# ASX Announcement ASX: AKM | 14 NOVEMBER 2024



## **Ovoot Coal Resources and Reserves Updated**

Aspire Mining Limited (ASX: **AKM**) (**Aspire** or the **Company**) is pleased to advise that estimation of updated JORC (2012) compliant Coal Resources and Coal Reserves within mining license MV-017098 upon which the Ovoot Coking Coal Project (**OCCP**) is based has been completed by SRK Consulting MGL LLC (**SRK**).

## **Headlines**

- Most detailed and comprehensive review of OCCP ever conducted confirms world class status and underwrites financing strategy.
- Total Coal Resource of 219.4 million tonnes (Mt) has been estimated, including 99.5 Mt
   Measured, 100.9 Mt Indicated, and 19.0 Mt Inferred.
- Total Coal Reserve of 130.1 Mt has been estimated on an assumed as received Run-of-Mine (ROM) moisture basis of 2.9% as received (ar), comprising 76.8 Mt Proved and 53.3 Mt Probable.
- The conservative Life-of-Mine (LOM) plan, upon which the Coal Reserve estimate was based, included for an overall mine life of 31 years following commencement of production at up 5 Mtpa ROM coal mining and processing, resulting in a low average total stripping ratio of 6.5 bank cubic metres (bcm) of overburden per 1 ROM tonne of total coal produced.
- Highlights from the underlying project cost model include low initial capital costs, with payback achievable within three years of production commencing and delivering overall NPV<sub>10</sub> of just under USD 1.6 billion

## **Highlights**

- The Board of Aspire acknowledge that completion of revised estimates of JORC (2012) compliant Coal Resources and Coal Reserves at the Ovoot project has taken longer than forecast to shareholders. This has been an extensive exercise to complete, with a significant amount of underlying work having been completed to support this process with significantly greater detail considered in relation to the transportation and logistics systems and supporting infrastructure necessary to deliver washed coking coal product to customers.
- Total Coal Resource of 219.4 million tonnes (Mt) has been estimated, including 99.5 Mt Measured, 100.9 Mt Indicated, and 19.0 Mt Inferred.
  - The Coal Resource estimated within the Ovoot mining license and meets the JORC Code's reasonable prospects of eventual economic extraction (RPEEE) criterion.
  - Ply correlations in the southwest of the deposit were updated based upon detailed assessment of downhole geophysical logging and coal quality information from both historical drillholes and drilled since the prior estimate was prepared, in Q4 2022.
  - Reduction in Total Coal Resource resulting from the updated ply correlations and application of more stringent and conservative criteria is offset by a significant reduction to the modelled ash content within the Upper Seam and improvement of modelled coking properties.
- Total Coal Reserve of 130.1 Mt has been estimated on an assumed as received Run-of-Mine (ROM) moisture basis of 2.9% as received (**ar**), comprising 76.8 Mt Proved and 53.3 Mt Probable.



- Based upon this, a Total Marketable Coal Reserve of 97.9 Mt has been estimated on basis of washing to produce a 9.0% ash air dried (ad) product with total moisture of 10.0% (ar), including 60.0 Mt Proved and 37.9 Mt Probable.
- Only coal from the Upper Seam was included, with the Lower Seam and coal deeper than 350m excluded assuming potential future extraction by underground mining methods. This reduces the footprint of disturbance, expedites in-pit waste dump development and consequently reduces overburden haulage distances and mining costs.
- The conservative Life-of-Mine plan, upon which the Coal Reserve estimate was based, included for:
  - Commencement of mining and processing at a rate of 1.5 million tonnes per annum (Mtpa) of ROM coal;
  - Ramp-up of production rate and CHPP modular expansion of onsite processing capacity aligned with addressing community concerns and securing access to rail capacity;
  - Onsite processing of coal to produce a premium washed 'fat' coking coal, transporting it across public road (accessed under a toll fee arrangement) to a rail terminal planned to be constructed;
  - Transloading to rail wagons and delivering into China utilising the trans-Mongolian railway, for sale to customers in northern and northeastern China.
  - An overall mine life of 31 years following commencement of coal production, at up 5 Mtpa ROM coal mining and processing.
- Highlights from the underlying project cost model include:
  - o Low initial capital costs, with payback achievable within three years of production commencing.
  - NPV<sub>10</sub> of just under USD 1.6 billion on basis of low forecast operating costs, and coal sales prices per forecasts provided by Fenwei Digital Information Technology Co., Ltd (Fenwei).
  - o Further detail will be communicated post completion of the Independent Technical Review.



## **Coal Resource Estimate**

SRK were engaged to prepare an updated Coal Resource Estimate for the Ovoot deposit within mining license MV-017098. Work in relation to this comprised of two main phases. Firstly, onsite supervision by Competent Person was provided for a small infill exploration program conducted in Q4 2022. Secondly, information pertaining the historical exploration activities conducted at Ovoot was collated, validated and evaluated to prepare update to the previously prepared Coal Resource model and estimate, but escalated to rebuilding a completely new Coal Resource model on basis of evaluation findings.

The total Coal Resource within the Ovoot mining license is estimated to be 219.4 Mt (refer to Tables 1 and 2). The Measured Coal Resource is estimated at 99.5 Mt, Indicated Coal Resource is estimated at 100.9 Mt and the Inferred Coal Resource is estimated at 19.0 Mt. The total tonnage of coal above 350 m depth (suited to open pit mining) is estimated at 201.2 Mt. The total tonnage of coal at and below 350 m depth is estimated at 18.2 Mt.

Table 1: Summary of Coal Resources as at 31 October 2024

Coal Resource Category	Coal Area (Th.m²)	RD (ad) (t/m³)	In-situ RD (t/m³)	Coal Resource (Mt)	Moisture (ad) (%)	Ash (ad) (%)	VM (ad) (%)	FC (ad) (%)	TS (ad) (%)	GCV (ad) (kcal/kg)	CSN (#)	P (%)
Measured	17,902	1.45	1.43	99.5	0.5	18.4	26.8	54.0	1.2	6,734	8	0.27
Indicated	28,609	1.45	1.42	100.9	0.5	21.3	26.3	51.8	1.5	6,518	7	0.25
Inferred	2,466	1.45	1.42	15.0	0.6	20.2	25.2	52.4	1.3	6,473	7	0.15
Inferred (Weathered)	1,078	1.42	1.31	4.0	0.7	15.6	25.0	54.8	0.9	6,442	3	0.19
TOTAL	50,056			219.4								

Table 2: Coal Resource by depth from surface as at 31 October 2024

Coal Resource Category	Depth (m)	RD (ad) (t/m³)	In-situ RD (t/m³)	Coal Resource (Mt)	Moisture (ad) (%)	Ash (ad) (%)	VM (ad) (%)	FC (ad) (%)	TS (ad) (%)	GCV (ad) (kcal/kg)	CSN (#)	P (%)
	0-100	1.39	1.36	8.8	0.5	11.3	27.1	58.8	1.3	7079	6	0.29
	100-200	1.44	1.43	55.9	0.5	16.6	27.6	55.2	1.3	6916	8	0.30
Measured	200-300	1.47	1.45	25.5	0.5	22.1	26.1	51.3	1.1	6432	8	0.21
	300-400	1.46	1.43	9.4	0.5	26.0	23.7	49.7	1.2	6135	7	0.25
	400-500	1.47	1.45	0.001	0.6	30.7	22.0	46.7	1.1	5579	8	0.05
Sub-total				99.5								
	0-100	1.40	1.34	5.8	0.7	16.6	26.0	55.8	1.1	6828	5	0.23
	100-200	1.43	1.41	43.1	0.5	18.1	27.9	53.4	1.3	6808	7	0.36
Indicated	200-300	1.48	1.45	36.5	0.5	24.6	26.2	48.8	1.3	6218	7	0.18
	300-400	1.45	1.43	19.2	0.4	24.1	24.1	51.3	2.3	6270	8	0.17
	400-500	1.45	1.43	6.3	0.4	22.9	22.9	50.5	2.1	6126	8	0.09
Sub-total				100.9								
	0-100	1.44	1.36	5.3	0.5	19.0	24.9	49.6	1.1	5988	5	0.14
	100-200	1.45	1.42	11.0	0.6	20.2	25.4	52.8	1.3	6550	7	0.15
Inferred	200-300	1.47	1.44	2.2	0.5	20.9	25.2	53.2	1.2	6618	8	0.11
	300-400	1.46	1.42	0.5	0.6	26.2	23.0	49.7	1.1	6027	7	0.30
	400-500			-								
Sub-total				19.0								
TOTAL				219.4								



The Coal Resource estimation for the Ovoot Project presented in this announcement has been carried out and reported under the principles and guidelines of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (The JORC Code 2012).

The information within this announcement that relates to Exploration Results and Coal Resources is based upon information compiled by Mr Ganzorig Tuvshinbayar, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (Member № 324823). Mr Tuvshinbayar is a full-time employee of SRK Consulting MGL LLC.

Mr Tuvshinbayar graduated with a Bachelor's degree (BSc) in Management of Geology and Mining from the National University of Mongolia in 2008 and has been directly involved in geological research and mineral and coal exploration and mining for more than 15 years. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of The JORC Code.

Mr Tuvshinbayar consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The Coal Resource estimated within the Ovoot mining license and meets the JORC Code's *reasonable prospects* of eventual economic extraction (RPEEE) criterion, after applying the following parameter limits:

- The minimum coal seam thickness used for reporting Coal Resources is 0.3m.
- The maximum raw ash value is ≤ 45% (ad).
- Coal tonnage calculations are based on the modelled in-situ density, as derived from the Preston-Sanders (2003) equation using an assumed in-situ moisture of 2.9% (ar).
- Coal above 350m depth is amenable to open pit mining methods.
- Coal below 350m depth is considered suitable for underground mining.

