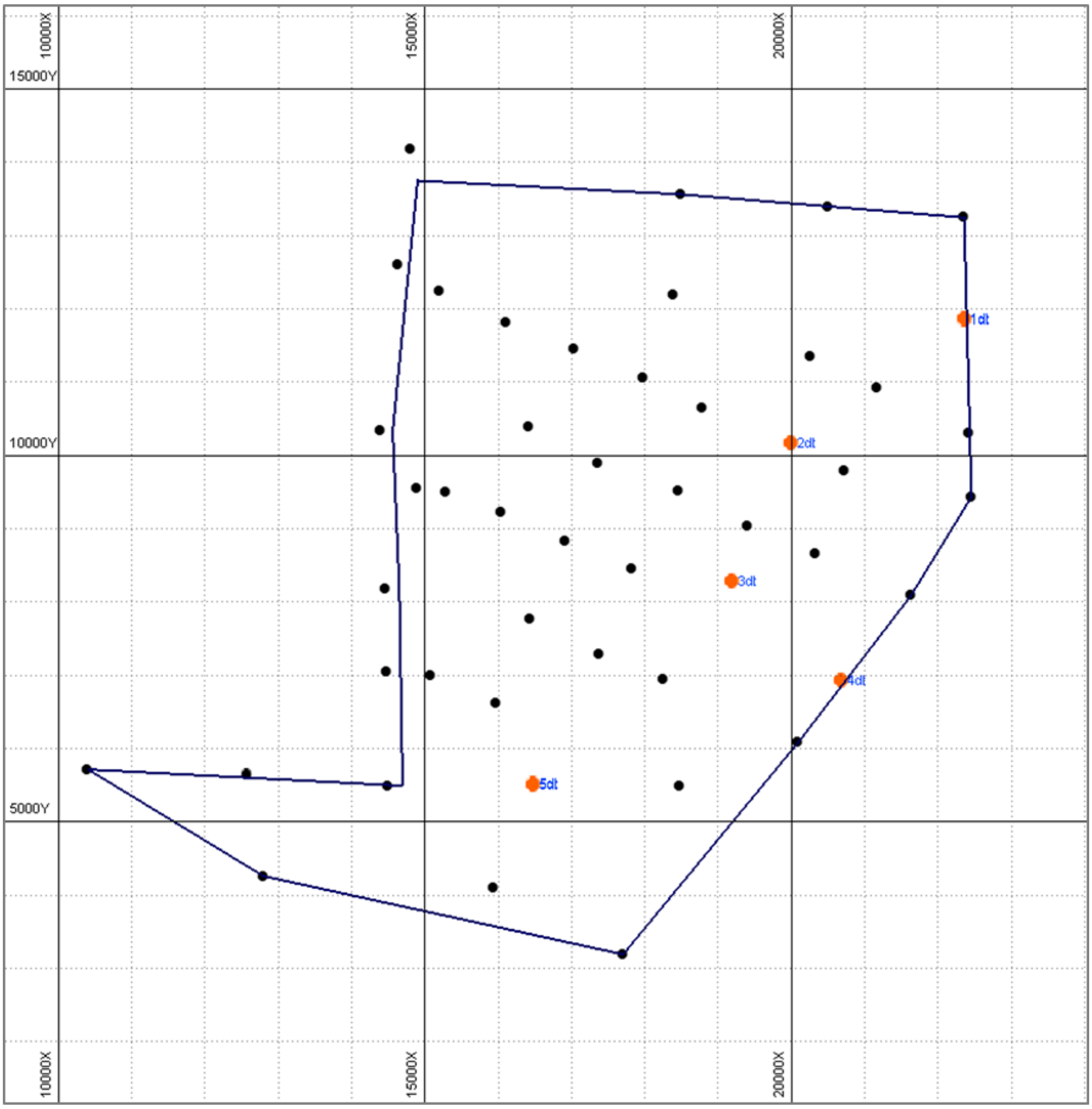


Figure 2-5: Drillhole Locations within and nearby the Talitsky Licence Borders (Five Recent Drillholes in red)

Exploration Equipment and Technology

The drilling method for all holes drilled prior 2009 was core drilling with tungsten carbide drill bits. The following types of drill rigs were used:

- KAM-500 for holes drilled before 1962; and
- ZIF-650A for all holes drilled after 1962.

No information about the type of drilling fluid was provided. All holes were cemented after drilling. The following compositions were utilised:

- Prior to 1962: clayey-gravel mix from the end of the hole with cement plug on the interval from the roof of sylvinite layer to the top of a salt table;
- 1967-69: cement from the end of hole to the roof of the sylvinite domain and clayey-gravel mix (proportion 60-40, respectively) from the roof of the sylvinite to the top of hole; and
- 1988-1994: magnesia-phosphate compound from the end of hole to the roof of the sylvinite domain, the interval of clastic-carbonate domain was filled by sand or gravel and then clayey-gravel compound up to the top of hole. The collar was cemented by concrete.

A total of 15,328.7 m of exploration holes and 3,963.2 m of hydrological and engineering holes were drilled prior to 2009.

The holes drilled in the 2009-2010 campaign were cored. Holes 1dt and 4dt were drilled by a ZIF-650M drill rig. Holes 2dt, 3dt and 5dt were drilled by a 1BA15V drill rig mounted on a MAZ-5334 vehicle. These three holes were twinned within the sylvinite domain. All 5 holes were drilled with utilisation of carbide drill bits. The drilling diameter was 112 mm in the primarily holes and 93 mm in the secondary holes. During the drilling process, fluid was only circulated around the drilling bit. Pure water was used for unsalted rocks and chlorine-magnesium phosphate solutions were utilized within salt domain. The run length varied from 0.5 to 6.7 m (average 2.6 m). Triple casing was used to prevent water leakage from upper water-bearing horizons to salty rocks. A total of 2410.99 m was drilled during 2009-2011 exploration, including 2194.34 m within primary holes and 216.65 m within secondary holes.

Down-Hole Surveying/Geophysics

1950-1960s

The techniques utilised include downhole survey (IK-2 tool), caliper surveys and gamma-surveys (tools RARK, RASK, PASK-8, YEA-1). According to VPC's report, in three holes (101, 108 and 571) dip/azimuth survey was not performed due to survey tool breakdown, and in six holes (282, 286, 564, 572, 582 and 583) the azimuth was not measured due to unknown technical issues. Gamma and caliper surveys were carried out in the all holes.

According to the downhole survey data, in most cases the deviation of holes from vertical does not exceed 3º even near the end of holes. SRK is of opinion that these data confirm absence of significant deviations, and the lack of azimuth measurements in some holes should be considered as an insignificant issue due to the very poor accuracy of azimuth measurements if the drillhole dip is greater than 87º.

Gamma-survey data (with assistance of caliper measurements) was used in two ways:

- For adjustment of the depths to lithological boundaries, including ore intervals, particularly for holes with poor core recovery. Sylvinite layers correspond to gamma-maximums, and (in accordance with standard industry practice) boundaries were marked at the ½ intensity of the peak.
- In case of poor core recovery (less than 55%) within the ore interval, samples were not taken. KCl concentration was measured indirectly based on gamma-survey using the empirical equation C(KCl)=S/100*h*K, where S is the area of gamma-anomaly

(μR/hour/cm^2), h the thickness of the layer (cm), and K the empirical coefficient, corresponded to influence of KCl concentration on intensity of gamma-anomaly. This equation was tested and adopted based on the ore intervals with core recovery greater than 90%.

SRK is of the opinion that gamma-survey is a useful tool for precise adjustment of lithological boundaries, including ore intervals in case of poor core recovery. At the same time, utilisation of this method for indirect estimation of KCl concentration could provide ambiguous results. SRK has not checked the accuracy of the VPC calculations.

1980-1990s

The list of downhole survey techniques for holes 1012, 1015, 1017 is provided below (Table 2-5). SRK notes that most of these techniques could add precision in locating lithological boundaries, including sylvinite layers, especially in case of poor core recovery. Some of the techniques, such as flowmeter and acoustic survey, are useful for hydrological and engineering purposes.

Table 2-5: Methods of Downhole Survey for Holes Drilled in 1980-1990s

Method	Survey Tool
Gamma ray survey	KURA-2, RKS-3M and CKM with NaI(Tl) detectors
Neutron gamma ray survey	KURA-2 with NaI(Tl) detector
Neutron-neutron survey based on the thermal neutrons	RKS-3m with NaI(Tl) detector
Gamma-gamma density survey	KURA-2 with NaI(Tl) detector and FYEU-35
Resistivity survey (KS)	Survey tools A2.0M 0.5N and A2.0M 0.2N
Downhole survey	KIT, MIR-36
Caliper survey	KM-2
Resistivity survey	RS-61M
Thermometry	ETMO-1, STL
Flowmwter survey	RYETS-2
Acoustic survey	PARUS-8 with I 0.75P 10.25P2 probe

2009-2011

A total 21 of different techniques of downhole survey were utilised during the 2009-2011 exploration campaign (Table 2-6). Even though there is generally good core recovery within ore intervals (93% of intersections have core recovery above 90%), SRK notes that some of the survey data could be useful for precise adjustment of lithological boundaries. Other potential uses of the data collected are for hydrological and geotechnical purposes.

Table 2-6: Methods of Downhole Survey for Holes Drilled in 2009-2011

Method	Amount, m
Mud logging	733.2
Downhole survey	3050.0
Gamma ray survey	2358.0
Neutron-neutron survey based on the thermal neutrons	2331.5
Gamma-gamma ray density survey	49.5
Spectrometric neutron-gamma ray logging	449.0
Spectrometric gamma ray logging	645.5
Induction electrical log	563.0
Acoustic survey	432.3
Standard electrical log (KS)	2198.0
Standard electrical log (PS)	1782.9
Lateral logging	1370.0
Caliper survey	2433.2
Gamma ray survey	454.1
Location of column joints	527.2
Highly sensitive thermometry survey	889.3
Barometry survey	278.9
Downhole thermoconductive flowmetry survey	313.4
Flowmetry survey	244.3
Resistivity survey	94.2
Assessment of hole grouting quality by USIT tool	1013.5
Assessment of hole grouting quality by IT tool	165.2

Core Recovery

According to VPC's report, a total of 49 drillholes were used for GKZ resource estimation. The report provides only average core recovery within selected "ore intervals". Average core recovery for all GKZ ore intervals is 80%. From 144 ore intervals, 22 have core recovery less than 50%, 45 between 50 and 90%, and 77 intervals with recovery greater than 90%. The core recovery within ore intervals also varies significantly between exploration campaigns (Table 2-7).

Table 2-7: Core Recovery within the GKZ Ore Intervals

Year	Average core recovery	Number of intervals	Number of intervals with core recovery below 90%	Intervals with core recovery below 90%, %
1955-56	85	21	9	43
1960-63	66	12	8	67
1967-69	76	84	49	58
1972-94	92	12	4	33
2009-10	99	15	1	7

SRK notes the assays from the intersections with poor core recovery (<50%) were not used to produce the GKZ audited reserve statements though the hanging wall and foot wall locations were still used to define the estimation domains.

Test methods; sampling and testing

VPC's report provides information regarding the sampling and analytical procedures for the exploration campaigns of 1967-69 and 2009-11, but not for the periods outside of this. There is no information on sampling/assaying for other periods. Samples were taken from sylvinite and carnallite layers and from underlying halite. The length of samples corresponds to thickness of lithological units in the geological log. Intervals of non-salt rocks with thicknesses greater than 5 cm were taken as separate samples; thinner intervals were included in the salt sample.

Sampling 1967-69

The maximum length of individual samples was 3.5 m for sylvinite and 14 m for the underlying halite. Core was broken along the axis in two halves, from which one was taken for assay and the other was stored as a duplicate. The resulting sample weights varied from 0.25 to 10.4 kg and these were crushed and pulverised to -0.25 mm for sylvinite and halite and to -0.5 mm for carnallite. The coarser fraction size in the latter case was due to high water absorption of carnallite which can affect the composition of sample. A total of 983 samples were taken, including 305 samples of sylvinite, 69 of carnallite, 505 of halite and 104 samples of salty clay.

SRK notes that dividing samples by breaking could provide non-equal pieces. Despite on the fact that the nugget effect is likely to be very low for a salt deposit, sampling of unequal halves could affect the analytical assessment of insoluble material.

Sampling 2009-11

All core was photographed before sampling; SRK has seen the resulting photographs for drillholes No. 1 and 2. Sample lengths vary from 0.03 to 5.8 m with average length 1.71 m. The underlying halite was usually sampled at 5 m intervals. Given the complex structure of ore intervals (small lenses of non-salty material are common within the salt layers), VPC decided to take a whole core as a sample. According to the database provided by VPC, a total of 596 samples were taken, fewer than the number given in the text of TEO Kondicii (612). The source of this mismatch is not clear. A total of 20 sylvinite samples were taken from the intervals identified as having reasonable prospects for economic extraction.

