COMPETENT PERSON'S REPORT FOR
Qinfa Two Underground Coal Mines in Indonesia
Kotabaru Regency, South Kalimantan Province, Indonesia

China Qinfa Group Limited

SRK Consulting China

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srk consulting

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EXECUTIVE SUMMARY

Overview

China Qinfa Group Limited ("**Qinfa**") commissioned SRK Consulting (China) Limited ("**SRK**") to undertake an independent technical review for PT Sumber Daya Energi underground coal mine project ("**the SDE Coal Project**" or "**the Project**") located in South Kalimantan province, Indonesia. The purpose of the review is to prepare a Competent Person's Report ("**CPR**") in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "**JORC Code**", 2012 Edition) and the requirements of "**Chapter 18: Equity Securities, Mineral Companies**" of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong ("**Listing Rules**").

The SDE underground coal mine project is located in the northern part of the Kotabaru Regency, South Kalimantan Province, on the eastern side of the Meratus Mountains, approximately 300 kilometres away by road from Banjarmasin, the capital city of South Kalimantan Province. The permit area can be readily reached in approximately 7 hours by car via the Ahmad-Yani public highway from Banjarmasin airport. Two underground coal mining projects are planned under a mining permit hold by the PT Sumber Daya Energi ("**PT SDE**"). The permit covers an area of approximately 180 km^2 and spanning three sub-districts which are Kelumpang Hulu, Sungai Durian and Kelumpang Barat of the Kotabaru Regency. The nearest city can be readily accessible from the project site is the Batulicin city of the Tanah Bumubu Regency, located on the west coast of the Pulau Laut strait, approximately 95 km south of the project area.

The project consists of two independent underground mining areas: Qinfa Mine I and Qinfa Mine II. Qinfa Mine I, with construction beginning in December 2021, has transitioned to the production stage. Retreat longwall mining of the first panel commenced in December 2023. Mine II is currently under construction; to date, two vertical shafts have been completed, and the main incline shaft is in its downward extension phase.

Coal Transportation and Infrastructure

The infrastructures and facilities serving the coal mining have been well established in the Project region.

The Ahmad-Yani public road (also called the Jenderal Sudirman road) crosses the SDE permit area, leading to the Pasir district in the north and Dana Bumbu district in the south, forming a convenient route for civilian usage only.

As public roads in Indonesia are not allowed to transport mineral commodities such as coal. To facilitate coal hauling, AJB Indonesia has designed a dedicated road specifically for hauling coal products extracted from the SDE Coal Mine. This coal hauling road is 35 kilometres long and 14 meters wide, connecting the SDE Coal Mine to the SDE New Jetty. The construction of the jetty and the dedicated coal hauling road has largely been completed and allows for low-capacity coal transportation.

A diesel power station was built in each of the industrial sites of Qinfa Mine I and Qinfa Mine II in SDE mining area, which is responsible for all the electricity loads of Qinfa Mine I and Qinfa Mine II, and the other power supply is drawn from the diesel generator sets in the mines. The power supply to the mines is guaranteed.

The production water of the mine comes from purified mine water and newly built deep well water, which is precipitated and purified to meet the standard of production water and meet the water demand. The domestic water is initially filled with pure water, and after the mine is put into operation, the deep well water will be filtered and purified by the drinking water treatment station to meet the drinking water standard and then used, so the mine's production and domestic water sources are both guaranteed.

SRK is of the opinion that the infrastructure within the existing mining area is generally sufficient to support the new project. nevertheless, a more stable power supply is crucial for safe coal mining operations. It is recommended that the mine explore other power supply options, such as investigating the possibility of introducing grid power of sufficient capacity from nearby cities. Additionally, having sufficient equipment and material spare parts on-site is also crucial for sustaining continued production.

Geological Conditions

The PT SDE coal deposit is located on the northern margin of the Asem-Asem Basin, and the Basin is one of the five major sedimentary basins existing in the east and south-east Kalimantan region of Indonesia. The Asem-Asem Basin consists of a thick Cenozoic sedimentary sequence, from the oldest to the youngest the sequences comprise of four formations, which are the Tanjung, Berai, Warukin and Dahor Formations. The stratigraphy occurring within the PT SDE coal deposit from bottom to the top includes the pre-tertiary basement of igneous rocks, Eocene Tanjung Formation, Late Oligocene to Early Miocene Berai Formation and Quaternary sediments. The Tanjung formation is the major coal-bearing formation of the region, and the target coal seams within the Project area occur in the lower part of the formation.

Historical exploration activities within the area have intersected five coal seams, designated from top to bottom as Seams A, B, C, D and E. Seams B and D are well developed and have been identified as the principal target coal seams. The thickness of Coal Seam B ranges from 1.2 metres to 8.1 metres, with an average thickness of 4.22 metres. Coal Seam D exhibits a thickness range between 0 metres and 2.26 metres, with an average thickness of 1.41 metres. Coal Seam E is partially developed within the area covered by drilling. Seams A and C display inconsistent thicknesses, rendering them less viable targets for further exploration and potential extraction.

The coal from each seam occurring within the exploration area of the SDE coal deposit is generally classified as high volatile B to C bituminous coal according to ASTM D388 (Classification of Coals by Rank). As per the Chinese Coal Classification GB5751-2009, the coal developed in the deposit is categorised as Long-flame coal (code CY). In general, the quality characteristics of the composited coal samples have exhibited low inherent moisture, medium to high ash content, low deleterious elements, non-caking properties, high volatile matter and medium to high calorific value. The total sulphur content varies from seam to seam, with low sulphur levels in Seams A and B, medium to high sulphur content in Seam D, and moderately high sulphur content in the remaining seams. The coal produced from each seam is amenable for use as thermal coal, primarily for power generation in coal-fired power plants.

Exploration

The exploration activities associated with the Project can be divided into two phases: explorations prior to 2020 and the 2020 exploration programme. As SRK has not been involved in any of the historical exploration activities of the project, the information on the previous exploration results has been compiled mainly based on borehole information provided by the Client as well as discussions with Qinfa's technical team.

The received borehole logs indicate that a total of 17 boreholes (6,784 metres) were drilled within the Permit area prior to 2020. Among these, three KB series boreholes were drilled by PT. Geo Drilling Indonesia and commissioned by PT. Satui Basin Gas during 2012 to 2013, while the remaining 14 boreholes (SDE series and two ZK series boreholes) were drilled by Sugico Group during 2015 to 2016.

From February 2020 to April 2021, Sugico Group and China Qinfa Group launched a joint exploration programme to further explore the coal resource presented in the PT SDE permit area. A total of 50 boreholes (20,232.77 metres) were drilled in the permit area during this period. The drilling has formed a 1,000-metre to 1,200-metre drill grid in conjunction with the previously drilled boreholes, covering an area of approximately 60 square kilometres.

An infill drilling programme commenced in the middle of 2023 with the objective of upgrading the resource and reserve categories. To date, over 20 boreholes have been drilled, and the programme is currently ongoing. SRK will incorporate the resulting data from this infill drilling into future resource and reserve estimations for subsequent updates of the Competent Person's Report (CPR).

Borehole Database and Model

The data acquired from the Company underwent procedures to validate the coal seam data obtained from each exploration activity All available information was consolidated into a borehole database within the Geovia Minex 6.1.3 modelling software.

Both coal seam structure data and coal quality data were validated through several processes. As a key quality parameter, the calorific value was validated through a regression equation and converted to the required analysis basis to meet the requirements for coal marketing.

Coal Resource

The Resources estimated for the coal deposit are based on the exploration data provided by the Company. The estimation is limited to coal Seams B and D, which have been identified as having reasonable prospects for eventual economic extraction using the longwall mining method. The estimates were also horizontally and vertically constrained according to the mining licenses of PT SDE. Additionally, coal seams occurring at depths shallower than 50 metres from the surface were considered to have surface water ingress and subsidence risks, and this portion was excluded from the estimates. Furthermore, a small-scale gob area within Mine I, formed from December 2023, was depleted from the estimate.

The minimum mining thickness for the resource estimates is set to be 1.2 m. SRK considers that the application of the minimum mining thickness has properly reflected the reasonable prospects for eventual economic extraction in accordance with JORC Code 2012.

The historical exploration drillings have resulted in an approximate 1,000-metre to 1,200-metre borehole grid, which covers an area of approximately 60 square kilometres. In addition to the geological structure, SRK's coal seam model has demonstrated good consistency in the coal seam thickness and quality. Based on the above considerations, the resource classification for the exploration area was determined according to the following principles:

- Measured Resource: the areas within 600 m spacing of the Points of Observation ("**PoO**");
- Indicated Resource: the areas between 600 m and 1,200 m spacing of the PoO;
- Inferred Resource: the area greater than 1,200 m and less than 2,500 m spacing of the PoO.

It should be noted that an area of approximately 3.3 km² within the Measured Resource Area has been reclassified from the Indicated Resource Area. This change is due to confirmation of coal seam B's consistency via underground logging along with the construction of underground roadways/gateways within the area.

The Estimated JORC Coal Resources of the PT SDE permit area are summarized in Table Ex-1.

Table Ex-1: Summary of PT SDE Mine Area Coal Resource under JORC Code (As of 31 December 2023)

Coal Seam	Resource Category	Resource	Area	Thickness	In-situ Moisture	Ash Content	Total Sulphur	Calorific Value
		(Mt)	*(Km^2)*	*(m)*		*(ad, %)*	*(ad, %)*	*(gar, kCal/kg)*
B	Measured	16.71	3.30	3.50	–	–	–	–
	Indicated	435.78	63.20	4.28	6.84	28.24	0.97	5,121
	Inferred	302.3	46.06	4.19	6.78	29.43	0.90	5,024
D	Measured	–	–	–	–	–	–	–
	Indicated	136.42	51.45	1.74	7.55	21.71	1.20	5,507
	Inferred	77.1	27.83	1.83	7.73	20.91	1.60	5,633
Sub-Total	Measured	16.71	–	–	–	–	–	–
	Indicated	572.20	–	–	7.00	26.73	1.00	5,210
	Measured +Indicated	**588.91**	**–**	**–**	**7.00**	**26.73**	**1.00**	**5,210**
	Inferred	**379.4**	**–**	**–**	**6.97**	**27.70**	**1.04**	**5,147**

JORC Code Statement: *The information in this Report which relates to the Coal Resource is based on information provided by China Qinfa Group, the Coal Resource was estimated by Zhuanjian (Leo) Liu and the Report was compiled by Yongchun (Roger) Hou of SRK Consulting China. Both of them are members of AusIMM and have sufficient experience relevant to the kind of project, style of mineralisation, type of deposit under consideration, and the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves", the JORC Code 2012. Mr. Hou and Mr. Liu consent to the reporting of this information in the form and context in which it appears.*

Coal Reserve

The Coal Reserve estimation was conducted on each mining system separately. SRK used Geovia Minex V6.1.3 computer software to estimate the Coal Reserve since this software is particularly suitable for modelling stratified deposits such as coal. For each mineable coal seam, the mine plan layouts comprised of the designed longwall working face were used for reserve estimation by SRK. The reviewed longwall working face (working face polygons) were imported into the Minex software and superimposed on the coal seam model to control the mineable area of the coal seams. The reserve tonnage was then estimated by using the "resource/reserve reporting" function in the software. The JORC Coal Reserve estimated by SRK is summarised in Table Ex-2.

Table Ex-2: Summary of PT SDE Mine Area Coal Reserve under JORC Code (As of 31 December 2023)

Mine	Proved Reserve	Probable Reserve	Total	Ash Content	Total Sulphur	Caloric Value
	(Mt)	*(Mt)*	*(Mt)*	*(ad, %)*	*(ad, %)*	*(kCal/ kg, gar)*
Qinfa Mine I	8.70	97.73	106.43	35.01	0.61	4,450
Qinfa Mine II	–	201.52	201.52	33.67	0.98	4,455

JORC Code Statement: *The information in this Report which relates to the Coal Reserve is based on the information provided by China Qinfa Group, the Reserve related information in this Report was compiled by Yongchun (Roger) Hou of SRK Consulting China Ltd and reviewed by Mr Bruno Strasser, an associate Principal Geologist of SRK Consulting China Ltd and a member of AusIMM. Mr Strasser has sufficient experience relevant to the kind of project, the style of mineralisation, the type of deposit under consideration, and the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves", the JORC Code. The reserve estimate is based on SRK's Coal Resource estimate and was conducted by Mr Zhuanjian (Leo) Liu, all of them are full time employees of SRK Consulting China Ltd. and members of AusIMM, they are specialists in computerized reserve estimation and have relevant experience in the style of mineralization and type of deposit under consideration. Mr. Strasser, Mr. Hou and Mr. Liu consent to the reporting of this information in the form and context in which it appears.*

Mining Assessment

This mining assessment was carried out to provide sufficient information on the mining operations and the mining factors to support the Coal Reserve estimate according to the JORC Code as stated in this Report.

Mine I, with construction beginning in December 2021, has transitioned to the production stage. Retreat longwall mining of the first panel commenced in December 2023. Mine II is currently under construction; to date, two vertical shafts have been completed, and the main incline shaft is in its downward extension phase.

The Mining Assessment of the Report was based on the feasibility study report ("**FS**") prepared by Taiyuan Institution in February 2022 and the actual road developing mining situation. In the FS, the PT SDE mine is divided into three mines, namely Qinfa Mine I, Qinfa Mine II and Qinfa Mine III, and mining targets at the early stage are Qinfa Mine I and Qinfa Mine II. Qinfa Mine I is planned in the northwest proportion of the mining area targeting on seam B, divided into three mining sections. Qinfa Mine II is planned in the southern proportion targeting on seam B, also divided into three mining sections. Both planned mines use the fully mechanized longwall retreating mining method to excavate raw coal from the longwall panels. Qinfa Mine I is now in operation stage, the single level development method with inclined shaft is adopted, and three shafts are arranged, namely the main inclined shaft, the auxiliary inclined shaft and the air-returning inclined shaft, with the shaft extended into the Seam B at an elevation round – 112 m. While the current ventilation capacity meets operational requirements, SRK strongly recommends increasing the number of air-intake and air-returning shafts to ensure adequate ventilation as mining operations extend into the deeper eastern sections. Qinfa Mine II adopts the hybrid development method with shafts and inclined shafts. Three shafts are planned and in construction, namely the main inclined shaft, the auxiliary vertical shaft and the air-returning vertical shaft. the construction of the auxiliary vertical shaft and the air-returning vertical shaft has been completed, the elevation of the bottom of the two shafts is at approximately -290 m in the coal seam B. In the later stage, air-intaking and air-returning shafts are arranged in mining section III to improve the ventilation capacity.

Coal Preparation Plant (CPP) Assessment

According to SRK's Reserve model and the planned working sections, it is assessed that the ROM coal is necessary to be washed to produce marketable coal product which mainly accepted for export and domestic utilization. However, SRK has not seen evidence of Qinfa's plans for constructing a coal washing plant. In this case, the descriptions and discussions provided in this chapter regarding the Coal Preparation Plant (CPP) are based on the assessed necessity for coal washing.

Considering the hauling distance of the ROM coal, Qinfa Mine I and Qinfa Mine II would separately have its own CPP built. The FS has assessed the coal washability of the ROM coal produced from the surrounding coal mines, dense medium method is employed as the core separation unit for the two mines' proposed CPP and the two CPPs have the same separation circuits.

According to the FS, the operation of the CPPs would achieve an overall average of 75% of mixed marketable coal yield with a total moisture ranging from 8 to 11, ash content ranging from 22% to 26% and calorific value ranging from 5,000 to 5,500 kCal/kg (GAR).

Environmental, Licence, Social and Community Impact

SRK has sighted an IUP relating to the production operation of the PT Sumber Daya Energi (No. 4/1/IUP/PMA/2023), which was issued by the Kotabaru Regency of South Kalimantan Province on 10 February 2023. The IUP states that the concession covers an area of 18,500 Ha and the period of validity is 10 years. The IUP can be extended twice for up to 10 years each time.

SRK has sighted an AMDAL document (including an ANDAL and a RKL-RPL) for the SDE Underground Coal Project which was produced in December 2013. The Environmental Licence for the Project (No. 188.45/339/KUM/2014) which was issued to the PT Sumber Daya Energi by the Kotabaru Regency of South Kalimantan Province on 2 May 2014.

The significant inherent environmental and social risks for the Project are as follows:

- Environmental approvals;
- Water management (i.e., stormwater/surface water drainage, including any mine dewatering);
- Waste rock management; and
- Social aspects (i.e. resettlements).

The above inherent environmental risks are categorised as medium/low risks (i.e. requiring risk management measures). It is SRK's opinion that the environmental and social risks for the Project can be generally managed if Indonesian and internationally recognised environmental standards and regulatory requirements are adhered to.

Coal Market

In order to forecast the price of the marketable coal produced from the PT SDE underground coal project, three coal price indexes, Indonesian Coal Price Reference (HBA and HPB), Indonesian Coal Index (Argus/Coalindo) and globalCOAL's NEWC Index were adopted in the Report for reference.

The average coal price for the last five years is approximately 90 US$/t and 80 US$/t based on the HBA and ICI-1 Index, respectively. The two prices were adjusted pro-rata to the project's GAR 5,300 kcal/kg washed coal averages 66 US$/t and 65 US$/t, respectively. SRK estimate that the FOB coal price for GCV 5,300 would keep in a range between 60 to 70 US$/t for the long term (10 years). Based on a conservative prospective, the consensus forecast of SRK for the FOB coal price of GAR 5,300 is approximately 60 US$/t for the first ten years of the LOM. The exchange rate used for RMB: USD is 7.25:1.

Risk Assessment

A qualitative risk analysis carried out by SRK indicates low to medium risk for the two projects. Refer to Section 15 of the Report for the details.

1. OVERVIEW

1.1 Background

China Qinfa Group Limited ("**Qinfa**") commissioned SRK Consulting (China) Limited ("**SRK**") to undertake an independent technical review for two underground coal mines of PT Sumber Daya Energi ("**the SDE Coal Project**" or "**the Project**") located in South Kalimantan province, Indonesia. The purpose of the review is to prepare a Competent Person's Report ("**CPR**") in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "**JORC Code**", 2012 Edition) and the requirements of "Chapter 18: Equity Securities, Mineral Companies" of the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong ("**Listing Rules**").

The proposed work program consists of three stages, as outlined below:

- Stage I: Initial review and conducting data process based on the data and information provided by the Client.

- Stage II: Carry out the resource estimation update based on the reviewed data and information.

- Stage III: JORC Coal Resource Reporting and JORC Coal Reserve conversion. Preparation of a CPR for public reporting including Coal Resources and Coal Reserves, assessment of the mining, review of environmental, social, and license and permit compliance.

1.2 Reporting Standard

This Report has been prepared to the standard of and is considered by SRK to be a CPR under the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, JORC Joint Ore Reserve Committee, The JORC Code 2012 Edition ("**JORC Code**"). The JORC Code is adopted by the Australasian Institute of Mining and Metallurgy ("**AusIMM**") and the standard is binding upon all AusIMM members.

This Report is not a Valuation Report and does not express an opinion as to the value of coal assets. Aspects reviewed in this Report do include product prices, socio-political issues and environmental considerations. However, SRK does not express an opinion regarding the specific value of the assets and tenements involved.

1.3 SRK Project Team

The SRK project team and responsibilities are shown in Table 1.

Table 1: SRK Project Team

Name	Title and Responsibility
Yongchun Hou (Roger)	Principal Consultant, Geological Review, Resource and Reserve Estimation, Report Compiling
Zhuanjian Liu (Leo)	Senior Consultant (Geology), Data Processing, Resource Estimation
Lanliang Niu	Principal Consultant, Economical Analysis
Nan Xue	Principal Consultant (Environment), Environmental, Social Aspects and Permits
Bruno Strasser	Associate Principal Consultant (Mining), Mining and Reserves Review
Dr. Yonglian Sun	Corporate Consultant, Internal Review

Yongchun (Roger) Hou, ***MSc*****,** ***MAusIMM,*** is a Principal Consultant (Coal Geology) at SRK China. He graduated from the China University of Mining and Technology and has twelve years' experience in exploration management, resource estimation, GIS and coal washing. He worked as a coal geologist in Kalimantan, Indonesia and Mozambique under JORC Code practice and is proficient with Minex and Vulcan modelling software. At SRK, he has been involved in independent technical review projects for international companies such as Peabody (USA), SABIC (Saudi Arabia) and Salim Group (Indonesia). Most recently, Mr. Hou has served as the head of JORC compliant coal resource estimation for several projects, including Unienergy in China and Agritrade in Indonesia, which have been successfully listed on the Hong Kong Stock Exchange. ***Mr. Hou is responsible for the report compiling, resource and reserve estimation of the project. He is competent in the relevant types of deposits and their execution.***

Zhuanjian Liu (Leo), China University of Mining and Technology, ***BEng, MAusIMM,*** Senior Consultant (Geology). He graduated from China University of Mining and Technology and has been engaged in geological survey and due diligence work in China, Mongolia and Indonesia for more than 10 years. At SRK, he has provided consulting services to Peabody Energy (USA), SABIC (Saudi Arabia), Salim Group (Indonesia) and other large corporations. In recent years, he has been involved in several successful independent technical reporting/due diligence efforts, including the listing of China Prime on the Hong Kong Stock Exchange and the acquisition of Agritrade's stake in Indonesia. ***Mr. Liu is responsible for the data processing, resource and reserve estimation of the project.***

Lanliang Niu, ***BEng, MAusIMM, MCAMRA,*** is a Principal Consultant (Processing) with SRK Consulting China Ltd. He has over 30 years' experience in processing testing and studies, production management and technical consultancy service. He has extensive experience in the processing of precious metals, non-ferrous metals, ferrous metals and some non-metals, as well as in process test design, data processing, plant design and operations. He is familiar with the new development and application of processing technologies, facilities and reagents. For his achievements in this field, he has received two national awards. At SRK, Mr. Niu has been responsible for ore processing/metallurgy and economic analysis and has participated in more than 70 independent technical review projects. ***Mr. Niu is responsible for the investment review and cost analysis of the project.***

Nan Xue, ***MSc, MAusIMM,*** is a Principal Consultant (Environmental) at SRK China. He holds a master's degree in Environmental Science from Nankai University, in Tianjin. He has twelve years' experience in environmental impact assessment, environmental planning, environmental management, and environmental due diligence. He has been involved in a number of large EIA projects and pollution source surveys for SINOPEC as well as in the environmental-planning project funded by UNDP. He has particular expertise in construction project engineering analysis, pollution source calculation, and impact predictions. He also has an acute understanding of equator principles and International Finance Corporation environmental and social performance standards. After joining SRK, Nan has been involved in a number of IPO and due diligence projects in China, Laos, Russia, Mongolia, Philippines, Indonesia, Kazakhstan, Kyrgyzstan, South Africa, DRC, Ecuador, Chile and Ghana; the clients include the Fuguiniao Mining, Zijin Mining, Hanking Mining, Future Bright Mining, CNMC, China Gold, Shandong Gold. ***Mr. Xue is responsible for environmental, social aspects and permits of the project.***

Dr. Yonglian Sun, ***BEng, PhD, FAusIMM, FIEAust, CPEng***, is a Corporate Consultant (Geotech) with over 25 years' experience in geotechnical and mining engineering in five countries across four continents. He has extensive international mining experience with an emphasis on site investigation, analysis, and modelling of geotechnical issues in open pits, underground mines, and civil tunnels. He also possesses considerable experience in evaluating mining projects. In recent years, Yonglian has coordinated and led dozens of due diligence projects, most of which have been successfully listed in the Stock Exchange of Hong Kong Limited. ***Dr. Sun is responsible for the internal peer review of this report to ensure that the quality of the report meets the required standards.***

Bruno Strasser, ***Dipl.-Ing. (MSc), MAusIMM,*** is an Associate Consultant (Mining) of SRK China. He has more than 30 years of professional experience in mining, project management, plant construction, and consulting and has working experience in several countries in Europe and Asia. He started as a mining engineer with RWE Rheinbraun in Germany, in the world's largest lignite mine, before he was assigned to the Bukit Asam coal mine project in Indonesia as part of RWE's own consulting firm. He later joined Austria's biggest engineering group, VOEST Alpine AG, where he set up the company's mining systems engineering department. He was responsible for mining engineering studies for projects in India and China and for the turn-key development of the Semirara coal mine project in the Philippines. In the 1990s, he joined Metso (Nordberg) Corp. in Hong Kong and was responsible for sales, construction, and commissioning for several large-scale turn-key plants for the aggregates and minerals industry in Hong Kong and China. He also worked for many years in Hong Kong and Austria as a self-employed consultant, as which he gained experience in a wider field of industries and also as a business and management consultant. In 2011 he joined SRK Consulting China Ltd in Beijing as Principal Consultant for coal mining and has carried out a number of independent technical reviews and mining studies for projects in China and Indonesia. ***Mr. Bruno Strasser is responsible for the mine review and coal reserve estimation and is a competent person in terms of deposit types and execution of the project.***

1.4 Statement of SRK Independence

Neither SRK nor any of the authors of this Report have any present or contingent material interest in the outcome of this Report, nor do they have any pecuniary or other interest that could be reasonably regarded as being capable of affecting their independence or that of SRK.