## **Exploration work and data**

Several phases of exploration works have been carried out within and surrounding the current Ovoot mining license, and in preparing the Coal Resource estimate, the following exploration work and data were utilized:

- Topographic survey completed for 2,703 ha at 1:2,000 scale (in 2010) and a drone topographic survey and mapping of the entire 5,144 ha mining license was undertaken at 1:1,000 scale (in 2019).
- · Geophysical surveys, including:
  - Seven dipole-dipole induced polarisation sections at 1:5,000 scale, covering 17.9 line-kilometres;
  - Airborne magnetic survey at 1:25,000 scale, covering 11,364 line-kilometres with lines spaced at 50 – 500 m;
  - Ground-based gravimetric survey, covering 1,702 measurement points with a grid 100m by 200m covering the license area; and
  - Seismic survey, incorporating twelve two-dimensional seismic lines for a total length of 53 km.
- 220 boreholes for a total of 46,220.55 drilled metres.
- Hydrogeological study across 18 wells.
- Geotechnical study across 10 holes.
- Coal sampling across 9,145 core samples.
- All coal samples were analysed for Total Moisture, Inherent Moisture, Ash, Volatile Matter, Fixed Carbon, Calorific Value, Total Sulphur, Relative Density, Hardgrove Grindability Index, Crucible Swelling Number, G Caking Index, Ultimate, Major Element Chemistry – Phosphorus and Chlorine, inductively coupled plasma-mass spectrometry (ME-MS81h).

## Data verification and validation

All data were checked for completeness in terms of lithology, geophysical and core recovery records and checked against core photography. Boreholes with complete data (such as verified collar survey coordinates, lithological descriptions, downhole geophysical surveys and core photographs) were classified as Structure Points of Observation and used for seam structure modelling and Coal Resource estimation.

Boreholes with core recovery over 90% and laboratory analyses such as moisture, ash, volatile matter, fixed carbon, total sulphur, gross calorific value, crucible swelling number and relative density with complete QA/QC



(quality assurance – quality control) were uploaded to the database as Quality Points of Observation for coal quality modelling and Coal Resource Estimation.

## Structural and coal quality modelling

Geovia Minex software was used to develop a gridded seam model (GSM) for the Ovoot deposit. This model was then used to estimate the Coal Resource. After compiling a database of exploration data, this was uploaded to Minex where its available tools were used to validate the data.

The geological model was developed using drilling data, topographic surface data, and fault interpretation. In total, data from 196 boreholes within the license area and 72 boreholes from the adjacent Mogoin Gol mine area were used as Structure Points of Observation. Out of the 196 Structure Points of Observation within the Ovoot license area, 104 of these also qualified as Quality Points of Observation.

SRK used the Split/Merge method to manage the relationship between the main and subordinate seams and for interpolation and extrapolation of coal intervals missing in some boreholes. The seam package is split into component plies as shown in Figure 1, with an Upper Seam comprising eight plies and a Lower Seam comprising four plies.

The coal relative density (RD) was determined based on 891 samples. The Preston-Sanders equation was used for determination of in-situ RD from air dried RD. In-situ moisture was assumed 2.9%. Average in-situ RD was determined as 1.43 g/cm<sup>3</sup>.

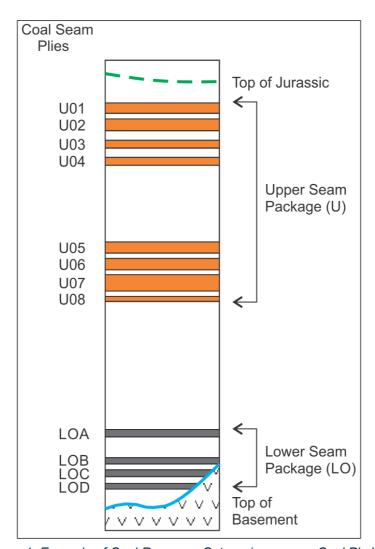


Figure 1. Example of Coal Resource Categories, across Coal Ply U02



### Coal Resource classification criteria

The Ovoot seam structure is geometrically and structurally complex (basemen onlap, unconformities, faults, seams lensing in and out) at the southern and southeastern parts of the deposit. In terms of the deposits structure setting, the Coal Resource category boundary is delineated with focus on Structure Points of Observation for each coal seam and confidence in structure interpolation. Similarly, the assignment of Coal Resource categories is based on confidence in data and coal seam correlation, and continuity of seam structure and quality.

The following classification criteria were applied to Coal Resource categorisation as Measured, Indicated or Inferred, and example of how this has been applied is shown in Figure 2.

- Measured Resource category is assigned to areas where structure continuity is demonstrated in high confidence and the Structure Point of Observation maximum spacing is 500 m. The Measured Resource is not extrapolated beyond Structure Points of Observation.
- Indicated Resource is assigned to an area where seam structure interpretation is well defined, and drillhole spacing is between 500 m and 1,000 m.
- Inferred Resource boundary is assigned to areas with lower confidence data. A 50m buffer zone along the southern faults was also assigned to the Inferred category. In addition, the Coal Resource between the base of weathering (BHWE) and top of Jurassic (TUJU) surface is classified as Inferred due to the uncertainty associated with the coal qualities above the base of weathering in particular, air dried moisture and Crucible Swelling Number (CSN) qualities show higher variability in zones between the BHWE and TUJU surfaces, however SRK observed areas where coal retained coking properties, although deterioration of coal quality is evident with increasing weathering intensity.

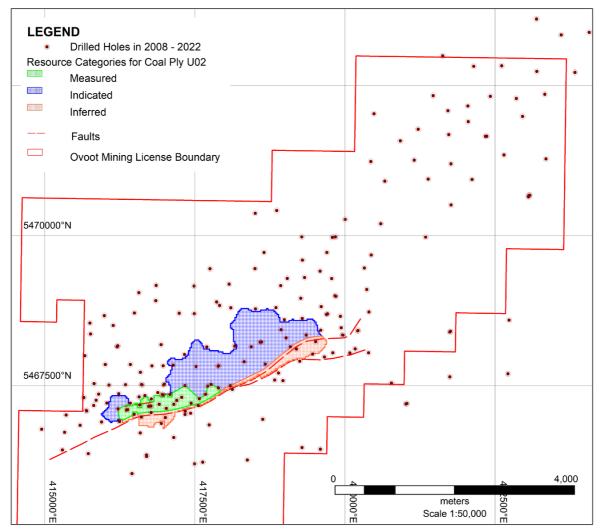


Figure 2. Example of Coal Resource Categories, across Coal Ply U02



## Comparison with prior estimates

The detailed assessment of ply correlations based upon existing data and new data collected from the 2022 exploration drilling program has been instrumental in correcting previously flawed modelling of the seam measures in the southwest of the license area and into the adjacent Mogoin Gol mine workings.

Although the Total Coal Resource estimated has decreased as result of this, importantly the modelled quality of the coal has improved significantly, with raw ash reducing by approximately 21% to an average of 20.0% (ad) and average CSN increasing approximately 15% to an average of 7.5. Details of this are shown in Table 3.

SRK compared its current Coal Resource estimate (2024) with the previous estimate prepared by Xstract (2013). The main differences between the estimates are due to:

- A revised correlation by SRK of the deposit coal seams which eliminates 'phantom' coal from the OVB seam. The revised coal seam correlation has considered signatures observed in geophysical logs as well as coal quality features.
- Application of cut-off parameters for seam thickness and raw ash. SRK applied a minimum thickness of 0.3 m and maximum ash (ad) of 45%. Xstract applied a minimum seam thickness of 0.1 m and did not apply any coal quality cut-offs.
- Application by SRK of more conservative Coal Resource classification criteria, with consideration given to the apparent complexity of seam structure and geometries in the deposit, and removal of isolated 'spotted dog' areas of Measured Coal Resources.

Table 3: Comparison of Xstract (2013) and SRK (2024) Coal Resource estimates

Coal		Coal	Xstract (2013)			SRK (2024)			Coal Resource
Resource Area	Seam ID	Resource Category	Coal Resource (Mt)	Ash (ad) (%)	CSN	Coal Resource (Mt)	Ash (ad) (%)	CSN	(Mt) Difference (%)
	Upper	Measured	77.4	19.0	6.9	88.6	16.8	7.5	14%
	Lower	Measured	102.1	26.5	6.2	10.9	26.1	7.5	-89%
	OVB	Measured	17.5	35.1	6.4	-	-	_	-100%
	Subtotal		197.0	24.3	6.5	99.5	18.4	7.5	-49%
	Upper	Indicated	9.8	19.0	7.4	67.7	18.4	7.5	591%
	Lower	Indicated	28.1	30.7	6.0	9.6	27.7	7.0	-66%
Main	OVB	Indicated	9.0	31.1	6.7	-	-	-	-100%
	Subtotal		46.9	28.3	6.4	77.3	20.3	7.5	65%
	Upper	Inferred	1.1	20.4	7.4	14.3	20.7	6.5	1200%
	Lower	Inferred	3.0	32.0	6.0	0.7	25.6	7.5	-77%
	Above BHWE	Inferred	5.1	28.7	0.0	4.0	24.3	3.5	-22%
	Subtotal		9.2	28.8	2.8	19.0	21.6	6.0	107%
	Subtotal Main Area		253.1	25.2	6.3	195.8	19.5	7.0	-23%
	Upper	Indicated	18.2	26.9	8.0	23.6	24.5	8.0	30%
	Lower	Indicated	7.2	23.2	8.0	-	-	-	-100%
	Subtotal		25.4	25.9	8.0	23.6	24.5	8.0	-7%
Northeast	Upper	Inferred	1.1	34.7	7.5	0.02	25.1	6.0	-98%
	Lower	Inferred	1.5	23.4	8.0	-	-	-	-100%
	Subtotal		2.6	28.2	7.8	0.02	25.1	6.0	-99%
	<b>Subtotal Northeast</b>		28.0	26.1	8.0	23.6	24.5	8.0	-16%
	TOTAL		281.1	25.3	6.5	219.4	20.0	7.5	-22%



## **Coal Reserve Estimate**

SRK were engaged to prepare an updated Coal Reserve Estimate for the Ovoot Coking Coal Project based upon the updated Coal Resource estimated within mining license MV-017098, and in consideration of the updated truck transportation and rail logistics plans to facilitate delivery of washed product coal to customers in northern China.

In preparing this, SRK reviewed a significant amount of historical and recent material prepared by third-parties, particularly in relation to the infrastructure planned to support the forecast operations, and worked closely with Aspire personnel to guide preparation of pit optimisation, design, scheduling and project cost modelling.

The total Coal Reserve within the Ovoot mining license is estimated to be 130.1 Mt, on basis of assumed in-situ moisture of 2.9% (ar). Within this the Proved Coal Reserve is estimated at 76.8 Mt, and the Probable Coal Reserve is estimated at 53.3 Mt. Detail is shown in Tables 4 and 5.