Drillholes 2dt, 3dt 5dt were twinned. Core from the primary holes was taken for engineering purposes, while core from the secondary holes was assayed. SRK notes there are mismatches between the primary and secondary holes, in regard to depths and thickness of ore intervals. The ore zones in the primary holes were defined based on lithological description, and the ore zones in the secondary holes were defined based on assay data. In some cases the mismatch is as great as 1.2 m. SRK suggests that depth, thicknesses and grades for resource estimation should be taken from the secondary hole with respect to downhole survey data.

Overall, in SRK's opinion, sampling procedures were carried out correctly, with reasonable attention to detail.

Assaying

VPC's report provides information only about analytical procedures for the 1967-69 and 2009-11 exploration campaigns. There is no information on assay methodology for other periods.

Samples from the 1967-69 exploration programme were assayed in the analytical laboratory of the Solikamsk exploration party, while those collected during the 2009-11 exploration program were carried out in the Berezniki analytical laboratory (a branch of JSC Galurgia).

The same assay method was used for both 1967-69 and 2009-11 exploration campaigns. Concentration of K, Ca, Mg, Na, HCO_3, SO_4, Cl, Br, crystalline H_2O, and hygroscopic H_2O was estimated in the salts (sylvinite, carnallite, halite) and clayey and anhydritic rocks. Two types of samples were taken: first with weight about 2 g, and second with weight of precisely 5 g for clays and anhydritic rocks and 10 g for salts.

The first sample type was used to estimate concentration of hygroscopic H_2O by drying samples in the testing oven at T=100-105^oC for 5-6 hours. The content of crystalline H_2O was calculated based on $MgCl_2$ concentration in the carnallite.

The second sample type was dissolved in distilled water and then filtered through a paper filter. The flask with this solution then was topped up to precisely 500 ml. The following methods were used to determine concentration of different ions:

- potassium concentration was determined by the tetraphenylborate method (Engelbrecht and McCoy, 1956, GOST 20851.3-93) in sylvinite and carnallite ores, and by flame-photometric method (Roy, 1956, GOST 13685-84) in mainly halitic and clayey samples;
- magnesium and calcium concentration was determined by the chelatometry method (Pribil, 1958, GOST 20851.3-93, ГОСТ 13685-84);
- sulphate-ion concentration was determined by the gravimetric method (GOST 13685-84). This method is based on precipitation of sulphate ions by solution of $BaCl_2$ and determination of the weight of $BaSO_4$ after roasting;
- chloride was determined by the mercurimetry method (Thomas, 1954, GOST 13685-84);
- bromide was determined by iodometric titration (Nagy and Nagy, 2014, GOST 13685-84, STO 8.2.4-UII/0.3-11-10); and
- sodium was calculated based on the amount of chloride that remained after deduction of amount bonded with potassium, magnesium and calcium (GOST 13685-84).

The paper filter was washed with hot water to remove chloride ions, the filter then was dried in the oven and weighed. Based on these data, the concentrations of the insoluble remnants were calculated.

Insoluble remnants from the samples taken during 2009-2011 exploration campaign were tested in the “All-Russian Institute of Mineral Resources” (“VIMS”) by the following methods:

- Grain size classification (10 samples) with utilisation of screens with cell size of 2, 1, 0.5, 0.25, 0.1 and 0.045 mm.
- Mineralogical analysis was used for making graphs of content (in %) versus depth for each mineral type. The following equipment was utilised:
  - optical microscope (27 samples) with magnification from 8x to 105x for the fractions +0.1 mm; and
  - XRD analyses (40 samples) for the fractions -0.045 mm were made by X-ray diffraction meter X’pert PROMPD (PANalytical B.V.).
- Chemical composition was determined by XRF MagiX-Pro spectrometer by PANAnalytic and ICP-AES Optima-4300 by Perkin-Elmer. A total of 46 samples were assayed.
- Thermal analyses were made on derivatograph Q-1500 (10 samples).

SRK is of the opinion that assay works were made in accordance with Russian State requirements, the appropriateness of these assay methods has been demonstrated throughout the history of mining on the other sites of Verkhnekamsk potash deposit. Although different techniques have been developed in recent decades, the assay methods utilised by VPC can be considered as sufficiently reliable for Mineral Resource estimation.

Sample Preparation

The sample preparation technique for sylvinite, carnallite and salt was different. The sylvinite Sample preparation is given at Figure 2-6.

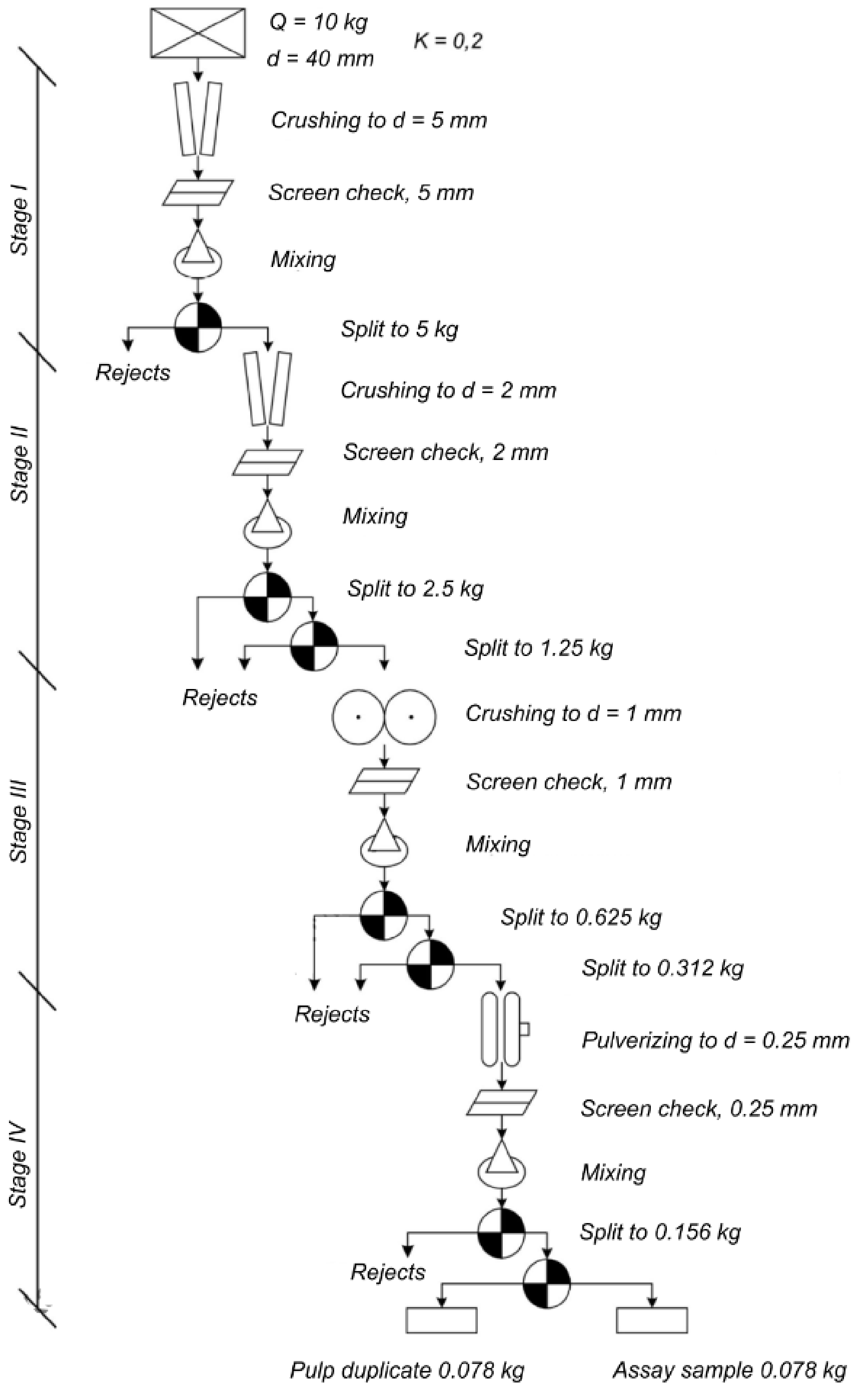


Figure 2-6: Sample Preparation for Sylvinite Samples

Analytical and Control Studies

The VPC report describes quality control measures for analytical procedures only from the 1967-69 and 2009-11 exploration campaigns.

The quality control programme comprised the following stages:

- Insertion of certified reference material ("CRM") with frequency one CRM per six routine samples. CRM are used to control the accuracy of standard value determination in order to control the laboratory performance.
- Internal control. Following GKZ guidance, 6% of sylvinite samples were duplicated; these duplicates were used for re-sampling at the same testing laboratory.
- External control. Following GKZ guidance, 63 and 11 samples of 1967-69 and 2009-11 campaigns, respectively, were taken; these duplicates were re-analysed at the independent testing laboratory.

CRM

According to the VPC report, three CRMs were used during exploration campaign 2009-2011:

- GSO 8561-2004, with composition of sylvinite of Verkhnekamsk deposit produced by JSC Galurgiya;
- GSO 7990-2002 with composition of table salt produced by JSC RITM; and
- SOP A 058-09 UK with composition of dry mud produced by PJSC Uralkali.

A total of 96 CRM were assayed. The VPC report only states that all data are within "reasonable range": no information is provided on number of CRM used, nor on the assay results. Notwithstanding this, given the good results for other check assays, SRK does not have a concern that the results of the CRM assay are not provided in the TEO Kondicii report.

With regards the earlier exploration, it is SRK's understanding of the QA/QC of that period in USSR the CRM were not used and all quality control procedure was based on internal and external control only.

Internal Control

The purpose of the internal laboratory control is to detect gross random errors and assay precision. Control during both exploration campaigns was constantly performed using duplicate assay samples. The overall amount of internal control for the 1967-69 exploration campaign was 63 samples (6%) for sylvinite. Grades varied from 6.5 to 37.0% for K_2O, and from 19.5 to 42.7% for Na_2O. Samples were assayed for K, Na, Mg, Cl, Br, $CaSO_4$ and insolubles, but only Na and K grades are provided in the report. Figure 2-7 demonstrates scatter plots based on internal quality control for K and Na assay. These plots indicate good repeatability and acceptable quality of assay data.

VPC stated that due to an insufficient amount of sylvinite samples (only 25) internal control was not performed. According to GKZ requirements, the total amount of samples should be at least 30.

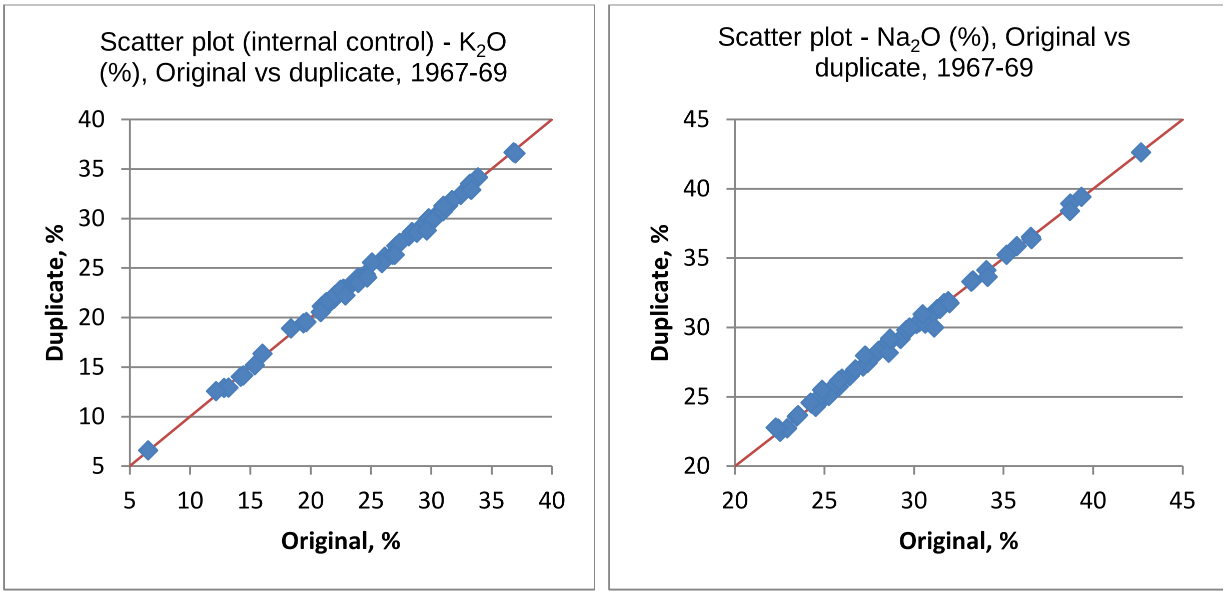


Figure 2-7: Internal Control of Assay, 1967-69 Exploration Campaign

External Control

External control of assaying during the 1967-69 exploration programme was carried out in the "Central Analytical Lab" of Solikamsk Potassium Integrated Plant. A total of 63 samples were assayed for Na and K, the same samples which were used for the purpose of internal control. The results are shown on the Scatter plots (Figure 2-8).

