

# Qualified Person’s Report for Songjiagou Gold Project, Shandong Province, People’s Republic of China

Report Prepared for



Persistence Resources Group Ltd



Report Prepared by



SRK Consulting China Ltd.

SRK Project Number: SCN740

Effective date: 30 June 2023

Signature date: 30 June 2023

# Qualified Person’s Report for Songjiagou Gold Project Shandong Province, People’s Republic of China

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### **IMPORTANT NOTICE**

SRK Consulting China Ltd. (the “**SRK**”) was requested by Persistence Resources Group Ltd (“**Persistence Resources**” or the “**Company**”) to prepare a Qualified Person’s Report (the “**QPR**” or “**CPR**”) for Songjiagou Gold Project (the “**SJG Project**”) located in Shandong Province of the People’s Republic of China (the “**PRC**” or “**China**”) in compliance with the requirements of Canadian National Instrument 43-101 (the “**NI 43-101**”) and the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in SRK’s services, based on: (i) information available at the time of preparation, (ii) data supplied by outside sources, and (iii) the assumptions, conditions and qualifications set forth in this QPR. This QPR is intended for use by Persistence Resources subject to the terms and conditions of its agreement with SRK and relevant securities legislation. The QPR will be included into the documents submitted to The Stock Exchange of Hong Kong Limited (the “**Stock Exchange**”) for Persistence Resources [REDACTED] (the “[REDACTED]”). Any other uses of this QPR by any third party are at that party’s sole risk. The responsibility for this disclosure remains with Persistence Resources. The user of this document should ensure that this is the most recent QPR for the SJG Project as it is not valid if an updated QPR has been issued.

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### **EXECUTIVE SUMMARY**

SRK Consulting China Ltd. (the “**SRK**”) was requested by Persistence Resources Group Ltd (“**Persistence Resources**” or the “**Company**”) to prepare a Qualified Person’s Report (the “**QPR**” or “**CPR**”) for Songjiagou Gold Project (the “**SJG Project**”) located in the People’s Republic of China (the “**PRC**” or “**China**”) in compliance with the requirements of Canadian National Instrument 43-101 (the “**NI 43-101**”) and the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “**Listing Rules**”).

Yantai Zhongjia Mining Co., Ltd. (the “**Yantai Zhongjia**”), a limited liability company established in the PRC is 75% indirectly owned by Persistence Resources. Yantai Zhongjia holds two mining licences for the SJG Project, in respect of the Songjiagou Open-Pit Mine (the “**SJG Open-Pit Mine**”) and the Songjiagou Underground Mine (the “**SJG Underground Mine**”). The SJG Open-Pit Mine is a producing open pit mine and will continue to be mined about 8.5 years using open pit methods. The SJG Underground Mine is a producing underground mine and will continue to be mined about 6.0 years by underground methods.

This QPR is an independent review of the SJG Project’s geology, exploration, Mineral Resources, Mineral Reserves, mining, mineral processing, capital investment, operating cost, and environmental and social aspects.

### **Outline of work program**

The scope of work includes the construction of a mineral resource model for the gold (“Au”) mineralisation delineated by drilling on the SJG Project and the preparation of a QPR in compliance with the NI 43-101 and the Listing Rules.

The Mineral Resource statement reported herein is a collaborative effort between Persistence Resources and SRK personnel. The exploration database was compiled and maintained by Persistence Resources and was reviewed by SRK.

The geological model and wireframes defining the Songjiagou mineralisation were constructed by SRK based on the exploration database provided by Persistence Resources. In SRK’s opinion, the geological model is a reasonable representation of the distribution of the targeted mineralisation at the current level of sampling. The geostatistical analysis, variography and grade models were completed by SRK from June 2018 to September 2018 and were updated in June 2023.

Based on the Mineral Resource statements and models, and the feasibility studies and designs of the mines by other third parties, SRK converted the qualified Mineral Resources into Mineral Reserves, and rescheduled the productions of the mines.

### **Overview**

The SJG Project, owned by Yantai Zhongjia, is located in the eastern part of the Jiaobei Terrane and northeast margin of the Jiaolai Basin on the Shandong Peninsula, approximately 50 kilometres (“km”) south of Yantai City, an important coastal city in China’s well-developed eastern Shandong Peninsula.

The SJG Project consists of SJG Open-Pit Mine, SJG Underground Mine, and related facilities that are suitable for supporting the operations. The SJG Open-Pit Mine is a producing open pit applying conventional drilling-blasting-loading-hauling mining techniques to produce about 960–1,900 kilotons per annum (“ktpa”) ore in years from 2020 to 2022. The SJG Underground Mine is a producing underground mine applying cut-and-fill mining and shrinkage stope mining to produce ores since 2019. The processing plant has a designed capacity of 6,000 tonnes per day (“tpd”) to produce gold concentrate.

The SJG Open-Pit Mine and the SJG Underground Mine are situated in the Muping-Rushan gold belt. It is a moderate temperature hydrothermal filling and metasomatic conglomerate type gold deposit. SRK has worked on the SJG Project since 2012, conducting technical services and preparing various technical reports on the SJG Project, and conducted data verification programs and carried out quality assurance and quality control programs on some exploration programs. Based on the review of active database and economic and technical parameters provided by Yantai Zhongjia technical department, SRK has estimated and updated the Mineral Resources and Mineral Reserves of the SJG Project.

The Mineral Resource statements for SJG Open-Pit Mine and SJG Underground Mine are shown in Table ES-1 and Table ES-2, respectively.

**Table ES-1: Mineral Resources Statement for SJG Open-Pit Mine,  
as of 30 June 2023<sup>[1, 2]</sup>**

Category	Cut-off Grade g/t Au	Quantity kt	Gold Grade g/t	Gold Content	
				kg	koz
Indicated	0.3	34,200	1.10	37,600	1,210
Inferred	0.3	36,700	0.95	34,800	1,120

*Notes:*

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. The information in this QPR with regard to Mineral Resource estimates is based on information compiled by Dr Anson Xu and Mr Pengfei Xiao, employees of SRK Consulting China Ltd. Dr Xu, FAusIMM, and Mr Xiao, MAusIMM, have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Qualified Persons as defined in the NI 43-101. Dr Xu and Mr Xiao consent to the reporting of this information in the form and context in which it appears.

**Table ES-2: Mineral Resources Statement for SJG Underground Mine,  
as of 30 June 2023<sup>[1, 2]</sup>**

Category	Cut-off g/t Au	Quantity kt	Gold Grade g/t	Gold Content	
				kg	koz
Indicated	0.7	1,640	1.38	2,270	73
Inferred	0.7	3,010	1.24	3,730	120

*Notes:*

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. The information in this QPR with regard to Mineral Resource estimates is based on information compiled by Dr Anshun Xu and Mr Pengfei Xiao, employees of SRK Consulting China Ltd. Dr Xu, FAusIMM, and Mr Xiao, MAusIMM, have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Qualified Persons as defined in the NI 43-101. Dr Xu and Mr Xiao consent to the reporting of this information in the form and context in which it appears.

The Mineral Reserve statement for SJG Open-Pit Mine and SJG Underground Mine are shown in Table ES-3 and Table ES-4, respectively.

The mine plan prepared based on the Mineral Reserves generates an 8.5-year mine life for the SJG Open-Pit Mine at a production rate of 3,300 ktpa, and a 6.0-year mine life for the SJG Underground Mine at a production rate of 90 ktpa.

The capital costs and operating costs provided to SRK were modified to match production capacity and the current economic conditions. The economic analysis results demonstrate the economic viability of the SJG Project.

**APPENDIX III**

**SRK REPORT**

**Table ES-3: Mineral Reserve Statement for SJG Open-Pit Mine,  
as of 30 June 2023<sup>[1, 2, 3, 4]</sup>**

Category	Cut-off g/t Au	Ore Quantity kt	Gold Grade g/t	Gold Content	
				kg	koz
Probable	0.3	22,600	1.17	26,400	849

Notes:

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. Both the mining dilution and loss rates are set to 5%.
3. The Mineral Reserves are included in the Mineral Resources. They shouldn't be added to the Mineral Resources.
4. The information in this QPR which relates to Mineral Reserve conversion is based on information compiled by Mr Yonggang Wu, MAusIMM, and Dr Anshun Xu, FAusIMM, employees of SRK Consulting China Ltd. Both Dr Xu and Mr Wu have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Qualified Persons as defined in the NI 43-101. Dr Xu supervised the work of Mr Wu. Dr Xu and Mr Wu consent to the reporting of this information in the form and context in which it appears.

**Table ES-4: Mineral Reserve Statement for SJG Underground Mine,  
as of 30 June 2023<sup>[1, 2, 3, 4]</sup>**

Domain	Category	Cut-off g/t Au	Ore Quantity kt	Gold Grade g/t	Gold Content	
					kg	koz
6	Probable	0.7	8	2.26	17	0.6
7	Probable	0.7	153	2.03	312	10.0
11	Probable	0.7	119	1.07	127	4.1
16	Probable	0.7	251	1.12	280	9.0
<b>Total</b>	Probable	<u>0.7</u>	<u>530</u>	<u>1.39</u>	<u>737</u>	<u>23.7</u>

Notes:

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. The mining dilution rate is 11%. The mining loss rate is 8%.
3. The Mineral Reserves are included in the Mineral Resources. They shouldn't be added to the Mineral Resources.
4. The information in this QPR which relates to Mineral Reserve conversion is based on information compiled by Mr Yonggang Wu, MAusIMM, and Dr Anshun Xu, FAusIMM, employees of SRK Consulting China Ltd. Both Dr Xu and Mr Wu have sufficient experience relevant to the style of mineralisation and type of deposit under consideration

and to the activity which they are undertaking to qualify as Qualified Persons as defined in the NI 43-101. Dr Xu supervised the work of Mr Wu. Dr Xu and Mr Wu consent to the reporting of this information in the form and context in which it appears.

Based on the SRK’s review and projection using discount cash flow modelling, the SJG Open-Pit Mine has a net present value (the “NPV”) of Renminbi (the “RMB”) 3,246 million at a discount rate of 9%, and the SJG Underground Mine has an NPV of RMB85 million at a discount rate of 9%.

### **Property description and location**

The SJG Project is located in the eastern part of the Jiaobei Terrane and northeast margin of the Jiaolai Basin on the Shandong Peninsula. The SJG Open-Pit Mine and the SJG Underground Mine are regarded as a conglomerate type of gold deposits, associated with mesothermal filling activities followed by alterations and metasomatism.

Table ES-5 summarises the status of key operational licences and permits for the SJG Project. SRK has reviewed the information provided by Yantai Zhongjia and is satisfied that the extent of the properties described in the various rights are consistent with the maps and diagrams received from Yantai Zhongjia.

**Table ES-5: Key Operational Licenses and Permits**

<b>Holder</b>	<b>Business License</b>	<b>Mining Licenses</b>	<b>Safety Production Permits</b>	<b>Water Use Permit</b>
Yantai Zhongjia	Y	Y	Y	Y

*Note:* “Y” denotes the licence/permit is granted and has been sighted by SRK.

### **Accessibility, climate, local resources, infrastructure and physiography**

The SJG Project is located approximately 50 km south of Yantai City, an important coastal city in the well-developed eastern Shandong Peninsula of China. The SJG Project is easily accessed by road, railway, sea, and air.

The mine area has a warm and semi-humid monsoon climate with marine characteristics and no drastic seasonal changes. Generally, there is no extreme cold or hot weather to hinder mining and processing operations.

Local provision of mining labour is sufficient for the operation of the SJG Project. Industry and agriculture are well developed in the area. Mining equipment and accessories are available in Yantai City, as are workshops for mechanical maintenance. Materials such as cement, steel, wood, and chemical agent are generally purchasable in Yantai City.

Domestic and industrial water can be supplied by the Rushan River, which passes approximately about 2 km east of the SJG Project area, adequate to support mine’s production. Electrical power is available locally. A 10 kilovolt (“**kV**”) power line and a diesel generator owned by Yantai Zhongjia, with an installed generation capacity of 120 kilowatts (“**kW**”) are adequate to support the mine’s production.

The geomorphology of the SJG Project area is originally characterised by gently undulating hills, and overall the topography slopes downward from west to east. The highest elevation is about 140 metres (“**m**”) above sea level (“**ASL**”) and the lowest is 78 m ASL with a relative relief of 62 m in the SJG Project area.

### History

The area has been explored by various Chinese geological brigades since the 1960s, and such exploration was carried out according to Chinese national exploration standards. The following are simple chorological description of exploration activities in history:

- Between 1982 and 1989 the Shandong Geophysical and Geochemical Prospecting Institute (the “**Shandong GGPI**”) conducted a gravity survey at a scale of 1:200,000 and a stream sedimentary survey at a scale of 1:50,000.
- Between 1983 and 1986, the No. 3 Geological Mineral Resource Prospecting Institute of Shandong Province (the “**No. 3 Geological Institute**”) undertook regional gold metallogenetic research.
- Between 1984 and 1993, the No. 3 Geological Institute and the No. 1 Geological Mineral Resource Prospecting Institute of Shandong Province (the “**No. 1 Geological Institute**”) carried out regional geological mapping on a scale of 1:50,000.
- In 1991 the No. 3 Geological Institute conducted preliminary mineral prospecting in the Songjiao-Songjiagou area. Several gold mineralised bodies were defined by a few trenches and drill holes.
- In 1997 and 1998, prospecting work continued with geological mapping, surveying, trenching, tunnelling and drilling, and the exploration results were compiled in a report titled *Geological Prospecting Report of Songjiagou Gold Prospect in Muping District, Yantai City, Shandong Province* by No. 3 Geological Institute in February 1998. The geological report was approved by the Yantai Bureau of Land and Resources in 2001.
- In 1998 the No. 3 Geological Institute conducted prospecting in the Fayunkuang area and estimated a total Mineral Resource in former Chinese Categories D and E Categories (similar to Inferred Mineral Resource of JORC Code) of approximately 1,800 kt with an average grade of 6.8 g/t Au. The exploration results were summarised in a report titled *Fayunkuang Gold Prospect in Muping District, Yantai City, Shandong Province*, submitted by No. 3 Geological Institute in October 2012.



- Between 1999 and 2003, the No. 3 Geological Institute was commissioned by Yantai Mujin Mining Co., Ltd. (the “**Yantai Mujin**”) to conduct general exploration in the Songjiagou area. Yantai Mujin completed 20 shallow drill holes and carried out 1,600 m of induced polarization (the “**IP**”) geophysical profiling that resulted in the identification of nine anomalies. Exploration works completed during this period also included geological mapping, magnetic surveying, trenching, 14 drill holes with a total depth of 1,640 m, and 2,860 m long of underground workings.
- Between October 2003 and December 2011, exploration was conducted by Yantai Zhongjia itself within the mine area. The main works include the topographic survey at a scale of 1:2,000 covering 1 km<sup>2</sup>, 30 drill holes with a total length of 8,947.59 m, 472.32 cubic metres trenches, density testing of 106 samples and logging of hydrogeology and engineering geology for 13 drill holes.
- During 2012 and April 2013, the No. 3 Geological Institute was commissioned by Yantai Zhongjia to conduct detailed exploration campaign. The main works include 1:10,000 geological revision covering 12 km<sup>2</sup>, 1:10,000 hydrogeological revision covering 12 km<sup>2</sup>, 1:2,000 topographic survey covering 1.30 km<sup>2</sup>, 1:2,000 hydrogeological revision covering 3.76 km<sup>2</sup>, 1,204.08 cubic metres trenches, 20 drill holes with a total length of 7,093.42 metres, basic analysing of 7,853 samples, 75 samples for geotechnics test, 7 samples for complete water quality analysis, 8 samples for rock-mineral determination, 8 samples for quantitative spectrographic analysis, 137 samples for density and humidity test, 89 composites, 991 basic internal duplicates, 7 compositing internal duplicates, and 320 external duplicates.

### **Geological setting and mineralisation**

The SJG Project is situated in China’s Shandong Peninsula, along the southeastern margin of the North China Plate and on the western margin of the Pacific Plate, in the eastern part of the Jiaobei Terrane and northeastern margin of the Jiaolai Basin, which is regarded as part of the Muping-Rushan gold belt.

Regional tectonics are characterised by two major orogenesis: the Indosinian collision between the North China and Yangtze cratons, with the nearly east-west directional suture defined as the Triassic Qinling-Dabie-Sulu metamorphic belt during the late Permian to Triassic epoch; and the Yanshanian subduction of the Pacific Plate beneath Eurasia Plate during the Middle Jurassic epoch.

The rock layer consists of Paleoproterozoic Jingshan Group metamorphic rocks, Mesozoic Cretaceous Laiyang Group sediments and Cenozoic quaternary system and is dominated by Laiyang Group. The local structure features two major fault zones, the northeast striking Yazhi Fault Zone and the northwest oriented Tanjia Fault Zone. Main magmatic activity is represented by monzonite granite.

The highest grades of gold mineralisation are confined to relatively narrow although vertically and horizontally persistent zones. Gold mineralisation is associated with sulphides. Mineralised rocks present in grained, in-filling, clastic, or brecciated textures. The boundaries between wall rocks, internal waste, and host rocks are not visually obvious, and must be determined by chemical analysis.

### **Deposit types**

Gold mineralisation occurs in pyrite-sericite altered conglomerates in the Linsishan Formation, which is part of the Cretaceous Laiyang Group. Gold enrichment occurs as veins as well as in disseminated structures and stockwork distributions.

The deposit is a moderate temperature hydrothermal filling and metasomatic conglomerate type gold deposit. As there is no clear boundary between wall rocks and ore chemical analysis is used for defining ore bodies.

### **Exploration**

The SJG Open-Pit Mine has been well prospected within the current licenced area, with completed works including geophysics and geochemical studies, exploration, geological mapping, surveying, trenching, underground channelling, and drilling.

The SJG Underground Mine has been explored with drilling, trenching and underground channelling and has potential for in-fill Mineral Resource exploration and upgrade.

### **Drilling, trenching and underground channelling**

The SJG Project has been explored with several campaigns at various stages. These stages can be classified into two types: 1) prior to 2005, the No.3 Geological Institute took main responsibility in the exploration and submitted reports for relevant authorities; and 2) post 2005, Yantai Zhongjia has taken over the exploration and the No. 3 Geological Institute has been assisting Yantai Zhongjia with exploration.

A total of 145 diamond drill holes have been completed since 1997, including 17 underground drill holes with a total length of 1,435 m and 128 surface drill holes with an aggregate length of 37,053 m. Prior to Yantai Zhongjia, there were 32 drill holes completed by No. 3 Geological Institute. A total of 1,152 samples were collected from the underground drilling and 26,654 samples were collected from the surface drilling. Drilling was performed using mostly HQ core and a few NQ core sized drill rods. More than half of the holes were drilled with dips of  $-60^\circ$  or  $-45^\circ$  to the northwest, and a few were drilled vertically (dip angle  $-90^\circ$ ). Core recoveries generally averaged above 95% and recoveries of mineralised intervals were about 97%. The statistics and calculations were performed by No. 3 Geological Institute.

The surface trenching used in earlier stage revealed good indications of mineralisation, which encouraged systematic drilling to follow up. A total of 75 trenches with an aggregate length of 5,883 m were excavated by Yantai Zhongjia in 1999–2007, from which 5,378 samples were collected. Gold content of these samples ranged from zero to 46.2 g/t Au, with about 5% of the assay values exceeding 1.0 g/t Au. Trenches were dug by backhoe and then cleaned prior to sampling. The trenches were completed by third-parties and were sampled by Yantai Zhongjia personnel. Trench sections were trapezoidal, with upper widths of 1.2 m and bottom widths greater than 0.8 m.

A total of 91 underground channels have been completed on the +9 m, –40 m, –80 m, and –120 m level in the underground voids of SJG Open-Pit Mine, from which 3,309 channel samples were collected. Data from these channel samples were compiled by Yantai Zhongjia. The underground engineering was undertaken by Yantai Huazhong Mine Engineering Company Limited, as reported by No. 3 Geological Institute. The underground tunnels were excavated with dimension of 2.2 m high by 2.2 m wide.

In 2018, a total of 15 underground channels were sampled in the SJG Underground Mine, on the +49 m, +9 m and –40 m levels, and a total of 257 underground channel chips were dispatched to SGS Laboratory in Tianjin, China (the “**SGS Tianjin**”) for sample preparation and chemical assay. SRK has supervised the sampling program.

The underground channelling suggests that the gold mineralisation of the SJG Project has a considerable extension from surface down to at least –120 m level. There are both surface and underground drill holes having intercepted gold mineralisation at deeper zones below this level.

The database for Mineral Resource estimation used in this QPR consists of 128 surface diamond drill holes with an aggregate length of 37,053 m drilled from surface since 1997, and 106 underground channels totalling 12,262 m, in addition to 17 underground drill holes with a total length of 1,435 m, as well as 75 surface trenches with an aggregate length of 5,883 m.

The actual workload completed in SJG Project might exceed these amounts. Quite a few of drill holes and trenches and/or channel data was not incorporated due to missing of verifiable collar or sample records. Prospecting pits and other workings had previously been conducted in the SJG Project area but are not included in the database provided.

The exploration generally followed a systematic sectional layout, designed with a number of exploration lines oriented northwest-southeast. The designed exploration lines cross-cut the gold enriched mineralised veins with overall north-easterly strikes. The exploration lines were spaced about 60 m apart and drill holes on a 60 m × 80 m grid were supplemented by surface trenching spaced about 30 m to 60 m apart. The vertical extension of the gold mineralisation was verified by underground cross-cuts spaced about 30 m apart on the +9 m, –40 m, –80 m, and –120 m levels.

Regional geochemical and geophysical investigations have been conducted by various geological brigades and institutes during the reconnaissance stage. SRK has not been provided with such data as it is not material to this review.

### **Sample preparation, analyses, and security**

Samples related to Mineral Resource statement for the SJG Open-Pit Mine were derived from exploration conducted mainly between 2005 and 2007, with about 20% from the exploration campaigns prior to 2005 and after 2007, which were validated for Mineral Resource estimation. The database for SJG Underground Mine Mineral Resource estimates combined sample data in various stages, mainly consisting of drilling program since 2005, trenches conducted prior to 2005, and the underground channelling in 2018.

Sampling was completed by No. 3 Geological Institute or Persistence Resources staff under supervision of a Competent Person (the “**CP**”) from Persistence Resources. Samples were logged and prepared to rock chips at the SJG Project site and then shipped to SGS Tianjin. Samples were analysed by SGS Tianjin using screen fire assays, in which 1 kilogram (“**kg**”) quantities of pulp were subjected to screening for metal content prior to analysis. The screen fire assay is typically used for nugget gold samples that contain coarse gold particles.

Drill core was logged by No. 3 Geological Institute and Persistence Resources staff; and core samples were obtained by cutting the core into two halves. One half was placed in sample bags; the remaining half-cores were returned to the core box. The basic length of drill core samples was 1 m. Trench samples were collected using channel method with a sectional size of 10 centimetres (“**cm**”) × 5 cm and a basic sample length of 1 m.

Underground channel sampling was conducted by Yantai Zhongjia. The samples were taken from cross-cuts as well as from drifts along veins. Sample length varied from 0.5 m to 2.4 m with an average length of 1 m. The channel section size was 10 cm × 3 cm.

Specific gravity (the “**SG**”) samples were collected and analysed by No. 3 Geological Institute. Density, humidity, and gold grade were determined.

Prior to 2007, the previous exploration has been summarised in a report prepared in compliance with China exploration standard by No. 3 Geological Institute, in which an internal laboratory check and an external check with pulp duplicates are obligatory. The previous technical report and Mineral Resource estimation were prepared by Wardrop Engineering Inc. (the “**Wardrop**”) in accordance with NI 43-101, and as reported by Yantai Zhongjia. The Qualified Persons include Nory Narciso, John Huang and Greg Mosher. The quality assurance and quality control (the “**QA/QC**”) programs were assessed.

- Assay data was reviewed for 174 blanks (3.5% of the total sample population) that were analysed in conjunction with samples from the drilling and trenching programs. All analyses of blanks were below the detection (<5 parts per billion (“**ppb**”) gold) threshold, indicating that there is no evidence of cross-sample contamination during the sample preparation process.

- The same set of four standards were used for both the drilling and trenching programs: CDN-GS15A with an expected mean value of 14.83 g/t Au and 2 standard deviations (the “SD”) of 0.61 g/t Au; CDN-GS1P5B with an expected mean of 1.46 g/t Au and 2 SD of 0.12 g/t; CDN-GSP1 with an expected mean of 0.12 g/t Au and 2 SD of 0.02 g/t Au; and CDN-GSP5B with an expected mean of 0.44 g/t Au and 2 SD of 0.04 g/t Au. All standards were prepared by CDN Resource Laboratories of Delta, British Columbia, Canada.
- The high failure rate for analyses of standard CDN-GS15A is noteworthy: 58% for the drill program and 78% for the trench program. Failures include both over and under-estimations. These results suggest that high assay values may be inaccurate, either positively or negatively, and such a high failure rate could potentially compromise the quality of the dataset, except for the fact that only 18 of the nearly 5,000 assays exceed 10 g/t Au, so the potential impact is considered to be negligible.”

SRK notes that SGS Tianjin has its own protocols for quality control applying standards, blanks and duplicates as well. As advised, actions were taken by Persistence Resources with respect to the out-of-bound values, i.e., repeated sampling and assaying, using duplicates and standard samples to monitor the procedures.

SGS Tianjin returned the sample pulps and coarse rejects to Yantai Zhongjia. The sample rejects and pulps are stored together with drill cores in a security facility near Yantai Zhongjia’s office building.

SRK has performed QA/QC check after 2011 and is of opinion the previous database is integrated and suitable for Mineral Resource estimation.

The sampling program at the underground of SJG Underground Mine in 2018 has been supervised by SRK and the samples were prepared and analysed in SGS Tianjin. A screening fire assay with atomic absorption spectrometry (the “AAS”) finish has been applied.

#### **Data verification**

The exploration data used for Mineral Resource estimation in this QPR was compiled by Persistence Resources; most of it was previously used by Wardrop in preparation of the preliminary economic analysis (the “PEA”) technical report issued in 2011. Wardrop stated in 2011 that they have verified both drill assays (73%) and trench assays (18%) as received from Persistence Resources against assay reports issued by SGS Tianjin.

SRK has reviewed the geological report prepared by No. 3 Geological Institute issued in 2011 and compared it with the compiled database; furthermore, the assay result datasheet from SGS Tianjin was partly inspected by SRK.

In 2012 SRK collected a random group of field samples within the open pit during the site visit and three additional samples, one each from feed processing, concentrate, and tailings. The samples randomly collected by SRK were prepared and analysed by the Intertek Laboratory in Beijing (the

“Intertek”). The results of this random check verified that the gold mineralisation is distributed broadly within the Linsishan Formation conglomerate with gold grades varying from 0.1 g/t Au up to several grams per tonne of gold.

A total of 102 coarse rejects (particles sized approximately one millimetre or “mm”) and 48 pulp duplicates (sized approximately 75 microns or “µm”) were selected by SRK for independent verification purposes in 2012. The samples were collected from Yantai Zhongjia’s core storage located near the SJG Open-Pit Mine; and each sample massed approximately 200 g. The coarse rejects (grain size approximately 1 mm) were further pulverised to 75 µm in the ALS Chemical Assaying Laboratory in Guangzhou, China (the “ALS”). All the verification samples were analysed by ALS. The applied method was aqua regia digestion followed by fire assays.

There are noticeable discrepancies between coarse rejects and the original assays, however more than half of the comparable results have a relative deviation within a range of +/-20%. The discrepancies discovered in the coarse reject assays are considered reasonable if considering the style of mineralisation and nugget effect. SRK has analysed the sample results with grades above 0.3 g/t Au (the cut-off grade at SJG Open-Pit Mine) and is of opinion that the overall comparison provides a confidence in the original assays. The sample preparation in SGS Tianjin has been further revisited and monitored by Persistence Resources and it was concluded that the processes were compliant with industrial applied QA/QC protocols.

The comparison between pulp duplicates and original assays were matched well and the deviation is general with a range of +/-10% with few discrepancies.

The SJG Open-Pit Mine has been operated for many years at a relatively low cut-off grade and the daily ore feeds in the processing plant have confirmed that.

To test and verify the grades of the SJG Underground Mine, SRK has supervised a sampling program of the underground channels in 2018. A total of 257 samples from three underground levels, namely 85 samples from +49 level, 112 samples from +9 level and 60 samples from -40 level, were taken continuously along the cross-cuts walls. Samples were taken at the panel of an approximate size at 1 m × 1 m.

The underground samples, about 4–5 kg each, were despatched to SGS Tianjin for preparation and analyses. A screening fire assay method was applied, with AAS finish. SRK reviewed the assays of these underground samples and is of opinion that the results coincide with the underground development of cross-cuts of the mineralised bodies. Therefore, this sample information was accepted in the integration of the drill hole database.

### **Mineral Resource estimation**

SRK converted the database provided by Persistence Resources into comma-separated values (the “CSV”) format, validated the database, and removed repeated samples. The drill hole database used for Mineral Resource estimation contains 326 geological engineering works including 145 drill holes (128 surface drill holes and 17 underground drill holes), 75 trenches, and 106 underground engineering.

The database contains 36,748 gold samples in total, including 27,805 from drill holes, 5,377 from trenches, and 3,566 from underground engineering. The maximum gold grade is 263.09 g/t Au and the average gold grade is 0.37 g/t Au prior to grade capping.

The topographic model was converted from the topographic survey map conducted in 2014 and has been updated to 30 June 2023. The block model used fixed size blocks for modelling. Grade interpolation was done using Ordinary Kriging.

The block models for the SJG Open-Pit Mine and SJG Underground Mine were created by SRK and the Mineral Resource estimation were constrained within the low grade shell (modelled basing on the lithology and topography) and the mineralised domains (modelled basing on a cut-off grade of 0.7 g/t Au), respectively.

### **Mineral Reserve estimation**

The SJG Open-Pit Mine is a producing mine. The technical department of the mine maintains an active database for the open pit operation, and provided SRK with related technical and economic parameters for the open pit optimisation and the design of the open pit. SRK reviewed and used Persistence Resources’ database and parameters to estimate Mineral Reserves.

With respect to the SJG Underground Mine, a feasibility study report (the “**FSR**”) by Yantai Dehe Metallurgy Design Institute Ltd. has been reviewed by SRK to estimate Mineral Reserves.

The cut-off grades were defined to be 0.3 g/t and 0.7 g/t run-of-mine (the “**RoM**”) to estimate Mineral Reserves for SJG Open-Pit Mine and SJG Underground Mine, respectively.

### ***SJG Open-Pit Mine***

The open pit optimisation was limited within mining licence area. A series of nested open pit shells were generated using floating-cone scenario to simulate pushbacks enlarged at about 1,500 kt ore interval. Economics of these open pit shells were analysed to select the open pit shell for the Mineral Reserve estimation.

### ***SJG Underground Mine***

Mineralised zones, including Nos. 6, 7, 11, 16 and 19, were initially selected by SRK to report potential Mineral Reserves. Zones were sliced to create levels, then stopes along strike direction were designed. All stopes within domain 19 have gold grade less than the cut-off grade and were excluded. Stopes within the Inferred Mineral Resources were excluded from reporting of Mineral Reserves. The stopes with a RoM gold grade greater than the cut-off grade of 0.7 g/t Au were included and reported within the Mineral Reserves.

## **Mining**

### ***SJG Open-Pit Mine***

SJG Open-Pit Mine is currently operated as an open pit using conventional road-truck technique which is assumed as the bench development method. The mining sequence will be controlled by two pushbacks.

The mine is scheduled to operate 8 hours per shift, 3 shifts per day and 330 days per year. The production capacity is assumed to be 3,300 ktpa ore.

Conventional drill-blast-load-haul mining cycle is assumed to move rocks within the open pit. The bench height is 12 m high. The blast holes have a grid pattern of (3.5 × 3.8 – 4.0 × 4.0) m. The explosives applied include emulsion for wet rocks and ammonium nitrate/fuel oil (the “ANFO”) for dry rocks. Ore is trucked directly to the processing plant and waste rock trucked directly to buyers, as such there is no requirement for waste dumps.

The open pit is inspected monthly for open pit stability.

Mine service facilities have been well developed and will continue to support daily operations.

### ***SJG Underground Mine***

The SJG Underground Mine utilises cut-and-fill mining and shrinkage stope mining methods and relies on cemented paste fill or cemented rock fill to support the stoping operation. The development system mainly consists of a trackless access ramp, six level haulage ways, an auxiliary shaft, a surface upcast and an underground upcast.

Off-road/underground dump trucks move both ore and wastes to surface along the level haulage way and the access ramp.

The mine is scheduled to operate 8 hours per shift, 3 shifts per day, 330 days per year. Hauling of ore along the access ramp is scheduled to operate just one shift per day. The production capacity is assumed to be 90 ktpa ore.

Mine service facilities have been well developed or shared with the SJG Open-Pit Mine to support daily operations.

## **Mineral processing**

The ore of Songjiagou deposit is low-grade gold with low content of sulphides. Both processing test results and historical production records show that the ore is amenable to conventional floatation process. A simple floatation flowsheet achieves a satisfied gold recovery to a concentrate.



Yantai Zhongjia organised and funded the construction of a processing plant with a throughput of 6,000 tpd, a tailings storage facility (the “TSF”) and other suitable auxiliary facilities. The TSF is in good condition and has capacity to support 10 years of production at current throughput as of 30 June 2023.

The processing plant adopts a processing flowsheet including the following major operations:

- A process of conventional three-stage crushing in closed circuit and one-stage screening is adopted to crush the RoM from a maximum size of 1,000 mm to 80% passing 12 mm.
- A process of one-stage grinding in closed circuit with conventional spiral classification is adopted to grind the crushed ore to approximately 50% passing 75 µm.
- Roughing floatation of the spiral classifier overflow followed by two scavenger cells produce rough concentrate and final tailings. The final tailings are pumped to the TSF. Two cleaning stages are conducted on the rough concentrate to produce a final gold concentrate.
- The final concentrate is dewatered through condensing and filtration in the processing plant. The dewatered concentrate is sold to nearby smelters.

The historical performance of the processing plant is shown in Table ES-6.

**Table ES-6: Historical Processing Performances**

<b>Item</b>	<b>Unit</b>	<b>2020</b>	<b>2021<sup>[1]</sup></b>	<b>2022</b>	<b>H1 2023<sup>[2]</sup></b>
RoM tonnage	kt	1,590	1,024	1,991	997
RoM gold grade	g/t	0.70	0.62	0.62	0.54
Gold content in RoM	kg	1,109	640	1,229	541
Concentrate production	kt	46.83	28.66	68.04	26.79
RoM/concentrate	t/t	33.96	35.72	29.26	37.20
Concentrate grade	g/t	22.69	21.28	17.21	19.10
Gold content in concentrate	kg	1,062	610	1,171	512
Gold recovery rate	%	95.82	95.33	95.31	94.62

*Notes:*

1. Processing was conducted in months January, February, April, May, and August to December.
2. The first half of 2023.

### **Environmental, social, health and safety impact**

The sources of inherent environmental risk are project activities that may result in potential environmental impacts. The environmental risks for the SJG Project are:

- Land disturbance and steep side slope;
- Poor water management; and
- Dust emission.

The above environmental risks are categorised as moderate/tolerable risks (i.e., requiring risk management measures). In addition, Yantai Zhongjia is of the view that the environment issues identified above will be under consideration and resolved in the foreseeable future.

Based on the review of the information provided and the site visit observations, it is SRK’s opinion that the environmental risks for SJG Project are generally being managed in accordance with Chinese national requirements.

### **Mine closure and land rehabilitation**

No comprehensive site closure plan was provided to SRK for review, but SRK was provided with a Land Reclamation Plan/approval and a Mine Site Geological Environment Protection and Rehabilitation Plan/approval for SJG Open-Pit Mine and SJG Underground Mine respectively.

SRK notes that the proposed approach to site rehabilitation is generally in line with the relevant recognised Chinese industry practices.

### **Capital cost and operating cost**

Records of capital cost (“**Capex**”) and operating cost (“**Opex**”) have been provided to SRK. Production capacity ratio was applied to modify records to estimate future costs.

#### ***SJG Open-Pit Mine***

The life of mine (the “**LoM**”) Capex and forecasts are shown in Table ES-7. The Opex forecasts are shown in Table ES-8.

**APPENDIX III**

**SRK REPORT**

**Table ES-7: Capex Records and Forecasts for SJG Open-Pit Mine (’000 RMB)**

<b>Item</b>	<b>Actual Value</b>	<b>SRK Forecast</b>
Sunk Capex	—	473,798
Initial Capex	759,082	—
Sustaining Capex	—	128,040
<b>Total</b>	<b>759,082</b>	<b>601,837</b>

**Table ES-8: LoM Opex Forecasts for SJG Open-Pit Mine (’000 RMB)**

<b>Item</b>	<b>Total</b>	<b>H2 2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>	<b>2030</b>	<b>2031</b>
Mining	383,619	16,530	32,821	36,973	49,601	49,601	49,601	49,601	49,601	49,289
Processing	1,146,481	42,177	83,616	96,385	154,271	154,271	154,271	154,271	154,271	152,947
Administration	137,794	8,082	16,147	16,464	16,184	16,184	16,184	16,184	16,184	16,184
Refining	62,717	1,264	2,309	4,600	9,825	10,151	9,519	9,407	7,662	7,980
Mineral resource tax	324,267	8,054	14,559	26,387	53,387	53,791	46,287	45,744	37,256	38,803
<b>Total</b>	<b>2,054,878</b>	<b>76,107</b>	<b>149,452</b>	<b>180,810</b>	<b>283,268</b>	<b>283,997</b>	<b>275,861</b>	<b>275,207</b>	<b>264,973</b>	<b>265,202</b>

***SJG Underground Mine***

The Capex records and forecasts are shown in Table ES-9. The LoM Opex forecasts are shown in Table ES-10.

**Table ES-9: Capex Records and Forecasts for SJG Underground Mine (’000 RMB)**

<b>Item</b>	<b>Actual Value</b>	<b>SRK Forecasts</b>
Sunk Capex	—	83,132
Initial Capex	150,790	—
Sustaining Capex	—	4,125
<b>Total</b>	<b>150,790</b>	<b>87,258</b>

**APPENDIX III**

**SRK REPORT**

**Table ES-10: LoM Opex Forecasts for SJG Underground Mine ('000 RMB)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029
Mining	79,476	6,790	13,464	13,464	13,464	13,464	13,464	5,367
Processing	43,020	3,699	7,298	7,298	7,298	7,298	7,298	2,832
Administration	4,372	370	739	739	739	739	739	305
Refining	1,749	181	355	355	334	236	220	69
Mineral resource tax	9,897	1,155	2,237	2,037	1,815	1,249	1,070	333
<b>Total</b>	<b>138,514</b>	<b>12,195</b>	<b>24,093</b>	<b>23,894</b>	<b>23,650</b>	<b>22,986</b>	<b>22,791</b>	<b>8,905</b>

***SJG Project***

The combined operating costs of historical and forecasted are shown in Table ES-11 for the SJG Project. Please note that:

- the production in year 2021 was significantly interrupted by the People’s Government of Shandong Province due to safety production inspection.
- the operating costs after year 2024 are less than those of in history, which is mainly caused by the expanded mining rates of SJG Open-Pit Mine, from 1,500 ktpa ore to 3,300 ktpa ore.

**Table ES-11: Short-term Opex Records and Forecasts for SJG Project (RMB/g gold produced)**

Item	Historical				Forecasts				
	2020	2021	2022	H1 2023	H2 2023	2024	2025	2026	2027
Workforce employment	20.26	26.28	32.05	40.76	36.61	39.72	21.34	10.41	10.18
Consumables	49.30	40.44	40.25	38.70	54.48	58.41	36.65	38.04	37.21
Fuel, electricity, water and other Services	44.74	74.60	59.02	77.85	45.55	48.69	31.32	15.16	14.88
On and off-site administration	6.28	11.05	9.76	8.43	1.49	1.62	0.87	0.42	0.41
Environmental protection and monitoring	0.04	0.00	0.00	0.00	0.01	0.01	0.01	0.00	0.00
Transportation of workforce	0.66	0.80	0.28	0.54	0.70	0.75	0.41	0.20	0.19
Product marketing and transport	—	—	—	—	—	—	—	—	—
Non-income taxes, royalties and other governmental charges	15.53	19.68	17.45	18.81	19.99	20.03	17.25	15.42	15.04
Contingency allowances	7.83	10.46	6.20	9.46	5.48	5.94	3.19	1.56	1.52
<b>Total</b>	<b>144.64</b>	<b>183.31</b>	<b>165.00</b>	<b>194.55</b>	<b>164.30</b>	<b>175.17</b>	<b>111.04</b>	<b>81.21</b>	<b>79.45</b>

### Economic analysis

The discounted cash flow (the “DCF”) method is selected as the foundation of economic analysis. The base date is set at 30 June 2023. The sunk costs were not considered during economic analysis, as sunk costs should not affect the rational decision-maker’s best choice.

The results in Table ES-12, showing a positive NPV, indicate that the SJG Project is economically viable.

**Table ES-12: Summary of Overall Economic Analysis**

Item	Unit	SJG		Total	Comments
		Open-Pit Mine	Underground Mine		
Production capacity	ktpa ore	3,300	90	3,390	
Life of mine	years	8.5	6	/	
Ore tonnage	kt	22,600	530	23,130	
Gold grade in ore	g/t	1.17	1.39	1.17	
Gold content in ore	kg	26,400	737	27,137	
Gold content in ore	koz	849	23.7	872	
Processing recovery rate	%	95.00	95.00	95.00	historical data based
Concentrate gold grade	g/t	20.00	20.00	20.00	
Concentrate tonnage	kt	1,254	35	1,289	
Gold content in concentrate	kg	25,087	700	25,786	
Gold content in concentrate	koz	807	22	829	
Payable gold	kg	23,331	651	23,981	
Gold price	RMB g/t	310	310	310	long-term forecasts
Sales revenue	million RMB	7,721	236	7,956	
Operating cost	million RMB	2,055	139	2,193	
Operating cost	RMB/t ore	91	261	95	
Mineral resource tax	million RMB	324	10	334	
Corporate income tax	million RMB	787	6	793	
Sunk capital cost	million RMB	474	83	557	
NPV (9%)	million RMB	3,246	85	3,332	9% is derived from WACC

### Risk assessment

SRK completed a risk assessment of the risks identified for the SJG Project in relation to their likelihood of occurrence within the LoM and consequence in accordance with Guidance Note 7 to the Listing Rules.

In general, project risk decreases from exploration, development, through to the production stage. SRK considers the SJG Project to be an advanced project.

SRK considered various technical aspects which may affect the feasibility and future cash flow of the SJG Project and conducted a qualitative risk analysis which has been summarised in Table ES-13. In this risk analysis, various risk sources/issues have been assessed for likelihood and consequence, and then an overall risk rating has been assigned.

**Table ES-13: Risk Assessment for SJG Project**

<b>Risk Issue</b>	<b>Likelihood</b>	<b>Consequence</b>	<b>Overall</b>
<b>Geology and Mineral Resources</b>			
Lack of significant Mineral Resource tonnage	Unlikely	Moderate	Low
Lower average grade of gold (i.e., 15% lower)	Unlikely	Major	Medium
Unexpected groundwater ingress	Unlikely	Moderate	Low
Overestimate of Mineral Resource potential	Unlikely	Minor	Low
Improper classification of Mineral Resource category	Possible	Moderate	Medium
Misleading geological description (related to low-quality exploration done)	Unlikely	Moderate	Low
<b>Mining</b>			
Significant geological structures	Possible	Moderate	Medium
Deformation of final open pit wall	Possible	Moderate	Medium
Designing of final open pit is wrong	Unlikely	Moderate	Low
Long-term schedule is optimistic	Unlikely	Moderate	Low
Ore production capacity is optimistic	Unlikely	Major	Low
Lack of significant Mineral Reserves	Unlikely	Moderate	Low
<b>Mineral Processing</b>			
Unfit configuration of equipment	Unlikely	Moderate	Low
Actual throughput cannot meet design capacity	Unlikely	Moderate	Low
Unsuitable flowsheet	Unlikely	Moderate	Low
Lower metal recovery	Unlikely	Moderate	Low
Poor plant design	Unlikely	Moderate	Low
<b>Environmental and Social</b>			
Land disturbance and ecological protection	Unlikely	Moderate	Low
ARD impact to the environment	Possible	Moderate	Medium
Land rehabilitation and site closure	Unlikely	Moderate	Low
Stakeholder engagement and cultural heritage protection	Unlikely	Moderate	Low
<b>Capital and Operating Costs</b>			
Project timing delay	Unlikely	Minor	Low
Poor mine management-plan	Possible	Minor	Low
Capital cost increases	Possible	Minor	Low
Higher capital costs — ongoing	Unlikely	Minor	Low
Operating cost underestimated	Possible	Moderate	Medium

## **Recommendations**

### ***Geology***

Grade control should be performed for both SJG Open-Pit Mine and SJG Underground Mine to meet grade requirement of the processing plant.

As observed by SRK from the mineral resource model, it can be noted that there are significant Inferred Mineral Resources occurred deeply, especially for those occurred in open pit walls and at depth below the open pit base for SJG Open-Pit Mine. SRK suggests further exploration campaign may be performed to upgrade the category of these Inferred Mineral Resources to reduce exploitation risks and extend the life of mine.

### ***Mining***

In order to substantially scale up mining operations, gold concentrate processing and increase gold mineral reserves, optimising open pit mine design should be implemented to cater for the increase in mining capacity, which includes expanding to the south of the current open pit boundary so that the Mineral Resources in the expanded area can be accessible as much as possible, the stripping of topsoil, wastes and ore materials to expose Mineral Resources as soon as possible, the construction of water storage pool and drainage system, the construction of site office and accommodation, the construction of stockpiles to store topsoil for future reclamation, and acquiring of additional equipment to support the expansion plan.

With respect to the SJG Underground Mine, SRK considers that Yantai Zhongjia should strengthen its communication with technicians and management of Mineral Resources to ensure the mining operations could be performed as planned.

## **Legal claims or proceedings**

SRK has been advised by Persistence Resources and its legal advisers that there are no legal claims or proceedings that could influence Yantai Zhongjia’s rights to explore and/or mine at both SJG Open-Pit Mine and SJG Underground Mine.