SRK has no prior association with Qinfa regarding the mineral assets that are the subject of this Report. SRK has no beneficial interest in the outcome of the technical assessment being capable of affecting its independence.

SRK's fee for completing this Report is based on its normal professional daily rates plus reimbursement of incidental expenses. The payment of that professional fee is not contingent upon the outcome of the Report.

1.5 Warranties

The Company has, to the best of SRK's knowledge, made full disclosure of all material information; and, to the best of its knowledge and understanding, such information is complete, accurate, and true.

1.6 Compliance Statement

The information in this Report that relates to Coal Resources and Coal Reserves is based on information compiled by Mr Zhuanjian (Leo) Liu, Yongchun (Roger) Hou and Bruno Strasser (Reserve). All Competent Persons who are Members of The Australasian Institute of Mining and Metallurgy and are full-time employees of SRK Hong Kong/China and close associates.

All have no prior association with the Company in regard to the mineral assets that are the subject of this Report. All have no beneficial interest in the outcome of the technical assessment being capable of affecting its independence.

All have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as Competent Persons as defined in the JORC Code (2012 Edition).

All consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

1.7 Limitations Statement

SRK is not professionally qualified to opine upon and/or confirm that the Company has 100% ownership of its underlying tenement and/or has any unresolved legal matters relating to any transfer of ownership or associated fees and royalties. SRK has therefore assumed that there are no legal impediments regarding the existence of the relevant tenements and that the Company has the legal right to all underlying tenements as purported. Assessing the legal tenures and rights to the prospects of the Company and or any of its subsidiary companies are the responsibility of legal due diligence conducted by entities other than SRK.

1.8 Forward-Looking Statement

Estimates of Coal Resources, Coal Reserves, and mine production are inherently forward-looking statements, which being projections of future performance will necessarily differ from the actual performance. The errors in such projections result from the inherent uncertainties in the interpretation of geologic data, in variations in the execution of mining and processing plans, in the inability to meet construction and production schedules due to many factors including weather, availability of necessary equipment and supplies, fluctuating prices, the ability of the workforce to maintain equipment, and changes in regulations or the regulatory climate.

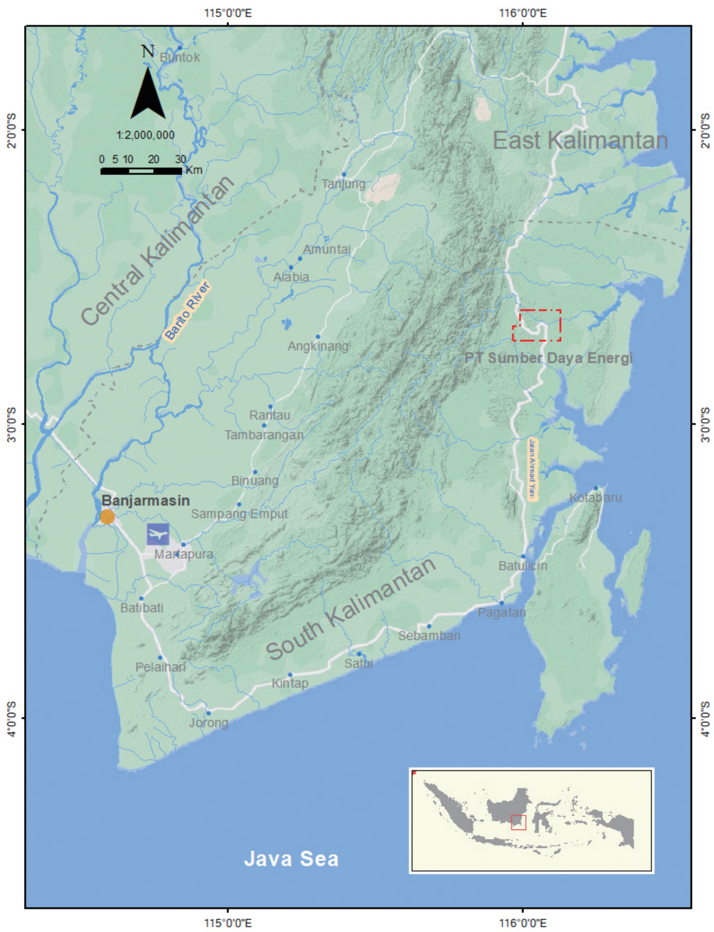
The possible sources of error in the forward-looking statements are addressed in more detail in the appropriate sections of this report. Also provided in the report are comments on the areas of concern inherent in the different areas of the mining and processing operations.

2. PROJECT DESCRIPTION

2.1 Location and Site Access

The PT SDE underground coal mine project area is situated in the northern part of the Kotabaru Regency, South Kalimantan Province, on the eastern side of the Meratus Mountains. It is approximately 300 kilometers from Banjarmasin, the capital city of South Kalimantan Province, and can be readily accessed by road within approximately 7 hours via the Ahmad-Yani public highway from Banjarmasin airport. PT Sumber Daya Energi ("**PT SDE**") holds a mining permit (IUP-OP) that covers an area of approximately 185 square kilometers spanning three districts: Kelumpang Hulu, Sungai Durian, and Kelumpang Barat of the Kotabaru Regency. The project consists of two underground mining areas: Qinfa Mine I and Qinfa Mine II. Qinfa Mine I is currently in operation, while Qinfa Mine II is under construction at the present time. The nearest city that can be readily accessible from the project site is Batulicin, located in the Tanah Bumubu Regency, on the west coast of the Pulau Laut strait, approximately 95 kilometers south of the project area. The location of the project area is presented in Figure 1.

Figure 1: Regional Location of the Project Area



2.2 Geography and Climate

The license area is generally situated in a limestone landform region, located approximately 27 km west of the Makassar Strait and around 8 km east of the Meratus Mountains. The surface of the license area exhibits a typical karst terrain, which is mainly developed in the northern and western parts of the area, with elevations ranging from approximately 20 m to 100 m. The topographic elevation of the Project area generally decreases gently towards the southeast, ranging from 25 m to 150 m above sea level ("**ASL**") within the Project area. The southeastern part of the license area is a relatively flat region with a topographic elevation ranging between 20 m to 50 m ASL.

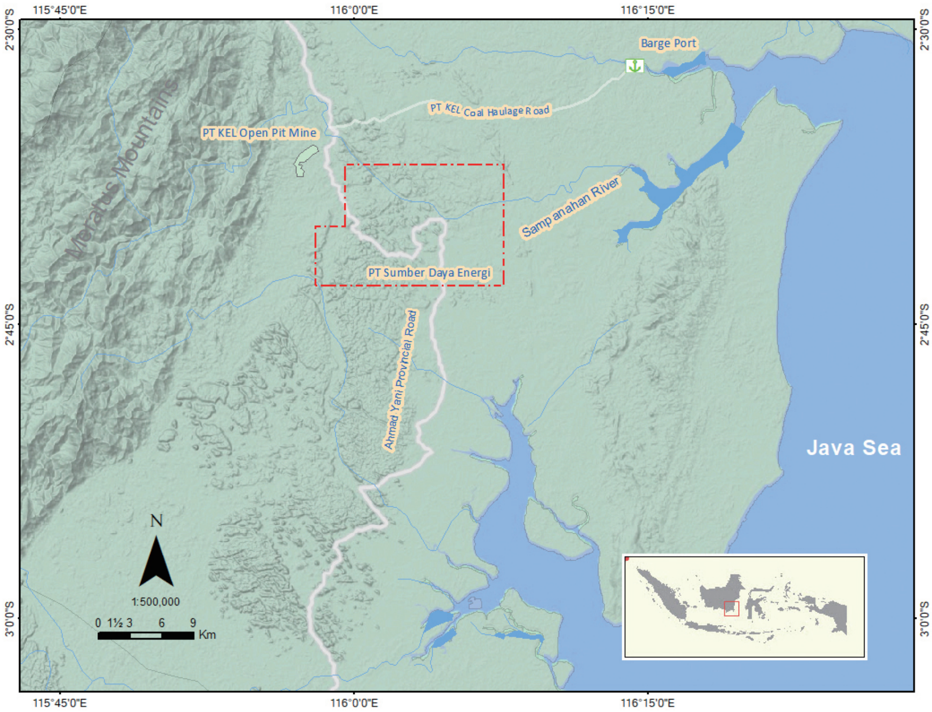
Figure 2: The Typical Landform in the Western Part of the Project Area

The surface water system in the Project region comprises two major rivers and several creeks generally flowing eastward. The major river in the Project area is the Sampanahan River, with a width of 20-40m, crossing the northern part of the Project area. The flow rate of the Sampanahan River varies between the rainy season and the dry season, with limited hydrological data available. The other major river is the Durian River, one of the major tributaries of the Sampanahan River, located in the northwestern corner of the permit area. Only a few villages are scattered along the Sampanahan River and the Ahmad-Yani road in the eastern part of the area. The western mountainous region of the permit area is less inhabited and has only scattered cultivated farmland. The Project location of the project is shown in Figure 3.

Situated in the equatorial region, the Project area has a tropical rainforest climate, generally characterized by high temperatures, rainy conditions, and high humidity without strong winds. Temperatures vary slightly throughout the year.

The area does not have distinctly separate dry and rainy seasons like some other regions. June, July, and August tend to have slightly lower rainfall compared to the rest of the year. However, these months are still quite wet. November, December, and January generally receive the highest amount of rainfall. Rainfall patterns can vary from year to year. Even during the "drier" months, frequent rain showers should be expected.

Figure 3: Project Location Map



The mean daily temperature is 26.1°C with a minimum of 17.1°C and a maximum of 35.4°C. The rainy days per year are around 92 days to 112 days, normally 100 days. The mean annual precipitation of Satui town is 2,400 mm to 3,116 mm, and the meteorological station of Banjarbaru has recorded annual precipitation ranging from 1,858 mm to 2,936 mm and 1,835 mm to 2,979.1 mm, with an average of 2,260 mm. The mean monthly precipitation is 36 mm in August and 349.5 mm in May. According to the record of PT. Arutmin, the maximum monthly precipitation is 821.4 mm recorded in June 1996.

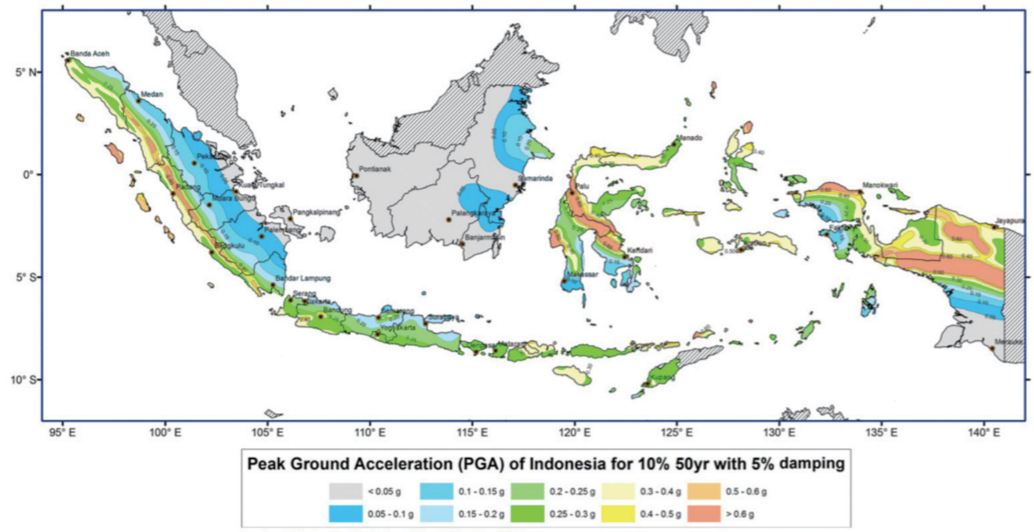
The wind is not strong in the area. From the record of a meteorological station of Banjarbaru, the average wind speed ranges from 0.2 m/s to 2.5 m/s with an average of 1.0 m/s. Most of the wind direction is south and north, approximate accounting for 47.9% and 45.1%, respectively.

Humidity is high in the area ranging from 73% to 91% with an average of 86.4%.

2.3 Potential Natural Hazards in the Area

Kalimantan Island, also known as Borneo, has been recognized as a tectonically stable area that is not affected by large-magnitude earthquakes. Indonesian earthquake records have also shown low earthquake intensity in South Kalimantan compared to other parts of Indonesia. According to the data derived from the United States Geological Survey (USGS), the seismic peak ground acceleration in the Project areas is less than 0.1g, and earthquakes rarely occur. As such, it is believed that underground mining conditions would be more suitable in this area than in tectonically more active areas such as Java, Sumatra, and other islands of Indonesia.

Figure 4: Seismic Hazard Map of Indonesia from Irsyam et al. (2010)



2.4 Mining Property, Licences and Permits

SRK has not undertaken a legal due diligence review of various licenses and permits, as such an exercise is beyond the scope of SRK's technical review. The following descriptions are based on the information provided by Qinfa.

PT SDE's Qinfa Mine I and Qinfa Mine II are located in Subdistricts of Sungai Durian, Kelumpang Barat, Kelumpang Hulu, Regency of Kotabaru, South Kalimantan Province. SDE has possessed the mining business license (IUP) for the aforesaid concession pursuant to the Decree of Kotabaru Regent No. 545/13/IUPOP/D.PE/2014 dated May 14, 2014. SDE has obtained extension of the IUP until May 14, 2034 pursuant to Decree of Head of Investment Coordinating Board No. 4/1/IUP/PMA/2023 dated on February 9, 2023. Furthermore, the IUP can be extended once more for another ten years until May 14, 2044. Further extension after could be made if SDE carried out integrated coal development and utilization activities to add more value to its coal and depending on the remaining coal reserves.

The summary information of the mining license is presented in Table 2, and the coordinates of the corner points authorized in the IUP-OP are tabulated in Table 3. A copy of the IUP-OP is presented in Appendix B. Information related to other licenses and permits is described in Section 12.1.

Table 2: Summary Information of the Mining License (IUP-OP) of PT SDE

License No.	Issued To	License Type	Issued By	Issue Date	Area *(Ha)*	Mineral Type	Validation Period *(year)*
4/1/IUP/PMA /2023	PT Sumber Daya Energi	Operational Production Permit	Kotabaru Regency of South Kalimantan Province	14 May 2034	18,500	Coal	10 (holding the right to extend)

The coordinates of the six corner points of the mining license area are provided in Table 3 below.

Table 3: Coordinates of the License Area Corner Points of the PT SDE IUP-OP

Corner Point	Longitude (E)	Latitude (S)
1	115° 59’ 33.06”	2° 40’ 04.10”
2	115° 58’ 01.18”	2° 40’ 04.10”
3	115° 58’ 01.18”	2° 43’ 03.21”
4	116° 07’ 37.00”	2° 43’ 03.21”
5	116° 07’ 37.00”	2° 36’ 54.92”
6	115° 59’ 33.06”	2° 36’ 54.92”

3. COAL TRANSPORTATION AND INFRASTRUCTURE

3.1 Coal Transportation Plan

It is noted that the Ahmad-Yani public road crosses the SDE permit area, leading to the Pasir district in the north and Dana Bumbu district in the south, forming a convenient route for civilian usage only.

As public roads in Indonesia are not allowed to transport mineral commodities such as coal. To facilitate coal hauling, AJB Indonesia has designed a dedicated road specifically for hauling coal products extracted from the SDE Coal Mine. This coal hauling road is 35 kilometers long and 14 meters wide, connecting the SDE Coal Mine to the SDE New Jetty. The construction of the jetty and the dedicated coal hauling road has largely been completed and allows for low-capacity coal transportation.

Figure 5: Coal Transportation Routes

3.2 Infrastructure

3.2.1 Water Supply

The production water of the mine comes from purified mine water and newly built deep well water, which is precipitated and purified to meet the standard of production water and meet the water demand. The domestic water is initially filled with pure water, and after the mine is put into operation, the deep well water will be filtered and purified by the drinking water treatment station to meet the drinking water standard and then used, so the mine's production and domestic water sources are both guaranteed.

3.2.2 Power Supply

As the project site is located in a sparsely populated area, there is no high-voltage transmission grid with large power capacity available locally. The installed capacity of the local public electrical grid cannot support the massive electricity demand required for underground mining operations in the project area. Surrounding mines are normally powered by generators.

To address the electricity demand for the coal mines, a new diesel power station has been built at each of the industrial sites of Qinfa Mine I and Qinfa Mine II. These power stations are responsible for supplying all the electricity loads required for Qinfa Mine I and Qinfa Mine II operations. Additionally, diesel generator sets within the mines provide supplementary power supply.

Although the power supply cost is relatively higher than using the national power grid, supplying power to the mines through these dedicated power stations and generator sets can guarantee that the power demand will be met during the mine operations.

Figure 6: Power Generator Installed on Mine I Site

3.2.3 Mian Construction Material Supply

It is noted that during the construction phase of the mine, the main construction and production materials such as sand, cement, and steel bars are purchased domestically within Indonesia. However, materials and equipment that cannot be produced domestically in Indonesia are sourced from China in order to meet the requirements for mine construction and ensure safe production operations.

Figure 7: Equipment and Materials Imported from China at the SDE Mine Site

3.2.4 Conclusion

Although this area has historically been a large-scale coal mining region, the mining methods employed were all open-pit mining. Large-scale underground coal mining has not yet been implemented in this area. Therefore, the area's capacity to supply underground coal mining-related materials and equipment is relatively weak.

SRK is of the opinion that the infrastructure within the existing mining area is generally sufficient to support the new project. nevertheless, a more stable power supply is crucial for safe coal mining operations. Hence, it is recommended that the mine explore other power supply options, such as investigating the possibility of introducing grid power of sufficient capacity from nearby cities. Additionally, having sufficient equipment and material spare parts on-site is also crucial for sustaining continued production.

4 GEOLOGICAL CONDITION

4.1 Regional Geology

The PT SDE coal deposit is situated on the northern margin of the Asem-Asem Basin, which is one of the five major sedimentary basins in the east and south-east Kalimantan region of Indonesia. The Asem-Asem Basin is believed to have been separated from the greater Barito Basin to the south-east by the Meratus Mountains, as there is a comparable succession of sedimentary rocks within the two basins, suggesting they once formed a much larger depocenter prior to the uplift of the Meratus Mountains in the Miocene (Witts 2014).

The Asem-Asem Basin consists of thick Cenozoic sedimentary sequences, comprising four formations from oldest to youngest: the Tanjung, Berai, Warukin, and Dahor Formations. The deposition processes were largely influenced by the basement's topography and the uplift of the Meratus Mountains, resulting in good exposures of the formations along the western margin of the basin (Siregar 1980).

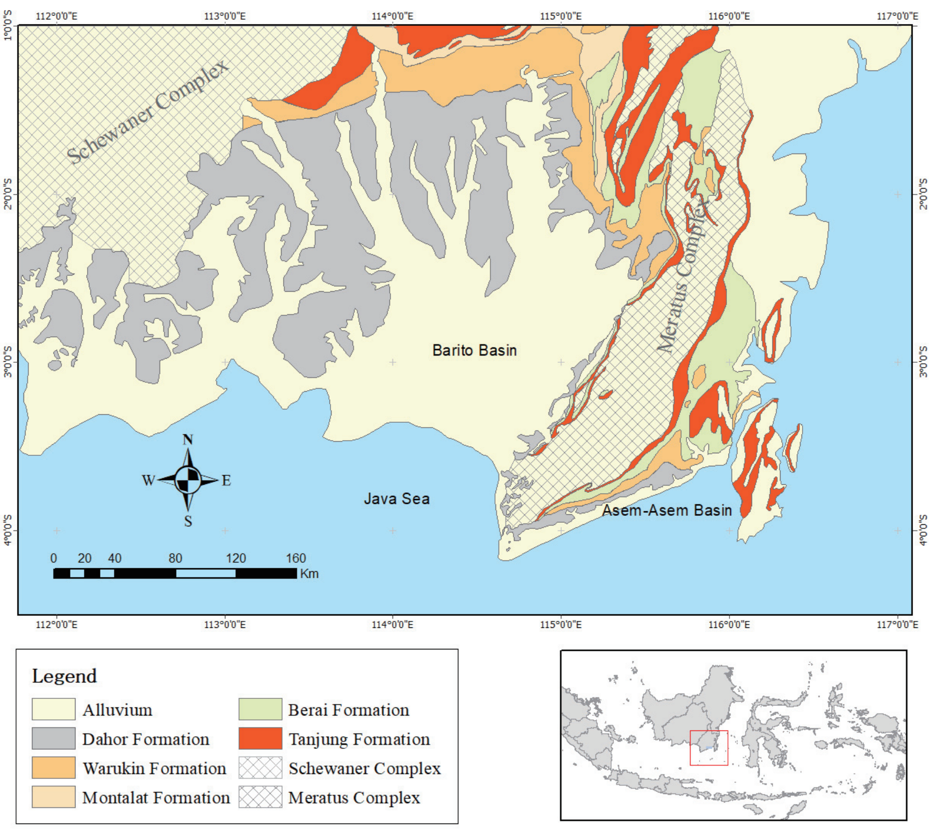
The development of the Barito and Asem-Asem Basins was initiated by rifting activities throughout the Sundaland (Pubellier 2014) in the Middle Eocene. During this rifting, the opening and extension of the Makassar Strait resulted in the separation between Borneo and Sulawesi and formed NW-SE aligned horsts and grabens. The Tanjung Formation was formed from rift sediments eroded from the Paleocene horsts. This rifting ceased at the end of the Lower Oligocene in the basins. Figure 8.

The marine influence increased along with the regression process in the Middle Oligocene, resulting in the carbonates of the Berai Formation forming within shallow water from the Late Oligocene through the Early Miocene. These gradually ceased due to the pro-deltaic input from the west.

The uplift of the Meratus in the Early Miocene resulted in the deposition of the prograding deltaic sediments of the Warukin Formation (Satyana 1999). This uplift led to the emergence of the Meratus Mountains and generated the inversion of pre-existing extensional faults in the Barito Basin.

The continuing uplift of the Meratus from the Pliocene to the Plio-Pleistocene resulted in the Dahor Formation, which mainly consists of polymict alluvium, shallow marine sediments, and tectonic molasse.

Figure 8: Schematic Map of the Stratigraphic Distribution of South Kalimantan



4.2 Geology of Mine Area

4.2.1 Stratigraphy

The stratigraphy occurring within the PT SDE coal deposit from bottom to the top includes the pre-tertiary basement of igneous rocks, Eocene Tanjung Formation, Late Oligocene to Early Miocene Berai Formation and Quaternary sediments. The Tanjung formation is the major coal-bearing formation of the region and the target coal seams within the Project area occur in the lower part of the formation.

- The bedrock, mainly consist of the grey-whitish diorite and granite, normally occurred at approximately 20 m below the bottom coal seam E of the Tanjung Formation.

- Overlying by massive limestone of the Berai Formation, the Tanjung Formation, a coal-bearing formation, only exposed in the western border area within the permit area, the lithology of the formation mainly comprised of greyish-green to dark grey mudstone, siltstone, silty mudstone and coal seams, with thin conglomerate layers, occasionally occurred at the bottom of the formation. The total thickness of the formation is approximately 280 m, and the coal-bearing section is developed in the lower part of the formation.