External control of assay during the 2009-11 exploration programme was carried out in the certified lab in the "Centre of investigation and quality control" JSC Sylvinite. A total of 11 samples were assayed for K and Na. Grades varied from 15.7 to 38.6% and from 18.0 to 38.9% for K_2O and Na_2O, respectively. The results are shown on the catter plots in Figure 2-9.

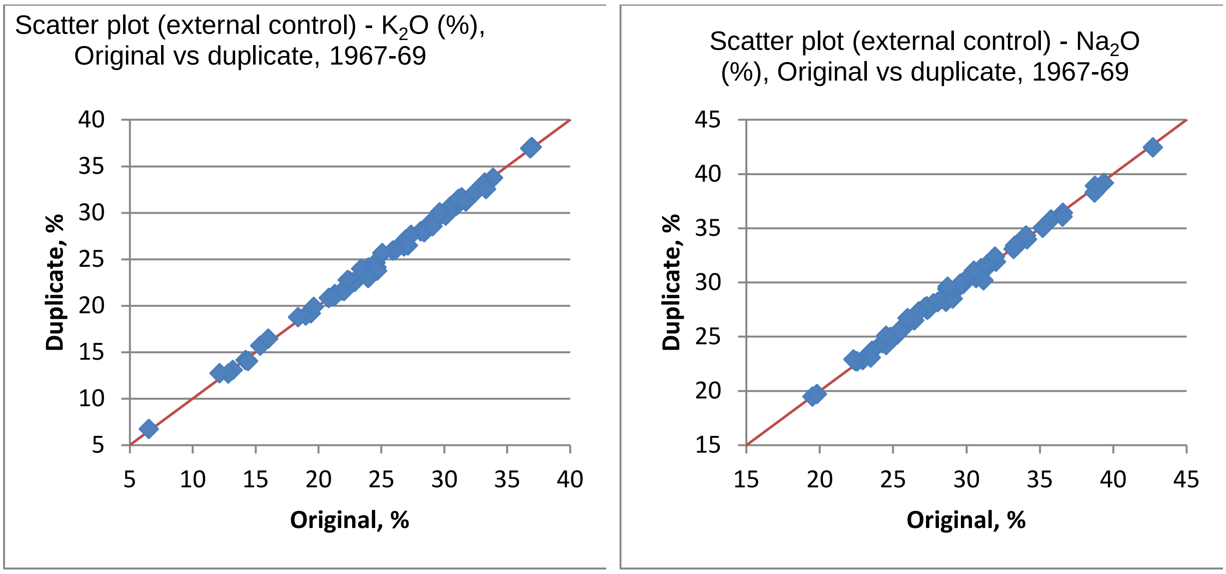


Figure 2-8: External Control of Assay, 1967-69 Exploration Campaign

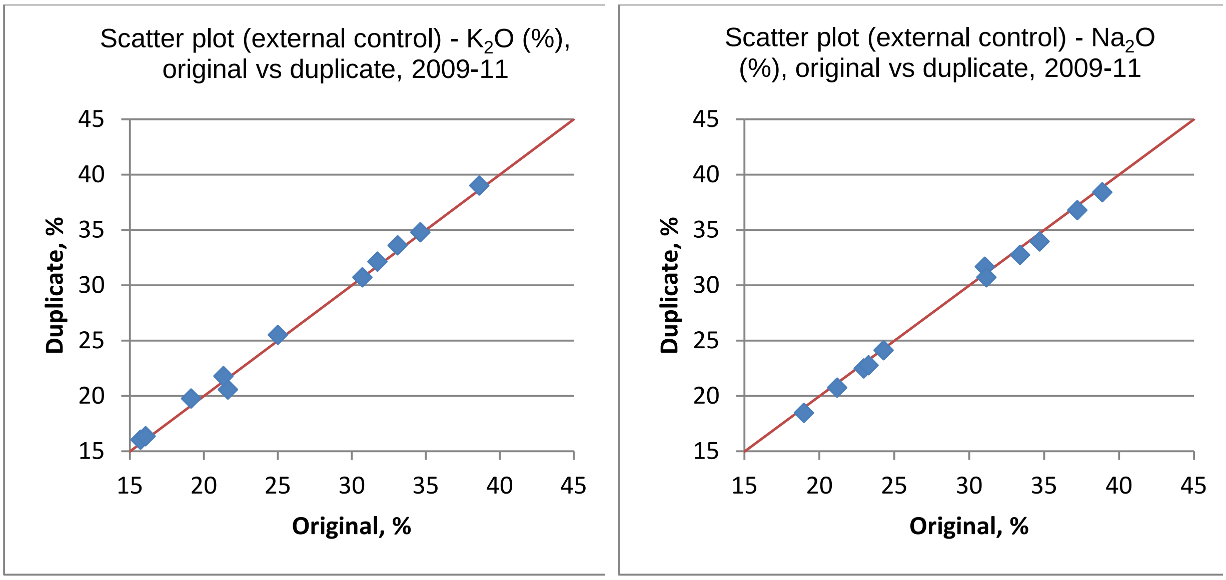


Figure 2-9: External Control of Assay, 2009-11 Exploration Campaign.

The scatter plots show good repeatability and acceptable quality of assay data, and notably the relative errors do not exceed 1.6 and 2.4% for Na and K, respectively.

SRK Comments

Based on the above, SRK is of the opinion that the analytical data have good precision and accuracy and are of sufficient quality to support the resource estimates presented later in this report.

2.4.3 Input Data Analysis

Introduction

VPC has provided the following assay data to SRK:

- Scanned copies (raster images) of assay data of 1967-69 exploration program;
- Assay data for all sample taken during 2009-11 exploration program in PDF format;
- Assay data for all ore intersections (MS Excel file) calculated as average weighted based on assay data of individual samples in accordance requirements of TEO Kondicii report.

Database Verification (contents, structure, completeness, accuracy)

Although SRK has not digitised all of the raw assay data from the 1967-69 exploration program, 5% of this data was randomly selected and re-calculated as average weighted within the ore intervals selected by VPC. The content of KCl (major mineral product) and $MgCl_2$ and insoluble remnant (impurities) was checked. The results demonstrate good agreement (Table 2-8, Table 2-9). SRK concludes that conversion of historical assay data to ore intervals was done with reasonable accuracy. Depth of the intervals in the raw data corresponds to calculated intersections. SRK also considers that because 5% of checks are satisfactory then the historical assay data can be accepted as reliable.

Based on examination of assay data from three drillholes of 1988-94 exploration campaign, SRK is of opinion that VPC's calculation were made correctly.

Table 2-8: SRK Check of Grade Calculation within GKZ Ore Intervals, Holes 1967-69

Hole_ID	Domain_ID	From	To	KCl, %		$MgCl_2$, %		Insoluble remnant, %	
				VPC data	SRK check	VPC data	SRK check	VPC data	SRK check
40a	Kp2	292	297	28.14	28.14	0.07	0.07	3.58	3.58
90r	Kp2	306.5	309.7	36.78	36.78	0.12	0.12	5.32	5.34
286	Kp2	282.0	285.0	42.59	42.60	0.21	0.22	3.35	3.35
286	Kp3	286.2	289.2	35.92	35.90	0.26	0.26	4.50	4.50
563	Kp2	260.3	264.3	40.4	40.41	0.22	0.22	2.12	2.12
567	Kp3	320.1	323.2	23.05	23.05	0.24	0.24	3.46	3.46
572	Kp2	232.3	234.5	32.35	32.35	0.14	0.14	7.04	7.08
578	Kp2	296.65	300.9	42.41	42.41	0.35	0.35	2.67	2.67
578	Kp3	302.3	305.5	33.33	33.33	0.26	0.26	5.66	5.66
584	Kp2	280.85	283.35	40.16	40.16	0.15	0.15	4.30	4.30
586	AB	299.3	301.30	40.36	40.36	0.30	0.31	2.80	2.80

Table 2-9: SRK check of grade calculation within GKZ ore intervals, holes 1988-94

Hole_ID	Domain_ID	from	to	KCl		$MgCl_2$		Insoluble	
				VPC data	SRK check	VPC data	SRK check	VPC data	SRK check
1012	AB	377.1	379.4	41.16	41.16	0.07	0.07	8.54	8.54
1012	Kp2	383.35	388.05	32.80	32.8	0.09	0.09	6.97	6.97
1012	Kp3	389.5	392.85	20.26	20.26	0.10	0.10	7.01	7.01
1015	AB	328.25	330.4	27.60	27.59	0.63	0.63	15.60	15.59
1015	Kp2	334.05	338.65	45.96	45.95	0.30	0.29	4.30	4.30
1015	Kp3	339.95	343.1	27.06	27.06	0.42	0.42	6.04	6.04
1017	AB	294.15	296.5	40.34	40.34	0.11	0.11	5.83	5.83
1017	Kp2	303.55	307.9	41.44	41.44	0.04	0.04	1.98	1.98
1017	Kp3	309.75	310.6	44.80	44.8	0.07	0.07	2.08	2.08

Based on verification of 2009-11 exploration database, SRK notes that ore interval thickness is provided from the main vertical hole based on the geological log data from the primary hole, but grades are taken from the secondary (duplicate) hole (see “Sampling” section for further details). Because of this, the thickness and depth of some layers varies significantly between the GKZ-approved intervals and the original raw assay data (Table 2-10), the differences are as great as 1.2 m (hole 5dt). SRK is of opinion that the raw assay data should be used for further resource estimation.

Table 2-10: SRK check of grade calculation within selected ore intervals, holes 2009-11

Hole_ID	Domain_ID	From		To		Thickness		KCl		$MgCl_2$		Insoluble	
		VPC data	SRK check	VPC data	SRK check	VPC data	SRK check	VPC data	SRK check	VPC data	SRK check	VPC data	SRK check
1dt	AB	236.41	236.4	237.41	237.4	1.00	1.00	42.72	42.72	0.07	0.07	6.94	6.94
2dt	AB	283.1	283.2	283.85	283.9	0.75	0.70	32.61	32.61	0.16	0.16	9.26	9.26
2dt	Kp2	287.65	287.9	289.35	289.4	1.70	1.50	43.01	43.01	0.10	0.10	4.57	4.57
3dt	AB	312.65	312.4	313.6	313.35	0.95	0.95	37.42	37.42	0.11	0.11	7.72	7.72
3dt	Kp2	316.05	316	317.9	317.75	1.85	1.75	30.63	30.63	0.22	0.22	11.65	11.65
3dt	Kp3	321.75	321.65	324.6	324.3	2.85	2.65	23.18	23.18	0.19	0.19	8.37	8.37
4dt	Kp2	265.75	265.75	267.75	267.75	2.00	2.00	35.33	35.33	0.30	0.30	12.72	12.72
5dt	AB	299.4	299.45	300.35	300.45	0.95	1.00	30.71	30.71	0.80	0.80	9.94	9.94
5dt	Kp2	303.7	305.05	308.1	308.25	4.40	3.20	39.39	39.39	0.15	0.15	6.92	6.92
5dt	Kp3	309.35	309.4	310.15	309.9	0.80	0.50	45.55	22.78	0.18	0.09	3.72	1.86

During all exploration campaigns, the depths of the lithological contacts were corrected based on the interpretation of the downhole geophysics. These corrections were performed during field data processing. The final data provided to SRK in the reports contain only corrected data. SRK notes that these corrections are essential in case of poor core recovery of historical drilling. Based on the random examination of 5% of the data from the sylvinite domain SRK is of opinion that these interpretations were done correctly and lithology data provided by VPC can be used for geological modelling.

Density

Density measurement was carried out for 47 samples during exploration campaign 1967-69. These data were processed by VPC in the most recent exploration campaign to make an empirical equation between chemical composition and density of a salt samples, as follows:

$$d_{npup.} = \left[\frac{\left(C_{KCl} - C_{MgCl_2} \cdot 0{,}7830\right) + \left(C_{MgCl_2} \cdot 2.9182\right) + C_{NaCl} + C_{CaSO_4} + C_{H.O.}}{\frac{C_{KCl} - C_{MgCl_2} \cdot 0{,}7830}{1{,}989} + \frac{C_{MgCl_2} \cdot 2.9182}{1{,}60} + \frac{C_{NaCl}}{2{,}16} + \frac{C_{CaSO_4}}{3{,}00} + \frac{C_{H.O.}}{2{,}70}} \right] \cdot K\ ,$$

This equation was used for calculation of density of all samples from all exploration programs. SRK has not validated this equation. SRK only used it to check density calculation for a randomly selected 5% of intervals and obtained the same numbers as in VPC's report. Based on density of individual mineral specimens, SRK's opinion is that this empirical equation provides sufficiently accurate density results to support resource estimation.

2.5 Resource Estimation

2.5.1 Introduction

In order to review the GKZ verified statement, and to produce an audited Mineral Resource Statement in accordance with the JORC Code, SRK has generated a 3D geological grid model in the Micromine software. The geological model comprised the AB, Red 2 and Red 3 horizons and is based on the composite table used for the GKZ verified polygonal statement. Samples with poor core recovery were ignored for grade estimation purposes but were used for the modelling of horizon elevations and thicknesses determined from the downhole geophysical logs.