## **Effective date**

The effective date for this QPR is deemed to be 30 June 2023 (the “**Effective Date**”). The Mineral Resource and Mineral Reserve statements set out in this QPR are reported as of 30 June 2023 and represent the Mineral Resources and Mineral Reserves at the Effective Date as audited by SRK.

The LoM plans and associated technical and economic parameters included in the LoM plans and techno-economic models all commence on 1 July 2023.

The financial results for the SJG Open-Pit Mine and SJG Underground Mine are taken to be correct on 30 June 2023, the Effective Date of this QPR.

### **Material change statement**

Based on the information provided by Persistence Resources, there are no events that have occurred since the Effective Date that are likely to have a material impact on the Mineral Resource and Mineral Reserve statements for the SJG Open-Pit Mine and SJG Underground Mine at the date of publication of this QPR.

### **Requirement and reporting standard**

This QPR has been prepared in the format of the NI 43-101 technical report with some modification to fit the requirements of the Stock Exchange, and the Mineral Resources and Mineral Reserves were estimated according to Canadian Institute of Mining, Metallurgy and Petroleum (the “CIM”) Definition Standards for Mineral Resources and Mineral Reserves adopted by the NI 43-101. The CIM Definition Standards are compatible with the JORC Code which is binding upon all Australasian Institute of Mining and Metallurgy (the “AusIMM”) members.

### **Reliance on SRK**

This QPR is addressed to and may be relied upon by Persistence Resources, the Directors of Persistence Resources and Persistence Resources’ various financial, legal and accounting advisors (the “Advisers”) in support of the proposed [REDACTED] of Persistence Resources on the Stock Exchange (the “Proposed [REDACTED]”), specifically in respect of compliance with the requirements of the Listing Rules. SRK agrees that this QPR may be made available to and relied upon by the Advisers.

SRK is responsible for this QPR and for all the technical information contained therein. SRK declares that it has taken all reasonable care to ensure that this QPR and the technical information contained therein is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its import.

SRK confirms that the presentation of technical information contained elsewhere in the document released by Persistence Resources in connection with the Proposed [REDACTED] which relates to information in the QPR is accurate, balanced and not inconsistent with the Qualified Person’s Report.

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

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

### **Independence**

SRK will be paid a fee for this work at commercial rates in accordance with normal professional consulting practice.



Payment of fees is in no way contingent upon the conclusions to be reached in this QPR.

**Forward looking statements**

This QPR contains statements of a forward-looking nature which are subject to a number of known and unknown risks, uncertainties and other factors that may cause the results to differ materially from those anticipated in this QPR. The achievability of these projections is neither assured nor guaranteed by SRK. The projections cannot be assured as they are based on economic assumptions, many of which are beyond the control of Persistence Resources and SRK. Future cash flows and profits derived from such projections are inherently uncertain and actual results may be significantly more or less favourable.

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**APPENDIX III**

**SRK REPORT**

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**GLOSSARY OF TERMS AND ABBREVIATIONS**

<b>Abbreviation</b>	<b>Terminology</b>
'	minute of arc
%	percent/percentage
/	per
°	degree(s) of arc
°C	degree(s) Centigrade
3D	three-dimensional
AAS	Atomic absorption spectroscopy
AER	Annual Environmental Report
Ag	The chemical symbol for silver
ALS	ALS Chemical Assaying Laboratory in Guangzhou, China
ANFO	ammonium nitrate/fuel oil
ARD	acid rock drainage
As	The chemical symbol for arsenic
ASL	above sea level
Au	The chemical symbol for gold
AusIMM	Australasian Institute of Mining and Metallurgy
B.Eng.	Bachelor of Engineering
B×H	breadth × height
BD	bulk density
Canadian NI 43-101	National Instrument 43-101, which is a national instrument for the (Canadian) Standards of Disclosure for Mineral Projects, including Companion Policy 43-101 as amended from time to time.
Capex	capital cost
CIM	Canadian Institute of Mining, Metallurgy and Petroleum
CIM Definition Standards	The Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM
cm	centimetre(s)
CME	Chicago Mercantile Exchange
CMF	Consensus Market Forecasts
CMP	composite(s)
Co	The chemical symbol for cobalt
Conc.	Concentrate
CP	Competent Person
CPR	Competent Person’s Report
CRF	cemented rock fill
CSA	compensations for sulfuric acid
CSV	comma-separated values
Cu	The chemical symbol for copper
Cut-off grade	The grade threshold above which a mineral material is considered potentially economic and is selectively mined and processed as ore

<b>Abbreviation</b>	<b>Terminology</b>
CuSO <sub>4</sub>	copper sulphate
CoV	Coefficient of Variation
DA	depreciation and amortisation
Dahedong	Yantai City Dahedong Processing Co., Ltd.
m/s	metre(s) per second
DCF	discounted cash flow
DNR of Shandong	Department of Natural Resources of Shandong Province
Dr	Doctor of Philosophy
ECAP	Environmental Corrective Action Plan
EIA	The Environmental Impact Assessment
EPMP	Environmental Protection and Management Plan
ESHS	Environmental, Social, Health and Safety
etc.	et cetera (= and so on)
FAusIMM	Fellow of the AusIMM
Fe	The chemical symbol for iron
FSR	feasibility study report
g	gram(s)
g/t	gram(s) per tonne
GPS	global positioning system
GRG	gravity recoverable gold
H1 2023	the first half of 2023
H2 2023	the second half of 2023
ha	hectare(s)
HQ core	core diameter of 63.5 mm
i.e.,	id Est (= that is)
ID3	inverse distance power of 3
IDW	inverse distance squared
IFC	International Finance Corporation
Indicated Mineral Resource	An Indicated Mineral Resource is that part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed
Inferred Mineral Resource	An Inferred Mineral Resource is that part of a mineral resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings, and drill holes which may be limited or of uncertain quality and reliability

<b>Abbreviation</b>	<b>Terminology</b>
Intertek	Intertek Laboratory in Beijing
IP	Induced Polarisation, which is an exploration technique whereby an electrical current is pulsed through the ground and the response from the sub surface measured in order to identify minerals of interest. Strong IP responses may be a result of sulphide which may be associated with gold mineralisation
[REDACTED]	[REDACTED]
IRR	internal rate of return
Jinyuan Metallurgical Lab.	Metallurgical Laboratory of Yantai Jinyuan Mining Machinery Co., Ltd.
JORC Code	Australasian Code for Reporting of Exploration Results, Mineral Resources and Mineral Reserves, 2012 edition, as published by the Joint Mineral Reserves Committee.
JORC Committee	Joint Mineral Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia
kg	kilogram(s), equivalent to 1,000 grams
kg/t	kilogram(s) per tonne
km	kilometre(s), equivalent to 1,000 metres
km <sup>2</sup>	square kilometre(s)
koz	1,000 troy ounces
kt	kiloton(s)
ktpa	kiloton(s) per annum
kV	kilovolt(s)
kW	kilowatt(s)
kWh/t	kilowatt(s) hour per tonne
L×B×H	length × breadth × height
LHD	load-haul-dump machine
LoM	life of mine
m	metre(s)
M	Million(s)
m ASL	metre(s) above sea level
M.Eng.	Master of Engineering
M.Sc.	Master of Science
m/kt	metre(s) per kiloton
m <sup>2</sup>	square metre(s)
m <sup>3</sup>	cubic metre(s)
m <sup>3</sup> /d	cubic metre(s) per day
m <sup>3</sup> /s	cubic metre(s) per second
m <sup>3</sup> /t	cubic metre(s) per tonne
m <sup>3</sup> /year	cubic metre(s) per year
MAusIMM	Member of the AusIMM

<b>Abbreviation</b>	<b>Terminology</b>
Measured Mineral Resource	A Measured Resource is that part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes
Mineral Reserve	The economically mineable part of a measured and/or indicated mineral resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments and studies have been carried out and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, and social and government factors, as defined in the CIM Definition Standards. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Mineral Reserves are sub-divided in order of increasing confidence into Probable Mineral Reserves and Proven Mineral Reserves
Mineral Resources	A concentration or occurrence of material of intrinsic economic interest in or on the earth’s crust in such form, quality and quantity that there are reasonable prospects for eventual economic extraction, as defined in the CIM Definition Standards. The location, quantity, grade, geological characteristics and continuity of a mineral resource are known, estimated or interpreted from specific geological evidence and knowledge
mg/l	milligram(s) per litre
mg/m <sup>3</sup>	milligram(s) per cubic metre
mm	millimetre(s)
Mn	The chemical symbol for manganese
Mo	The chemical symbol for molybdenum
Moz	Million ounce(s)
Mr	Mister
Yantai Mujin	Yantai Mujin Mining Co., Ltd.
MW	Megawatt(s), equivalent to 1,000,000 watts
NCF	net cash flow
Ni	The chemical symbol for nickel
NI 43-101	Canadian National Instrument 43-101
No. 1 Geological Institute	No. 1 Geological Mineral Resource Prospecting Institute of Shandong Province
No. 3 Geological Institute	No. 3 Geological Mineral Resource Prospecting Institute of Shandong Province
No. 6 Geological Institute	No. 6 Geological Mineral Resource Prospecting Institute of Shandong Province
NPV	net present value
NQ core	core diameter of 47.6 mm

<b>Abbreviation</b>	<b>Terminology</b>
O.K.	Ordinary Kriging
OHS	occupational health and safety
Opex	operating cost
oz	ounce
Pb	The chemical symbol for lead
PEA	Preliminary Assessment Technical Report on the Songjiagou Project, Shandong Province, China, which was prepared by Wardrop and dated in 2011
Persistence Resources or the Company	Persistence Resources Group Ltd
PGE	platinum group element
pH	potential of hydrogen
Ph.D.	Doctor of Philosophy
ppb	part(s) per billion
PRC	People’s Republic of China
Probable Mineral Reserve	A Probable Mineral Reserve is the economically mineable part of an Indicated, and in some circumstances Measured Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified
Proven Mineral Reserves	A Proven Mineral Reserve is the economically mineable part of a Measured Resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified.
Provincial Government	the People’s Government of Shandong Province.
QA/QC	Quality Assurance/Quality Control
QMS	Quality Management System
QPR or CPR	Qualified Person’s Report
RMB	Renminbi, which is the official currency of the People’s Republic of China.
RMB/a	RMB per annum

<b>Abbreviation</b>	<b>Terminology</b>
RMB/t	RMB per tonne
RoM	run-of-mine
RTK	real-time kinematic
S	The chemical symbol for Sulphur
SBX	Sodium butyl xanthate
SD	standard deviations
SG	specific gravity
SGS Tianjin	SGS Laboratory in Tianjin, China
Shandong GGPI	Shandong Geophysical and Geochemical Prospecting Institute
SJG	Songjiagou, the name of the village near the SJG Project.
SJG Open-Pit Mine	Songjiagou Open-Pit Mine, which is the open-pit operating mine of the SJG Project.
SJG Project	The SJG Project consists of SJG Open-Pit Mine, SJG Underground Mine, and related facilities.
SJG Underground Mine	Songjiagou North Mine, which is the underground operating mine north of the SJG Open-Pit Mine.
SRK	SRK Consulting China Ltd. trading as SRK Consulting
Stock Exchange	The Stock Exchange of Hong Kong Limited
t	tonne(s), equivalent to 1,000kg
t/h	tonne(s) per hour
t/m <sup>3</sup>	tonne(s) per cubic metre
TFe	Total iron, including magnetic and non-magnetic iron
tpa	tonne(s) per annum
tpd	tonne(s) per day
tph	tonne(s) per hour
TSF	tailings storage facility
TSX	Toronto Stock Exchange
TSXV	TSX Venture Exchange
USD	United States Dollar
USGS	United States Geological Survey
V	The chemical symbol for vanadium
Valmin Code	Code for Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports
VAT	value-added tax
Wardrop	Wardrop Engineering Inc.
WRD	waste rock dump
WSCP	Water and Soil Conservation Plan
Yantai Design Institute	Shandong Gold Group Yantai Design and Research Engineering Co., Ltd.
Yantai Zhongjia	Yantai Zhongjia Mining Co., Ltd.
Zn	The chemical symbol for zinc
µm	micron(s), 1/1,000 of a millimetre



## 1 INTRODUCTION AND TERMS OF REFERENCE

SRK Consulting China Ltd. (“SRK”) was requested by Persistence Resources Group Ltd (“Persistence Resources” or “Company”) to prepare a Qualified Person’s Report (the “QPR” or “CPR”) for Songjiagou Gold Project (the “SJG Project”) located in The People’s Republic of China (the “PRC” or “China”) in compliance with the requirements of Canadian National Instrument 43-101 (the “NI 43-101”) and the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the “Listing Rules”).

The ownership structure chart is presented in Figure 1-1.

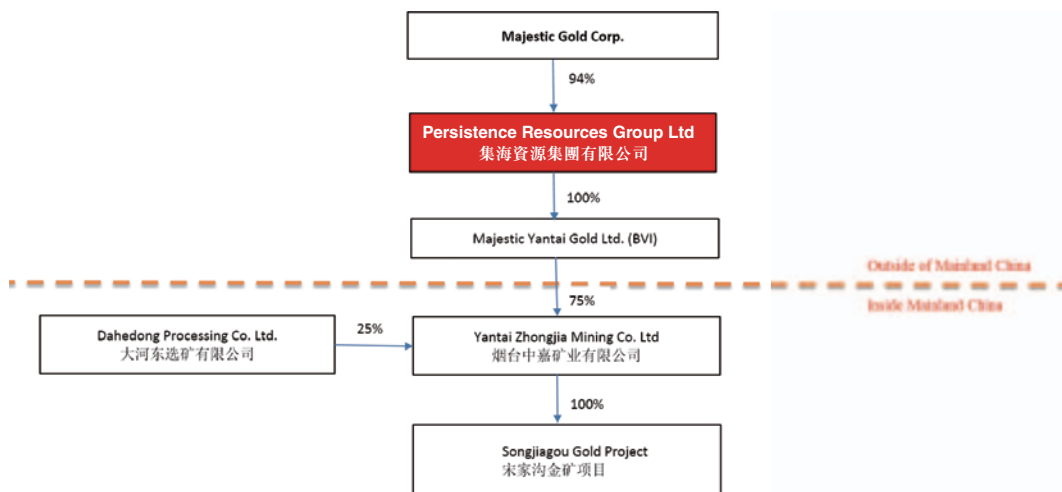


Figure 1-1: Ownership Structure Chart

### 1.1 Scope of work

The scope of work includes the construction of a mineral resource model for the gold mineralisation delineated by drilling on the SJG Project and the preparation of a QPR in compliance with NI 43-101 and the Stock Exchange listing requirements. This work typically involves the assessment of the following aspects of the SJG Project:

- Regional, local and mine geology;
- Exploration history, quality and independent data verification;
- Geological modelling, Mineral Resource estimation and validation;
- Mining;
- Processing and mineral recovery;
- Environmental and social;

- Operating and capital costs; and
- Economic analysis.

## **1.2 Work program**

The Mineral Resource statement reported herein is a collaborative effort between Persistence Resources and SRK personnel. The exploration database was compiled and maintained by Persistence Resources and was reviewed by SRK.

The geological model and wireframes for the Songjiagou mineralisation were constructed by SRK based on the exploration database provided by Persistence Resources. In SRK’s opinion, the geological model is a reasonable representation of the distribution of the targeted mineralisation at the current level of sampling. The geostatistical analysis, variography and grade models were completed by SRK from June 2018 to September 2018; and were updated in June 2023.

## **1.3 Basis of Qualified Person’s report**

This QPR is based on information collected by SRK during site visits (see section “1.7 Site visits” for details) and on additional information provided by Persistence Resources throughout the course of SRK’s investigations. Other information was obtained from the public domain. SRK has no reason to doubt the reliability of the information provided by Persistence Resources. This QPR is based on the following sources of information:

- Discussions with Persistence Resources personnel;
- Inspection of the SJG Project area, including outcrops, drill cores, open pit, open pit benches, underground mine, processing plant, tailings storage facilities and environmental and social aspects;
- Review of exploration and geological data provided by Persistence Resources;
- Data verification, including re-sampling and re-assaying of duplicates and verification drilling; and
- Additional information from public domain sources.

## **1.4 Reporting standard, reporting compliance and reliance**

### **1.4.1 Reporting standard**

This QPR has been prepared in the format of NI 43-101 technical report with some modification to fit the requirements of Stock Exchange, and the Mineral Resources and Mineral Reserves were estimated according to Canadian Institute of Mining, Metallurgy and Petroleum (the “CIM”) Definition Standards

for Mineral Resources and Mineral Reserves adopted by the NI 43-101. The CIM Definition Standards are compatible with the JORC Code which is binding upon all Australasian Institute of Mining and Metallurgy (the “**AusIMM**”) members.

#### **1.4.2 Reporting compliance**

SRK confirms that this QPR complies with the disclosure and reporting requirements of the Listing Rules, including:

- Rules 18.02 to 18.04 inclusive, relating to conditions for [REDACTED] of Persistence Resources;
- Rules 18.05 to 18.08 inclusive, relating to content of the document for [REDACTED] of Persistence Resources;
- Rules 18.18 to 18.27 inclusive, relating to statements on Mineral Resources and/or Mineral Reserves;
- Rules 18.28 to 18.30 inclusive, relating to reporting standard; and
- Guidance Note 7 to the Listing Rules, titled “Suggested Risk Assessment for Mineral Companies” [Rule 18.05(5)].

SRK understands the requirements set out in the Listing Rules with regard to the qualifications and experience of the Independent Qualified Person. SRK confirms that the staff employed on the SJG Project satisfy these requirements of the Listing Rules.

Compliance with the Listing Rules is shown in Appendix F to this QPR.

#### **1.4.3 Reliance**

This QPR is addressed to and may be relied upon by Persistence Resources, the Directors of the Persistence Resources and Persistence Resources’ various financial, legal and accounting advisors (the “**Advisers**”) in support of the proposed [REDACTED] of Persistence Resources on The Stock Exchange of Hong Kong Limited (the “**Proposed [REDACTED]**”), specifically in respect of compliance with the requirements of the Listing Rules. SRK agrees that this QPR may be made available to and relied upon by the Advisers.

SRK is responsible for this QPR and for all the technical information contained therein. SRK declares that it has taken all reasonable care to ensure that this QPR and the technical information contained therein is, to the best of its knowledge, in accordance with the facts and contains no omission likely to affect its import.

SRK confirms that the presentation of technical information contained elsewhere in the document released by Persistence Resources in connection with the Proposed [REDACTED] which relates to information in the QPR is accurate, balanced and not inconsistent with the QPR.

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

SRK has no obligation or undertaking to advise any person of any development in relation to the SJG Project which comes to its attention after the date of the QPR or to review, revise or update the QPR or opinion in respect of any such development occurring after the date of the QPR.

### **1.5 Effective date**

The effective date for this QPR is deemed to be 30 June 2023 (the “**Effective Date**”). The Mineral Resource and Mineral Reserve statements set out in this QPR are reported as of 30 June 2023 and represent the Mineral Resources and Mineral Reserves at the Effective Date as audited by SRK.

The life of mine (the “**LoM**”) plans and associated technical and economic parameters included in the LoM plans and techno-economic models all commence on 1 July 2023.

The financial results for the Songjiagou Open-Pit Mine (the “**SJG Open-Pit Mine**”) and Songjiagou Underground Mine (the “**SJG Underground Mine**”) are taken to be correct on 30 June 2023, the Effective Date of this QPR.

#### **1.5.1 Commodity price**

The gold price is 310 RMB/g (or 1,450 USD/oz) for the Mineral Reserves estimate. The price selected by SRK is derived from forecast of Consensus Market Forecasts (the “**CMF**”) delivered in June 2023 by assuming an exchange rate of 6.69 RMB/USD.

#### **1.5.2 Material change**

Based on the information provided by Persistence Resources, there are no events that have occurred since the Effective Date that are likely to have a material impact on the Mineral Resource and Mineral Reserve statements for the SJG Open-Pit Mine and SJG Underground Mine at the date of publication of this QPR.

#### **1.5.3 Legal claims and proceedings**

SRK has been advised by Persistence Resources and its legal advisers that there are no legal claims or proceedings that could influence Yantai Zhongjia’s rights to explore and/or mine at both SJG Open-Pit Mine and SJG Underground Mine.

#### 1.5.4 Sufficiency of rehabilitation funding

SRK notes that Yantai Zhongjia has put efforts on the open pit slope rehabilitations including plating parthenocissus and other vegetations by allocating annual budgets, upon the request of the local governments. Persistence Resources appointed a consultancy to prepare a rehabilitation plan, and some staff have been assigned to implement this rehabilitation plan.

#### 1.5.5 Claims over land

Persistence Resources has advised SRK that there are no land claims that may exist over the land on which exploration or mining activity is being carried out. From a list of outstanding liabilities provided by Persistence Resources, SRK could not find any outstanding claims that could materially influence Persistence Resources’ rights or prevent it from continuing with its operations.

### 1.6 Qualifications of SRK and SRK team

The SRK Consulting comprises over 1,500 professionals, offering expertise in a wide range of resource engineering disciplines. The SRK Consulting’s independence is ensured by the fact that it holds no equity in any project and that its ownership rests solely with its staff. This fact permits SRK to provide its clients with conflict-free and objective recommendations on crucial judgment issues. SRK has a demonstrated track record in undertaking independent assessments of Mineral Resources and Mineral Reserves, project evaluations and audits, technical reports and independent feasibility evaluations to bankable standards on behalf of exploration and mining companies and financial institutions worldwide. The SRK Consulting has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs.

The short biographies of key SRK personnel involved in this QPR are shown below:

- **Anshun Xu (Anson Xu), Ph.D. (Geology), FAusIMM**, is a Corporate Consultant (Geology) who specialises in the exploration of mineral deposits. He has more than 25 years’ experience in exploration and development of various types of mineral deposits including Cu-Ni sulphide deposits related to ultra-basic rocks, tungsten and tin deposits, diamond deposits, and especially deep expertise in various types of gold deposits, including vein-type, fracture-breccia zone type, alteration type, and Carlin type. He was responsible for the Mineral Resource estimations of several diamond deposits, and for reviews of Mineral Resource estimations of several gold deposits. He recently completed several due diligence jobs for clients from both China and overseas including technical review projects such as Canadian NI43-101 reports and Stock Exchange [REDACTED] technical reports. *Dr Xu was the project manager of this project and the Qualified Person (the “QP”) who takes overall responsibility for this QPR.*
- **Pengfei Xiao, M.Sc., MAusIMM**, is a Principal Consultant (Geology). He specialises in mineral exploration applying comprehensive geological and geophysical methods; and his expertise also includes mineral resource modelling and estimation. He is familiar with both theory and practice in sampling, sample preparation, and chemical analysis. As a consulting

geoscientist, he has been active in over 60 projects including due diligence reviews, exploration design, data verification, and Mineral Resource estimation in China, Mongolia, Africa, America, and Southeast and Central Asia. His experience relates precious metals (Au, Ag, and PGE), base metals (Cu, Ni, Pb, Zn), and other metal deposits (Fe, Mn, V, Mo, Co), and also includes a few non-metal projects (phosphorite, potash, gypsum). In the past five years, he has been working in geology and Mineral Resource assessment with SRK and co-authored a dozen Qualified Person’s Reports aiding clients in successful property transactions, more than half of which have been published in stock exchanges. *Mr Xiao assisted Dr Xu in completing the geological modelling and Mineral Resource estimate.*

- **Yonggang Wu, M.Eng., MAusIMM**, is a Principal Consultant (Mining). He joined SRK after graduation from Jiangxi University of Science and Technology in 2007. He has acquired specialised knowledge of mining engineering and MineSight software and has been involved in a large number of projects to date. Minerals involved include Au, Pb, Zn, Mn, Cu, Fe, fluorite, potassium salts, alum, phosphorus, and many more. He has accumulated extensive experience in Mineral Resource and Mineral Reserve estimation, open pit limit optimisation and design, underground mining design, long-term production planning, and due diligence studies. Yonggang has expertise in geological and mining modelling and is proficient in using MineSight, AutoCAD, and other specialised software packages. *Yonggang assisted Dr Xu in completing the mineral reserve modelling and estimate.*
- **Lanliang Niu, B.Eng., MAusIMM**, is a Principal Consultant (Mineral Processing), who graduated in 1987 from Beijing University of Science and Technology majoring in ore processing. He has worked on the industrial testing of gold leaching with low grade ores, managed or participated in processing and metallurgical testing for more than 10 precious and non-ferrous metals projects. With SRK, he has been responsible for the ore processing and metallurgical scope of work and involved in many key projects. *He was responsible for the metallurgical and processing review, and economic analysis.*
- **Yuanhai Li, Ph.D., MAusIMM**, is a Principal Consultant (Environmental) with SRK Consulting China Ltd., who is an environmental scientist with 11 years’ experience in environmental management for the hazardous waste treatment industries. This experience has been gained mainly from within United States and China. He has particular expertise in environmental due diligence reviews, phase II/III site investigations, environmental impact assessment, wetland and landfill rehabilitation, and environmental risk assessment. In addition, he has extensive experience in environmental engineering with a thorough knowledge of dealing with various environmental hazardous waste/solid waste issues, including contaminated site assessment, landfill closures/brownfield redevelopment, and contaminated site remedial designs. He also has a deep understanding of water/wastewater treatment design, water distribution systems, storm water management systems, geographic information systems (the “GIS”), and geotechnical issues through various projects. Furthermore, he is also experienced in AutoCAD/MicroStation, ArcGIS, and GMS. *Dr Li was responsible for the review of environmental issues.*

- **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 more than ten 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 [REDACTED] and due diligence projects in China, Laos, Russia, Mongolia, Philippines, and Indonesia; these projects include the Fuguiniao Mining project, Zijin Mining project, Hanking Mining project, and Future Bright Mining project. *Mr Xue updated the review and report on the environmental and permit issues.*
- **Yiefei Jia, PhD, FAusIMM (CP)**, is a Principal Consultant (geology) with a specialty of exploration of mineral deposits. He has more than 25 years’ experience in the field of exploration, development, and Mineral Resources estimate of precious metal (gold, silver and PGE), base metal (lead, zinc, copper, nickel, vanadium and titanium), and black metals (iron and manganese) as well as non-metallic metal (fluorite and graphite) and decorative stone (marble) ore deposits in different geological settings in Australia, Africa, Asia, and North and Central America. He has extensive experience in project management, exploration design and Mineral Resource assessment. He, as Competent Person, has led and coordinated many due diligence projects with technical reports either for fund raising or overseas stock listing such as on Stock Exchange. *Dr Jia provided internal peer review to ensure the quality the report meets the required standard.*
- **Alexander Thin, Beng (Hons), Gdip Engineering, FAusIMM (CP), FIMMM (C.Eng), FSAIMM, RPEQ**, is a Principal Consultant (Mining and Evaluation) with SRK Australasia. He is an experienced mining professional, with over 30 years’ experience growing businesses across Africa and Australasia (Australia, Papua New Guinea, Solomon Island and Fiji), from start-ups to corporates and multinationals — listed and unlisted. His strategy and leadership experience spans feasibility studies, mineral asset audits and evaluations, independent technical reports, techno-economic studies, capital raising, merger and acquisitions, managing joint ventures, research and development, local and international stock exchange compliance, business development, company promotion, and investor/stakeholder relations. His industry experience spans operational (underground and open pit), technical, consulting and corporate within the metalliferous resources sector, covering precious metals, base metals and bulk commodities. *Alexander provided external peer review to ensure the quality the report meets the required standard.*

## **1.7 Site visits**

The site visit histories are shown below:

- Mr Anshun Xu and Pengfei Xiao visited the SJG Project site between 30 and 31 October 2012, accompanied by personnel of Persistence Resources. The visit covered open pit, exploration site, processing plant, core storage and laboratory. The second site visit, between 23 and 30 November 2012, covered the technical reviewing of mining, processing, licensing/permitting, and environmental and social aspects.
- Mr Pengfei Xiao visited the SJG Project site between 29 and 31 January 2013. He compared the historical core samples and coarse/duplicate samples and collected verification samples from coarse rejects and pulp duplicates independently.
- Mr Anshun Xu, Lanliang Niu, Yuanhai Li and Yonggang Wu visited the SJG Project site between 6 and 8 June 2018, accompanied by personnel of Persistence Resources. The visit covered open pit, processing plant, and underground mine;
- Mr Anshun Xu, Lanliang Niu and Nan Xue conducted site visits from 14 to 16 November 2019.
- Mr Yonggang Wu conducted site visits from 10 to 12 October 2020.
- Mr Yuntao Liu, on behalf of Mr Lanliang Niu and Yonggang Wu conducted site visits from 7 to 8 November 2021.
- Mr Anshun Xu and Yonggang Wu conducted site visits from 24 to 26 July 2023, accompanied by personnel of Persistence Resources. The visit covered open pit, underground mine, processing plant, and tailing storage facilities.

The purpose of site visits was to review the digitalisation of the exploration database and validation procedures, review the exploration procedures used to acquire the data, define the geological modelling procedures, examine the drill cores, interview SJG Project personnel, and collect all relevant information for the preparation of a revised mineral resource model and the compilation of the QPR. During these visits, particular attention was paid to the treatment and validation of historical drilling data.

The site visits also investigated the geological and structural controls on the distribution of the gold mineralisation to aid the construction of three-dimensional (the “**3D**”) gold mineralisation domains.

SRK was given full access to relevant data and conducted interviews with Persistence Resources personnel to obtain information on the past exploration work, to understand the procedures used to collect, record, store, and analyse historical and current exploration data.

## **1.8 Acknowledgement**

SRK would like to acknowledge the support and collaboration provided by Persistence Resources personnel for this assignment. Their collaboration was greatly appreciated and instrumental to the success of SJG Project.



## **1.9 Limitations, reliance on information, declaration, consent and cautionary statements**

### **1.9.1 Limitations**

Mineral Reserve estimates are based on many factors, including data with respect to drilling and sampling. Mineral Reserves are derived from estimates of future technical factors, which include data with respect to operating and capital costs and product prices. The Mineral Reserve estimates contained in this QPR should not be interpreted as assurances of economic life of the SJG Project. As Mineral Reserves are only estimates based on the factors and assumptions described herein, future Mineral Reserve estimates may need to be revised. For example, if production costs increase or product prices decrease, a portion of the current Mineral Resources, from which the Mineral Reserves are derived, may become uneconomical to recover and would therefore result in lower estimated Mineral Reserves. Furthermore, should any of the assumed factors change adversely, the values and parameters for the SJG Open-Pit Mine and SJG Underground Mine as reported herein may need to be revised and may result in lower estimates.

This QPR contains statements of a forward-looking nature. These forward-looking statements are estimates and involve a number of risks and uncertainties that may cause the actual results to differ materially from those anticipated in this QPR. The achievability of the projections, LoM plans, budgets and forecast parameters as included in this QPR is neither warranted nor guaranteed by SRK. The projections as presented and discussed herein have been proposed by Persistence Resources management and have been adjusted where appropriate by SRK.

The projections cannot be assured as they are based on economic assumptions, many of which are beyond the control of Persistence Resources and Yantai Zhongjia. Future cash flows and profits derived from such forecasts are inherently uncertain and actual results may be significantly more or less favourable.

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

Unless otherwise expressly stated, all the opinions and conclusions set out in this QPR are those of SRK.

### **1.9.2 Reliance on information**

SRK’s opinion, contained herein and effective 30 June 2023, is based on information collected by SRK throughout the course of SRK’s investigations, which in turn reflect various technical and economic conditions at the time of writing. Given the nature of the mining business, these conditions can change significantly over relatively short periods of time. Consequently, actual results may be significantly more or less favourable.

SRK has reviewed the information provided by Persistence Resources and is satisfied that the extents of the properties described in the various rights are consistent with the maps and diagrams received from Persistence Resources.

This QPR may include technical information that requires subsequent calculations to derive sub-totals, totals, and weighted averages. Such calculations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, SRK does not consider them to be material.

### ***1.9.3 Declaration***

SRK is not an insider, associate, or an affiliate of Persistence Resources, and neither SRK nor any affiliate has acted as advisor to Persistence Resources, its subsidiaries or its affiliates in connection with SJG Project. The results of the technical review by SRK are not dependent on any prior agreements concerning the conclusions to be reached, nor are there any undisclosed understandings concerning any future business dealings.

Consequently, SRK, the Competent Person (the “CP”) consider themselves to be independent of Persistence Resources, their respective directors, senior management and Persistence Resources’ Advisers.

In this QPR, SRK provides assurances to the Board of Directors of Persistence Resources, in compliance with the requirements of the reporting standards, that the Mineral Resources and Mineral Reserves as provided to SRK by Persistence Resources and reviewed and where appropriate modified by SRK, are reasonable given the information currently available.

### ***1.9.4 Consent***

SRK consents to the issuing of this QPR in the form and content in which it is to be included in documentation distributed to shareholders of Persistence Resources.

Neither the whole nor any part of this QPR nor any reference thereto may be included in any other document without the prior written consent of the CP as to the form and context in which it appears.

### ***1.9.5 Cautionary statements***

The reader and any potential or existing shareholder or [REDACTED] in Persistence Resources is cautioned that Yantai Zhongjia is involved in mining the SJG Open-Pit Mine and SJG Underground Mine and there is no guarantee that any unmodified part of the Mineral Resources will ever be converted into Mineral Reserves nor ultimately extracted at a profit.

## **1.10 Indemnities provided by Persistence Resources**

SRK provides technical services, including preparation of the report based on the agreements between SRK and the client, and only charges the client with the amount of fees both parties agreed on, without any other fees or charges.

## **2 RELIANCE ON OTHER EXPERTS**

SRK trusts the information from Persistence Resources regarding mine ownership, legal and financial liability. SRK did not carry out independent validation of the information regarding land ownership and use rights summarised in “3 Licences and Permits” of this QPR. SRK did not verify the legality of any underlying agreement(s) that may exist concerning the permits or other agreement(s) between third parties but have relied on Persistence Resources. SRK was informed by Persistence Resources that there are no known litigations potentially affecting the SJG Project.

Persistence Resources provided the digital database used for geological modelling. SRK verified this database and removed repeated samples. It is SRK’s opinion that the database used for Mineral Resource estimation has been validated and was collected and built in a professional manner.

The topography used in estimating the Mineral Resource statement in this QPR relies on the topographic survey map dated June 2023 provided by Persistence Resources. SRK trusts the results of this survey.

SRK also relied on the geological reports approved by related governmental authorities which were compiled by various Chinese geological brigades.

### 3 LICENCES AND PERMITS

SRK relies on the information provided by Yantai Zhongjia and SRK understands that a legal due diligence review of SJG Project has been undertaken by Yantai Zhongjia’s legal advisors. The following sections summarise matters related to operational licences and permits.

#### 3.1 Business licence

Details of the business licences for the SJG Project are presented in Table 3-1.

**Table 3-1: Songjiagou Business Licence**

Item	Description
Project	Yantai Zhongjia
Business licence number	91370600717854556W
Issued to	Yantai Zhongjia
Issued by	Yantai Industry and Commerce Bureau
Issue date	24 December 2015
Expiry date	16 March 2035
Licensed business activities	Gold and precious metals mine mining, processing, smelting, and sale

#### 3.2 Mining licences

The current two mining licences (Appendix A) owned by Yantai Zhongjia were issued by the Department of Natural Resources of Shandong Province (“**DNR of Shandong**”). The information pertaining to these two mining licences are shown in Table 3-2 and Table 3-3 respectively. SRK notes that both the SJG Open-Pit Mine and SJG Underground Mine are operational.

**Table 3-2: Mining Licence for SJG Open-Pit Mine**

Item	Description
Mine name	Songjiagou Open-Pit Mine
Mining licence number	C3700002009044110010983
Issued to	Yantai Zhongjia
Issued by	DNR of Shandong
Issue date	17 May 2020
Expiry date	17 May 2031
Mining method	Open pit/Underground Mining
Production capacity	900,000 tonnes per annum (“ <b>tpa</b> ”)
Area	0.5937 square kilometres (“ <b>km<sup>2</sup></b> ”)

**Table 3-3: Mining Licence for SJG Underground Mine**

<b>Item</b>	<b>Description</b>
Mine name	Songjiagou North Mine
Mining licence number	C3700002016024210141314
Issued to	Yantai Zhongjia
Issued by	DNR of Shandong
Issue date	18 February 2021
Expiry date	18 February 2031
Mining method	Underground Mining
Production capacity	90,000 tpa
Area	0.4140 km <sup>2</sup>

Persistence Resources advised SRK that the comprehensive uses of waste materials to recover gold mineral resources are allowed and encouraged by government in actual production. SRK understands that the Mineral Resources estimated and reported in the report by SRK according to NI 43-101/CIM Definition Standards are not the same as the mineral resources estimated and reported by Chinese geological teams according to Chinese standard. It is SRK’s opinion that the production plan proposed in the report by SRK was based on the Mineral Resources estimated according to the NI 43-101/CIM Definition Standards, which may include the waste materials in Chinese standard.

### **3.3 Safety operational permits**

Details for the existing safety operational permits of the SJG Project are presented in Table 3-4, Table 3-5 and Table 3-6 respectively.

**Table 3-4: Safety Operational Production Permit for SJG Open-Pit Mine**

<b>Item</b>	<b>Description</b>
Project	SJG Open-Pit Mine
Safety production permit number	(Lu) FM [2023] 06-0002
Issued to	Yantai Zhongjia
Issued by	Department of Emergency Management of Shandong Province
Licensed activity	Open Pit Operation
Issue date	19 July 2023
Expiry date	1 March 2026

**Table 3-5: Safety Operational Production Permit for SJG Underground Mine**

<b>Item</b>	<b>Description</b>
Project	SJG Underground Mine
Safety production permit number	(Lu) FM [2022] 00-0042
Issued to	Yantai Zhongjia
Issued by	Department of Emergency Management of Shandong Province
Licensed activity	Underground Operation
Issue date	12 September 2022
Expiry date	11 September 2025

**Table 3-6: Safety Operational Permit for Tailings Storage Facility**

<b>Item</b>	<b>Description</b>
Project	SJG Open-Pit Mine
Safety production permit number	(Lu) FM [2020] 06-0052
Issued to	Yantai Zhongjia
Issued by	Department of Emergency Management of Shandong Province
Licensed activity	Tailings Storage Facility Operation
Issue date	15 September 2021
Expiry date	7 December 2023

### **3.4 Other operational permits**

SRK sighted a relocation agreement between Yantai Zhongjia and the residents in Songjiagou Village and Fayunkuang Village in a site visit in 2018. The relocation was completed in 2019. All apartment units were equipped with air conditions, solar panel hot water tank, communication system, water, electricity, etc. Figure 3-1 shows the typical resident apartments for the local residents. However, no land use permit within the mining and processing area is sighted as part of this review.

SRK sighted a water use permit for Yantai Zhongjia, and details of this permit are presented in Table 3-7.



**Figure 3-1: Typical Resident Apartments**

**Table 3-7: Water Use Permit**

<b>Item</b>	<b>Description</b>
Project	Yantai Zhongjia
Water use permit number	D370612S2021-0063
Issued to	Yantai Zhongjia
Issued by	Yantai Muping District Water Bureau
Issue date	16 May 2022
Expiry date	15 May 2024
Water source	Surface water
Water use allocation	464,900 cubic meters per year (“m <sup>3</sup> /year”)

## 4 REGIONAL DESCRIPTION

### 4.1 Location and accessibility

The geographical coordinates of the SJG Project site are centred at approximately 121°22′ East longitude and 37°07′ North latitude.

The SJG Project is located approximately 50 km south of Yantai City, which was previously known to the West as “Chefoo”, an important coastal city in China’s well developed eastern Shandong Peninsula. The SJG Project is easily accessible by means of road, railway, sea and air (Figure 4-1).

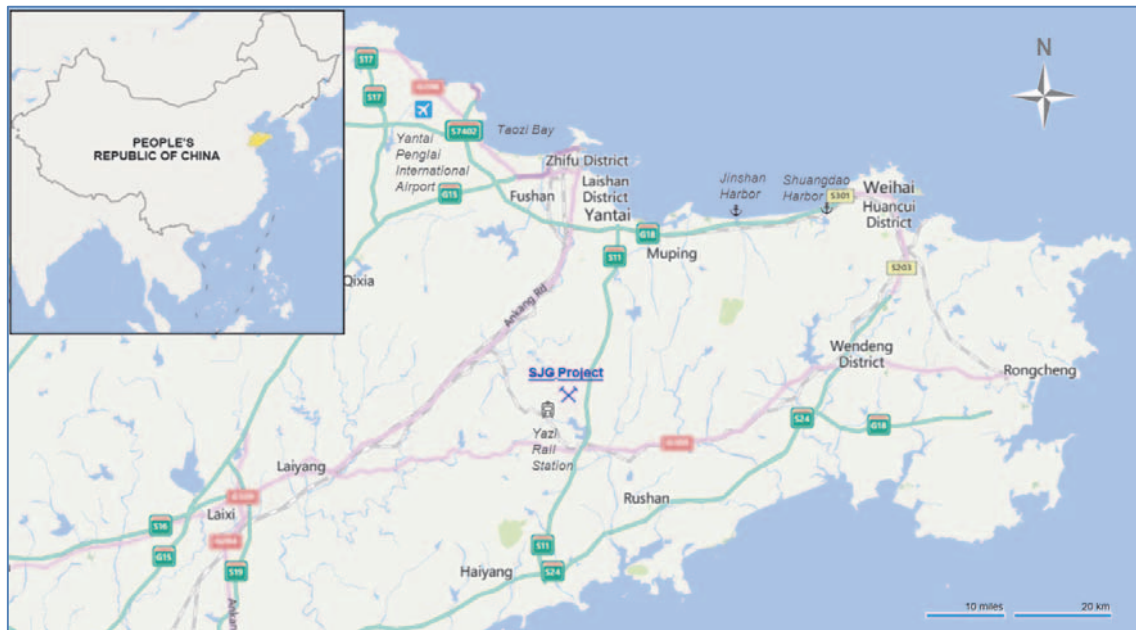


Figure 4-1: SJG Project Location and Accessibility

Provincial Highway S304 is approximately 8 km north of the mine, and National Expressway G309 passes 11 km south of the mine. The western and eastern areas of the SJG Project are connected to Provincial Roads S208 and S207, respectively. Roads in the region are generally paved with asphalt and maintained well.

The nearest railway station is at Yazi Town, about 10 km southwest of the SJG Project. The railway joins the Laiyang-Yantai rail line and provides a link to China’s national railway network.

The Yellow Sea surrounds the Shandong Peninsula to the northeast, east, and south, and the SJG Project is approximately 50 km far away from the shoreline.

Yantai Penglai International Airport, located approximately 93 km directly northwest of the SJG Project, hosts daily flights to and from many Chinese cities including Beijing, Shanghai, and Jinan, the capital city of Shandong Province, as well as weekly flights to Japan, South Korea, Hong Kong, and Taiwan. It takes approximately one hour to drive from the airport to the mine site.



## **4.2 Climate**

The mine area has a warm and semi-humid monsoon climate with displays marine characteristics. Generally, there are no drastic seasonal changes. The year round average annual relative humidity is 68 percent (“%”); recorded statistics shows the yearly precipitation is around 650 millimetres (“mm”).

The annual average temperature is about 12 degrees Centigrade (“°C”), with about 210 frost-free days per year. The highest temperature reaches 30°C and the lowest drops to 5°C below zero (minus 5°C, or –5°C). Generally, there is no extreme cold or hot weather to hinder the mining and processing operations.

The prevailing winds are southerly and predominantly occur in spring and summer; and secondary prevailing winds come from the north and mainly occur in winter.

## **4.3 Local resources and infrastructure**

The mine area is densely populated by Han Chinese, with minorities of Hui and Manchu. Muping District has a population of approximately 500,000 people. Local provision of mining labour is sufficient for the operation of the SJG Project.

Industry and agriculture are well developed in the area, including wheat, corn, and sweet potato; economic crops include peanuts, apples, peaches, pears, ginkgo, and chestnuts. Yantai is famous throughout China for a particular variety of apple and is home to the country’s largest and oldest grape winery. Manufacturing, fishing, international trade, and tourism are important industries in the Yantai region and are instrumental in supporting and creating the local infrastructure.

Mining equipment and accessories are available in Yantai City, as are workshops for mechanical maintenance. Materials such as cement, steel, wood, and chemical agent are generally purchasable in Yantai City.

Daily necessities are supplied to the SJG Project. Office and accommodation buildings are built near the current open pit. Telecommunication and internet services are available in the SJG Project area. A post office, hospital facilities, and schools are available locally.

## **4.4 Physiography**

The geomorphology of the SJG Project area is originally characterised by gently undulating hills, and overall topography slopes downward from west to east. The highest elevation is 140 meters above sea level (“m ASL”) and the lowest is 78 m ASL, with a relative relief of 62 m in the SJG Project area. A view of the SJG Project area is presented in Figure 4-2.

The mainly local water system is the Rushan River to the east of the mine, a seasonal river flowing south through Longjiaoshan Reservoir into the Yellow Sea. The local water supply is adequate to support the mine’s production.



**Figure 4-2: View of Landscape of the SJG Project**

## 5 HISTORY

### 5.1 Ownership history

The mining licence for the SJG Open-Pit Mine was initially issued by the Shandong Department of Land and Resources in 2006, based on the *Geological General Exploration Report of Songjiagou Gold Prospect in Muping District, Yantai City, Shandong Province*, submitted in December 2002 by No. 3 Geological Mineral Resource Prospecting Institute of Shandong Province (the “**No. 3 Geological Institute**”). Mine construction commenced in December 2002. The mining licence holder at the time was Yantai Mujin Mining Co., Ltd. (the “**Yantai Mujin**”). On 2 August 2010, ownership of the mining licence was transferred to Yantai Zhongjia, the current owner of the SJG Project.

The mining licence for the SJG Underground Mine was initially issued by the Shandong Department of Land and Resources on 18 February 2016.

### 5.2 Exploration history

The area has been explored by various Chinese geological teams since the 1960s. In 1969 the No. 6 Geological Mineral Resource Prospecting Institute of Shandong Province (the “**No. 6 Geological Institute**”) carried out preliminary regional gold investigation and found gold occurrences in the SJG Project area.