Marketable Coal Reserves were estimated on the basis of yield equation determined through LIMN simulation prepared by Sedgman Pty Ltd, targeting a 9.0% ash (ad) product at an assumed 10.0% moisture (ar) basis. The total Marketable Coal Reserve is estimated to be 97.9 Mt, including 60.0 Mt Proved and 37.9 Mt Probable.

All tonnages exist above 350 m depth of cover and have not included for any extraction of the Lower Seam in its entirety, nor any coal from the Upper Seam deeper than 350 m by either open pit or underground methods.

Table 4: Summary of Coal Reserves as at 13 November 2024

Coal Reserve Category	Coal Reserves (M <sub>ad</sub> = 0.53%) ROM Mt	Coal Reserves (M <sub>ar</sub> = 2.9%) ROM Mt	Marketable Coal Reserves (A <sub>ad</sub> = 9.0%, M <sub>ar</sub> = 10.0%) Mt
Proved	75.0	76.8	60.0
Probable	52.0	53.3	37.9
TOTAL	127.0	130.1	97.9

Table 5: Summary of Coal Reserves by depth from surface as at 13 November 2024

Coal Reserve Category	Depth (m)	Coal Reserves (M <sub>ad</sub> = 0.53%) ROM Mt	Coal Reserves (Mar = 2.9%) ROM Mt	Marketable Coal Reserves (A <sub>ad</sub> = 9.0%, M <sub>ar</sub> = 10.0%) Mt
	0-100	8.1	8.3	7.4
Dunas vand	100-200	49.7	50.9	40.3
Proved	200-300	16.0	16.3	11.4
	300-350	1.2	1.2	0.7
Sub-total		75.0	76.8	60.0
	0-100	4.5	4.6	3.7
Probable	100-200	35.5	36.3	26.1
Propable	200-300	11.8	12.1	8.0
	300-350	0.2	0.3	0.1
Sub-total		52.0	53.3	37.9
TOTAL		127.0	130.1	97.9

The Coal Reserve estimation for the Ovoot Project presented in this announcement has been carried out and reported under the principles and guidelines of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves (The JORC Code 2012).

The information within this announcement that relates to Coal Reserves is based upon information compiled by Mr Petr Osvald, a Competent Person who is a Member of The Australasian Institute of Mining and Metallurgy (Member № 990524). Mr Osvald is a full-time employee of SRK Consulting MGL LLC.

Mr Osvald graduated at Mining University VSB Ostrava in 1989 and has been directly involved in geological research and mineral and coal exploration and mining for 35 years. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of The JORC Code.

Mr Osvald consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears



## **Coal Reserve model preparation**

The Coal Resource gridded seam model which had been prepared in Minex software was exported to CSV file and imported into Datamine Studio OP software as a starting point for Coal Reserve model preparation. Validation conducted in both Microsoft Excel and Datamine Studio OP confirmed complete compliance in terms of both quantities and qualities between the two versions of the Resource Model, with zero variation.

The following parameters were then used to convert from the Resource Model to the Reserve Model using Datamine Studio OP:

- Recoverable coal thickness of 0.3 m was applied;
- Minimum separable interburden thickness of 0.2 m was applied;
- Coal seam roof and floor losses of 0.05 m was applied;
- Coal seam roof and floor dilution of 0.05 m was applied; and
- ROM coal qualities were adjusted on basis of losses and dilution, with dilutant qualities based upon regression of interburden sample analyses results.

As the result of applying these parameters, in comparison to the Resource Model quantities, total coal loss amounted to 3.2%, and total dilution amounted to 5.0%. Quantities and qualities were compared by ply between the Resource Model and Reserve Model, and no abnormalities of concern were found.

### Pit optimisation

Datamine Studio NPVS software was used to perform pit optimisations to identify optimum pit development progression and potential limits. Inputs were applied regarding:

- Mining costs, which varied by lithology and depth;
- Overall pit slope angles, which varied between Quaternary and Jurassic layers;
- Processing costs and recoveries, based upon Sedgman Pty Ltd FEED Study findings; and
- Assumed mine gate prices for washed coking and raw (weathered) thermal coal products.

The nested pit shells produced from the pit optimisation provided guidance on the most economic development sequence for the pit. Further pit optimisation using smaller steps in revenue factor were used to fine tune determination of the initial Starter Pit location and development sequencing, which confirmed the location considered previously into which exploration boreholes were targeted in Q4 2022.

## Pit and Dump Design

Based upon results from the pit optimisation process, pit and dump designs were created in accordance with a phased pit development sequence. Datamine Studio NPVS software was used to prepared designs with intent to maximise the in-pit dumping of overburden to minimise ex-pit disturbance, haul distance and mining costs. The overburden dumps were designed inclusive of the forecast coal reject volumes, which are planned to be codisposed with the mined overburden.

## Mine Scheduling

The LOM schedule was prepared based upon the following key inputs:

- Coal processing, transportation and sales are to commence from Q4 2026, with construction of paved road and Coal Handling and Preparation Plant (CHPP) to be commissioned in advance of this; and
- An initially conservative mining and processing rate of 1.5 Mtpa is to be gradually increased year-on-year to 2.5 Mtpa, and following modular expansion of the CHPP increased to 5.0 Mtpa.

The mine scheduling was prepared with monthly granularity for pre-stripping activities ahead of coal production, and for the first five years of coal production. The subsequent five years activity were scheduled on a quarterly basis, and the remainder of the LOM schedule was prepared on basis of annual periods.

Excavation was scheduled on basis of first principles assessment of the productivity of various models of hydraulic excavators considered, in combination with the models of mining trucks also considered for use. The first principles productivity calculations were reconciled with known productivities for such combinations observed in Mongolian coal mines.



Scheduling of in-pit haulage was prepared based upon calculated pit centroid to dump centroid paths, which were then simulated using RPM Global TALPAC-3D software for the various combinations of truck and excavator models considered. Ultimately this determined the number of mining trucks required to support the scheduled excavator fleet.

## **Capital and Operating Cost Forecast**

Forecast capital and operating costs were collated in Microsoft Excel in alignment with the LOM production schedule output from the Datamine Studio NPVS software.

Capital costs were input based upon:

- Third-party estimates for phased infrastructure construction, in alignment with the Front End Engineering
  Design (FEED) studies, Basic Engineering Design (BED) studies and Feasibility Studies completed on
  the major underlying infrastructure including CHPP, Erdenet Rail Terminal (ERT), Transportation Hub
  and Rest Stops, new and upgraded road and minesite infrastructure; and
- Quotations from vendors for production, ancillary and support equipment for use in mining, processing and transportation operations.

Operating costs were input based upon:

- Third-party estimates for infrastructure operation in alignment with the FEED, BED and Feasibility Studies completed in relation to the planned underlying infrastructure;
- Advice from vendors and Original Equipment Manufacturers (OEMs) with regard to equipment scheduled preventative maintenance, major overhauls and other aspects of equipment operation;
- Detailed simulation of mine production equipment and road truck operating hours and fuel consumption;
- Vendor quoted prices for consumable items such as fuel, explosives, and contracted services;
- · Client in-house knowledge of the labour market and minor administrative expenses; and
- Published tariffs in relation to state regulated water and electricity consumption and capacity charges, as well as government taxes, fees and royalties.

#### **Revenue Forecast and Economic Cut-off**

Revenue incorporated into the same Microsoft Excel model in which capital and operating costs were forecast, with two main streams scheduled:

- Revenue for washed 'fat' coking coal was assumed to be USD 230 per tonne on a Delivered Duty Paid (DDP) basis in Erlian, China, which aligns with forecast price advised by Fenwei for the same quality of product delivered to Erlian in 2026 for ultimate consumption in Hebei province in northern China.
- Revenue for raw thermal coal byproduct resulting from weathered coal intercepted was assumed to be MNT 50,000 per tonne, in alignment with current pricing received for mine gate sale of equivalent product from the neighbouring Mogoin Gol coal mine for use in local power and heating plants.

In combination with the combined capital and operating costs, the forecast revenue resulted in no economic cutoff being applied in determination of the Coal Reserves, with the cumulative net present value continuing to increase through the LOM schedule without plateauing or decreasing.

## Coal Reserve classification criteria

The following classification criteria were applied to Coal Reserve categorisation as Proved or Probable:

- Proved Reserve category is assigned to coal scheduled to be mined from where Measured Resource categorisation has been applied.
- Probable Reserve category is assigned to coal scheduled to be mined from where Indicated Resource categorisation has been applied.
- No categorisation is assigned to coal scheduled to be mined from where Inferred Resource categorisation
  has been applied, or no Resource categorisation has been applied.



## Table 1 - Checklist of Assessment and Reporting Criteria (The JORC Code, 2012 Edition)

The following table provides a summary of important assessment and reporting criteria used for the Ovoot Coal Mine in accordance with the Table 1 Checklist of Assessment and Reporting Criteria, in The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code) 2012 Edition.