2.5.2 Geological Modelling

Structural Gridding

The structural grids were generated from the elevation of the drillhole composite mid-points and the stacking of horizon thicknesses for each of the horizons.

A grid spacing of 200 x 200 m was chosen to accurately model the dips of the potassium bearing horizons across the deposit. The horizon and interburden mid-point elevations and thicknesses were interpolated using an inverse distance squared algorithm into a 200 x 200 m grid using a maximum of four samples and a maximum distance of 2 km to ensure the whole grid extents were filled (Table 2-11). The grids were then stacked together to create a seam block model which contained the potassium horizons and interburden material.

Table 2-11: Structural Grid and Block Model Extents and Size

Axis	Minimum	Maximum	Size	No of blocks
X	1,000	23,000	200	66
Y	3,000	15,000	200	61

Grade Interpolation

Geostatistical analyses were carried out on the drillhole composites and omnidirectional variograms were successfully generated for KCl, $MgCl_2$, $CaSO_4$, Br and the insoluble remnants for each horizon.

The block model was then interpolated into using Ordinary Kriging ("OK"), covering the same extents as the structural grids (Figure 2-10). Each horizon was interpolated separately for KCl, $MgCl_2$, $CaSO_4$, Br and the insoluble remnant qualities. A maximum of 20 samples, minimum of 4 samples and a maximum distance of between 8,400 m and 9,690 m, depending on the horizon, was used to constrain the interpolation. The same search neighbourhood was used for all variables.

The modelled mid-elevation point elevations and thicknesses for the Red 2 horizon are shown on Figure 2-10 and Figure 2-11. The KCl interpolated grades for the Red 2 horizon shown in Figure 2-12. Following interpolation, the geological block model was then truncated against the licence boundaries.

Density values were incorporated into the geological block model based on the GKZ formula that uses mineralogy data for the calculation of bulk density. The density values vary between 2.0 g/cm^3 and 2.1 g/cm^3.

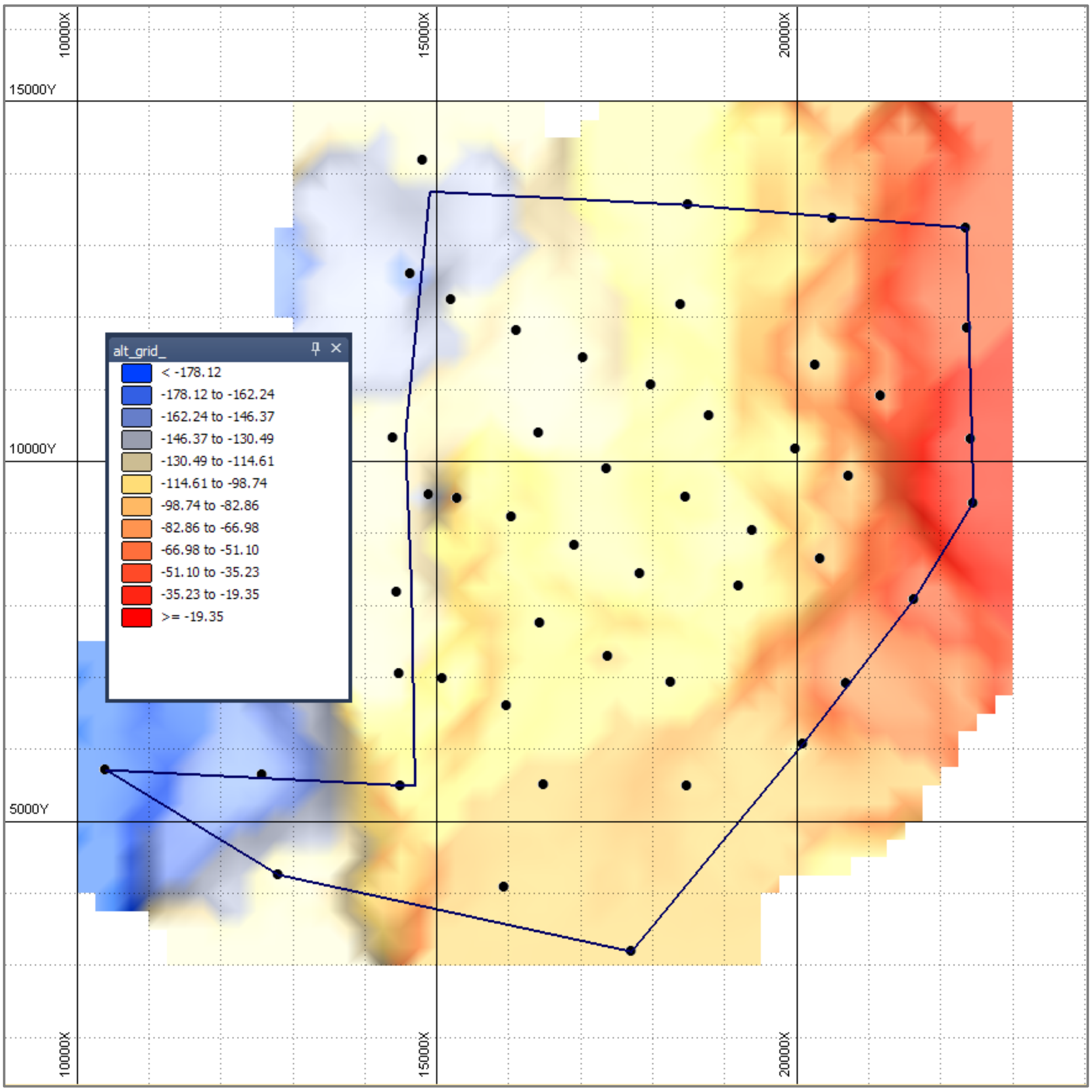


Figure 2-10: Mid-point Elevation Grid for Horizon Red 2

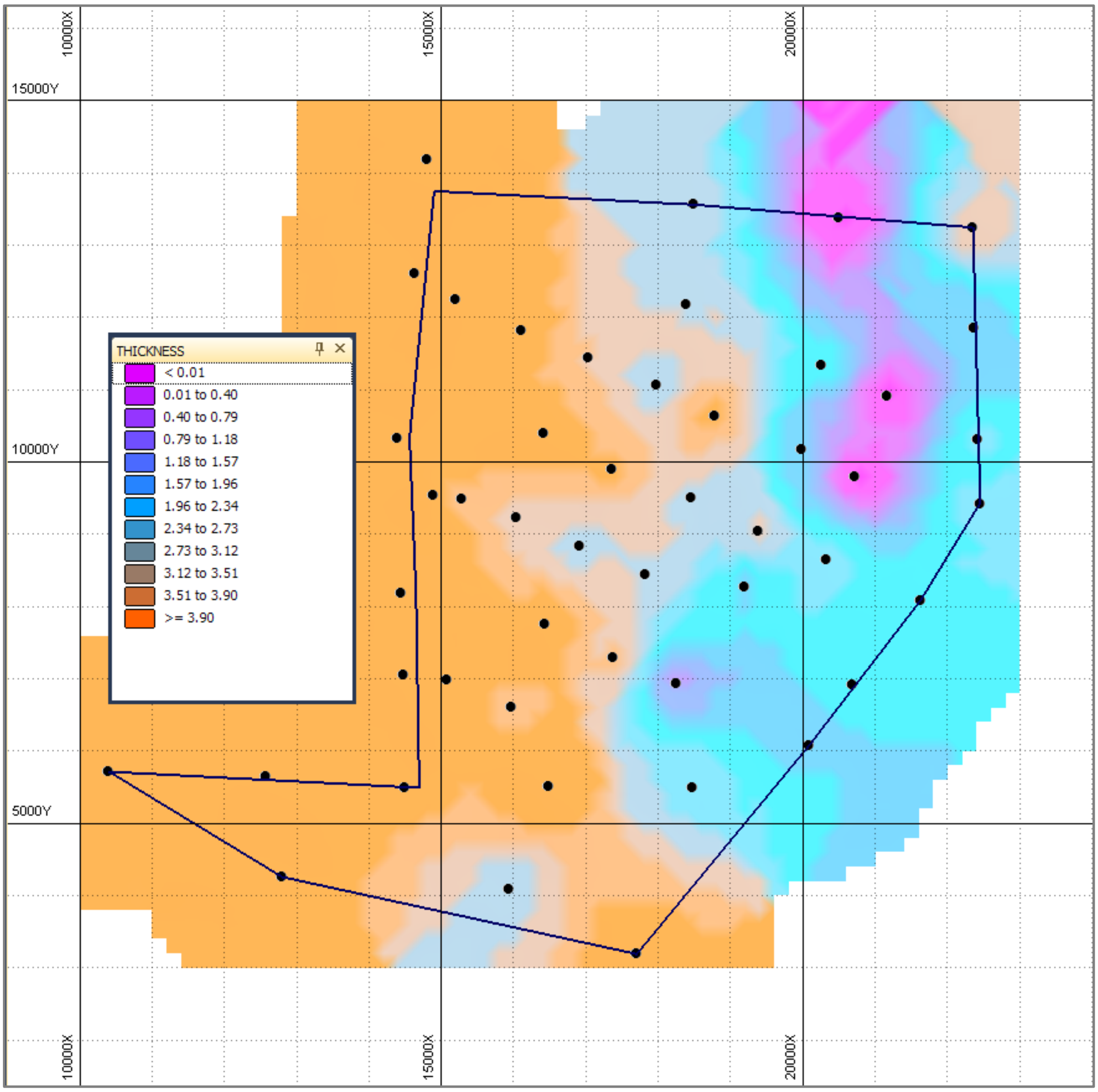


Figure 2-11: Thickness Grid for Horizon Red 2

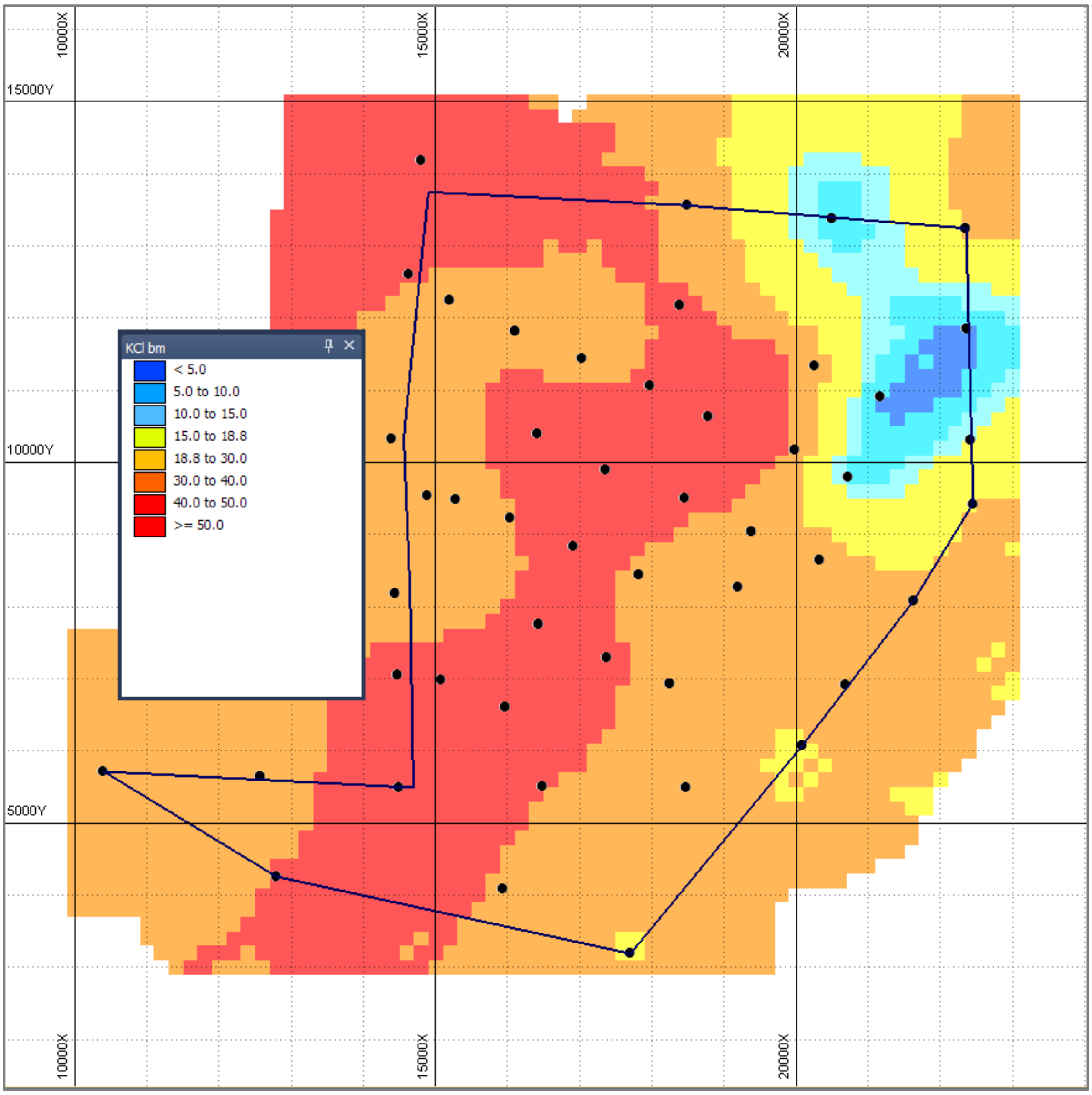


Figure 2-12: Block Model Showing the KCl Grades for Horizon Red 2

2.5.3 Classification

The geological structures within the basin and the complexity observed within the potash horizons in terms of continuity of grade and thickness, indicate that the deposit has a moderate level of geological complexity that does not require close-spaced drilling to accurately define the tonnage and potash quality.