Between 1982 and 1989 the Shandong Geophysical and Geochemical Prospecting Institute (the “**Shandong GGPI**”) conducted a gravity survey at a scale of 1:200,000 and a stream sedimentary survey at a scale of 1:50,000.

Between 1983 and 1986, the No. 3 Geological Institute undertook regional gold metallogenetic research.

Between 1984 and 1993, the No. 3 Geological Institute and the No. 1 Geological Mineral Resource Prospecting Institute of Shandong Province (the “**No. 1 Geological Institute**”) carried out regional geological mapping on a scale of 1:50,000.

In 1991 the No. 3 Geological Institute conducted preliminary mineral prospecting in the Songjiao-Songjiagou area. Several gold mineralised bodies were defined by a few trenches and drill holes.

In 1997 and 1998, prospecting work continued with geological mapping, surveying, trenching, tunnelling and drilling, and the exploration results were reported in a report titled *Geological Prospecting Report of Songjiagou Gold Prospect in Muping District, Yantai City, Shandong Province* by No. 3 Geological Institute in February 1998. The geological report was approved by the Yantai Bureau of Land and Resources in 2001.

In 1998 the No. 3 Geological Institute conducted prospecting in the Fayunkuang area and estimated a total mineral resource of former Chinese Categories D and E (similar to Inferred Mineral Resource) of approximately 1,800 kt with an average grade of 6.8 g/t gold (“**Au**”). The exploration results were summarised in a report titled *Fayunkuang Gold Prospect in Muping District, Yantai City*,

*Shandong Province*, submitted in October 2012. The “Fayunkuang” area covered by that report is within the current SJG Project area. The main workload completed in 1998 included detailed geological mapping at scales of 1:2,000 and 1:1,000, and a total of 12 drill holes with an aggregate length of 5,036 m.

During 1999 and 2003, the No. 3 Geological Institute was commissioned by Yantai Mujin to conduct general exploration in the SJG Project area. Yantai Mujin completed 20 shallow drill holes, and carried out 1,600 m of induced polarization (the “**IP**”) geophysical profiling which resulted in the identification of nine anomalies. The completed exploration during the period also included geological mapping, magnetic surveying, trenching, 14 drill holes with a total depth of 1,640 m, and 2,860 m long of underground workings.

Between October 2003 and December 2011, exploration was conducted by Yantai Zhongjia itself within the mine area. The main works include the topographic survey at a scale of 1:2,000 covering 1 km<sup>2</sup>, 30 drill holes with a total length of 8947.59 m, 472.32 cubic meters (“**m**<sup>3</sup>”) trenches, density testing of 106 samples and logging of hydrogeology and engineering geology for 13 drill holes.

During 2012 and April 2013, the No. 3 Geological Institute was commissioned by Yantai Zhongjia to conduct detailed exploration campaign. The main works include 1:10,000 geological revision covering 12 km<sup>2</sup>, 1:10,000 hydrogeological revision covering 12 km<sup>2</sup>, 1:2,000 topographic survey covering 1.30 km<sup>2</sup>, 1:2,000 hydrogeological revision covering 3.76 km<sup>2</sup>, 1,204.08 m<sup>3</sup> trenches, 20 drill holes with a total length of 7,093.42 meters (“**m**”), basic analysing of 7,853 samples, 75 samples for geotechnics test, 7 samples for complete water quality analysis, 8 samples for rock-mineral determination, 8 samples for quantitative spectrographic analysis, 137 samples for density and humidity test, 89 composites, 991 basic internal duplicates, 7 compositing internal duplicates, and 320 external duplicates.

## 6 GEOLOGICAL SETTING AND MINERALISATION

### 6.1 Regional geology

The SJG Project is located in China’s Shandong Peninsula, along the southeastern margin of the North China craton and on the western margin of the Pacific Plate. The Shandong Peninsula, also called the Jiaodong Peninsula, is known as a gold enriched district. It is bounded to the west by the northeast-trending Tan-Lu Major Fault Zone, which extends more than 3,000 km from the Russian Far East to the Yangtze River in south China. To the south, the Shandong Peninsula extends into the Yangtze craton.

The regional tectonics is characterised by two major orogenesis, the Indosinian collision between the North China and Yangtze cratons, with the nearly east-west directional suture defined as the Qinling-Dabie-Sulu metamorphic belt from Triassic period; and the Yanshanian subduction of the Pacific plate beneath Eurasia during the Middle Jurassic epoch.

The Shandong Peninsula is broadly divisible into two pre-Jurassic components: the Jiaobei Terrane of North China strata in the north, and the Sulu (the “**Jiaonan**”) Terrane of Yangtze strata in the south. The two terranes are separated by the northeast trending Wulian-Qingdao-Rongcheng ductile shear belt and the Jiaolai depression (the “**Laiyang Basin**”), comprising Jurassic and Cretaceous-age sedimentary rocks. The SJG Project is located in the eastern part of the Jiaobei Terrane.

The Jiaobei Terrane is largely represented by granitoid intrusions and Archaean greenstone, and is also comprised of Proterozoic and Mesozoic rock sequences and Quaternary alluvium. The Sulu Terrane is characterised by the presence of high-pressure metamorphic minerals and is interpreted to be the eastern extension of the Qinling-Dabie orogenic belt.



Figure 6-1: Regional Geology of Shandong Peninsula

The granitoid rocks of the peninsula are dominated by Mesozoic-age intrusions as well as by Precambrian granitoids, but economic mineralisation is exclusively associated with Mesozoic intrusive bodies.

The eastern Shandong (the “**Jiaodong**”) gold district is divided from west to east into the Zhaoyuan-Laizhou, Penglai-Qixia, and Muping-Rushan gold belts (Figure 6-1). The SJG Project is located within the Muping-Rushan gold belt situated in the eastern part of the Jiaobei Terrane. Gold mineralisation is characterised as either vein-filling or as disseminated structures/stockwork.

## 6.2 Property geology

The SJG Project is situated in the eastern part of the Jiaobei Terrane and on the northeast margin of the Jiaolai Basin and is regarded as part of the Muping-Rushan gold belt. A simplified map of local geology is shown in Figure 6-2.

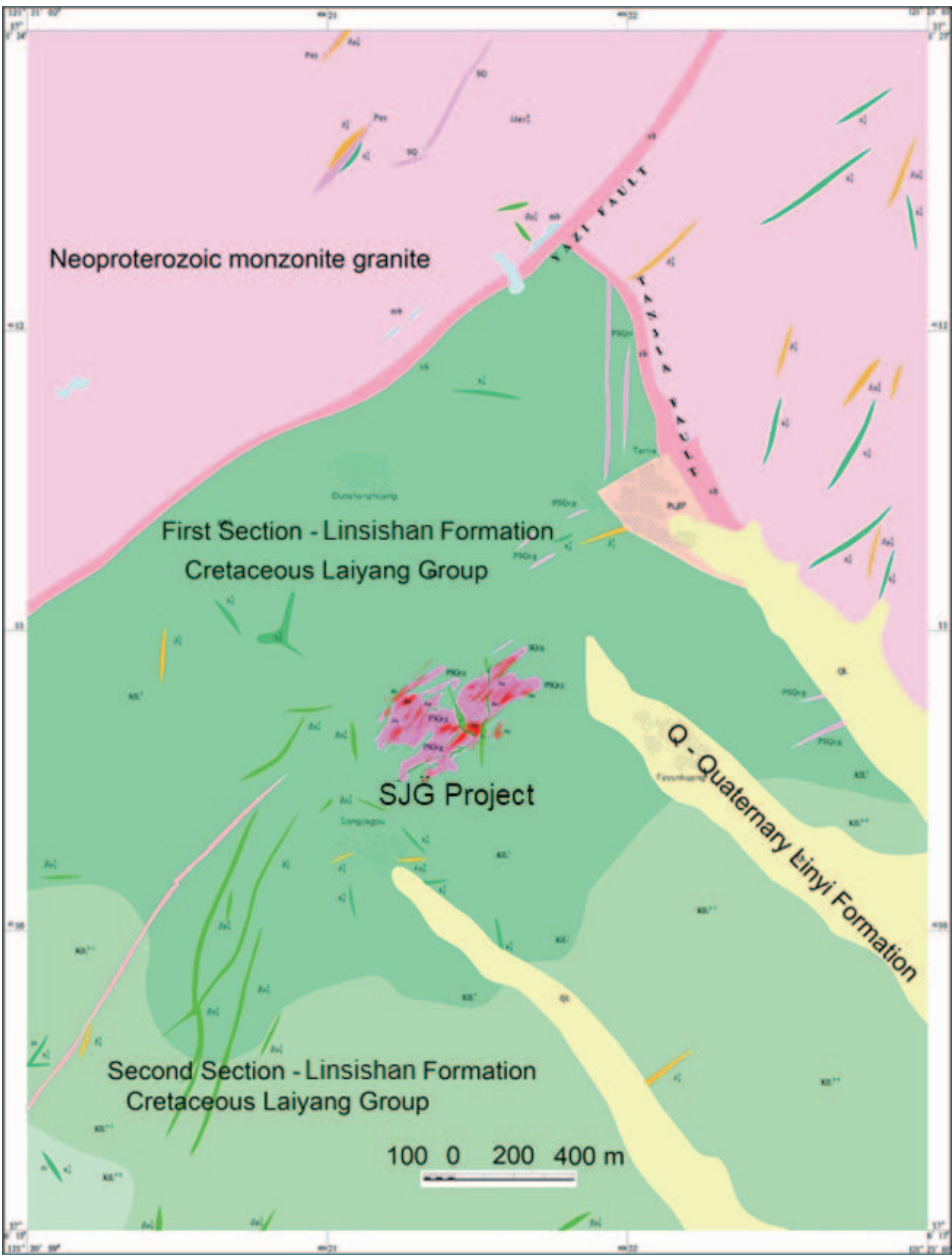


Figure 6-2: Simplified Local Geology

Note: modified from No. 3 Geological Institute 2011.

Local strata include metamorphic rocks of the Paleoproterozoic Jingshan Group, sedimentary rocks of the Mesozoic Cretaceous Laiyang Group, and Cenozoic Quaternary system. The Laiyang Group dominates the SJG Project area. A ductile shear zone and ductile brittle fault zone are major geological structures in the area. Major magmatic activity is represented by monzonite granite. Other dykes include diabase, diorite, hornblende porphyrite, and lamprophyre.

Paleoproterozoic metamorphic rocks of the Jingshan Group are mainly distributed to the north of the SJG Project area near Tanjia village, and are comprised of biotite granulite, graphite-bearing gneiss, leucogranite, and marble. These strata generally dip southeast with angles varying from 15° to 50°.

Cretaceous-age rocks are predominately represented by the Linsishan Formation, part of the Laiyang Group and comprised of conglomerate and sandstone. The Linsishan Formation in the SJG Project area has an overall northeast strike and dips southeast with an angle of 20° to 40°. The formation is divisible into two conformably contacted sections according to the clast size. The first section of Linsishan Formation consists of relatively larger clasts with grain sizes of about 3 centimetres (“cm”) –20 cm and is predominately composed of monzonitic granite and quartz; marble, gneiss, schist and granulite are occasionally visible in this section. The second section is characterised by finer grained and rounded clasts made of sandstone and siltstone.

The gold mineralisation is mainly hosted within the conglomerate in first section of the Laiyang Group Linsishan Formation.

Quaternary sediments in the property area are classified as Linyi Formation, represented by alluvial deposits distributed to the lower terrain near Tanjia, Fayunkuang, and Songjiagou villages.

Local structure features two major fault zones, the north-easterly striking Yazhi Fault Zone and the north-westerly orientated Tanjia Fault Zone. The two major fault zones mark the margin of the SJG Project’s mineralisation and lie at or near the contact between metamorphic Proterozoic rocks and the overlying Laiyang Group conglomerate.

Alteration minerals associated with the fault zone include sericite, silica, pyrite, carbonate, chlorite, and potassium feldspar, which present in a large halo around the fault zone and its contained mineralisation.

Dykes are developed in the property area and represent intrusive activities during the Proterozoic and Mesozoic periods; they are composed of diabase, diorite, granite, and lamprophyre.

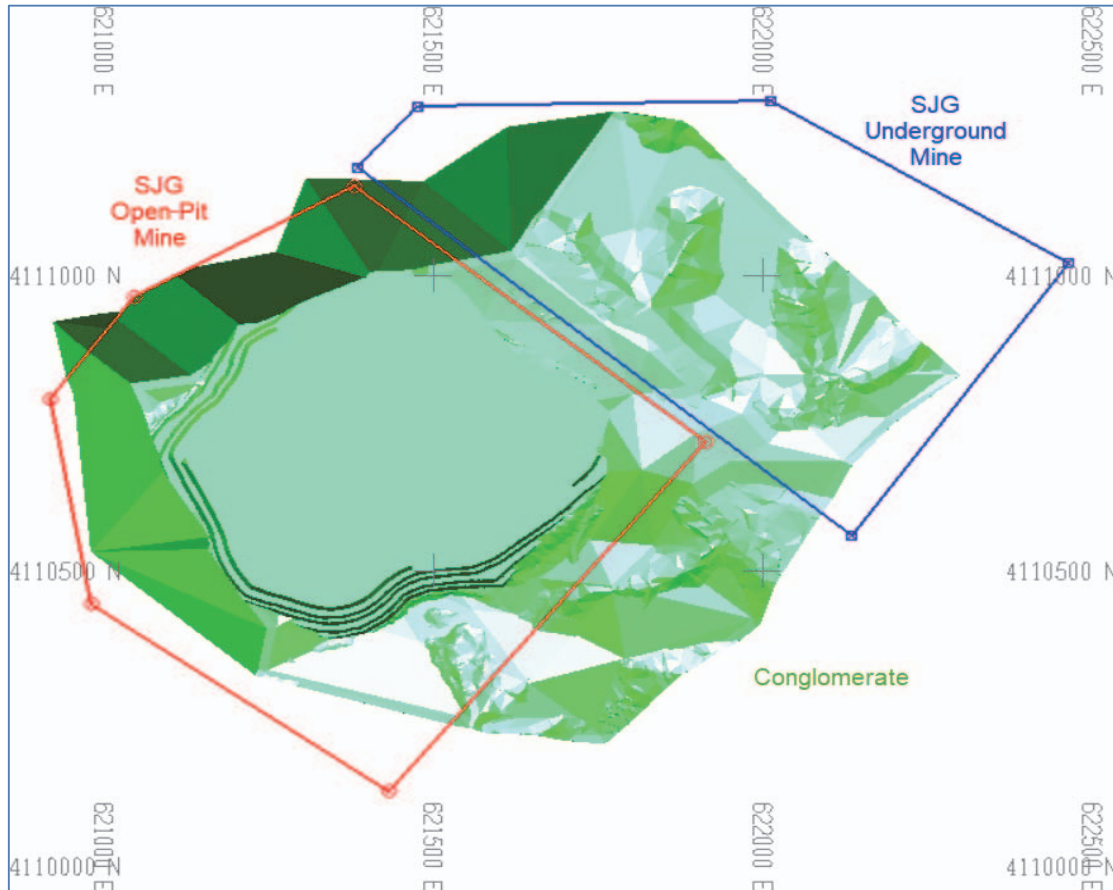
### **6.3 Mineralised zones**

The SJG Project’s gold mineralised zones are concentrated within an area of approximately 1.0 km<sup>2</sup> which is covered by the aggregate areas of Yantai Zhongjia’s currently valid mining licences (Figure 6-3). The defined mineralised zones are bounded within the Laiyang Group Linsishan Formation conglomerate without distinct boundaries, and a number of gold enriched bodies present as gold veins occurring within the lithological zone characterised by Linsishan Formation conglomerate (Figure 6-4).

Historical exploration before 2005 had been primarily focusing on mineralisation with gold grade greater than 1 g/t Au. Although the previous underground workings suggest that most mineralisation was confined to relatively narrow zones, there was also evidence, by way of room-and-pillar stopes, that in some areas mineralisation extended laterally away from the controlling structures for 10 m or more. The underground sampling carried out by Persistence Resources substantially confirmed that the highest



grades of gold mineralisation are confined to relatively narrow although vertically and horizontally persistent zones. Away from those higher-grade corridors, gold grades dropped to 0.5 g/t Au or less, with rare, interspersed higher values.



**Figure 6-3: Songjiagou Mineralised Zone**

The open pit mining operation begun in 2005 and indicates that the zones of Linsishan Formation conglomerate are generally mineralised. There is also evidence that lamprophyre dykes intruded into the Cretaceous conglomerate and interrupted the gold enriched bodies (see Figure 6-4).

Gold mineralisation is associated with sulphides that include electrum, pyrite, chalcopyrite, galena, sphalerite, and bornite. Gold is most abundantly associated with electrum and pyrite. The secondary metallic minerals include sphalerite, galena, chalcopyrite, magnetite, and limonite. The associated gangue minerals are represented by feldspar, quartz, muscovite, calcite, and clay minerals.

Sulphur (“S”) grades vary from 1.1% to 7.8% according to tests done on 13 samples by No. 3 Geological Institute, with an average grade of 3.7%. Silver (“Ag”) grades have been analysed within a range of 0.5 g/t and 8.5 g/t Ag. The harmful element arsenic (“As”) was found to occur with grades ranging from 0.0040% to 0.0302% As. The average grade of arsenic is about 0.0012% As. As the content of arsenic is far lower than the required standard of 0.5% in the content of the gold product as

stipulated in the sales contract, SRK does not consider this could materially affect the saleability of the gold produced at the mines. Furthermore, in view of the graded of arsenic, SRK do not consider that it would be likely to adversely impact the environment.

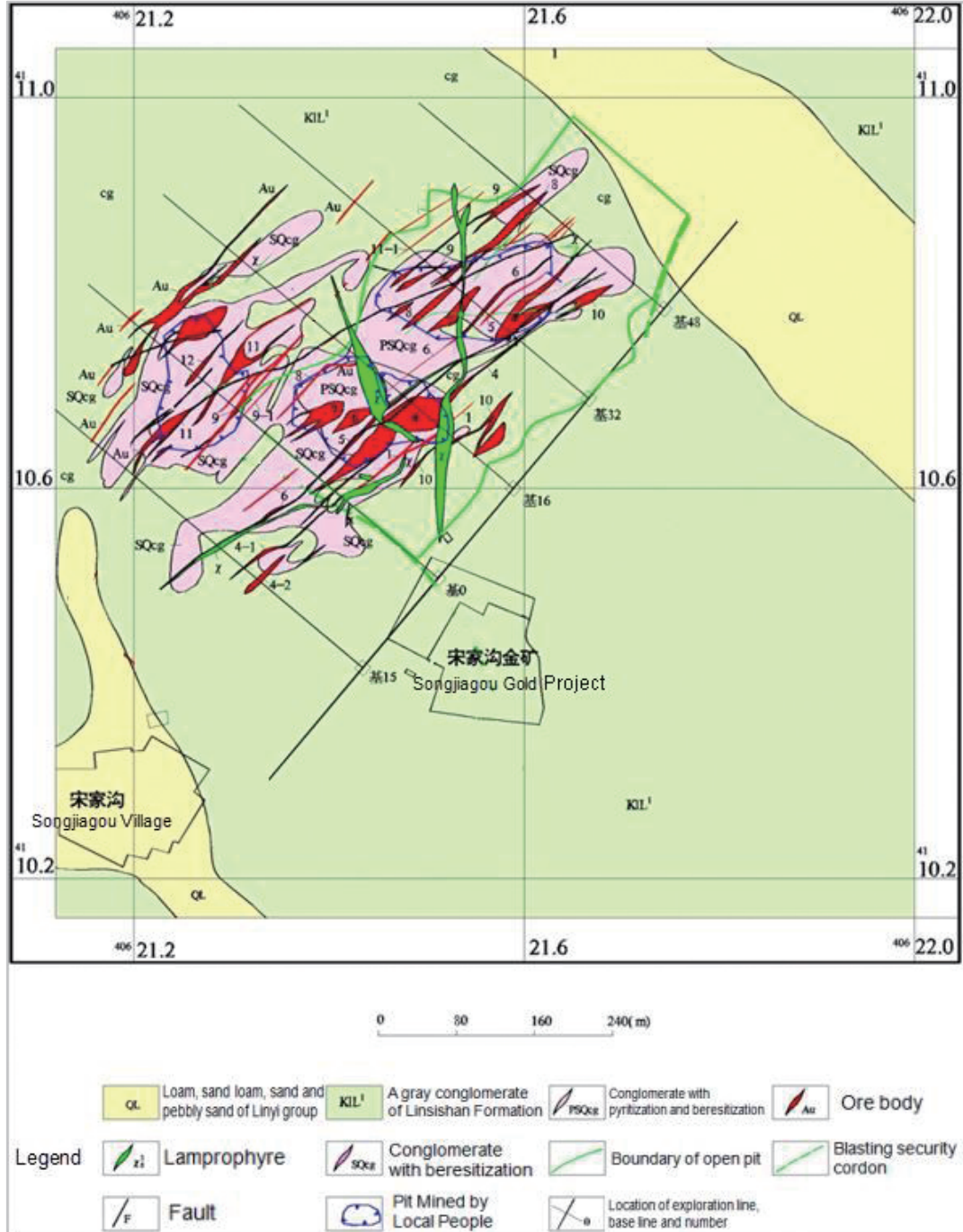


Figure 6-4: Geology of SJG Project

Based on observation as well as on the phase analysis results, the types of gold mineralised zones present at the SJG Project include oxidised, mixed, and primary sulphide (Figure 6-5); primary sulphide or accounts for the largest proportion. The mineralised rocks present in grained, in-filling, clastic, or brecciated textures.



Partly oxidised mineralised conglomerate



Primary host rock

**Figure 6-5: Typical Gold Mineralisation Host Rocks**

## **7 DEPOSIT TYPES**

Gold mineralisation of the SJG Project is hosted within the pyritic-sericitic conglomerate of the Linsishan Formation from Laiyang Group of Cretaceous-age. Gold enrichment occurs as veins, as well as in disseminated and stockwork distributions. The SJG vein-type mineralisation could be appropriately described as mesothermal genesis. The disseminated and stockwork types of mineralisation have some aspects of epithermal mineralisation but are both spatially and genetically associated with the vein-type; as such it can be considered a variant of that type.

The SJG Project’s conglomerate type gold deposit is believed to be associated with mesothermal filling activities and followed by alterations and metasomatism.

Wall rocks are generally consistent with the host rocks, comprised of conglomerate and occasional lamprophyre. Wall rocks and internal waste contain small quantities of gold, usually less than 0.10 g/t Au. The boundaries between wall rock, internal waste, and the host rocks are not visually obvious, and must be determined by chemical analysis.

## **8 EXPLORATION**

### **8.1 Geological mapping**

Geological mapping has been successively conducted by previous explorers as described in section “5.2 Exploration history” of this QPR. The geological report prepared by No. 3 Geological Institute in January 2011 provided geological maps at scales of 1:10,000 and 1:2,000. Other than cross section information, no updated surface geological mapping has been conducted since 2011.

### **8.2 Survey**

Topographic and engineering surveys have been conducted mainly by No. 3 Geological Institute, and Yantai Mujin carried out previous underground surveys. Local control points were set up and utilised in these surveys. Handheld global positioning system (the “GPS”) and real-time kinematic (the “RTK”) instruments were used.

Topography for the SJG Project area, locations of all borehole and trench collars, and surface samples were surveyed and mapped at scales of 1:2,000 and 1:1,000.

Yantai Zhongjia used its own professionally equipped survey team to meet the requirements for frequent surveys during the normal production cycle of open pit mining, such as blasting, stripping, and grade-control sampling. The mining area’s topography is surveyed and updated regularly for mine planning purposes.

SRK notes that the previous survey was conducted and reported using different coordinate system; Yantai Zhongjia has reconciled all the survey results and converted all coordinates to China Xi’an 1980 system.

SRK’s Mineral Resource estimation as stated in this QPR used the topography map dated on 31 July 2018, and then was updated with the latest open pit map or mining voids, which was provided to SRK by Yantai Zhongjia.

### **8.3 Other**

Regional geochemical and geophysical investigations have been conducted by various geological brigades and institutes during the reconnaissance stage. SRK has not been provided with such data for review as it is not material to this QPR.

Inventory density determination was based on tests using a total of 81 samples collected from the deposit over various periods: 7 samples were taken in 1998, 35 samples were taken in 2002, 32 samples in 2007, and 7 samples in 2010.

## **9 DRILLING, TRENCHING AND UNDERGROUND WORKINGS**

### **9.1 Trenching**

The surface trenching used in the earlier stages revealed good indications of mineralisation, which encouraged systematic drilling to follow up. A total of 75 trenches with an aggregate length of 5,883 m were excavated by Yantai Zhongjia between 1999 and 2007, from which 5,378 samples were collected. Gold content of these samples ranged from zero to 46.2 g/t Au, with about 5% of the assay values exceeding 1.0 g/t Au.

Trenches were dug by back-hoe and were cleaned prior to sampling. The trenches were completed by third-parties and were sampled by Yantai Zhongjia personnel. Trench sections were trapezoidal, with upper widths of 1.2 m and bottom widths greater than 0.8 m.

The distribution of assay values suggests that the mineralised fractures that are being exploited underground extend to the surface. This finding is reinforced by the fact that surface mining is taking place in the area of the trenches.

Most of the trenches have been backfilled or levelled by recent mining activities.

### **9.2 Underground channelling**

A total of 91 underground channels have been completed on the +9 m, –40 m, –80 m, and –120 m levels in the SJG Project prior to 2012, from which 3,309 channel samples were collected. Data from these underground channel samples were compiled by Yantai Zhongjia. The underground engineering was undertaken by Yantai Huazhong Mine Engineering Company Limited, as reported by No. 3 Geological Institute. The underground tunnels were excavated with section size of 2.2 m high by 2.2 m wide.

In 2018, a total of 15 underground channels were sampled in the SJG Underground Mine, on the +49 m, +9 m and –40 m levels, and a total of 257 underground channel chips were dispatched to SGS Laboratory in Tianjin, China (the “**SGS Tianjin**”) for sample preparation and chemical assay. SRK has supervised the sampling program.

The underground channelling suggests that the gold mineralisation of the SJG Project has a considerable extension from surface down to at least –120 m ASL. There were both surface and underground drill holes having intercepted gold mineralisation at deeper zones below this level, which confirmed the discovery and interpretations from underground channels.

### **9.3 Drilling**

A total of 145 diamond drill holes have been completed since 1997, including 17 underground drill holes with a total length of 1,435 m and 128 surface drill holes with an aggregate length of 37,053 m. Prior to Yantai Zhongjia, there were 32 drill holes completed by No. 3 Geological Institute.

Drilling was conducted by No. 3 Geological Institute. A total of 1,152 samples were collected from the underground drilling and 26,654 samples were collected from the surface drilling.

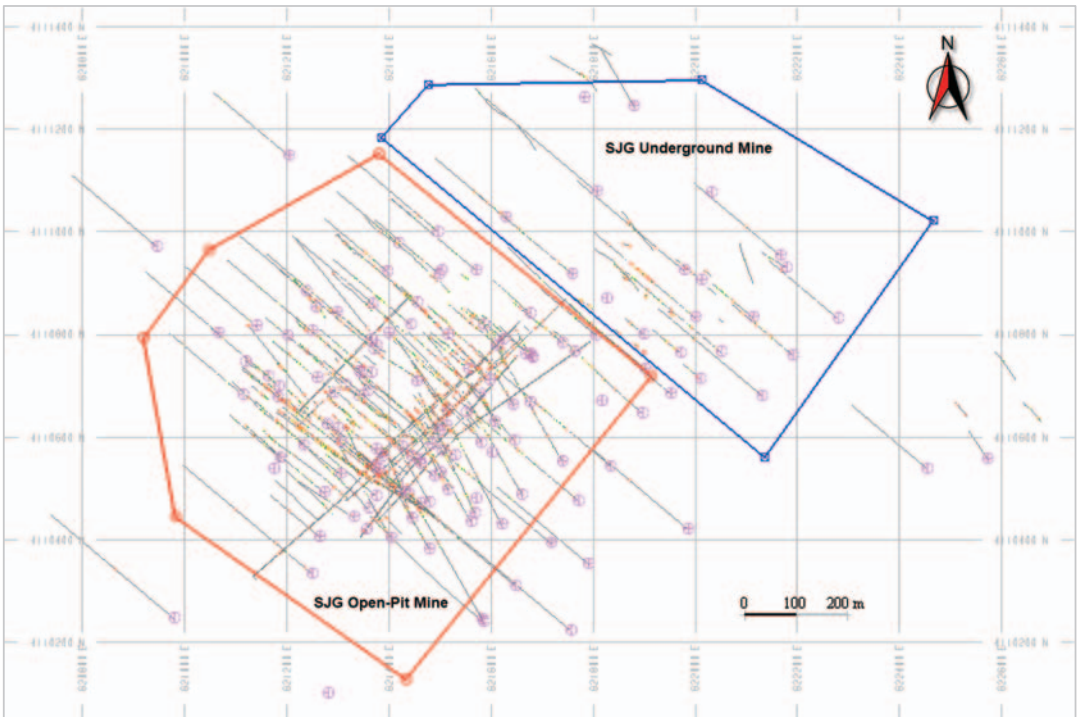
Drilling was performed using mostly HQ and a few NQ sized drill rods. More than half of the holes were drilled with dips of  $-60^\circ$  or  $-45^\circ$  to the northwest, and a few were drilled vertically (dip angle  $-90^\circ$ ).

Core recoveries generally averaged above 95% and recoveries of mineralised intervals were about 97%. The statistics and calculations were performed by No. 3 Geological Institute.

**9.4 Drilling and trenching pattern and density**

The database for Mineral Resource estimation used in this QPR consists of 128 diamond holes for a total of 37,053 m drilled on the surface since 1997, and 106 underground workings totalling 12,262 m, in addition to 17 underground drill holes with a total length of 1,435 m, as well as 75 surface trenches with an aggregate length of 5,883 m.

The actual workload completed in SJG Project might exceed these amounts. Quite a few of drill holes and trenches and/or channel data was not incorporated due to missing of verifiable collar or sample records. Prospecting pits and other workings had previously been conducted in the SJG Project area but are not included in the database provided. Layout of the drilling and trenching used in the Mineral Resource estimation in this QPR is shown in Figure 9-1.



**Figure 9-1: Drilling and Trenching Completed in SJG Project**

The exploration generally followed a sectional layout, designed with a number of exploration lines oriented northwest-southeast. The designed exploration lines cross-cut the gold enriched mineralised veins with overall north-easterly strikes. The exploration lines were spaced about 60 m apart and drill holes on a 60 m × 80 m grid were supplemented by surface trenching spaced about 30 m to 60 m apart. The vertical extension of the gold mineralisation was verified by underground cross-cuts spaced about 30 m apart on the +9 m, -40 m, -80 m, and -120 m levels.

## **10 SAMPLE PREPARATION, ANALYSES, AND SECURITY**

### **10.1 Sample preparation and analyses**

Multiple batches of samples were prepared and assayed for the SJG Project. The samples used for Mineral Resource estimate were derived from exploration conducted since 1997.

Sampling was completed by No. 3 Geological Institute and Persistence Resources staff under the supervision of a CP from Persistence Resources. Samples were logged and prepared to rock chips on site and then shipped to the SGS Tianjin.

All samples for routine chemical assays collected between 2005 and 2007 were further prepared by SGS Tianjin following a standard rock preparation procedure of drying, weighing, crushing, splitting, and pulverization. The pulverised pulps were about 74 microns (“ $\mu\text{m}$ ”, Tyler 200 mesh).

Samples were analysed by SGS Tianjin using screen fire assays, where 1 kg quantities of pulp were subjected to screening for metallic content prior to analysis. The screen fire assay is typically used for nugget gold samples that contain coarse gold particles.

#### **10.1.1 Drill core samples**

Drill cores were logged by No. 3 Geological Institute and Persistence Resources staff; core samples were obtained by cutting the core lengthwise into two halves. One half of each core was placed in sample bags that were then shipped by commercial courier to the SGS Tianjin. The basic length of drill core samples was 1 m. The half-core that was not sampled was placed back in the core box, and all cores were stored for archival purposes in Yantai Zhongjia’s storage facilities.

#### **10.1.2 Trench samples**

Trench samples were collected using the channel method with a sectional size 10 cm × 5 cm and basic sample length of 1 m. The trench sampling was conducted by No. 3 Geological Institute and Persistence Resources staff.

#### **10.1.3 Underground channel samples**

Underground channel sampling was conducted by Yantai Zhongjia. The samples were taken from cross-cuts, as well as from drifts along the veins. Sample length varied from 0.5 m to 2.4 m with an average length of 1 m. The channel section size was 10 cm × 3 cm.



#### 10.1.4 *Specific gravity samples*

Specific gravity (the “SG”) samples were collected and analysed by No. 3 Geological Institute. Density, humidity and gold grade were determined. Tests of 81 SG samples returned an average SG value of 2.7.

#### 10.1.5 *Other information*

The routine chemical assay samples collected in 2008 were prepared and analysed by No. 3 Geological Institute. The sample preparation was similar to the process for samples taken between 2005 and 2007. No. 3 Geological Institute used fire assays to determine the gold grade. SRK has been advised by Yantai Zhongjia that since no CP was responsible for the sampling and sample preparation process in 2008, these samples were not reviewed for a QPR under NI 43-101.

### 10.2 **Quality assurance and quality control programs**

Prior to 2007, the previous exploration has been summarised in a report prepared in compliance with China exploration standard by No. 3 Geological Institute, in which an internal laboratory check and an external check with pulp duplicates are obligatory. The previous technical report and Mineral Resource estimation were prepared by Wardrop Engineering Inc. (the “Wardrop”) in accordance with NI 43-101, and as reported by Yantai Zhongjia, there was a qualified person responsible for the exploration, and the quality assurance and quality control (the “QA/QC”) programs were assessed.

As reported by Wardrop in 2011, the 2007 drilling and trenching programs used blanks and standard reference materials as the basis of the QA/QC program. The following paragraphs are extracted from the *Preliminary Assessment Technical Report on the Songjiagou Project, Shandong Province, China* (the “PEA”) prepared by Wardrop and dated in 2011:

- Assay data was reviewed for 174 blanks (3.5% of the total sample population) that were analysed in conjunction with samples from the drilling and trenching programs. All analyses of blanks were below the detection (<5 parts per billion (“ppb”) gold) threshold, indicating that there is no evidence of cross-sample contamination during the sample preparation process.
- The same set of four standards were used for both the drilling and trenching programs: CDN-GS15A with an expected mean value of 14.83 g/t Au and 2 standard deviations (the “SD”) of 0.61 g/t Au; CDN-GS1P5B with an expected mean of 1.46 g/t Au and 2 SD of 0.12 g/t; CDN-GSP1 with an expected mean of 0.12 g/t Au and 2 SD of 0.02 g/t; and CDN-GSP5B with an expected mean of 0.44 g/t Au and 2 SD of 0.04 g/t. All standards were prepared by CDN Resource Laboratories of Delta, British Columbia, Canada.
- Assay data is available for 133 standard samples as summarised in Table 10-1.
- The high failure rate for analyses of standard CDN-GS15A is noteworthy: 58% for the drill program and 78% for the trench program. Failures include both over and under-estimations. These results suggest that high assay values may be inaccurate, either positively or

negatively, and such a high failure rate could potentially compromise the quality of the dataset, except for the fact that only 18 of the nearly 5,000 assays exceed 10 g/t, so the potential impact is considered to be negligible.

**Table 10-1: Standard Analyses in 2007 as Summarised by Wardrop**

Standard	Drilling Program				Trenching			
	Used (Count)	Over	Under	Fail (%)	Used (Count)	Over	Under	Fail (%)
CDN-GS15A	24	9	5	58	9	1	6	78
CDN-GS1P5B	22	5	1	27	11	2	—	18
CDN-GSP1	24	1	—	4	13	—	—	—
CDN-GSP5B	<u>18</u>	—	—	—	<u>12</u>	1	—	8
<b>Total</b>	<b><u>88</u></b>	<b>15</b>	<b>6</b>	<b>24</b>	<b><u>45</u></b>	<b>4</b>	<b>6</b>	<b>22</b>

The accuracy of analyses for the remaining standards is considerably better and improves markedly at the lower analytical levels. This suggests that most assay values obtained from the 2007 exploration programs are accurate.

As advised, action was taken by Persistence Resources with respect to the out-of-bound values. Wardrop considers that the assays are suitable for use in the Mineral Resource estimation that is the subject of this QPR. Wardrop believes sample preparation, analyses and security are “acceptable”.

SRK notes that SGS Tianjin has its own protocols for quality control applying standards, blanks and duplicates as well.

SGS Tianjin returned the sample pulps and coarse rejects to Yantai Zhongjia. The sample rejects and pulps are stored together with drill cores in a security facility near Yantai Zhongjia’s office building (see Figure 10-1).

SRK has performed QA/QC check after 2011 (see “11 Data Verification”) and is of opinion the previous database is integrated and suitable for Mineral Resource estimation.



pulp and coarse reject containers



remained drill cores

**Figure 10-1: Storage of Coarse Rejects, Pulps, and Drill Cores**

### 10.3 SRK comments

SRK considers that the sampling, sample preparation, security, and analytical procedures performed between 2005 and 2007 for the SJG Project are consistent with generally accepted industry practices and are therefore adequate.

## 11 DATA VERIFICATION

### 11.1 Verifications by Persistence Resources and Wardrop

The exploration data used for Mineral Resource estimation in this QPR was compiled by Persistence Resources; a majority of it was previously used by Wardrop in preparation of the PEA report issued in 2011. Wardrop stated in 2011 that they have digitally verified both drill assays (73%) and trench assays (18%) as received from Persistence Resources against assay reports issued by SGS Tianjin. No errors or discrepancies were found in either dataset.

### 11.2 Verifications by SRK

SRK has reviewed the geological report prepared by No. 3 Geological Institute as issued in 2011 and compared it with the compiled database; furthermore, the assay result datasheet from SGS Tianjin was partly inspected by SRK.

SRK had a site visit to the SJG Project to inspect the field geology. The presence of an operating mine was taken as sufficient proof of the existence of gold mineralisation.

During SRK’s visit, a random group of field samples was collected from the current open pit plus three additional samples, one each from the feed processing plant feed ore, concentrate, and tailings. The samples randomly collected by SRK were prepared and analysed by the Intertek Laboratory in Beijing (the “Intertek”). The assay results for these random check samples are provided in Table 11-1.

**Table 11-1: Random Check Samples Collected by SRK**

Sample Number	Gold Grade (g/t)
SJ01	0.121
SJ02	0.262
SJ03	0.374
SJ04	0.206
SJ05	6.340
SJ06	0.394
SJ07	0.881
SJ08	2.330
SJ09	0.323
SJ10	2.270
SJ11	0.936
A — feed	0.328
B — concentrate	29.600
X — tailings	0.043

The random check results verified that the gold mineralisation is distributed broadly within the Linsishan Formation conglomerate with gold grades varying from about 0.1 g/t Au up to several grams per tonne.

A total of 102 coarse rejects (1 mm sized) and 48 pulp duplicates (75 µm sized) were selected by SRK for an independent verification purpose. The samples were collected from Yantai Zhongjia’s core storage located near SJG Project; each sample was approximately about 200 grams (“g”) in weight. The coarse rejects with about 1 mm grain size were further pulverised to 75 µm in the ALS Chemical Assaying Laboratory in Guangzhou, China (the “ALS”). All of the verification samples were analysed by ALS. The applied method was aqua regia digestion followed by fire assay.

The verification sample results were compared with their counterparts amongst the original assays. A detailed log of the verification samples is provided in Appendix D. The performances of coarse reject and pulp duplicate assays are illustrated in Figure 11-1 and Figure 11-2, respectively.

In general, there are notable discrepancies between coarse rejects and the original assays. About half of the comparable results show relative deviations within a range from –20% to 20%, while the rest (about 50%) show relatively large deviations. These discrepancies may be generated by the nugget effect, uneven splitting and reduction during sample preparation, and/or different chemical analysis approaches, as well as improper sample handling. SRK has analysed the sample results with grades above 0.3 g/t Au (the cut-off grade at SJG Open-Pit Mine) and is of opinion that the overall comparison

provides a confidence in the original assays. The sample preparation in SGS Tianjin has been further revisited and monitored by Persistence Resources and it was concluded that the processes were compliant with QA/QC protocols. SRK is of opinion that due to the existence of nugget effect, the coarse rejects are not comparable to the pulps used for sample analyses.

Comparatively, the pulp duplicate assays returned acceptable results considering a cut-off grade of 0.3 g/t Au. The comparison between pulp duplicates and original assays were matched well and the deviation is general with a range of +/- 10% with few discrepancies.

The SJG Open-Pit Mine has been put into operation since 2011 at a relatively low cut-off grade and the daily ore feeds in the processing plant have corroborated that.

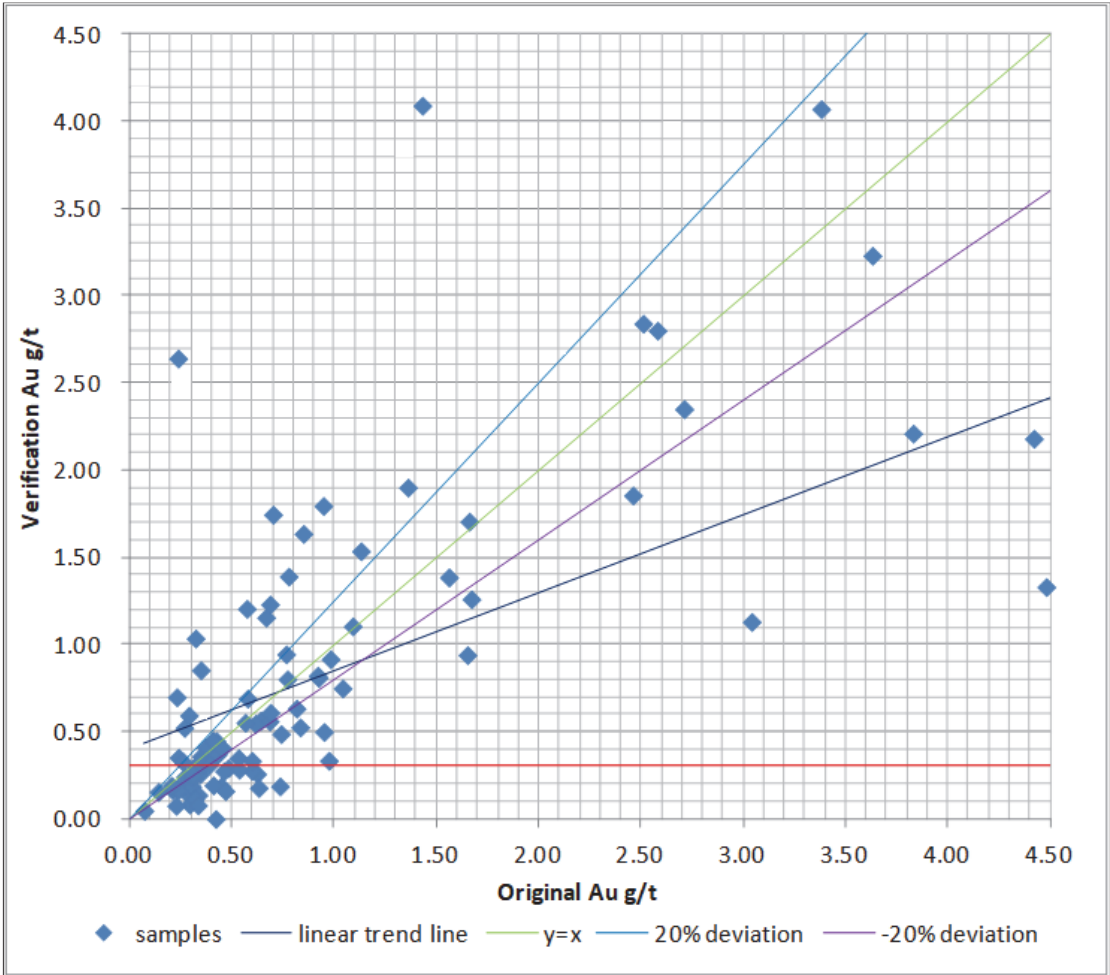


Figure 11-1: Performance of Coarse Reject Assays vs. SRK Verification Samples

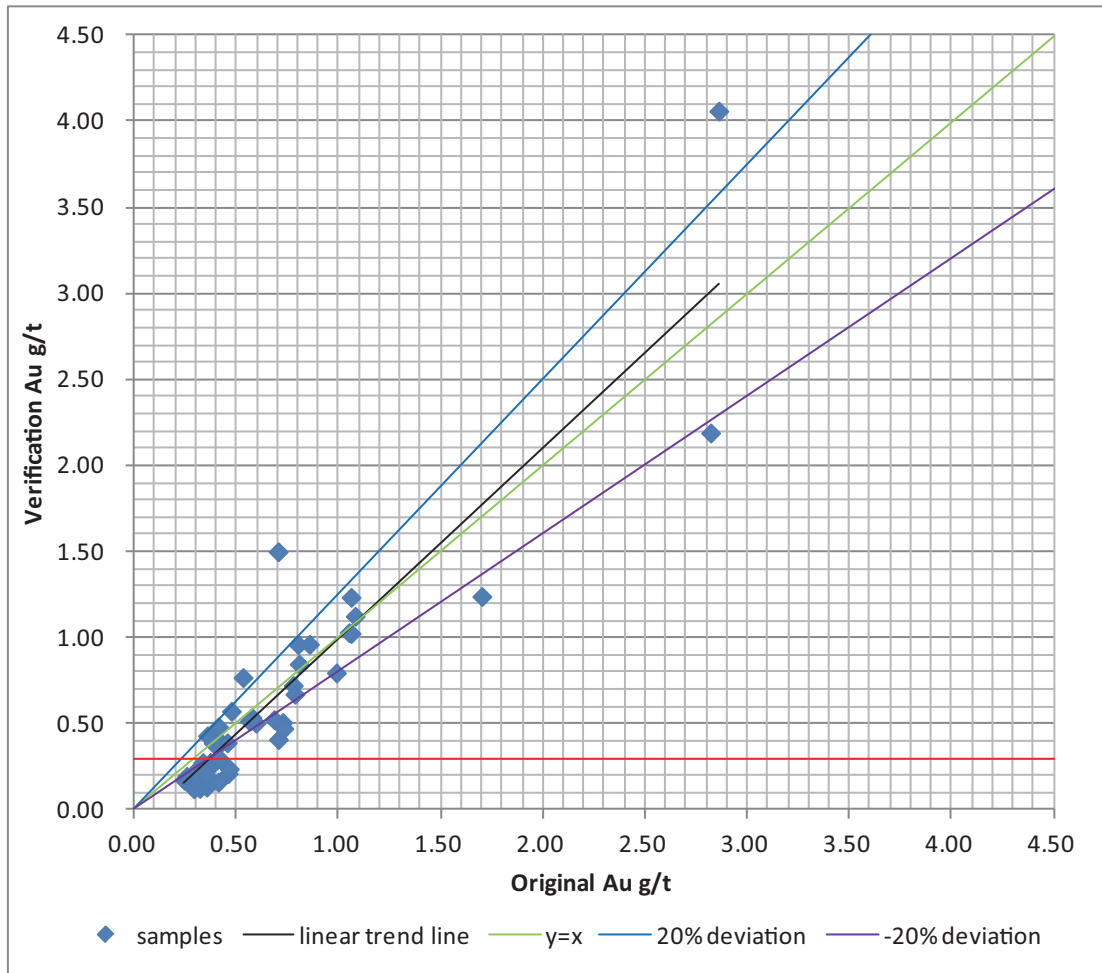


Figure 11-2: Performance of Pulp Duplicate Assays vs. SRK Verification Samples

### 11.3 Sample assays in 2018

To test and verify the grades of the SJG Underground Mine, SRK has supervised a sampling program of the underground channels. A total of 257 samples from three underground levels, namely 85 samples from the +49 level, 112 from the +9 level and 60 from the -40 level, were taken continuously along the cross-cuts walls. Samples were taken at the panel of an approximate size at 1 m × 1 m.