## **Section 1: Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

#### **Explanation** Exploration at Ovoot Coking Coal Project was carried out in Sampling Nature and quality of sampling (e.g. **Techniques** cut channels, random chips, or from 2008 to 2022 on mining licence MV-017098. A total of 220 boreholes were drilled for a total of 46,220.55 drilled specific specialised industry standard measurement tools metres, as follows: appropriate to the minerals under o In 2008, 8 boreholes were drilled for a total of 1,888.0 investigation, such as downhole gamma sondes, or handheld XRF o In 2010–2012, 192 boreholes were drilled for a total of instruments, etc.) These examples 42,354.15 m. should not be taken as limiting the broad meaning of sampling. o In 2016, a further 4 non-cored boreholes were drilled for a total of 423 m. Include reference to measures taken to ensure sample representativity o In 2022, 15 boreholes were drilled with a total of 1,957.9 and the appropriate calibration of m. SRK provided advice and technical oversight for the any measurement tools or systems 2022 drilling activities at the Ovoot Project. SRK used. provided technical oversight and guidance during the 2022 drilling program. Aspects of the determination of mineralisation that are Material to the Aspire submitted 773 coal samples derived from 97 holes to Public Report. the laboratory from the 2008-2012 drilling programs. Coal samples were taken immediately after the HQ and PQ size In cases where 'industry standard' drill core barrel was brought to the surface. The following coal work has been done; this would be sampling procedure was undertaken: relatively simple (e.g. 'reverse circulation drilling was used to obtain o After on-site logging, coal seams were full coal core 1 m samples from which 3 kg was sampled on a composite basis or a ply-by-ply basis pulverised to produce a 30 g charge the coal seam roof and coal seam floor were not for fire assay'). In other cases, more sampled. explanation may be required, such Sample intervals were determined by reference to as where there is coarse gold that geological and geophysical log results. Samples were has inherent sampling problems. sealed as soon as practicable to do so. Unusual commodities or Samples were submitted to the laboratory as soon as mineralisation types (e.g. submarine practicable after sampling was completed. nodules) may warrant disclosure of detailed information. Of the 200 boreholes completed between 2008 and 2012, 11 had no sample records and 10 were not geophysically logged. The analysis data for these holes have not been used in the Coal Resource estimation. No coal sampling and analyses were completed in 2016 as some holes did not penetrate coal and were drilled outside of mining licence area. The sampling methodology for the 2022 drilling was as follows: o Coal intervals were identified visually from the recovered core and compared and reconciled with geophysical logs. The rig geologists wrapped all coal core samples with

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aluminium foil and plastic and placed them into core trays immediately after completing each drilling run at the drilling sites. Wrapped coal cores were stored in the

cooler storage area at the KK field camp until



- geophysical logs had been acquired and the log depths had been reconciled according to the geophysical logs.
- After the coal intersections had been sampled and downhole geophysics had been completed, the corrected depths were provided to the geologist.
- Sample intervals were selected according to lithology for raw coal quality testing. The coal sampling was done on a ply basis where a ply consists of similar coal lithotypes (that is, bright coal versus dull coal) or where stone partings separate coal plies.
- Plies that were less than 2 m in thickness were sampled separately. Where a coal ply was greater than 2 m thick, several 2 m sub-ply samples were taken until the ply had been fully sampled. For example, a 4.5 m ply was sampled in three samples: two samples of 2 m thickness and one sample of 0.5 m thickness.
- Stone partings that were less than 0.2 m thick were included in the ply being sampled unless it was clear the stone partings were at the ply boundaries.
- Stone partings that were greater than 0.2 m but less than 0.5 m thick represented a parting and were sampled as individual samples.
- o Stone partings greater than 50 cm were not sampled.
- Stone samples of coal seam roof and coal seam floor were collected from each seam cored.
- The core samples were doubled bagged in strong plastic bags and sealed with plastic packaging tape. The sample ID and depth interval were marked with permanent pen on the outside bag.

## Drilling Techniques

 Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc.).

- A total of 220 boreholes were drilled in the period 2008–2022. Of these, 174 boreholes were diamond drill fully and partially cored and 46 boreholes were non-cored by RC or PCD drilling. The drilling diameter for the 2008 holes was HQ initially, then was reduced to NQ diameter in the deeper parts of boreholes. The 2010–2022 core drilling used PQ and HQ diameter core with a dual-wall core barrel with a split inner tube for the below the top of the Jurassic surface. In the upper parts of boreholes in Quaternary cover (above the top of the Jurassic surface), non-core drilling was used, i.e. reverse circulation (RC) or polycrystalline diamond (PCD) methods. Most of the holes drilled from 2008 to 2022 were drilled vertically with depths ranging from 24 m to 520.0 m. The only six geotechnical holes in 2012 were drilled inclined at 65° and reached depths between 162.3 m and 410.3 m.
- For the 2016 and 2022 drilling programs, downhole deviation surveys were conducted on boreholes to provide downhole azimuth and dip data. Downhole verticality surveys were not conducted between 2008 and 2012.

## Drill Sample Recovery

- Method of recording and assessing core and chip sample recoveries and results assessed.
- Measures taken to maximise sample recovery and ensure representative nature of the samples.
- Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.
- SRK reviewed the core recovery of the 2008–2022 boreholes. Preliminary measurement of the core recovery was undertaken by comparison of length of core run and recovered core. Coal intervals were identified visually from the recovered core and compared and reconciled with geophysical logs. The core recovery for all drilling programs was reasonable and representative for coal quality. Overall core recovery was greater than 92%. Of the 200 boreholes drilled in 2008–2012, core recovery information was missing for 6 boreholes.
- The core drilling used HQ and PQ diameter core with a dualwall core barrel with a split inner tube to maximise the core



Logging	<ul> <li></li></ul>	sample recovery. Diamond core was reconstructed into continuous runs in core barrel split and checked against the depth given on the core blocks, and rod counts were routinely carried out by the drillers.  Core loss within was not preferential. Core loss in coal intervals and either host rock strata or intra-seam partings was about the same.  SRK reviewed all geological data for holes drilled between 2008 and 2022. Boreholes with verified collar survey coordinates, lithological descriptions, geophysical logging, downhole surveys (deviation) and core photographs were classified as Structure Points of Observation for Coal Resource estimation.  During all exploration phases, the geological logging was conducted by a rig geologist. Logging sheets contain the drilling technical log, lithology log, geotechnical log, core run record, sampling record, chain of custody, and sample dispatch form. SRK is satisfied that the logging has been undertaken to a suitable standard for the Coal Resource estimation.  Geological and geotechnical logging is based on downhole depth measurements of drill core and these depths are subsequently reconciled with geophysical logs. The geological interpretations are undertaken by trained personnel but are ultimately subjective. The interpretation of mineralised (i.e. coal) intervals is supported by geophysical log interpretation. All cores were photographed.  Logging was undertaken across the full depth of all drillholes. Geophysically logged boreholes are typically logged from the bottom of the hole to the surface. Natural gamma and density logs were acquired over the full depth of all boreholes. In some boreholes the other parameters were not surveyed through to final drilled depth because boreholes walls were prone to collapse and there was a risk that the probe could be lost in the open hole after pipes were pulled out from
Sub-sampling techniques and preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the</li> </ul>	<ul> <li>For all exploration phases, full core samples were collected. This is standard practice for coal exploration where more of each sample is required for analysis.</li> <li>No samples were collected from the non-cored boreholes drilled in all drilling campaigns.</li> <li>Samples were collected from coal plies, stone partings, seam roof and floor after the coal intersections had been sampled and downhole geophysics had been completed and depths corrected. The coal sampling was done on a ply basis where a ply consists of similar coal lithotypes (that is, bright coal versus dull coal) or where stone partings separate coal plies. Stone partings that were greater than 0.2 m but less than 0.5 m thick represented a parting and were sampled as individual samples.</li> <li>The sample preparation of core follows the standard industry practice for coal. Proximate analysis involved oven drying, coarse crushing, followed by pulverisation.</li> <li>The sample sizes are considered appropriate to correctly represent the nature of coal.</li> </ul>
Quality of assay data	<ul> <li>material being sampled.</li> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and</li> </ul>	<ul> <li>In 2008–2012, samples were tested by three laboratories:</li> <li>SGS Tianjin (in China) and SGS and Stewart Mongolia LLC (both in Ulaanbaatar). All coal samples were analysed for</li> </ul>



## and laboratory tests

- whether the technique is considered partial or total.
- For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.
- Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.

Total Moisture (TM) % ar, Inherent Moisture (IM) % ad, Ash Content (Ash) % ad, Volatile Matter (VM) % ad, Fixed Carbon (FC) % ad, Calorific Value (CV) % ad, Total Sulphur (TS) % ad, Relative Density (RD), Hardgrove Grindability Index (HGI), Crucible Swelling Number (CSN), and major element chemistry - phosphorus (P) and chlorine (CI). SRK was not given any QAQC data and details of procedures used between 2008 and 2012.

• In 2022, core samples were submitted to SGS IMME Mongolia for testing by proximate analysis, total sulphur, CSN, calorific value, relative density (RD), phosphorus and G caking index. The SGS IMME Mongolia laboratory has internal quality control system of inserting Certified Reference Materials (CRMs) and testing of pulp repeats. The results were reviewed by SRK and are considered acceptable. During the 2022 exploration program, external checks of SGS's analysed samples were conducted on 10 pulp sample duplicates by the GeoAnalytic Inc. laboratory in Ulaanbaatar. SRK has checked the performance of duplicates. Overall, the QAQC results were satisfactory and confirmed that the data were suitable for use in the Coal Resource estimate.

# Verification of sampling and assaying

- The verification of significant intersections by either independent or alternative company personnel.
- The use of twinned holes.
- Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.
- Discuss any adjustment to assay data.
- SRK has visually verified lithology by checking the core
  photograph and geophysical log and intersections in diamond
  cores and selected samples were taken for check analysis,
  as part of the Coal Resource estimation process.
- · No twinned holes were drilled.
- Hard logging data were transferred to a set of standard MS Excel spreadsheets. Assay test data were provided to SRK as Excel spreadsheets, supplemented by laboratory test results certificates.
- No adjustments to the data were made.

## Location of data points

- Accuracy and quality of surveys used to locate drillholes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.
- Specification of the grid system used.
- Quality and adequacy of topographic control.
- The borehole collars from 2008 to 2022 were surveyed by total station. Only five borehole collar surveys were not conducted for the 2016 drilling. SRK was given the electronic survey data.
  - The grid system used is UTM Zone 47 (WGS84).
- The survey is considered adequate for Coal Resource estimation purposes.

# Data spacing and distribution

- Data spacing for reporting of Exploration Results.
- Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.
- Whether sample compositing has been applied.
- In the 2008–2022 exploration campaign, the drillhole spacing ranged between 250 and 500 m, but was less than 150 m in the southwestern part.
- The modelled seams demonstrated sufficient continuity in geological continuity to support the applied Coal Resource classifications.
- Sub-seam or ply samples were composited in Minex on a length x density basis, where coal seam intervals consisted of more than one sample.