The potash horizons in the eastern part of the deposit show greater variation between drillholes in thickness and grade and subsequently much of this area does not meet the minimum criteria applied in the GKZ for reporting underground potash resources. The variation observed is due to the wider spaced drilling and increased geological complexity in the form of pinching out of the potash horizons and replacement of these by rock salt. The drillhole spacing in this region is between 1,500 m and 2,500 m. The western part of deposit has lower degree of geological complexity as the horizons are more continuous. However, three fault zones have been interpreted in this area, with associated influence confined to the upper AB and lower Red 3 horizons. In this region the drill spacing is between 1,000 m and 2,500 m. The central part of the deposit has a low degree of complexity, and has been drilled on an approximate 1,000 m to 1,200 m grid spacing.

Potash quality throughout the deposit varies from east to west and between the horizons. The highest quality horizon is Red 2 due to good continuity of significant thicknesses and high grades of sylvinite (38.9-39.2% KCl). Horizon AB has a higher grade (about 41.5-42.0% of KCl) and lower geological continuity compared to the Red 2. Red 3 has good continuity, but lower grade, approximately 25.9% of KCl.

Overall, SRK considers the potash quality is representative of the intersections sampled with only ten intersections displaying poor recoveries of less that 80%. The average core recovery for intersections is 89.8%.

The GKZ verified statement is replicated below and dated 1 January 2016 (Table 2-12).

Table 2-12: GKZ Potassium Resource Categorisation for the Talitsky deposit, effective date 1 January 2016 (Protokol #2809)

GKZ Resource Category	Tonnage, kt	KCl, %	KCl, kt
A	86,334	34.78%	30,029
B	218,617	35.90%	78,487
A+B	304,951	35.58%	108,516
C_1	421,124	35.49%	149,477
A+B+C_1	726,075	35.53%	257,993

SRK has prepared a block model to verify the above estimate. The model was constrained by the block plan polygons used for the GKZ estimate where a minimum thickness cut-off of 1.6 m is applied to each polygon. The model has not been constrained by cut-off grade or a minimum thickness. Comparison of SRK's block model with the GKZ estimate in most cases shows good agreement for the A and B Resource categories, but some differences for the C_1 Resource category on a GKZ block basis. In the case of applying the minimum grade (not less than 15% KCl in intersection and 18.8% KCl in estimation block) and minimum thickness (not less than 1.6 m) constraints used for the GKZ Reserves to the block model, comparisons show good agreement for most estimation blocks in the A and B Resource categories (up to 10% relative difference on a tonnage basis) and poorer agreement for the C_1 Resource category (up to 30% relative difference on a tonnage basis). Comparison of the unconstrained block model by grade and thickness with the GKZ Resources for the AB, Red 2 and Red 3 horizons respectively reported on a block basis are shown in Table 2-13 Table 2-14, and Table 2-15.

Table 2-13: Comparison of SRK's block model with the GKZ Reserves for the AB horizon

No	GKZ Block	Block model			GKZ			Absolute difference			Relative difference			Classification
		Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	
1	I-C1	41,858	42.1%	17,610	49,606	43.9%	21,772	- 7,748	-1.8%	-4,162	-15.62%	-4.15%	-19.12%	Indicated
2	II-C1	20,586	39.4%	8,105	22,740	38.0%	8,630	- 2,154	1.4%	- 525	-9.47%	3.74%	-6.09%	Indicated
3	III-C1	701	32.5%	228	806	39.8%	321	- 105	-7.3%	- 93	-12.99%	-18.37%	-29.02%	Unclassified
	TOTAL	**63,145**	**41.1%**	**25,942**	**73,152**	**42.0%**	**30,723**	**- 10,007**	**-0.9%**	**-4,781**	**-13.68%**	**-2.18%**	**-15.56%**	

Table 2-14: Comparison of SRK's block model and GKZ Reserves on block basis of Red 2 horizon

No	GKZ Block	Block model			GKZ			Absolute difference			Relative difference			Classification
		Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	
1	I-A	45,339	43.4%	19,673	45,724	42.4%	19,401	-385	1.0%	272	-0.84%	2.26%	1.40%	Measured
2	II-B	40,764	39.1%	15,947	39,187	39.1%	15,314	1,577	0.0%	633	4.02%	0.10%	4.13%	Measured
3	III-B	44,781	39.8%	17,827	45,574	40.1%	18,289	-793	-0.3%	-462	-1.74%	-0.80%	-2.52%	Measured
4	IV-B	71,199	41.1%	29,291	70,883	40.3%	28,587	316	0.8%	704	0.45%	2.01%	2.46%	Measured
5	V-C1	50,067	40.4%	20,242	51,306	41.2%	21,123	-1,239	-0.7%	-881	-2.41%	-1.80%	-4.17%	Indicated
6	VI-C1	14,279	32.7%	4,666	17,221	40.3%	6,935	-2,942	-7.6%	-2,269	-17.08%	-18.85%	-32.71%	Indicated
7	VII-C1	31,619	27.8%	8,778	35,198	35.2%	12,383	-3,579	-7.4%	-3,605	-10.17%	-21.09%	-29.12%	Indicated
8	VIII-C1	66,186	34.8%	23,026	68,038	35.6%	24,235	-1,852	-0.8%	-1,209	-2.72%	-2.33%	-4.99%	Indicated
9	IX-C1	57,767	40.6%	23,430	60,126	39.3%	23,648	-2,359	1.2%	-218	-0.04	3.13%	-0.01	Indicated
10	X-C1	3,370	20.6%	693	4,499	35.6%	1,601	-1,129	-15.0%	-908	-0.25	-42.19%	-0.57	Unclassified
	TOTAL	**425,371**	**38.5%**	**163,574**	**437,756**	**39.2%**	**171,516**	**-12,385**	**-0.7%**	**-7,942**	**-2.83%**	**-1.85%**	**-4.63%**	

Table 2-15: Comparison of SRK's block model and GKZ Reserves on a block basis for Red 3 horizon

No	GKZ Block	Block model			GKZ			Absolute difference			Relative difference			Classification
		Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	Tonnage, Kt	KCl, %	KCl, Kt	
1	I-A	39,194	26.0%	10,171	40,610	26.2%	10,628	-1,416	-0.2%	-457	-3.49%	-0.84%	-4.30%	Measured
2	II-B	22,287	26.6%	5,928	26,135	24.6%	6,424	-3,848	2.0%	-496	-14.72%	8.22%	-7.72%	Measured
3	III-B	7,560	26.0%	1,962	7,282	25.9%	1,884	278	0.1%	78	3.82%	0.31%	4.13%	Measured
4	IV-B	8,381	21.2%	1,775	9,176	25.4%	2,334	-795	-4.3%	-559	-8.67%	-16.75%	-23.95%	Indicated
5	V-B	20,179	28.6%	5,761	20,380	27.8%	5,655	-201	0.8%	106	-0.99%	2.88%	1.88%	Measured
6	VI-C1	30,660	26.6%	8,159	39,078	26.1%	10,203	-8,418	0.5%	-2,044	-21.54%	1.91%	-20.04%	Indicated
7	VII-C1	14,680	22.8%	3,351	15,540	27.8%	4,323	-860	-5.0%	-972	-5.53%	-17.94%	-22.47%	Indicated
8	VIII-C1	51,128	25.8%	13,191	55,560	25.3%	14,034	-4,432	0.5%	-843	-7.98%	2.14%	-6.01%	Indicated
9	IX-C1	1,409	12.3%	173	1,406	19.1%	269	3	-6.8%	-96	0.23%	-35.62%	-35.51%	Unclassified
	TOTAL	**195,478**	**25.8%**	**50,472**	**215,167**	**25.9%**	**55,754**	**-19,689**	**-0.1%**	**-5,282**	**-9.15%**	**-0.36%**	**-9.47%**	

With due consideration to the data quality and quantity, and the geological complexity both with regard to tectonic and horizon structure across the deposit, SRK has classified the deposit into Measured, Indicated and Inferred Resources. Measured Resources are supported by an average drillhole spacing (where the drillholes have representative horizon intersection quality data) of 1,000-1,200 m and good comparisons (less than 5% relative difference) for tonnage and grades between SRK block model and GKZ model. Indicated Resources are supported by an average drillhole spacing of 1,200 to 2,000 m and moderate comparisons (less than 10% relative difference) for tonnage and grades between SRK block model and GKZ model. Inferred Resources are supported by an average drillhole spacing of more than 2,000 m and relatively poorer comparisons (high relative difference) for tonnage and grades between SRK block model and GKZ model.

2.5.4 SRK Audited Mineral Resource Statement

In order to report Mineral Resources for AB, Red 2 and Red 3 horizons in accordance with the JORC Code, SRK has reclassified the GKZ Resource Statement dated 29 June 2016. Given the underground resources of Talitsky deposit lie between -15 m and -184 m levels, and in order to report resources that have the potential for eventual economic extraction, the following parameters were applied to the Mineral Resources on a block by block basis;

- minimum horizon thickness of 1.6 m;
- minimum cut-off grade of KCl 18.8%;
- maximum cut-off grade of 1% $MgCl_2$;and
- maximum insoluble remnant grade of 11%.
- Additional deductions have been applied to the complex faulted zones for AB and Red 3 horizons and for the railroad pillar affecting the AB horizon.

SRK's Mineral Resource Statement for the Talitsky potassium deposit reported using the terms and definitions given in the JORC Code is presented in Table 2-16.

Table 2-16: Mineral Resource Statement for the Talitsky Potash deposit, effective date April, 2016

Classification	Horizon	Tonnage, kt	KCl, %	KCl, kt
Measured	Red 2	201,400	40.52%	81,600
	Red 3	94,400	26.05%	24,600
Measured Sub-total		295,800	35.90%	106,200
Indicated	AB	72,300	42.02%	30,400
	Red 2	231,900	38.09%	88,300
	Red 3	119,400	25.88%	30,900
Indicated Sub-total		423,600	35.32%	149,600
Total	AB	72,300	42.02%	30,400
	Red 2	433,300	39.22%	169,900
	Red 3	213,800	25.96%	55,500
Grand Total		**719,400**	**35.56%**	**255,800**

Dr Mike Armitage (PhD, MIMMM FGS C.Geol, CEng) is the Competent Person for the statement of Mineral Resources. Dr Armitage is a mining geologist with over 30 years' experience in the mining industry and has been responsible for reporting of Mineral Resources and Ore Reserves on various properties internationally during the past 25 years.

Dr Armitage is a full time employee of SRK and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined by the JORC Code. He is a Member of the Institute of Materials, Minerals and Mining.

Dr Armitage did not visit the Talitsky site. A visit to the Project site in relation to mine geology was undertaken by Mr Sergey Volkov under the direction of Dr Armitage.

The deductions applied to the complex faulted zones for AB and Red 3 horizons and for the railroad pillar affecting the AB horizon are shown in Figure 2-13. Detailed plans with the Resource Classification for each horizon are presented in Figure 2-14, Figure 2-15 and Figure 2-16.