- The Berai Formation is conformably underlain by the Tanjung Formation, the formation covers most of the permit area except for the western part. The formation consists of a thick sequence of limestone, marl and fine-grained clastic strata with a thickness ranging from 0 m to over 320 m within the Project area.

- Quaternary soil covers most surface of the project area with an average thickness of 12 m.

4.2.2 Geological Structure and Magmatic Rocks

Shaped by the uplift of the Meratus Mountains to the west, the strata of the exploration area featured a general northeast strike and southeast dip characteristic, with the dip angle of the strata ranging from approximately 1 to 5 degrees within most of the exploration area. No magmatic occurrences have been detected within the sedimentary strata of the region.

Historical explorations have inferred seven major faults. All of the faults are interpreted as normal faults with a vertical displacement ranging from approximately 15 meters to 60 meters. The characteristics of the faults are presented in Table 4.

Table 4: Faults Identified in the PT SDE Deposit

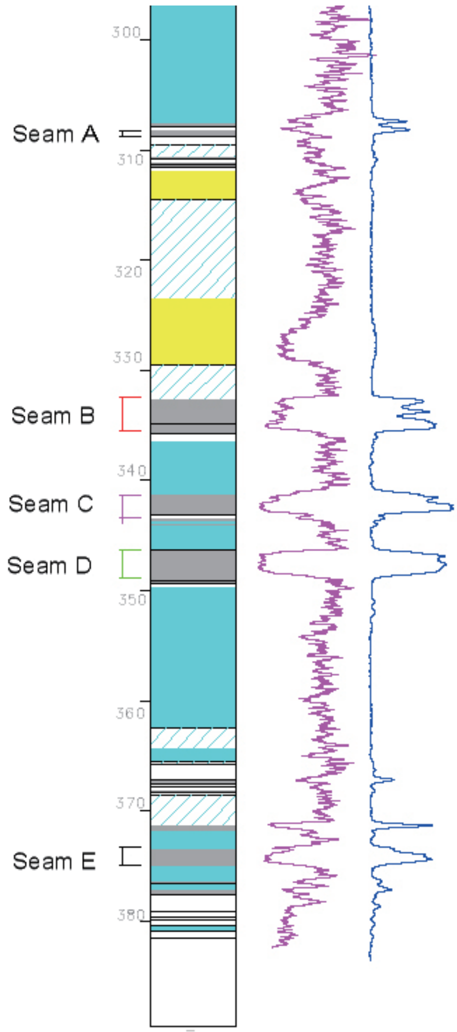
Fault No.	**Type**	**Trend**	**Vertical Drop** *(m)*
F1	Normal	SE/NW	20
F2	Normal	SE/NW	20 – 40
F3	Normal	SE/NW	15
F4	Normal	NE/SE	50
F5	Normal	WE/NS	15
F6	Normal	WE/NS	60
F7	Normal	SE/NW	60

Note: All faults are inferred from previous survey

4.2.3 Coal Seam Characteristics

Historical explorations have intersected five coal seams, labeled A through E from top to base. Seams B and D are well-developed and identified as the main target coal seams. Seam B has a thickness ranging from 1.2 to 8.1 meters, with an average of 4.22 meters. Seam D has a thickness ranging from 0 to 2.26 meters, averaging 1.41 meters. Coal seam E is only partially developed within the drilled area, while seams A and C have inconsistent thicknesses. Figure 9 presents a typical column of the coal-bearing strata.

Figure 9: Typical Column of the Coal-bearing Strata



The following describes the detailed information and structural characteristics of the intersected coal seams, as summarized in Table 5:

- Seam A: Intersected at depths ranging from 148 m to 492 m below the surface, seam A is the uppermost and least consistent coal seam within the PT SDE coal deposit. Its thickness is generally less than 1 m, and its immediate roof and floor are primarily composed of claystone. This seam is not considered suitable for underground longwall mining.

- Seam B: This well-developed coal seam occurs throughout the exploration area at depths of 163 m to 532 m below the surface. Most areas of the seam exceed 1.2 m in thickness, with an average thickness of 4.22 m. It contains one to three partings, mainly composed of claystone and carbonaceous claystone, with thicknesses ranging from 0.15 m to 1 m. The immediate roof and floor are predominantly claystone. The interburden between seams A and B ranges from 10 m to 25 m (averaging 20 m). Seam B is the primary target for underground longwall mining.

- Seam C: Primarily found in the western exploration area, seam C occurs at depths of 163 m to 550 m below the surface. Its thickness varies from 0.30 m to 1.34 m, averaging 0.97 m. One or two partings of claystone and carbonaceous claystone (0.15 m to 0.20 m thick) are present within this seam. The immediate roof and floor are claystone. With an interburden of 2 m to 10 m (averaging 5 m) between seams C and B, seam C lacks sufficient thickness and consistency for mining, especially due to its proximity to seam B.

- Seam D: This well-developed seam occurs throughout the exploration area at depths between 187 m and 549 m. Most sections range from 0 m to 2.60 m in thickness, with an average of 1.41 m. Seam D generally lacks partings. The interburden between seams D and C ranges from 3 m to 22 m (averaging 10 m). This interburden thins eastward from approximately 20 m to less than 5 m. In these eastern areas, seam D transitions into a locally mineable, unstable simple seam.

- Seam E: Presented mainly in the eastern part of the exploration area, seam E has thicknesses between 0.45 m and 3.51 m (averaging 1.50 m). Due to its inconsistent thickness, seam E is not considered a viable mining target within this exploration area.

Table 5: PT SDE Exploration Area Coal Seam Structural Characteristics

Coal Seam No.	Coal Thickness Range (average) *(m)*	Quantity of partings	Average Thickness of Partings *(m)*	Average Seam Spacing *(m)*	Seam Roof/Floor Lithology
A	0.18–0.35(0.26)	0	–	–	Claystone, siltstone
B	1.18–8.10(4.22)	0–4	0.34	24	Claystone, siltstone
C	0.30–1.34(0.97)	1–2	0.19	5	Claystone, siltstone
D	0.58–2.60(1.41)	0	0	10	Claystone, siltstone
E	0.45–3.51(1.50)	0	0	27	Claystone, siltstone

The seam floor contour map of the typical coal seam B and the corresponding thickness contour map are presented in Figure 10 and Figure 11.

Figure 10: Seam Floor Contour Map of Coal Seam B in PT SDE Exploration Area

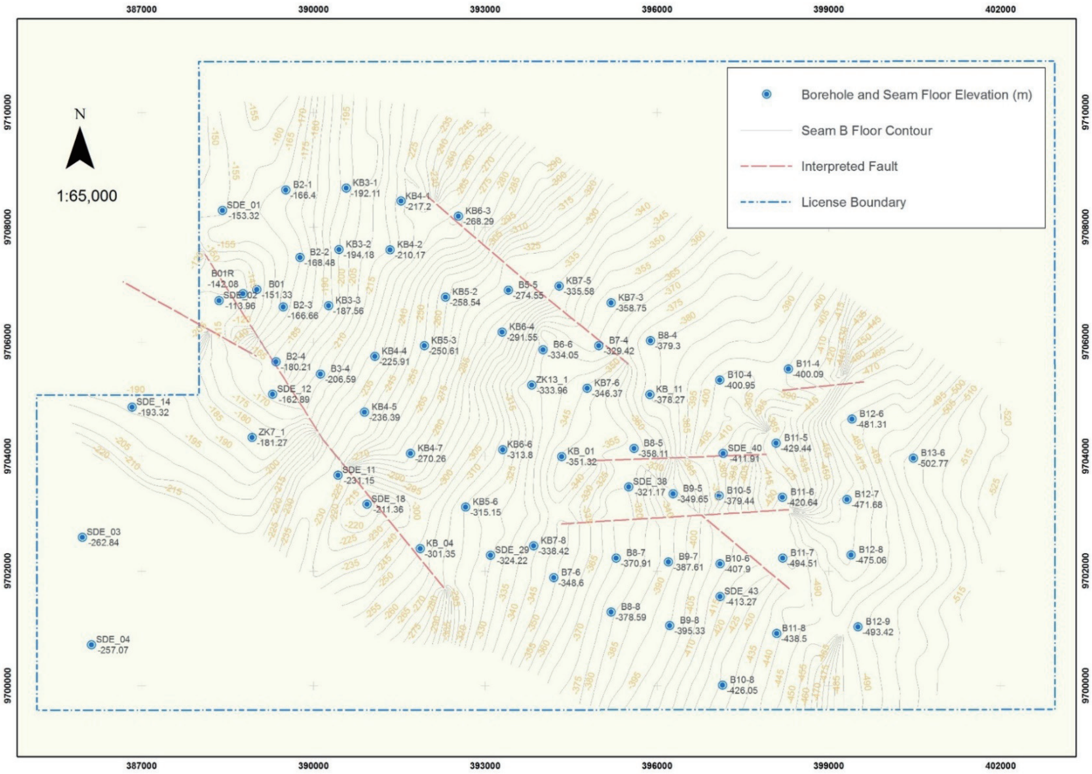
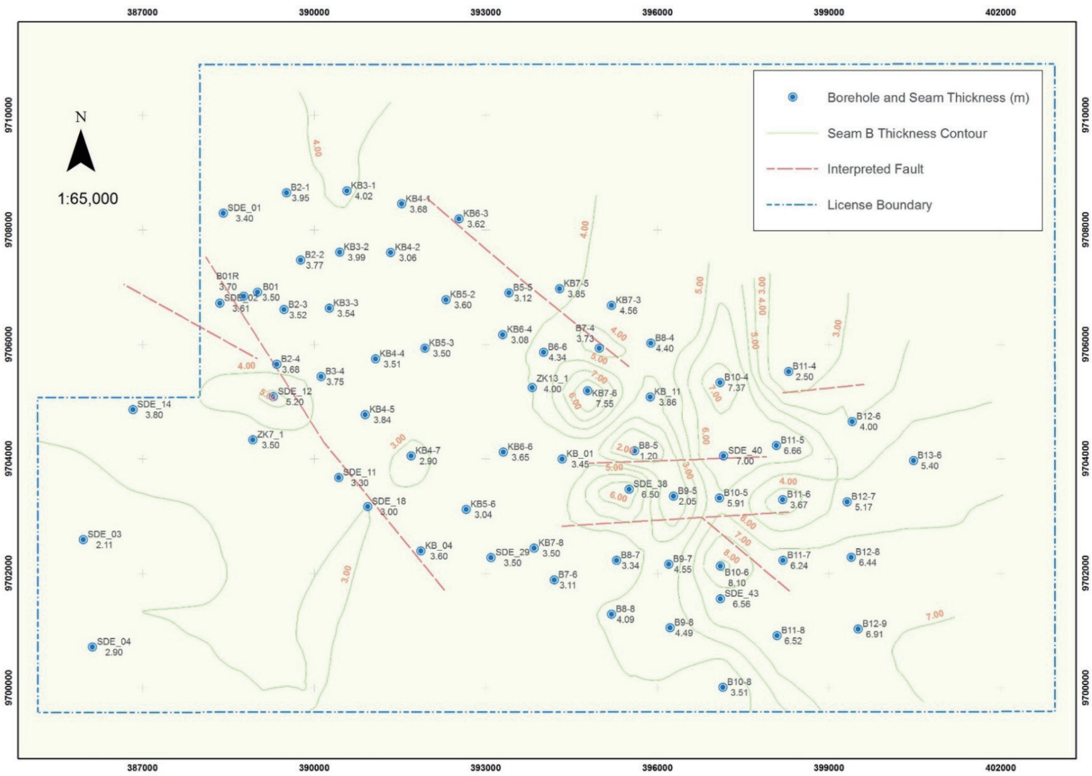


Figure 11: Thickness Contour Map of Coal Seam B in PT SDE Exploration Area



4.2.4 Coal Type and Coal Quality

The coal from each seam that occurs in the exploration area of the SDE coal deposit is generally classified as high volatile B to C bituminous coal according to ASTM D388 (Classification of Coals by Rank). Based on the Chinese Coal Classification GB5751-2009, the coal developed in the deposit is classified as Long-flame coal (code CY) with its dry-ash-free volatile matter generally greater than 37% and Qgr, maf greater than 24 MJ/kg.

In general, the quality characteristics of the composited coal samples have shown low inherent moisture, medium to high ash content, low deleterious elements, non-caking properties, high volatile matter, and medium to high calorific value. The total sulfur content varies from seam to seam, with low sulfur for seams A and B, and medium to high sulfur for seam D. The typical quality of the coal seams is presented in Table 6. The coal produced from each seam is amenable to be used as thermal coal, mainly for power generation in coal-fired power plants.

Table 6: Typical Quality of the Coal Seams in PT SDE Exploration Area (Composites)

Coal	**Inherent Moisture** *(ad, %)*	**Ash Content** *(ad, %)*	**Volatile Matter** *(ad, %)*	**Fixed Carbon** *(ad, %)*	**Total Sulphur** *(ad, %)*	**Calorific Value** *(gr.ar, kCal/kg)*
B	4.0	29.5	30.8	35.7	0.9	5,018

Figure 12: Ash Content Contour Map of Coal Seam B in PT SDE Exploration Area (Composites)

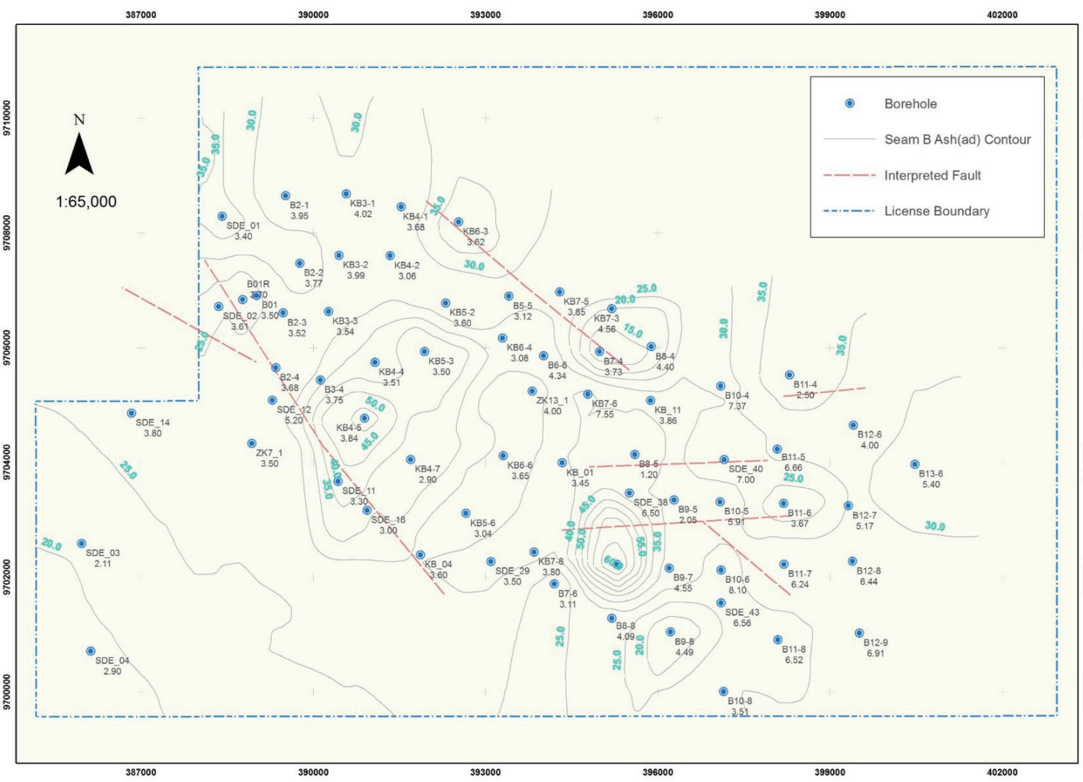
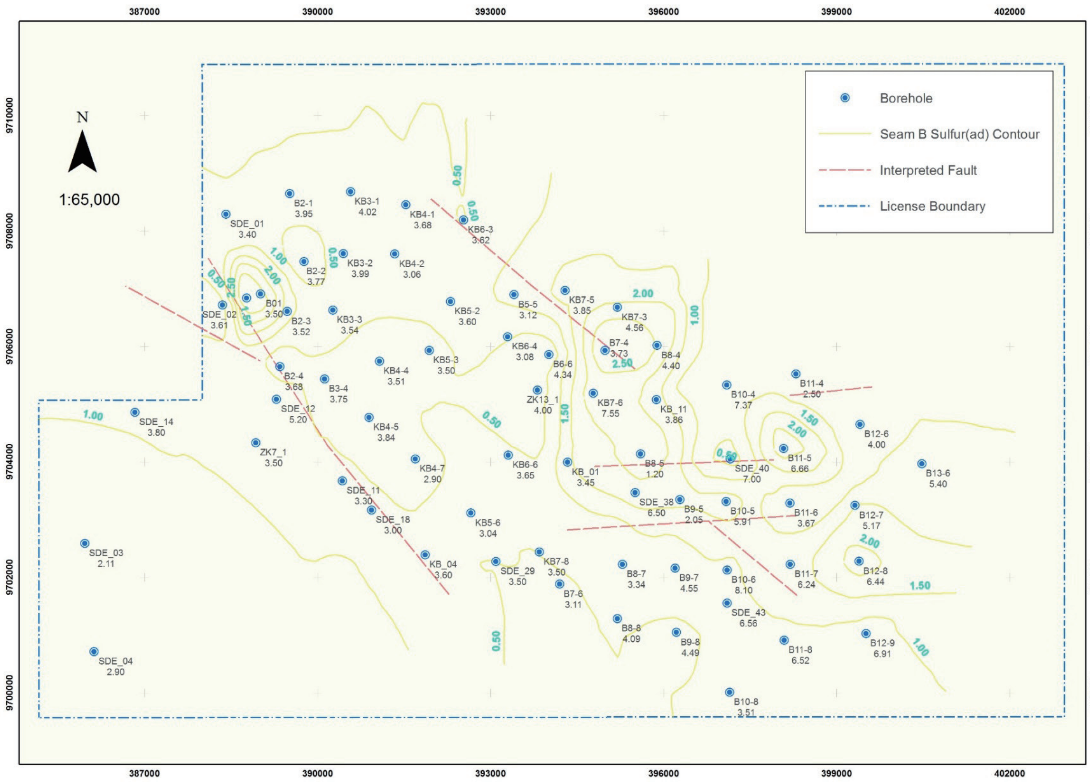


Figure 13: Total Sulfur Contour Map of Coal Seam B in PT SDE Exploration Area (Composites)



5 EXPLORATION

The exploration activities associated with the permit can be divided into the explorations prior to 2020 and the 2020 exploration program. As SRK has not been involved in any of the historical exploration activities of the project, the following information on the previous exploration results is compiled mainly based on borehole information provided by the Client as well as the discussions with Qinfa's technical team.

SRK conducted a site visit from 16th December to 21st December 2023 to discuss with the technical team of SDE to collect data and information about the exploration, current mining situation.

5.1 Explorations Prior to 2020

Prior to 2020, historical borehole logs indicate a total of 17 exploration boreholes (6,784 m cumulative depth) were drilled within the Permit area. These drilling campaigns were conducted in two phases:

- 2012-2013: PT. Geo Drilling Indonesia drilled three KB series boreholes commissioned by PT. Satui Basin Gas.
- 2015-2016: Sugico Group drilled 14 additional boreholes (SDE series and two ZK series).

Drilling did not follow a systematic grid pattern and is best classified as prospecting exploration aimed at preliminary delineation of the SDE coal deposit's resource potential.

All boreholes were vertical, cored holes with downhole geophysical surveys. Drilling primarily utilized XY-44A drill rigs (common in China, maximum depth capacity of 1,000 m). Downhole geophysical surveys included caliper, gamma, long density, and short density logs – standard for Indonesian coal seam exploration.

Coal samples were analyzed at the ILAC-MRA accredited laboratory of Pt. Surveyor Carbon Consulting Indonesia ("**SCCI**") in Banjarbaru. Analyses focused on proximate analysis, total sulfur, and heat value. SRK lacks information regarding sampling procedures and core retrieval methods used in the historical campaigns.

5.2 2020 Drilling Program

From February 2020 to April 2021, a joint exploration program by Sugico Group and China Qinfa Group further delineated coal resources within the PT SDE permit area. This program involved drilling 50 boreholes (totalling 20,232.77 m), which, in combination with historical boreholes, established a 1,000 m to 1,200 m drill grid across approximately 60 km^2.

Boreholes were completed using HQ coring with Hanjin D&B 45 drilling rigs. A wireline triple-tube system with split inner barrels was employed for core retrieval. Core logs indicate approximately 95% overall core recovery, with approximately 90% recovery within coal seams. Borehole collars were surveyed in reference to project area benchmarks.

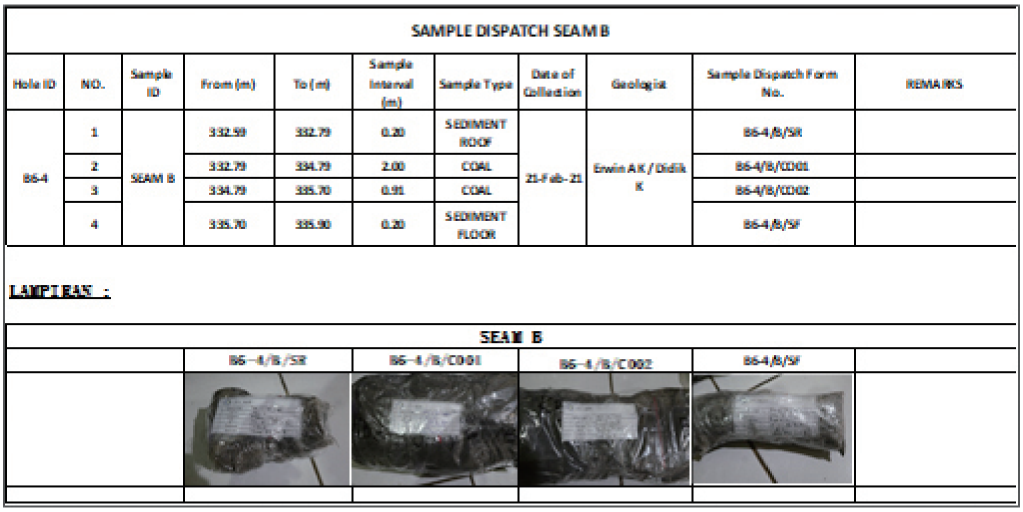
Figure 14: Cores and Labels in the Core Box

Downhole geophysical logging, conducted by Robertson Geologging Technology, included the following parameters: LSD, HRD, BRD, Caliper, and Natural Gamma. This data facilitated interpretation of coal seam structures.

Coal core samples were collected on a seam-by-seam basis with a maximum 2 m sampling interval. Partings ranging from 10 cm to 50 cm were included. Partings exceeding 50 cm were classified as interburden, with 20 cm of seam floor and roof collected. All samples were tagged with borehole number, roof/floor/parting code, seam ID, and lithology code.

While SRK was not involved in sample preparation, security, or analysis, the client provided information indicates sampling procedures generally align with standard practices and are considered acceptable for coal resource and reserve modeling.

Figure 15: A Typical Sample Sheet of 2020 Exploration



SAMPLE DISPATCH SEAM B

Hole ID	NO.	Sample ID	From (m)	To (m)	Sample Interval (m)	Sample Type	Date of Collection	Geologist	Sample Dispatch Form No.	REMARKS
B6-4	1	SEAM B	332.59	332.79	0.20	SEDIMENT ROOF	21-Feb-21	Erwin AK / Didik K	B6-4/B/SR	
	2		332.79	334.79	2.00	COAL			B6-4/B/C001	
	3		334.79	335.70	0.91	COAL			B6-4/B/C002	
	4		335.70	335.90	0.20	SEDIMENT FLOOR			B6-4/B/SF	

LAMPIRAN :

SEAM B

	B6-4/B/SR	B6-4/B/C001	B6-4/B/C002	B6-4/B/SF	

Coal core sample analysis included the following variables: total moisture, inherent moisture, ash content, volatile matter, total sulfur, calorific value, relative density, Ash Fusion Temperature (AFT), and Hardgrove Grindability Index (HGI). Table 7 outlines the specific standards applied to each analytical variable.