## Orientation of data in relation to geological structure

- Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.
- If the relationship between the drilling orientation and the orientation of key mineralised structures is
- Most of holes drilled from 2008 to 2022 were drilled vertically. Six geotechnical holes in 2012 were drilled with collars inclined at 65°. For the 2016 and 2022 drilling programs, downhole deviation surveys were conducted on boreholes. Diamond core was used to obtain high quality samples and the diamond core was logged for lithological and structural attributes.



	considered to have introduced a sampling bias, this should be assessed and reported if material.	<ul> <li>The Ovoot Coking Coal Project is typified by strata elongated in a general northeast trend and coal seams, gently folded into an east-northeast–west-southwest trending syncline dipping at about 5°–12°; boreholes are drilled at 90° (vertical).</li> <li>It is considered that the relationship between drilling</li> </ul>
		orientation and coal seam dip did not introduce sampling bias and close to true thickness.
Sample security	The measures taken to ensure sample security.	Coal samples designated as sufficient for testing in a laboratory were bagged in a heavy-duty plastic bag, labelled, sealed with plastic packaging tape and transported to the laboratory in Ulaanbaatar. Samples were stored on site until being collected for transport to the SGS laboratories in Ulaanbaatar.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	A review and validation of the sampling techniques and data was carried out by SRK as part of the Coal Resource estimation. The database is considered of sufficient quality to carry out Coal Resource estimation. SRK reviewed all borehole data and Structure and Quality Points of Observation.

Section 2: Reporting of Exploration Results
(Criteria listed in the preceding section also apply to this section.)

(Criteria listed in the	preceding section also apply to	this section.)
Criteria	Explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>Khurgatai Khairkhan (KK) LLC holds mining licence MV-017098 which covers the Ovoot Coking Coal Project. Khurgatai Khairkhan LLC is wholly owned by ASX-listed company, Aspire Mining Limited (Aspire). The licence covers an area of 5,144.04 ha, is valid until 10 August 2042, and is extendable twice by 20-year periods.</li> <li>The tenement is understood to be in good standing with no known impediment to future permitting for mining operations.</li> <li>SRK has not undertaken a legal review of the mining licence.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The model was developed based on the exploration data from drilling programs undertaken by KK and Aspire in 2008–2012. The data were reviewed by SRK and included or discarded from the Coal Resource estimation, as appropriate.  The 2022 drilling program was implemented under SRK's
Geology	Deposit type, geological	<ul><li>supervision.</li><li>The Jurassic coal-bearing sequence is composed of</li></ul>
	setting and style of mineralisation.	conglomerates, sandstones, siltstones and coal seams, gently folded into an east-northeast—west-southwest trending syncline at about 5°–10°. The Ovoot Coal Basin is a depression that is elongated in a general northeast trend. The depression has two troughs that are separated by a spur of basement high trending southeast. The southeastern limit of the depression is tectonic. The boundary of coal-bearing strata is a prominent normal fault trending to the northeast. Exploration data confirm that to the northeast the fault bifurcates into two main branches. The total thickness of coal-bearing strata is approximately 300–400 m, increasing from the southwest to the northeast. Coal occurs in two



		structurally and geometrically complex seam packages designated the Upper Seam (U seam code prefix) and Lower Seam (LO seam code prefix).
Drillhole information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all material drillholes:         <ul> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (reduced level – elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	KK (or Aspire) carried out exploration drilling programs across Ovoot mining licence MV-017098 in 2008–2022. A total of 220 boreholes for a cumulative depth of 46,220.55 m were drilled. Tables of all drillhole collars, dip, azimuth and depth information are provided in Sections 4.2 and 4.3 of the main body of the Report.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Raw coal quality samples were composited downhole on a length x RD basis. No grade capping of the sample analysis was undertaken.</li> <li>Coal composite samples were reconstituted at the laboratory according to seam intervals determined from borehole log and tested. Proximate analysis, GCV and TS were composited in Minex software from the original samples. Sample compositing parameters were set to 85% of the seam to be sampled. This was done to ensure that only seams represented by samples covering at least 85% of the seam thickness were used for the quality model.</li> <li>Not applicable to coal.</li> </ul>
Relationship between mineralisation widths and intercept depths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> </ul>	The coal strata gently folded into an east-northeast—west-southwest trending syncline at about 5°–10° and almost all boreholes are vertical. Downhole lengths were close to true thickness and used for coal intervals used in Minex software.



	If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.	<ul> <li>Appropriate geology and seam structure maps and sections were prepared for whole deposit area and are included in the Report.</li> </ul>
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Comprehensive reporting was conducted on all coal seams.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	<ul> <li>Additional exploration work completed by KK consists of the following:         <ul> <li>In 2008, Land Major LLC completed DDIP profiling of 7 lines with a total length of 17.9 line-kilometres The distance between points on the lines was 100 m.</li> <li>Ground-based gravimetric survey – AMO Discover LLC conducted a gravity survey on 1,702 measurement points with a grid 100 m by 200 m covering the licence area in September 2010.</li> <li>Seismic survey – In October 2010, Logantek Mongolia LLC undertook a seismic survey that consisted of 12 2D seismic survey lines totalling 53 km, and interpretation.</li> <li>An airborne magnetic survey at 1:25,000 scale was conducted by Geosan LLC in 2011. The magnetic survey used a Cessna Caravan 208B fixed-wing aircraft which flew at nominated 60–80 m terrain clearance for a total survey length of 11,364 line-kilometres. Geosan LLC processed the raw data and provided a Total Magnetic Intensity (TMI) and filtered First Vertical Derivative (1VD) of the Reduced to Pole (RTP) maps.</li> </ul> </li> </ul>
Further Work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>SRK makes the following recommendations:         <ul> <li>Carry out Line of Oxidation (LOX) drilling to identify coking Coal Resource blocks in coal above the base of weathering.</li> <li>Carry out infill drilling in Indicated and Inferred Coal Resource areas to upgrade coal to the Measured and Indicated categories, which are allowed for conversion to Coal Reserves.</li> <li>Carry out geotechnical drilling to verify the northwest trending faults and slope stability of the box cut.</li> <li>Update the structural geology review of the deposit based on the geophysical data and up-to-date drilling data.</li> </ul> </li> </ul>



Section 3: Estimation and Reporting of Mineral Resources (Criteria listed in Section 1, and where relevant in Section 2, also apply to this section.)

Criteria	Explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	SRK reviewed all drillhole data. All coal seam picks were checked before being uploaded into Minex software and validated using Minex's in-built validation tools to prevent transcription errors. The Ovoot geological model and Coal Resource estimate were carried out using GEOVIA Minex software.  The uploaded database was validated using tools available in Minex to aliminate attationable mineratabase possible against the season.
		Minex to eliminate stratigraphy mismatches, negative seam and interburden thicknesses, and missing or duplicated intervals.
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	During the 2022 exploration program, Ganzorig Tuvshinbayar (SRK Senior Consultant) supervised at the Ovoot Project from 1 to 25 November 2022, including coordination of geological team, drilling, survey and geophysical logging contractors. SRK inspected the deposit area and reviewed the status of the Project and verified technical information from the exploration drilling and the adjacent Mogoin Gol open pit mine. Notes and photographs were taken and discussions with the on-site personnel were held.
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The Ovoot seam structure is geometrically and structurally complex (basement onlap, unconformities, faults, seams lensing in and out) at the southern and southeastern parts of the deposit. SRK used the Split/Merge method to manage the relationship between the main and subordinate seams and for interpolation and extrapolation of coal intervals missing in some boreholes.</li> <li>Three faults with a general northeast trend were interpretated at the southwestern part of the project area. Faults were introduced into the model as 'Fault NT' (i.e. no throw), which indicates discontinuities for which the throw of the fault has not been determined. The fault displacements are calculated by the software based on the seam grid elevations either side of the discontinuity.</li> <li>Borehole data were used for geology interpretation. Seam thickness gridding was limited to the limits of the borehole data and in all extrapolated and interpolated intervals above the borehole collar and below the final depth were set to zero in Minex.</li> <li>Three (DH238_C, DH211_C and DH241_C) additional artificial control boreholes (or 'dummy' holes) were introduced into the database to improve interpolation on the coal subcrop against the top of Jurassic (TUJU) surface at the northwestern part of the Ovoot coal deposit.</li> <li>Coal seams were correlated using cross sections and structure data. Frequent seam splitting and merging is affecting structure continuity.</li> </ul>
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>Maps, cross sections and 3D models of the coal seams were constructed in Minex software and examples presented in the Report. The grids were generated over the whole Ovoot mining licence area, developed using Minex's multi-seam multi-variable gridding function with the following parameters:         <ul> <li>X_Origin: 414,480.875, Y_Origin: 5,462,448</li> <li>X_Extent: 9,250, Y_Extent: 10,600</li> <li>X_Mesh: 25.0, Y_Mesh: 25.0.</li> </ul> </li> <li>The grids were limited by subcrop line and cut by the top of Jurassic (TUJU), top of basement (TUBA) surfaces in the</li> </ul>



# Estimation and modelling techniques

- The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen, include a description of computer software and parameters used.
- The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource Estimate takes appropriate account of such data.
- The assumptions made regarding recovery of by-products.
- Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).
- In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.
- Any assumptions behind modelling of selective mining units.
- Any assumptions about correlation between variables.
- Description of how the geological interpretation was used to control the resource estimates.
- Discussion of basis for using or not using grade cutting or capping.
- The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.

depth and inferred faults at the at the southwestern part of the project area. In places where the coal seams are not developed, the values of the seam thickness grids were set to zero.