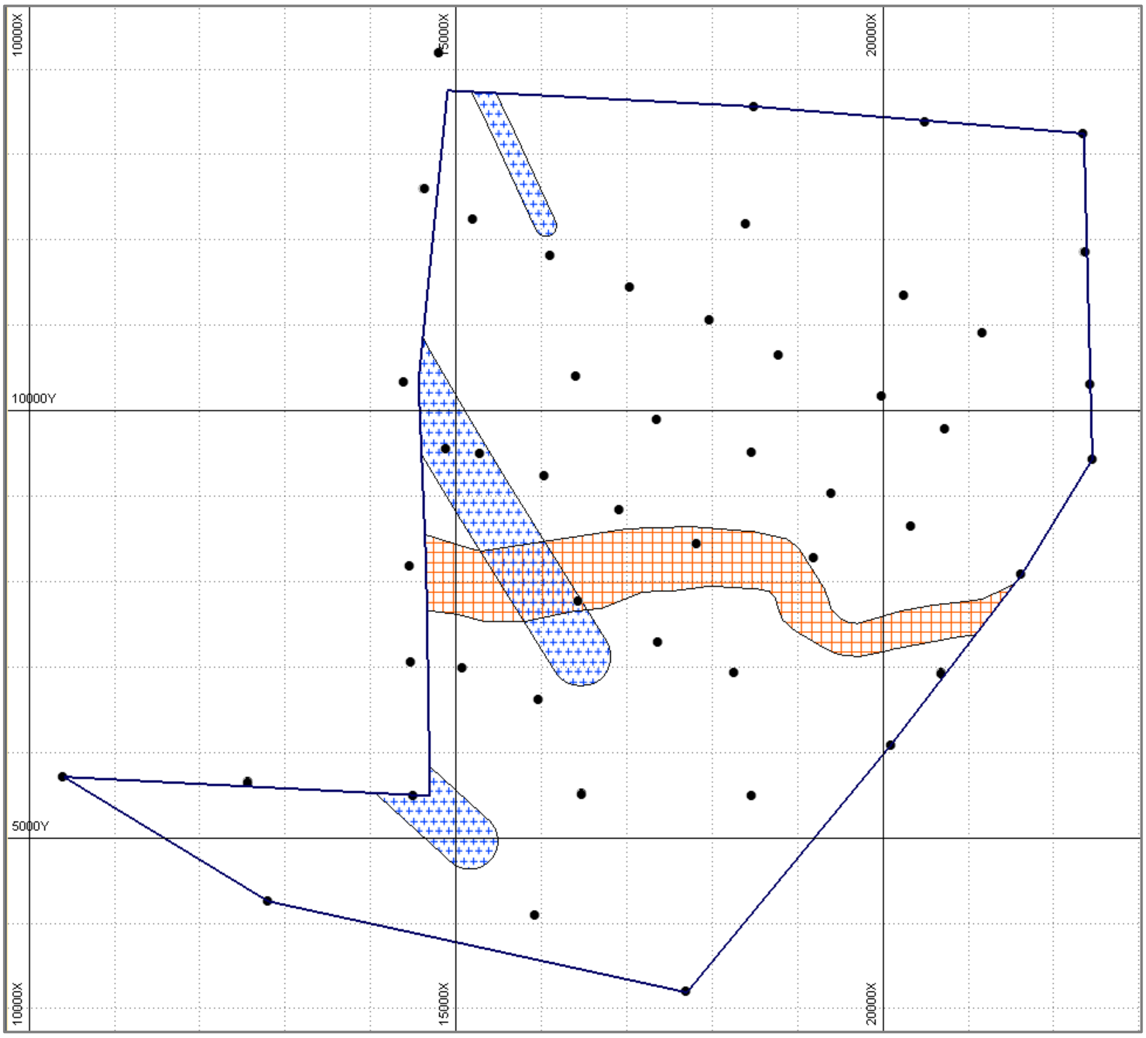


Figure 2-13: Areal deductions applied to the Resources for Complex Faulting (Blue) and the Railroad Pillar (Red)

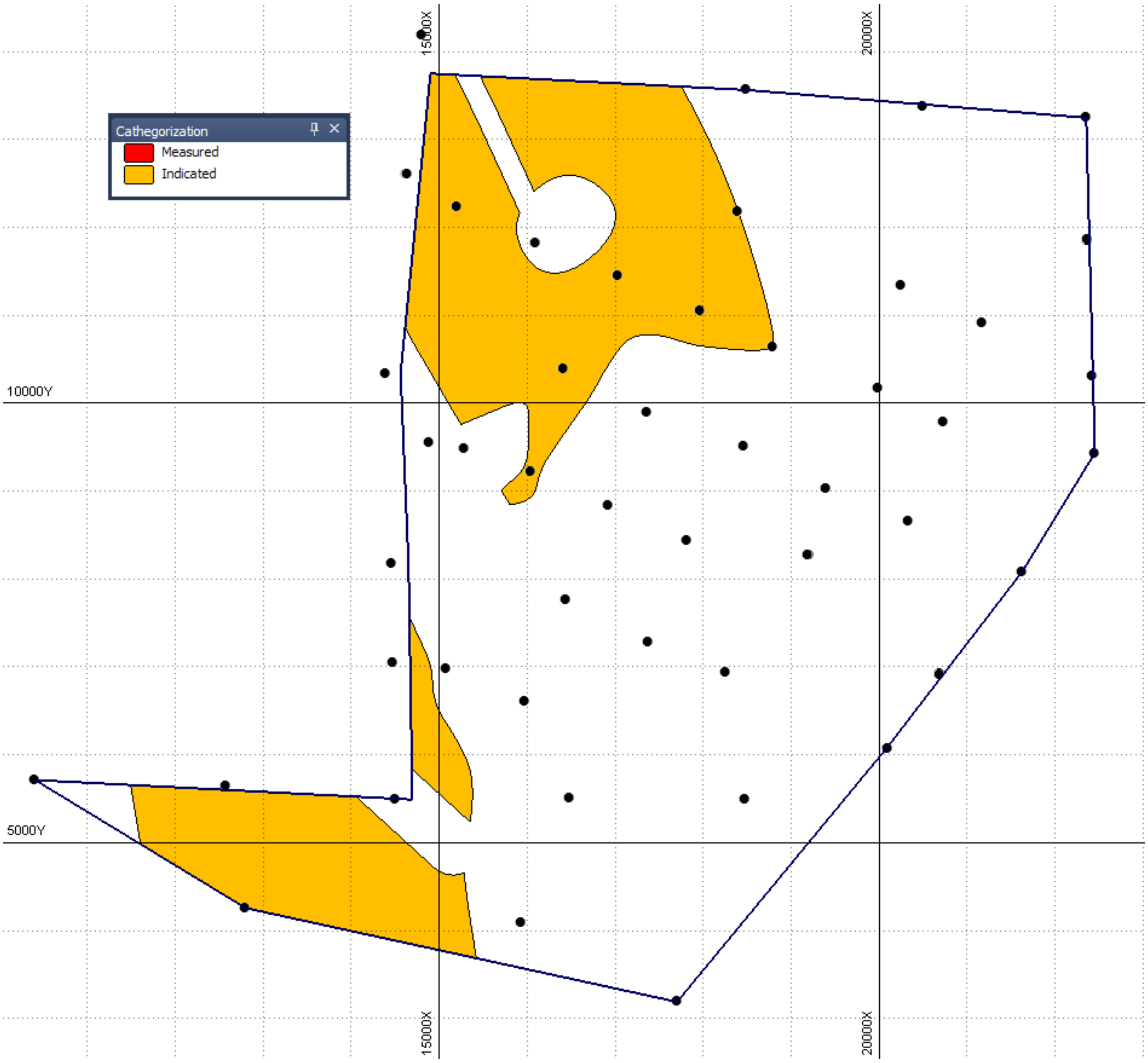


Figure 2-14: Classification and Resource Limits of AB horizon divided Indicated (orange) with separate polygons for different blocks.

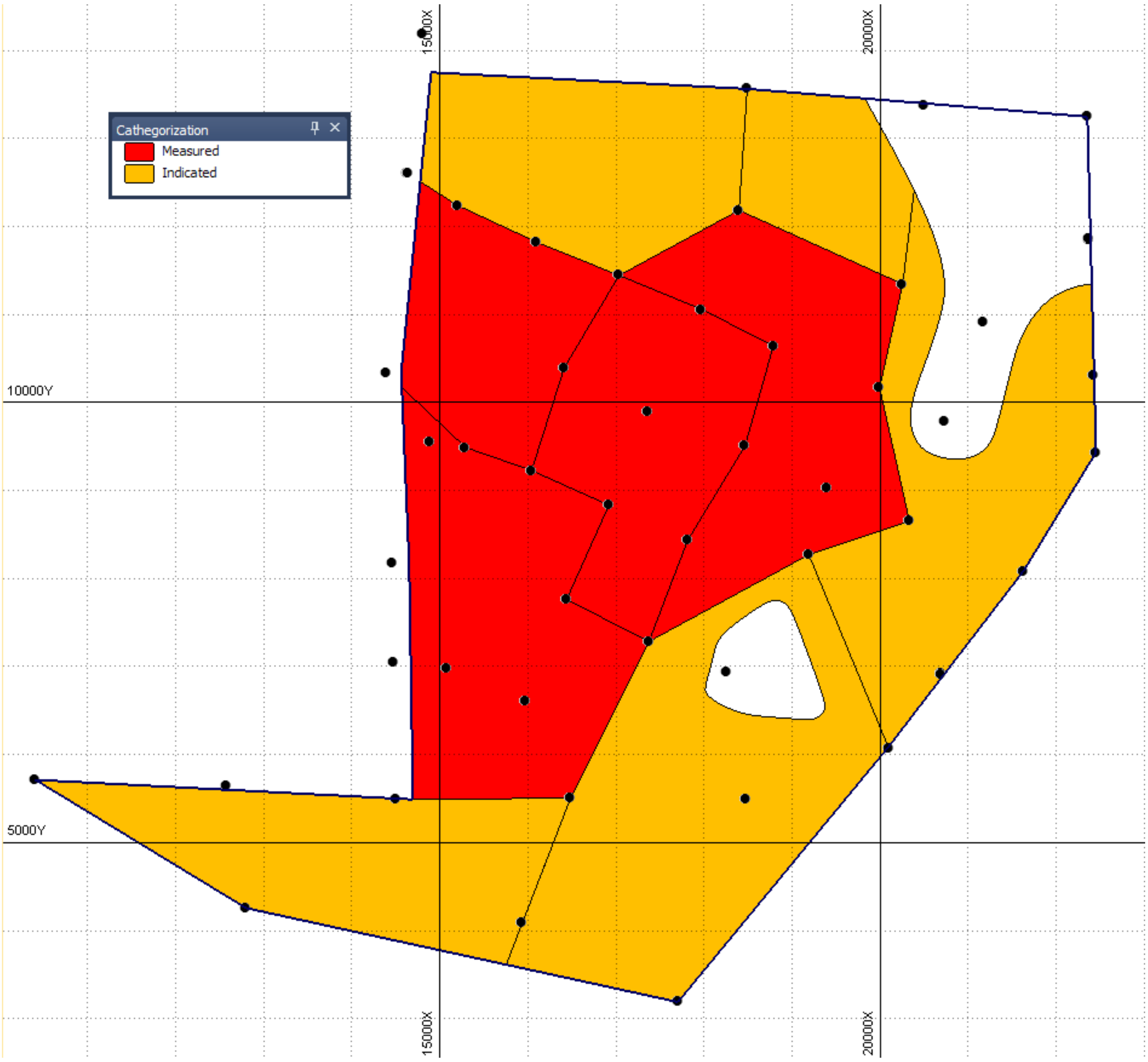


Figure 2-15: Classification and Resource Limits of Red 2 horizon divided into Measured (red) and Indicated (orange) with separate polygons for different blocks.

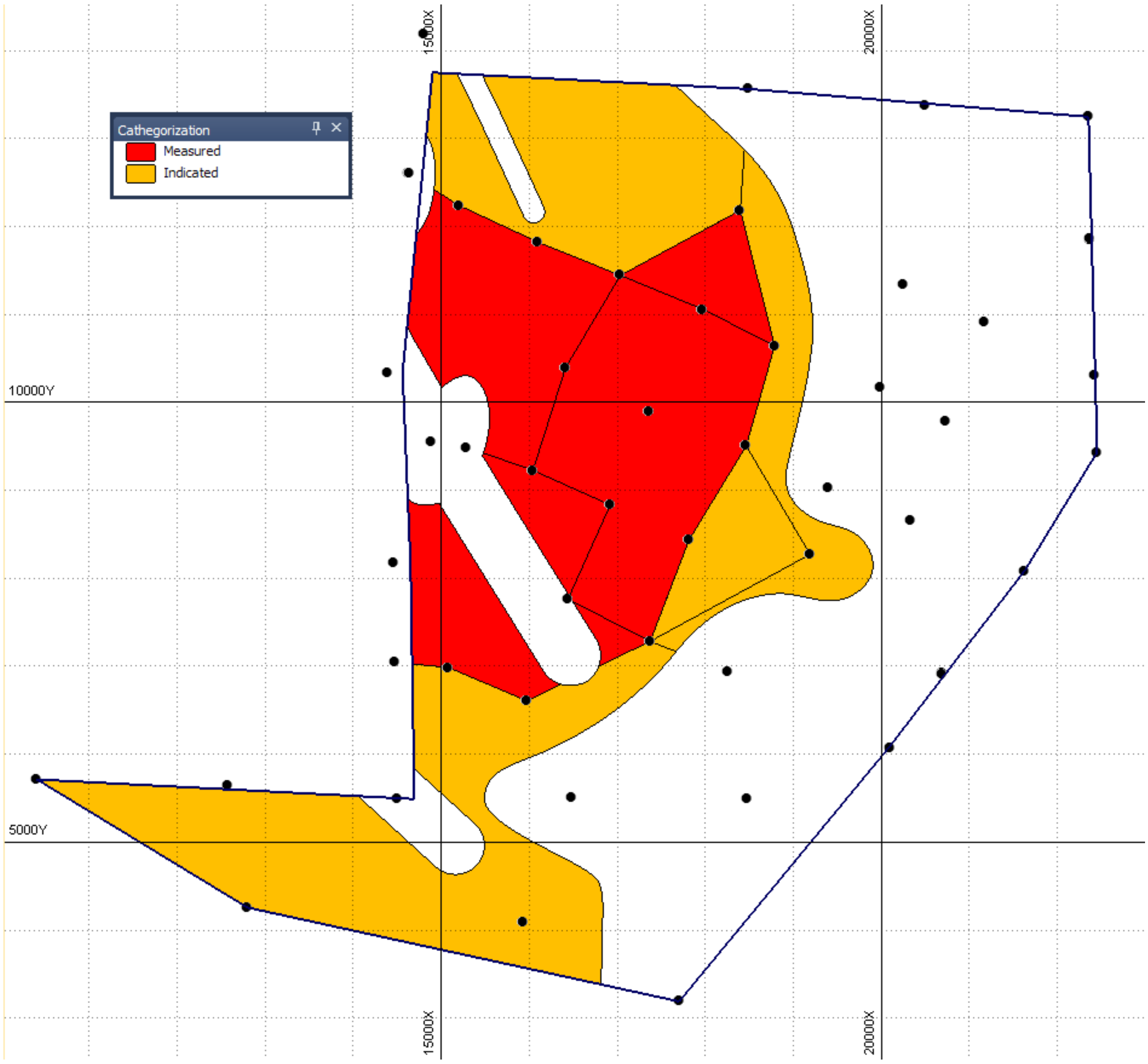


Figure 2-16: Classification and Resource limits of Red 3 horizon divided into Measured (red) and Indicated (orange) with separate polygons for different blocks.