Table 7: Relevant Standards Adopted for the Analytical Variables

Test Item	**Adopted Standard**
Total Moisture	ASTM D3302
Inherent Moisture	ASTM D3173
Ash Content	ASTM D3174
Volatile Matter	ASTM D3175
Fixed Carbon	By difference
Total Sulphur	ASTM D4239
Calorific Value	ASTM D5865
Ash Fusion Temperature	ASTM D1857
Relative Density	AS 1038

5.3 2021 Hydrogeological drilling

Qinfa Group drilled two hydrogeological boreholes (B7W-1 and B8W-1) within the SDE mine to assess hydrogeological conditions. Hydrological observations were performed:

- B7W-1: Static water level, pumping tests, and recovery observations focused on the Berai Formation limestone and sandstone within the coal seam B roof.

- B8W-1: Targeted the Berai Formation limestone.

Results:

- B8W-1: Unit water influx of 0.1157 L/s.m (>0.1 L/s.m) indicates a "medium" hydrogeological type.

- B7W-1: drilling and operations spanned October to December 2021 (depth: 467.35 m).

    - Limestone Aquifer: Pumping tests (October-November) revealed 160.2 m thickness and unit water influx of 0.0141 L/s.m.

    - Coal Seam B: Pumping tests (December) focused on the sandstone aquifer 7.3 m above. Aquifer thickness was 5.2 m, with a unit water influx of 0.0006 L/s.m (<0.1 L/s.m), classifying it as a "simple" hydrogeological type.

SRK Assessment: Considering observed parameters and applying China's "Rules for Prevention and Control of Water in Coal Mines", SRK determines a "medium" hydrogeological type classification is appropriate, reflecting the higher predicted result.

5.4 2023 Infill Drilling Program

An infill drilling programme commenced in the middle of 2023 with the objective of upgrading the resource and reserve categories. To date, over 20 boreholes have been drilled, and the programme is currently ongoing. SRK will incorporate the resulting data from this infill drilling into future resource and reserve estimations for subsequent updates of the Competent Person's Report (CPR).

6 BOREHOLE DATABASE AND MODEL

The data acquired from the client was subjected to a procedure to validate the coal seam data acquired from various explorations. The first step was to consolidate all the available information into a borehole database of Geovia Minex 6.1.3 modelling software.

6.1 Coal Seam Structure Data Verification

First, the coal seam structure data were subjected to the following procedure and a series of borehole filtration work was carried out as required.

- The collar data were checked against the topographical data to correct any abnormal points of collar elevation, especially the consistency of the coordinate system for boreholes of the different exploration programs. Generally, the collar data was found to be consistent with the topography data. Boreholes with the different coordinate systems were converted to be in line with the system used in corresponding mining permits.

- Seam intervals (seam picks) provided by the Client were checked against downhole geophysical profiles and geological core logs and inconsistent intervals were adjusted to match the downhole geophysical profiles. This procedure showed a high level of consistency between the provided seam intervals and the geophysical/geological core logs.

- A seam correlation review based on the interpretation conducted in the historical geological reports and some abnormal correlations were double-checked and corrected.

The check process resulted in 67 boreholes used in seam structure (seam thickness and interval) modelling to form the basis of the volume estimation for the Project.

6.2 Analytical Results Verification

A total of 532 core samples' analytical results were available from the 67 boreholes. Three scatter plots based on all the available coal samples, including the scatter plot of ash versus calorific value, ash versus volatile matter and ash versus relative density were made to assess the reliability of the test procedure of the laboratory.

The three scatter plots, as presented from Figure 16 to Figure 18, have shown that the reliability of the analysis for the three major quality items is within an acceptable range.

Figure 16: Scatter Plot – Ash Content Versus Caloric Value

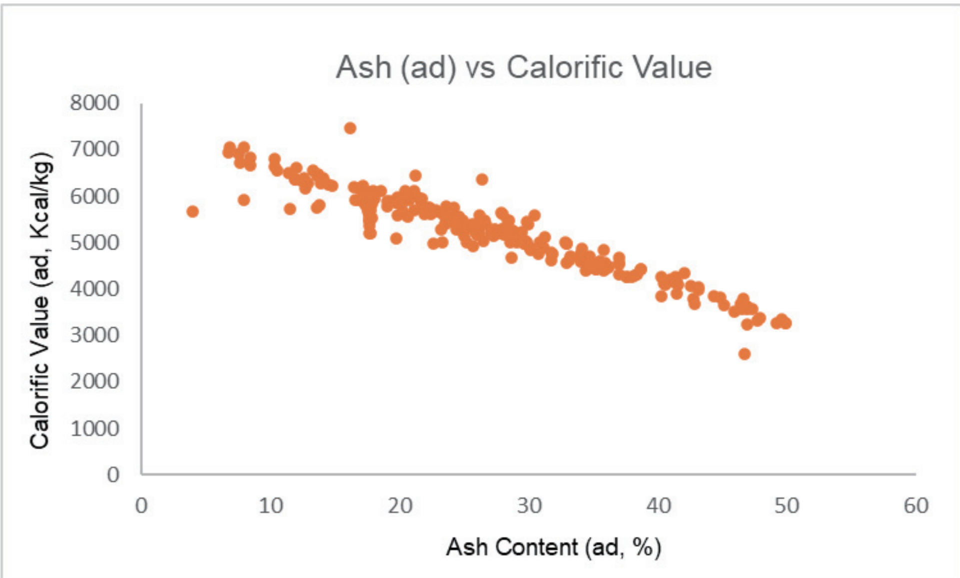


Figure 17: Scatter Plot – Ash Content Versus Volatile Matter

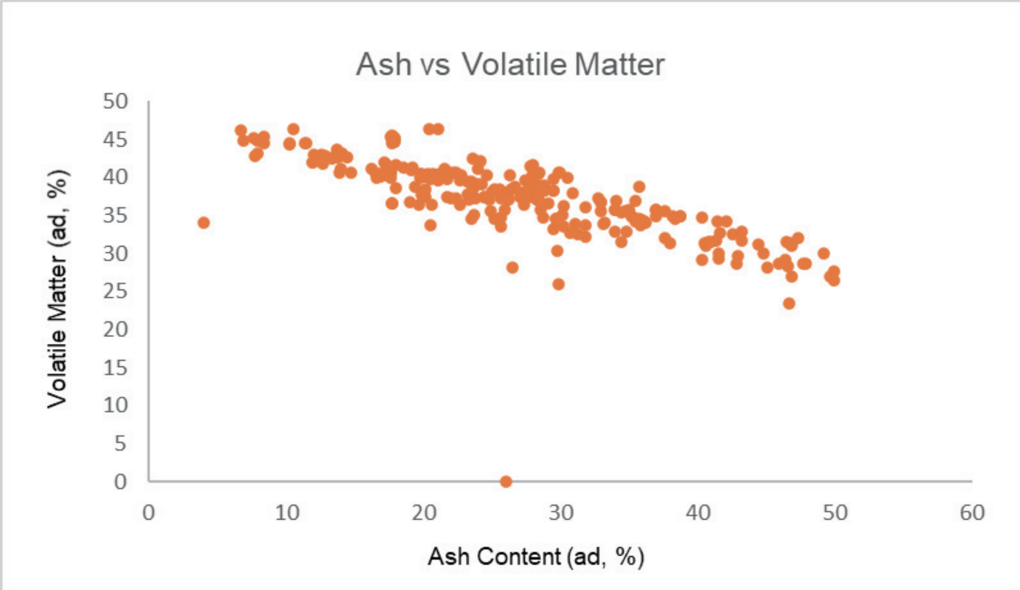
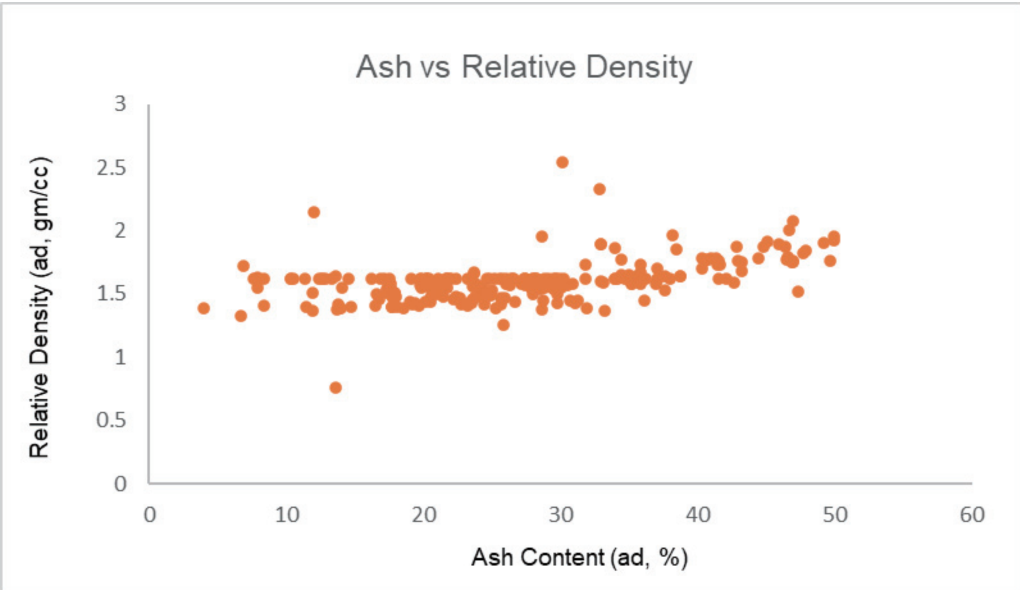


Figure 18: Scatter Plot – Ash Content Versus Relative Density



6.3 Resource Model

A total of 67 boreholes were incorporated into Geovia Minex 6.1.3 borehole database to develop a geological model. The dataset checking and modelling process are summarised as follows:

- Imported seam intervals (seam picks) were checked on a borehole-column-profile view to ensure that the coal seams were properly correlated;

- Imported sample intervals were checked against the seam intervals and inconsistent sample intervals were adjusted to match the seam intervals;

- The quality variables except relative density were composited based on the mass-weighting method by using its correspondent thickness and density. The relative density was composited by using the volume weighting method;

- The position of the floor of the missing seams was estimated in Minex by using "set-missing-seams" tool, and all the thicknesses of the missing seams below the collar and above end-hole depth were set to zero. The thickness and position of the coal seams below the end-hole depth or above collar were interpolated by the same tool;

- Working sections for resource estimation were created by adjusting seam intervals;

- "Multi-Seam Multi-Variable Gridding" tool was used to generate a series of grids including seam floor, seam thickness, inter-burden and quality variables.

7 COAL RESOURCE

7.1 Overview

Coal Resource is a concentration or occurrence of coal deposit of economic interest in such form, quantity and quality that there are reasonable prospects for eventual economic extraction. The location, quantity, quality, continuity and other geological characteristics of Coal Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling. Coal Resources are sub-divided, in order of increasing geological confidence, into "Inferred", "Indicated" and "Measured" categories in accordance with The JORC Code (2012). The following JORC 2012 guidelines explain the three levels of resources.

An "Inferred" Coal Resource is that part of Coal Resource for which quantity and quality are estimated on the basis of low levels of confidence with limited geological evidence and sampling. The quantity and quality are inferred using Points of Observation ("**PoO**") that may be supported by interpretive data.

An "Indicated" Coal Resource is that part of Coal Resource for which quantity and quality are estimated on the basis of reasonable levels of confidence which allows the application of Modifying Factors in sufficient detail to support mine plan and evaluate the economic viability of the deposit. The quantity and quality information are collected from PoO that may be supported by interpreted data. The PoO are sufficient for continuity to be assumed but are too widely or inappropriately spaced to confirm geological and quality continuity. An "Indicated" Coal Resource has a lower level of confidence than that applying to a "Measured" Coal Resource and may only be converted to a "Probable" Coal Reserve.

A "Measured" Coal Resource is that part of Coal Resource for which quantity and quality are estimated on the basis of a high level of confidence which allows the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit. The quantity and quality information collected from PoO may be supported by interpretive data. The PoO are spaced closely enough to confirm geological and coal quality continuity. A "Measured" Coal Resource has a higher level of confidence than that applying to either an "Indicated" Coal Resource or an Inferred Coal Resource. It may be converted to a "Proved" Coal Reserve or under a certain circumstance to a "Probable" Coal Reserve.

In general, the process of coal resource estimation and reporting can be divided into the following steps:

- Geological data processing and resource modelling: mainly includes coal seam structure and quality data processing, coal seam correlation and geological structure data interpretation. The process will eventually generate a resource model ready for resource estimation.

- Coal Resource classification: estimated resources are classified as Measured, Indicated and Inferred categories according to the different geological confidence level. The geological confidence level is determined through both the coal seam consistency, the geological structure complexity as well as considering certain aspects which may have a substantial impact on the reasonable prospect of eventual economic extraction.

- Mined-out/sterilized area deduction, thin coal seam and poor-quality area identification: these areas apparently having no reasonable prospects for eventual economic extraction. Normally, the minimum thickness and coal quality limits (collectively, "**Cut-offs**") should be applied to the resource model for estimation.

- Estimated Resource is reported in compliant with the JORC Code, and the reporting should not only include the quantity (tonnage) but also comprise the main coal quality variables related to marketing.

7.2 Substantive Assumption

The Resources estimated for the coal deposit are based on the exploration data provided by the Company. The estimation is limited to coal Seams B and D, which have been identified as having reasonable prospects for eventual economic extraction using the longwall mining method. The estimates were also horizontally and vertically constrained according to the mining licenses of PT SDE. Additionally, coal seams occurring at depths shallower than 50 metres from the surface were considered to have surface water ingress and subsidence risks, and this portion was excluded from the estimates. Furthermore, a small-scale gob area within Mine I, formed from December 2023, was depleted from the estimate.

The minimum cut-off thickness for the resource estimates is set to be 1.2 m. As in some of the existing underground mines, the installed equipment allows for coal seams within a thickness range of between 0.8 m and 1.2 m to be extracted, SRK considers that the application of the cut-off thickness has properly reflected the reasonable prospects for eventual economic extraction in accordance with JORC Code 2012.

In terms of Australian Guidelines for the Estimation and Classification of Coal Resources, 2014 Edition ("**Coal Guidelines 2014**"), the tonnage of Coal Resource was recommended to estimate on an in-situ basis This requires in-situ density to be used in the estimation, and the in-situ density can be converted from relative density (air-dried) and in-situ moisture by using Preston and Sanders equation (Preston and sanders, 1993). In-situ moisture is normally derived from moisture-holding capacity which can be directly analyzed from the laboratory test.

In this project, no moisture-holding capacity was tested. In this case, a regression equation deriving in-situ moisture from air-dried moisture, Mis=1.3335*Mad+2.2168 (R2=0.901) was used to calculate in-situ moisture according to the study of Fletcher & Sanders (ACARP C10041), and the relative density has been adjusted to the in-situ density with an approximately decreasing in the order of 0.01 to 0.2 m^3/t.

7.3 Resource Classification

The historical exploration drillings have resulted in an approximate 1,000-metre to 1,200-metre borehole grid, which covers an area of approximately 60 square kilometres. In addition to the geological structure, SRK's coal seam model has demonstrated good consistency in the coal seam thickness and quality. Based on the above considerations, the resource classification for the exploration area was determined according to the following principles:

- Measured Resource: the areas within 600 m spacing of the Points of Observation ("**PoO**");

- Indicated Resource: the areas between 600 m and 1,200 m spacing of the PoO;

- Inferred Resource: the area greater than 1,200 m and less than 2,500 m spacing of the PoO.

The Resource classification map of the typical coal seams for the project is presented in Figure 19. It should be noted that an area of approximately 3.3 km² within the Measured Resource Area has been reclassified from the Indicated Resource Area. This change is due to confirmation of coal seam B's consistency via underground logging along with the construction of underground roadways/gateways within the area.

7.4 JORC Coal Resources Statement

A geological modelling software specified for coal and other stratified deposits, Geovia Minex™ was used for the Coal Resource estimation of the PT SDE underground coal project.

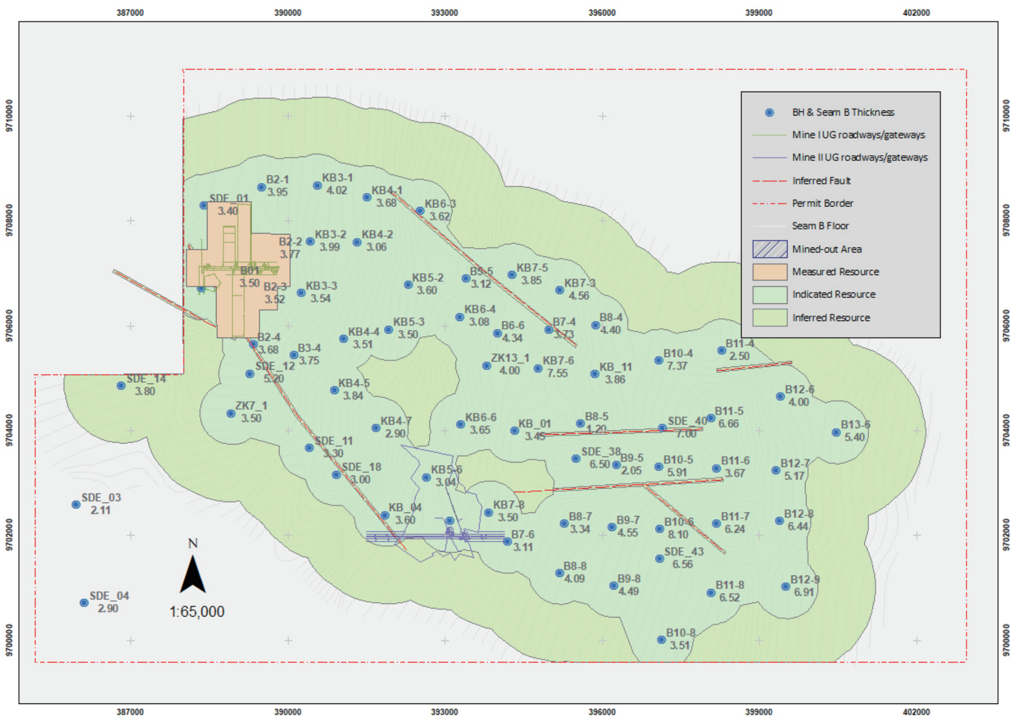
A total of **588.91 million tonnes** of Measured and indicated Coal Resource were estimated and reported by SRK in accordance with the JORC Code 2012 within the PT SDE permit area, of which 16.82 million tonnes is of Measured Coal Resource, 571.97 million tonnes is of Indicated Coal Resource. 379.4 million tonnes are estimated as Inferred Coal Resource. The estimation was prepared with the cut-off date as of 31 December 2023.The result of the estimated Coal Resource is presented in Table 8.

Table 8: Coal Resource within the PT SDE Permit Area as of 31 December 2023

Coal Seam	Resource Category	Resource	Area	Thickness	In-situ Moisture	Ash Content	Total Sulphur	Calorific Value
		(Mt)	*(Km^2)*	*(m)*	*(ad, %)*	*(ad, %)*	*(gar, kCal/kg)*	
B	Measured	16.71	3.30	3.50	–	–	–	–
	Indicated	435.78	63.20	4.28	6.84	28.24	0.97	5,121
	Inferred	302.3	46.06	4.19	6.78	29.43	0.90	5,024
D	Measured	–	–	–	–	–	–	–
	Indicated	136.42	51.45	1.74	7.55	21.71	1.20	5,507
	Inferred	77.1	27.83	1.83	7.73	20.91	1.60	5,633
Sub-Total	Measured	16.71	–	–	–	–	–	–
	Indicated	572.20	–	–	7.00	26.73	1.00	5,210
	Measured +Indicated	**588.91**	**–**	**–**	**7.00**	**26.73**	**1.00**	**5,210**
	Inferred	**379.4**	**–**	**–**	**6.97**	**27.70**	**1.04**	**5,147**

JORC Code Statement: *The information in this Report which relates to the Coal Resource is based on information provided by China Qinfa Group, the Coal Resource was estimated by Zhuanjian (Leo) Liu and the Report was compiled by Yongchun (Roger) Hou of SRK Consulting China. Both of them are members of AusIMM and have sufficient experience relevant to the kind of project, style of mineralisation, type of deposit under consideration, and the activity which they are undertaking to qualify as Competent Persons as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves", the JORC Code 2012. Mr Hou and Mr Liu consent to the reporting of this information in the form and context in which it appears.*

Figure 19: The Resource Classification Map of the Typical Coal Seam B



7.5 Conclusions and Recommendations

SRK has developed a borehole database and geological model by referring to the Client's coal seam and geological structure interpretations. The model is suitable for underground coal resource estimation after reviewing the exploration data acquired from historical exploration programs between 2012 and 2021.

Based on the review, a total of 588.91 Mt Measured and Indicated Coal Resources and 379.4 Mt of Inferred Resource are estimated for the coal seam B and D. Resources are considered to be amenable to using the underground longwall method. No open-pit Resources are estimated in the Report.

The coal quality that SRK estimated based on the data acquired from the explorations would support a medium calorific thermal ROM coal product with potentials both for domestic and export thermal coal markets.

8 COAL RESERVE

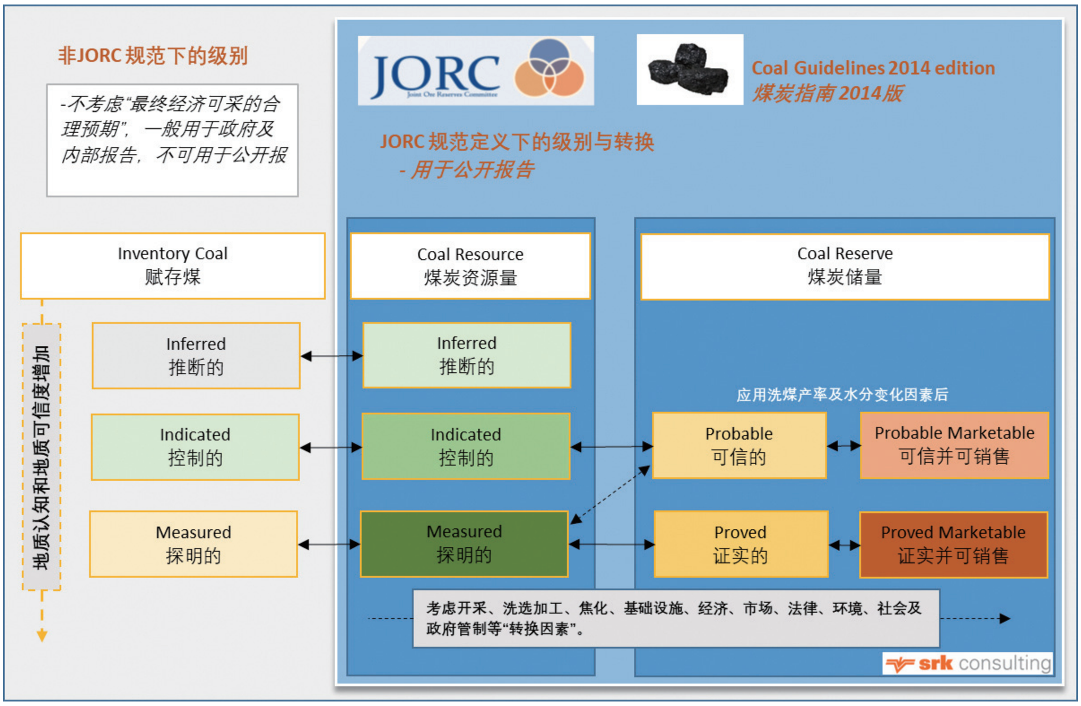
8.1 Overview

Public reporting requires coal reserves to be estimated in accordance with recognised international standards. The Coal Reserve estimate in this Report follows the guidelines, recommendations and standards set out in the JORC Code in order to provide competency and transparency as required for public reporting of Ore Reserves. For coal deposits, Ore Reserve is referred to as Coal Reserve as recommended by the JORC Code and used in this Report.