The underground samples, between 4 and 5 kg each, were despatched to SGS Tianjin for preparation and analyses. A screening fire assay method was applied, with atomic absorption spectroscopy finish. SRK has reviewed the assays of these underground samples and is of opinion that the results coincide with the underground development of cross-cuts of the mineralised bodies. Therefore, this sample information was accepted in the integration of the drill hole database. A copy of the detailed sample assays returned from SGS Tianjin is maintained by SRK and could be available upon request.

## **12 MINERAL RESOURCE ESTIMATION**

### **12.1 Introduction**

The Mineral Resource estimate presented herein represents the Mineral Resource evaluation prepared for the SJG Project in accordance with the CIM Definition Standards.

The Mineral Resource estimation work was completed by Mr Pengfei Xiao (MAusIMM) under the supervision of Dr Anshun Xu (FAusIMM), both employees of SRK, an appropriate “independent Qualified Person” as this term is defined in NI 43-101. The effective date of the Mineral Resource statement is 30 June 2023.

This section describes the Mineral Resource estimation methodology and summarizes the key assumptions made by SRK. In SRK’s opinion, the Mineral Resource evaluation reported herein is a reasonable representation of the global gold mineral resources found in the SJG Project at the current level of sampling. The Mineral Resources have been estimated in conformity with generally accepted CIM Definition Standards and are reported in accordance with the Stock Exchange listing requirements. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no certainty that all or any part of the Mineral Resource will be converted into Mineral Reserves.

The mineral resource model prepared by SRK makes use of an integrated drill hole database compiled in 2018. SRK converted the database provided by Persistence Resources into comma-separated values (the “CSV”) format, validated the database, and removed repeated samples. No exploration data is available in the years after 2018.

The database used to estimate the SJG Project Mineral Resources was reviewed by SRK. SRK believes the current drilling information is sufficiently reliable to interpret with confidence the boundaries for hydrothermal filling metasomatic altered conglomerate mineralisation and that the assay data are sufficiently reliable to support Mineral Resource estimation.

Surpac (Version 6.8), a software package used for geological modelling and mine planning, was used to construct the Mineral Resource estimation.

The Mineral Resource estimate included Mineral Resources for both SJG Open-Pit Mine and SJG Underground Mine.

### **12.2 Estimation procedures**

The Mineral Resource evaluation methodology involved the following procedures:

- Database compilation and verification;
- Data preparation (compositing and capping) for geostatistical analysis and variography;
- Construction of the block model and grade interpolation;

- Mineral Resource classification and validation; and
- Preparation of the Mineral Resource statement.

### 12.3 Database

SRK converted the database provided by Persistence Resources into CSV format and conducted validation and removal of repeated samples. The database used for the Mineral Resource estimation consists of 326 geological engineering works including 145 drill holes (128 surface drill holes and 17 underground drill holes), 75 trenches, and 106 underground engineering (include tunnels prior to 2012 and in 2018). Appendix B provides detailed information for all geological engineering works.

As shown in Table 12-1, the database contains 36,748 gold samples in total, including 27,805 from drill holes, 5,377 from trenches, and 3,566 from underground engineering. The maximum gold grade is 263.09 g/t. The average gold grade is 0.37 g/t prior to grade capping.

**Table 12-1: Characteristic Value Summary of Original Sample**

All Data	Au g/t		Length	Drill Hole Data	Au g/t		Length
	Uncapped	Capped			Uncapped	Capped	
Sample numbers	36,748	36,748	36,748	Sample numbers	27,805	27,805	27,805
Minimum	0.00	0.00	0.02	Minimum	0.00	0.00	0.06
Maximum	263.09	11.00	8.00	Maximum	263.09	11.00	8.00
Mean	0.37	0.28	1.03	Mean	0.25	0.20	1.02
Median	0.03	0.03	1.00	Median	0.03	0.03	1.00
SD <sup>[1]</sup>	3.42	0.96	0.17	SD <sup>[1]</sup>	2.57	0.76	0.16
Variance	11.68	0.92	0.03	Variance	6.62	0.57	0.02
CoV <sup>[2]</sup>	9.17	3.46	0.16	CoV <sup>[2]</sup>	10.14	3.74	0.15
Skewness	44.76	8.13	5.21	Skewness	66.84	10.23	7.25
Kurtosis	2,710.73	75.88	130.34	Kurtosis	6,009.70	122.71	213.16

Trench Data	Au g/t		Length	Underground Data	Au g/t		Length
	Uncapped	Capped			Uncapped	Capped	
Sample numbers	5,377	5,377	5,377	Sample numbers	3,566	3,566	3,566
Minimum	0.00	0.00	0.30	Minimum	0.00	0.00	0.02
Maximum	46.21	11.00	1.80	Maximum	237.80	11.00	4.40
Mean	0.26	0.24	1.01	Mean	1.46	0.91	1.13
Median	0.04	0.04	1.00	Median	0.05	0.05	1.00
SD <sup>[1]</sup>	1.15	0.71	0.07	SD <sup>[1]</sup>	8.09	1.95	0.28
Variance	1.33	0.51	0.01	Variance	65.43	3.78	0.08
CoV <sup>[2]</sup>	4.37	2.92	0.07	CoV <sup>[2]</sup>	5.53	2.15	0.25
Skewness	22.61	9.77	2.65	Skewness	17.56	3.73	0.63
Kurtosis	709.31	118.17	45.22	Kurtosis	399.90	14.43	7.56

Notes:

1. Standard deviation
2. Coefficient of variation



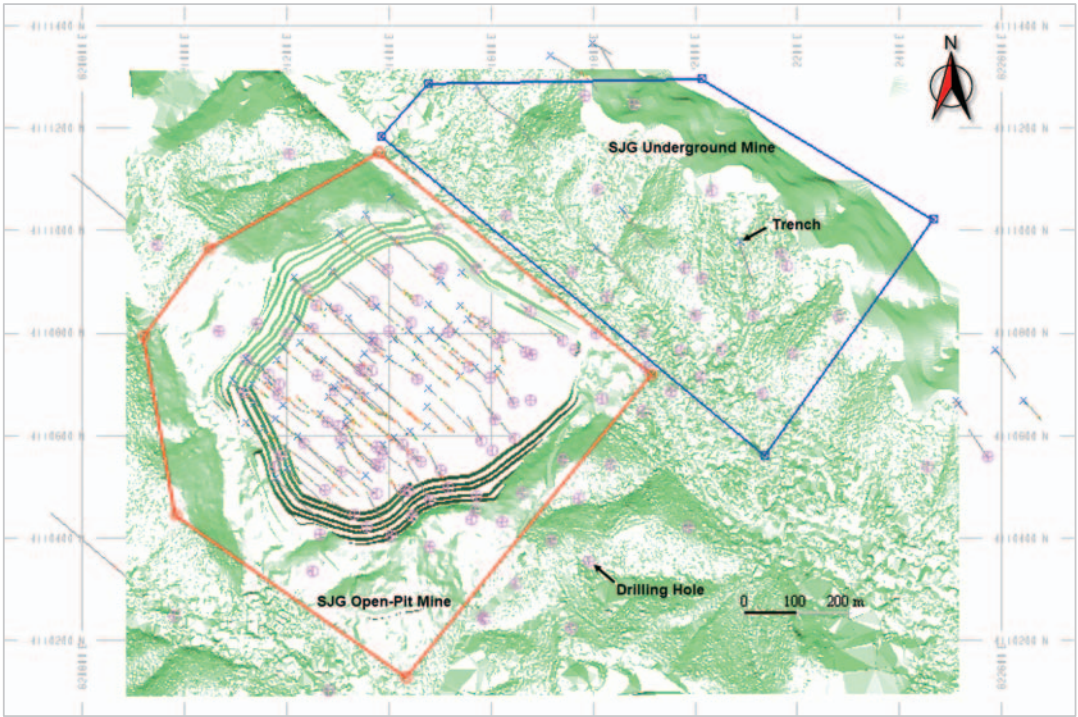


Figure 12-1: Topographic 3D Map (Azimuth: 0°, Dip: -90°)

The drill holes’ distribution is shown in Figure 12-1, overlaid on the topographic 3D model converted from the file provided by Persistence Resources. The topographic map uses the Xi’an 1980 geodetic system on a scale of 1:1,000 and contour intervals of 1 m.

In November 2014, Yantai Zhongjia conducted a topographical survey. The survey data was used for the topographical model. In addition, monthly survey for the open pit has been updated to 30 June 2023.

12.4 Compositing

SRK composited the sample prior to grade interpolation; as the statistics of the original samples indicated that 75% of samples were 1 m long (shown in Figure 12-2), SRK chose 1 m as the length for compositing.

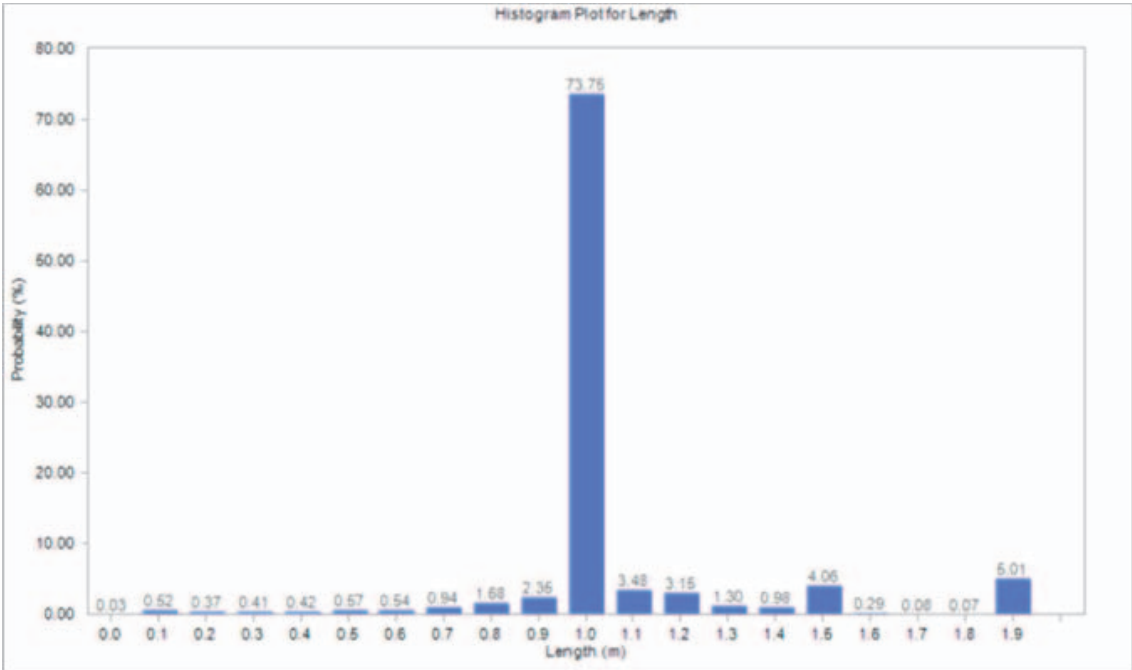


Figure 12-2: Original Sample Length Probability Distribution Histogram

12.5 Outlier value assessment

Previously, a cap (top cut/grade capping) value at 40 g/t Au had been used for grade capping in SJG Project according to the analysis on board sample data. The grade control data in recent years suggested that for the average grade in the SJG Open-Pit Mine was far below 40 g/t Au. SRK has used 99.7% of the grade range of all samples; the lower limit of outliers = (the average value for all raw samples) + 3 × (the standard deviation for all raw samples). Thus, a cap value at 11 g/t Au has been applied for replace all the higher values of 1 m composites.

SRK is of the opinion that the analysis and processing methods are reasonable and acceptable, which capped and replaced 148 samples with gold grade values above 11 g/t Au (Table 12-2).

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Results of the statistical analysis of 1 m composites are shown in Table 12-3.

**Table 12-2: Grade Capping Details**

<b>Sample Number</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)</b>	<b>Original Grade (g/t Au)</b>	<b>Capped Grade (g/t Au)</b>
1-CM0-3B	239.14	239.99	0.85	11.120	11
1-CM0-3B	314.61	315.61	1.00	49.070	11
1-CM0-3B	372.15	373.15	1.00	18.150	11
1-CM6S-3B	10.43	11.43	1.00	33.370	11
1-CM6S-3B	160.83	161.83	1.00	33.370	11
1-CM7S-3B	54.96	55.96	1.00	19.140	11
1-CM9-3B	78.90	79.06	0.16	18.290	11
1-CM9-3B	199.87	200.87	1.00	37.370	11
1-YM1N-3B	239.21	240.21	1.00	17.990	11
1-YM1N-3B	262.20	263.20	1.00	17.990	11
1-YM1N-3B	443.81	444.81	1.00	23.530	11
1-YM2N	194.30	195.41	1.11	21.424	11
1-YM2N-3B	9.81	10.81	1.00	73.620	11
1-YM3N-3B	80.03	81.03	1.00	11.650	11
2-CM0-3B	226.14	227.14	1.00	18.620	11
2-CM0-3B	228.19	229.19	1.00	20.930	11
2-CM11-1-3B	4.45	5.45	1.00	11.200	11
2-CM3-3-3B	22.81	23.81	1.00	31.750	11
2-CM4-1-3B	3.62	4.62	1.00	47.840	11
2-CM4-1-3B	4.77	5.77	1.00	63.440	11
2-CM4-1-3B	12.12	13.12	1.00	17.740	11
2-CM5-2-3B	10.04	10.26	0.22	23.840	11
2-YM1-3B	15.79	16.49	0.70	16.820	11
2-YM1-3B	137.50	138.50	1.00	20.280	11
2-YM1-3B	175.34	176.34	1.00	12.250	11
2-YM1-3B	178.35	179.35	1.00	33.590	11
2-YM1-3B	179.35	180.01	0.66	140.190	11
2-YM1-3B	191.71	192.71	1.00	20.740	11
2-YM1-3B	196.04	197.04	1.00	11.540	11
2-YM1-3B	281.22	282.22	1.00	207.750	11
2-YM1-3B	325.63	326.63	1.00	56.620	11
2-YM1-3B	355.09	356.09	1.00	12.090	11
2-YM2-3B	311.23	312.23	1.00	20.770	11
2-YM3-3B	11.04	12.04	1.00	14.410	11
2-YM3-3B	83.51	84.51	1.00	61.090	11
2-YM3-3B	113.73	114.73	1.00	15.200	11

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<b>Sample Number</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)</b>	<b>Original Grade (g/t Au)</b>	<b>Capped Grade (g/t Au)</b>
3-CM0-3B	161.05	162.05	1.00	23.730	11
3-CM1N-3B	15.22	16.22	1.00	16.540	11
3-CM1S-3B	19.04	19.99	0.95	47.580	11
3-CM4S-3B	58.51	59.51	1.00	15.440	11
3-YM2N-3B	8.07	9.07	1.00	14.600	11
3-YM2N-3B	15.77	16.77	1.00	30.530	11
3-YM2N-3B	20.02	21.02	1.00	89.790	11
3-YM2N-3B	23.66	24.66	1.00	51.830	11
3-YM2N-3B	326.56	327.56	1.00	13.680	11
3-YM2N-3B	333.98	334.98	1.00	18.240	11
3-YM2NN-3B	7.93	8.93	1.00	32.190	11
3-YM2NN-3B	20.33	21.33	1.00	139.890	11
3-YM2NN-3B	23.92	24.92	1.00	18.600	11
3-YM2NN-3B	145.16	146.16	1.00	15.490	11
3-YM2NN-3B	321.71	322.71	1.00	25.690	11
3-YM2NN-3B	377.39	378.39	1.00	24.280	11
3-YM2S-3B	29.72	30.72	1.00	35.620	11
3-YM2S-3B	97.95	98.95	1.00	21.820	11
3-YM2SN-3B	33.72	34.72	1.00	49.300	11
3-YM2SN-3B	207.05	208.05	1.00	29.320	11
4-CM0-3B	124.58	125.37	0.79	14.800	11
4-CM1-3B	17.82	18.69	0.87	47.580	11
4-CM3S-3B	15.31	16.26	0.95	16.270	11
4-YM2N-3B	10.92	11.92	1.00	117.680	11
4-YM2N-3B	147.08	148.08	1.00	16.680	11
4-YM2NN-3B	10.77	11.77	1.00	78.030	11
4-YM2NN-3B	147.02	148.02	1.00	16.370	11
4-YM2NN-3B	165.06	166.06	1.00	41.650	11
4-YM2S-3B	16.19	17.19	1.00	11.930	11
624-ZK52	30.00	30.35	0.35	37.320	11
624-ZK90	137.33	138.53	1.20	14.750	11
CK16-1	24.00	25.00	1.00	17.000	11
CK16-1	107.00	108.00	1.00	15.900	11
CK16-1	128.00	129.00	1.00	16.900	11
CK16-1	129.00	130.00	1.00	14.000	11
CK24-1	81.20	82.20	1.00	35.800	11
CK28-1	104.00	105.00	1.00	23.600	11
CK4-2	20.00	21.00	1.00	18.100	11
KDZK11	72.44	73.44	1.00	24.020	11

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<b>Sample Number</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)</b>	<b>Original Grade (g/t Au)</b>	<b>Capped Grade (g/t Au)</b>
KDZK3	11.60	12.60	1.00	15.440	11
L3A	161.00	162.50	1.50	237.800	11
L4A	139.50	141.00	1.50	98.050	11
L4A	144.00	145.50	1.50	15.460	11
SJ05-03	108.00	109.00	1.00	55.340	11
SJ05-04	136.00	137.00	1.00	12.040	11
SJ05-05	67.00	67.50	0.50	47.380	11
SJ05-08	152.00	153.00	1.00	53.120	11
SJ05-11	470.40	470.60	0.20	263.090	11
SJ05-12	49.00	50.00	1.00	41.480	11
SJ05-12	51.00	52.00	1.00	15.110	11
SJ05-14	408.00	409.00	1.00	13.040	11
SJ05-14	416.00	417.00	1.00	26.850	11
SJ05-16	148.00	149.00	1.00	16.350	11
SJ05-21	270.00	271.00	1.00	30.160	11
SJ05-21	273.00	274.00	1.00	26.720	11
SJ05-24	3.00	4.00	1.00	66.230	11
SJ05-25	281.00	282.00	1.00	17.720	11
SJ06-27	241.20	242.20	1.00	11.100	11
SJ06-27	426.20	427.20	1.00	28.700	11
SJ06-27	428.20	429.20	1.00	29.300	11
SJ06-28	233.20	234.20	1.00	11.698	11
SJ06-29	401.20	401.60	0.40	18.170	11
SJ06-30	160.70	161.80	1.10	14.720	11
SJ06-30	202.60	203.60	1.00	13.710	11
SJ06-30	301.60	302.40	0.80	18.300	11
SJ06-30	310.40	311.40	1.00	16.090	11
SJ06-31	119.40	120.40	1.00	13.016	11
SJ06-32	271.00	272.00	1.00	21.002	11
SJ06-32	275.00	276.00	1.00	11.667	11
SJ06-32	295.00	296.00	1.00	30.237	11
SJ06-35	352.00	353.00	1.00	41.509	11
SZK0-2	38.60	39.52	0.92	19.100	11
SZK16-5	122.75	123.75	1.00	15.660	11
SZK24-2	29.00	30.00	1.00	19.730	11
SZK64-1	47.80	48.80	1.00	41.190	11
SZK72-1	74.07	75.07	1.00	17.500	11
SZK72-4	57.76	58.76	1.00	22.730	11
SZK72-4	113.96	114.96	1.00	27.570	11

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<b>Sample Number</b>	<b>From (m)</b>	<b>To (m)</b>	<b>Length (m)</b>	<b>Original Grade (g/t Au)</b>	<b>Capped Grade (g/t Au)</b>
SZK8-2	87.99	89.01	1.02	12.300	11
SZK8-2	89.01	90.01	1.00	14.300	11
SZK8-2	127.43	128.43	1.00	18.400	11
SZK8-3	93.13	94.13	1.00	12.700	11
SZK96-2	164.20	165.20	1.00	18.300	11
TC4-1	16.00	17.00	1.00	11.300	11
TC48-3	87.60	88.60	1.00	12.200	11
TC48-3	88.60	89.60	1.00	46.210	11
UL206-C	16.00	17.29	1.29	12.700	11
UL206-C	50.47	51.86	1.39	15.800	11
UL206-E	13.94	14.62	0.68	14.800	11
ZK1	22.00	23.10	1.10	41.660	11
ZK1	107.20	108.20	1.00	65.560	11
ZK1	262.40	263.50	1.10	21.120	11
ZK13	144.72	145.72	1.00	24.700	11
ZK13	205.09	206.09	1.00	14.860	11
ZK13	209.40	210.40	1.00	221.990	11
ZK151	17.64	18.14	0.50	15.030	11
ZK16	382.40	383.40	1.00	27.970	11
ZK17	326.28	327.28	1.00	12.050	11
ZK17	341.31	342.31	1.00	14.310	11
ZK19	224.52	225.52	1.00	42.370	11
ZK19	226.53	227.53	1.00	46.430	11
ZK19	227.53	228.53	1.00	13.290	11
ZK19	232.56	233.56	1.00	13.450	11
ZK19	233.56	234.56	1.00	16.240	11
ZK19	234.56	235.86	1.30	11.800	11
ZK19	240.19	240.99	0.80	70.440	11
ZK19	242.79	243.79	1.00	15.580	11
ZK2	232.10	233.60	1.50	35.990	11
ZK52	24.71	25.69	0.98	31.200	11
ZK52	192.63	193.03	0.40	64.600	11
ZK6	233.90	235.50	1.60	11.500	11
ZK9	191.30	192.30	1.00	14.110	11

**Table 12-3: Statistical Analysis Result of Composites**

Item	before Capping (g/t Au)	after Capping (g/t Au)	Length
Sample counts	36,491	36,491	36,491
Minimum	0.01	0.01	0.10
Maximum	237.80	11.00	1.00
Mean	0.42	0.32	0.99
First quartile	0.03	0.03	1.00
Median	0.07	0.07	1.00
Third quartile	0.18	0.18	1.00
SD <sup>[1]</sup>	3.23	0.97	0.15
Variance	10.43	0.93	0.02
CoV <sup>[2]</sup>	7.78	3.19	0.16
Skewness	34.46	7.53	-4.01
Kurtosis	1,731.14	66.61	16.05
Length weighted mean	0.47	0.28	/
Length weighted SD <sup>[1]</sup>	2.91	0.88	/
Length weighted variance	8.47	0.78	/
Length weighted CoV <sup>[2]</sup>	7.97	3.21	/

Notes:

1. Standard deviation
2. Coefficient of variation

## 12.6 Statistical analysis and variography

### 12.6.1 Statistical analysis of composites

After grade capping, samples with grades less than 0.1 g/t Au account for approximate 61% of total samples, those with grades less than 0.3 g/t Au account for 84%, and those with grades less than 1.1 g/t Au account for 95%.

Based on the analysis of drill hole data, and from the point of view of spatial distribution of the sample grades, the high and low grade boundaries are not obvious; hence, SRK did not set any such boundary for the Mineral Resource estimation.

### 12.6.2 Variograms

During the process of variogram modelling, a lag distance of 2 m was assigned along the downhole, and 10 m in all other directions.

Variograms were modelled with nuggets and double spherical structures. Nugget and sill values adopted the modelled results along the downhole. The simulated variogram parameters are shown in Figure 12-3 and Table 12-4, and details are provided in Appendix C.

In general, gold has good correlation along the direction of azimuth 90° and dip angle 0°. The modelled range along the downhole is 45 m. Horizontal ranges along east-west direction and south-north axes are 120 m and 80 m respectively. Therefore, the major axis of search ellipsoid is in direction of azimuth 90° and dip angle 0°. The ellipsoid has a size of 120 m × 80 m × 50 m (X × Y × Z).

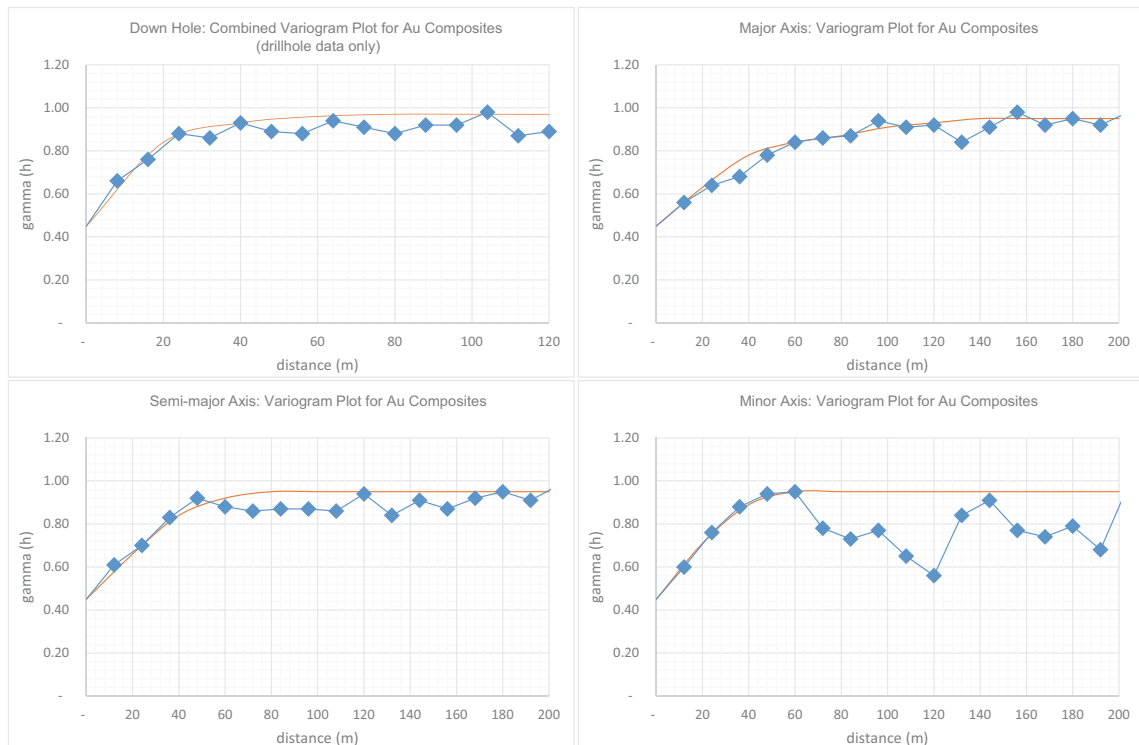


Figure 12-3: Variography Used for Grade Interpolation

Table 12-4: Variogram Parameters

Direction	Nugget	Sill	Variation Range
Along the downhole			45
90, 0	0.445	0.555	120
0, 0			80
0, -90			50



**Table 12-5: Block Model Limits for the SJG Open-Pit Mine and SJG Underground Mine**

<b>Axis</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Block Size (m)</b>	<b>Minimum Block Size (m)</b>
X (Easting)	620,900	622,360	10	5
Y (Northing)	4,111,200	4,111,300	10	5
Z (Elevation)	-420	156	6	3

**Table 12-6: Main Criteria and Attributes of Block Model**

<b>Item</b>	<b>Description</b>
TOPO	The volume percentage of a block under surface (as of 30 June 2023)
KAUUN	Au uncapped grade, ordinary kriging interpolation
KAUCA	Au capped grade, ordinary kriging interpolation
BD	Bulk density
DIST	Distance from block unit to nearest sample
ADIST	Average distance from block unit to sample
DH#	Drill hole counts
SAM#	Sample counts
ZONE	Lithology encoding, 1 for conglomerate
CAT	Mineral Resource category encoding, 2 for Indicated, 3 for Inferred

### **12.7 Block model**

Table 12-5 shows the parameters used for the block model, which used fixed sized blocks for modelling. The main criteria and attributes of the block model are shown in Table 12-6.

12.8 Grade interpolation

SRK converted the solid model (see Figure 12-4) and imported it into Surpac for use in creating solid constraints for the grade interpolation.

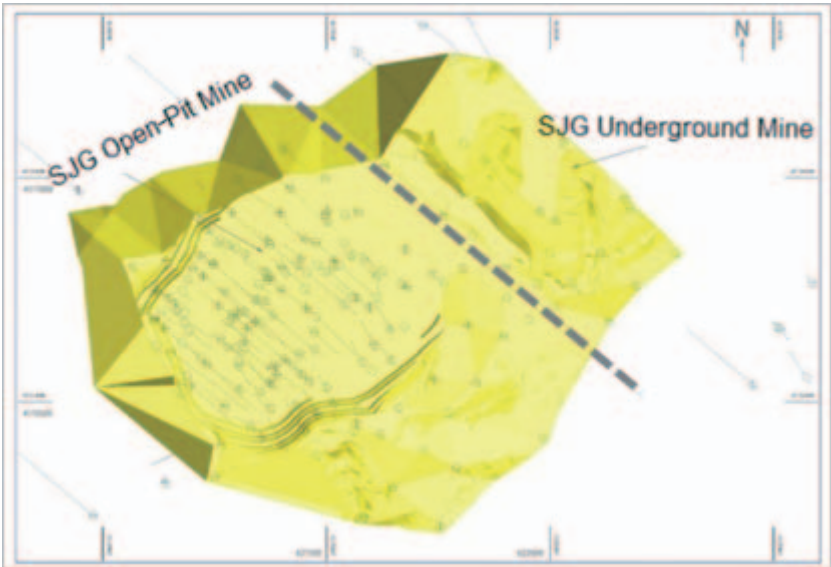


Figure 12-4: Solid Model of Mineralised Conglomerate

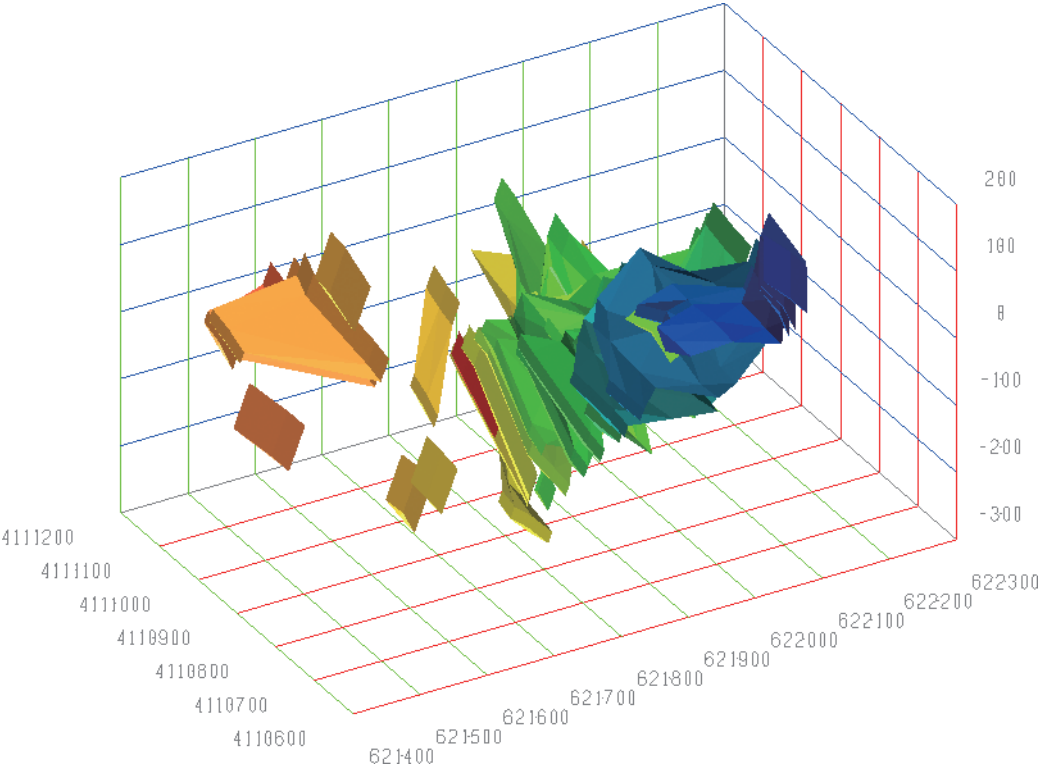


Figure 12-5: SJG Underground Mine Solid Wireframe

The grade interpolation used ordinary kriging based on the statistical and variogram analysis of the composited samples. Quartered circles were used for grade estimation.

Grade interpolation was conducted in two passes. The ellipsoid used for the first search pass was 120 m × 80 m × 50 m, had a major axis azimuth of 90° and a dip angle of 0°, and a minor axis dip angle of 0°. Three to 40 composite samples were used to estimate the block grades, with a maximum of two samples for any individual borehole, trench, or channel. A quartered circle was applied with a maximum of two composite samples within one quartered circle used for grade interpolation.

The ellipsoid used for the second search pass was 60 m × 40 m × 25 m, had a major axis azimuth of 90° and a dip angle of 0°, and a minor axis dip angle of 0°. Two to 40 composite samples were used to estimate the block grades, with a maximum of three samples for any individual borehole, trench, or channel, and a maximum of two composite samples within one quartered circle.

For the Mineral Resources of SJG Underground Mine, SRK has constructed a solid wireframe at a threshold of 0.7 g/t Au, as shown in Figure 12-5.

**12.9 Model validation**

Based on the 1 m composites’ length, SRK adopted Ordinary Kriging (the “**O.K.**”), inverse distance squared (the “**IDW**”), and inverse distance power of 3 (the “**ID3**”) to estimate the grade, where the average grade of block model and composites (“**CMP**”) are compared and shown in Table 12-7.

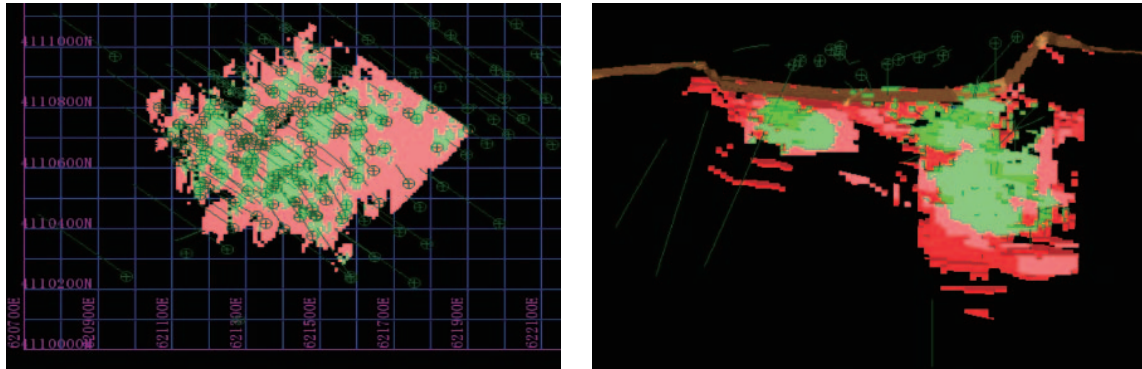
As shown in Table 12-7, the relative difference between the grade interpolation results of the average block model and average composites is approximately within 20%, which indicates that the O.K. method is feasible.

**Table 12-7: Average Gold Grade Comparison between Blocks and Composites**

CMP (g/t)	Estimation Method (g/t)			Relative Difference (%)		
	O.K.	IDW	ID3	O.K./CMP	IDW/CMP	ID3/CMP
0.37	0.45	0.45	0.44	1.2	1.2	1.2

### 12.10 Mineral Resource classification

Mineral Resources at the SJG Project are classified as Indicated Mineral Resources and Inferred Mineral Resources as shown in Figure 12-6. Each Mineral Resource block is classified individually.



**Figure 12-6: Mineral Resource Classification**

*Notes:*

1. Green — Indicated; Red — Inferred
2. Blocks shown are above 0.3 g/t Au
3. SJG Open-Pit Mine only, while the SJG Underground Mine classification were performed using solid constraint of vein models

The blocks estimated with composites no less than three drill holes and with average informing distance no more than 60 m were classified as Indicated Mineral Resources. After identifying all Indicated Mineral Resources, all remaining blocks with gold grade value were classified as Inferred Mineral Resources.

The classification of SJG Underground Mine was performed according to solid vein model constraints.

### 12.11 Mineral Resource statement

The previous cut-off grade for reporting of Mineral Resources for the SJG Open-Pit Mine was 0.3 g/t Au. The SJG Open-Pit Mine has been operated for several years with a relatively low cut-off grade that has proved suitable. Based on the analysis on grade control and production data, SRK applied the cut-off grade at 0.3 g/t Au for reporting the Mineral Resources within SJG Open-Pit Mine. For the Mineral Resources at the SJG Underground mine, a cut-off grade at 0.7 g/t Au was applied. The assumptions for the cut-offs are as:

For SJG Open-Pit Mine

- Gold Price: 410 RMB/g;

- Mining Dilution: 5%;
- Processing Recovery: 95%;
- Operating Cost: 110 RMB/t ore;

And for SJG Underground Mine

- Gold Price: 410 RMB/g;
- Mining Dilution: 12.5%;
- Processing Recovery: 95%;
- Operating Cost: 220 RMB/t ore.

The Mineral Resource estimates as of 30 June 2023 2022, within the current mining licence for SJG Open-Pit Mine and the SJG Underground Mine are provided in Table 12-8 and Table 12-9.

**Table 12-8: Mineral Resources within SJG Open-Pit Mine, as of 30 June 2023<sup>[1, 2]</sup>**

Category	Cut-off g/t Au	Quantity kt	Gold Grade g/t	Gold Content	
				kg	koz
Indicated	0.3	34,200	1.10	37,600	1,210
Inferred	0.3	36,700	0.95	34,800	1,120

Notes:

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. The information in this QPR with regard to Mineral Resource estimates is based on information compiled by Dr Anshun Xu and Mr Pengfei Xiao, employees of SRK Consulting China Ltd. Dr Xu, FAusIMM, and Mr Xiao, MAusIMM, have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Qualified Persons as defined in the NI 43-101. Dr Xu and Mr Xiao consent to the reporting of this information in the form and context in which it appears.

**Table 12-9: Mineral Resources within SJG Underground Mine, as of 30 June 2023<sup>[1, 2]</sup>**

Category	Cut-off g/t Au	Quantity kt	Gold Grade g/t	Gold Content	
				kg	koz
Indicated	0.7	1,640	1.38	2,270	73
Inferred	0.7	3,010	1.24	3,730	120

Notes:

1. All figures are rounded to reflect the relative accuracy of the estimate.

2. The information in this QPR with regard to Mineral Resource estimates is based on information compiled by Dr Anshun Xu and Mr Pengfei Xiao, employees of SRK Consulting China Ltd. Dr Xu, FAusIMM, and Mr Xiao, MAusIMM, have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Qualified Persons as defined in the NI 43-101. Dr Xu and Mr Xiao consent to the reporting of this information in the form and context in which it appears.

### 12.12 Grade sensitivity analysis

The Mineral Resource as stated for the SJG Project is sensitive to the cut-off grade selected, which is detailed in Table 12-10 and Table 12-11.

**Table 12-10: Tonnage and Grades under Different Cut-offs — SJG Open-Pit Mine**

Cut-off (g/t Au)	Category	Quantity (kt)	Gold Grade (g/t)	Gold Content (kg)
0.1	Indicated	52,737	0.78	41,051
	Inferred	88,414	0.50	43,818
0.2	Indicated	41,477	0.95	39,420
	Inferred	53,659	0.73	38,935
0.3	Indicated	34,206	1.10	37,623
	Inferred	36,660	0.95	34,769
0.4	Indicated	28,695	1.24	35,711
	Inferred	27,203	1.16	31,512
0.5	Indicated	24,530	1.38	33,849
	Inferred	21,139	1.36	28,802
0.6	Indicated	21,171	1.51	32,002
	Inferred	17,332	1.54	26,716
0.7	Indicated	18,628	1.63	30,355
	Inferred	14,551	1.71	24,908
0.8	Indicated	16,451	1.75	28,724
	Inferred	12,457	1.87	23,347
0.9	Indicated	14,697	1.85	27,240
	Inferred	10,964	2.01	22,087
1.0	Indicated	13,067	1.97	25,693
	Inferred	9,790	2.14	20,979

*Note:* This table is only intended to demonstrate the impact of grade sensitivity on Mineral Resource tonnage and does not represent a Mineral Resource estimate.

**Table 12-11: Tonnage and Grades under Different Cut-offs — SJG Underground Mine<sup>1, 2</sup>**

Cut-off (g/t Au)	Category	Quantity (kt)	Gold Grade (g/t)	Gold Content (kg)
0.1	Indicated	6,423	0.56	3,611
	Inferred	30,109	0.33	10,056
0.2	Indicated	4,367	0.76	3,316
	Inferred	14,853	0.53	7,921
0.3	Indicated	3,208	0.95	3,033
	Inferred	9,257	0.71	6,567
0.4	Indicated	2,748	1.05	2,872
	Inferred	6,562	0.86	5,634
0.5	Indicated	2,374	1.14	2,704
	Inferred	5,196	0.97	5,024
0.6	Indicated	1,929	1.27	2,459
	Inferred	3,992	1.09	4,368
0.7	Indicated	1,642	1.38	2,272
	Inferred	3,011	1.24	3,732
0.8	Indicated	1,397	1.50	2,090
	Inferred	2,251	1.40	3,158
0.9	Indicated	1,289	1.55	1,999
	Inferred	1,690	1.59	2,681
1.0	Indicated	1,220	1.58	1,933
	Inferred	1,408	1.72	2,415

*Notes:*

- 1 This table is only intended to demonstrate the impact of grade sensitivity on Mineral Resource tonnage and does not represent a Mineral Resource estimate.
- 2 The SJG Underground Mine tonnage and grade presented in table above was estimated under the constraint of broader breccia model and the wireframe constructed at a threshold of 0.7 g/t Au was not applied.

**12.13 Historical Mineral Resource estimation**

The historical Mineral Resource estimates for the SJG Project are listed in Table 12-12 and discussed below:

- In 2006, Wardrop completed a Mineral Resource estimate complying with NI 43-101 standards using Ordinary Kriging at a 0.5 g/t Au cut-off grade. The Mineral Resource consisted of 6,100 kt of Indicated Mineral Resources at an average grade of 0.96 g/t Au and 12,100 kt of Inferred Mineral Resources at an average grade of 0.84 g/t Au.

- In 2007, Wardrop completed an update of the Mineral Resource estimate again using Ordinary Kriging at a 0.5 g/t Au cut-off grade. The Mineral Resource consisted of 8,800 kt of Indicated Mineral Resources at an average grade of 1.5 g/t Au and 18,200 kt of Inferred Mineral Resources at an average grade of 1.3 g/t Au.
- In April 2010, Wardrop completed another update of the Mineral Resource estimation again using Ordinary Kriging at a 0.4 g/t Au cut-off grade and set a topping grade value at 40 g/t Au. The Mineral Resource consisted of 24,900 kt of Indicated Mineral Resources at an average grade of 1.25 g/t Au and 28,100 kt of Inferred Mineral Resources at an average grade of 1.88 g/t Au.
- In October 2010, Wardrop completed a third update of the Mineral Resource estimation, again using Ordinary Kriging at a 0.3 g/t Au cut-off grade and a lower limit for outlier value at 40 g/t Au. The Mineral Resource consisted of 33,700 kt of Indicated Mineral Resources at an average grade of 1.15 g/t Au and 38,800 kt of Inferred Mineral Resources at an average grade of 1.47 g/t Au.
- In January 2013, SRK completed an update of the Mineral Resource estimation using Ordinary Kriging. The outlier is also 40 g/t, which is same as that of Wardrop. As of 31 January 2013, the SJG Project contains 26,600 kt of Indicated Mineral Resources at an average gold grade of 1.40 g/t, and 23,400 kt of Inferred Mineral Resources at an average gold grade of 1.45 g/t Au within the optimised open pit, at a cut-off grade of 0.3 g/t Au. In addition to the open pit, there are about 5,600 kt Inferred Mineral Resources occurred outside of the optimised open pit with an average gold grade of 2.56 g/t Au at a cut-off grade of 0.8 g/t Au.