- The structural model for the seam roof, seam floor and seam thickness were developed as a Grid Seam Model (GSM) within the boundaries of Ovoot mining licence MV-017098. The structural GSM was developed using drilling data, the topographic surface, the top of Jurassic data and fault interpretation. In Minex, parameters and setting of gridding procedure are mesh size 25 × 25 m, data boundary 200 m, scan distance of 10,000 m. The grids are limited by the top of Jurassic (TUJU) at the top, top of basement (TUBA) surfaces in the depth and inferred faults at the at the southwestern part of the project area. The coal quality model was built using the same grid parameters as the structure model. Average coal quality for seams with less than three samples was determined as an arithmetic average of the available samples. Sample compositing parameters were set to 85% of the seam to be sampled.
- Comparisons were made with previous estimates and differences. The previous Coal Resource estimate as at December 2013 was prepared by Xstract in 2013. The main differences between the estimates are due to:
  - A revised correlation by SRK of the deposit coal seams which eliminates phantom coal from the OVB Seam.
     The revised coal seam correlation has considered signatures observed in geophysical logs as well as coal quality features.
  - Application of cut-off parameters for seam thickness and raw ash – SRK applied a minimum thickness of 0.3 m and maximum ash (ad) of 45%. Xstract did not apply any coal quality cut-offs.
  - Application by SRK of more conservative Coal Resource classification criteria, with consideration given to the apparent complexity of seam structure and geometries in the deposit, and removal of isolated 'spotted dog' areas of Measured Coal Resources.
- No assumptions were made regarding the recovery of byproducts.
- The deleterious elements in Ovoot coal include phosphorus (P), chlorine (Cl) and sulphur (S) in the form of sulphate, organic and pyritic sulphur.
  - A total of 928 coal samples were analysed for total sulphur. Total sulphur is variable in each of the mineable seams. The Lower seam package has an average 1.1% sulphur (ad). The Upper seam package exhibits an average 1.3% total sulphur (ad).
  - Forms of sulphur (sulphate, organic and pyritic sulphur) were tested on 135 raw composite samples. The data indicate that organic sulphur is the prevailing form, followed by pyritic sulphur.
  - SRK opines that while pyritic sulphur could be removed during washing process, the organic sulphur would be rather concentrated in the clean coal and coal washing would therefore have negligible impact on sulphur content.
  - SRK noted that the P content in raw coal is generally high and in places and exceeds the level accepted by coking plants and the coal would therefore require



		<ul> <li>blending with low P coal. However, P content in washed coal samples produced as consistently been at more reasonably and mostly acceptable levels.</li> <li>Chlorine content is low.</li> <li>The Minex mesh size 25 × 25 m. Borehole spacing is 100–250 × 250–500 m for the Ovoot Project. Extrapolation and interpolation were made by Minex software's proprietary Growth method.</li> <li>Structure and raw coal quality models were visually checked in cross sections and contour plan views.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>SRK estimated in-situ RD using Preston-Sanders equation for determination of in-situ RD from RD air dried. The coal relative density (RD) was determined based on 891 samples. IRD grids were modelled and introduced to the coal quality model. In-situ moisture was assumed at 2.9%. Average in- situ RD was 1.43 g/cm3.</li> </ul>
Cut-off parameters	<ul> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul> <li>The minimum coal seam thickness used for reporting Coal Resources is 0.3 m.</li> <li>The maximum raw ash value is ≤45% (ad).</li> </ul>
Mining factors	Assumptions made regarding	Open pit is the most likely mining method.
or assumptions	possible mining methods, minimum mining dimensions and internal (or, if	Coal above 350 m depth is amenable to open pit mining
	applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	<ul> <li>Coal below 350 m depth is considered suitable for underground mining.</li> </ul>
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	Coal washability tests indicate that Ovoot coal is suitable for a coking coal product.
Environmental factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly	The overburden removed from the box cut can be disposed of to an external waste dump. After depletion of coal from the box cut, overburden from the open pit extension would be backfilled on the internal waste dump.



Bulk density  Classification	for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.  • Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.  • The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.  • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.  • The basis for the classification of the Mineral Resources into varying confidence categories.  • Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).  • Whether the result appropriately	The Ovoot Coal Resource was classified in the Measured, Indicated and Inferred categories based on the density and distribution of the Points of Observation, in conjunction with the geological complexity and confidence in coal seam correlation and continuity of seam structure and quality.  Measured Resource category is assigned to areas where structure continuity is demonstrated in high confidence and the Structure Point of Observation maximum spacing is 500 m. The Measured Coal Resource is not extrapolated beyond Points of Observation.
	Whether the result appropriately reflects the Competent Person's view of the deposit.	
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	SRK has completed internal audits, which verified the technical inputs, methodology, parameters and results of the Coal Resource estimate.
Discussion of relative accuracy /confidence	Where appropriate, a statement of the relative accuracy and confidence level in the Mineral Resource Estimate using an approach or procedure deemed appropriate by	<ul> <li>The relative accuracy of the Coal Resource estimate is reflected in the reporting of the Coal Resource as per the guidelines of the JORC Code (2012).</li> </ul>



the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.

- The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
- These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

- The statement relates to global estimates of coal tonnes and quality.
- No production data are available for comparison as the Project has not been developed to a mining stage.

## **Section 4: Estimation and Reporting of Ore Reserves**

(Criteria listed in Section 1, and where relevant in Sections 2 and 3, also apply to this section.)

Criteria	Explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	<ul> <li>A Coal Resource Estimate ("CRE") report entitled "Ovoot Coking Coal Project - JORC Code Report (SRK Project number SMN110)" was completed by SRK Consulting MGL LLC dated 31 October 2024 prepared for Khurgatai Khairkhan LLC, a wholly owned subsidiary of Aspire.</li> <li>Reported Mineral Resource is inclusive of potential Coal Reserve material.</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been</li> </ul>	<ul> <li>The last site visit was undertaken by Mr. Ganzorig Tuvshinbayar between 10-12 November 2024, on behalf of the Mr. Petr Osvald, Competent Person for Coal Reserve Reporting</li> <li>Site visit was aimed at inspection of proposed open pit,</li> </ul>
Study status	undertaken indicate why this is the case.  The type and level of study	waste dump, CHPP site, proposed infrastructure sites including road and coal transloading station.  • Pre-Feasibility Studies were previously prepared in relation
Study Status	undertaken to enable Mineral Resources to be converted to Ore Reserves.	to the Ovoot Coking Coal Project:  o An initial PFS by Xstract (2012) focused on large scale mine development supported by rail infrastructure
	The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	connection to site; and
		<ul> <li>A revised PFS by FMS LLC (2019) focused on smaller scale mine development supported by special purpose (private) road connection to rail infrastructure.</li> </ul>
		<ul> <li>The Coal Reserve Report is based upon further evolution of concepts considered within these previously prepared Pre-Feasibility Studies, but supported by standalone updates to operational plans and supporting infrastructure estimated by third-parties. The main supporting studies include:         <ul> <li>Front End Engineering Design (FEED) study completed by Sedgman Pty Ltd on construction and operation of a Coal Handling and Preparation Plant</li> </ul> </li> </ul>



		<ul> <li>(CHPP) onsite within the Ovoot mining license in Tsetserleg soum, Khuvsgul aimag.</li> <li>FEED study and subsequent Basic Engineering Design (BED) study revision completed by O2 Mining Limited (O2) on process and non-process infrastructure excluding trackwork to facilitate transloading of coal from road trucks to rail wagons at the Erdenet Rail Terminal (ERT) planned to be constructed adjacent to the Erdenet – Salkhit rail line in Jargalant soum, Orkhon aimag.</li> </ul>
		<ul> <li>Approved Statutory Technical and Economic Feasibility Study prepared by Start Alliance LLC on trackwork required to enable rail access to the planned ERT coal transloading facility.</li> </ul>
		<ul> <li>Numerous studies completed on paved road construction and operation in relation to new and improved road infrastructure proposed to be developed under Private Public Partnership, including:</li> </ul>
		<ul> <li>Approved Statutory Feasibility Study prepared by ICT Sain Consulting LLC;</li> </ul>
		<ul> <li>Approved Statutory Detailed Design prepared by ICT Sain Consulting LLC; and</li> </ul>
		<ul> <li>Commercial Feasibility Study prepared by Gobi Infrastructure Partners LLC.</li> </ul>
		<ul> <li>BED study completed by O2 on Transportation Hub and Rest Stop infrastructure intended to support efficient and cost effective truck transportation of washed product coal from the Ovoot Coal Mine to the Erdenet Rail Terminal.</li> </ul>
		<ul> <li>Detailed Haulage Simulation and Analysis Report prepared by Smedley's Engineer's Pty Ltd prepared to provide input into road design parameters and establish confident in tractor-trailer capability, cycle times and fuel consumption across the planned truck haulage route.</li> </ul>
		<ul> <li>Logistics Study prepared by Sun Shine Peak LLC examining the possibilities, current conditions and price tariffs for exporting coal from the ERT to multiple points of import into China.</li> </ul>
		<ul> <li>Study prepared by SGS-CSTC Standards Technical Services (Tianjin) Co., Ltd providing independent assessment of Ovoot washed coal product classification and value in use.</li> </ul>
		<ul> <li>Study prepared by Fenwei Digital Information Technology Co., Ltd assessing the Ovoot coal quality and analysing its Target Markets in China.</li> </ul>
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	The minimum coal seam thickness used for reporting Coal Resources is 0.3 m.
		• The maximum raw ash value is ≤45% (ad).
Mining factors or assumptions	The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or	<ul> <li>The Coal Reserve estimate is based on a conventional open pit mining operation using drilling and blasting (free dig for top layer), and large hydraulic excavators loading into off-highway trucks.</li> <li>The open pit mining is planned to access coal via ramps after about 10 months pre-stripping.</li> </ul>
	by preliminary or detailed design).	The open pit optimisation, input parameters used for the optimisation were:



- The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.
- The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.
- The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).
- The mining dilution factors used.
- The mining recovery factors used.
- Any minimum mining widths used.
- The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.
- The infrastructure requirements of the selected mining methods.

Mining Cost: Free Dig (12m below top surface) Low PF (Quaternary layer) Normal PF (Jurassic layer) Incremental Mining cost	2.5 \$/bcm 2.85 \$/bcm 3.0 \$/bcm 0.02 USD/t per 10m bench	
Pit Slope:  • Quaternary layer  • Jurassic layer	32 degree 43 degree	
Weathered coal: Price Processing recovery Processing cost	14.8 \$/t (50k MNT) 100% 0 feed \$/t	
Coking coat: Price Processing recovery formula	<b>100</b> \$/t (excluded Coal Logistic) =109.3-Ash(AD)*1.762 (per 2012 PFS)	

 The optimisation limitation was the floor of the Upper Seams in the southwest part of the mining license and 350 m total depth.