According to the JORC Code, a Coal Reserve is the economically mineable part of a "Measured" and/or "Indicated" "Coal Resource" and includes losses and dilution, which may occur by mine design and during the mining operation. Coal Resources are converted to Coal Reserves after consideration of mining, processing, coal quality, infrastructural, economic, marketing, legal, environment, social, and governmental factors (the "**Modifying Factors**"). For reporting of Coal Reserves, a project mining study at the Pre-Feasibility Study or Feasibility Study level must support the technical feasibility and economic viability of a project. Data available from records of an ongoing operation may support, complement, and confirm the findings of a mining study and the Modifying Factors. Only "Measured" Coal Resources can be converted to "Proved" Coal Reserves; "Indicated" Coal Resources can only be converted to "Probable" Coal Reserves.

Coal Reserves are defined at a reference point, usually, and for this Report, the run-of-mine ("ROM") coal as received at the mine surface plant. Beneficiated or otherwise enhanced coal products must also be reported in conjunction with the Coal Reserves as "Marketable Coal Reserve". The predicted yield to achieve such "Marketable Coal Reserves" must also be stated. Estimated coal tonnage and grade outside these categories (also known as inventory coal) shall not be included in a Public Report. However, if the Company's mining and production plans include coal outside these categories, this should be mentioned in the review of the mining plans.

Figure 20: Relationship between Coal Resources and Coal Reserves



8.2 Reserve Estimation

The Coal Reserve estimation was conducted on each mining system separately. The system division can be seen in Figure 21.

8.2.1 Estimation Principles and Parameters

SRK utilized the Geovia Minex V6.1.3 computer software for estimating the Coal Reserves, as this software is particularly well-suited for modelling stratified deposits such as coal seams. For each mineable coal seam, the mine plan layouts comprising the designed longwall panels were employed by SRK for reserve estimation. The reviewed longwall panel polygons were imported into the Minex software and superimposed onto the coal seam model to constrain the mineable areas of the coal seams. The reserve tonnage was subsequently estimated by utilizing the "resource/reserve reporting" function within the software. The longwall panel polygons used for the Reserve estimation for the two mines are presented in Figure 21.

Through the superimposition of the longwall panels on the seam model, the reserve estimate excluded coal from various protecting pillars and barriers. Additionally, an average dilution of 5% of the in-situ coal was applied in the estimate for both projects to account for occasional floor cuttings, roof rock falls, and minor geological disturbances within the panels. The "coal quality" parameters of the dilution material used in the Reserve estimates are presented as follows:

Table 9: Dilution Parameters Used in the Reserve Estimates

Item	**Relative Density**	**Ash Content**	**Total Sulphur**	**Caloric Value**
	(m^3/t)	*(ad, %)*	*(ad, %)*	*(kCal/kg, gar)*
Parting/Dilution Material	2.5	85	0.5	250

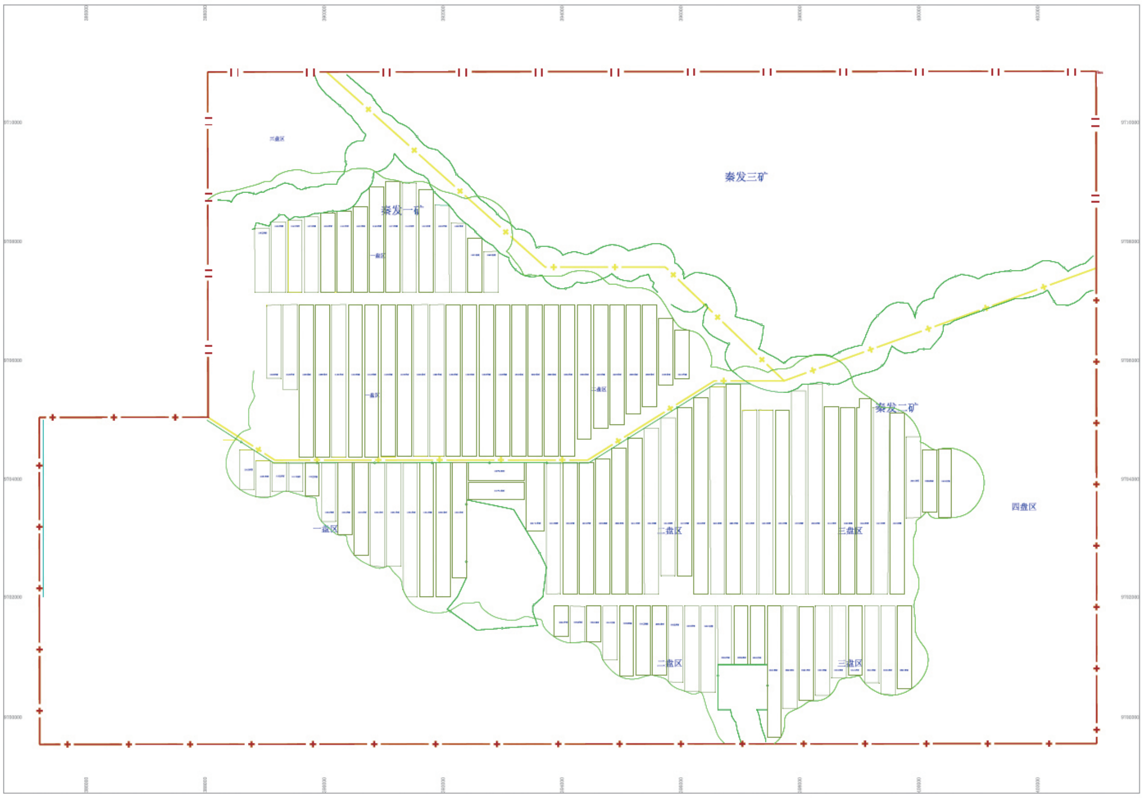
According to the coal seam thicknesses and the mine planning parameters, the Coal Reserve estimations were confined to coal seam B for the Qinfa Mine I and Qinfa Mine II projects, respectively. The longwall retreat mining method with single slice (cut) extraction is proposed for implementation in both projects. Based on this mining method, SRK applied the following limits and parameters (cut-offs) in the Reserve estimates for both mines:

- The estimation of the Coal Reserves is limited to the designed panels within the mining license area boundaries;
- A minimum mining thickness of 2.0 m was applied in the estimation for seam B at both Qinfa Mine I and Qinfa Mine II. This minimum mining thickness is in alignment with the selected coal shearer machine specifications outlined in the Feasibility Study;
- An average recovery rate of 95% was applied for the designed panels;
- Coal output derived from the various roadway developments was included in the reserve calculations;
- The cut-off date for the Coal Reserve estimates is 31 December 2023.

8.2.2 Modifying Factors

The "Modifying Factors", i.e., the consideration of the factors such as mining, processing, metallurgical (coal quality), infrastructure, economic, marketing, legal, environmental, social and government are reviewed in the various sections of this report. As a conclusion, the situation and conditions of the two proposed mines could be seen as established, secure and stable with regard to the factors mentioned above. SRK would therefore not consider, for instance, downgrading Proved Coal Reserve supported by Measured Resource, or downgrading (reject) Probable Coal Reserve supported by Indicated Coal Resource.

Figure 21: Longwall Mining Face Layout Applied in Qinfa Mine I and Qinfa Mine II Reserve Estimates



8.2.3 JORC Coal Reserve Statement

SRK has estimated a JORC (2012) compliant Coal Reserve of 106.43 million tonnes for the Qinfa Mine I area and 201.52 million tonnes for the Qinfa Mine II area. Details of the Reserve estimations for both mine projects are summarized in Table 10 and Table 11, respectively.

Table 10: Coal Reserve of Qinfa Mine I under JORC Code (As of 31 December 2023)

Coal Seam	**Reserve Category**	**Reserve**	**Ash Content**	**Total Sulphur**	**Caloric Value**
		(Mt)	*(ad, %)*	*(ad, %)*	*(gar, kCal/kg)*
B	Proved	8.70	34.50	0.57	4,500
	Probable	97.73	35.10	0.61	4,450
	Sub-Total	**106.43**	**35.05**	**0.61**	**4,450**
Total	Proved	8.70	34.50	0.57	4,500
	Probable	97.73	35.10	0.61	4,450
	Sub-Total	**106.43**	**35.05**	**0.61**	**4,450**

Table 11: Coal Reserve of Qinfa Mine II under JORC Code (As of 31 December 2023)

Coal Seam	Reserve Category	Reserve	Ash Content	Total Sulphur	Caloric Value
		(Mt)	*(ad, %)*	*(ad, %)*	*(gar, kCal/kg)*
B	Proved	–	–	–	–
	Probable	201.52	33.67	0.98	4,455
	Total	**201.52**	**33.67**	**0.98**	**4,455**

JORC Code Statement*: The information in this Report which relates to the Coal Reserve is based on the information provided by China Qinfa Group, the Reserve related information in this Report was compiled by Yongchun (Roger) Hou of SRK Consulting China Ltd and reviewed by Mr Bruno Strasser, an associate Principal Geologist of SRK Consulting China Ltd and a member of AusIMM. Mr Strasser has sufficient experience relevant to the kind of project, the style of mineralisation, the type of deposit under consideration, and the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves", the JORC Code. The reserve estimate is based on SRK's Coal Resource estimate and was conducted by Mr Zhuanjian (Leo) Liu and Mr Hou, they are full-time employees of SRK Consulting China Ltd. and members of AusIMM, they are specialists in computerized reserve estimation and have relevant experience in the style of mineralization and type of deposit under consideration. Mr Strasser, Mr Hou and Mr Liu consent to the reporting of this information in the form and context in which it appears.*

9 MINING ASSESSMENT

9.1 Overview

This mining assessment was carried out to provide sufficient information on the mining operations and the mining factors to support the Coal Reserve estimate according to the JORC Code as stated in this Report.

Mine I, with construction beginning in December 2021, has transitioned to the production stage. Retreat longwall mining of the first panel commenced in December 2023. Mine II is currently under construction; to date, two vertical shafts have been completed, and the main incline shaft is in its downward extension phase.

The Mining Assessment of the Report was based on the feasibility study report ("**FS**") prepared by Taiyuan Institution in February 2022 and the actual road developing mining situation. In the FS, the PT SDE mine is divided into three mines, namely Qinfa Mine I, Qinfa Mine II and Qinfa Mine III, and mining targets at the early stage are Qinfa Mine I and Qinfa Mine II. Qinfa Mine I is planned in the northwest proportion of the mining area targeting on seam B, divided into three mining sections. Qinfa Mine II is planned in the southern proportion targeting on seam B, also divided into three mining sections. Both planned mines use the fully mechanized longwall retreating mining method to excavate raw coal from the longwall panels. Qinfa Mine I is now in operation stage, the single level development method with inclined shaft is adopted, and three shafts are arranged, namely the main inclined shaft, the auxiliary inclined shaft and the air-returning inclined shaft, with the shaft extended into the Seam B at an elevation round – 112 m. While the current ventilation capacity meets operational requirements, SRK strongly recommends increasing the number of air-intake and air-returning shafts to ensure adequate ventilation as mining operations extend into the deeper eastern sections. Qinfa Mine II adopts the hybrid development method with shafts and inclined shafts. Three shafts are planned and in construction, namely the main inclined shaft, the auxiliary vertical shaft and the air-returning vertical shaft. the construction of the auxiliary vertical shaft and the air-returning vertical shaft has been completed, the elevation of the bottom of the two shafts is at approximately -290 m in the coal seam B. In the later stage, air-intaking and air-returning shafts are arranged in mining section III to improve the ventilation capacity.

In order to prepare the competent person report, SRK geologists and engineers, including the Competent Person, conducted a site visit from 16th to 21st December 2023. During this visit, meetings and discussions were hold with SDE engineers.

The FS used for the mining assessment covers the following Chapters:

- Overview
- Minefield and Construction Conditions
- Market Forecast
- Designed Coal Production and Mine Service Life
- Mine Field Development, Mine Design, and Mining Equipment
- Mine Ventilation, Gas, and Safety
- Auxiliary Equipment of the Mine
- Coal Preparation Plant
- Surface Facilities
- Energy Conservation and Emission Reduction
- Utilization of Coal Resources

- Environmental Protection
- Work Safety and Occupational Health
- Organization and Human Resources
- Project Implementation Plan
- Investment Estimate and Economic Analysis
- Risk Analysis
- Social Impact Assessment
- Conclusions and Suggestions

SRK is confident that the FS was prepared with due care and by experienced professionals, meets the requirement for Coal Reserve estimate as stipulated by international reporting codes.

As of December 2023, the Qinfa Mine I has produced around 300 Kt raw coal including 134 Kt of ROM coal extracting from the longwall mining face and 166 Kt engineering coal extracted from roadway/gateway tunnelling. With regard to Qinfa Mine II, the construction of the two vertical shafts has been finished, the main incline shaft mainly for coal lifting is in construction (720 m finished).

Figure 22: The Auxiliary Vertical Shaft of Qinfa Mine II

9.2 Summary of Mine Technical Data

An overview of the main mine technical data and design parameters of the two mines are presented in Table 12.

Table 12: Main Technical Parameters of the Two Mines

Item	Unit	Qinfa Mine I	Qinfa Mine II
Planned area of coal mine (about)	(km^2)	38.75	102.34
Elevation of the mine portal	(m ASL)	+47-+58	+56
Surface elevation range of mining area	(m)	+20 – +160	+20 – +160
Mining depth range	(m)	180 – 500	230 – 820
Number of recoverable coal seams	nos.	1	1
Recoverable coal seams		Seam B	Seam B
Thickness of Seam B	(m)	1.2 – 8.1 (4.2)	
Coal seam dip within mining area	(° degree)	0-1	0-1
Geological structure complexity		simple to medium	
Gas content class		low–medium	low
Hydrogeological conditions of mine			
Estimated normal/maximum mine water inflow	(m^3/h)	200/300	200/300
Spontaneous combustion tendency of coal seam		Grade II	
Coal dust explosion		Explosive tendency	
Coal rank		B to C bituminous coal with high volatile	
Coal type		long flame coal	
Number of dirt bands in coal seam		Seam B, 0 -4,	Seam B, 0 -4,
Coal reserves	(Mt)	106.43	201.52
Designed raw coal capacity	(Mtpa)	6-10	6-10
Mining method		Underground mining	
Coal mining technology		fully mechanized longwall mining full height at one time	
Development method		Drift	Vertical/Inclined shafts
Dip length and slope of main inclined shaft		655 m/16^o	1,018/23^o
Underground haulage roadway and slope		11,823 m/0-1^o	15,342m/1-2 ^{o}
Number and length of working faces		41/240 m	64/240 m
Tenant area	(km^2)	185	
Number of designed panels		3	3
Production year	(year)	2023	2025
Designed LoM	(years)	14	24
Number of employees	(nos)	1,102	1,102
Annual operating days/shifts per day		330/3	330/3

Item	Unit	Qinfa Mine I	Qinfa Mine II
Auxiliary transport method		Trackless rubber wheel car (material truck)	Trackless rubber wheel car (material truck)
Total power	(MW)	65	65

9.3 Coal Production Plan and Life of Mine (LoM)

Qinfa Mine I

Qinfa Mine I initiated pilot production in December 2023, beginning with a single operational longwall panel and ramping-up the capacity gradually. SRK estimates that the mine would reach a production of 6-10 Mtpa in the early 2027, with a LoM of approximately 15-20 years from the commissioning of mining operation to mine closure.

Qinfa Mine II

SRK estimates that the Qinfa Mine II will start production at the initial mining face in middle of 2025, reach a production of 6-10 Mtpa in 2028, with a LoM of approximately 24-28 years from the commissioning of mining operation to mine closure.

9.4 Coal Quality

The target coal seams distributed in the two mines area have similar characteristics, and the coal quality of the PT SDE coal deposit is described in detail in Section 4 and Section 10 of this Report.

The significant impact factors on the ROM coal quality could be the dirt band/partition in Seam B. The dirt band which has to be cut during extraction together with the coal, which cannot be separated or held out during the longwall mining operation. The proportion of the (local) thickness of the dirt band and thickness of the coal seam determines the dilution of the ROM coal and its quality.

Dilution is the key factor in determining the need for coal washing and process design. SRK's preliminary coal seam modeling suggests that ROM coal from both seams will require washing. Additionally, the FS considers the general necessity of the coal washing. However, SRK has not seen evidence of Qinfa's plans for constructing coal washing plant. Therefore, SRK assumes that marketable coal sales from both mines will consist of unwashed ROM coal.

9.5 Mining Conditions

9.5.1 Mining Area Geology and Coal Seam Conditions

From the available geological information which SRK interpreted that the geological conditions for the two proposed underground mines are in general relatively simple to moderate.

The coal seams to be mined are in the Tanjung Formation of the Asam-Asam coal basin. The seams striking approximately southwest to northeast and generally dipping towards the southeast at about 0-1° in both mines. The geological setting is described in detail in Section 4 of this Report. The dip of the coal seams is favourable with fully mechanized longwall mining method by using coal shearer for coal cutting.

The main target Seam B in the FS is a "multi-seam" with a dirt band/partition band of varying thickness. The band consists mainly of claystone and carbonaceous mudstone. Seam B is the thicker seam that have the priority for mining to achieve a high coal production. The average thickness of coal seam B in the planned underground mining area is 4.2 m. The roof rock is classified as claystone and its rock strength is described as poor when wet. The coal seams A, C, D and E are described as unstable coal seams in thickness and therefore being excluded from the current mining plan. The main characteristics of the coal seams and the mine geology are summarized in Section 4.

9.5.2 Rock Mechanics Conditions

Rock mechanics conditions of coal seam roof and floor

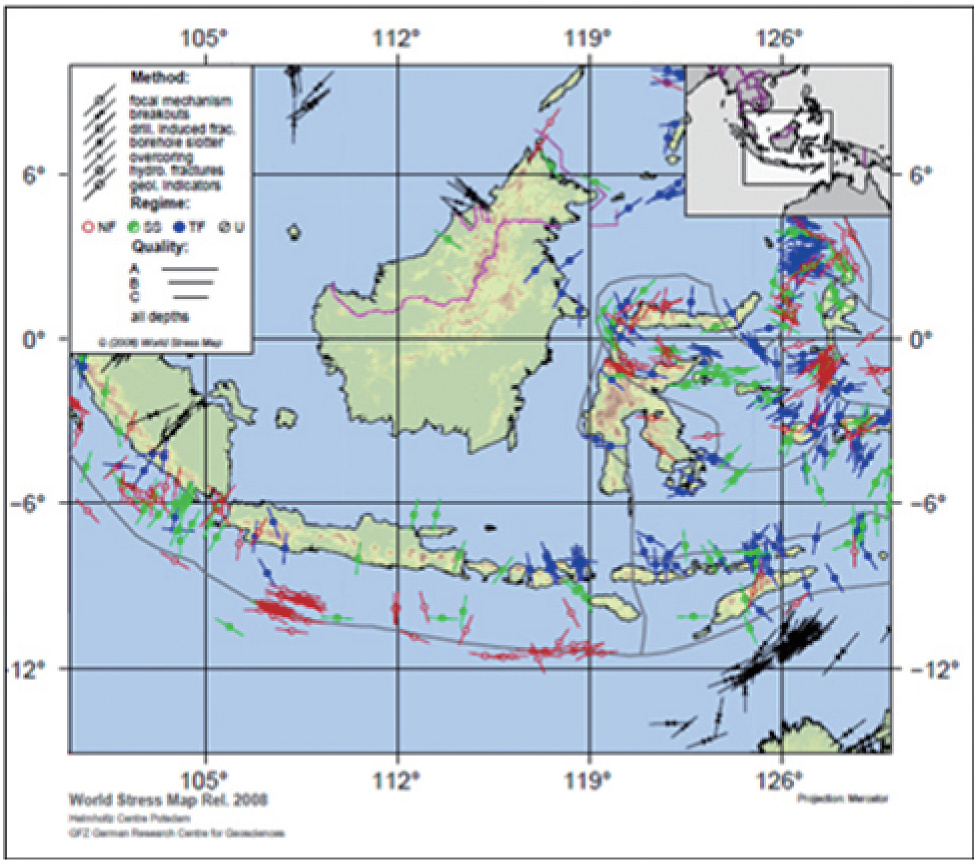
The geotechnical conditions described in the FS are based on the geo-mechanical data derived from the test result of rock samples of the exploration boreholes. The lithology of the roof and floor of the main target coal seam B mainly comprised of claystone with the hardness (Protodyakonov scale of hardness) ranging between 1.5 and 2, the uniaxial compressive strength ranges from 15 MPa to 20 MPa, averaging 17.5 MPa, indicating a low strength in general. Intensive roof support and roadway/gateway maintenance should be considered during the mining operation.

In-situ stress

SRK is not aware of any specific in-situ stress measurements conducted on the site. In the absence of the specific in-situ stress data, SRK has accessed the World Stress Map database to ascertain if information in the public domain could provide a useful preliminary overview of likely in-situ stress conditions to validate mine design and planning assumptions that have already been made.

In-situ stress measurement information (from The World Stress Map database release 2008) in Indonesia is shown graphically in Figure 23. In-situ stress measurements in the vicinity of the PT SDE have not been identified.

Figure 23: In-situ Stress Map of Indonesia



SRK opines that it is important to properly understand in-situ stresses at the mine site to address safety and also to optimize mine design (including planning to prevent sterilization of reserves). For conditions observed at the Project, SRK anticipates that in-situ stress measurements could be quickly and effectively collected using the Flat Jack method within existing underground mine openings.

An alternative method that could be considered for the determination of stress tensors is the Western Australian School of Mines acoustic emission ("**WASM AE**") method. This technique involves the testing of the oriented core. For standard WASM AE stress measurement, the rock samples received from the test site are usually supplied as a 2 m to 3 m continuous run of HQ diamond drill core (63 mm diameter). A core that contains less than 4 breaks per metre and without fractures parallel to the core axis is preferred. Each piece of a core is marked to indicate drilling direction and the bottom of the core. The orientation and the start and finish coordinates of the core run are required relative to a coordinate reference system.

Irrespective of the in-situ stress testing method, SRK notes that it is important that sufficient testing needs to be done to properly define the in-situ stress regime across the site, and the depth of mining.

Surface subsidence

The FS confirms the possibility of future surface subsidence of the coal mines, and it is believed that changes in rock conditions could cause surface subsidence due to the influence of mining. Due to the good rock mechanical properties of the thick limestone overlying the Berai Formation, the FS estimates that the depth of surface subsidence is expected to be around 1 m. However, because the rock stratum in this area is clay rock with strong water-resisting property, and the coal seam is thin, the overall surface subsidence caused by underground mining is slow, which has little impact on the growth of woodland plants.

SRK notes that this observation is general, and recommends that further, more detailed study needs to be done to properly assess the subsidence. Once this is completed the Company should prepare appropriate management/mitigation plans which would be acceptable within the overall requirements of the mining license and Environmental Impacts Analyses (Bahasa Indonesia abbreviation "**AMDAL**"), whilst at the same time optimizing mining plans.

It is specifically recommended that:

- Before final mine design and commencement of mining, a complete survey should be performed and protective coal pillars for surface buildings (structures) as required must be reviewed. A survey would also be required to quantify damage after it occurs.

- Deformation monitoring should be carried out later during the mining phase.

The FS identified the risks of the local rivers and concluded that the rivers will impact mining in a way or ways that will impact flood flow and seepage of water into the mine. The FS clearly states that certain measures would be required with general guidance as follows:

- Predict the settlement quantity of the river channels and tributary streams to be influenced prior to the start of mining;

- Based on predicted settlement quantity and the landform and topography of the area surrounding the river channel, evaluate the influence of underground mining on residences and farmland near the affected river channel;

- If the assessment result shows that underground mining will influence the channel, raised banks should be built on both sides of the river channel to guarantee that river water will not flood over the sides after the river channel subsides;

- During the mining, impacted channels should be continuously monitored; and

- After the conclusion of mining operations, assess any damage to river banks and reinforce them if necessary.

SRK would recommend further reviewing the designed permanent pillars of mining sections for protecting water bodies and other affected structures on the surface. Such pillars will result in a certain loss of coal reserve. SRK would also suggest considering suitable equipment for dredging sections of the local river for drainage and water flow in case subsidence or related landslips cause backwater formation.