**Table 12-12: Mineral Resource Estimate History**

<b>Date/Year</b>	<b>Cut-off Grade (g/t Au)</b>	<b>Category</b>	<b>Quantity (kt)</b>	<b>Gold Grade (g/t)</b>
2006	0.5	Indicated	6,100	0.96
		Inferred	12,100	0.84
2007	0.5	Indicated	8,800	1.5
		Inferred	18,200	1.3
April 2010	0.4	Indicated	24,900	1.25
		Inferred	28,100	1.88
October 2010	0.3	Indicated	33,700	1.15
		Inferred	38,800	1.47
31 January 2013 (SJG Open-Pit Mine)	0.3	Indicated	26,600	1.40
		Inferred	23,400	1.45
31 January 2013 (SJG Underground Mine)	0.8	Indicated	—	—
		Inferred	5,600	2.56



## **13 MINERAL RESERVE ESTIMATION**

### **13.1 Estimation procedures**

The Mineral Reserve estimate involved the following procedures:

- Desktop review of the available study report and the client data;
- Calculation of cut-off grade;
- Processing of year end map and underground voids model;
- Preparation of mineral reserve model;
- Mineable analysis including final open pit validation and underground stopes modelling;
- Mineral Reserve classification;
- Preparation of the Mineral Reserve statement;
- Sensitivity analysis of Mineral Reserve; and
- Preparation of life of mine plan.

MineSight software, which is courtesy of Persistence Resources, was used to estimate the Mineral Reserve.

### **13.2 Feasibility study report**

SRK was provided a document issued by Shandong Research Institute of Geological Sciences dated 19 November 2019, in which the Institute has examined and approved the application and agreed to increase the production capacity to 900 ktpa for the open-pit mining. The modifying factors associated with mining and processing will be assumed by SRK based on the available information to date.

As an operating mine, SRK notes that the mine frequently retained external technical service on the open-pit optimisation and design as well as grade controls. The database from the external service also provides the basis of SRK’s reviews.

With respect to the SJG Underground Mine, the detailed feasibility study report (the “FSR”) reviewed by SRK is listed below. SRK understands that the FSR has been applied to guide the mine development since 2016. After review of the mineral resource model, SRK believes that the production capacity of 90 ktpa ore is technically feasible.

- *Detailed Feasibility Study Report on SJG Underground Mine for Yantai Zhongjia*, which is prepared by Yantai Dehe Metallurgy Design Institute Ltd. and dated in May 2016.

### 13.3 Cut-off grade

Assumptions to calculate the cut-off grade are listed in Table 13-1. The cut-off grades were rounded up to 0.3 g/t Au and 0.7 g/t Au run-of-mine (the “RoM”) for SJG Open-Pit Mine and SJG Underground Mine, respectively.

The cut-off grade shown in Table 13-1 was calculated by SRK based on industry standard technical and economic assumptions. These assumptions were true at the time of calculation, but may change over time, so different cut-off grades can be produced. Scatter plots of sensitivity analysis on price and costs for these two mines are shown in Figure 13-1 and Figure 13-2. The gold prices analysed are the minimum and maximum prices shown in Table 17-2. The refining costs analysed are values shown in Table 17-5. The other variables analysed are in line with common practice. With respect to the SJG Open-Pit Mine, the cut-off grade is most sensitive to the gold price and processing costs. With respect to the SJG Underground Mine, the cut-off grade is most sensitive to the gold price and mining costs.

**Table 13-1: Assumptions to Calculate Cut-off Grade**

Item	Unit	Value	Comments
Processing recovery rate	%	$y = -22.802 x^2 + 36.418 x + 81.464$	See Figure 15-7. y — processing recovery rate. x — feed grade
Concentrate grade	g/t	20.00	Derived from the average concentrate grade in history.
Mining cost	RMB/t RoM	110	See Table 19-19.
Processing cost	RMB/t RoM	45	See Table 19-7.
Administration cost	RMB/t RoM	8.42	See Table 19-7.
Refining cost	RMB/t dry concentrate	50	See Table 17-5.
Mineral resource tax	% sales revenue	4.2	See “20.1 Assumptions”.
Price constant	RMB/g	-0.5	Based on the available sales contract
Payable gold	%	93.00	See Table 17-5
Gold price	RMB/g	310	See “17.2 Gold price”.
Marginal cut-off grade	g/t RoM	0.23	SJG Open-Pit Mine
Economic cut-off grade	g/t RoM	0.63	SJG Underground Mine

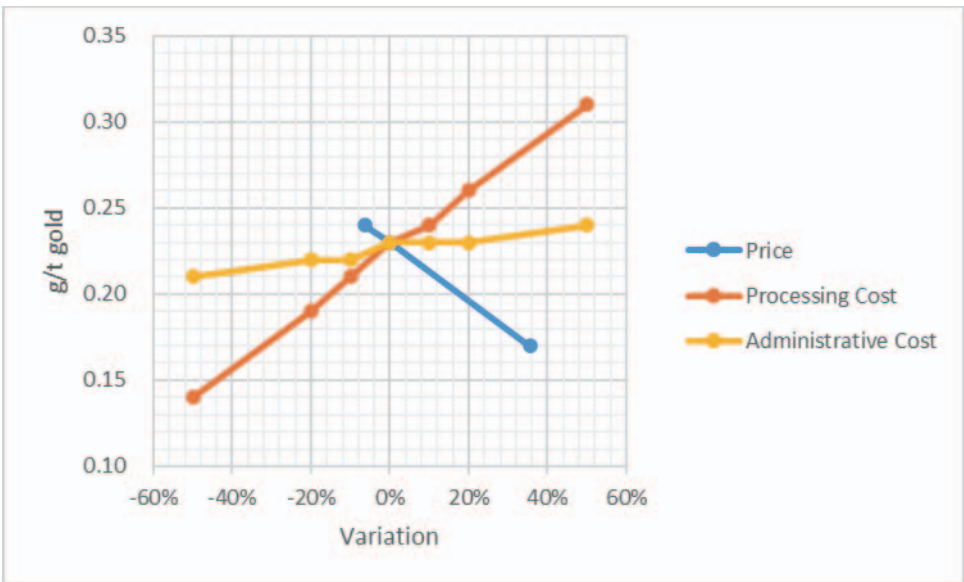


Figure 13-1: Sensitivity Analysis of Cut-off Grade for SJG Open-Pit Mine

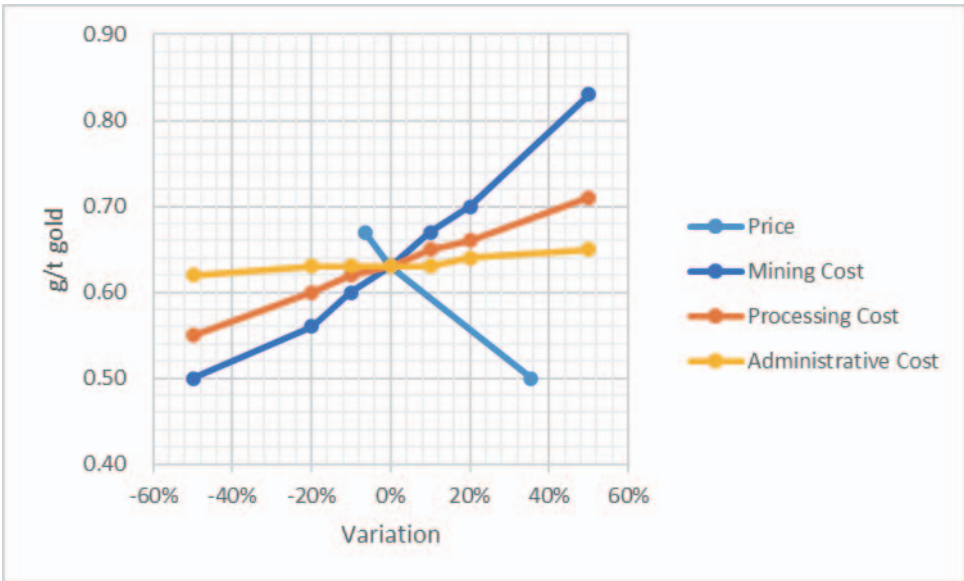


Figure 13-2: Sensitivity Analysis of Cut-off Grade for SJG Underground Mine

13.4 SJG Open-Pit Mine

13.4.1 Year-end open pit outline

A monthly-end open pit as of 30 June 2023 was provided to SRK by Yantai Zhongjia. It was used as the top geometry limit of the Mineral Reserve estimate to report remnant, but not used during open pit optimisation.

### 13.4.2 Mineral Reserve model

The Mineral Resource estimate was finalised by SRK using Surpac software. The block model was exported to a comma delimited file with a constant block size of 5×5×3 m (X×Y×Z). The data was imported to MineSight software to carry out open pit optimisation.

Key fields added to the mineral resource model are TOPO, AUOKD, SGW and MAT. Descriptions of these additional fields are shown in Table 13-2 and Table 13-3. This new model was named mineral reserve model on which the Mineral Reserves were estimated.

**Table 13-2: Description of Key Fields in Mineral Reserve Model for SJG Open-Pit Mine**

Field	Description
TOPO	Volume percentage below the topography for a block.
AUOK	Gold grade interpolated using ordinary kriging method. It was directly imported from the data file.
CAT	Category of Mineral Resources. 2 for Indicated, 3 for Inferred.
AUOKD	The diluted gold grades. It equals to AUOK*0.95.
MAT	Materials code. See Table 13-3.
SGW	Specific gravity for waste rock. It is 2.62 tonne per cubic metre (“t/m <sup>3</sup> ”).

**Table 13-3: MAT Coding for SJG Open-Pit Mine**

MAT	CAT	AUOKD	Description
1	2	>= 0.3	Economically Indicated. The cut-off grade of 0.3 is adopted during daily mining operation.
2	2	<0.3	Indicated wastes
3	3	>= 0.3	Economically Inferred. The cut-off grade of 0.3 is adopted during daily mining operation.
4	3	<0.3	Inferred wastes
5	/	/	Waste rocks

### 13.4.3 Mining dilution and recovery

The commonly used rates of 5% were assumed by SRK to estimate Mineral Reserves for mining dilution and loss.

SRK recommends that Yantai Zhongjia introduce a final reconciliation process to support the estimation of mining dilution and ore loss to reconcile the mineral resource model and mineral reserve estimate.

#### 13.4.4 Pit optimisation and final open pit design

Open pit optimisation and final open pit design had been finished by Yantai Zhongjia before the Mineral Resource was estimated by SRK. The steps of Mineral Resource estimation by the Yantai Zhongjia were reviewed by SRK and some inconsistencies and potential flaws have been observed in the process. SRK undertook an independent optimisation to validate the suitability of the Yantai Zhongjia final open pit for use in Mineral Reserve estimation.

The open pit optimisation was strictly limited within mining licence area. A series of nested open pit shells were generated using floating-cone scenario to simulate pushbacks enlarged at about 1,500 kt ore interval. Although the floating cone doesn't guarantee an optimal result, it is flexible and can produce technically feasible mining sequences. The base cone radius is set to 10 m to simulate a minimum open pit base width of 20 m. The overall slope angle is set to 45 degrees, which is a commonly used angle when lacking geotechnical information. Other key parameters including costs, price, processing recovery rate were set to ensure that pre-defined ore blocks would be sent to processing plant. The following two passes of open pit optimisation were carried out by SRK:

- First pass: the blocks with MAT code (Table 13-3) 1 were treated as ore, while all the other blocks were treated as waste.
- Second pass: the blocks with MAT code (Table 13-3) 1 or 3 were treated as ore, while all the other blocks were treated as waste. The start open pit for the second pass is the maximum open pit generated in the first pass optimisation.

In total 29 open pit shells were generated, the economics of these are shown in Table 13-4 and Figure 13-3. Assumptions to estimate the open pit economic values are shown below:

- The net value rather than the net present value (the “NPV”) was calculated for each open pit. The NPV is closely related to the production schedule, while the net value is independent of production schedule. SRK prefers net value to NPV to select optimal open pit shell, as it can be reasonably expected that the economically acceptable NPV would be realised for the open pit with maximum net value.
- The capital costs were set to zero, as maximising the net value is independent of the capital investment.
- The costs and processing indices to calculate open pit's economic value are shown in Table 13-1. The long-term gold prices shown in Table 17-3 were converted to RMB290, RMB310 and RMB420 per tonnage of RoM for conservative, base and optimistic cases, respectively, to study whether the optimal open pit selection will be materially affected by gold price.
- The blocks with MAT code (Table 13-3) 1 were treated as ore, while all the other blocks were treated as waste.

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The lines in Figure 13-3 show that the cumulative open pit values increase to peak point at Pit 23 for all three cases of gold price, which provides an indication that the optimal open pit selection will unlikely be materially affected by the gold price and the Pit 23 is the competent open pit that should be selected. The inventories within Pit 23 are shown in Table 13-5.

Geometry comparison between Pit 23 and final open pit is shown in Figure 13-4 and Figure 13-5. Globally, the final open pit designed by Yantai Zhongjia moves more material at south-eastern wall and is developed to greater depth, while in other location it moves less material.

The final open pit was deemed by SRK to be conservative, but technically feasible and suitable for use to report Mineral Reserves for SJG Open-Pit Mine. Open pit inventories within the final open pit are presented in Table 13-6. Summary of the final open pit geometry properties are shown in Table 13-7.

**Table 13-4: Summary of Pit Economics for SJG Open-Pit Mine**

Pit	Ore Tonnage (kt)	Waste Tonnage (kt)	Strip Ratio (t/t)	Gold Content (kg)	Gold Grade (g/t)	Pit Economic Value (million RMB)		
						290 RMB/t	310 RMB/t	420 RMB/t
1	1,166	6,023	5.16	625	0.54	-20	-9	52
2	1,279	6,567	5.13	943	0.74	44	61	154
3	1,342	6,425	4.79	1,398	1.04	150	175	311
4	1,373	3,728	2.71	1,472	1.07	207	233	376
5	1,363	4,544	3.33	1,508	1.11	204	230	377
6	1,375	3,679	2.68	1,638	1.19	247	276	435
7	1,380	5,050	3.66	1,714	1.24	245	275	442
8	1,380	4,056	2.94	1,735	1.26	265	295	464
9	1,377	3,256	2.36	1,689	1.23	266	296	460
10	1,382	2,935	2.12	1,701	1.23	273	303	468
11	1,394	4,633	3.32	1,766	1.27	263	294	466
12	1,428	7,482	5.24	1,841	1.29	236	268	447
13	1,417	3,700	2.61	1,764	1.24	275	306	477
14	1,423	3,463	2.43	1,731	1.22	270	300	469
15	1,408	3,299	2.34	1,926	1.37	320	354	542
16	1,422	4,524	3.18	1,755	1.23	260	291	461
17	1,433	2,711	1.89	1,863	1.30	312	345	526
18	1,400	6,758	4.83	1,617	1.16	194	223	380
19	1,383	5,330	3.85	1,343	0.97	151	174	305
20	1,361	4,091	3.01	1,152	0.85	124	145	257
21	1,364	3,068	2.25	1,183	0.87	147	168	283
22	1,295	2,054	1.59	1,474	1.14	238	264	407
23	808	1,780	2.20	860	1.06	126	141	225
24	11	9,237	848.19	7	0.61	-138	-138	-137
25	30	3,284	109.13	25	0.82	-45	-45	-43
26	11	3,311	304.01	5	0.50	-49	-49	-48
27	27	5,000	183.00	17	0.62	-73	-72	-71
28	101	4,295	42.36	105	1.04	-46	-44	-34
29	22	2,339	106.45	16	0.73	-33	-32	-31
<b>Total</b>	<b>31,154</b>	<b>126,621</b>	<b>4.06</b>	<b>34,872</b>	<b>1.12</b>	<b>4,412</b>	<b>5,028</b>	<b>8,417</b>

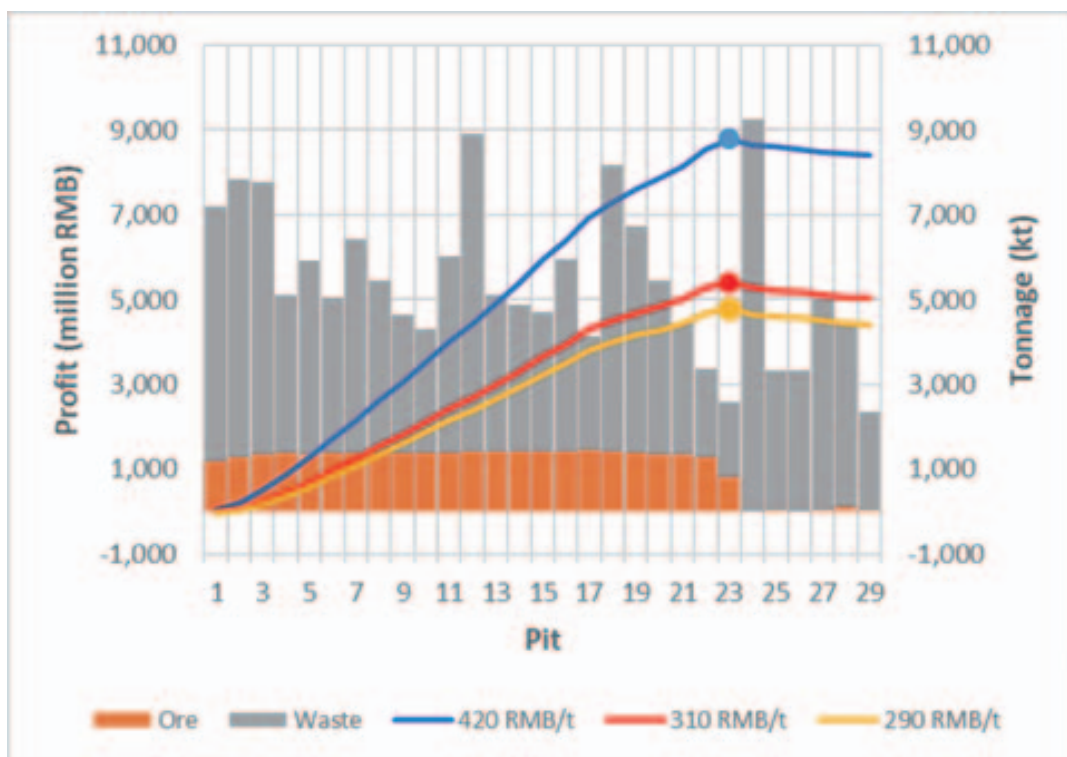


Figure 13-3: Pit Economics Analysis for SJG Open-Pit Mine

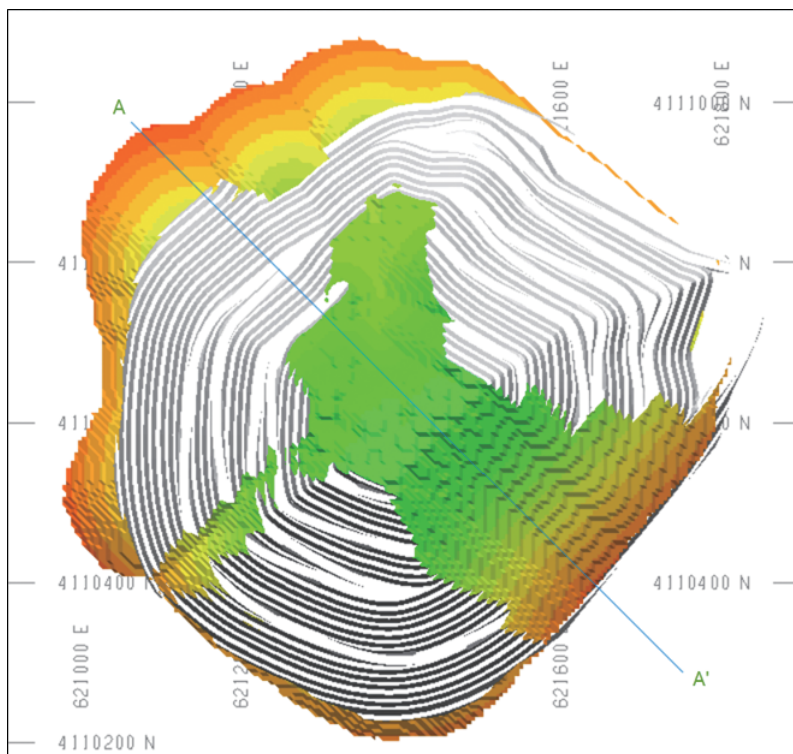


Figure 13-4: Top View of Pit 23 and Final Pit for SJG Open-Pit Mine

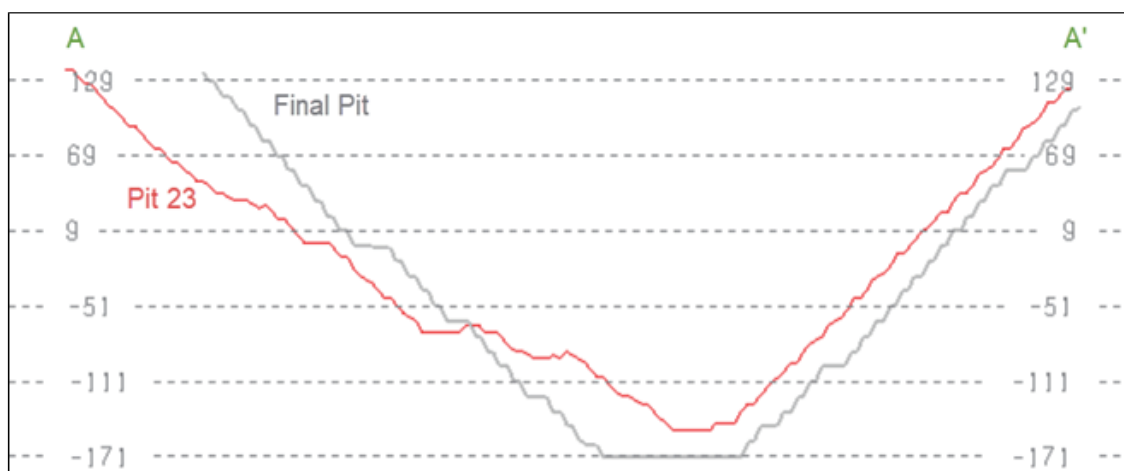


Figure 13-5: Profile of Pit 23 and Final Pit for SJG Open-Pit Mine

Table 13-5: Pit Inventories within Pit 23

MAT	Quantity (kt)	Gold Content (kg)	Gold Grade (g/t)	Remarks
1	30,952	34,697	1.12	Economically Indicated
2	16,034	2,950	0.18	Sub-economically Indicated
3	10,681	10,504	0.98	Economically Inferred
4	16,270	2,714	0.17	Sub-economically Inferred
5	56,171	—	—	Wastes
<b>Total</b>	<b>130,107</b>	<b>50,865</b>	<b>0.39</b>	

Note: Year-end map on 30 June 2023 was not used to cut the block model, as open pit optimization is independent of the year-end map.

Table 13-6: Pit Inventories within Final Pit

MAT	Quantity (kt)	Gold Content (kg)	Gold Grade (g/t)	Remarks
1	22,647	26,407	1.17	Economically Indicated
2	9,388	1,724	0.18	Sub-economically Indicated
3	6,761	6,980	1.03	Economically Inferred
4	9,013	1,504	0.17	Sub-economically Inferred
5	34,735	—	—	Wastes
<b>Total</b>	<b>82,544</b>	<b>36,615</b>	<b>0.44</b>	



**Table 13-7: Final Pit Geometry Properties**

Item	Unit	Value	Remarks
Easting size	m	811	
Northing size	m	787	
Pit depth	m	308	
Bench height	m	12	
Berm width	m	4 or 6	
Bench face angle	degrees	65	
Inter-ramp slope angle	degrees	46.0/51.4	6/4 m wide berm
Pit base elevation	m ASL	-171	
Pit ramp width	m	12/9	dual/single lane
Pit ramp gradient	%	10	
Flat transition length	m	60	

#### 13.4.5 Mineral Reserve classification

Materials with MAT code 1 in Table 13-6 within the final open pit, which is Indicated Mineral Resources, were classified as the Probable Mineral Reserves. All the other materials were classified as waste.

#### 13.4.6 Mineral Reserve statement

The Mineral Reserve statement is shown in Table 13-8.

**Table 13-8: Mineral Reserve Statement for SJG Open-Pit Mine, as of 30 June 2023<sup>[1, 2, 3, 4]</sup>**

Category	Cut-off g/t Au	Ore Quantity kt	Gold Grade g/t	Gold Content	
				kg	koz
Probable	0.3	22,600	1.17	26,400	849

Notes:

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. Both the mining dilution and loss are set to 5%.
3. The Mineral Reserves are included in the Mineral Resources. They shouldn't be added to the Mineral Resources.
4. The information in this QPR which relates to Mineral Reserve conversion is based on information compiled by Mr Yonggang Wu, MAusIMM, and Dr Anshun Xu, FAusIMM, employees of SRK Consulting China Ltd. Both Dr Xu and Mr Wu have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Qualified Persons as defined in the NI 43-101. Dr Xu supervised the work of Mr Wu. Dr Xu and Mr Wu consent to the reporting of this information in the form and context in which it appears.

**13.4.7 Mineral Reserve sensitivity**

The CMF forecasts varied between 290 and 420 RMB/g for the long-term gold price (Table 17-4). This varied gold price can lead to a cut-off grade varied from 0.24 g/t Au to 0.17 g/t Au. The impact of the change in cut-off grade on the open pit inventory is shown in Table 13-9. Compared with the Mineral Reserves, the relative differences of tonnage are about -1% and 10%, respectively.

**Table 13-9: Possible Ore Tonnage within Final Open Pit of SJG Open-Pit Mine**

Gold Price (RMB/g)	Cut-off (g/t Au)	Ore Quantity (kt)	Gold Grade (g/t)	Gold Content (kg)
290	0.24	24,780	1.09	26,978
310	0.23	25,094	1.08	27,052
420	0.17	27,591	1.00	27,550

**13.4.8 Production schedule**

SJG Open-Pit Mine is scheduled to operate 8 hours per shift, 3 shifts per day, 330 days per year. The production capacity is planned to be 3,300 ktpa ore. Production plans have been finalised by Yantai Zhongjia using two pushbacks within the final open pit to control the mining sequence. A summary of the pushback statistics is shown in Table 13-10 and a plan view of the pushbacks is presented in Figure 13-6.

**Table 13-10: Summary of Pushback Statistics**

Pushback	Ore Tonnage (kt)	Gold Content (kg)	Gold Grade (g/t)	Waste Tonnage (kt)	Strip Ratio (t/t)
1	8,772	11,807	1.35	8,639	0.98
2	9,332	9,840	1.05	28,596	3.06
3	4,543	4,760	1.05	22,663	4.99
<b>Total</b>	<b>22,647</b>	<b>26,407</b>	<b>1.17</b>	<b>59,897</b>	<b>2.64</b>

After the review of the pushback designed by Yantai Zhongjia, SRK considers that they are technically feasible to manage the strip ratio over the LoM. These pushbacks were adopted by SRK to generate the LoM schedule for the SJG Project.

SRK was told, by Yantai Zhongjia, that the increase in processing throughputs beyond those of currently achieved by Yantai Zhongjia will be conducted by independent third-parties in future. SRK considers this to be an acceptable plan but notes that limited detail has been developed and provided by Yantai Zhongjia.

Optimised schedules prepared to maximise the economic value over the LoM schedule is presented in Table 13-11. It should be noted that portions of low grade tonnage were planned to feed to the processing plant in years to the end of 2025 by Yantai Zhongjia.

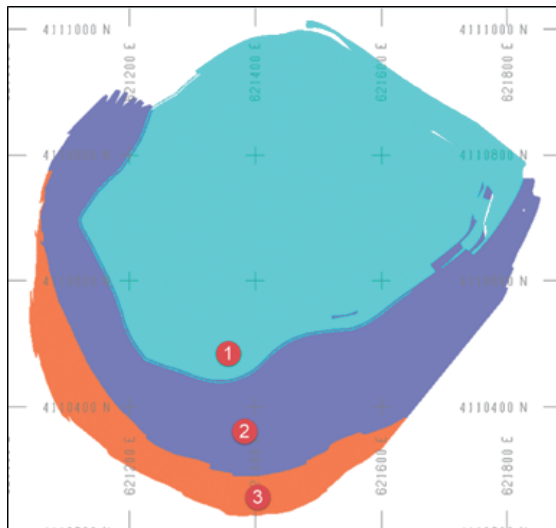


Figure 13-6: Plan View of Pushbacks

Table 13-11: Life of Mine Schedule for SJG Open-Pit Mine (SRK)

Item	Unit	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
<b>Mining</b>											
Ore tonnage	kt	22,647	393	922	1,558	3,300	3,300	3,300	3,300	3,300	3,273
Waste tonnage	kt	59,897	2,700	6,300	3,400	4,800	9,400	9,400	9,400	9,400	5,097
Ore + Waste tonnage	kt	82,544	3,093	7,222	4,958	8,100	12,700	12,700	12,700	12,700	8,370
Yantai Zhongjia	kt	22,647	393	922	1,558	3,300	3,300	3,300	3,300	3,300	3,273
Independent third-party	kt	59,897	2,700	6,300	3,400	4,800	9,400	9,400	9,400	9,400	5,097
Strip ratio	t/t	2.64	6.86	6.83	2.18	1.45	2.85	2.85	2.85	2.85	1.56
Gold grade	g/t	1.17	1.35	1.05	1.24	1.25	1.30	1.21	1.20	0.98	1.03
Gold content	kg	26,407	532	972	1,937	4,137	4,274	4,008	3,961	3,226	3,360
<b>Processing</b>											
RoM tonnage	kt	22,647	393	922	1,558	3,300	3,300	3,300	3,300	3,300	3,273
Yantai Zhongjia	kt	14,214	393	922	1,558	1,890	1,890	1,890	1,890	1,890	1,890
Independent third-party	kt	8,433	—	—	—	1,410	1,410	1,410	1,410	1,410	1,383
RoM gold grade	g/t	1.17	1.35	1.05	1.24	1.25	1.30	1.21	1.20	0.98	1.03
RoM gold content	kg	26,407	532	972	1,937	4,137	4,274	4,008	3,961	3,226	3,360
Recovery rate	%	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00
Concentrate gold grade	g/t	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Mass recovery rate	%	5.54	6.42	5.01	5.90	5.95	6.15	5.77	5.70	4.64	5
Concentrate tonnage	kt	1,254	25	46	92	197	203	190	188	153	160
Gold content in concentrate	kg	25,087	505	923	1,840	3,930	4,060	3,808	3,763	3,065	3,192
Tails tonnage	kt	21,393	368	876	1,466	3,103	3,097	3,110	3,112	3,147	3,113

### **13.5 SJG Underground Mine**

#### **13.5.1 Mineral Reserve model**

The mineral resource model prepared by SRK using Surpac software was exported to a comma delimited file with a constant block size of 5×5×3 m (X×Y×Z) to MineSight software to carry out mine design to estimate Mineral Reserves.

The Mineral Resource estimate is a global estimate. The nearest neighbour method was applied to local grade estimate to estimate Mineral Reserves. Theoretically, the nearest neighbour method can estimate the global mean well but with a smaller standard deviation compared to other interpolation methods like inverse distance weighted and Kriging. Actually, the iteration process of Mineral Reserve estimate indicates that just small portions of Mineral Resources (Figure 13-7) can be converted to Mineral Reserves for SJG Underground Mine, so SRK doesn't think the local estimate will materially affect the Mineral Reserves conversion.

#### **13.5.2 Mining dilution and recovery**

The rates of mining loss and dilution in the FSR are proposed to be 8% and 11%, respectively. These two rates are commonly benchmarks used in China and hence were adopted by SRK to estimate Mineral Reserves for SJG Underground Mine.

#### **13.5.3 Mineral Reserve estimation**

The steps in the process to estimate the Mineral Reserve are shown below:

- A total of 18 mineralised zones (Domains) were interpreted by SRK to estimate the Mineral Resources for SJG Underground Mine. Among these Domains 6, 7, 11, 16 and 19 reported to include the Indicated Mineral Resources. All stopes within Domain 19 have gold grade less than the cut-off grade, as such the domain was excluded from reporting of Mineral Reserves. Finally just four domains were selected by SRK to report potential Mineral Reserves.
- The development system described in section “14.3.2 Mine development” was applied to limit the mining boundary in vertical direction, which is 49 m ASL down to -160 m ASL.
- The domains/Zones were sliced to create levels, then stopes were designed along strike direction based on the existing cross cuts. The stopes are between 50 and 60 m long with a vertically interval of 40 m to 50 m.
- The contained Mineral Resource tonnage was multiplied by a mining recovery rate of 92% and divided by the value of 1 minus the dilution rate of 11% to calculate the Run-of-mine tonnage. The gold grade of Indicated Mineral Resources were multiplied by the value of 1 minus mining dilution rate of 11% to calculate RoM gold grade. The list of stope inventories are shown between Table 13-12 and Table 13-15. Both Inferred Resources and wastes were treated as 0 grade.

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- Stopes within the Inferred Mineral Resources were excluded from reporting of Mineral Reserves.
- All stopes with a RoM gold grade no less than cut-off grade of 0.7 g/t were deemed to be both technically feasible and economically viable and reported as Mineral Reserves.

**Table 13-12: Stope Mineable Inventory in Domain 6**

Level	Stope	Indicated		Inferred <sup>[1]</sup>		Waste <sup>[1]</sup>		Total <sup>[1]</sup>	
		Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)
9	1 <sup>[2]</sup>	30.34	3.49	<0.01	2.73	3.75	—	34.09	3.11
	2 <sup>[2]</sup>	48.74	3.47	—	—	6.02	—	54.76	3.09
	3 <sup>[2]</sup>	7.03	0.86	—	—	0.87	—	7.90	0.76
	4	8.30	0.64	6.30	0.91	1.80	—	16.40	0.32
-40	1	9.69	2.77	0.40	1.09	1.25	—	11.34	2.37
	2	3.66	2.21	—	—	0.45	—	4.11	1.97
	3	11.66	0.48	0.10	1.36	1.45	—	13.21	0.43
	4	23.13	1.14	17.29	1.36	5.00	—	45.41	0.58
-80	1	0.21	1.12	0.85	1.12	0.13	—	1.19	0.20
	2	0.99	0.48	1.71	0.47	0.33	—	3.03	0.16
	3	0.90	0.30	3.00	0.66	0.48	—	4.39	0.06
	4	—	—	6.33	1.47	0.78	—	7.11	—
<b>Total</b>	<b>157.74</b>	<b>2.45</b>	<b>36.24</b>	<b>1.19</b>	<b>23.97</b>	<b>—</b>	<b>217.95</b>	<b>1.97</b>	

Note:

1. Both Inferred and Waste was treated with 0 g/t Au grade to estimate Mineral Reserves due to its insufficient geological confidence level.
2. Void stope.

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**Table 13-13: Stope Mineable Inventory in Domain 7**

Level	Stope	Indicated		Inferred <sup>[1]</sup>		Waste <sup>[1]</sup>		Total <sup>[1]</sup>	
		Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)
9	1	12.20	1.32	10.77	1.39	2.84	—	25.80	0.62
	2 <sup>[2]</sup>	19.97	2.04	9.46	1.84	3.64	—	33.07	1.23
	3	5.41	1.98	9.62	0.89	1.86	—	16.89	0.63
	4	—	—	14.95	1.14	1.85	—	16.80	—
-40	1	58.94	2.87	—	—	7.28	—	66.22	2.56
	2	34.31	2.67	0.06	1.20	4.25	—	38.61	2.37
	3	0.43	1.20	14.75	1.21	1.88	—	17.06	0.03
	4	—	—	71.11	1.29	8.09	—	73.51	—
-80	1	22.07	2.37	13.69	1.70	4.42	—	40.18	1.30
	2	21.77	2.04	4.93	1.38	3.30	—	30.00	1.48
	3	—	—	6.10	1.10	0.75	—	6.86	—
	4	—	—	10.00	1.35	1.24	—	11.24	—
-120	1	—	—	0.72	1.67	0.09	—	0.81	—
	2	—	—	8.47	1.26	1.05	—	9.52	—
	3	—	—	0.62	1.09	0.08	—	0.69	—
	4	—	—	0.04	1.35	0.00	—	0.04	—
<b>Total</b>		<b>175.09</b>	<b>2.43</b>	<b>169.60</b>	<b>1.32</b>	<b>42.60</b>	<b>—</b>	<b>387.29</b>	<b>1.68</b>

*Note:*

1. Both Inferred and Waste was treated with 0 g/t Au grade to estimate Mineral Reserves due to its insufficient geological confidence level.
2. Void stope.

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**Table 13-14: Stope Mineable Inventory in Domain 11**

Level	Stope	Indicated		Inferred <sup>[1]</sup>		Waste <sup>[1]</sup>		Total <sup>[1]</sup>	
		Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)
9	1	8.70	0.87	0.98	1.18	1.20	—	10.87	0.70
	2	15.43	1.77	18.08	2.53	4.14	—	37.65	0.73
	3	—	—	1.69	3.70	0.21	—	1.89	—
	4	—	—	0.55	1.84	0.07	—	0.62	—
-40	1	8.45	0.90	—	—	1.04	—	9.50	0.80
	2 <sup>[2]</sup>	64.80	2.36	—	—	8.01	—	72.81	2.10
	3 <sup>[2]</sup>	28.13	2.68	2.24	3.82	3.75	—	34.13	2.21
80	4	11.89	1.40	9.31	1.43	2.62	—	23.83	0.70
	1	1.92	1.02	1.84	1.00	0.47	—	4.23	0.46
	2	20.07	1.64	0.78	1.31	2.58	—	23.43	1.40
	3	24.94	1.67	—	—	3.08	—	28.02	1.48
-120	4	14.36	1.31	6.26	1.28	2.55	—	23.17	0.81
	2	6.08	1.60	4.38	1.60	1.29	—	11.75	0.83
	3	6.48	1.58	7.16	1.57	1.69	—	15.33	0.67
	4	0.08	1.28	3.29	1.28	0.42	—	3.78	0.03
<b>Total</b>		<b>214.41</b>	<b>1.90</b>	<b>60.16</b>	<b>1.97</b>	<b>33.94</b>	<b>—</b>	<b>308.51</b>	<b>1.71</b>

*Note:*

1. Both Inferred and Waste was treated with 0 g/t Au grade to estimate Mineral Reserves due to its insufficient geological confidence level.
2. Void stope.

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**Table 13-15: Stope Mineable Inventory in Domain 16**

Level	Stope	Indicated		Inferred <sup>[1]</sup>		Waste <sup>[1]</sup>		Total <sup>[1]</sup>	
		Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)
9	1 <sup>[2]</sup>	0.54	7.73	3.29	12.38	0.47	—	4.31	0.97
	2 <sup>[2]</sup>	5.42	1.46	0.91	1.72	0.78	—	7.11	1.11
	3	14.74	1.44	—	—	1.82	—	16.56	1.28
	4	6.20	0.23	4.34	0.23	1.30	—	11.84	0.12
-40	1	21.04	1.53	—	—	2.60	—	23.64	1.36
	2	23.30	1.56	—	—	2.88	—	26.18	1.39
	3	31.46	1.34	—	—	3.89	—	35.35	1.19
	4	12.13	0.84	4.17	0.41	2.01	—	18.32	0.56
-80	1	34.91	1.15	—	—	4.31	—	39.22	1.03
	2	15.43	1.37	—	—	1.91	—	17.34	1.22
	3	25.16	1.36	—	—	3.11	—	28.27	1.21
	4	9.83	1.16	2.86	1.04	1.57	—	14.26	0.80
-120	1	10.24	1.03	2.73	1.02	1.60	—	14.57	0.72
	2	12.17	1.03	0.10	1.01	1.52	—	13.79	0.90
	3	11.87	1.04	0.14	1.04	1.48	—	13.50	0.91
	4	2.13	1.04	2.71	1.04	0.60	—	5.43	0.41
-160	1	—	—	0.09	1.03	0.01	—	0.10	—
	2	5.96	1.06	1.07	1.06	0.87	—	7.89	0.80
	3	3.46	1.06	2.16	1.08	0.69	—	6.31	0.58
	4	—	—	0.47	1.05	0.06	—	0.53	—
<b>Total</b>	<b>246.00</b>	<b>1.26</b>	<b>25.04</b>	<b>2.31</b>	<b>33.50</b>	<b>—</b>	<b>304.53</b>	<b>1.21</b>	

Note:

1. Both Inferred and Waste was treated with 0 g/t Au grade to estimate Mineral Reserves due to its insufficient geological confidence level.
2. Void stope.

A summary of mineable inventories (stopes above the cut-off grade), after applying Dilution and Ore Loss for each Domain are shown in Table 13-16. The location of the mineable stopes within the domain is presented in Figure 13-7.

The Mineral Reserve was estimated from the inventories when classifying the Inferred Mineral Resources as waste and applying a 0 g/t Au grade. With further Mineral Resource definition drilling some of the Inferred Mineral Resources may contribute additional ounces to the production profile.



Table 13-16: Summary of Mineable Inventory

Domain	Indicated		Inferred		Waste		Total <sup>[1]</sup>	
	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)	Tonnage (kt)	Grade (g/t Au)
6	7	2.62	0	1.09	1	—	8	2.26
7	119	2.61	17	1.64	17	—	153	2.03
11	83	1.53	22	1.96	13	—	119	1.07
16	216	1.30	7	1.03	28	—	251	1.12
<b>Total</b>	<b>425</b>	<b>1.73</b>	<b>47</b>	<b>1.70</b>	<b>58</b>	<b>—</b>	<b>530</b>	<b>1.39</b>

Note:

- Both Inferred and Waste was treated with 0 g/t Au grade due to its insufficient geological confidence level.

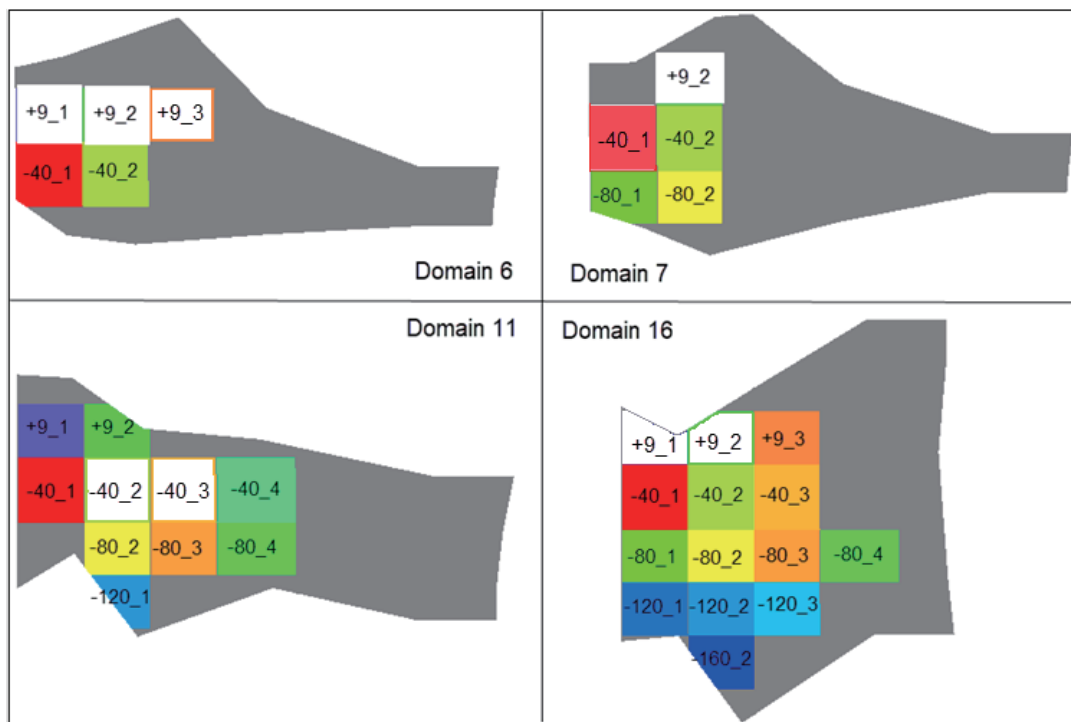


Figure 13-7: Mineable Stopes Location in Each Domain (Azimuth: 310°, Dip: 0°)

#### 13.5.4 Mineral Reserve classification

The Mineable Inventory in Table 13-16 include mineable portions of Indicated Mineral Resources, Inferred Mineral Resources and external wastes.

The Inferred Mineral Resource were considered as waste, given a 0 g/t Au grade and all material was converted to Probable Mineral Reserves.

13.5.5 Mineral Reserve statement

Mineral Reserve statement is shown in Table 13-17.

**Table 13-17: Mineral Reserve Statement for SJG Underground Mine,  
as of 30 June 2023<sup>[1, 2, 3, 4]</sup>**

Domain	Category	Cut-off g/t Au	Ore		Gold Content	
			Quantity kt	Gold Grade g/t	kg	koz
6	Probable	0.7	8	2.26	17	0.6
7	Probable	0.7	153	2.03	312	10.0
11	Probable	0.7	119	1.07	127	4.1
16	Probable	0.7	251	1.12	280	9.0
<b>Total</b>	<b>Probable</b>	<b>0.7</b>	<b>530</b>	<b>1.39</b>	<b>737</b>	<b>23.7</b>

Notes:

1. All figures are rounded to reflect the relative accuracy of the estimate.
2. The mining dilution rate is 11%. The mining recovery rate is 92%.
3. The Mineral Reserves are included in the Mineral Resources. They shouldn't be added to the Mineral Resources.
4. The information in this QPR which relates to Mineral Reserve conversion is based on information compiled by Mr Yonggang Wu, MAusIMM, and Dr Anshun Xu, FAusIMM, employees of SRK Consulting China Ltd. Both Dr Xu and Mr Wu have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Qualified Persons as defined in the NI 43-101. Dr Xu supervised the work of Mr Wu. Dr Xu and Mr Wu consent to the reporting of this information in the form and context in which it appears.