2.5.5 Comparison with Previously Reported Resource Estimates

GKZ Reviewed Estimate

The January 2012 GKZ Mineral Resource estimate for Talitskiy was derived using a polygonal method based on sections and plans. In several cases, the borders of the polygons were snapped to drillholes. The shape, size and category of the polygons used for resource estimation were selected independently for each sylvinite layer and were based on the following parameters:

- geological continuity of the horizon;
- density of the drilling grid;
- core recovery;
- position in the basin; in the eastern part of the deposit the KCl horizons are wedged out or gradually transition to NaCl;
- industrial type of mineralisation; and
- the following GKZ-approved conditions:

- the Resources were estimated within the sylvinite horizons, namely KpIIIa-b, KpII and AB, consisting of KCl with minor NaCl intercalations. All the intersections show grades significantly above 15% KCl;
- minimum thickness of potash layer of 1.6 m;
- minimum KCl grade within the minable block of between 19.5% and 20.35% according to mining equipment and process plant;
- maximum of 1% $MgCl_2$ and 11% insoluble remnant impurities; and
- KCl content estimated based on gamma ray logging in the case of less than 50% core recovery in historical holes (Section 2.4.2 “Downhole survey”).

The methodology for polygonal estimation included:

- Adjustment of boundaries according to mining and geotechnical considerations (i.e. weakened zones, safety pillar requirements).
- Calculation of the true borehole layer thicknesses was based upon the geological log with the support of gamma-ray survey (apparent thickness) and corrected for the dip of the layer. Polygonal layer true thicknesses are calculated by taking the arithmetical mean of the true thicknesses from the intersections within the polygon. Calculation of the grades by length-weighted average.
- Exclusion of further adjustments through ore/waste factors or high grade capping due to the nature of mineralisation.

The following areas were excluded from the Mineral Resources:

- barrier pillars on the border with adjacent mining properties (100 m from western and northern boundaries of the Talitsky licence area);
- safety pillars around exploration drillholes (the radius of the pillars is calculated based on geotechnical properties of the host rocks and layer depth and varies between 46.5 m and 120 m);
- the safety pillar around the petroleum exploration hole located next to the southern license boundary (radius of 500 m);
- the safety pillar, the AB layer, under the federal railroad and railroad with load on the ribs not greater than 0.4; and
- safety pillars around the weakened structural zones for water protection for AB and Red 3 horizons.

The resulting resource estimate was approved by the GKZ (Protocol No 2809, 29 June 2012) and is presented in Table 2-17. Resources reported in category A correspond to areas where the drillhole spacing is between 950 m and 1,320 m (drilling density 0.57 km^2/hole), category B where the drillhole spacing is between 925 m and -2,800 m (0.71 km^2/hole), and category C1 where the drillhole spacing is between 1,750 m and 5,000 m (2.2 km^2/hole).

Table 2-17: Resources of Talitskiy Licence Area, Approved by the GKZ

Category	Resources, 10^3 t										
	Balance					Off-balance					
	Raw salt	KCl	K_2O	$MgCl_2$	MgO	Raw salt	KCl	K_2O	$MgCl_2$	MgO	Br
Sylvinite											
A	86,334	30,029	18,973	-	-	9,481	3,792	2,396	-	-	3,508
B	218,617	78,487	49,588	-	-	27,729	8,847	5,589	-	-	8,823
C1	421,124	149,477	94,442	-	-	810,558	213,831	135,096	-	-	215,436
A+B+C1	726,075	257,993	163,003	-	-	847,768	226,470	143,081	-	-	227,767
Carnallite											
C1	-	-	-	-	-	672,919	101,127	63,893	79,935	338,45	518,771
Mixed salts											
C1	-	-	-	-	-	1,805	533	337	130	55	1,354

Comparison between SRK Audited and GKZ Resource Statement

In general, SRK considers that the GKZ Reserve categories of A and B can be equated to a "Measured" classification within the JORC Code, C_1 can be equated to "Indicated" and C_2 can be equated to "Inferred". In this regard, SRK has compared the tonnages of those declared in the GKZ statement to the audited SRK Mineral Resource Statement.

While overall the two estimates are very similar, the Measured Resource reported by SRK is some 9.2 Mt or 3% less than would be the case if all of the A and B classed mineralisation was classed as Measured. This is because SRK has downgraded some mineralisation towards the east of the basin in the Red 2 and Red 3 seams. While the drill spacing in this area is sufficient to support a Measured classification elsewhere, the geological complexity here is such that SRK has rather classed this as Indicated.

The overall tonnage of the Indicated Resource (C_1) has, however, increased by 2.5 Mt or 0.5%. This is partly due to the above adjustment, but also reflects the exclusion of 6.7 Mt around the isolated drillhole in the northeast of the licence area classified as C1 in the GKZ estimate. Notably, this includes a total of 0.8 Mt in the AB horizon, 4.5 Mt in the principal Red 2 horizon and 1.4 Mt in Red 3 horizon.

Notwithstanding these adjustments, SRK considers the two estimates compare very well which gives confidence to the use of SRK's model as the basis of the mining plan discussed later in this report

3 ORE RESERVES

The mine plan assumes production commences in Q4 2021 following some 5.75 years of construction commencing in 2016 and ramping up to steady state in Q3 2024, over a 2.75 year period. Steady state production between Q3 2024 and Q4 2049 is 7.45 Mtpa run of mine and 2.0 Mtpa of product giving a Life of Mine (LoM) production of some 28 years. Mined ore has a constant grade of 30% KCl with a constant 85% recovery to product with a grade of 95% KCl. The LoM mined tonnages total 193 Mt.

3.1 Mining Plan

SRK has assessed through review of the mining design and assessment of the mine parameters established by the Galurgiya Design Institute that a production rate of 7.45 Mtpa with an average 30% KCl at the Talitsky project is achievable. Specifically:

- The planned equipment is sufficient to meet the mine's nameplate production capacity;
- There is a sufficient level of engineering design to support the mine plan;
- Sufficient support infrastructure has been planned for each block; and
- The LOM plan has average annual grades in excess for 30% KCl in all but the last year of production from ore reserves.

The mine design has been organised into three major elements:

- Shaft bottom: this extends from the shaft collars to the beginning of the main access tunnels and includes underground workshops, pumping stations, main ventilation airways and materials handling areas (storage bunkers, etc).
- Mine development: this consists of main access tunnels from the shaft bottom area to the mining panels and the preparation works for mining the panels.
- Production zones: this consists of nine mining panels, each divided into 7-10 blocks. Panels are separated by hydraulic (safety) pillars that are 500 to 600 m wide. Ore is extracted using room and pillar mining excavated by mechanical methods. A panel will be backfilled within two years after mining of that panel has been completed.

Development will be undertaken using Ural continuous miners: the Ural-61, Ural-10 and Ural-20. The equipment productivities have been developed based on regional experience with the equipment. The mining areas comprise nine panels, each subdivided into blocks which are typically 500 m by 1,500 m in plan area. Pre-production development of a block extracts some 25% of the block's planned extraction, and takes around 18 months to complete.

Mining layouts are determined by room and pillar dimension established by geotechnical analysis in the seams present in the blocks. The range pillar dimensions of the various seams are:

- AB Seam: rooms are 4.3 m wide, 2.6 m high, pillars are 7 to 10 m wide.
- Red 2 Seam: rooms are 5.5 m wide, 3 to 4 m high, pillars are 4.5 to 7 m wide.
- Red 2/ Red 3 Seam: rooms are 5.5 m wide, 8 to 9 m high, pillars are 7 to 9 m wide.

The sequence of extraction of rooms within a block and the panel is constrained by the geotechnical design parameters. The grade of each seam is generally consistent within a panel, but does vary between panels in different areas of the deposit. The main grade differences are between the three seams being mined. This requires short term operational planning to schedule and blend run of mine ore to achieve the targeted grade of 30% KCl on a daily basis. From the level of information currently available, this is expected to be achievable; the life of mine average ROM grade is 31.4% KCl.

The production schedule is presented in Figure 3-1. Following full commissioning of the shafts, full production is achieved after a 3.75 year period for underground construction and ramp up.

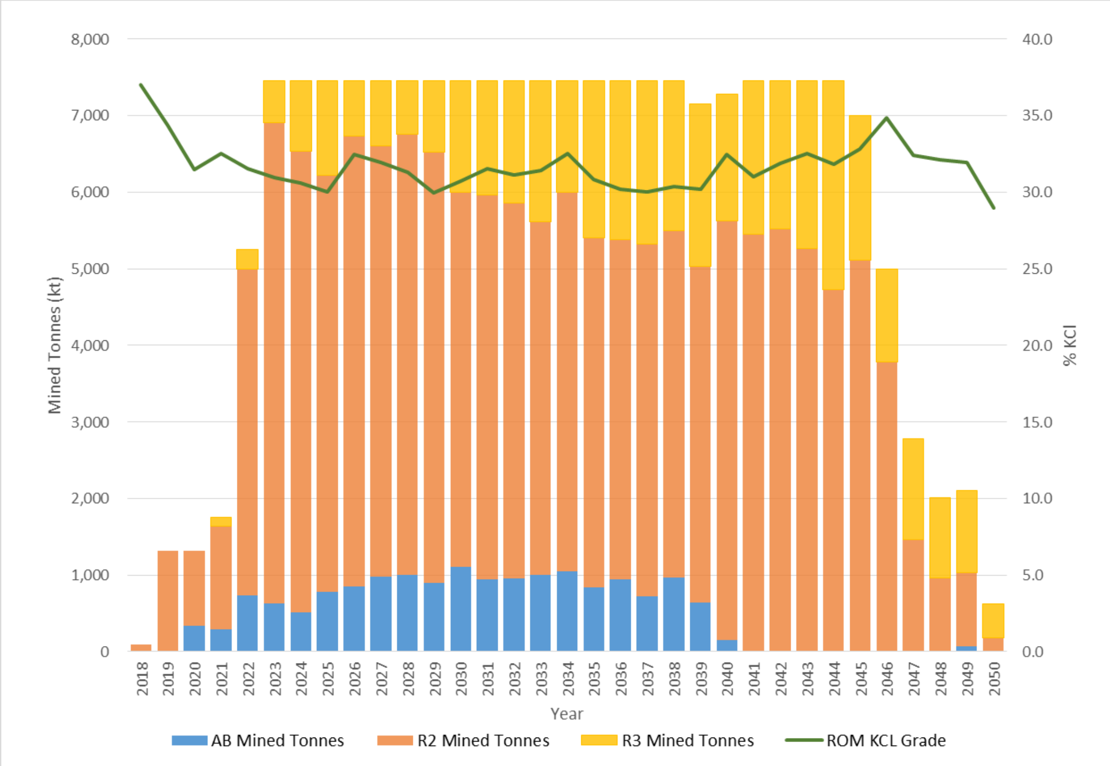


Figure 3-1: Talitsky Potash Annual Mine Plan

The large difference between Mineral Resource and Life of Mine plan is mainly a function of the relatively low mining recovery inherent in the mining method employed, which is necessary for the safe and sustainable extraction of the orebody, and the volume of material that is included in the main roadway pillars and shaft pillar.