9.5.3 Hydrogeology and Hydrology

Surface water

The mining license area is crossed in the north by the Sampanahan River, a major river originating in the Meratus mountains. It flows eastward to the Java Sea. The Durian River, a tributary of the Sampanahan River, crosses the northeast corner of the mine license area flowing north-eastwards During the rainy season the area along the Sampanahan is also prone to flooding.

Assuming that the maximum subsidence of the surface after mining would reach about 1 m some measures along rivers such as dams to maintain water flow and to avoid the formation of backwater need to be considered. The mining plan further considers "coal pillars" for the Sampanahan river area to protect the surface and water flow.

According to the FS, no historical underground mining has been carried out in the project area and no danger from water accumulations in such abandoned underground works should exist.

Groundwater

The source of groundwater in the mine area is considered to be mainly precipitation which is heavy in the region with an annual average of 2,260 mm and monthly peaks measured to reach over 500 mm. In addition, water from the local rivers and standing water bodies may contribute. Due to seasonal variations in rainfall, groundwater recharge and ingress of water to the mine may be periodical as well.

In the geological strata of the mine field, a strong main aquifer in the karst limestone formation (Berai formation) near the surface in the mine field reaches a thickness of about 280 m in the mining area. This limestone aquifer is assumed to be sealed below with a stratum of relative plasticity.

Assumed feeders of the aquifers and aquicludes are seven identified large faults with a throw of 10 to 60 m. The water feeding capacity of these main faults has not been established. Karst water is known to accumulate in the upper limestone layer/aquifer of the area but is not expected to reach the depth of the future mine.

9.5.4 Gas and Other Coal Mine Gases

According to the FS, the highest original gas content of coal seam B in the SDE mining area is 3.21m^3/t, and it is predicted to be a low gas mine. SRK believes that when succeeding a new panel, it is necessary to re-predict the gas emission volume based on the latest geological gas data. When exposing coal seam B, it is necessary to revise the gas-related data to provide relevant basis for mine ventilation, so as to guide gas control management and ensure safe production in the mine.

It is worth noting that the coal-bearing strata in the mining area may be at risk of carbon dioxide exceedances due to the influence of the overlying limestone and long-term geothermal baking. While SRK has not yet received relevant supporting data, it is recommended to closely monitor underground gas content during coal mining to prevent the risk of carbon dioxide or gas outbursts.

9.5.5 Ventilation

Qinfa Mine I

The mine ventilation scheme provided by the FS is as follows: the mine adopts mechanical extraction ventilation method, and three shafts of the main inclined shaft, the auxiliary inclined shaft and the air-returning inclined shaft are arranged when put into operation, all located in the selected industrial site. The ventilation uses the central parallel type. According to the overall development layout of the mine, a panel air-returning shaft is considered when mining reaches Mining Section III, and air-intaking and air-returning shafts are arranged to improve the ventilation capacity when mining reaches the east deep part of the deposit with a zoned ventilation system adopted.

Qinfa Mine II

The mine ventilation scheme provided by the FS is as follows: the mine adopts mechanical extraction ventilation method, and three shafts of the main inclined shaft, the auxiliary shaft and the air-returning shaft are arranged when put into operation, all located in the selected industrial site. The ventilation uses the parallel type. According to the overall development layout of the mine, air-intaking and air-returning shafts are arranged to improve the ventilation capacity when mining section III with a zoned ventilation system adopted.

SRK believes that the mine ventilation system scheme provided by the FS is reasonable, and it should be emphasized that with the increase of mining depth and mining head, it is necessary to further strengthen the working face gas monitoring, air volume allocation, sprinkling and dust suppression, closed inspection, and natural fire monitoring and treatment of the mined-out area, to prevent gas transfinite, eliminate the occurrence of gas explosions, fires and coal dust explosion accidents, and ensure safe production.

9.5.6 Coal Dust Explosion and Coal Seam Spontaneous Combustion Tendency

According to the FS spontaneous combustion tendency tests of coal and appraisal if the coal dust is explosible that were undertaken with coal from coal seam B from random boreholes.

The coal dust tested was determined as explosible according to relevant Chinese standards. The tendency for spontaneous combustion of the coal tested is Class II.

SRK considers necessary precautions and safety measures such as water spraying, and good housekeeping should be taken to manage the spontaneous combustion and coal dust explosion risks in the mines during future operation.

9.6 Development and Mining Methods

Mine development is the mining term for "construction" of the permanent mine workings such as shafts, roadways and mine chambers and the ongoing development of the temporary panel gateways and entries before actual extraction work commences.

The design of the area to be mined, mining sections, and the required underground workings are limited by the prevailing geological conditions i.e. strike and dip of the coal seams, main faults, other mining conditions, the exploration status and coal resource model. Technically, using belt conveyors instead of hoists, and applying longwall technology for coal extraction are suitable.

The minefield is by design divided into two separate mining systems, namely the Qinfa Mine I and the Qinfa Mine II, the two mine areas are bounded by the JI.Jenderal Sudirman Provincial Highway, the north of the provincial road is roughly Qinfa Mine I, and the south of the provincial highway is roughly Qinfa Mine II.

The Qinfa Mine I is currently in operation, the single level development method with inclined shaft is adopted, and three shafts are arranged, namely the main inclined shaft, the auxiliary inclined shaft and the air-returning inclined shaft, with the mining level of -112 m. After the shafts sinking to the bottom, roadways for mining section I and section lI are developed to the east, and mining operation starts in the two wings of section I nearby to form the initial mining face. As section I and section II extend to the east, it is necessary to increase the air-intaking and air-returning shafts to improve the ventilation capacity when mining reaches the east deep part of the mining section II.

Qinfa Mine II adopts the hybrid development method with shafts and inclined shafts. When the mine is put into operation, three shafts are arranged, namely the main inclined shaft, the auxiliary shaft and the air-returning shaft, with the mining level of -290 m. After the main inclined shaft sinking to bottom, mining operation starts nearby to form the initial mining face at mining section II. In the later stage, with the extension of the development roadways to the east and west, mining section I and section III mining systems are formed, and air-intaking and air-returning shafts are arranged in mining section III to improve the ventilation capacity.

The selected mining method for both systems is longwall retreat mining. In order to achieve a high-capacity output operation, full mechanized longwall with double drum shearer, armoured scraper conveyor, and hydraulic support shields is proposed in the FS and applied in Qinfa Mine I. Belt conveyors with matched transporting capacity is also proposed in the FS to deliver ROM coal from the longwall exit (head gate) to the surface industrial area.

Although room-and-pillar underground mining method with continuous miners which is a preferred coal mining method in deposits with flat coal seams and particularly widely used in North America, the stable roof conditions are a basic requirement for room-and-pillar method as immediate support of the roof at the mining front is limited to rock bolting. As such, the method has been excluded as an option due to the expected unstable roof conditions of the project area.

Figure 24 shows the mine development schematic diagram of Qinfa Mine I and Qinfa Mine II.

Figure 24: Development Schematic Diagram of Qinfa Mine I and Qinfa Mine II

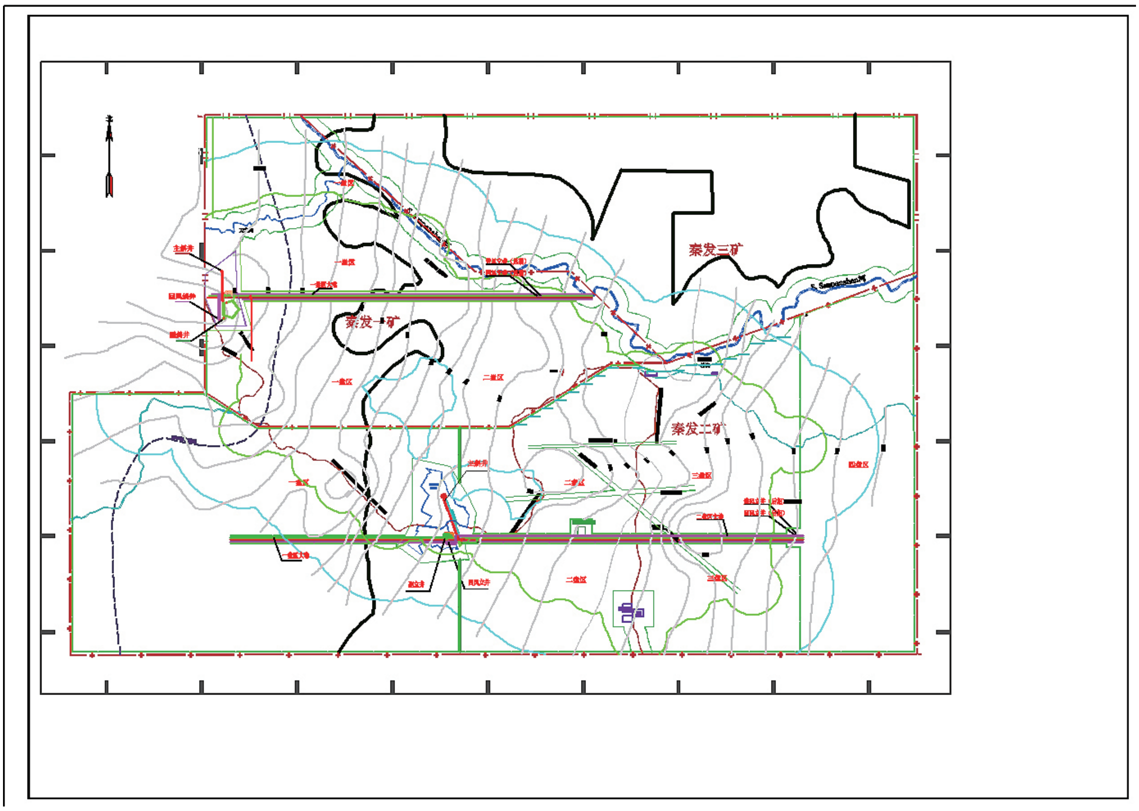
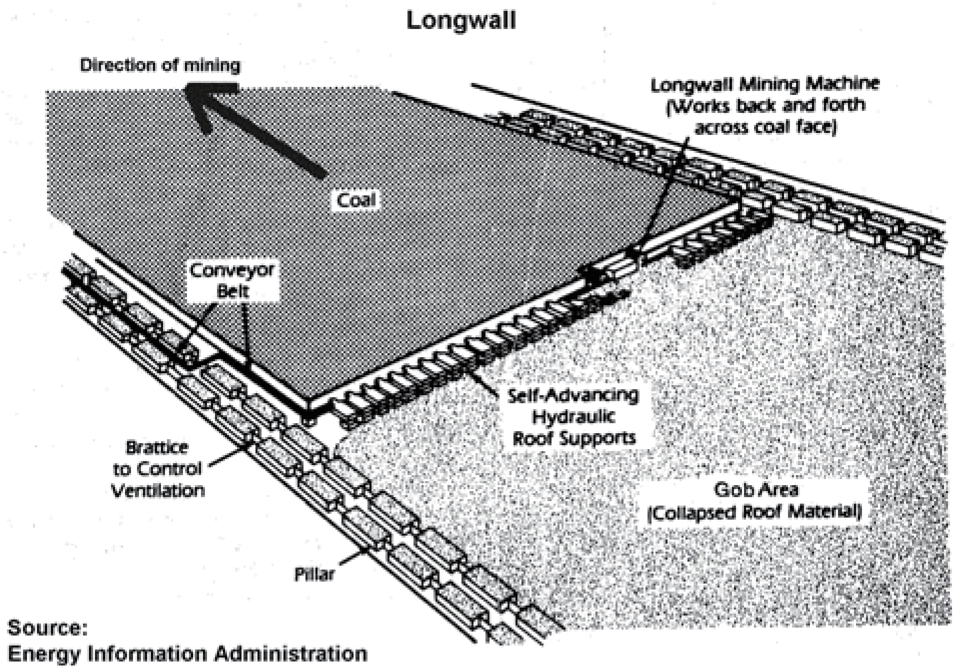


Figure 25 is a typical schematic diagram of fully mechanized longwall mining. As the working face moves forward, the roof behind the hydraulic roof supports in the mined-out area (goaf or gob) is collapsing (caving) after mining of the coal.

Figure 25: Working Face Schematic Diagram of Fully Mechanized Longwall Mining



Qinfa Mine I

The Qinfa Mine I is roughly south of the Sampanahan River and north of the JI.Jenderal Sudirman provincial highway. The coal seam occurred in the area at a depth between approximately 200 m and 500 m below the surface and dipping to the southeast with a 0-1 dip degree. The surface industrial site has been constructed near the west boundary of the mining area adjacent to the public highway at the south side of the Durian River. From the industrial site three inclined drifts extended down into the coal seam B. The designed facilities located in the surface industrial site mainly comprise follows.

- The coal handling system, consisting of a proposed coal preparation plant directly connecting to the surface portal of the main drift via belt conveyor, coal storage stockpile/silos and coal product loading system;
- Warehouses for materials storing, vehicle and equipment storing and repairing;
- The water treatment facility, diesel power station, surface substation system; and
- Auxiliary operating facilities including office building, bathhouses, lamp room, dormitories.

Access to the mine is provided by inclined shafts and sloped roadways due to the favorable coal seam conditions, with the seams rising close to the surface. Generally, inclined shafts for mine access offer an economic advantage compared to vertical shafts due to less demanding technology requirements for conveying coal to the surface, as compared to hoisting in a vertical shaft.

Leveraging inclined shaft access and sloped roadways was an advantageous design choice for Qinfa Mine I, enabled by the favorable geological conditions of the coal seams outcropping near the surface in this area.

The Mine I has started the mining operation in December 2023. Three mining sections have been planned for Qinfa Mine I, and three working faces are proposed to operate at the same time to achieve production in future. Three underground roadways is heading into mining section I along coal seam B to the east, namely the mining section I belt roadway, section I auxiliary transportation roadway, and north-wing air-returning roadway.

Qinfa Mine II

The Qinfa Mine II is roughly in the south of the JI.Jenderal Sudirman provincial highway. The coal seam occurred in the area at a depth between approximately 230 m and 820 m below the surface and dipping to the southeast with a 0-1 dip degree. The surface industrial site has been constructed and is located in the slightly south side of the permit, near the provincial highway, and the shaft development plan uses a mixed development of inclined shafts, with two vertical shafts extending down into the coal seam B and one inclined shaft for coal transportation from the underground. The designed facilities in the surface industrial site are similar to those of the Qinfa Mine I, and mainly comprise follows.

- The coal handling system, consisting of a proposed coal preparation plant directly connecting to the surface portal of the main inclined shaft via belt conveyor, coal storage stockpile/silos and coal product loading system;

- Warehouses for materials storing, vehicle and equipment storing and repairing;

- The water treatment facility, diesel power station, surface substation system; and

- Auxiliary operating facilities including office building, bathhouses, lamp room, dormitories.

The Qinfa Mine II is currently in construction, with the construction of the two vertical shafts completed, the heading of the inclined shaft is in progress.

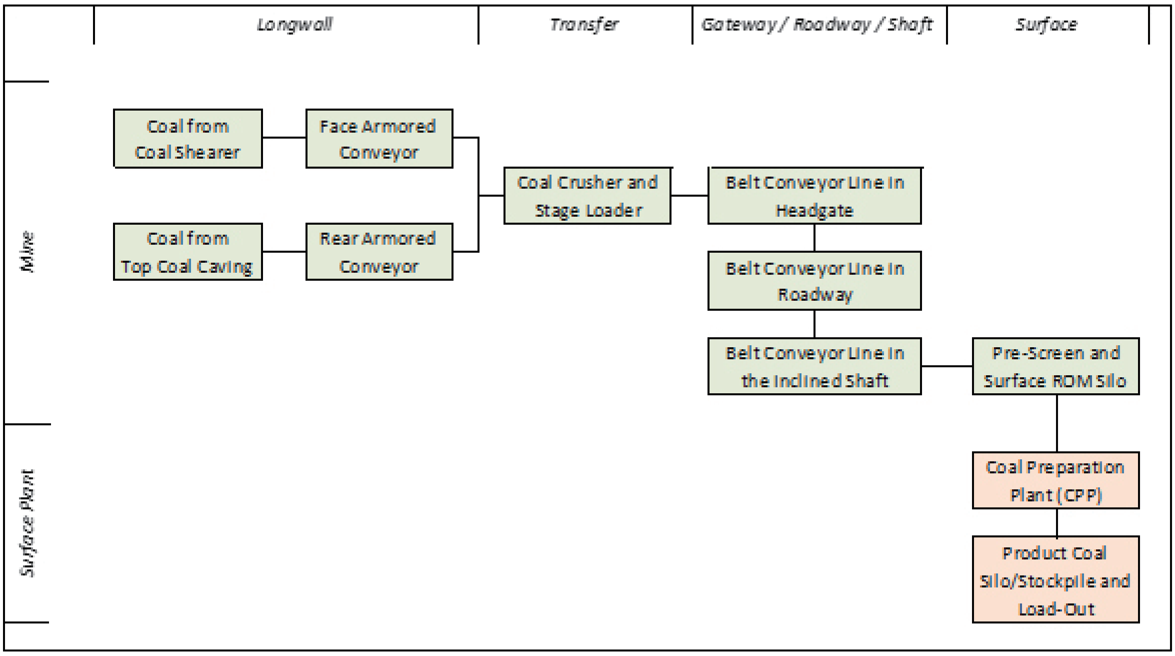
The mine is planned to develop the southern part of the coal seam B within the permit area. Three mining sections have been preliminarily planned for the mine in the FS, and three working faces are proposed to operate at the same time to achieve the planned full capacity. After the shafts sinking to the bottom in the coal seam, three underground roadways are planned in mining section I along coal seam B to the east, namely the section I belt roadway, the auxiliary transportation roadway, and the north-wing air-returning roadway.

9.7 General Flowsheet of Coal Mining and Handling

Coal will be extracted from the coal seam at the longwall by a coal shearer. The cut coal is falling on an armoured face conveyor and is scraped to the headgate of the panel where it through beam stage loader the coal will be transferred to a belt conveyor installed in the headgate. Where the headgate reaches the coal transport main road a belt conveyor installed in the road takes over the coal. The main road belt conveyor is hauling the coal uphill (lifting) to the junction point with the inclined shaft where the option for bunkering some coal could be provided. Subsequently, the coal is transferred to the belt conveyor in the incline and hauled uphill to the surface and transferred to the mine ROM coal silo.

The target coal seam B is considered to be mined firstly by three longwalls (face) at the same time in the Qinfa Mine I and Qinfa Mine II. ROM coal from the ROM coal silo will be transported to the proposed coal preparation plant for washing, or directly to the product coal silo or barge terminal. A simplified flowsheet of underground mining and coal handling at the surface is provided in Figure 26.

Figure 26: Flowsheet of Coal Mining and Handling



9.8 Mining Equipment and Capabilities

9.8.1 Main Mining Equipment

The two mines are planned to be operated with fully mechanized longwall system, the main equipment consists of one double-drum coal shearer which is rail mounted and travels over the main armoured conveyor that can stretch the full panel width of up to 240 m. The hydraulic shields to support the roof after each shearer cut are moving forward hydraulically and are also pushing the connected armoured conveyor forward toward the coal face. At the head and tail entries of the working face, where the drives for the armoured conveyor and transfer units are installed and entry shield supports are placed to support, the normal hydraulic support shield is installed behind the rear armoured conveyor. The hydraulic shields are pulling the rear armoured conveyor forward when advancing. A single support shield is typically 1.75 m wide.

The ROM coal is mainly transported by belt conveyors both in the underground and on the surface, the belt conveyor line starts from the headgate, the main road and main inclined shaft finally to the ROM coal silo. This belt conveyor line is normally several hundred to thousand metres long and consists of multiple belt conveyor units. At the transfer point from the AFC in the longwall to the belt conveyor line at the headgate, a crusher reduces oversize coal lumps to a suitable size for extensible belt conveyor transport. At the surface, a pre-screening unit is provided prior to the ROM coal silo.

The movable hydraulic and electric support units placed in the headgate to supply the longwall equipment. Power supply cables along the roadway and gateway walls supply the units from the transformer sub-station.

The following Table 13 provides an overview of the main equipment of the two mines proposed in the FS. Please noted that the panel equipment listed in the table is only for one panel usage.

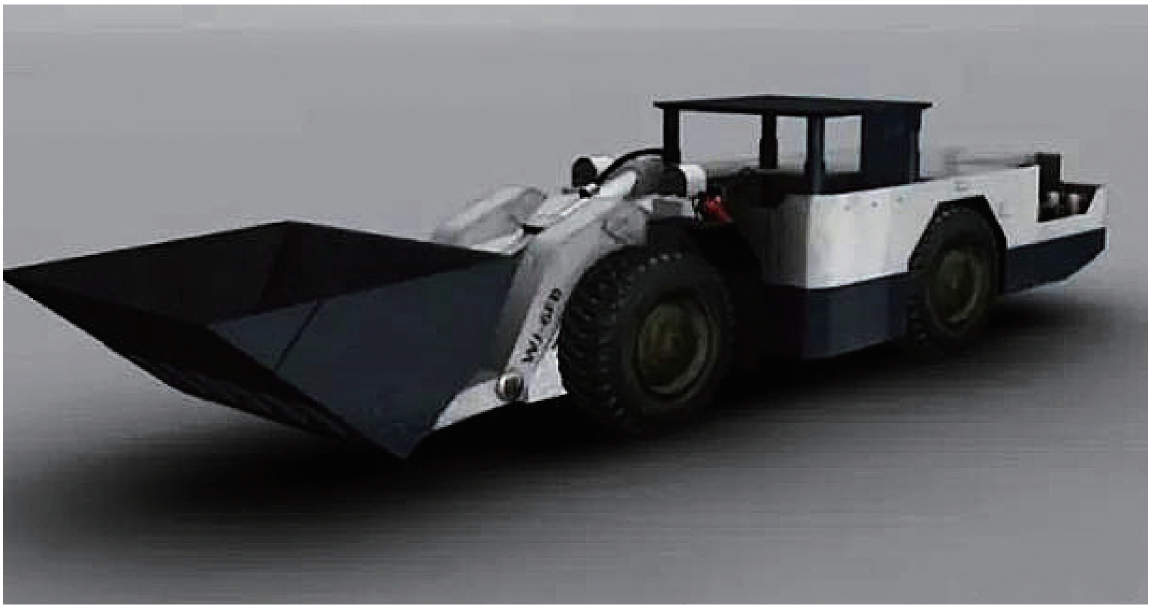
Table 13: Coal Mining and Transportation Equipment List

Qinfa Mine I					Qinfa Mine II			
Equipment name	**Model**	**Quantity**	**Power** *(kW)*	**Max. capacity**	**Equipment name**	**Model**	**Quantity**	**Power** *(kW)*
Drum shearer	7LS06	1	1330	Max. cut height 5.5 m	MG500/1180-WD	1	1180	Max. cut height 4.8 m
Hydraulic support	DBT7592/22/45	143	–	7592 kN	ZY8600/24/50D	143	–	8600 kN
Transition hydraulic support	ZY8600/23/47	6	–	10,000 kN	ZY8600/23/47	6	–	8600 kN
Face-end support	ZY8600/23/47	4	–	12,000 kN	ZY8600/23/47	4	–	8600 kN
Individual hydraulic prop	DW45-200/110X	100	–	4.5 m, 200 kN	DW45-200/110X	100	–	4.5 m, 200 kN
Hinged girder	DJB1000/300	50	–	1.0 m, 400 kN	DJB1000/300	50	–	1.0 m, 400 kN
Rear armored conveyor	SGZ1000/2×1000	1	2*1000 kW	2500 t/h	SGZ1000/2×855	1	2*855 kW	2200 t/h
Crusher	PCM400	1	400 kW	>2500 t/h	PCM400	1	400 kW	>2500 t/h
Reversed loader	SZZ1200/525	1	525 kW	3000 t/h	SZZ1200/525	1	525 kW	3000 t/h
Extensible belt conveyor	SSJ1200/2×450	1	2×450kW	2000 t/h	SSJ1200/2×450	1	2×450kW	2000 t/h
Main haulage shaft conveyor		2	4*800 kW	3500 t/h		4	2*630kW, 1*630kW, 1*900kW	4000 t/h, 2000 t/h, 2000 t/h

9.8.2 Auxiliary Transport Equipment of Coal Mine

Diesel-powered rubber-tyred vehicle is proposed in the FS for Qinfa Mine I and Qinfa Mine II as the main vehicle for auxiliary transportation. Figure 27 shows a diesel-powered rubber-tyred vehicle used in an underground coal mine.