13.5.6 Mineral Reserve sensitivity

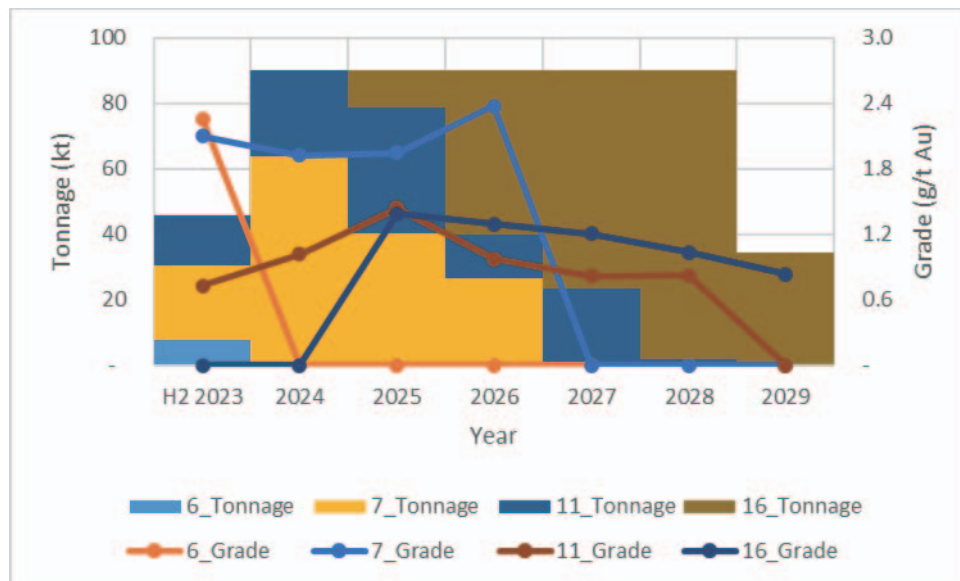
The CMF forecasts varied between 290 and 420 RMB/g for the long-term gold price (Table 17-4). This varied gold price can lead to a cut-off grade varied from 0.67 g/t Au to 0.50 g/t Au. The relevant possible ore tonnages are listed in Table 13-18. Compared with the Mineral Reserves, the relative differences of tonnage are about -5% and 25%, respectively.

**Table 13-18: Possible Ore Tonnage within Exploited Stopes of SJG Underground Mine**

Gold Price (RMB/g)	Cut-off (g/t Au)	Quantity (kt)	Gold Grade (g/t)	Gold Content (kg)
290	0.67	565	1.35	761
310	0.63	597	1.31	782
420	0.50	745	1.17	868

13.5.7 Production schedule

SJG Underground Mine will produce 8 hours per shift, 3 shifts per day, 330 days per year. The production capacity is to be 90 ktpa ore. The life of mine shall be about 6.0 years, which include a 5.5-year full production period and a 0.5-year ramp-down period. The LoM schedule is shown in Figure 13-8 and Table 13-19.



**Figure 13-8: Stacked Column Plots of Life of Mine Schedule for SJG Underground**

**Table 13-19: LoM Schedule for SJG Underground Mine (SRK)**

Item	Unit	Total	H2 2023	2024	2025	2026	2027	2028	2029
Ore tonnage	kt	530	46	90	90	90	90	90	35
Gold grade	g/t	1.39	1.67	1.66	1.66	1.56	1.10	1.03	0.83
Gold content	kg	737	76	149	150	141	99	93	29
Processing recovery rate	%	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00
Concentrate gold grade	g/t	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Concentrate tonnage	kt	35.0	3.6	7.1	7.1	6.7	4.7	4.4	1.4
Gold content in concentrate	kg	700	72	142	142	134	94	88	27
Tails tonnage	kt	495	42	83	83	83	85	86	33

### 13.6 Ascertain Mineral Reserves

SRK doesn’t think it’s necessary to carry out further detailed exploration campaigns to ascertain Mineral Reserves for the SJG Project by considering the following reasons:

- Both the SJG Open-Pit Mine and the SJG Underground Mine are producing mines as at the Effective Date.
- SRK, based on its experiences, think it’s extremely difficult to upgrade the Mineral Resources with low geological confidence to the Measured category for a gold deposit due to its intrinsic geological properties.

Although the further detailed exploration campaign is not necessary for the SJG Project, the production exploration, grade control and the detailed production plans are required to minimise the risk caused by the Mineral Resource category during daily operation. SRK was told that these commonly procedures have been practiced regularly in the daily operation by Yantai Zhongjia itself, and the related fees have been included in the operating costs. When publicly reporting is required or materially changing of Mineral Reserves has happened, internal expert or externally independent expert will review or carry out the estimate of the Mineral Resources and Mineral Reserves.

### 13.7 Conclusions and recommendations

#### 13.7.1 SJG Open-Pit Mine

SRK’s review of the open pit optimisation results indicate that the final open pit design proposed by Yantai Zhongjia is conservative, but it is technically feasible and economically viable and suitable for Mineral Reserve estimate.

The LoM production capacity is scheduled to be 3,300 ktpa ore over an 8.5-year period. The SJG Open-Pit Mine Probable Mineral Reserves is 22,600 kt at 1.17 g/t Au. Without the open pit optimisation, the existing design of the SJG Open-Pit Mine can cater for the mining of approximately 455 kt of Probable Mineral Reserves (representing approximately 2.0% of the Probable Mineral Reserves of approximately 22,600 kt available at the SJG Open-Pit Mine). It is estimated that there are approximately 22,100 kt of Probable Mineral Reserves (representing approximately 98.0% of the Probable Mineral Reserves of approximately 22,600 kt available at the SJG Open-Pit Mine) that can be

accessible at the unmined areas next to and below the current infrastructure, which has the potential to increase the mining production output and to cater for mining operations for the next years at Yantai Zhongjia’s current mining capacity

SRK was provided with a production schedule for the next two and half years operation by Yantai Zhongjia, which is shown in Table 13-20. This short-term schedule is different with that shown in Table 13-11 in terms of RoM tonnage and gold grade. With reference to the historical production pattern of Yantai Zhongjia, Yantai Zhongjia estimate that low grade tonnage of 463 kt, 926 kt and 649 kt per each year could be filtered back to the processing plant for processing for the year period H2 2023 and fiscal year 2024 and fiscal year 2025 respectively.

**Table 13-20: Short-term Production Schedule for SJG Open-Pit Mine (Yantai Zhongjia)**

<b>Item</b>	<b>Unit</b>	<b>H2 2023</b>	<b>2024</b>	<b>2025</b>
RoM tonnage	kt	856	1,848	2,207
Gold grade	g/t	0.57	0.53	0.88

**13.7.2 SJG Underground Mine**

SRK understands that the FSR has been applied to guide the mine development since year 2016.

Technically feasible stopes were designed based on the planned development system and mining methods. Stope economics of each stope were analysed to select economically viable stopes that were reported as the Mineral Reserves.

The LoM production capacity is scheduled to be 90 ktpa ore over an a 6.0-year period. The SJG Underground Mine Probable Mineral Reserves is 530 kt at 1.39 g/t Au.

SRK was provided with a production schedule for the next two and half years operation by Yantai Zhongjia, which is shown in Table 13-21. This short-term schedule is similar to that shown in Table 13-19.

**Table 13-21: Short-term Production Schedule for SJG Underground Mine (Yantai Zhongjia)**

<b>Item</b>	<b>Unit</b>	<b>H2 2023</b>	<b>2024</b>	<b>2025</b>
RoM tonnage	kt	46	90	90
Gold grade	g/t	1.70	1.70	1.70

## **14 MINING**

### **14.1 Mining technical conditions**

#### **14.1.1 Hydrogeology**

The average annual precipitation is about 654.4 mm, which is mostly during the months from June to September. The maximum daily precipitation is about 141.3 mm.

The SJG Project is in the charging area of sub-hydrogeological unit of Jiaolai Basin, which belongs to the hydrogeological unit of Ludong low-hilly intrusive rock, aggregated rock and metamorphic rock. The terrain is predominantly low hilly. The orebodies are in elevation ranges of +145 m ASL down to -402 m ASL. The erosion basis, which is in the south-east of mine area, is +60 m ASL.

The stratum in the area is predominantly the continental sedimentation of Quaternary, and conglomerate of the Linsishan Formation, Laiyang Group, and gneiss and granulite of Douya Formation, Jingshan Group of Cretaceous. The other strata include monzonitic granite in Linglong superunit of Neoproterozoic Era, and widely spread dykes of Mesozoic and Proterozoic. The local settings are friable fractures, which has been moderately developed due to several times of local tectonics. The primary fractures are north-east striking, which controls the spread of gold dykes, while the secondary fractures are north-west striking.

The underground layers are divided into porous aquifer of uncompact Quaternary, fissure aquifer of weathered bed rock, fissure aquifer of geological fractures, aquitard and aquiclude, based on the groundwater type and permeability.

Aquitard and aquiclude are mainly consist of conglomerate, gneiss, monzonitic granite and other various dykes occurring below the weathered layer, which are widely spread in and around the SJG Project area with extremely low permeability and water yield property and located below the water level.

The main source of local groundwater is atmospheric precipitation. The porous aquifer of uncompact Quaternary is charged with not only the atmospheric precipitation, but also the fissure water of bed rock and the surface runoff. The fissure aquifer of bed rock is charged with not only the atmospheric precipitation, but also the fissure water of the upper uncompact Quaternary.

Most of the orebody is located below the local base of erosion and below the groundwater level, so ground water cannot be drained out of the mine by gravity. The main aquifer has low permeability, with local areas having moderate permeability. Groundwater recharges slowly and the volume of mine water inrush is small.

Generally, hydrogeological conditions are relatively straight forward.

Long-term drainage and dewatering of groundwater would change the groundwater quality and quantity. Potentially this would cause the water level to fall, which could bring about negative effect to the processing water and domestic water of residents.

#### **14.1.2 Engineering geology and geotechnical engineering**

Conglomerates and dykes are widely spread in the whole SJG Project area. Details are as follows:

- Conglomerate mainly consists of pyritization and sericite with a very small number of thin layers of sandstone occurred in them. The colours are grey-white, grey-green and purple-red. The primary component of conglomerate is mylonitization monzonitic granite. The matrix is primarily composed of felsic sandstone. The rock integrity is fair to good. The rock is semi-hard to hard with a Protodyakonov coefficient ranging from 6 to 10. The rock quality is fair to good.
- Dykes include diorite (porphyrite), lamprophyre and dolerite (porphyrite), all of which are formed in fractures in a pre-existing mesozoic conglomerate with a thickness of dozens of centimetres to several meters and a striking length of several meters to hundred meters. Fissures are not developed. The rock integrity is fair to good. The rock hardness is fair. The rock quality is fair to good. Some dykes developed along the fractures with a thickness of several centimetres to dozens of centimetres. These dykes are usually cut by later fractures and developed in small size. There is no need to support them.

Monzonitic granites primarily occur in the north of the SJG Project area. The weathering that occurs to surface rock is caused by well-developed fissures at depth the fissures are decreased slowly. Affected by the terrain, lithology and groundwater, the depth of strong weathering varied widely, which is usually ranging from 1 to 15 meters. The rock integrity is fair to good.

SRK understands that the currently available engineering geology study cannot provide information about how weathered the rocks are (eroded rocks), and how many structural weaknesses occur within the rocks, such as a faults, shears, joints or foliations. If possible, the risks related to open pit wall stability should be studied to provide a sound guide for overall slope angle.

The slope monitoring and management will continue for the entire life of mine. SRK suggests that slope stability monitoring should be enhanced, and a rock mechanics study should be carried out as soon as possible to finalise these parameters to confirm open pit wall deformation and slope stability.

Globally, the engineering geological conditions are straightforward due to straightforward geomorphology, unitary lithology, simple structure and stable of wall rocks and rock mass.

### **14.2 SJG Open-Pit Mine**

#### **14.2.1 Mine operations history and current status**

SJG Open-Pit Mine was initially exploited as an underground mine in 2006. After several years of exploration and mining operation, it was converted to a hybrid of open pit mining and underground mining in 2011. Underground mining ceased in 2013, after which open pit mining continued. As of 30 June 2023, the mining operations were conducted in the open pit with the open pit's upper opening area of about 0.41 km<sup>2</sup>, and the open pit is producing at four benches of +81 m ASL, +69 m ASL, +21 m ASL and +9 m ASL. Figure 14-1 is the producing open pit.

The production records of last three years and the first half of 2023 (“**H1 2023**”) are shown in Table 14-1. It should be noted that the production in year 2021 was significantly interrupted by the People’s Government of Shandong Province (the “**Provincial Government**”) due to safety production inspection. It can be seen that the actual ore production capacity is about 960–1,900 ktpa in the years from 2020 to 2022.



**Figure 14-1: Open Pit in Producing**

**Table 14-1: SJG Open-Pit Mine Production Records**

Category	Unit	2020	2021 <sup>[1, 2]</sup>	2022	H1 2023 <sup>[3]</sup>
Ore tonnage	kt	1,499	960	1,899	615
Waste tonnage	kt	205	75	401	217
Ore + waste tonnage	kt	1,704	1,035	2,300	832
Strip ratio	t/t	0.14	0.08	0.21	0.35
Ore milled	kt	1,500	1,013	1,901	952

*Notes:*

1. Mining was conducted in months January, February, and from August to December.
2. Processing was conducted in months January, February, April, May, and from August to December.
3. Low in mining production in May 2023 due to maintenance of road from open pit to mill. No ore but waste production in June 2023 due to application of safety production licence.



**14.2.2 Mine development**

Conventional road-truck method will continue be applied to the mine development. The key parameters applied on site are shown in Table 14-2.

Roads around the open pit can be dug freely, with supplementation of rock breaking. Conventional drill-blast-load-haul cycle, as described in “14.2.3 Mining methods”, is applied to construct in open pit ramps and cut slots to access benches below the active bench and to prepare a void space for the following large-scale production and storing of water inflows temporarily.

**Table 14-2: Key Parameters of Mine Development**

<b>Item</b>	<b>Unit</b>	<b>Value</b>	<b>Comments</b>
Road/open pit ramp width	m	12/9	Dual/single
Road/open pit ramp maximum gradient	%	10	
Cut slot length	m	60–80	
Cut slot width	m	20	
Truck	t	40	

**14.2.3 Mining methods**

The mining sequence will be controlled by two pushbacks. Conventional drill-blast-load-haul mining cycle is being and will be applied to move rocks within the open pit. Key parameters of the mining method are shown in Table 14-3 and the mining cycle is presented in Figure 14-2.

Grade control has been and will be carried out based on the samples from blasthole. The cut-off grade applied to separate ore from wastes varied from 0.2 to 0.3 g/t Au. The mining dilution and recovery rates are 5%.

Table 14-3: Key Parameters of Mining Method

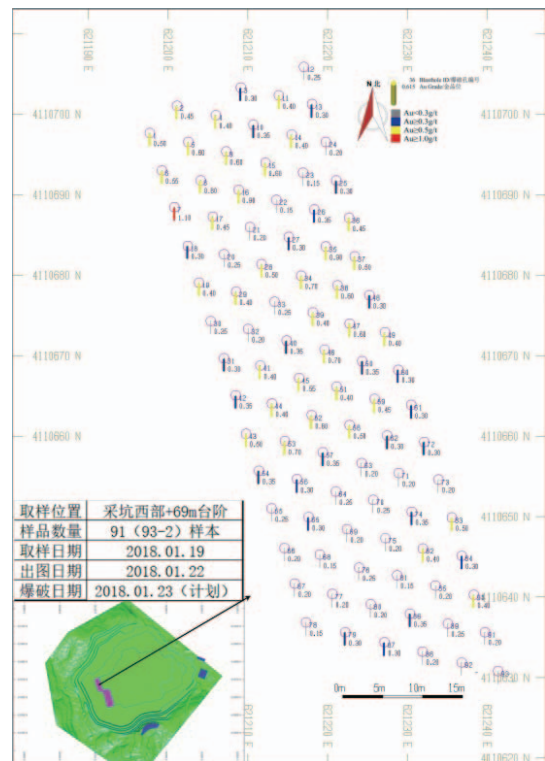
Item	Unit	Value
Bench height	m	12
Active bench face angle	degrees	70
Grid pattern of blastholes	m	3.5×3.8–4.0×4.0
Blasthole diameter	mm	110
Blasthole length	m	13
Over-drill length of blasthole	m	1
Explosive	/	Emulsion and ammonium nitrate/fuel oil (the “ANFO”)
Explosive consumption	kg/t ore	about 0.25
Drill rig	/	See Table 14-4
Excavator	m <sup>3</sup>	See Table 14-4.
Truck	t	See Table 14-4.



Drilling



Loading and hauling



Blast-hole pattern

Figure 14-2: Mining Cycle in SJG Open-Pit Mine

**14.2.4 Slope monitoring**

Regular (monthly) open pit slope inspections are undertaken as no special monitoring devices are installed to monitor the open pit stability.

**14.2.5 Waste dump**

The waste has been and will continued to be disposed by buyers. It’s the buyers responsibility to transport wastes out mine area. There is no need to consider permanent waste dumping.

**14.2.6 Mine equipment**

The mine equipment on site is shown in Table 14-4.

**Table 14-4: Mine Equipment List for SJG Open-Pit Mine**

<b>Equipment</b>	<b>Manufacturer</b>	<b>Mode</b>	<b>Size</b>	<b>Quantity</b>	<b>Comments</b>
Drill rig	Jinke Zuankong	JK590C	/	2	115 mm bit
Drill rig	Jinke Zuankong	JK591C	/	2	115 mm bit
Drill rig	Jinke Zuankong	JK59BA-3A	/	2	115 mm bit
Air compressor	Atlas	XRVS 1050 CD	29.8 m <sup>3</sup> /min	1	
Air compressor	LIUTECH	LUY310-25GIII	31.0 m <sup>3</sup> /min		
Excavator	Doosan	DX300LC-7	1.27 m <sup>3</sup>	2	load ore and break over-sized rock
Excavator	Doosan	DX300LC-9C	1.4 m <sup>3</sup>	1	
Excavator	Doosan	DX380LC-9C	1.71–1.9 m <sup>3</sup>	8	
Excavator	Doosan	DX305LC-9C	1.4 m <sup>3</sup>	1	load ore and break over-sized rock
Truck	/	/	40 t	47	belonging to third-party
Loader	Lovol	FL955F	5 t	1	
Watercart	Sinotruck	JYJ5161GSSE	8.7 m <sup>3</sup>	1	
Watercart	Dongfeng	153	12 m <sup>3</sup>	1	

**14.2.7 Mine services**

**Mine drainage and dewatering**

Surface run-off above +81 m ASL drains by gravity to interceptor ditches around the open pit opening.

Surface run-off and groundwater below +81 m ASL drains by gravity to old underground voids like level haulage ways, shafts etc. along the fissures, joints, and foliations. The water is then gathered and pumped out to surface via pipes installed in the auxiliary shaft of SJG Underground Mine. The water pumped out will be used within open pit for water spray purpose and sold to a processing plant near to the SJG Underground Mine.

Drainage of groundwater below –120 m ASL is not considered at present, as it will happen towards the end of open pit life. SRK understand that Yantai Zhongjia didn’t have a plan for this at the Effective Date, but there is sufficient time to make a plan for the future.

There are two water tankers (See Table 14-4) to spray water for dust suppression.

**Electric power supply**

All equipment is diesel driven, with minimal electric power required for lighting.

**Compressive air**

Compressed air for the drill rigs is provided by mobile compressors.

**Explosives supply and management**

Currently, SJG Project has two explosive magazines. SJG Open-Pit Mine and SJG Underground Mine each has one own magazine and cannot be shared with each other. A 40 t explosive magazine has been constructed on the SJG Open-Pit Mine site to store explosives. The magazine of SJG Open-Pit Mine is in normal use. According to the production plan, the required blasting materials are applied for by Yantai Zhongjia, then delivered to the explosive magazine by the producer. Onsite blasting can only be performed under the supervision of policies.

**Fuel**

There are two fuel tanks on site, which belong to Yantai Zhongjia. The fuel was supplied from the gasoline stations located in the town of Wanggezhuang.

**Maintenance facilities**

Maintenance facilities and workshop are located near to the perimeter of open pit.

Yantai Zhongjia oversees the maintenance of trucks, drill rigs and ancillary equipment, while the excavator maintenance will be undertaken on-site by the manufacturer.

**Communications**

Two-way radios are applied in open pit to provide simple producing communication. No special dispatch communication is required.

### 14.3 SJG Underground Mine

#### 14.3.1 Mine operations history and current status

Development of SJG Underground Mine was commenced in September 2016, and production commenced in 2019. Photos taken during site visit are shown in Figure 14-3.



Access ramp's portal



Industrial site of auxiliary shaft



Upcast portal

**Figure 14-3: Portals for SJG Underground Mine**

Commercial production commenced in 2019, with some ore produced in 2018 during the pre-production period. Current underground production is coming from the upper three levels in the mine while development of the ramp and the lower three levels continues. The production records in the last three years and H1 2023 are shown in Table 14-5. It should be noted that the production in year 2021 is significantly interrupted by the Provincial Government due to safety production inspection.

**Table 14-5: SJG Underground Mine Production Records**

Category	Unit	2020	2021 <sup>[1]</sup>	2022	H1 2023
Ore mined and milled	kt	89.9	10.7	90.0	44.3

Notes:

1. Both mining and processing were conducted in months January and December.

SJG Underground Mine produces 8 hours per shift, 3 shifts per day, 330 days per year. Hauling of ore along the access ramp will operate just one shift per day and is designed for an ore production capacity of 90 ktpa.

**14.3.2 Mine development**

The development system consists of a trackless access ramp, six level haulage ways, an auxiliary shaft, a surface ventilation upcast shaft and an underground ventilation upcast shaft. Properties of these tunnels are shown in Table 14-6.

Off-road dump truck, each with a nominated capacity of 20 t, are used to move both ore and waste to surface along the level haulage way and the access ramp.

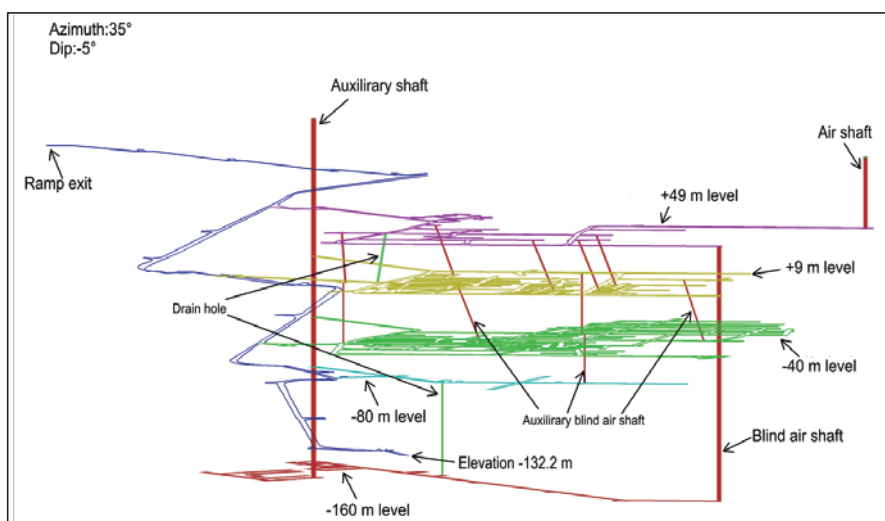
The mine development system shown in Figure 14-4 has been completed at the Effective Date.

**Table 14-6: Development Tunnel Dimensions**

Tunnels	Net Cross Section	Location/level	Length (m)
Access ramp <sup>[1]</sup>	4.5x4.0 (widthxheight)	4111092, 40622241, +80 (N, E, Z)	2,265
Auxiliary shaft	4.0 (diameter)	4111168, 40621939, +120 (N, E, Z)	305
Surface ventilation upcast shaft	3.5 (diameter)	4110712, 40622173, +98 (N, E, Z)	49
Underground ventilation upcast shaft	2.5 (diameter)	4110681, 40621996, +49 (N, E, Z)	209
Level haulage way <sup>[2]</sup>	4.5x4.0 (widthxheight)	+49, +9, -40, -80, -120, -160 (Level)	/

Notes:

1. The access ramp has been advanced to -132.2 m ASL as at the Effective Date.
2. As of 30 June 2023, level haulage ways have been advanced 1,952 m at Level +49 m; 3,094 m at Level +9 m; 4,891 m at Level -40 m; 45 m at Level -80 m; and 1,092 m at Level -160 m. Level -120 m is not yet advanced.



**Figure 14-4: Longitudinal Profile of Development System**

### **14.3.3 Mining methods**

The mining methods include cut-and-fill mining and shrinkage stope mining.

#### **Cut-and-fill mining**

Stope development includes: a footwall haulage drive on the main level for ventilation, hauling of ore; two cross cuts at the main level for water drainage; a raise connection in the footwall, with access drive to each slice for filling material, workers, and storage of ore; an undercut of the stope area.

The stopes are between 50 and 60 m in length and include a 5 m thick sill pillar at the bottom of the cut and fill panel that is recoverable.

Recovery of ore starts from the bottom undercut, advancing upward at 1.8 m slice interval/cut. The blastholes are 1.8 m long with a dip angle of 0 degree or slightly dipping at 0.8–1.0 m spacing. Short bolt or round timber is used in a stope to provide temporary support as required.

Mobile fan will be used after blasting to remove the blasting fumes. The exhausted air will return to the upper level haulage way. Fresh air flows through the working face of drilling at a speed of no less than 1.5 meters per second (“m/s”).

The ore is scraped to the ore pass in the footwall and discharged to trucks below the hopper.

The bottom slice is filled with cemented fill that has a cement-sand ratio of 1:4, while all the other slices are filled with fully cemented paste.

The production capacity of a stope is assumed to be 80 tpd, with each stope producing 1,000 t per 8.5 m of advance. The rates of mining loss and dilution are 8% and 11%, respectively.

#### **Shrinkage mining**

Stope development includes: a footwall haulage drive, about 6 m away from the orebody; crosscuts at 5–6 m interval, hauling of ore; an upcast in rib for ventilation and workers; an undercut of the stope area, 2 m high.

The stopes are 40 m in length and each panel includes a 6 m wide rib pillar and a 3 m thick crown pillar. The stopes produce 1000 t per 11.8 m of advance.

Drilling, blasting and ventilation are same as those applied to cut-and-filling method. Ore is loaded from ore pass using electric load-haul-dump (the “LHD”) machine.

Pillars with high grade of gold will be recovered, while the pillars with low grade gold will be left permanently. A reinforced concrete sill, which is a 500 mm thick will be used to enable the crown pillars to be recovered. Half of the rib pillar can be recovered by drilling shallow blastholes from the upcast in the rib.

Once all the ore has been removed from a stope, the void would be filled with a mix of waste rock and paste. Raises for backfilling, which are connected to the crosscuts of a stope in the upper level, have a profile of 2×1.5 m at 10–15 m spacing.

The production capacity of a stope is assumed to be 80 tpd. The rates of mining loss and dilution are 8% and 12%, respectively.

#### 14.3.4 Ground support

The mine plan relies on backfill as a ground support medium. The voids underground will be filled using either cemented paste fill or cemented rock fill (the “CRF”). A surface paste plant (Figure 14-5) near to the compressed air station has been installed.

The paste plant includes a 300 m<sup>3</sup> upright bin, a 50 t cement tank, a  $\Phi$ 1,500 × 1,500 high concentration stirred-tank and a screw feeder etc.

The dry tails are transported to paste plant by truck. After mixing with cement in the stirred-tank, the paste flows to the underground stope by gravity along two sets of  $\Phi$  133 × 12 manganese steel pipe in the auxiliary shaft, then distributed via a DN80 polyethylene pipe in level haulage way and finally a  $\Phi$ 89×10 polyethylene pipe in a stope.

The average filling volume is 81 cubic meters per day (“m<sup>3</sup>/d”). The maximum filling volume per shift is 52.5 m<sup>3</sup>/d. The filling density is 68% to 70%.



Figure 14-5: Paste Plant



**14.3.5 Mine equipment**

Underground mine equipment in place are shown in Table 14-7.

**Table 14-7: Underground Mine Equipment in Place for SJG Underground Mine**

<b>Equipment</b>	<b>Model</b>	<b>Quantity</b>	<b>Remarks</b>
Drill rig	7655	10	
Drill rig	YSP-45	3	
Mobile fan	JK58-1No4.0	6	
Mobile fan	JK58-1No4.5	6	
Main fan	FKZ45-6-No18	1	160 kilowatts (“kW”)
Main fan	FKZ40-6-No14	1	30 kW
Scraper	/	2	15 kW
LHD	LDCY-0.75	2	37 kW
Shotcrete machine	/	2	
Hoist	JKMD-1.85×4 (I)	1	Auxiliary shaft
Double-deck cage	#2 multi rope	1	Auxiliary shaft
Trucks	YC6L290-20	3	20 t
Water pumps	MD120-50*7	3	120 m <sup>3</sup> /h
Air compressor	SAC132A	1	
Air compressor	SAC55A	1	
Drilling jumbo for driving	Yz-820	2	
Drilling jumbo for driving	Atlas 281	1	
Drilling jumbo for driving	Atlas K111	1	
Drilling jumbo for mining	Simba 1254	1	
Drill rig	SWDE165	1	
Drill rig	SWDB165	1	
Scaling jumbo	XMPYT-58/700	1	
Long-hole drill rig	YGZ-90	1	
Shallow-hole drill rig	YT28	3	
Front end loader	FL956F	2	
Front end loader	ZL30E-I	1	
Front end loader	ZL30E- II	1	
Truck	Dongfeng	8	
Concrete mixer	JZC450	1	
Shotcrete machine	SPJ08-07-22	1	
Light truck		2	
Pick-up truck		4	

**14.3.6 Mine services**

**Ventilation**

The ventilation plan for stopes and headings is in diagonal pattern. Fresh air flows to a working face along the auxiliary shaft and the level haulage way. The exhaust air flows to surface along the upper level haulage way, underground upcast, and surface upcast shafts.

The calculated air requirement is 43 cubic meters per second (“m<sup>3</sup>/s”). One FKZ45-6-No.18 fan (Figure 14-6) was installed at the portal of upcast to draw out exhaust air with a capacity of 64 m<sup>3</sup>/s.



Figure 14-6: Main Fan at the Portal of Upcast

Ventilation in the access ramp is independent of the ventilation plan for stopes and headings. A 2.5 m diameter exhaust raise is constructed at the connection linking the access ramp and the active levels. A mobile fan is installed at the top of this raise to stop and redirect the exhausted air to the upper non-active level with supplementation of air doors and other air redirecting facilities. The air requirement for the working area is 21 m<sup>3</sup>/s. The mobile fan is FKZ40-6-No.14, which has a nominated airflow rate of 15.8–34.4 m<sup>3</sup>/s.

Locally, the mobile fans, JK58-1N0.4, are used in drive headings, stope development workfaces to discharge exhaust air.

**Mine drainage and dewatering**

The normal groundwater inflow is 1,950 m<sup>3</sup>/d reaching a maximum of 3,900 m<sup>3</sup>/d. In addition to the groundwater inflow, water from production and backfilling operations totals 60 m<sup>3</sup>/d.

The pumping station (Figure 14-7) located at the bottom of service shaft at –160 m ASL is equipped with three sets of MD120-50×7 pump with each has a flow rate of 120 m<sup>3</sup>/h and a water head of 350 m. There are two water sumps next to the pump station with a total volume of 700 m<sup>3</sup>. Groundwater from each level flows to the water sumps by gravity and is pumped to the elevated tank on surface, by single stage pumping along two seamless steel pipes that have a size of Φ159×6 and are installed in the service shaft.

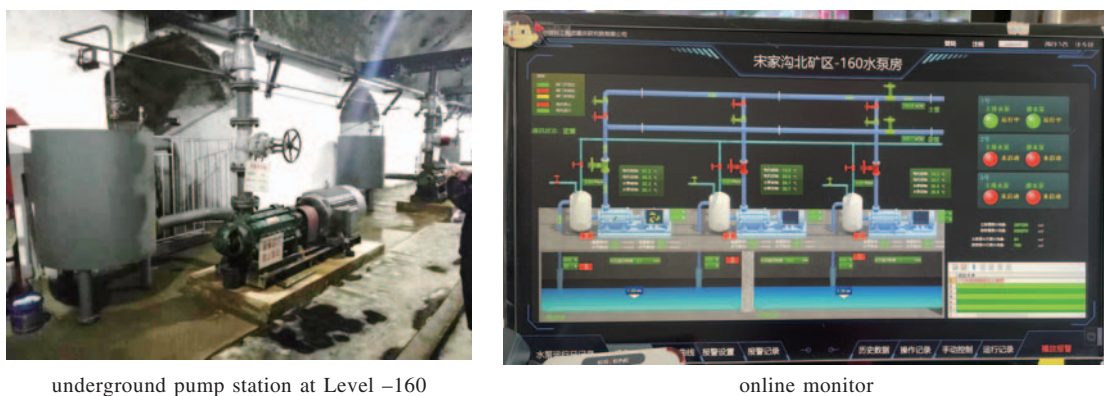


Figure 14-7: Pumping Station

**Compressed air**

The compressed air station is located near to the service shaft shown in Figure 14-8.

Screw compressors of FHOGD-132F are installed to produce compressive air. The compressed air will be distributed to each level along the seamless steel pipes in service shaft, which consists of a main pipe of  $\Phi 108 \times 6$  and a branch pipe of  $\Phi 76 \times 6$ .



building for compressed air and power distribution



single screw air compressor



power distribution

**Figure 14-8: Compressed Air Station and Power Distribution Room**

**Power supply**

A 10 kilovolts (“kV”) power distributor is located next to the compressive air station to provide electricity power for loadings at and below surface, which is shown in Figure 14-8. The surface electrical demands includes mainly the hoist, air compressors, domestics, office and lighting. The sub-surface loadings include primarily the water pumps, mine equipment and lighting.

A diesel generator with a voltage of 10 kV and a power of 1,000 kW is on site for standby power generation.

**Water supply**

The water requirement for mining operation include  $100 \text{ m}^3/\text{d}$  for underground mining operation,  $300 \text{ m}^3/\text{d}$  for the paste plant and  $144 \text{ m}^3$  and  $200 \text{ m}^3$  for above and below ground firefighting. An elevated tank (Figure 14-9) is located near to the auxiliary shaft with a volume of  $300 \text{ m}^3$ . Water storage impoundments will meet the requirement of mining operation and firefighting. Water is distributed by seamless steel pipe,  $\Phi 108$  in diameter.

Domestic water requirement is 6 m<sup>3</sup>/d for workshops onsite supplied via a 10 m<sup>3</sup> water tank next to the elevated tank.



**Figure 14-9: Elevated Water Tank**

**Explosive supply and management**

Underground explosive bins have been built at +49 m ASL to store 3 t explosives and 7,500 pieces of detonators, shown in Figure 14-10. The magazine of SJG Underground Mine is in normal use.



Detonator bin



Explosive bin



Magazines bin

**Figure 14-10: Underground explosive magazine**

**Maintenance facilities**

The maintenance facility (Figure 14-11) is located near to the portal of access ramp. The area is about 165 m<sup>2</sup>.



**Figure 14-11: Maintenance Facility**

**Communications**

Digital multimedia broadcasting consists of: video monitoring in the control centre; telephone and cameras at important/key locations i.e., workfaces, mechatronics chambers, water pump stations, etc.; horn loudspeakers; two-way radios, alarms and positioning sensor hold by workers; and hoist safety control system served for service shaft.

Two special communication cables distribute to sub-surface levels along the service shaft and upcasts to deliver signal.

**14.4 SRK comments**

**14.4.1 *SJG Open-Pit Mine***

The open pit slope monitoring and management will continue for the life of the operation. SRK suggests that slope stability monitoring should be enhanced, and a rock mechanics study should be carried out as soon as possible to verify the slope design parameters, to minimise the potential for disruptions to production resulting from open pit wall deformation and slope instability.

**14.4.2 *SJG Underground Mine***

SRK suggests Yantai Zhongjia should strengthen its daily safety training for workers and management of Mineral Resources to ensure the mining operation could be performed as planned.

Regular patrols are recommended to validate ground support effect and find potential surface subsidence risk as soon as possible.

## 15 MINERAL PROCESSING TEST AND RECOVERY

### 15.1 Introduction

Yantai Zhongjia organised and funded the construction of a processing plant in the SJG Project, Figure 15-1 and Figure 15-2. The processing plant is located about 4 km southeast to the mines. It was put into operation in May 2011 with a throughput of 6,000 tpd.



Figure 15-1: The Location of Mining and Processing Facilities



Figure 15-2: Aerial Photo of the Processing Plant

The processing plant has a history of gold concentrate production, using simple floatation process or amalgamation — floatation process to produce gold concentrate. Local smelters were commissioned, and the gold concentrate was processed into gold bullions.

SRK did not sight any mineralogical studies or processing study data or test work. However, the historical processing of ore from the current operation and historical production data demonstrates that the future ore can be efficiently processed and supports the basis for the Mineral Resource, Mineral Reserve estimation and economic evaluation of this deposit.

## **15.2 Technological mineralogy**

### **15.2.1 Mineral composition and occurrence status**

The mineral composition of the deposit is relatively simple. The metal minerals are mainly pyrite, with a small amount of chalcopyrite, sphalerite, galena, magnetite, and limonite. The gold minerals are generally native gold and electrum. The non-metallic minerals are mainly feldspar and quartz, with a small amount of potassium feldspar, muscovite, clay minerals and carbonate minerals. The main mineral characteristics are as follows:

#### **Gold mineral**

Microscopic observations of 30 grains of gold minerals show that the gold minerals are mainly in breccia form (with 13 grains, accounting for 44% of the total gold grains), followed by twig-like form (17%), round-grains (13%), fine-vein form (7%), long-horned granules (7%), flaky form (3%), wheat grain-shaped form (3%), and lenticular form (3%). The gold grains are mainly medium and fine particles, and the size is generally (0.020 to 0.100) mm × (0.020 to 0.100) mm, with the smallest one of 0.006 mm × 0.010 mm and the largest one of 0.100 mm × 0.350 mm. The gold minerals mainly occur in the pyrite crystal gaps and the crystal gaps between pyrite and gangue minerals (with 12 grains, accounting for 40% of the total particles), followed by wrapped by pyrite and gangue minerals (27%), occurring in the pyrite fractures (23%) and between the pyrite and gangue minerals (10%).

#### **Pyrite**

The Pyrite is mainly pentagonal dodecahedron, followed by cubic, round-granule, amorphous and irregular form. The particle size ranges from 0.05 mm to 10 mm, which is generally 2 mm to 5 mm, and it is partially fragmented. The pyrite distributes in the cement in the form of granules, aggregates, clumps, veins and disseminated. It mainly distributes around the gravel, and a very small amount of pyrite veins cut through the gravel. The early-stage pyrite is fine-grained (<0.1 mm), which is not closely related to gold mineralisation, while the late pyrite particles are larger (0.1 mm to 8 mm) with better crystalline form and mainly are pentagonal dodecahedron, which is closely related to gold mineralisation.

#### **Magnetite**

The magnetite is the particulate aggregate. It is distributed along the gaps of the gangue minerals, sometimes co-existing with pyrite in the forms of emulsion intergrowth or latticed joined crystals.



### **Chalcopyrite**

The Chalcopyrite is granular shape with a small content and shows metallic lustre. Its particle size is small, about 0.05 mm and mostly distributed in pyrite fractures, with a small amount contained in pyrite and gangue minerals.

### **Sphalerite**

Sphalerite is present in xenomorphic — hypidiomorphic granular form, with a particle size of 0.02 mm to 0.08 mm. It is distributed in the pyrite crystal gaps or wrapped by pyrite and is partially symbiotic with chalcopyrite in irregular forms.

### **Galena**

It is an idiomorphic — hypidiomorphic granular, with quite few contents, and distributes along the pyrite fracture.

### **Quartz**

It is an irregular granular in the form of branched aggregate. One kind is the quartz in the protolith that has nothing to do with gold mineralisation, and the other kind is the quartz formed by late silicification, which is symbiotic with metal sulphide and is related to gold mineralisation.

### **Feldspar**

The Feldspar is granulated, with a particle size of 0.1 mm to 0.3 mm, and the larger one is about 0.5 mm. It is partially etched into sericite.

### **Calcite**

The Calcite is in fine-vein form. It is metasomatic feldspar or fissure filling metasomatism type.

### **Sericite**

The Sericite is in fine-scaly form, which is mainly the product of hydrothermal metasomatic feldspar.

#### ***15.2.2 Mineral chemical composition***

In the exploration history of the SJG Project, the constituted elements of these minerals have been analysed many times, and the results are quite different, indicating that the distribution of these elements in the deposit is uneven. However, in general, gold and silver in the ore are valuable elements for processing recovery, while the other elements are of low contents and have no recoverable value. The statistical results of analysis of several geological samples are shown in Table 15-1.

**Table 15-1: Statistics of Geological Sample Analysis Results**

Description	Assay Result						
	Au (g/t)	Ag (g/t)	As (%)	Cu (%)	Pb (%)	Zn (%)	S (%)
Minimum	0.50	0.50	0.000910	0.001	0.002	0.001	0.14
Maximum	221.99	16.00	0.013410	0.150	0.009	0.011	5.48
Average	2.67	1.70	0.005020	0.005	0.005	0.002	1.76

### 15.3 Mineral processing test

The sulphide material is the main carrier mineral of the gold and silver, and exhibits good floatability. The Jiaodong Peninsula is China’s largest gold producing area. Most gold mines in this area use the floatation method to produce gold concentrates, which are sold to smelters to produce gold bullion by cyanide leaching. Before the ban on amalgamation method in the late 1990s, most processing plants used mercury plates to pre-recover coarse gold in the grinding circuit.

The initial ore processing test work of the SJG Project was not available. However, before Yantai Zhongjia took over the mine, several processing plants were processing the ore of the SJG Project with single floatation flowsheet or amalgamation-floatation flowsheet, both of which obtained good recovery.

#### 15.3.1 Historical test work

In 2002, during the detailed survey period of the SJG Project, Yantai Mujin, the previous tenant of the SJG Project, conducted test work on 1,091 t of ore at the nearby Wanggezhuang Processing Plant. The ore feed rate was 5 tonne per hour (“t/h”) for a total of 218 hours. The test procedure was:

- Two-stage crushing in open circuit. The size of the crushing product is less than 25 mm;
- One-stage grinding in closed circuit. The fineness of the grinding product shall achieve 65% less than 200 meshes; and
- One roughing + twice scavenging + one cleaning floatation.

The test results in Table 15-2 show that the gold ore in the SJG Project is brittle and easy to process, and it has good processing performance. However, the grade of the tested ore was high as 4.22 g/t, making the sample not representative.

**Table 15-2: Test Work Results**

Description	Percentage (%)	Au Grade (g/t)	Au Recovery (%)
Feed	100.00	4.22	100.00
Concentrate	3.39	118.99	95.60
Tailing	96.61	0.19	4.40

### 15.3.2 *Laboratory test*

In January 2010, to verify the processing parameters of the Songjiagou ore and provide the technical basis for the construction of a new large-scale processing plant, the Metallurgical Laboratory of Yantai Jinyuan Mining Machinery Co. Ltd. (the “**Jinyuan Metallurgical Lab.**”) undertook a metallurgical test work program.

#### **Test sample**

The test sample was collected from the ball mill feed conveyor of a 1,000 tpd running plant on 16 January 2010. The sample weighed 150 kg, grading 0.68 g/t Au, a particle size of  $-12$  mm and a specific gravity of 2.62. Its bulk density was  $1.73$  t/m<sup>3</sup>.

The sample is considered by SRK to be representative of future ore, since the ore is simple. There was no necessity to do more tests.

#### **Response of grinding fineness of floatation**

The result of grind size test work by open circuit floatation are presented in Figure 15-3. Sodium butyl xanthate (the “**SBX**”) was used for collecting gold and gold bearing minerals, and #2 oil (mainly terpene oil) was used as the frother. The results show that the gold recovery increases as the grind size decreases. Due to the low grade of the feed, there will be a balance between the increasing recovery and the increased grinding cost. SRK considers this to be between 50% and 65% at  $-75$   $\mu$ m. The laboratory recommended 50% passing 75  $\mu$ m ( $P_{50} = 75$   $\mu$ m) as the optimum grind size.

#### **Response of gravity and amalgamation**

Two processes of gravity concentration followed by floatation and mercury amalgamation were carried out at  $P_{65}=75$   $\mu$ m. The equipment used for gravity separation and amalgamation is not described in the metallurgical test report. SRK presumes it to be shaking table and amalgamating table. The results are shown in Table 15-3. The gravity recovery is 46% at a concentrate grade of 63 g/t Au, and 41% of gold is recovered into amalgam, implying the presence of nugget gold and gravity recoverable gold (the “**GRG**”).

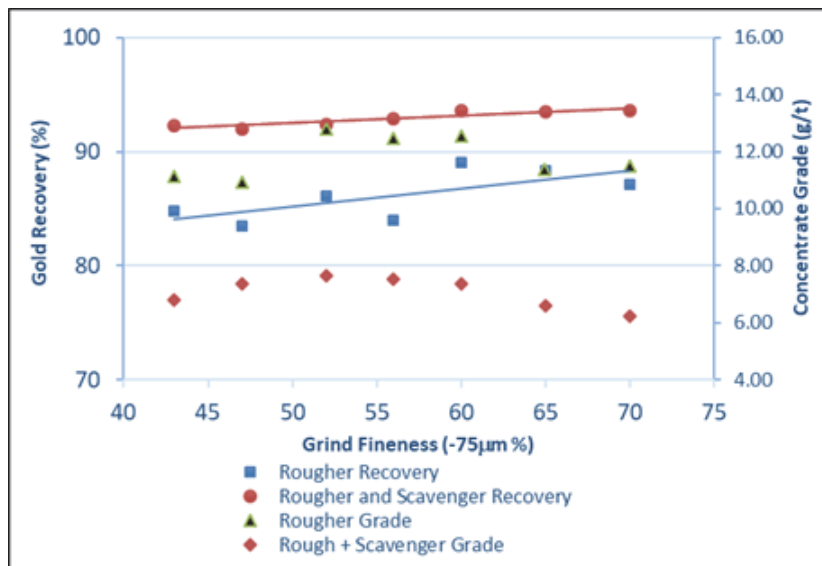


Figure 15-3: Response of Grinding Fineness to Gold Recovery of Flotation Process

Table 15-3: Test Results of Gravity and Amalgamation

Description	Gravity-Flotation			Amalgamation-Flotation		
	Percentage (%)	Grade (g/t Au)	Recovery (%)	Percentage (%)	Grade (g/t Au)	Recovery (%)
Gravity/amalgamation	0.47	62.92	46.57	/	/	41.47
Rougher flotation concentrate	6.37	3.81	40.37	6.25	4.11	37.78
Scavenger flotation concentrate	4.69	0.83	6.12	4.36	2.21	14.18
Tailing	88.11	0.05	6.94	89.39	0.05	6.57
Calculated feed	100.0	0.64	100.0	100.0	0.71	100.0

**Closed circuit flotation**

A closed circuit flotation test was conducted at 52% passing 75 µm using SBX and #2 oil as the collector and frother, respectively. The test results are presented in Table 15-4. The gold recovery reaches 92.87% while the concentrate grade is 22.53 g/t Au. The test work flowsheet, Figure 15-4, consists of one rougher, two scavengers and one cleaner.