The current mine plan would benefit from more detailed planning and scheduling of production in order to forecast tonnage and grade resulting from sequencing of multiple panels over the three seams to be extracted. The level of orebody knowledge would support this work at a panel and block level, although it is recognised that until underground test drilling of blocks is undertaken there is insufficient orebody knowledge to undertake short term planning and to estimate grade blending requirements in detail. In addition KCl grade, the grade of insolubles in the Run of Mine ore will impact processing performance; target levels should be established (expected to be around 9% insolubles) and schedules managed to achieve those targets.

Geotechnical Design

SRK has reviewed the geotechnical study documents prepared for the project and visited the Perm Mining Institute (the Institute) to discuss in detail the geotechnical aspects of the project with Institute specialists and VPC technical staff. 2D and 3D verification numerical modelling has been conducted to confirm the geotechnical design parameters developed for the project.

The Institute has brought its understanding and many years of experience in designing and mining the other potash mines in the region to develop a geotechnically sound design for Talitsky. Based on the experience of mine inundation events at the neighbouring Berezniki and Solikamsk mines, the Talitsky mine has been designed very conservatively to ensure that the individual mine elements have a high level of stability, thus minimising the magnitude of surface subsidence whilst effectively eliminating the hydrogeological impact of the overlying aquifer. The verification modelling carried out by SRK generally confirms the stability of the mine and concludes that in its current state, the Talitsky potash mine has been designed to a high degree of stability using appropriate analytical techniques.

3.2 Ore Processing

The engineering design for the ore processing plant was conducted by OJSC TOMS in St Petersburg, as a subcontract to OJSC Novogorod GIAP who were responsible for the overall project engineering. The OJSC TOMS work built on earlier work conducted by the OJSC Belgorkhimprom Institute in Minsk, Belarus.

The plant is designed for the production of 2 Mtpa of concentrate. At the design head grade (30% KCl) and recovery (85%), this equates to 7.45 Mtpa of ore. The plant will produce three potash products; Brand M, a standard powdered material, at a rate of 500 ktpa and which will be used internally for downstream processing by Acron; Brand N a non-dusting powder, at a rate of 750 ktpa and which is mainly for export, and 750 ktpa of Brand G, a granulated product for export.

The flowsheet designed for the Talitsky Project contains all of the process elements typically used in sylvinite potash flotation operations in the Berezniki region, namely a desliming stage, to separate fine insoluble material from the sylvite / halite ore, followed by a flotation stage on the slime fraction, a “reverse” flotation step, where the slimes are recovered into the froth phase, leaving sylvite / halite that is combined with the desliming oversize for “direct” flotation of the sylvite; that is, the recovery of the sylvite material to the froth phase, leaving the halite in the tailings stream. Unit processes have been incorporated specifically to cater for the expected lower KCl and higher Insolubles content of the Talitsky ore compared to other orebodies in the region, namely two stages of desliming using hydrocyclones, a slimes pre-flotation stage and a cleaning stage on the fine fraction within the sylvite flotation circuit, incorporating three stages of cleaning.

VPC will implement improvements to the proposed flowsheet to provide technical and financial benefit to the project; in particular to replace the proposed concentrate dewatering circuit with belt filters, which are typically used in operations in the region, as well as use of column flotation cells and larger flotation cells.

Tailings Storage

The feasibility study design for the proposed salt dump and slimes tailings storage facility, which together forms the Tailings Storage Facility (“TSF”) for the Talitsky Project, was completed by TG-Group Engineers (“TG”), a Russian based engineering consultancy.

The slimes material consists of fine tailings and remnant NaCl particulates from the processing operation, which will be pumped at 30% solids (W/W) to the paddock style TSF known as the "Slimes TSF". Tailings will consist of clay and sand fractions (<12% fines), with a settled dry density of 1.4 t/m^3 (liquid phase 1.235 t/m^3 and slime pulp 1.52 t/m^3 as based on experience from similar operations). The slimes TSF impoundment shall consist of a fully HDPE lined paddock style facility, with compacted earth fill embankments. Excess water shall be removed from the facility by means of a barge mounted submersible pump.

The salt dump will be formed by dry stacking halite sands that will be conveyed at a moisture content of <10%. Some 30% of this waste stream will be stored on surface, the remaining portion will be hydraulically reticulated underground to backfill excavated rooms. The salt dump will be developed when mine operation commence. Tailings will be conveyed across the dry stack area and deposited in a series of stockpiles. Brine shall be pumped to the top of the stack and co-disposed with the dry tailings, to allow this material to spread out as a lobe under gravity across the upper slope of the dry stack (2-3° slope). This method increases the achievable dry density of the stored tailings. A dozer will also work continuously across the salt dump area to spread material evenly across the upper slopes.

3.3 Infrastructure

The Usolsky municipal district of Perm Krai in which the Talitsky Project is located has well-developed regional access and utilities infrastructure. Of particular note are the Berezniki-Sortirovochnaya railway station, on the Sverdlovsk railway, located 1.5 km to the north of the plant site, the Kungur – Solikamsk and Perm-Berezniki highways (4.0 and 12.0 km away from the plant site respectively), and the substantial high voltage power transmission infrastructure located in proximity to the site.

Utilities required for the Project include supply of electrical power supplied from the grid via a newly constructed 220 kV supply transmission line and 220/10/6 kV substation and a nearby 110 kV transmission grid as a reserve power supply line; raw water through groundwater abstraction with five supply wells to provide domestic and process water that will be pumped 2.9 km to the surface facilities; and natural gas for heating and processing supplied via a newly constructed 8.97 km long gas pipeline that will connect to an existing supply point.

The main access to the operation will via a new connecting road that is to be constructed from the Kungur–Solikamsk highway to the surface facilities. The Project will also link to the Sverdlovsk railway with the following infrastructure: modifications at the Berezniki-Sortirovochnaya railway station; a new "Talitsky railway station" adjacent to the processing plant; and a railway spur from the Sverdlovsk railway to the new Talitsky railway station.

The surface facilities incorporate the support and operational infrastructure and utilities distribution networks that are required for the mining and processing operations. This includes buildings, internal roads, distribution networks and bulk earthworks. In the design of the surface facilities, VPC has considered space-planning and architectural solutions in relation to operational conditions and regulatory requirements. Operational requirements have been developed from production equipment and mine flow charts and the individual premises are arranged within the layout on a zoned basis, in accordance their use and functionality, fire safety classification and utilities requirements.

Work on site has commenced: a construction access road (between the surface facilities and the Berezniki-Sortirovochnaya railway station), and some of the bulk earthworks and surface facilities have been constructed. This includes components of the 110 kV substation and supply line. Working documentation (detailed design) is complete for the external/ auxiliary infrastructure.

3.4 Environment and Social

SRK has not identified any environmental or social fatal flaws or risks that could prevent or significantly delay the Project. The permitting process for the Project is well understood and controlled by VPC. The environmental permits that are currently required are in place and the OVOS reports have been developed in accordance with legal requirements and submitted to the state environmental expertise for the approval. SRK does not expect any issues or delays related to the permitting process.

The local community in general is supportive of the Project, largely due to the region's historical development and as most of the population is dependent on the existing mining industry. There are no indigenous people or people living in a protected, traditional way in the vicinity of the Project area.

There are no critical habitats or biodiversity hotspots within the Project impact area, and there are no natural protected or internationally recognized areas nearby. Biodiversity of the region is reasonably low due to the climate and environment conditions and historical disturbance of the Project area and surroundings. However, the rivers in the region are classified as fishery water bodies requiring fish resources to be managed.

Some elements of an Environmental and Social Management System are in place and an overall ESMS is being developed by VPC. The management system will include management plans and procedures to support an adequate and workable ESMS.

The OVOS processes and reports do not meet the requirements of the Equator Principles and IFC Performance Standards. This is mainly due to the highly qualitative approach to the assessment. That is, specific impacts and risks are not identified and defined considering sources, receptors and pathways of exposure. This makes it difficult to develop and implement appropriate plans for impact and risk management; accordingly an impact and risk identification assessment should be undertaken. Additionally, although the consultation process currently undertaken meets Russian requirements, the process does not conform to recognised international good practice, as defined by the IFC Performance Standards.

Other issues that require further investigation are: geochemistry studies on the tailings; potential for surface and ground water contamination due to the salinity and geochemical processes; and risks around potential involuntary resettlement. Although an overall land acquisition plan has not been developed, negotiation with owners of the lands for the Project development purposes (access road) is on-going. Acquisition will be based on the purchasing the land lots and compensations and does not include physical replacement.

An Environmental and Social Action Plan has been developed as part of this feasibility study, which identifies the activities needed to improve environmental and social management, provide conditions for the health and safety of the workforce, monitoring, and performance in accordance with international industry practice defined by the Equator Principles and applicable IFC Performance Standards and the World Bank Group.

3.5 Economic Analysis

The Talitsky Project has a real terms, post-tax pre-finance NPV (10% discount rate) of USD 2,025 million and an IRR of 24.6% (base date of 1 January 2016).

Projected revenues have been derived in USD and all operating costs have been derived in Russian Rouble ("RUB") and converted to USD. From Q1 2025, a flat lined RUB:USD exchange rate of 76.91, is assumed based on advice provided by VPC/ UCB.

Over the LoM a total of 51.7 Mt of product is to be sold in the domestic market, both internally to Acron and to third parties, and is also to be sold for export. Product pricing assumptions provided by VPC (1 February 2015) are a real terms potash price (FOB Baltic Sea) of USD 343/t in 2016, rising progressively to a steady state price of USD 465/t from Q1 2025 is applied.

Forecast gross revenue reaches steady state from Q1 2025 at USD 917 million per annum.

Capital costs are estimated to be USD 1,200 million including a contingency applied to project capital amounts of USD 113 million, which is 9.4% of total development capital. Capital cost estimates are derived from various sources; the majority by value are derived from Russian design institutes.

A breakeven potash price of USD 202 /t product is estimated.

3.6 Statement of Ore Reserves

As with its Mineral Resource statement, SRK's Ore Reserve statement has been reported using the terminology and guidelines proposed in the JORC Code. Specifically it comprises the tonnage of mineralisation reported as a Measured and Indicated Mineral Resources which is planned to be mined and processed, and then transported by rail for sale. It is presented inclusive of losses and dilution incurred during mining. It excludes the mineralisation in pillars that may be considered for mining on final retreat from the mining areas in the future. Notably this is a sub-set of the Mineral Resource presented above and not additive to this.

The definition of an Ore Reserve as defined by the JORC Code is "*the economically mineable part of a Measured and/or Indicated Mineral Resource. It includes diluting materials and allowances for losses, which may occur when the material is mined or extracted and is defined by studies at the Pre-Feasibility or Feasibility level as appropriate that include application of Modifying Factors. Such studies demonstrate that, at the time of reporting, extraction could reasonably be justified".*

Ore Reserves for the Talitsky Project are based on only those Mineral Resources classified as Measured and Indicated. The classification of Ore Reserves for the Talitsky Project is based on the geological confidence with Proven Reserves based on Measured Mineral Resources and Probable Reserves based on Indicated Mineral Resources.

The technical and economic viability of mining potash at the Talitsky Project has been confirmed by SRK's report "A Feasibility Study on the Talitsky Potash Project, Berezniki, Russia" (2016). The type and level of individual studies that support the report have been carried out to at least Pre-Feasibility Study level; the overall study status is considered to be at Feasibility Level. The report includes consideration of all the criteria specified in Table 1 as required by Clause 35 of the JORC Code in relation to the public reporting of an Ore Reserve.

This Ore Reserve Statement should be read in conjunction with that report.

SRK's Ore Reserve Statement for the Project reported using the terms and definitions given in the JORC Code is presented in Table 3-1.

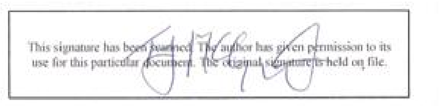
Table 3-1: SRK Ore Reserve Statement for the Talitsky Potash Project

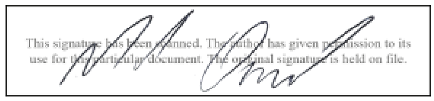
Seam	Proven Reserve		Probable Reserve		Total Ore Reserve	
	Tonnage (kt)	KCl (%)	Tonnage (kt)	KCl (%)	Tonnage (kt)	KCl (%)
AB	50	26.8	16,400	28.3	16,400	28.3
R2	54,700	37.6	77,900	31.4	132,600	33.9
R3	17,500	24.7	24,100	24.8	41,700	24.7
Total	**72,300**	**34.5**	**118,400**	**29.6**	**190,700**	**31.4**

The Competent Person (as defined by the JORC Code) who has supervised the production of the Ore Reserve statement is Mr Tim McGurk, who is a director of the SRK UK Consulting Ltd and the SRK Group. Mr McGurk is a mining engineer with over 25 years' experience in the mining industry and has been responsible for reporting of Ore Reserves on various properties internationally during the past eight years.

Mr McGurk is a full time employee of SRK and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined by the JORC Code. He is a Fellow of the Institute of Materials, Minerals and Mining which is a 'Recognised Overseas Professional Organisation' included in a list promulgated by ASX from time to time. Mr McGurk visited the Project site in September 2015.

For and on behalf of SRK Consulting (UK) Limited





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