Figure 27: Diesel-powered Rubber-tyred Vehicle



9.8.3 Coal Mine Industrial Site and Auxiliary Facilities

The mine surface plant at the two mines is similar in function. For the ROM coal arriving from underground, silos and stockpiling is provided prior to feeding the coal preparation plant. Other surface facilities at the plants are power supply, transformer and distribution units, water treatment and supply, the maintenance and repair workshops and yards, material warehouse, equipment storage yard with handling crane. Mine administration and office buildings are supplementing the surface facilities.

9.8.4 Mine Drainage Equipment

The mine water drainage system as designed and installed is simple. Mine water is first collected in a sump at the lowest point of the mine and is then pumped to a central pumping station near the landing of the inclined shaft. For each mine project, the main pumping station is provided with 3 sets of dewatering pumps. During the normal water influx period of the mine, one of the three pumps is working, one standby and one in maintenance, and one of the two drainpipes is working and the other standby. During the maximum water influx period, two pumps work, the third one is in maintenance, and two drainpipes work at the same time. The water is pumped to the surface through a pipeline installed along the wall of the inclined shaft. At the surface, the mine water receives basic treatment and is then used as industrial water at the mine plant, used for CPP process water, or is discharged. The following table shows the estimated average water influx to the mines and the designed pumping capacity.

The nominal and maximum water influx estimated in the FS for the two mines is 200 m^3/h and approx. 300 m^3/h, respectively. This is considered to be a moderate influx level. The designed pumping capacity to handle this influx with a safety margin is 720 m^3/h.

9.8.5 Ventilation Equipment

Mine ventilation is mainly required to provide the underground workings with fresh air, and to dilute and remove mine gas. As a standard, two mine ventilation fans are installed at the mouth of the air return shaft. One should provide the required estimated ventilation air volume, while the second would provide backup during maintenance and emergency. In the underground, a system of air doors manages the airflow to all underground workings. Local fans with flexible air ducts provide temporary ventilation to the roadways, gateways and panel entries under development.

9.8.6 Coal Mine Control and Safety

The operations of the two mines are monitored from central control rooms at the mine office building of each mine. Through various camera and sensors located at different area to monitor ROM coal mining operation of the working face, the ventilation, gas content, equipment status and underground worker's location.

Mine safety must be provided by the training and attitude of each mine worker and management. Underground, safe working conditions must be provided and the necessary emergency equipment must be installed. Abandoned (mined out) panels must be sealed with brickwork and the gas flow must be controlled.

Mine workers receive safety training regularly. mine safety plan for the two mines is recommended to be prepared in advance.

9.8.7 Equipment Maintenance and Repair

The proposed workshops and equipment assembly areas are located at the surface industrial area of each mine. The workshops are equipped for maintenance and repair of hydraulic supports, other heavy mine equipment, the fabrication of steel supports (I-beam or U-shape steel) for roadways, and other mechanical, hydraulic and electrical repair work underground or in the surface plant. Maintenance and repair services are also provided by equipment suppliers which are hired on-demand.

9.8.8 Power Supply

A new diesel power station has been built in the industrial site of Qinfa Mine I and Qinfa Mine II in SDE Mining Area respectively, which will bear all the power load of Qinfa Mine I and Qinfa Mine II, and the other power supply will be drawn from the mine diesel generator set. The power supply of the mining area is guaranteed.

The designed overall layout of the Qinfa Mine I and Qinfa Mine II is shown in Figure 21. The industrial site of Qinfa Mine I is located at the western boundary of the tenement area, near the road on the south side of the Durian River, and the industrial site of Qinfa Mine II is located in the middle of the license, close to the provincial highway.

The main surface facilities and ROM coal stockpiles will be independently constructed in each mine's surface site. AJB Indonesia has designed an optimal and shortest coal transport road for the SDE coal project, with a length of 35 km and a width of 14 m, connecting the SDE coal mine area to the proposed SDE terminal. An independent CPP will be constructed in each surface site by connecting the ROM silo directly through the belt conveyor. The proposed gangue stockpile for each mine is located near the surface industrial site.

SRK is of the opinion that the designed mine layouts and location of all surface facilities are functional and well-adjusted to the design of the underground mine. Some final adjustments of the layout might still be necessary once the final mine design and exact location of the CPP have been confirmed.

9.9 Waste Rock Management, Surface Subsidence, Mine Closure and Land Reclamation

Waste rock is generated during underground development work at the mines. It is usually hauled to the surface and dumped in a designated area near the mine industrial plant.

The FS confirms the possibility of future surface subsidence of the coal mines, and it is believed that changes in rock conditions could cause surface subsidence due to the influence of mining. Due to the good rock mechanical properties of the thick limestone overlying the Berai Formation, the FS estimates that the depth of surface subsidence is expected to be around 1 m. However, because the rock stratum in this area is clay rock with strong water-resisting property, and the coal seam is thin, the overall surface subsidence caused by underground mining is slow, which has little impact on the growth of woodland plants. Attention must also be paid to streams, water bodies and land drainage systems to avoid backwaters from subsidence and the possible infiltration of surface water into the mine through disturbed formations.

The short time span until the closure of the two mines would require that the necessary planning and preparations should be done and that the necessary funds should be allocated. A detailed review of the situation and requirements is provided in Section 12, Environmental, of this Report.

9.10 Manpower

SRK believes that the proposed workforce according to the FS is reasonable. But considering that the geological structure of Qinfa Mine II is more complex than that of Qinfa Mine I, it is recommended that more employees will be required in Qinfa Mine II in the future to meet the mine production needs.

Table 14: Labors of Qinfa Mine I and Qinfa Mine II

Mine	Production workers	Managerial staff	Other	Total
Qinfa Mine I	873	89	140	1,102
Qinfa Mine II	873	89	140	1,102

Skilled and experienced underground coal mining workers in Indonesia are rare and might be hardly available in sufficient numbers for recruitment. The employment of a higher number of skilled Chinese personnel might be a necessity for the initial years of operation until a local workforce can be built and trained. Some key operator, supervisor and management positions should be considered to be staffed with Chinese or other experienced expatriate personnel for possibly a longer period. This is a factor to be considered for workforce planning and is important for ramping-up and later maintaining the planned coal production. Accommodation requirements for a larger number of expats may be more demanding.

The basic requirements for labour skills and workforce level are briefly described in the FS. Before start-up of the mine, SRK would suggest preparing and conduct a detailed training program in order to assure timely and adequate training of the workforce.

10 COAL PREPARATION PLANT (CPP)

Coal preparation is to remove those undesirable materials from the ROM coal by employing separation processes that are able to differentiate between the physical and surface properties of coal and the impurities. Through proper coal preparation, a uniform product is achieved. The main purpose of the coal preparation assessment for the project is to reduce the ash content of the ROM coal which will be extracted from a proposed longwall mining operation.

The ROM coal is a coal material with various particle sizes extracted from mining operations without crushing/screening, which often comprises rocks, middlings, minerals and contamination. It often reports to the coal preparation plant as a raw material for coal preparation.

A general necessity for coal washing was assessed in the FS. However, SRK has not seen evidence of Qinfa's plans for constructing a coal washing plant. In this case, the descriptions and discussions provided herein regarding the CPP are based on the assessed necessity for coal washing.

10.1 ROM Coal Quality

According to SRK's reserve model and the planned working sections, the estimated run-of-mine (ROM) coal ash content of Seam B is in an approximate range between 26% and 40%, with the total sulphur content generally lower than 1%.

It has been assessed that the ROM coal requires washing in order to produce marketable coal products that are more competitive for export and domestic utilization. The high ash content in the ROM coal necessitates beneficiation through washing to reduce the ash percentage and improve the quality of the coal products before they can be marketed effectively.

10.2 Main Washing Process

Considering the hauling distance of the ROM coal, Qinfa Mine I and Qinfa Mine II should have two independent mine-mouth CPPs separately. The FS has assessed the coal washability of the ROM coal produced from the surrounding coal mines, the dense medium method is proposed to be used as the core separation unit for the two mines' proposed CPP and the two CPPs have the same separation circuits.

According to the CPP preparation flowchart planned in FS, the separation process mainly relies on three separation circuits: the DMV coal separation circuit, the fine coal separation circuit (core separation unit: DMC) and the coarse slurry processing circuit (core separation unit: classifying cyclone).

The belt conveyor transports the ROM coal to the ROM coal crusher in the transfer station, where the ROM coal is crushed to a size of less than 200 mm. The downstream screen in the CPP then separates the flow (-200 mm) into two size groups, the -13 mm group and +13 mm group. The +13 mm overflow is fed to the DMV circuit for further separation. The -13 mm underflow is conveyed to the DMC coal separation circuit after sizing and desliming. If necessary, the -13 mm underflow can also be bypassed and directly mixed with the final clean coal product.

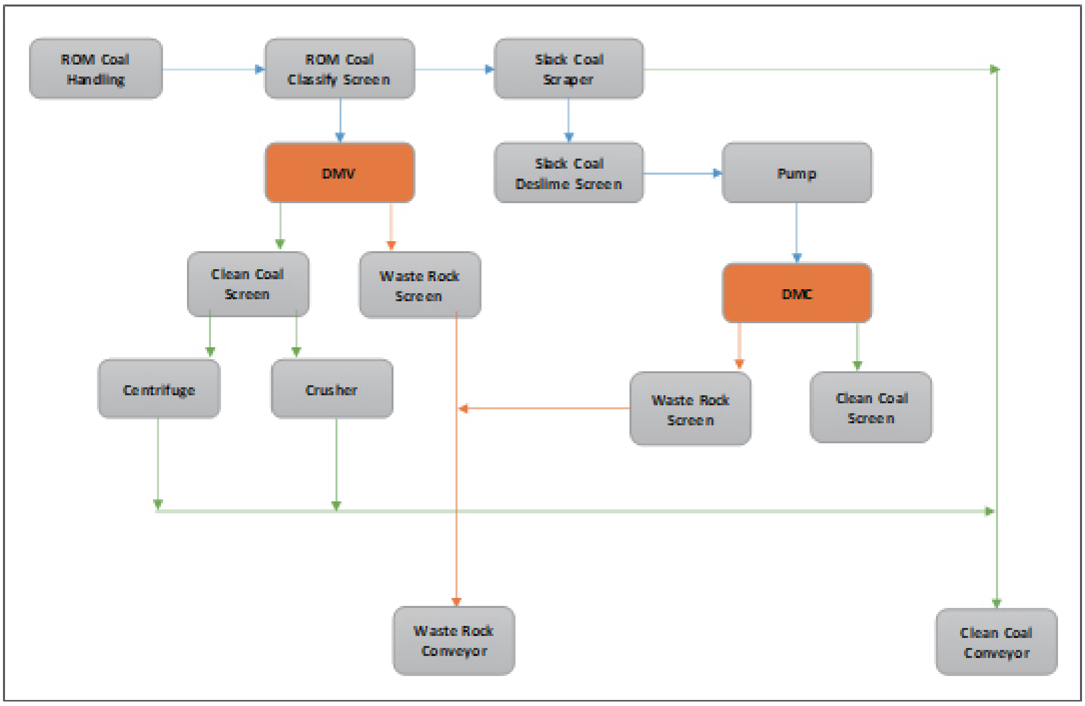
In the DMV coal separation circuit, the +13 mm overflow is blended with water and the dense medium undergoes DMV separation. The lump size waste rock and light overflow are separated inside the DMV, and the light overflow is then screened into two sizes of clean coal through a double-deck dense-medium separation screen. After further crushing and de-watering, the separated clean coal from the DMV circuit is transported to the final clean coal yard.

In the DMC coal separation circuit, the -13 mm underflow is firstly deslimed by a sieve bend and deslime screen. The overflow is transported and separated in the DMC. The light flow is transported to the final clean coal yard after draining off the dense medium.

Underflow water from the deslime screens is pumped into the classify cyclone circuit for further processing. The residual fine clean coal and slurry water are separated from the circuit. Slurry water enters the thickener. In the thickener, coagulant (poly-aluminium chloride) and flocculant (polyacrylamide) are added to accelerate the settlement of the slurry in the concentration tank, which is then retrieved and dewatered by filter press. The filter cake can be sold for its coal content or be added to other products if sales specifications allow. The water in the thickener is recycled for reuse in the CPP closed water circuit.

The dense medium used in the CPPs is a water-magnetite mixture. The diluted underflow medium from all medium draining screens is recycled and returned to the diluted medium barrel. A magnetic separator retrieves the magnetic dense media from the coal waste material and returns it to the process medium distribution tank. The dense medium system is equipped with a densitometer and a water compensation valve to allow automatic density control.

Figure 28: Proposed Coal Handling Flowsheet of the CPP



10.3 Clean Coal Yield

According to the FS, the operation of the CPPs would achieve an overall average of 75% of mixed marketable coal yield with total moisture ranging from 8 to 11, ash content ranging from 22% to 26% and calorific value ranging from 5,000 to 5,500 kCal/kg (GAR).

11 PROJECT IMPLEMENTATION

The project schedule for the development of the underground workings, equipment installation, and the surface facilities as required for the project stage covering operation in each initial mining section for Qinfa Mine I and Qinfa Mine II is provided by the Client. The Qinfa Mine I has started mining activity in December 2023 with an estimated three years' ramp-up period, it is estimated that the full capacity production will start from early 2027.

The development and construction period for this initial stage of the Qinfa mine II is scheduled to be 12 and 16 months before retreat mining of the first longwall panel commenced.

SRK concludes that the schedule as prepared is based on the experience of the Chinese coal mining construction industry from local projects in China. The time scheduled for development and construction appears realistic and the design work and site preparation should be carried out to a sufficient level before the start of the actual development work. It may be discussed if some extension of the scheduled development time may be allowed considering the remote location in Indonesia and the pioneering status of this underground project in Indonesia. For final project planning a schedule with more detailed preparation, development, equipment procurement and installation activities would be required.

SRK notes that the project development and construction schedule prepared by the Client is for the initial project stage and covers development for mining in the initial mining block of each mine, with one mining face/longwall. The schedule for construction of the surface facilities, which is indicated as "civil engineering" activity in the FS schedule, would require a more detailed breakdown of activities for review and the final project planning.

12 ENVIRONMENTAL, LICENCE, SOCIAL AND COMMUNITY IMPACT

12.1 Operating Licences

12.1.1 Mining Licence

The Indonesian National Law on Mineral and Coal Mining (No.4 of 2009) ("**Mining Law**"), can issue mining licences under the following three categories:

- Mining Business Licence – an Izin Usaha Pertambangan (IUP) is a general mining licence issued to specific companies for conducting mining business activities within the mining area of a Wilayah Usaha Pertambangan (WUP) (a Commercial Mining Business Area or WUP – a mining area for larger scale mining);

- Special Mining Business Licence – an Izin Usaha Pertambangan Khusus (IUPK) is a licence issued to specific companies for conducting mining business activities within the mining area of a specific Wilayah Pencadangan Negara (WPN) (a State Reserve Area or WPN – a mining area reserved for the national strategic interest); or

- People's Mining Licence – an Izin Pertambangan Rakyat (IPR) is a licence granted to Indonesian citizens/invertors only for conducting mining business of limited size and investment, within the mining area of a Wilayah Pertambangan Rakyat (WPR) (a People's Mining Area or WPR – a mining area for small scale local mining).

SRK has sighted an IUP relating to the production operation of the PT Sumber Daya Energi (No. 545/13/IUPOP/D.PE/2014), which was issued by the Kotabaru Regency of South Kalimantan Province on 14 May 2014. The IUP states that the concession covers an area of 18,500 Ha and the period of validity is 10 years. The IUP can be extended twice for up to 10 years each time.

12.1.2 Other Operating Licences

SRK has sighted an Environmental Licence for the Project which was issued to the PT Sumber Daya Energi by the Kotabaru Regency of South Kalimantan Province on 2 May 2014. The Environmental Licence summarized the basic information of mineral rights, mining production plan, environmental protection and reclamation.

The other key project development permits for Indonesia are the 'Borrow and Use Permits' for forest areas. These are administered through the Law on Forestry (No.41 1999) and the Government Regulation (No. 24 2010) – regarding utilisation of forest areas, and are issued by the Minster of Forestry.

In addition to the Environmental Permit and Forest Borrow and Use Permit, a number of operational permits may be required for the Project, such as Water Extraction Permit, Hazardous Waste (B3) Handling and Operations Permit, Wastewater Disposal Permit, etc. No aforementioned operational permits for the Project have been sighted as part of this review. SRK recommends the company obtain relevant operational permits according to the requirements of Indonesian laws and regulations and the actual situation of the Project.

12.2 Environmental and Social Due Diligence Purposes

The objective of this environmental due diligence review is to identify and/or verify the existing and potential environmental liabilities and risks, and assess any associated proposed remediation measures for the SDE Underground Coal Project.

12.3 Environmental and Social Related Review Process, Scope and Criteria

The process for the verification of the environmental compliance and conformance for the SDE Underground Coal Project is to review and inspect the project's environmental management performance against:

– Indonesian National environmental regulatory requirements.

– World Bank/International Finance Corporation (IFC) environmental and social standards and guidelines.

12.4 Environmental Protection Approvals

Indonesia's Environment Law provides that an Environmental Impact Analysis ("**AMDAL**") is required for those businesses and/or activities which exploit natural resources and may cause environmental pollution and/or damage and/or degradation of natural resources. An AMDAL consists of an environmental impact assessment (an Analisis Dampak Lingkungan – or ANDAL), an environmental management plan (a Rencana Pengelolaan Lingkungan – or RKL), and an environmental monitoring plan (a Rencana Pemantauan Lingkungan – or RPL). Businesses and/or activities that impact the environment but are not identified as requiring an AMDAL under the Environment Law (including in the Environmental Decree) must prepare an Environmental Management Efforts and Environment Monitoring Efforts (UKL-UPL). The AMDAL will be evaluated by the AMDAL Evaluation Commission (Komisi Penilai AMDAL) established at the relevant level of government, which will issue a recommendation to that government.

Certain business activities in Indonesia which impact the environment require an environmental license. The approval process for such a licence involves three stages:

1. Drafting an Environmental Impact Analysis (AMDAL) or Environmental Management Efforts and Environment Monitoring Efforts (UKL-UPL);

2. Evaluation of the AMDAL or UKL-UPL and obtaining an AMDAL approval or UKL-UPL recommendation; and

3. Application for an Environmental Licence.

The application for the Environmental Licence will be submitted to the relevant level of government; either the national Minister for the Environment, the Governor of the relevant Province or the Regent/Mayor of the relevant regency/city.

SRK has sighted an AMDAL document (including an ANDAL and a RKL-RPL) for the SDE Underground Coal Project which was produced in December 2013. The Environmental Licence for the Project (No. 188.45/339/KUM/2014.

12.5 Environment, Society, Health and Safety

12.5.1 Project Site Ecological Assessment

The project's EIA should determine the extent and significance of any potential impacts on subsidence and surface water systems. The EIA should also propose effective measures to reduce and manage these potential impacts. According to the EIA report of the Project, the mine site is partially located on production forest plantations (KBHP), artificial forest plantations (KBTTP), and rivers. The Project's EIA report also provides an overview of the baseline conditions of vegetation, fauna and aquatic life at the mine site. The Project's environmental management plan provides the management measures relating to the site ecology, such as planting of trees, prohibition of hunting, good planning, etc.

SRK recommends that the operational areas of land disturbed for the development of the underground mining Project be surveyed and recorded on an annual basis and the topsoil should be collected for future reclamation.

12.5.2 Waste Rock and Waste Rock Dump Management

According to the mine design report, the waste rock dump ("**WRD**") is located in the east of the main shaft site. The excavated waste rock in the construction period will be transported to the WRD for stacking, and later used for backfilling the mined-out area together with the excavated waste rock in the production period. SRK recommends that the Company formulate a comprehensive design for waste rock dumping and collect the topsoil for future rehabilitation.

No geochemical characterization of waste rocks or acid rock drainage assessment has been sighted as part of this review. Acid rock drainage ("**ARD**") refers to the acidic water that is created when sulphide minerals are exposed to air and water and, through a natural chemical reaction, produce sulphuric acid. ARD has the potential to introduce acidity and dissolved metals into water, which can be harmful to surface and groundwater. However, the environmental licence of the Project makes a brief description of the acid mine water treatment.

12.5.3 Water Management

The demand for raw water in the Kotabaru area is quite large, both for household needs, agricultural irrigation, and inland fisheries development. The Project area is rich in surface runoff, with the main river, the Sampanahan River, flowing from west to east through the middle of the mine site. As a perennial river, it has a large volume of water. The mine design states that the production water is sourced from a river that flows through the northern part of the industrial site. Domestic water is taken from the local tap water system, which is filtered and purified to meet drinking water standards.

According to the mine design report, the total water consumption for production and domestic use at the mine's industrial site is estimated to be 2,265.19 m^3/d, of which 759.69 m^3/d for surface production and domestic use and 1,447.56 m^3/d for underground fire sprinkler use. Other water consumption is 57.94 m^3/d.

The potential negative impacts of a mining project to surface water and ground water are due to the indiscriminate discharge of untreated production and domestic wastewater. In addition, the mining activities may lead to the change of the groundwater table. The wastewater for the Project mainly includes mine water, coal washing wastewater, dust suppression wastewater, waste rock leachate, domestic sewage, etc.

The normal and maximum mine from underground mining is estimated to be 200 m^3/h and 300 m^3/h respectively. The environmental management plan of the Project states that the settling pond and wastewater treatment station will be constructed to dispose of the wastewater. It is recommended that the Company pay attention to the treatment of acid wastewater. The mine design also proposes the construction of mine water treatment facilities and industrial site production and domestic sewage treatment facilities to dispose of the wastewater.

SRK recommends that quality monitoring be undertaken of the groundwater and surface water resources within the project area (including upstream and downstream of the project area), and also any site water discharges. This water quality monitoring should form part of a broader site environmental monitoring program. It is recommended that the Company take into account the water needs of nearby residents to make sure the Project will not have any adverse impact on the local villagers' water use. SRK also recommends the Company construct an effective drainage. In addition, some prevention measures, such as surface hardening, accident pool and second containment facility, are recommended to mitigate the water pollution risks.

12.5.4 Dust Management

The dust emission sources for the Project are mainly from mining, loading and unloading, waste rock dumping, coal screening and movement of vehicles and mobile equipment. The environmental management plan and mine design for the Project provide the following proposed site dust management measures:

– Install dust suppression net for the coal stock yard;

– Use of dust remover;

– Water sprinkling of crashing, screening, coal stock yard and on roads;

– Tree planting around office and shaft areas; and

– Haul road maintenance and vehicle speed limit.

SRK opines the above fugitive dust mitigation measures are reasonable and recommends that the Company adopt the proposed measures during the Project's construction and operation. SRK also recommends including ambient air quality monitoring as part of a site environmental monitoring program.

12.5.5 Noise Management

The main sources of noise emissions for the Project are mining, air compressor, pump, vibrating screen and mobile equipment (mainly loading, unloading and haulage activities). The environmental management plan and mine design propose the following noise management measures:

– Use of low noise equipment where possible;

– Enclose all high noise equipment;

– Use of muffler for noisy equipment;

– Equipment maintenance;

– Conduct greening around office and shaft; and

– Use of ear plugs for workers.

12.5.6 Hazardous Substance Management

Hazardous materials have the characteristics of corrosive, reactive, explosive, toxic, flammable and potentially biologically infectious, which pose a potential risk to human and/or environmental health. The hazardous materials will be generated mainly by the project's construction, mining, coal washing, including hydrocarbons (i.e. fuels, waste oils, and lubricants), chemical and oil containers, batteries, medical waste, and paint.