8 feed \$/t

Pit shell selection:

Processing cost

- o Final pit, Revenue Factor = 1.000
- Starter pit, Revenue Factor = 0.255
- Phase Design
  - The design was guided by the pit optimisation shells and practically modified. South Fault was excluded to the LOM pit design.
  - The Phase sequences was principally based on the optimisation shells and combined considering the ramp development and mining technology. Five main Phases were proposed.
- Mining Dilution was estimated by considering:
  - o 0.05 m roof and floor dilution.
  - o Inclusion of interburden ≤ 0.2 m thickness.
  - Total dilution was approximately 5.0%.
- Mining Loss was estimated by considering:
  - $\circ$  0.30 m loss when coal seam thickness ≤ 0.3 m.
  - o 0.05 m loss from both seam roof and floor.
  - Total loss was approximately 3.2%.
- Minimum mining width of 30 m was considered on basis of smaller production equipment scheduled.
- The minimum mining thickness of 0.3 m was considered on basis of smaller production equipment scheduled capable of selective mining.
- Inferred Coal Resource utilization:
  - The total Coal Resource model, including Measured, Indicated and Inferred categories, was converted to a Coal Resource model through application of coal losses, dilution, minimum seam thickness and maximum interburden thickness.
  - The total Coal Reserve model was used as basis for performing pit optimisations, and the ultimate pit shell determined included coal that had been derived from Measured, Indicated and Inferred Resource categories.
  - Coal in the Coal Reserve model derived from Inferred Resources cannot be converted into Proved or



- Probable Coal Reserves, but can and was included in the LOM schedule.
- Sensitivity analysis performed on the pit optimisation determined when Inferred Resource was included, the total coal tonnes within the ultimate pit shell increased by approximately 7%, which was not considered to be material.
- Evaluation of the impact that coal from Inferred Resource areas included in the LOM schedules also indicates that it does not have a material impact on the forecast NPV:
  - Coking coal from Inferred Resource areas is scheduled from against the main fault containing the pit to the south. To not mine this coal would reduce overall stripping ratio, reduction in overall tonnage would barely impact NPV given the impact of the compounding discount factor at the end of the schedule.
  - Thermal coal from Inferred Resource areas is a low value product with minimal associated revenue. Most thermal coal in the schedule is not encountered until late in the forecast mine life, and the forecast revenue from it is also thus strongly affected by the compounding discount factor.

#### Site infrastructure:

The site will require conventional infrastructure, including water boreholes, accommodation camp, office, equipment fleet workshops, fuel and lubrication storage, magazine, stockpiles, Coal handling and preparation plant, roads, transportation facility which were reviewed and describe below in the "Infrastructure" sections.

Metallurgical factors or assumptions

- The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.
- Whether the metallurgical process is well-tested technology or novel in nature.
- The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.
- Any assumptions or allowances made for deleterious elements.
- The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.
- For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?

- The Coal Reserve is based on a processing plant (aka washplant) with dense media cyclone treatment of the coarse coal, and reflux classifier treatment of the fine coal. Such a washplant is typically employed in the beneficiation of coking coals world-wide. There are currently at least three other coal mines in Mongolia producing washed coking coal.
- All aspects of the flowsheet are well tested world-wide, and it contains no novelty.
- Extensive sizing, float-sink test and coal quality testwork
  has been completed over the various exploration stages.
  The test work for the larger diameter cores includes pretreatment using procedures based on the Australian
  Standards for bore core treatment including drop shatter,
  dry tumbling and wet tumbling, followed by comprehensive
  float/sink analysis over a range of particle sizes.
- The data set produced by this testwork is suitable for both plant design purposes and for computer simulation of expected plant performance. The industry standard LIMN Flowsheet software was used to calculate the CHPP yield for each LD borecore.
- It is common for a large proportion of exploration data to have no relevance (e.g. rotary chip samples), or very limited accuracy (e.g. slimcores) in predicting CPP yield. It is therefore customary to develop regressions from the most reliable LD borecore data and to apply those regressions to the rest of the exploration data, so that the accuracy of the marketable reserves can be maximized (N.B. and yield



'hotspots' minimized). The regression uses raw ash to predict processing plant yield and was applied to the current mine plan blocks and the Datamine and financial models updated.

- Sedgman updated the yield-raw ash regression in 2024 based on work carried out in their 2012 Pre-feasibility Study.
- The LIMN simulations were updated in 2024 to include all available drill core data. Target product ashes in 0.5% (ad) increments between 7.0% ash (ad) and 10.5% ash (ad) were considered. A 9.0% ash (ad) primary product was selected and has been applied to all raw hard coking coal scheduled as mined and fed to the CHPP.
- Working sections with a raw ash (and therefore product ash) less than the product target were removed from the regression. There was very little difference between the resulting regressions before / after filtering. The air-dried yield is calculated and the air-dried product tonnes are converted to an assumed 10.0% as received product moisture and 27.2% as received total reject moisture. The yield is inclusive of dilution.
- No allowances were required for deleterious elements
- The bulk samples collected from 2011-2022 are considered to be representative of the resource.
- The ore reserves estimation is based on producing a hard coking coal with a product ash of 9.0% (ad).

## Environmental •

The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.

- The baseline studies for the project components either have been completed or under the progress (for infrastructure).
- Environmental impact assessments (EIA) according to national (Mongolian) standards have been completed and approved by regulator for the key Project component including mine site and CHPP. There is no international EIA has been developed.
- The waste rock characterization has not been completed yet and supposed to be part of the additional studies. At the same time SRK does not expect major risks to be identified due to the geochemistry of the waste rock.

## Infrastructure

The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided or accessed.

- The site and logistics infrastructure components of the project are significant and comprise site support infrastructure, power supply, and water supply at the Ovoot Coal Mine to facilitate mining and coal washing and the construction and operation of logistics infrastructure for transport of coal to the point of sale, which is assumed to be the Mongolia-China border.
- The Coal Reserve is based on the following coal export logistics system:
  - 600km of road haulage using on-highway trucks on national roads to a rail-head located 15km east of the town of Erdenet.
  - Storage and train loading at an owner operated facility termed the "ERT" which is situated on the Erdenet branch line of the Trans-Mongolian Railway.
  - Tariff will be paid for 1,115km of rail haulage on the Trans-Mongolian Railway by Ulaanbaatar Tumur Zam (UBTZ) to Erlian station in China, on the Chinese side of the Mongolia-China border at the Zamyn-Uud/Erlian border port.
- The following components of the system are being constructed / purchased and operated by Aspire:



- Site infrastructure, bulk power infrastructure, water supply.
- Truck fleet for transport of washed coal on national roads.
- En-route facilities to support the trucking operations, namely the Transportation Hub planned to accommodate drivers, maintainers and support personnel, and complete maintenance and refuelling activities
- The rail loading facility at Erdenet.
- Road infrastructure & Public Private Partnership ("PPP"):
  - The Project requires construction of 190 km of national road between the project site and the town of Murun, construction of two bypasses (3.7 km and 36.0 km) along the existing road between Murun and the ERT, and various upgrades of the along other sections of the road optimize the road for coal trucking and other road users.
  - Aspire proposes, and the Coal Reserve estimate assumes, the construction of the road is undertaken by a PPP, where the PPP provides investment, construction and operation and Aspire is charged a per-tonne toll for using the road.
  - The toll paid by Ovoot Mine is considered the cornerstone of the PPP investment.
  - Mongolia is actively encouraging PPP investment into national infrastructure.
  - Aspire has undertaken detailed design of the road with tender costing by an in-country infrastructure engineer.
  - o The status of negotiations are as follows:
    - Written confirmation has been received from the Ministry of Economy and Development (MED) that the project was determined "suitable" for partnership implementation at the stage of preliminary evaluation stipulated in the Law on Public-Private-Partnerships.
    - A project team within the MED is now preparing to conduct a full analysis, as stipulated in Article 20 of the Law on Public-Private-Partnerships. The full analysis will include analysis of the project's value for money, preliminary and detailed feasibility study, social and environmental impact analysis, project risk analysis, conclusions that identify project risks and mitigation measures, type of partnership for project implementation, type of contract, the duration of the project, and the type of government support required for the project, and based on these studies a conclusion will be made by the tam as to whether it is suitable for partnership implementation.
    - Findings made during the full analysis stage will be reviewed by the Central State Administration Organization in charge of Partnership and the Central State Administration Organization in charge of Finance and Budget. If the project is determined to be "unsuitable" for partnership implementation by the full analysis of the project stipulated by the law, the project will be returned to the project initiator.



- SRK proposed a 20% contingency adjustment to the estimated toll to allow for unforeseen increases in capital cost of PPP negotiations, which was incorporated into the cost model.
- The haulage operation has been studied to feasibility study level including simulation modelling to select the tractor deemed most appropriate and estimate key input assumptions such as average fuel economy. The profile of the proposed new road with a maximum gradient of 5% was used as a basis for the logistics modelling. It is important to note that the Coal Reserve estimate is based upon Aspire "owner operating" a new fleet of Tier-1 brand trucks and trailers to ensure an efficient, safe and well managed haulage operation. The operation will be conducted on a 24/7 basis and will be centred around a Transportation Hub ("TH") at a half-way point where driver change over, refuelling and truck maintenance will be carried out.
- A report commissioned by Aspire to investigate the rail logistics options presents a detailed picture of the current situation.
  - A specific option associated to Zamyn-Uud/Erlian Station with the lowest overall estimated tariff is assumed in the Reserve.
  - However, there are multiple alternative options with the impact of selecting an alternative increasing the rail logistics costs by +25-50%.
  - A 20% contingency adjustment to the model was made to allow for unforeseen operational inefficiencies.
- Power demand is relatively low (circa 5 MW average load) and there are multiple power supply options at the site; grid, off-grid, and hybrid.
  - The Coal Reserve is based on the reasonable prospect of connecting to the national grid, which has recently been improved in the area with a new 110 kV overhead powerline and imminent commissioning of a new 24 MW coal fired power station connected to this.
  - Mongolia continues to invest in its power infrastructure and further supply capacity related to this line is understood to be planned or under construction.
  - Ovoot would connect to either of the 35 kV or 110 kV overhead powerlines crossing the mining license via a new substation.
  - Investigations have been undertaken although further work is required to bring this aspect to a Pre-feasibility Study level.
  - As the CHPP ramps up over the five-year period, annual utilization increasing from 25% to 80% over this period giving Aspire time to work with the utility to ensure grid capacity and reliability without impacting annual production targets. Diesel generator plant is included to cover site services in the event of an outage.
  - Aspire has used the readily documented current grid tariffs; there is an on-going debate within Mongolia around the current level of subsidies applied to grid tariffs and a risk they may rise in the coming years as the subsidies are reduced.
- Adequacy of water resources and supply: the available water sources are sufficient to meet the processing needs.



A raw water dam will be constructed which shall be supplied from the surface run-off and later from in-pit dewatering.