Another flotation test was undertaken using copper sulphate (the “CuSO<sub>4</sub>”) as activator to improve gold recovery, but the results did not improve.

Test results show that the ore of SJG Project is easy to process and a simple flotation flowsheet can achieve high gold recovery. The flotation performance is good, but the nugget effect on flotation is not detected well. Gravity recovery may be applicable for pre-recovering of nugget gold. SRK recommends that a centrifugal separator such as Knelson Concentrator is considered.

Table 15-4: Flotation Test Results

Description	Percentage (%)	Grade (g/t Au)	Gold Recovery (%)
Concentrate	2.81	22.53	92.87
Tailings	97.19	0.05	7.13
Calculated feed	100.0	0.68	100.0

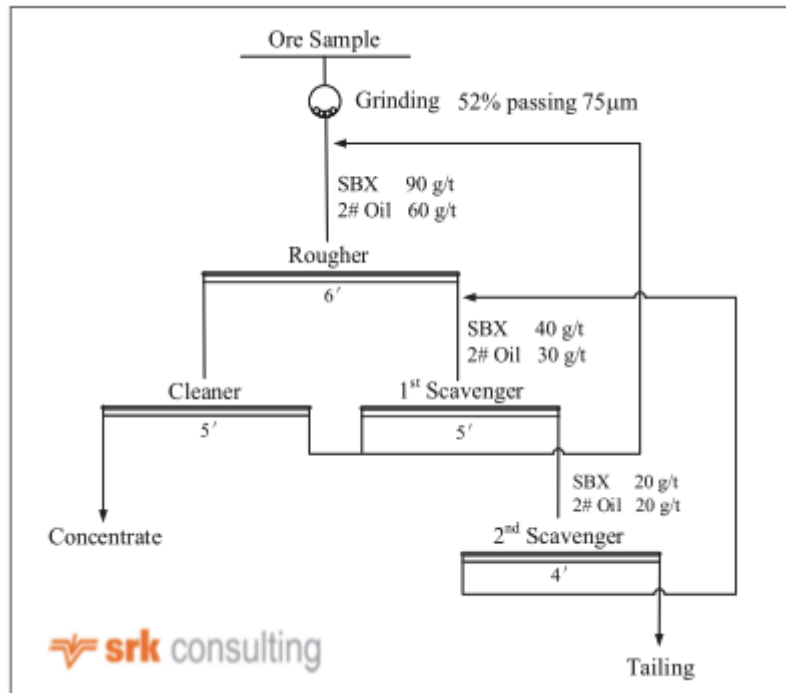


Figure 15-4: Closed Circuit Applied to Flotation Test

#### 15.4 Processing flowsheet

The processing plant consists of one crushing series and two identical grinding-flotation series. A simplified processing flowsheet of the processing plant is shown in Figure 15-5.

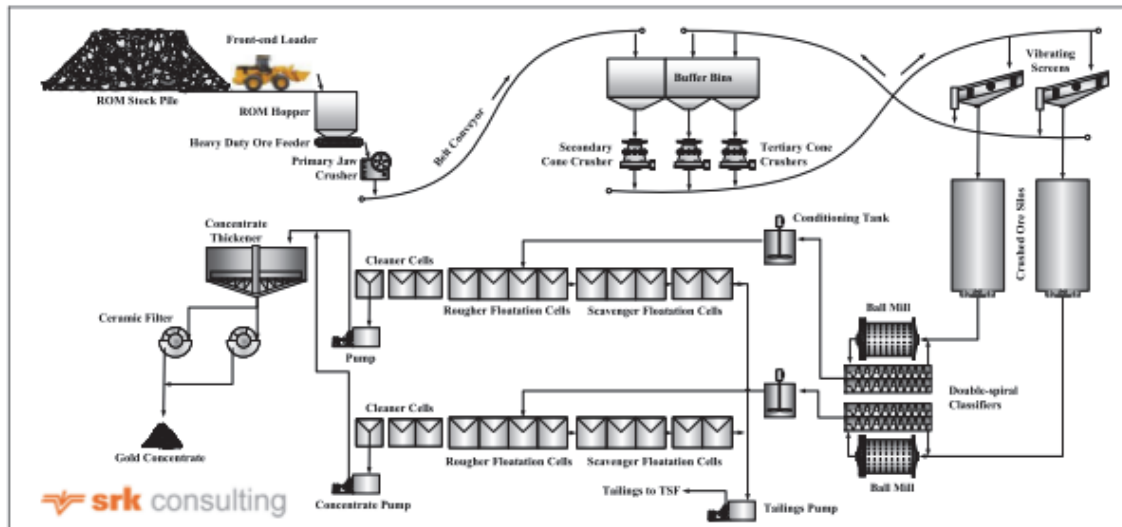


Figure 15-5: Simplified Processing Flowsheet

#### 15.4.1 Crushing

The crushing circuit includes a RoM stockpile, a coarse crushing circuit, a medium and fine crushing circuit, and a screening circuit. The crushing process is a traditional “three-stage crushing with one closed circuit”, and the ore which is not more than 1,000 mm is crushed to achieve 80% less than 12 mm ( $P_{80} = 12$  mm).

The ore is transported to the RoM stockpile at the processing plant by truck and fed into the 450 m<sup>3</sup> RoM hopper by the front-end loader. A heavy-duty ore feeder installed at the bottom of the RoM hopper feeds ore to a jaw crusher for primary crushing. The crushed product is sent to the buffer bin by the #1 belt conveyor, from where it will be fed into a cone crusher by the moving belt feeder at the lower part of the buffer bin for secondary crushing. Ore discharged from the secondary crusher is transported by the #2 belt conveyor to the two vibrating screens at the screening workshop for screening. The oversize materials are transported to the buffer bins by the #3 belt conveyor for tertiary crushing. There are two tertiary cone crushers, which are fed respectively by two moving belt feeders, and the ore produced is also transported to the screening workshop through the #2 belt conveyor. The fineness of the undersize material is  $P_{80} = 12$  mm, and it is sent to two 1,800 m<sup>3</sup> crushed ore silos by the #4 belt conveyor.

#### **15.4.2 Grinding**

The grinding circuit consists of two crushed ore silos, two grate ball mills and two double-spiral classifiers, which form two identical “one-stage closed-circuit” grinding series, grinding the crushed ore to 50% less than 200 meshes ( $P_{50} = 75 \mu\text{m}$ ).

The crushed ore in the silo is fed onto the #5 belt conveyor by two electromagnetic vibrating feeders installed in the lower part of the silo and sent to the ball mill. The floatation potential of hydrogen (the “**pH**”) adjuster lime is evenly added to the material stream on the #5 belt conveyor. The ball mill and the double-spiral classifier form a closed circuit, and the ore discharged from the ball mill is fed into the spiral classifier for classification. The return sand from the classifier is sent back to the mill for re-grinding. The overflow fineness is  $P_{50} = 75 \mu\text{m}$ , which flows into the floatation circuit by itself.

#### **15.4.3 Floatation**

The floatation circuit includes a pulp conditioning tank and a “one rougher + two scavenger + two cleaner” floatation process. The overflow from the spiral classifier flows into a conditioning tank. After mixing with the floatation reagents, it then enters the floatation circuit consisting of a row of floatation cells to produce gold concentrate and tailings. The tailings are pumped into the tailings storage facility (the “**TSF**”) through the pipeline, and the concentrate is pumped into the dewatering circuit.

#### **15.4.4 Concentrate dewatering**

The floatation concentrate is pumped into a thickener, with its overflow used as return water and the underflow fed into the ceramic filter. The filter cake has a moisture content of less than 8% and is stored in the warehouse.

### **15.5 Processing equipment**

The main mineral processing equipment is shown in Table 15-5. The ore storage facilities, pumps and other auxiliary equipment are not listed. As the ore is easy to separate and the processing flowsheet is simple, the total number of ore processing equipment is small with reasonable configuration and stable operation. Photos of some equipment are shown in Figure 15-6.

**Table 15-5: Main Processing Equipment**

No.	Equipment	Mode/Specification	Motor Power (kW)	Quantity
1	Heavy-duty ore feeder	GBZ2480	45	1
2	Jaw crusher	C140	200	1
3	Electric magnetic iron remover	RCDB1000		3
4	Cone crusher	HP500	400	1
5	Cone crusher	HP500XS	400	2
6	Vibrating screen	DYK3675-AT	37*2	2
7	#1 belt conveyer	TD75100100 L=97 m	75	1
8	#2 belt conveyer	TD75120100 L=100 m	160	1
9	#3 belt conveyer	TD75100100 L=95 m	75	1
10	Ball mill	MQG3645	1250	2
11	Spiral classifier	2FG-3000	30	2
12	Agitating tank	BJ4.5×4.5 m	22	2
13	Flotation machine	JYF/BSK-24 m <sup>3</sup>	55	3
14	Flotation machine	JYF/BS-24 m <sup>3</sup>	37	13
15	Flotation machine	JYF/BSK-16 m <sup>3</sup>	30	4
16	Roots blower	L84WD Q=176 m <sup>3</sup> /min, P=49 kPa	215	3
17	Submerged pump	65Q-LPR	11	3
18	Reagent agitating tank	BJW2×2 m	3	2
19	Computer dosing machine	16PT		1
20	Thickener	NZS-18 m	5.5	1
21	Ceramic filter	TCG-21 m <sup>2</sup>	5.5	2



**Figure 15-6: Photos of Processing Equipment**



15.6 Production performance

The metallurgical performance for the processing plant is summarised in Table 15-6. It should be noted that the production in year 2021 was significantly interrupted by the Provincial Government due to a safety production inspection. The production data shows that the ore responded well to the conventional floatation process, and the gold recovery increases with the ore grade.

Table 15-6: Historical Processing Performances

Item	Unit	2020	2021 <sup>[1]</sup>	2022	H1 2023
RoM tonnage	kt	1,590	1,024	1,991	997
RoM gold grade	g/t	0.70	0.62	0.62	0.54
Gold content in RoM	kg	1,109	640	1,229	541
Concentrate production	kt	46.83	28.66	68.04	26.79
RoM/concentrate	t/t	33.96	35.72	29.26	37.20
Concentrate grade	g/t	22.69	21.28	17.21	19.10
Gold content in concentrate	kg	1,062	610	1,171	512
Gold recovery rate	%	95.82	95.33	95.31	94.62

Note:

1. Processing was conducted in months January, February, April, May, and August to December.

The gold recovery and concentrate grade data of the monthly production data from July 2018 to June 2022 is plotted in Figure 15-7. The gold recovery increases with the feed grade in a definite functional relationship. The concentrate grade is low, likely having nothing to do with the feed grade.

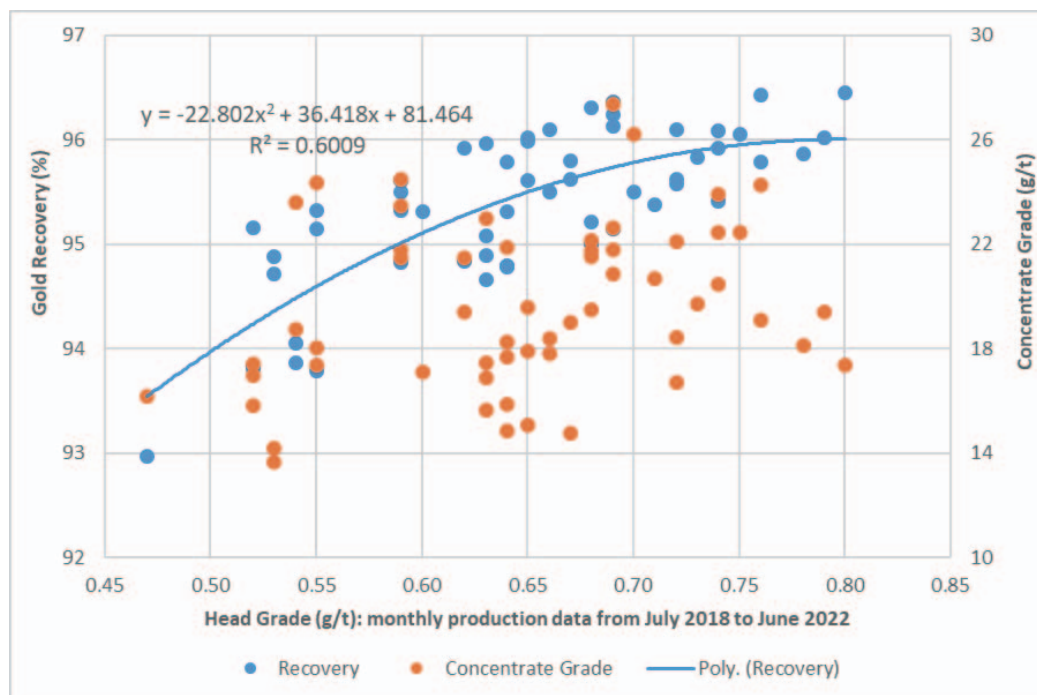


Figure 15-7: Gold Recovery vs. Feed Grade and Concentrate Grade vs. Feed Grade

SRK noted that due to the good sales market for this low-grade concentrate, the processing plant used a relatively coarse grind to obtain high processing recovery and maintain low production costs, which resulted in the low concentrate grade.

After long-term production and operation, Yantai Zhongjia believes that the best concentrate grade is between 15 g/t and 25 g/t and does not consider increasing the grinding fineness (increasing the grinding cost) to improve the concentrate grade. Increasing the grinding fineness to improve the concentrate grade does not substantially increase the business economic benefit.

## **15.7 Services**

### **15.7.1 Material and reagent supply**

The daily energy, materials and reagent consumptions of mineral processing are as follows:

- Lining plate of crusher and ball mill: 0.2 kg/t;
- Lime: 1 kg/t;
- Xanthate: 100 g/t;
- #2 oil: 30 g/t;
- Water: 3 cubic meters per tonne (“**m<sup>3</sup>/t**”), among which new water is 0.6 m<sup>3</sup>/t; and
- Electricity: 24 kilowatts hour per tonne (“**kWh/t**”).

Compared to most gold floatation plants, the above consumptions are very low. Because of inhibitors of limestone sulphide minerals, tests and experiences have shown that it can achieve the same recovery rate without the addition of lime.

The SJG Project is located in an active gold mining area, where the equipment, spare parts, consumables and reagents are easy to purchase due to abundant supply.

### **15.7.2 Laboratory**

The laboratory is adjacent to the processing plant. It has a complete set of equipment and instruments for sample preparation, fire assay and volumetric analysis, which can fully meet the daily production testing requirements of the processing plant.

### **15.7.3 Maintenance**

All the processing workshops are equipped with maintenance vehicles or electric hoists. The equipment maintenance is mainly conducted on-site. Although the maintenance workshop is built, it is mainly used as warehouse, storing a small quantity of spare parts and consumable materials. Yantai

Zhongjia told SRK that due to the simple process of mineral processing and high equipment level, the maintenance workload is light. SRK observed that the workshop was clean, and the equipment was in good condition.

#### **15.7.4 Processing water**

The processing plant has two 1,230 m<sup>3</sup> concrete head tanks (15 m in diameter and 7 m in height): one is for storing new water from the Rushan River, which is mainly used for production supplementation, ground washing, dust suppression and fire protection. The second tank is for the storage of processing return water, with return water utilisation rates ranging from 80% to 85%.

A water pumping station is built on the bank of the Songjiagou River near Jincheng Village, which is 2 km southeast from the processing plant, and the river water is pumped to the new water head tank through pipelines. The clarified water from the TSF is diverted through the culvert to the valley between the TSF and the processing plant. A dam is built at the valley mouth next to the processing plant to form a reservoir, which stores a large number of tailings clarified water which is pumped to the return water head tank of processing plant. The unfiltered water from the TSF is directly pumped back to the return water head tank through the return water tank at dam toe. The concentrate unfiltered water and ground washing water of the processing plant are pumped back to the return water head tank after sedimentation and clarification in the processing plant settling tank. SRK believes that the processing plant water is well managed, and there is no shortage of water in the past and future.

#### **15.8 Tailings storage facility**

The TSF is located in a valley 2 km southeast of the processing plant. It was designed by Shandong Gold Group Yantai Design and Research Engineering Co., Ltd. (the “**Yantai Design Institute**”) in July 2010. The TSF was designed as a valley type, and the foundation dam was 24.6 m high (elevation between +75.4 m and +100.0 m), which was a permeable dam. The tailings stockpiling dam above the foundation dam was constructed by upstream damming method. The final stockpiling dam height was 24 m (elevation between +100.0 m and +124.0 m), the total dam height was 48.6 m, the dam crest width was 6.0 m, and the dam crest length was 175.83 m. The slope of the dam toe surface was provided with rubble prism and cut off key-wall. The total storage capacity was 9.48 million m<sup>3</sup>, with an effective storage capacity of 7.11 million m<sup>3</sup>. The TSF was completed and put into use in October 2011.

In December 2014, the Yantai Design Institute carried out a capacity expansion design for the TSF. At that time, the elevation of tailings had reached +122 m. The original design TSF consisted of initial dam, final stockpiling dam, flood discharge system of TSF area, return water system, observation system and management system. The expansion design was conducted to rebuild or expand these facilities.

The expanded TSF elevation is 36 m higher than the original design dam crest elevation of +124 m, which is +160.0 m in total, and the total storage capacity is increased to 42.228 million m<sup>3</sup>, with a newly added effective storage capacity of 22.93 million m<sup>3</sup>. The total remaining capacity is 30.04 million m<sup>3</sup>. At a tailings bulk specific gravity of 1.35 t/m<sup>3</sup>, the tailings storage capacity increases 31,000 kt. Figure 15-8 shows the current status of the TSF.



Figure 15-8: TSF Photo

#### 15.8.1 Tailings dam

The tailings dam above the foundation dam adopts upstream damming method, and a safety platform 2 m wide is reserved for each 2 m lift, and horizontal and vertical drainage channels were constructed.

In the expansion design, the new sub-dam is constructed after the 20 m wide safety platform is installed at elevation of +124 m. The expansion dam consists of 12 benches (sub-dams/lifts), for each lifting 3 m in height. The wall for each dam lift is piled with roller-compacted coarse tailings. The slope of the sub-dam surface is 1:3, and the width of the dam wall is 3 m. To improve the stability of the tailings dam, a 15 m wide safety platform is reserved at dam crest elevation of +136 m and +148 m, and the total slope of the dam wall is 1:4.83.

Due to the surface of storage facility rising after expansion, an auxiliary dam is built up in the east of the TSF. The auxiliary dam has masonry gravity dam as the foundation dam. The elevation of the dam toe is +132 m, the dam height is from 13 m to +145 m, and the width of dam crest is 3 m. The dam toe is equipped with seepage draining system. The final dam is built with earth-rock materials, the height of the dam is 15 m, and the final elevation is +160 m.

A retaining dam is built at the upstream of the tailings dam to intercept the upstream valley water. It is an impervious roller-compacted earth-rock dam. The dam was constructed with earth and stones at the TSF site during the period of TSF construction. The elevation of the dam crest is +143.4 m, the dam height is 23 m, and the width of dam crest is 6 m. The dam crest is used as the road for the nearby Huangyang Village. The expansion design is to heighten and widen the retaining dam. A 2 m wide horse track is set at the slope surface elevation of +130 m and +150 m respectively, and a 6 m wide horse track is set at elevation of +143 m to be used as the road to Huangyang Village.

### **15.8.2 Seepage draining system**

A prism facility is arranged at the initial dam toe of the main dam, and the elevation of the prism crest is +85 m with a crest width of 2 m. To drain and consolidate the tailings in front of the dam as soon as possible, lower the saturation line of the final dam, improve the strength of the dam and enhance the stability of the final dam, a MY200 circular plastic blind ditch is set in the final dam body for each 4 m higher from the elevation of +100 m, and infiltration water is diverted from the dam through DN80PE pipes.

The final dam adopts seepage drainage mattress and horizontal drainage pipe, and a row of seepage drainage layer is installed in the dam wall every 9 m from the elevation of +124 m. The drainage pipe is arranged along the longitudinal layout of the TSF area (perpendicular to the dam axis) with a horizontal spacing of 20 m and a single piece length of 70 m. The inner portal of the TSF is connected to the infiltration blind ditch, the outer outlet of the dam is connected to the horizontal drainage channel, and the water flows into the return water tank at the back of dam. The TSF dam body has complete seepage drainage facilities, and the dam slope drainage pipe is operating effectively. In a new flood discharge system built, the original return water tank at the dam toe which was used as a collection tank for clarification and seepage water, is currently only used as a return water tank for unfiltered water, and the water will be pumped to the return water head tank of processing plant through pump station.

To drain and consolidate the tailings in front of the auxiliary dam as soon as possible, and lower the saturation line of the final dam, a horizontal drainage system is set at the dam crest elevation of +145 m and +151 m respectively, and the drainage facilities are arranged in line with the stockpiling dam structure of the main dam. The slope protection and drainage facilities of the final stockpiling dam are consistent with the stockpiling dam structure of the main dam. The drainage water from auxiliary dam slope and infiltration water from the TSF flows to the collecting tank at the outside slope of initial dam. The collecting tank is 6 m (length) × 5 m (width) × 3 m (height), with masonry structure, has two pumps in the pump station to drain water out of the collecting tank to the TSF without affecting the surrounding environment.

### **15.8.3 Flood control and discharge system**

The flood discharge system in the original TSF area adopted the drainage shaft — drainage culvert — return water tank to discharge the clarified water in the TSF to the dam toe return water tank. The section size of the drainage culvert is  $\phi = 2.0$  m and the length is about 1,538 m. Five framed drainage shafts, 3.5 m diameter are built of which the No. 4 shaft and No. 5 shaft are used for later heightening

The height of the drainage shafts are: H1 = 15 m (+85 m – +100 m), H2 = 18 m (+99 m – +117 m), H3 = 12 m (+113 m – +125 m), H4 = 15 m (+120.71 m – +135.71 m), H5 = 15 m (+134 m – +149 m).

To meet the flood discharge requirements after the expansion of the TSF, a new flood discharge system is designed, that is, a set of flood discharge system is arranged at northern TSF area. Drainage facilities include drainage shafts — drainage culverts — tunnels — stilling pools, which discharge the clarified water from the TSF to the valley between the processing plant and the TSF. When the new flood discharge system is commissioned, the original flood discharge system of the TSF will be sealed.

The expansion design utilises the existing No. 4 and No. 5 drainage shafts in the TSF, and adds a No. 6 frame drainage shaft, 12 m in height (+147 m to +159 m). The original flood discharge culvert portals at the bottom of No. 3 and No. 4 drainage shafts are sealed, and a new culvert is built to connect No. 3 and No. 6 drainage shafts. The culvert section size is  $\phi = 2.0$  m, with reinforced concrete structure.

A drainage tunnel is drilled in the western of the TSF area. The tunnel has a straight arched straight wall with a section size of  $B \times H = 2 \text{ m} \times 2.4 \text{ m}$ , and the straight wall is 1.8 m high with a top arch angle of  $124^\circ$ . The length of the tunnel is 739.2 m, and the exit elevation is +103 m. It is connected to the original culvert of the TSF area through the new culvert. The tunnel exit is located inside the valley to the east of the processing plant, and the outlet is connected to an open channel, which leads the overflow water flows into the return water pond next to the processing plant. A return water pump station is located next to the pond to pump the clarified back water to the return water tank in the processing plant.

The distance from the drainage shaft to each auxiliary jetty head can meet the requirements of tailings clarification distance. The TSF is a third-class storage facility, and the drainage system can meet the flood discharge capacity for once in 500 years. Currently, the new flood discharge system has been activated and the original drainage culvert has been sealed.

The slope of the tailings dam is provided with vertical and horizontal drainage ditches. A vertical drainage ditch is set at 15 m intervals. The tailings dam wall is arranged with a horizontal drainage ditch for each two-bench sub-dam (vertical height of 6 m). The drainage ditch is a masonry structure, and the bottom of the ditch is 300 mm higher than the bottom of the dam abutment interceptor ditch and they are connected to discharge the rainwater from the slope of the dam and the seepage water from the drainage pipe to the interceptor ditch of the dam abutment. With the extension of the stockpiling dam, the dam abutment interceptor ditch is set up along natural terrain of the joint slope between the two dam abutments and two sides of the slope, and the ditch is connected to the interceptor ditch of the original dam abutment from the dam crest down. It is used to discharge water seepage and intercept the rainwater from the slopes to prevent rainwater from directly scouring the dam slope.

#### **15.8.4 Tailings discharging system**

The tailings are pumped to the tailings main dam through the tailings pump station in the processing plant. The main tailings pipe is laid along the axis of the tailings dam. The slurry branch pipe is laid perpendicular to the main pipe with a horizontal interval of 20 m. The branch pipe is laid along the dam slope in the TSF. They alternately distribute and evenly discharge tailings along the axis of the dam to maintain the uniform rise of the dam body. After filling up, the main pipeline is elevated, and then the next-level sub-dam will be piled up.

### ***15.8.5 Tailings disposal***

The waste and tailing are handled and processed by the independent third party for raw construction and ceramics material and finally achieve the goal of zero discharge.

### ***15.8.6 Safety monitoring facilities and management***

In accordance with the design and safety management requirements, the TSF has established a sound safety management system with an online monitoring system, including a dam displacement monitoring system, and saturation line monitoring system and a safety warning facility.

The TSF is well constructed, managed and operated, and has acquired a safety production licence from the government safety supervision agency.

## **15.9 Conclusions and recommendations**

The ore of the SJG Project is low-sulphide gold ore. The historical ore processing production practice and the processing test results show that the gold mineral and gold carrier minerals have good floatability, and a simple floatation flowsheet can achieve a recovery rate over 90%.

The mineralogy test work, the gravity tests and the amalgamation tests have confirmed the presence of coarse gold particles. There is no systematic study on the loss of coarse gold in floatation tailings. SRK recommends conducting on-site gravity separation tests to assess the ability to recover gold from the floatation production tailings at the processing plant.

The processing plant is well constructed, with reasonable equipment configuration, reasonable process, stable operation and good management. Historically, the actual ore processing capacity is about 1,600 ktpa, it shows a relationship between gold recovery rate (“y”) and ore grade (“x”):  $y = -22.802x^2 + 36.418x + 81.464$ .

The total storage capacity of the TSF is 42.28 million m<sup>3</sup>, and the TSF is well constructed and managed. For a production capacity of 1,600 ktpa, the remaining service life of mine is about 10 years as of 30 June 2023.

A possible cost reduction is lime, the floatation reagent. SRK recommends not using lime to float but under natural pH conditions.

SRK recommends undertaking test work and using gravity separation equipment for recovery test on site to decide whether gravity separation would be appropriate.

## 16 PROJECT INFRASTRUCTURE

### 16.1 Roads

The open pit, underground mine, processing plant, and office building are easily accessed via existing paved roads. The concrete paved road shown in Figure 16-1 connects the mining area and the processing plant over a distance of about 4 km. The site layout is shown in Figure 16-2.



Figure 16-1: Concrete Paved Road Connecting Mining Area and Processing Plant



Figure 16-2: Simplified General Layout of SJG Project



## 16.2 Power supply

Electricity is primarily supplied by the 35 kV/10.5 kV Dahedong Substation (Figure 16-3) in Dahedong Village, Wanggezhuang Town, 5 km from the mine, and delivered over dedicated power lines. The voltage of the substation is flexible and can be switched to 10 kV, 6 kV, or 380 volts as required by the mines. The power supply is adequate to support the development of SJG Project. Secondary power supply is supplied by the local 10 kV electricity power line. There is an existing 120 kW diesel generator (Figure 16-4) on site to supply power in case of power shortage.



Figure 16-3: Dahedong Substation



room for diesel generator



diesel generator

Figure 16-4: Stand-by Power Supply

## 16.3 Water supply

Water for the processing plant is extracted from the Rushan River, which flows by about 2 km east of the SJG Project area. A pump station (Figure 16-5) has been built on the bank of Songjiagou River, Jincheng Village, about 2 km west of the processing plant and supplies water for the processing plant's production demand. The Songjiagou River is a tributary of Rushan River.

Water for domestic use is sourced from a local ground well.

The water supply is adequate to support the mines and the processing plant. Additional information is detailed in section “15.7.4 Processing water”.



pump station



pump in pump station

**Figure 16-5: Pump Station for Processing Production**

#### 16.4 Communication

The SJG Project area has a well-developed communication system with a wireless network, cable network, and fixed-line telephone network already in operation.

#### 16.5 Community and office

Yantai Zhongjia values the relationship between the mine and the community, is actively involved in the infrastructure construction (i.e., roads, bridges, water and power plants), and organises local citizens to participate in industrial and standardised production.

An office building shown in Figure 16-6, which was constructed in 2012, has already been put into use.

Overall, the work environment and operational facilities are in good condition.



**Figure 16-6: Off-site Office Building**

## **17 MARKET STUDIES AND CONTRACTS**

The gold market is globally mature. Smelters and refineries with good reputations exist all over the world and demand for gold remains high.

There is a large consumer market for gold and a large number of gold smelters in China, often sellers can negotiate good payment terms.

### **17.1 Sales record**

Gold sales recorded in the last three years and H1 2023 are shown in Table 17-1. It should be noted that the production in year 2021 is significantly interrupted by the Provincial Government due to safety production inspection.

**Table 17-1: Gold Sales Record**

<b>Product</b>	<b>Unit</b>	<b>2020</b>	<b>2021<sup>[1, 2]</sup></b>	<b>2022</b>	<b>H1 2023</b>
<b>Gold</b>	<b>kg</b>	<b>987.4</b>	<b>645.5</b>	<b>1,084.9</b>	<b>468.1</b>
<b>Gold</b>	<b>koz</b>	<b>31.7</b>	<b>20.8</b>	<b>34.9</b>	<b>15.1</b>

*Notes:*

1. Production in year 2021 was significantly interrupted by the Provincial Government due to safety production inspection.
2. Selling was conducted in months January, February, April to December.

### **17.2 Gold price**

The World Bank monthly gold price data since July 2018, which are 99.5% fine, London afternoon fixing, average of daily rates, were used by SRK to draw the trend line shown in Figure 17-1. The exchange rate of converting United States Dollar (the “USD”) to RMB since July 2018 is shown in Figure 17-2, based on the open data of Bank of China. Summary statistics of gold prices and exchange rates in the last 36 months are presented in Table 17-2. Based on publications of the United States Geological Survey (“USGS”), high level of gold price in the last two years are mainly caused by several factors:

- gold demand increased to safe-haven buying as a result of the global COVID-19 pandemic;

- demand from central banks and investors increased;
- the United States Federal Reserve Board cut interest rates; and
- trade negotiations halted between the United States and China.

Gold price forecasts of Consensus Market Forecasts (the “CMF”) delivered in June 2023 are shown in Table 17-3. Gold Future — Quotes of Chicago Mercantile Exchange (the “CME”) delivered in June 2023 are shown in Table 17-4 after considered the prudent assumptions by the Company. At the Effective Date, the price forecasts of CMF at middle level were used for economic analysis, while the long-term forecast of CMF at middle level was used for Mineral Reserve estimate. The gold price was converted to RMB/g by considering an exchange rate of 6.69 RMB/USD (yearly mean value in Table 17-2).

As a special commodity, the price of gold is greatly influenced by external factors. SRK suggests conducting periodically study on gold demand and supply as well as the price. As at the Effective Date, the Mineral Reserves tonnage is moderately sensitive to the gold price, as shown in “13.4.7 Mineral Reserve sensitivity” and “13.5.6 Mineral Reserve sensitivity”.

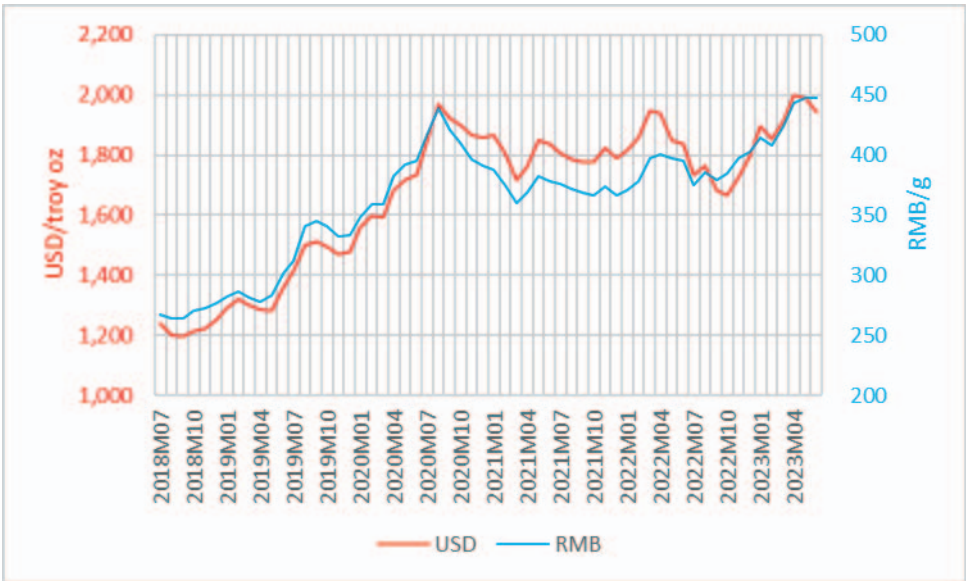


Figure 17-1: Gold Price Trends Since July 2018

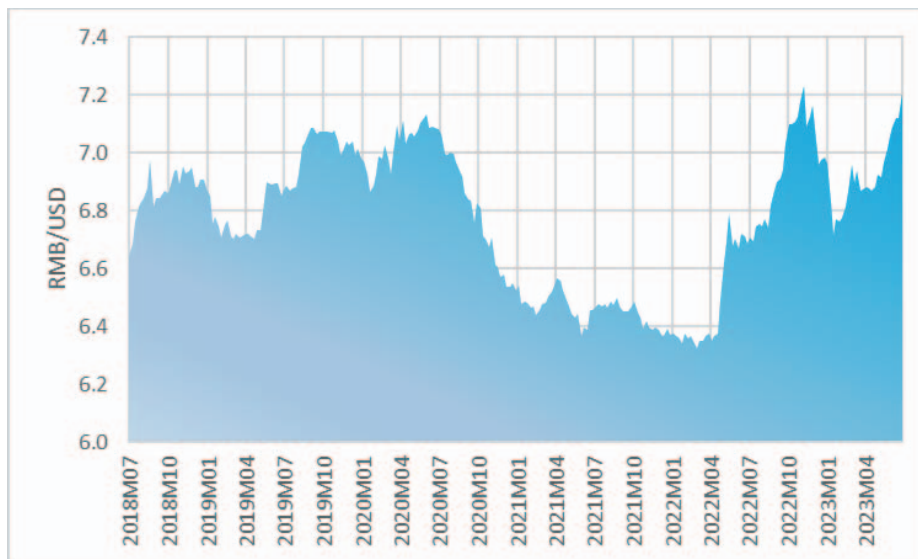


Figure 17-2: Exchange Rates of RMB/USD Since July 2018

Table 17-2: Summary Statistics of Exchange Rate and Gold Price

Item	Exchange Rate (RMB/USD)		Gold Price (USD/troy oz)		Gold Price (RMB/g)	
	Monthly	Yearly	Monthly	Yearly	Monthly	Yearly
Month numbers	36	36	36	36	36	36
Minimum	6.34	6.41	1,664.45	1,598.60	359.67	362.10
Maximum	7.19	7.05	1,999.77	1,850.03	447.69	409.15
Standard deviation	0.2605	0.2068	82.3803	56.0118	23.9339	10.6180
Mean	6.68	6.69	1,837.91	1,796.14	394.48	385.71
Degrees of freedom	35	35	35	35	35	35
Probability	95%	95%	95%	95%	95%	95%
Lower limit	6.59	6.62	1,810.03	1,777.19	386.38	382.12
Upper limit	6.76	6.76	1,865.78	1,815.09	402.57	389.31
Probability	99%	99%	99%	99%	99%	99%
Lower limit	6.56	6.59	1,800.51	1,770.71	383.61	380.89
Upper limit	6.79	6.78	1,875.30	1,821.57	405.34	390.53

Table 17-3: Gold Price Forecasts of CMF (USD/oz)

Price Level	2023	2024	2025	2026	2027	post-2027
High	2,170	2,221	2,417	2,161	2,172	1,960
Middle	1,900	1,880	1,710	1,620	1,580	1,450
Low	1,676	1,569	1,472	1,425	1,387	1,355

**Table 17-4: Gold Price Forecasts of CME**

Item	Unit	2023	2024
Price in USD	USD/oz	1,993	1,949
Exchange rate	USD/RMB	0.1475	0,1494
Price in RMB	RMB/oz	13,506	13,040
Price in RMB	RMB/g	420.09	405.59

### 17.3 Contracts

Three refining contracts have been reviewed by SRK. Refining charge and payable gold are shown in Table 17-5. Generally, these contracts include the following stipulations:

- Inclusions of stone, sand, bags, or other debris are not allowed in the gold concentrate; any volume of impurities will be deducted from the total tonnage processed.
- Concentrate sent to the smelter should have an even grade distribution; otherwise, the refiner has the right to charge according to the minimum grade.
- At least 70% of the gold concentrate should pass –200 meshes in size; otherwise, refiner has the right to treat it as lump ore and charge RMB60/t for grinding.
- Refiner picks up the gold concentrate at the mine and bears the cost for delivery.
- The gross refiner charges varied with time between RMB150 and 200 per tonne of concentrate for processing but compensations for sulfuric acid (“CSA”) was returned from refiners. In a contract (contract number GD-8.4-05-014-20211010-SW), the gross refining fee is RMB200 per ton and the CSA is RMB150 per ton and the CSA is further revised as follows:
  - in the case of sulfuric acid price greater than RMB400 per tonne and not greater than RMB1,000 per tonne and, the CSA = (sulfuric acid price – 400) × 35% + 100;
  - in the case of sulfuric acid price not-greater than RMB400 per tonne, the CSA = 100; and
  - in the case of sulfuric acid price greater than RMB1,000 per tonne, the CSA is renegotiated..

The gold produced by the refiners is returned to Yantai Zhongjia and then sold to the market by Yantai Zhongjia itself. A purchase contract of raw gold, which was signed between a precious metal refining company and Yantai Zhongjia on 1 January 2021, has been reviewed by SRK.

**Table 17-5: Key Information of Available Refining Contracts**

<b>Contract Number</b>	<b>HBYL20-Y0203</b>	<b>GD-8.4-05-016-20211010-SW</b>	<b>zj20211008jjf</b>	<b>GD-8.4-05-016-20221010-SN</b>
<b>Sign Date</b>	1 April 2020	10 October 2021	18 October 2021	10 October 2022
<b>Gross Refining Cost (RMB/t dry concentrate)</b>	150	200	200	200
<b>Concentrate Grade (g/t Au)</b>	<b>Payable Gold (%)</b>	<b>Payable Gold (%)</b>	<b>Payable Gold (%)</b>	<b>Payable Gold (%)</b>
6.00–9.99	/	80	/	80
10.00–14.99	85	85	85	85
15.00–17.99	91	91	91	91
18.00–19.99	92	92	92	92
20.00–29.99	93	93	93	93
30.00–39.99	94	94	94	94
40.00–49.99	95	95	95	95
50.00–59.99	96	96	96	96
>=60.00	97	97	97	97

**18 ENVIRONMENTAL, PERMIT, SOCIAL AND COMMUNITY IMPACT**

**18.1 Objective**

The objective of this QPR is to identify and/or verify the existing and potential Environmental, Social, Health and Safety (the “**ESHS**”) liabilities and risks, and assess any associated proposed remediation measures for the SJG Project.

**18.2 ESHS review process, scope and standards**

The process for the verification of the environmental compliance and conformance for the SJG Project comprised a review and inspection of the SJG Project’s environmental management performance against:

- Chinese national environmental regulatory requirements; and
- Equator Principles (World Bank/International Finance Corporation (the “**IFC**”) environmental and social standards and guidelines) and other internationally recognised environmental management practices.

**18.3 Status of ESHS approvals and permits**

The details of the Environmental Impact Assessment (the “**EIA**”) reports and approvals for the SJG Project are presented in Table 18-1. The details of the Water and Soil Conservation Plan (the “**WSCP**”) reports and approvals for the SJG Project are presented in Table 18-2.

**Table 18-1: Details of EIA Reports and Approvals**

<b>Gold Mine</b>	<b>Prepared by</b>	<b>Production Date</b>	<b>Approved by</b>	<b>Approval Date</b>
SJG Open-Pit Mine	Shandong Academy of Environmental Science	December 2014	Shandong Environmental Protection Bureau	26 January 2015
SJG Underground Mine	Shandong Academy of Environmental Science	April 2015	Shandong Environmental Protection Bureau	5 May 2015

**Table 18-2: Details of WSCP Reports and Approvals**

<b>Gold Mine</b>	<b>Prepared by</b>	<b>Production Date</b>	<b>Approved by</b>	<b>Approval Date</b>
SJG Open-Pit Mine	Zhaozhuang Hydrology Survey and Design Institute	February 2017	Shandong Water Resources Bureau	10 March 2017
SJG Underground Mine	Weihai Hydrology Bureau	October 2014	Shandong Water Resources Bureau	7 October 2014

**18.4 Environmental conformance and compliance**

SRK notes that the EIA reports and WSCP reports for the SJG Project has been compiled in accordance with relevant Chinese laws and regulations. SRK has reviewed these documents and conducted an environmental site visit against recognised international industry environmental management standards, guidelines, and practices. During the site visit, the SJG Project was generally being developed and/or operated in accordance with its approval conditions.



In the following sections, SRK provides comments in respect to the SJG Project’s existing and proposed environmental management measures.

### **18.5 Key ESHS Aspects**

#### ***Land disturbance***

The WSCP reports for the SJG Project estimated that it will lead to land disturbance area of 78.36 hectares (“ha”) for the SJG Open-Pit Mine and 4.78 ha for the SJG Underground Mine. The disturbed land estimates in the WSCP reports are generally consistent with SRK’s observation at the time of this site visit. No current surveyed documents of the estimated areas of land disturbance for the SJG Project have been sighted as part of this review. SRK observed that some of the slopes in the open pit area are very steep, and Yantai Zhongjia states that some mitigation measures including slope cutbacks will be conducted in the near future to prevent the potential slope failures.

SRK recommends that the operational areas of land disturbed and progressively rehabilitated for the SJG Project be surveyed and recorded on an annual basis, as well as slope stability monitoring.

#### ***Flora and fauna***

The development of mining may result in impacts to or loss of floral and fauna habitats by landslides, or stripping. Where these potential impacts to flora and fauna are determined to be significant, Yantai Zhongjia should propose effective measures to reduce and manage these potential impacts. SRK notes that the SJG Project area is originally characterised by gently undulating hills, and overall topography slopes downward from west to east. The highest elevation is about 140 m ASL and the lowest is 78 m ASL. The main vegetation comprises Japanese red pines, oaks, black locusts, apple trees, pear trees, lespedeza, etc. Animals including hedgehogs, lepus capensis, sparrows, magpies, snakes and frogs live within the mining area. According to the EIA reports for the SJG Project, the two mines are not located within natural reserves, and no endangered wild animals or plants have been found. Yantai Zhongjia’s EIA reports contain proposed measures for controlling and monitoring soil erosion and minimising loss of flora and fauna habitat. These proposed measures include topsoil salvaging and reuse, limitations on the area disturbed by SJG Project, and revegetation of the industrial area. Yantai Zhongjia has planted trees and set up slope protection and adopted other measures to control and monitor soil erosion and minimise loss of flora and fauna habitat.

#### ***Waste rock and tailings management***

SRK observed a temporary waste rock dump (the “WRD”) next to the mining area and no records of the rates and volumes of waste rock backfilled/stored for the SJG Project have been sighted as part of this review. Yantai Zhongjia informed SRK that all of the waste rock from mining was reused for construction material for roadway, retaining walls, and swales or for sale to other off-site construction.

The capacity of the operational TSF is expanded from 7.1 million m<sup>3</sup> to 42.2 million m<sup>3</sup> in 2016. Yantai Zhongjia reported that the tailings from the processing plant are discharged into the operating TSF. SRK noted that a water retaining pond was constructed and the dam at the operating TSF was

reinforced by rocks at the time of SRK’s site visit. Yantai Zhongjia states that the TSF has installed a supernatant liquid returning system to the processing plant to save water resources, stormwater discharge pipe system, and online phreatic monitoring system for the dam safety. During the time of 2019 site visit, SRK also noted that the experiment of tailings reuse was in the progress.

SRK has not sighted a comprehensive geochemical/acid rock drainage (the “**ARD**”) assessment for the waste rock and tailings. However, the EIA reports states that a toxic leaching test has been undertaken on the waste rock. The EIA report states that the waste rock is categorised as general industrial solid waste, and leaching liquid from this waste rock meets all relevant standards and the discharged leaching liquid will not impact the water environment.

***Solid waste management***

The solid-waste types for the SJG Project comprise scrap metal and municipal solid waste. At the time of the site visit, these solid wastes were generally being managed in a controlled manner. For each waste type, there were designated collection and storage points around the SJG Project. SRK observed that scrap iron was being collected and stockpiled in a number of designated areas prior to being disposed. During the site visit, municipal solid-waste collection points were installed in designated areas, and all the municipal solid waste is collected in designated areas and disposed of offsite. Overall, these project sites had good housekeeping.

***Water management***

The potential impacts of SJG Project to surface water and groundwater are due to the direct discharge of untreated domestic wastewater or untreated mine water/processing water into the environment, or infiltration of leach from the waste rock dumps and tailings into the ground. Mine water from the mines is collected and treated by sedimentation tank, and it is reused for mining and dust depression. The water supplies for the ore processing are sourced from the Rushan River, which is a seasonal river located about 2 km from the east border of the SJG Project area. Yantai Zhongjia states that supernatant liquid from the TSF is pumped back to the processing plant for reuse, by which water can be saved significantly. Potable water for all staff is supplied from the local municipal water plant.

During the rainy season when excessive mine water comes out of the mines, the mine water is treated by sediment pond before discharged into the environment. There is an existing domestic wastewater treatment plant on site, and all treated domestic wastewater is reused for site irrigation.