12.5.7 Environmental Protection and Management Plan ("EPMP")

The purpose of an operational Environmental Protection and Management Plan ("**EPMP**") is to direct and coordinate the management of the Project's environmental risks. The EPMP documents the establishment, resourcing, and implementation of the Project's environmental management programs. The site environmental performance should be monitored, and feedback from this monitoring could then be utilised to revise and streamline the implementation of the EPMP.

SRK has reviewed the Project's RKL and RPL and opines that the RKL and RPL provide the basis for the Project's EPMP. SRK recommends that as the Project moves toward construction and operation, the Company develop and implement an operational EPMP to be in line with the recognised international practices.

12.5.8 Mine Closure and Reclamation Plan

The Government released GR 78/2010 dealing with reclamation and post-mining activities for both IUP holders on 20 December 2010. This regulation updates PerMen 18/2008 issued by the MoEMR on 29 May 2008. On 29 February 2014, the MoEMR issued PerMen 7/2014 (the implementing regulation for GR 78/2010) detailing the requirements and guidelines for the preparation of reclamation and post-mining plans.

A mining concession holder, among other requirements, must provide:

– A five-year reclamation plan;

– A post-mining plan;

– A reclamation guarantee which may be in the form of a joint account or time deposit placed at a state-owned bank, a bank guarantee, or (if meeting certain eligibility criteria) an accounting provision; and

– A post-mining guarantee in the form of a time deposit with a state-owned bank.

The requirement to provide reclamation and post-mining guarantees does not release the mining concession holder from the requirement to perform reclamation and post-mining activities. The reclamation and mine closure guarantees may only be withdrawn upon approval from the MoEMR, the Governor, the Regent or the Mayor, as applicable. PerMen 7/2014 also sets out the procedures for the preparation of the reclamation and post-mining activities report.

The recognised international industry practice for managing site closure and rehabilitation is to develop and implement an operational site closure and rehabilitation planning process and document this through an operational Closure and Rehabilitation Plan. This operational closure planning process generally includes the following components:

– Identify all site closure stakeholders (e.g., government, employees, community);

– Undertake stakeholder consultation to develop agreed site closure criteria and post-operational land use;

– Maintain records of stakeholder consultation;

– Establish a site rehabilitation objective in line with the agreed post-operational land use;

– Describe/define the site closure liabilities determined against agreed closure criteria;

– Establish site closure management strategies and cost estimates to address/reduce site closure liabilities;

– Establish a cost estimate and financial accrual process for site closure; and

– Describe the post site closure monitoring activities/program to demonstrate compliance with the rehabilitation objective/closure criteria.

12.5.9 Occupational Health and Safety ("OHS")

A well developed and comprehensive safety management system comprises site inductions, site policies, safe work procedures, training, risk/hazard management (including signage), use of personal protective equipment ("**PPE**"), emergency response process, incident/accident reporting, an onsite first aid/medical centre, designated safety responsibilities for site personnel, regular safety meetings and a work permit/tagging system.

12.5.10 Social Related Aspects

The Project is located in Kotabaru Regency, the eastern part of South Kalimantan, Indonesia. The general surrounding land of the mine site comprises mainly secondary forest and palm plantation park.

According to the EIA report, there are a number of villages that may be affected by the mining activities, including Magalau Hulu Village, Magalau Hilir Village and Siaynh Village of Kelumpang Barat District, Kotabaru Regency, South Kalimantan Province. The majority of the population in the Project area is Muslim and the people generally develop cultural values in line with that religion. The EIA report states that the community in the area was quite open and could accept newcomers well. The results of documentation and field interviews show that the indigenous tribes in this area consist of the Banjar and Dayak tribes. Besides that, there are Javanese, Bugis, Tator, Batak, and Chinese tribes.

In Indonesia, Corporate Social Responsibility ("**CSR**") and community development ("**CD**") have been legally mandated by Law 40/2007 on Limited Liability Company Law. Beside direct employment for local people, mining can lead to better standards of living for local people if natural resource extraction occurs responsibly and is well managed meeting government and community requirements. A well-developed CSR/CD can promote the relationship between the Company and its stakeholders. As the Project moved towards construction and operation, there are six themes suggested for the CSR/CD development which comprise infrastructure and basic utilities, economy, education, health, environment and donation.

13 COAL MARKET

13.1 Seaborne Thermal Coal Market Analysis

Thermal coal, a key energy source for electricity generation, plays a significant role in the global energy market. The seaborne trade of thermal coal allows flexible movement of resources across borders, meeting the dynamic energy needs of different regions. In recent years, this market has witnessed substantial volatility driven by changing demand patterns, geopolitical factors, and the push towards renewable energy sources.

Global Seaborne Thermal Coal Market: Demand, Supply, and Recent Trends

Demand Trends: Over the past five years, global seaborne thermal coal demand has been influenced by a confluence of factors. Economic growth in emerging markets, particularly in Asia, spurred increased coal-fired power generation. On the other hand, in developed economies, particularly in Europe and North America, a shift toward cleaner energy sources led to a decline in coal consumption. Additionally, fluctuations in natural gas prices have impacted thermal coal demand, as some power generators have the flexibility to switch between these fuels.

Supply Dynamics: The seaborne thermal coal supply has been shaped by production trends in major exporting countries such as Indonesia, Australia, Russia, and South Africa. Production levels have been affected by factors including mine development, weather disruptions, logistics bottlenecks, and changing government policies. Notably, recent export restrictions in some countries have further tightened the global supply.

Market Trend (2018-2023): The seaborne thermal coal market in the past five years has seen periods of both surplus and tightness. Prices were relatively subdued in the early part of the analyzed period due to ample supply. However, a confluence of factors including supply disruptions, recovering post-pandemic demand, and the geopolitical conflict in Europe fueled a surge in prices in 2022, reaching record highs. Though prices have moderated somewhat, they remain elevated compared to historical averages.

Future of Seaborne Thermal Coal in Asia

Asia holds the key to the future of the seaborne thermal coal market. The region's developing economies exhibit a growing appetite for electricity, and thermal coal remains a readily available and affordable energy source. However, there are countervailing forces at play.

Continued Reliance on Coal: Countries like India and China have large domestic coal resources but also face immense power demand. While they are investing in renewables, their energy infrastructure will likely continue to rely on thermal coal for the foreseeable future, driving seaborne imports.

Environmental Pressures: Growing international and domestic pressures to address climate change are influencing policymakers in Asia. Countries are pledging to reduce emissions and transition towards greener energy sources. This could translate to long-term declines in thermal coal demand but may not materialize in the immediate future.

Shifting Trade Flows: The recent trade disruptions have led Asian buyers to diversify their sources of thermal coal. Traditionally, major importers have relied on Australia; however, there are increasing efforts to procure coal from countries like Indonesia, Russia, and even suppliers further afield in South America.

Indonesia's Position in the Seaborne Thermal Coal Market

Indonesia holds a pivotal position within the global seaborne thermal coal market. It's the largest exporter of thermal coal by volume, and its supply is essential to meet Asian demand.

Demand and Supply Trends: Indonesia's domestic coal consumption has been rising, driven by its own economic development and power generation needs. Simultaneously, the country has ramped up coal production to cater to export markets. Despite environmental concerns, the government is committed to maintaining high coal export levels to generate foreign exchange earnings.

Price Trends: Indonesian thermal coal prices have generally followed the global market trends. The recent price surge has been highly beneficial for Indonesian producers and exporters. However, government policies that impose price caps or domestic market obligations (DMO) can sometimes introduce a degree of divergence from international price benchmarks.

Challenges and Opportunities: Indonesia's coal sector faces challenges related to environmental sustainability, fluctuating market conditions, and logistical constraints. Simultaneously, there are opportunities to secure long-term supply contracts with major Asian importers and potentially diversify into higher-value coal products.

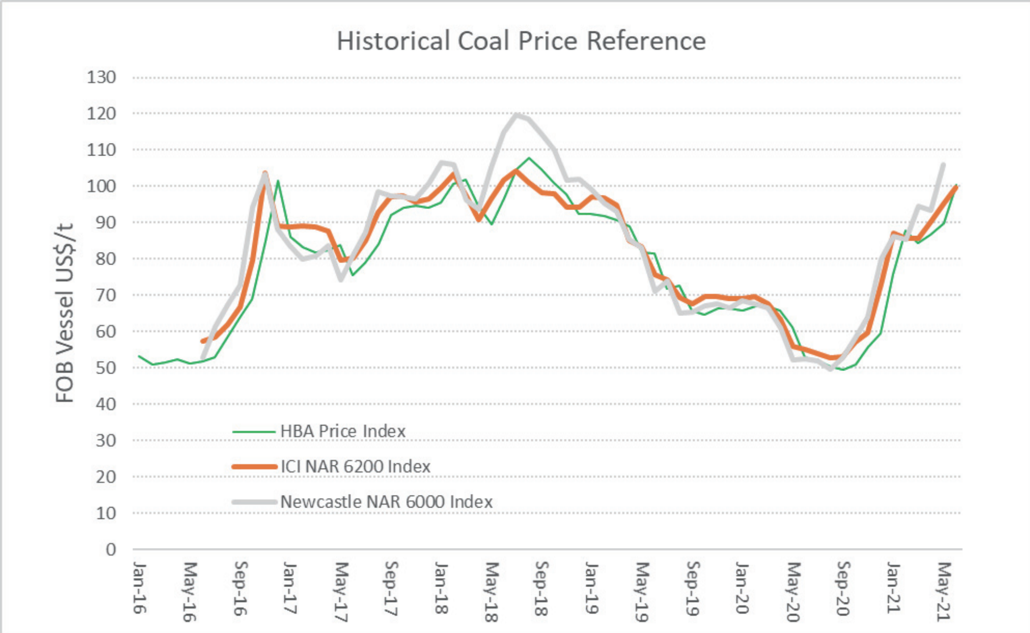
13.2 Indonesia High Calorific Coal Price Index

In order to forecast the price of the marketable coal produced from the PT SDE underground coal project, three coal price indexes, Indonesian Coal Price Reference (HBA and HPB), Indonesian Coal Index (Argus/Coalindo) and globalCOAL's NEWC Index were adopted in the Report for reference.

The HBA and HPB have been publishing monthly by the government of Indonesia since February 2009 to be used by coal producers for all spots as well as term contracts. The HBA was calculated based on the calorific value of 6,322 kcal/kg (GAR), stated to be using a formula based on the average of ICI-1 (Indonesia Coal Index) 25%, Platts-5900 25%, NEX (Newcastle Export Index) 25%, and GC (globalCOAL Index) 25% and it was calculated considering coal with GCV (GAR) 6,322 kcal/kg, Total Moisture (arb) 8.00%, Total Sulphur 0.8% (arb), Ash Content 15 % (arb) and delivery free on Board (FOB) Vessel basis and apply to spot contract. The HPB coal price takes into account the quality of the coal, calorie level, water content, sulphur content, and ash level in line with the brand of the coal, called HPB Maker. The HPB Maker consists of 8 coal brands that have been popularly known in the market. Figure 29 shows the historical HBA monthly price from January 2016 to June 2021.

The Argus/Coalindo Indonesian Coal Index Report is published every week of the year, the index is based on the assessments are for deliveries on a FOB Kalimantan basis. Prices are in US dollars per metric tonne, of which ICI-1 is published based on a calorific basis of GAR 6,500 kCal/kg (6,200 NAR).

Figure 29: Historical Coal Price Reference



14 RISK ASSESSMENT

14.1 Overview

Coal mining is a relatively high-risk industry and is subject to a number of operational risks. Some of which can even be beyond a mine's management and operators' control. Project risks may decrease from the exploration and development stage to the production stage, and over LOM through mine closure stage.

Reporting standards and rules governing the listing of securities require the disclosure of general and specific risks associated with a project if relevant and material to the Company's business operation. For this risk assessment which is covering technical-economic project and operation risks, SRK has identified the following relevant risk areas for which specific risks and hazards were reviewed and rated:

- Geology
- Mine construction and development
- Mining and processing
- Capital and operating costs
- Environmental issues
- Social, health, and safety concerns; and

- Other risks (natural risks influencing operation; permitting; etc.)

The risks associated with the above items may cause incidents such as mine roof collapse, instability of mine workings and slopes, flooding, explosions caused by methane gas or coal dust, and fires. It may result in personal injury to employees as well as damage to or destruction of property, mine structures and facilities. These risks may also cause increased costs, business interruptions, legal liability, environmental damage, and other damages, and must be considered in project and investment decisions.

The risk assessment by SRK in this Report is qualitative and considers the risks at the time of the review. It follows the Australian Standards AS/NZ 3931:1998, AS/NZ 4360:1999, (Risk Management), and HB 203:2004 (Environmental Risk Management) which have been developed in line with comparable international standards.

SRK has further compared the results of its risk assessment with the risk assessment provided in the FS/PMD studies and concludes that the results and conclusions are consistent. For the IPO Prospectus, the Company will provide additional overall project risk assessment.

14.2 Risk Assessment

SRK's risk assessment covers the two mining systems Qinfa Mine I and Qinfa Mine II. The risk assessment is shown in the table below. The overall technical-economic project risk for the two mines would be rated by SRK as "Low" to "Medium".

Table 15: Risk Assessment

Risk area/hazard	Qinfa Mine I			Qinfa Mine II		
	Likelihood	Importance	Risk level	Likelihood	Importance	Risk level
Geology						
Coal resource risk (quantitative exploration or estimation errors)	Impossible	Important	Low	Impossible	Important	Low
Coal quality risks (prospecting, sampling, analysis errors)	Impossible	Moderate	Low	Impossible	Moderate	Low
Undetected significant tectonic disturbances/faults	Possible	Moderate	Medium	Possible	Moderate	Medium
Severe hydrogeological conditions (excessive underground water inflow)	Possible	Moderate	Medium	Possible	Moderate	Medium

Risk area/hazard	Qinfa Mine I			Qinfa Mine II		
	Likelihood	Importance	Risk level	Likelihood	Importance	Risk level
Mine development and plant construction						
Underground development delay	Possible	Moderate	Medium	Possible	Moderate	Medium
Delay in the construction of surface mine facilities and plants	Possible	Mild	Low	Possible	Mild	Low
Delay in the purchase of mining equipment and plant construction and installation	Possible	Moderate	Medium	Possible	Moderate	Medium
Mining and reserves						
Improper mining methods and design	Impossible	Moderate	Medium	Impossible	Moderate	Medium
Coal reserve risk (Estimation error, reduced recovery)	Impossible	Moderate	Low	Impossible	Moderate	Low
Insufficient equipment and productivity/equipment failure	Impossible	Important	Low	Impossible	Important	Low
Poor microgeological conditions (faults and disturbances)	Possible	Important	Medium	Possible	Important	Medium
Geotechnical risks (tectonic stability and pressure of roof and floor)	Possible	Important	Medium	Possible	Important	Medium
Coal reserve loss (panel mining sequence)	Impossible	Moderate	Low	Impossible	Moderate	Low
Spontaneous combustion/mine fire/coal dust explosion	Possible	Moderate	Medium	Possible	Moderate	Medium
Coal mine gas explosion/coal seam gas explosion	Possible	Disastrous	Medium	Possible	Disastrous	Medium

Risk area/hazard	Qinfa Mine I			Qinfa Mine II		
	Likelihood	**Importance**	**Risk level**	**Likelihood**	**Importance**	**Risk level**
Lack of skilled labor personnel and operations management	Impossible	Moderate	Low	Impossible	Moderate	Low
Coal handling, washing and transportation						
Insufficient coal processing capacity and insufficient inventory capacity	Impossible	Moderate	Low	Impossible	Moderate	Low
Coal preparation process, capacity, yield and quality	Impossible	Moderate	Low	Impossible	Moderate	Low
Coal transportation – disruptions and capacity (road and rail)	Impossible	Moderate	Low	Impossible	Moderate	Low
Costs, coal price and market						
Cost overruns for construction and development	Possible	Moderate	Medium	Possible	Moderate	Medium
Unexpected (additional) capital investment (cost) requirements	Possible	Moderate	Medium	Possible	Moderate	Medium
Increased operating costs (mining)	Possible	Moderate	Medium	Possible	Moderate	Medium
Increased operating costs (coal preparation)	Possible	Moderate	Medium	Possible	Moderate	Medium
Poor project financial management leading to a shortage of funds	Possible	Important	Medium	Possible	Important	Medium
Coal prices fall	Possible	Moderate	Medium	Possible	Moderate	Medium
Market and demand shortages/oversupply of coal	Impossible	Moderate	Low	Impossible	Moderate	Low

Risk area/hazard	Qinfa Mine I			Qinfa Mine II		
	Likelihood	Importance	Risk level	Likelihood	Importance	Risk level
Environment and society						
Wastewater discharge (including possible environmental impacts)	Possible	Mild	Low	Possible	Mild	Low
Waste rock and gangue discharge	Possible	Mild	Low	Possible	Mild	Low
Dust emissions	Possible	Mild	Low	Possible	Mild	Low
Hazardous waste and impacts	Possible	Moderate	Medium	Possible	Moderate	Medium
Biodiversity impacts	Possible	Mild	Low	Possible	Mild	Low
Resettlement and land rights	Possible	Moderate	Medium	Possible	Moderate	Medium
Land disturbance and subsidence	Possible	Mild	Low	Possible	Mild	Low
Coal mine closure issues	Possible	Moderate	Low	Possible	Moderate	Low
Social and labor issues	Possible	Moderate	Medium	Possible	Moderate	Medium
Stakeholder, public, community engagement	Possible	Moderate	Medium	Possible	Moderate	Medium
Future coal use and CO_2 restrictions	Possible	Mild	Low	Possible	Mild	Low
Legal, policy and other risks						
Land acquisition, compensation and management issues	Impossible	Moderate	Low	Impossible	Moderate	Low
Exploration and coal production licenses	Impossible	Mild	Low	Impossible	Mild	Low
Other licenses and permits	Possible	Important	Medium	Possible	Important	Medium
Natural risks in mining areas (floods, earthquakes, etc.)	Impossible	Mild	Low	Impossible	Important	Medium
Supply failures (electricity, water, fuel)	Impossible	Moderate	Low	Impossible	Moderate	Low

CLOSURE

This report, Competent Person's Report for Qinfa Two Underground Coal Mines in Indonesia, was prepared by

Yongchun Hou, Principal Consultant (Geology)
Competent Person

and reviewed by

Bruno Strasser, Associate Principal Consultant (Mining)
Competent Person

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APPENDIX A MINING LICENSE (IUPOP)

Mining License (IUPOP) of PT SDE (page 9 and page 10)

LAMPIRAN I: KEPUTUSAN BUPATI KOTABARU
NOMOR : 545/ 13 /IUPE/D.PE/2014
TANGGAL : 14 Mei 2014
TENTANG : PERSETUJUAN PENINGKATAN IUP EKSPLORASI MENJADI IUP OPERASI PRODUKSI KEPADA PT. SUMBER DAYA ENERGI

DAFTAR KOORDINAT WILAYAH PENINGKATAN IUP EKSPLORASI MENJADI IUP OPERASI PRODUKSI

L o k a s i
- Propinsi : KALIMANTAN SELATAN
- Kabupaten : KOTABARU
- Kecamatan : SUNGAI DURIAN
- Komoditas Tambang : BATUBARA
- Kode Wilayah : KTB. 1404IUPE0017

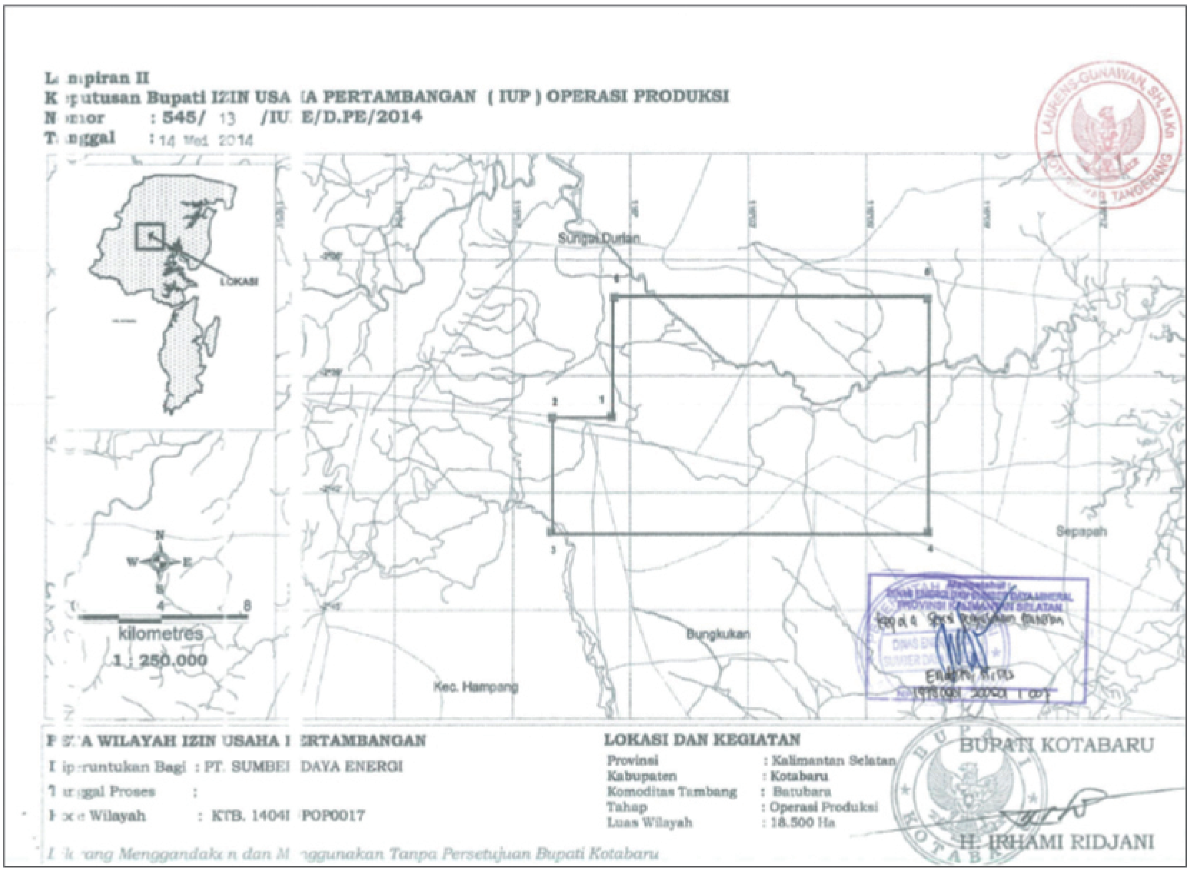
Luas Wilayah : 18.500 Ha

No. Titik	Bujur Timur (BT)			Lintang Selatan (LS)		
	°	'	"	°	'	"
1.	115	59	33,06	2	40	04,10
2.	115	58	01,18	2	40	04,10
3.	115	58	01,18	2	43	03,21
4.	116	07	37,00	2	43	03,21
5.	116	07	37,00	2	36	54,92
6.	115	59	33,06	2	36	54,92

BUPATI KOTABARU,

H. IRHAMI RIDJANI

Mengetahui :
DINAS ENERGI DAN SUMBER DAYA MINERAL
PROVINSI KALIMANTAN SELATAN


L :npiran II
K :putusan Bupati IZIN USA :A PERTAMBANGAN (IUP) OPERASI PRODUKSI
N :mor : 545/ 13 /IU: E/D.PE/2014
T :nggal : 14 Mei 2014
LOKASI
Sungai Durian
Sepapah
Bungkukan
Kec. Hampang
kilometres
1 : 250.000
P :A WILAYAH IZIN USAHA I :ERTAMBANGAN
I :peruntukan Bagi : PT. SUMBEI DAYA ENERGI
T :nggal Proses :
I :o : Wilayah : KTB. 1404I :POP0017
I :ang Menggandak :n dan M :ggunakan Tanpa Persetujuan Bupati Kotabaru
LOKASI DAN KEGIATAN
Provinsi : Kalimantan Selatan
Kabupaten : Kotabaru
Komoditas Tambang : Batubara
Tahap : Operasi Produksi
Luas Wilayah : 18.500 Ha
BUPATI KOTABARU
H. IRHAMI RIDJANI