- Aspire has yet to consolidate the various technical studies into a multidisciplinary document. Until this is done, there is a risk of scope gaps at the interface between each project component. A full technical due diligence is required at the next stage and technical report presenting the entire scope of the project. The site infrastructure to support the CHPP and mining operation (e.g. layout, internal roads, buildings, site wide services) requires additional study work to increase the level of design to that achieved for ERT and Transportation Hub; however, there is adequate time to undertake this work in the schedule and estimated costs appear reasonable.
- Key assumptions critical to the coal reserve and requiring management by Aspire to ensure they proceed as envisaged are:
  - o The formation and agreement of the PPP;
  - Developing relationship with UBTZ to ensure sufficient capacity on the rail system as the project ramps up from the initial production rates; and
  - Working with the power utility to ensure capacity and reliability of supply.
- Regarding construction schedule, the critical path item is the agreement of the PPP and commencement of construction on the 190 km section of road, and Coal Reserve is based on construction commencing by Q2 2025.

# The derivation of, or assumptions made, regarding projected capital costs in the study.

- The methodology used to estimate operating costs.
- Allowances made for the content of deleterious elements.
- The source of exchange rates used in the study.
- Derivation of transportation charges.
- The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.
- The allowances made for royalties payable, both Government and private.

## The capital costs for mining, processing, logistics and infrastructure have been estimated to a minimum of a Pre-Feasibility level;

- Detailed listed plant and equipment and life cycle replacement scheduling have been applied with capital item cost estimates from vendors
- road construction has reached a detailed level and is ready for construction phase tendering
- At the Ovoot site further design work is needed for capital costs for support infrastructure to achieve a Class IV estimate level and there's adequate time for this in the H1 of 2025.
- Operating cost for mining, processing, infrastructure and logistics are from first principles using results of specific studies authored by in country or external consultants.
  - Detailed materials usage and scheduling applied to determine annual operating costs
  - Detailed labour rates and scheduling applied to determine annual labour cost
  - Transportation charges: Using the simulation modelling and TH and ERT studies, and with the assistance of in-country consultants, Aspire has estimated from first principles the fixed and variable components of the operating costs for trucking and operation of the support hubs. The road toll is developed from estimated construction and maintenance costs and assumptions around the investment environment and anticipated profits for a future PPP.

#### Costs



		<ul> <li>Various contingencies have been applied across capital and operating costs up to 20% in same cases to account for uncertainty in cost estimates</li> </ul>
		<ul> <li>Where costs are derived in local currencies an exchange rate as at 20 October 2024 obtained from the Central Bank of Mongolia (BoM) is applied to convert to USD.</li> </ul>
		<ul> <li>Taxes, coal royalties, VAT and fees such as pay roll, vehicle usage, road usage, water usage, air pollution and others are all applied.</li> </ul>
Revenue factors	<ul> <li>The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	A real terms coking coal price of USD230/t DAP (delivered duty paid) has been used to calculate the annual revenue for the sale of approximately 5Mt per annum at the sustaining level production from year 8 (2032). Coal is delivered for export at the port of Erlian, on the border between Mongolia and China. Pricing is based on a market study by Fenwei Digital Information Technology Co., Ltd. The price is adjusted relative to variation in qualities against coals with index prices in target market regions. In addition, the price is adjusted on basis of netting back transportation costs from the port of import into China to equal sales term and location of the index sales price referenced.
		<ul> <li>A small amount (less than 4%) of coal is modelled as sold to a local power station for USD 14.73/t FOT (free on truck) at the mine gate which is equal to the current market rate for same quality coal supplied from the neighbouring Mogoin Gol coal mine.</li> </ul>
Market assessment	<ul> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	<ul> <li>Aspire has conducted both internal and external market assessments and advised on the appropriate discounts to benchmark pricing for the Ovoot product specification.</li> </ul>
		<ul> <li>Analysis of supply and demand is a primary consideration of coal price forecasts. Markets exist for the coal products produced by the project.</li> </ul>
		<ul> <li>In 2023, SGS-CSTC Standards Technical Services (Tianjin)</li> <li>Co., Ltd completed a Coal Classification and Value in Use Assessment.</li> </ul>
		<ul> <li>In 2024, Fenwei Digital Information Technology Co., Ltd. completed a Coal Quality Evaluation and Analysis of Its Target Markets in China.</li> </ul>
Economic	<ul> <li>The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.</li> <li>NPV ranges and sensitivity to variations in the significant assumptions and inputs.</li> </ul>	<ul> <li>A very detailed first principals cost model feeds into a DCF to derive an NPV of almost USD 1.6 billion.</li> </ul>
		<ul> <li>The model starts in January 2025 with a 33-year period ending in November 2057.</li> </ul>
		<ul> <li>Cost modelling assumptions have been provided by various consultants, vendors and service providers providing a high level of confidence.</li> </ul>
		The model is in real terms, no inflation applied. Real exchange rates as at 20 October 2024 obtained from the Central Bank of Mongolia (BoM) are used to convert different underlying currencies into USD.
		<ul> <li>The cash flow analysis is in USD. A 10% real discount rate is applied to the determine NPV.</li> </ul>
		<ul> <li>Broad sensitivity analysis was performed at a high level, assessing the impact of fluctuation of Revenue, Operating Costs and Capital Costs by up to ± 20%, separately. Results from this sensitivity analysis indicate that the forecast NPV10 is most susceptible in order of magnitude to</li> </ul>



		decrease in Revenue (i.e. reduced selling prices), increase in Operating Costs and increase in Capital Costs.
Social	The status of agreements with key stakeholders and matters leading to social licence to operate.	<ul> <li>The company understands the Project's wider stakeholders and undertakes regular stakeholder engagement with local communities, suppliers, local authorities and regulators. No risks have been identified which could negatively affect the company's social license to operate.</li> </ul>
		<ul> <li>Over many years the company has supported several community support programs focused on environmental, health, educational and business empowerment.</li> </ul>
Other	<ul> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction</li> </ul>	<ul> <li>The environmental permitting process is under control and the primary documents (baseline studies reports and impact assessment reports) prepared according to the national permitting requirements have been completed and submitted for approval.</li> <li>Although not all permits have been received, the permitting process is under robust management with the outstanding permits application process is in progress.</li> <li>With the baseline studies outstanding for some components of the project there is a risk that these studies may identify potential limitations for the project components development. However, such finding can be managed with additional mitigation measures and not considered as potential fatal flows for the project.</li> </ul>
Classification	of the reserve is contingent.     The basis for the classification of the Ore Reserves into varying confidence categories.	<ul> <li>Proved Reserve category is assigned to coal scheduled to be mined from where Measured Resource categorisation has been applied.</li> </ul>
	Whether the result appropriately reflects the Competent Person's view of the deposit.	<ul> <li>Probable Reserve category is assigned to coal scheduled to be mined from where Indicated Resource categorisation has been applied.</li> </ul>
	The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).	<ul> <li>No categorisation is assigned to coal scheduled to be mined from where Inferred Resource categorisation has been applied, or no Resource categorisation has been applied.</li> </ul>
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	<ul> <li>Internal Review and audits of methodology, input data and definition of Modifying Factors applied in Coal Reserve estimate were conducted by SRK</li> </ul>
Discussion of relative accuracy/ confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the	<ul> <li>The relative accuracy of the Coal Reserve estimate is reflected in the reporting of the Coal Reserve as per the guidelines of the JORC Code (2012).</li> <li>The statement relates to global estimates of coal tonnes and quality.</li> <li>Modifying factors are defined in accuracy and confidence of PFS level</li> </ul>



- relative accuracy and confidence of the estimate.
- The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.
- Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.
- It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

## - Ends -

This announcement was authorised for release to the ASX by the Company Secretary, Emily Austin.

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## **About Aspire Limited**

Aspire Limited (ASX: AKM) is developing premium coking coal deposits in an environmentally sensitive manner to support global sustainable development, deliver shared prosperity to local host communities and long term value and growth for our shareholders.

Aspire's assets include the Ovoot Coking Coal Project (100% owned) and Nuurstei Coking Coal Project (90% owned) – both assets are strategically located in Khuvsgal aimag (province) of north-western Mongolia which are proximal to end markets.

The Ovoot Coking Coal Project (Ovoot) is world-class in terms of scale, product quality and project economics. With all major approvals in place, Aspire is now on a pathway to production with the view to deliver a highly sought-after 'fat' coking coal, classified within the highest category of coking coals, to customers in China and other end markets where there is robust forecast demand.

Aspire's transformational projects make the company uniquely positioned to deliver value and build a sustainable future in Mongolia. Aspire is deeply committed to responsible and sustainable development, prioritising community well-being and environmental protection. Aspire's operations include the construction of a new public-use highway and the creation of significant employment opportunities.

The Company is led by a proven team with extensive Mongolian mining and logistics experience and benefits from strategic alliances with key stakeholders as well as substantial support from Mongolian investors.

For further information, please visit: aspirelimited.com



## Forward-Looking Statements

This report may contain forward-looking information which is based on the assumptions, estimates, analysis, and opinions of management and engaged consultants made in light of experience and perception of trends, current conditions and expected developments, as well as other factors believed to be relevant and reasonable in the circumstances at the date that such statements are made, but which may prove to be incorrect.

Assumptions have been made by the Company regarding, among other things: the price of coking coal, the timely receipt of required governmental approvals, the accuracy of capital and operating cost estimates, the completion of a feasibility studies on its exploration and development activities, the ability of the Company to operate in a safe, efficient and effective manner and the ability of the Company to obtain financing as and when required and on reasonable terms. Readers are cautioned that the foregoing list is not exhaustive of all factors and assumptions which may have been used by the Company.

Although management believes that the assumptions made and the expectations represented by such information are reasonable, there can be no assurance that the forward-looking information will prove to be accurate.

Forward-looking information involves known and unknown risks, uncertainties, and other factors which may cause the actual results, performance, or achievements of the Company to be materially different from any anticipated future results, performance or achievements expressed or implied by such forward-looking information. Such factors include, among others, the actual market price of coking coal, the actual results of current exploration, the actual results of future exploration, changes in project parameters as plans continue to be evaluated, as well as those factors disclosed in the Company's publicly filed documents. Readers should not place undue reliance on forward-looking information.