SRK observed the water/flood collection system constructed for the TSF and mine site. However, SRK has not sighted any operational water monitoring report and/or plans for the SJG Project at the time of the site visit.



Figure 18-1: On-site Water Sprinkling

### *Air emissions*

The fugitive dust emission sources for the SJG Project are mainly from blasting, mining, loading, ore crushing and screening, waste rock storage and handling, and movement of vehicles and mobile equipment.

The EIA reports provide the following proposed site dust management measures:

- Collect dust in the crushing and processing workshop; and
- Water sprinkling of the mining area, waste rock loading area and roads.

Yantai Zhongjia stated that there are water trucks on the mining site, as shown in Figure 18-1. SRK noticed that dust collectors were installed in the processing plant.

### *Noise emissions*

The main sources of noise emissions for the SJG Project are blasting, rock drills, loaders, processing equipment, mobile equipment, air compressors, and other noise-making equipment and machinery.

The EIA reports state that the noise emissions from normal production (not including blasting) are within the allowed limits. SRK observed that the processing equipment is installed in enclosed rooms and that warning signs for using sound insulating earmuff in the processing plant areas are clearly posted. Other measures to minimise the impact of noises on the environment include installing vibration and noise reduction devices, installing muffler on air compressors, setting up the speed limit for vehicles, conducting explosions in the daytime. No operational noise monitoring report or plans have been sighted as part of this review.

*Hazardous materials management*

SRK noted that some maintenance works was conducted in the yard of the processing plant and there are a number of lubricant drums stored in the workshop of the processing plant. SRK sighted that the waste oil was stored in a separate shed. Yantai Zhongjia stated that blasting is under the control of department of public safety. During the site visit, SRK observed the processing reagents are stored in the workshop of the processing plant without secondary containment.

*Environmental protection and management plan*

The EIA reports provided the structure and scope for an operational Environmental Protection and Management Plan (the “EPMP”), including the site’s proposed environmental monitoring program and is in line with Chinese requirements. However, a fully functioning and documented operational EPMP has not yet been developed and implemented for the SJG Project. The environmental monitoring program proposed in the EIA reports specified the monitoring points, analysis items, and monitoring frequency and methods. The proposed monitoring items includes domestic wastewater, waste gas, groundwater, noise, and solid waste.

*Site closure planning and rehabilitation*

The recognised international industry practice for managing site closure is to develop and implement an operational site closure planning process and document this through an operational closure plan. While this site closure planning process is not specified within the Chinese national requirements for mine closure, the implementation of this process for a Chinese mining project will:

- Facilitate achieving compliance with these Chinese national legislative requirements; and
- Demonstrate conformance to recognised international industry management practices.

No comprehensive site closure plan was provided to SRK for review, but SRK was provided with a Land Reclamation Plan/approval and a Mine Site Geological Environment Protection and Rehabilitation Plan/approval for SJG Open-Pit Mine and SJG Underground Mine respectively. These sighted plans generally provide the following in respect to the proposed site closure and rehabilitation measures:

- Land Reclamation Objective — The land reclamation programme is aimed at rehabilitating land disturbed by mining operations, to control soil loss and conserve the ecological environment.
- Geological-Environment Rehabilitation — Measures will be taken to mitigate geological hazards, especially landslides during a raining season, including slope cutbacks during open pit mining or backfilling steep slope area with tailings after the completion of the open pit and underground mining.
- Top-Soil Stripping — Topsoil will be stripped from the mining and processing sites, waste rock dump areas, and infrastructure areas and then stockpiled for reuse in rehabilitation.

- Progressive Rehabilitation — Rehabilitation will be conducted progressively with mining activity. In addition, any farmland disturbed shall be returned to agricultural use at minimum crop productivity whenever possible.
- Industrial and TSF Areas — At the time of project completion, the associated land will be rehabilitated by covering with topsoil and seeds to allow for revegetation. The species to be used will be local perennials that are capable of growing in the local conditions of the mine sites.
- Rehabilitation Monitoring — Monitoring will be carried out throughout the SJG Project lifetime and for a number of years after closure.
- Environmental Bonds — According to the related Chinese regulations, a Land Reclamation bond and a Geological Environment Rehabilitation bond should be paid for each licenced mine site. Phased bond payment receipts at the current stage, for the two mines were sighted by SRK, and a full payment at each mine site will be made in the future accordingly.

SRK notes that the above proposed approach to site rehabilitation is generally in line with the relevant recognised Chinese industry practices, and Figure 18-2 was provided to SRK as an evidence for progressive rehabilitation. According to the Chinese legal requirements, a mine geological environment treatment and restoration fund account should be established by the mine. Yantai Zhongjia provided SRK with a document which shows RMB3,289,320 and RMB500,000 are deposited in this account for SJG Open-Pit Mine and SJG Underground Mine, respectively.



**Figure 18-2: Revegetation on the Open Pit Wall of Mining Area**

*Occupational health and safety*

SRK has reviewed the Safety Assessment Reports as provided by the SJG Project and is of the opinion that the reports cover items that are generally in line with recognised Chinese industry practices and Chinese safety regulations.

Fundamental operational occupational health and safety (the “OHS”) management systems and procedures have been developed for the SJG Project. The OHS management systems and procedures cover basic safety production management for drilling, transportation, ventilation, explosive storage, and fire and flood prevention. In addition, the safety assessment report for the open pit activity provides safety management measures including open pit mining, flood and fire prevention, explosion, and transportation. SRK notes that these proposed safety management measures could be the basis for operational OHS management systems and procedures. Figure 18-3 shows the typical on-site OHS boards to improve the people’s awareness in regard to OHS.



**Figure 18-3: On-site OHS Boards**

SRK notes that in the last few years, some mining or processing related injuries occurred in the SJG Project site, the numbers of which were summarised in the Table 18-3. It is suggested that Yantai Zhongjia may need to put more efforts on the OHS management. However, overall the OHS management is in line with Chinese mining industrial practices.

**Table 18-3: Historical OHS Records**

Year	Near Miss	Minor	Serious	Fatality	Total
2020	—	2	—	—	2
2021	—	2	—	—	2
2022	—	—	—	2	2
H1 2023	—	—	—	—	—

*Social aspects*

The general surrounding land use mainly comprises forest and agriculture land.

The main administrative body for the SJG Project is the Provincial Government, with some delegation of environmental regulation to Yantai City and Muping District. SRK has not sighted any historical or current non-compliance notices and/or other documented regulatory directives in relation to the development of the SJG Project’s mines and processing operations. No cultural heritage sites were identified within the SJG Project area.

The EIA reports for the SJG Project provided several public participation surveys for project development. The survey results showed positive support for the SJG Project. Yantai Zhongjia maintains good relationships with the local communities. Job opportunities have been provided to the local residents including truck drivers, and workers in the mining area and processing plant. Those residents living within the SJG Project area or to be impacted by the mining activity have been relocated with proper compensation, as well as apartment units, as shown in Figure 18–4. However, noise and waste rock were raised by the local residents as the key environmental concerns for the SJG Project’s development.

SRK has not sighted any documentation in relation to any actual or potential impacts of non-governmental organisations on the sustainability of the SJG Project.



Figure 18-4: Apartment Layout for the Relocated Residents

## **18.6 Evaluation of environmental and social Risks**

The sources of inherent environmental risk are project activities that may result in potential environmental impacts. These project activities have been previously described within this QPR.

The environmental risks for the SJG Project are:

- Land disturbance and steep side slope;
- Poor water management; and
- Dust emission.

The above environmental risks are categorised as moderate/tolerable risks (i.e., requiring risk management measures). In addition, Yantai Zhongjia is of the view that the environment issues identified above will be under consideration and resolved in the foreseeable future.

Based on the review of the information provided and the site visit observations, it is SRK’s opinion that the environmental risks for SJG Project are generally being managed in accordance with Chinese national requirements.

## **19 CAPITAL INVESTMENT AND OPERATING COSTS**

### **19.1 Introduction**

The deliverable of this section is to provide readers with independent opinions of SRK about the SJG Project’s capital costs (“**Capex**”) and operating costs (“**Opex**”).

### **19.2 SJG Open-Pit Mine**

#### **19.2.1 Sunk Capex**

The SJG Open-Pit Mine is a producing mine. Many costs have been expended as at the Effective Date and these expended costs were treated as sunk Capex. The original value and net value of sunk Capex are shown in Table 19-1, as of 30 June 2023..

The depreciation and amortization (“**DA**”) calculation of sunk Capex is shown in Table 19-2. The residual values are about RMB8.4 million.



**Table 19-1: Summary of Sunk Capex for SJG Open-Pit Mine ('000 RMB)**

Item	Original Value	Net Value
Property, plant and equipment	405,785	254,300
Buildings	—	—
Plant and machinery	186,635	82,491
Office equipment and furniture	4,586	541
Motor vehicles	7,229	2,757
Mining infrastructures	203,241	164,866
Leasehold improvements	4,094	3,645
Intangible assets	133,765	105,137
Mining right	133,257	104,766
Other intangible assets	508	371
Right-of-use assets	219,533	114,361
Land lease	124,937	70,356
Buildings	94,596	44,005
<b>Total</b>	<b>759,082</b>	<b>474,619</b>

**Table 19-2: DA Calculation of Sunk Capex for SJG Open-Pit Mine ('000 RMB)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Depreciation	289,900	10,998	23,135	27,699	40,216	39,898	39,250	38,877	38,419	31,409
Amortization	175,493	3,093	7,232	12,152	25,619	25,541	25,510	25,518	25,518	25,309
<b>Total</b>	<b>465,393</b>	<b>14,091</b>	<b>30,368</b>	<b>39,851</b>	<b>65,835</b>	<b>65,440</b>	<b>64,760</b>	<b>64,395</b>	<b>63,936</b>	<b>56,718</b>

### 19.2.2 Initial Capex

SRK was told by Persistence Resources there will be no additional capital expenditure to increase the production capacity to 3,300 ktpa, as both the exceeding capacities for mining operations and processing operations will be the responsibilities of independent third-parties.

SRK agreed that there is no need to spend additional capital to expand the production capacity for the mining and processing operation.

### 19.2.3 Sustaining Capex

SRK was provided with a sustaining Capex plan, which is shown in Table 19-3.

19.2.4 Working capital

The working capital as at the Effective Date is about RMB213 million. The working capital forecasts were set to 25% of operating costs at each production year. Working capital forecasts are shown in Table 19-4.

**Table 19-3: Investment Plan for SJG Open-Pit Mine ('000 RMB)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Closure and rehabilitation	8,749	—	—	—	1,458	1,458	1,458	1,458	1,458	1,458
Drilling of 26 holes	4,700	—	4,700	—	—	—	—	—	—	—
Development of new mining site	64,893	25,171	34,877	4,845	—	—	—	—	—	—
Water drainage system	500	500	—	—	—	—	—	—	—	—
Mining equipment	4,000	4,000	—	—	—	—	—	—	—	—
Auxiliary facilities	4,000	4,000	—	—	—	—	—	—	—	—
Sustaining costs	41,197	—	—	—	6,896	6,906	6,887	6,884	6,832	6,792
<b>Total</b>	<b>128,040</b>	<b>33,671</b>	<b>39,577</b>	<b>4,845</b>	<b>8,355</b>	<b>8,364</b>	<b>8,345</b>	<b>8,342</b>	<b>8,290</b>	<b>8,250</b>

**Table 19-4: Estimate of Working Capital for SJG Open-Pit Mine ('000 RMB)**

Item	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Start value	212,582	34,026	33,723	38,606	57,470	57,552	57,394	57,366	56,929
End value	34,026	33,723	38,606	57,470	57,552	57,394	57,366	56,929	56,600
Increments	(178,556)	(303)	4,883	18,865	81	(158)	(28)	(436)	(330)

**APPENDIX III**

**SRK REPORT**

**Table 19-5: Mining Cost Records for SJG Open-Pit Mine**

<b>Item</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>H1 2023</b>
	<b>Annual Cost (RMB/a)</b>			
Workforce employment	19,159,553	15,045,308	26,716,685	14,205,515
Consumables	38,506,788	22,397,547	36,255,224	14,091,391
Fuel, electricity, water and other services	41,889,107	40,352,318	55,473,574	32,866,096
On and off-site administration	5,870,122	6,307,587	9,990,756	3,798,193
Environmental protection and monitoring	37,273	208	1,014	492
Transportation of workforce	616,502	457,880	282,709	244,393
Product marketing and transport	—	—	—	—
Non-income taxes, royalties and other governmental charges	15,247,115	11,324,818	18,541,799	8,788,868
Contingency allowances	<u>7,457,354</u>	<u>5,045,829</u>	<u>4,231,996</u>	<u>2,822,965</u>
<b>Total</b>	<b><u>128,783,814</u></b>	<b><u>100,931,495</u></b>	<b><u>151,493,757</u></b>	<b><u>76,817,912</u></b>
	<b>Unit Cost (RMB/t RoM)</b>			
Workforce employment	12.77	14.85	14.05	14.92
Consumables	25.67	22.11	19.07	14.80
Fuel, electricity, water and other services	27.92	39.83	29.18	34.51
On and off-site administration	3.91	6.23	5.26	3.99
Environmental protection and monitoring	0.02	0.00	0.00	0.00
Transportation of workforce	0.41	0.45	0.15	0.26
Product marketing and transport	—	—	—	—
Non-income taxes, royalties and other governmental charges	10.16	11.18	9.75	9.23
Contingency allowances	<u>4.97</u>	<u>4.98</u>	<u>2.23</u>	<u>2.96</u>
<b>Total</b>	<b><u>85.84</u></b>	<b><u>99.62</u></b>	<b><u>79.69</u></b>	<b><u>80.66</u></b>
	<b>Unit Cost (RMB/g gold produced)</b>			
Workforce employment	22.47	26.89	28.63	35.44
Consumables	45.16	40.02	38.85	35.16
Fuel, electricity, water and other services	49.13	72.11	59.45	82.00
On and off-site administration	6.88	11.27	10.71	9.48
Environmental protection and monitoring	0.04	0.00	0.00	0.00
Transportation of workforce	0.72	0.82	0.30	0.61
Product marketing and transport	—	—	—	—
Non-income taxes, royalties and other governmental charges	17.88	20.24	19.87	21.93
Contingency allowances	<u>8.75</u>	<u>9.02</u>	<u>4.54</u>	<u>7.04</u>
<b>Total</b>	<b><u>151.05</u></b>	<b><u>180.36</u></b>	<b><u>162.36</u></b>	<b><u>191.66</u></b>

### 19.2.5 Opex records

A summary of cash costs, which excludes the depreciation, amortisation and financial costs from the total costs, is shown in Table 19-5. It should be noted that:

- the costs are combination of mining, processing and administration; and
- production in year 2021 was significantly interrupted by the Provincial Government due to safety production inspection.

### 19.2.6 Opex forecasting

Contractor mining was terminated in January 2021, as required by the Provincial Government for safety reasons, which makes the breakdown of operating costs materially changed, especially for those related to workforce employment, consumables and fuel, electricity, water and other services. At the Effective Date, mining cost forecasts of SRK were derived after clarification with the management of Yantai Zhongjia for the practical operation without the involvement of contractors. The results are shown in Table 19-6.

**Table 19-6: Mining Cost Forecasts for SJG Open-Pit Mine**

Item	Unit	Mining
Mining rate	ktpa	3,300
Workforce employment	RMB/a	8,100,000
Consumables	RMB/a	36,473,684
Fuel, electricity, water and other services	RMB/a	2,027,368
On and off-site administration	RMB/a	—
Environmental protection and monitoring	RMB/a	—
Transportation of workforce	RMB/a	—
Product marketing and transport	RMB/a	—
Non-income taxes, royalties and other governmental charges	RMB/a	—
Contingence allowance	RMB/a	3,000,000
<b>Grand total</b>	<b>RMB/a</b>	<b>49,601,053</b>
Fixed costs	RMB/a	11,460,000
Variable costs	RMB/a	38,141,053
<b>Average total</b>	<b>RMB/t mined</b>	<b>15.03</b>
Fixed costs	RMB/t mined	3.47
Variable costs	RMB/t mined	11.56

Forecasts of processing and administration costs are shown in Table 19-7.

**Table 19-7: Processing and Administration Costs’ Forecasts for SJG Project**

<b>Item</b>	<b>Unit</b>	<b>Processing</b>	<b>Administration</b>
Throughput	ktpa RoM	1,980	1,980
Workforce employment	RMB/a	14,474,000	9,883,000
Consumables	RMB/a	31,540,000	—
Fuel, electricity, water and other services	RMB/a	40,842,000	139,000
On and off-site administration	RMB/a	209,000	1,421,000
Environmental protection and monitoring	RMB/a	15,000	—
Transportation of workforce	RMB/a	13,000	748,000
Product marketing and transport	RMB/a	—	—
Non-income taxes, royalties and other governmental charges	RMB/a	83,000	3,024,000
Contingence allowance	RMB/a	1,349,000	1,350,000
<b>Grand total</b>	<b>RMB/a</b>	<b>88,525,000</b>	<b>16,565,000</b>
Fixed costs	RMB/a	18,150,000	14,816,000
Variable costs	RMB/a	70,375,000	1,749,000
<b>Average total</b>	<b>RMB/t RoM</b>	<b>44.71</b>	<b>8.37</b>
Fixed costs	RMB/t RoM	9.17	7.48
Variable costs	RMB/t RoM	35.54	0.88

The third-party charges for processing operation were set at 1.1 times the processing costs. See Table 19-8.

**Table 19-8: Third-party Charges for SJG Open-Pit Mine**

<b>Item</b>	<b>Unit</b>	<b>Fixed</b>	<b>Variable</b>	<b>Total</b>
Processing	RMB/t RoM	—	49.18	49.18

**APPENDIX III**

**SRK REPORT**

LoM operating cost and surcharge forecasts are shown in Table 19-9 and Table 19-10 for annual and unit estimate, respectively. The forecasts can also be presented alternatively from Table 19-11 to Table 19-13.

**Table 19-9: LoM Opex Forecasts for SJG Open-Pit Mine (’000 RMB)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Mining	383,619	16,530	32,821	36,973	49,601	49,601	49,601	49,601	49,601	49,289
Processing	1,146,481	42,177	83,616	96,385	154,271	154,271	154,271	154,271	154,271	152,947
Administration	137,794	8,082	16,147	16,464	16,184	16,184	16,184	16,184	16,184	16,184
Refining	62,717	1,264	2,309	4,600	9,825	10,151	9,519	9,407	7,662	7,980
Mineral resource tax	324,267	8,054	14,559	26,387	53,387	53,791	46,287	45,744	37,256	38,803
<b>Total</b>	<b>2,054,878</b>	<b>76,107</b>	<b>149,452</b>	<b>180,810</b>	<b>283,268</b>	<b>283,997</b>	<b>275,861</b>	<b>275,207</b>	<b>264,973</b>	<b>265,202</b>

**Table 19-10: LoM Opex Forecasts for SJG Open-Pit Mine (RMB/t RoM)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Mining	16.94	42.01	35.59	23.72	15.03	15.03	15.03	15.03	15.03	15.06
Processing	50.62	107.19	90.67	61.85	46.75	46.75	46.75	46.75	46.75	46.73
Administration	6.08	20.54	17.51	10.56	4.90	4.90	4.90	4.90	4.90	4.94
Refining	2.77	3.21	2.50	2.95	2.98	3.08	2.88	2.85	2.32	2.44
Mineral resource tax	14.32	20.47	15.79	16.93	16.18	16.30	14.03	13.86	11.29	11.86
<b>Total</b>	<b>90.73</b>	<b>193.43</b>	<b>162.06</b>	<b>116.02</b>	<b>85.84</b>	<b>86.06</b>	<b>83.59</b>	<b>83.40</b>	<b>80.29</b>	<b>81.03</b>

**Table 19-11: LoM Opex Forecasts for SJG Open-Pit Mine (’000 RMB)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Workforce employment	275,885	16,229	32,457	32,457	32,457	32,457	32,457	32,457	32,457	32,457
Consumables	947,515	25,214	49,868	59,561	135,749	135,749	135,749	135,749	135,749	134,126
Fuel, electricity, water and other services	415,679	21,251	41,866	51,371	50,935	51,261	50,629	50,517	48,772	49,076
On and off-site administration	13,014	766	1,531	1,531	1,531	1,531	1,531	1,531	1,531	1,531
Environmental protection and monitoring	119.0	7.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0	14.0
Transportation of workforce	6,078	358	715	715	715	715	715	715	715	715
Product marketing and transport	—	—	—	—	—	—	—	—	—	—
Non-income taxes, royalties and other governmental charges	349,551	9,517	17,466	29,627	56,332	56,737	49,232	48,690	40,201	41,749
Contingency allowances	47,039	2,767	5,534	5,534	5,534	5,534	5,534	5,534	5,534	5,534
<b>Total</b>	<b>2,054,878</b>	<b>76,107</b>	<b>149,452</b>	<b>180,810</b>	<b>283,268</b>	<b>283,997</b>	<b>275,861</b>	<b>275,207</b>	<b>264,973</b>	<b>265,202</b>

**Table 19-12: LoM Opex Forecasts for SJG Open-Pit Mine (RMB/t RoM)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Workforce employment	12.18	41.25	35.20	20.83	9.84	9.84	9.84	9.84	9.84	9.92
Consumables	41.84	64.08	54.08	38.22	41.14	41.14	41.14	41.14	41.14	40.98
Fuel, electricity, water and other services	18.35	54.01	45.40	32.96	15.43	15.53	15.34	15.31	14.78	14.99
On and off-site administration	0.57	1.95	1.66	0.98	0.46	0.46	0.46	0.46	0.46	0.47
Environmental protection and monitoring	0.01	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Transportation of workforce	0.27	0.91	0.78	0.46	0.22	0.22	0.22	0.22	0.22	0.22
Product marketing and transport	—	—	—	—	—	—	—	—	—	—
Non-income taxes, royalties and other governmental charges	15.43	24.19	18.94	19.01	17.07	17.19	14.92	14.75	12.18	12.76
Contingency allowances	2.08	7.03	6.00	3.55	1.68	1.68	1.68	1.68	1.68	1.69
<b>Total</b>	<b>90.73</b>	<b>193.43</b>	<b>162.06</b>	<b>116.02</b>	<b>85.84</b>	<b>86.06</b>	<b>83.59</b>	<b>83.40</b>	<b>80.29</b>	<b>81.03</b>

**Table 19-13: LoM Opex Forecasts for SJG Open-Pit Mine (RMB/g gold produced)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Workforce employment	11.83	34.53	37.80	18.97	8.88	8.60	9.17	9.27	11.39	10.93
Consumables	40.61	53.64	58.07	34.80	37.14	35.95	38.34	38.79	47.63	45.18
Fuel, electricity, water and other services	17.82	45.21	48.75	30.02	13.94	13.58	14.30	14.44	17.11	16.53
On and off-site administration	0.56	1.63	1.78	0.89	0.42	0.41	0.43	0.44	0.54	0.52
Environmental protection and monitoring	0.01	0.01	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00
Transportation of workforce	0.26	0.76	0.83	0.42	0.20	0.19	0.20	0.20	0.25	0.24
Product marketing and transport	—	—	—	—	—	—	—	—	—	—
Non-income taxes, royalties and other governmental charges	14.98	20.25	20.34	17.31	15.41	15.03	13.90	13.91	14.10	14.06
Contingency allowances	2.02	5.89	6.44	3.23	1.51	1.47	1.56	1.58	1.94	1.86
<b>Total</b>	<b>88.08</b>	<b>161.92</b>	<b>174.03</b>	<b>105.65</b>	<b>77.50</b>	<b>75.21</b>	<b>77.90</b>	<b>78.64</b>	<b>92.97</b>	<b>89.34</b>

### 19.3 SJG Underground Mine

#### 19.3.1 Sunk Capex

The SJG Underground Mine is a producing mine. Much of the associated Capex has been expended as at the Effective Date. These expended costs were treated as sunk Capex. The original value and net value of sunk Capex are shown in Table 19-14, as at the Effective Date.

The DA calculation of sunk Capex is shown in Table 19-15. The residual values are about RMB0.6 million.

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**Table 19-14: Summary of Sunk Capex for SJG Underground Mine (’000 RMB)**

<b>Item</b>	<b>Original Value</b>	<b>Net Value</b>
Property, plant and equipment	127,863	66,278
Buildings	3,228	2,172
Plant and machinery	17,497	12,373
Office equipment and furniture	—	—
Motor vehicles	—	—
Mining infrastructures	107,139	51,733
Leasehold improvements	—	—
Intangible assets	21,910	15,973
Mining right	21,142	15,384
Other intangible assets	768	589
Right-of-use assets	1,016	882
Land lease	1,016	882
Buildings	—	—
<b>Total</b>	<b><u>150,790</u></b>	<b><u>82,312</u></b>

**Table 19-15: DA Calculation of Sunk Capex for SJG Underground Mine (’000 RMB)**

<b>Item</b>	<b>Total</b>	<b>H2 2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029</b>
Depreciation	65,698	6,402	12,667	12,667	11,399	9,696	9,238	3,630
Amortization	<u>16,855</u>	<u>1,479</u>	<u>2,914</u>	<u>2,914</u>	<u>2,914</u>	<u>2,812</u>	<u>2,761</u>	<u>1,060</u>
<b>Total</b>	<b><u>82,553</u></b>	<b><u>7,880</u></b>	<b><u>15,581</u></b>	<b><u>15,581</u></b>	<b><u>14,313</u></b>	<b><u>12,508</u></b>	<b><u>11,999</u></b>	<b><u>4,690</u></b>

**19.3.2 Initial Capex**

Initial Capex is not considered applicable for the SJG Underground Mine as it has been in operation since 2019 and that there is no further renovation plan to expand current production capacity.



### 19.3.3 Sustaining Capex

The following sustaining Capex should be considered:

- The sustaining Capex, starting from the year 2025, is set to 3% of yearly operating costs.
- Closure and rehabilitation costs, starting from the year 2025, were calculated based on the *Land Reclamation Plan for Songjiagou North Mine*, which was prepared by Shandong Haitian Geographic Information Engineering Ltd. and dated in June 2014. The total costs of closure and rehabilitation is estimated to be about RMB1.3 million. The time value of these costs has been included.

The investment plan was assumed by SRK and shown in Table 19-16.

**Table 19-16: Investment Plan for SJG Underground Mine ('000 RMB)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029
Sustaining costs	2,872	—	—	656	655	652	652	257
Closure and rehabilitation	1,254	—	—	251	251	251	251	251
<b>Total</b>	<b>4,125</b>	<b>—</b>	<b>—</b>	<b>906</b>	<b>906</b>	<b>903</b>	<b>902</b>	<b>508</b>

### 19.3.4 Working capital

The working capital as at the Effective Date is about RMB15.3 million. The working capital forecasts were set to 25% of operating costs at each production year. Working capital forecasts are shown in Table 19-17.

**Table 19-17: Estimate of Working Capital for SJG Underground Mine ('000 RMB)**

Item	H2 2023	2024	2025	2026	2027	2028	2029
Start value	15,301	5,520	5,464	5,464	5,459	5,434	5,430
End value	5,520	5,464	5,464	5,459	5,434	5,430	5,143
Increments	(9,781)	(56)	0	(5)	(25)	(4)	(287)

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**Table 19-18: Mining Cost Records for SJG Underground Mine**

<b>Item</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>H2 2023</b>
	<b>Annual Cost (RMB/a)</b>			
Workforce employment	930,356	117,857	7,655,625	5,011,668
Consumables	10,366,577	931,462	6,913,735	4,156,334
Fuel, electricity, water and other services	2,468,036	2,685,067	7,822,645	3,838,201
On and off-site administration	351,850	66,567	472,878	176,559
Environmental protection and monitoring	2,234	2	48	23
Transportation of workforce	36,953	4,832	13,381	11,361
Product marketing and transport	—	—	—	—
Non-income taxes, royalties and other governmental charges	145,257	25,851	169,840	81,839
Contingency allowances	<u>307,153</u>	<u>989,282</u>	<u>2,416,667</u>	<u>1,636,366</u>
<b>Total</b>	<b><u>14,608,416</u></b>	<b><u>4,820,921</u></b>	<b><u>25,464,820</u></b>	<b><u>14,912,349</u></b>
	<b>Unit Cost (RMB/t RoM)</b>			
Workforce employment	10.35	11.02	85.09	113.20
Consumables	115.29	87.12	76.84	93.88
Fuel, electricity, water and other services	27.45	251.13	86.94	86.69
On and off-site administration	3.91	6.23	5.26	3.99
Environmental protection and monitoring	0.02	0.00	0.00	0.00
Transportation of workforce	0.41	0.45	0.15	0.26
Product marketing and transport	—	—	—	—
Non-income taxes, royalties and other governmental charges	1.62	2.42	1.89	1.85
Contingency allowances	<u>3.42</u>	<u>92.52</u>	<u>26.86</u>	<u>36.96</u>
<b>Total</b>	<b><u>162.46</u></b>	<b><u>450.88</u></b>	<b><u>283.03</u></b>	<b><u>336.83</u></b>
	<b>Unit Cost (RMB/g gold produced)</b>			
Workforce employment	6.70	6.81	54.92	70.89
Consumables	74.69	53.84	49.60	58.79
Fuel, electricity, water and other services	17.78	155.21	56.12	54.29
On and off-site administration	2.53	3.85	3.39	2.50
Environmental protection and monitoring	0.02	0.00	0.00	0.00
Transportation of workforce	0.27	0.28	0.10	0.16
Product marketing and transport	—	—	—	—
Non-income taxes, royalties and other governmental charges	1.05	1.49	1.22	1.16
Contingency allowances	<u>2.21</u>	<u>57.18</u>	<u>17.34</u>	<u>23.15</u>
<b>Total</b>	<b><u>105.25</u></b>	<b><u>278.67</u></b>	<b><u>182.67</u></b>	<b><u>210.92</u></b>

19.3.5 *Opex records*

The Opex for the SJG Underground Mine in the last three years are shown in Table 19-18. It should be noted that:

- the costs are combination of mining, processing and administration; and
- production in year 2021 was significantly interrupted by the Provincial Government due to safety production inspection, which makes unit costs in year 2021 are obviously greater than those in other years.

19.3.6 *Opex forecasting*

Contractor mining was terminated in January 2021, as required by the Provincial Government for safety reasons, which makes the breakdown of operating costs materially changed, especially for those related to workforce employment, consumables and fuel, electricity, water and other services. At the Effective Date, mining cost forecasts are shown in Table 19-19.

**Table 19-19: Mining Cost Forecasts for SJG Underground Mine**

<b>Item</b>	<b>Unit</b>	<b>Yantai Zhongjia</b>
Mining rate	ktpa	90
Workforce employment	RMB/a	5,784,000
Consumables	RMB/a	2,568,000
Fuel, electricity, water and other services	RMB/a	1,152,000
On and off-site administration	RMB/a	—
Environmental protection and monitoring	RMB/a	—
Transportation of workforce	RMB/a	—
Product marketing and transport	RMB/a	—
Non-income taxes, royalties and other governmental charges	RMB/a	—
Contingence Allowance	RMB/a	240,000
<b>Grand total</b>	<b>RMB/a</b>	<b>9,744,000</b>
Fixed costs	RMB/a	6,024,000
Variable costs	RMB/a	3,720,000
<b>Average total</b>	<b>RMB/t mined</b>	<b>108.27</b>
Fixed costs	RMB/t mined	66.93
Variable costs	RMB/t mined	41.33

The LoM Opex forecast is shown in Table 19-20 and Table 19-21 for annual and unit estimate, respectively. The forecast can be presented alternatively in tables from Table 19-22 to Table 19-24.

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**Table 19-20: LoM Operating Cost Forecasts for SJG Underground Mine (’000 RMB)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029
Mining	79,476	6,790	13,464	13,464	13,464	13,464	13,464	5,367
Processing	43,020	3,699	7,298	7,298	7,298	7,298	7,298	2,832
Administration	4,372	370	739	739	739	739	739	305
Refining	1,749	181	355	355	334	236	220	69
Mineral resource tax	9,897	1,155	2,237	2,037	1,815	1,249	1,070	333
<b>Total</b>	<b>138,514</b>	<b>12,195</b>	<b>24,093</b>	<b>23,894</b>	<b>23,650</b>	<b>22,986</b>	<b>22,791</b>	<b>8,905</b>

**Table 19-21: LoM Opex Forecasts for SJG Underground Mine (RMB/t RoM)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029
Mining	149.88	148.57	149.60	149.60	149.60	149.60	149.60	155.30
Processing	81.13	80.93	81.09	81.09	81.09	81.09	81.09	81.94
Administration	8.24	8.10	8.21	8.21	8.21	8.21	8.21	8.84
Refining	3.30	3.97	3.94	3.95	3.71	2.62	2.45	1.98
Mineral resource tax	18.66	25.28	24.85	22.64	20.16	13.88	11.89	9.64
<b>Total</b>	<b>261.22</b>	<b>266.85</b>	<b>267.70</b>	<b>265.48</b>	<b>262.77</b>	<b>255.40</b>	<b>253.24</b>	<b>257.71</b>

**Table 19-22: LoM Opex Forecasts for SJG Underground Mine (’000 RMB)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029
Workforce employment	40,773	3,446	6,891	6,891	6,891	6,891	6,891	2,871
Consumables	47,153	4,064	8,003	8,003	8,003	8,003	8,003	3,073
Fuel, electricity, water and other services	37,170	3,232	6,366	6,366	6,345	6,247	6,231	2,382
On and off-site administration	412	35	70	70	70	70	70	29
Environmental protection and monitoring	3.8	0.3	0.6	0.6	0.6	0.6	0.6	0.3
Transportation of workforce	192	16	33	33	33	33	33	14
Product marketing and transport	—	—	—	—	—	—	—	—
Non-income taxes, royalties and other governmental charges	10,709	1,225	2,375	2,175	1,952	1,387	1,208	388
Contingency allowances	2,101	178	355	355	355	355	355	148
<b>Total</b>	<b>138,514</b>	<b>12,195</b>	<b>24,093</b>	<b>23,894</b>	<b>23,650</b>	<b>22,986</b>	<b>22,791</b>	<b>8,905</b>

**Table 19-23: LoM Opex Forecasts for SJG Underground Mine (RMB/t RoM)**

Item	Total	H2 2023	2024	2025	2026	2027	2028	2029
Workforce employment	76.89	75.40	76.57	76.57	76.57	76.57	76.57	83.09
Consumables	88.93	88.93	88.93	88.93	88.93	88.93	88.93	88.93
Fuel, electricity, water and other services	70.10	70.73	70.73	70.74	70.50	69.41	69.24	68.95
On and off-site administration	0.78	0.76	0.77	0.77	0.77	0.77	0.77	0.84
Environmental protection and monitoring	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Transportation of workforce	0.36	0.36	0.36	0.36	0.36	0.36	0.36	0.39
Product marketing and transport	—	—	—	—	—	—	—	—
Non-income taxes, royalties and other governmental charges	20.20	26.80	26.38	24.16	21.69	15.41	13.42	11.22
Contingency allowances	3.96	3.89	3.95	3.95	3.95	3.95	3.95	4.28
<b>Total</b>	<b>261.22</b>	<b>266.85</b>	<b>267.70</b>	<b>265.48</b>	<b>262.77</b>	<b>255.40</b>	<b>253.24</b>	<b>257.71</b>

**Table 19-24: LoM Opex Forecasts for SJG Underground Mine (RMB/g gold produced)**

Item	Total	2023	2024	2025	2026	2027	2028	2029
Workforce employment	62.65	51.11	52.23	52.16	55.47	78.57	84.17	112.66
Consumables	72.46	60.28	60.66	60.58	64.42	91.25	97.75	120.57
Fuel, electricity, water and other services	57.12	47.94	48.25	48.19	51.07	71.22	76.11	93.48
On and off-site administration	0.63	0.52	0.53	0.53	0.56	0.79	0.85	1.14
Environmental protection and monitoring	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01
Transportation of workforce	0.30	0.24	0.25	0.25	0.26	0.37	0.40	0.53
Product marketing and transport	—	—	—	—	—	—	—	—
Non-income taxes, royalties and other governmental charges	16.46	18.17	18.00	16.46	15.71	15.81	14.75	15.22
Contingency allowances	3.23	2.63	2.69	2.69	2.86	4.05	4.34	5.81
<b>Total</b>	<b>212.84</b>	<b>180.88</b>	<b>182.61</b>	<b>180.85</b>	<b>190.37</b>	<b>262.08</b>	<b>278.37</b>	<b>349.41</b>

## 20 ECONOMIC ANALYSIS

### 20.1 Assumptions

The assumptions used to carry out the economic analysis are listed below:

- The discounted cash flow method (the “DCF”) is selected as the foundation of economic analysis. The discount rate was calculated using weighted average cost of capital (the “WACC”) method. The value calculated is 8.83% in Table 20-1. As at the Effective Date, the discount rate of 9% is adopted.
- The base date is assumed to be 30 June 2023, and all the assumptions are subject to conditions obtained at the base date.
- The gold bullion price is described in section “17.2 Gold price”.
- The LoM schedules are shown in Table 13-11 and Table 13-19 for SJG Open-Pit Mine and SJG Underground Mine, respectively.
- The costs that have been invested to develop the SJG Project to date were treated as the sunk costs and will not be considered during economic analysis. The investment plans of sustaining Capex are shown in Table 19-3 and Table 19-16 for SJG Open-Pit Mine and SJG Underground Mine, respectively.
- The LoM operating costs are shown in Table 19-9 and Table 19-20 for SJG Open-Pit Mine and SJG Underground Mine, respectively.
- The deferred taxes as of 30 June 2023 were used for adjustment of corporate income taxes (the “CIT”) in the next five years.

- The taxes applied to financial analysis are shown in Table 20-2. The value-added tax (the “VAT”) is not charged in China for gold commodities. The taxes for housing property, land tenure and water resource royalty were assumed to have been included in the operating costs and were not separated from the total. Mineral resource taxes are shown in Table 19-9 and Table 19-20 for SJG Open-Pit Mine and SJG Underground Mine, respectively.
- The financial interests were assumed to be 0.
- DA calculations of sunk Capex are shown in Table 19-2 and Table 19-15 for SJG Open-Pit Mine and SJG Underground Mine, respectively. DA calculation of initial Capex is not applicable due to further initial Capex is zero.
- All the ore mined is assumed to be feed to the processing plant and gold bullion sold in each producing year.
- The processing recovery rate is calculated by the formula  $y = -22.802x^2 + 36.418x + 81.464$ , which is historically based, where “x” is the mined grade.

**Table 20-1: Discount Rate Estimate (WACC method)**

Item	Unit	Value	Remarks
Risk free rate of return	%	3.97	5-year treasury bill rate since year 2021
Market risk premium	%	6.00	
Beta		1.5	
Cost of equity/CAPM	%	12.97	
Debt margin	%	10.00	
Cost of debt	%	13.97	
Rate of CIT	%	15.00	rate for an innovation company (see Appendix E)
Post-tax cost of debt	%	11.87	
Target debt equity ratio	%	30.0	
WACC in nominal terms	%	12.64	
Inflation rate	%	3.50	
WACC in real terms	%	8.83	

**Table 20-2: Taxes and Surcharge Applied to Financial Analysis**

Item	Value
Corporate income tax	15% for an innovation company (see Appendix E)
Mineral resources tax	4.2% of sales revenue
Housing property tax	Original value $\times$ 70% $\times$ 1.2%
Land tenure tax	RMB5.6 per square meters
Water resource royalty	RMB0.4 per tonne water

## 20.2 SJG Open-Pit Mine

The net cash flow (the “NCF”) was calculated and shown in Table 20–3. NPVs at various discount rates, which are shown in Table 20–4, provide an indication that it is economically viable for SJG Open-Pit Mine to report Mineral Reserves.

**Table 20-3: Cash Flow Calculation for SJG Open-Pit Mine (million RMB)**

Cash Flow	Total	H2 2023	2024	2025	2026	2027	2028	2029	2030	2031
Cash inflow	7,965	370	347	628	1,271	1,281	1,102	1,089	887	989
Sales revenue	7,721	192	347	628	1,271	1,281	1,102	1,089	887	924
Fixed asset residuals	8	—	—	—	—	—	—	—	—	8
Working capital	236	179	0	—	—	—	0	0	0	57
Cash outflow	2,994	126	216	253	450	434	399	396	357	364
Operating cost	1,731	68	135	154	230	230	230	229	228	226
Working capital	24	—	—	5	19	0	—	—	—	—
Mineral resource tax	324	8	15	26	53	54	46	46	37	39
CIT	787	16	26	63	140	141	115	112	84	90
Capital cost	128	34	40	5	8	8	8	8	8	8
NCF	4,971	245	131	375	821	847	703	693	530	625

**Table 20-4: NPVs at Various Discount Rates for SJG Open-Pit Mine**

Discount Rate (%)	6	7	8	9	10	11	12
NPV (million RMB)	3,712	3,547	3,392	3,246	3,109	2,981	2,860

## 20.3 SJG Underground Mine

The NCF was calculated and shown in Table 20-5. NPVs at various discount rates that were shown in Table 20-6 provide an indication that it is economically viable for SJG Underground Mine to report Mineral Reserves.

**Table 20-5: Cash Flow Calculation for SJG Underground Mine (million RMB)**

Cash Flow	Total	2023	2024	2025	2026	2027	2028	2029
Cash inflow	251.5	37.3	53.3	48.5	43.2	29.8	25.5	13.9
Sales revenue	235.6	27.5	53.3	48.5	43.2	29.7	25.5	7.9
Fixed asset residuals	0.6	—	—	—	—	—	—	0.6
Working capital	15.3	9.8	0.1	—	0.0	0.0	0.0	5.4
Cash outflow	148.5	13.4	26.2	26.3	25.4	24.0	23.7	9.4
Operating cost	128.6	11.0	21.9	21.9	21.8	21.7	21.7	8.6
Working capital	0.0	—	—	0.0	—	—	—	—
Mineral resource tax	9.9	1.2	2.2	2.0	1.8	1.2	1.1	0.3
CIT	5.8	1.2	2.1	1.5	0.9	0.1	0.1	—
Capital cost	4.1	—	—	0.9	0.9	0.9	0.9	0.5
NCF	103.1	23.9	27.1	22.2	17.8	5.8	1.7	4.5

**Table 20-6: NPVs at Various Discount Rate for SJG Underground Mine**

Discount Rate (%)	6	7	8	9	10	11	12
NPV (million RMB)	91	89	87	85	84	82	81

## 20.4 Conclusions

A summary of economic analysis is shown in Table 20-7. The positive NPVs indicate that the SJG Project is economically viable.

**Table 20-7: Summary of Overall Economic Analysis**

Item	Unit	SJG Open-Pit Mine	SJG Underground Mine	Total	Comments
Production capacity	ktpa ore	3,300	90	3,390	
Life of mine	years	8.5	6	/	
Ore tonnage	kt	22,600	530	23,130	
Gold grade in ore	g/t	1.17	1.39	1.17	
Gold content in ore	kg	26,400	737	27,137	
Gold content in ore	koz	849	23.7	872	
Processing recovery rate	%	95.00	95.00	95.00	historical data based
Concentrate gold grade	g/t	20.00	20.00	20.00	
Concentrate tonnage	kt	1,254	35	1,289	
Gold content in concentrate	kg	25,087	700	25,786	
Gold content in concentrate	koz	807	22	829	
Payable gold	kg	23,331	651	23,981	
Gold price	RMB g/t	310	310	310	long-term forecasts
Sales revenue	million RMB	7,721	236	7,956	
Operating cost	million RMB	2,055	139	2,193	
Operating cost	RMB/t ore	91	261	95	
Mineral resource tax	million RMB	324	10	334	
Corporate income tax	million RMB	787	6	793	
Sunk capital cost	million RMB	474	83	557	
NPV (9%)	million RMB	3,246	85	3,332	9% is derived from WACC



**21 ADJACENT PROPERTIES**

No information is available regarding any adjacent properties.

**22 OTHER RELEVANT DATA AND INFORMATION**

No other relevant data or information is available for the SJG Project.

## 23 RISK ASSESSMENT

SRK completed a risk assessment of the specific risks identified for the SJG Project in relation to their likelihood of occurrence within the LoM and consequence in accordance with Guidance Note 7 to the Listing Rules.

In general, the risk of a project decreases from exploration, through development, to the production stage. The SJG Project is an advanced project.

SRK considered various technical aspects which may affect the feasibility and future cash flow of the SJG Project. SRK’s final Risk Assessment is presented in Table 23-1.

**Table 23-1: Risk Assessment for SJG Project**

<b>Risk Issue</b>	<b>Likelihood</b>	<b>Consequence</b>	<b>Overall</b>
<b>Geology and Mineral Resources</b>			
Lack of significant Mineral Resource tonnage	Unlikely	Moderate	Low
Lower average grade of gold (i.e. 15% lower)	Unlikely	Major	Medium
Unexpected groundwater ingress	Unlikely	Moderate	Low
Overestimate of Mineral Resource potential	Unlikely	Minor	Low
Improper classification of Mineral Resource category	Possible	Moderate	Medium
Misleading geological description (related to low-quality exploration done)	Unlikely	Moderate	Low
<b>Mining</b>			
Significant geological structures	Possible	Moderate	Medium
Deformation of final open pit wall	Possible	Moderate	Medium
Designing of final open pit is wrong	Unlikely	Moderate	Low
Long-term schedule is optimistic	Unlikely	Moderate	Low
Ore production capacity is optimistic	Unlikely	Major	Low
Lack of significant Mineral Reserves	Unlikely	Moderate	Low
<b>Mineral Processing</b>			
Unfit configuration of equipment	Unlikely	Moderate	Low
Actual throughput cannot meet design capacity	Unlikely	Moderate	Low
Unsuitable flowsheet	Unlikely	Moderate	Low
Lower metal recovery	Unlikely	Moderate	Low
Poor plant design	Unlikely	Moderate	Low
<b>Environmental and Social</b>			
Land disturbance and ecological protection	Unlikely	Moderate	Low
ARD impact to the environment	Possible	Moderate	Medium
Land rehabilitation and site closure	Unlikely	Moderate	Low
Stakeholder engagement and cultural heritage protection	Unlikely	Moderate	Low
<b>Capital and Operating Costs</b>			
Project timing delay	Unlikely	Minor	Low
Poor mine management-plan	Possible	Minor	Low
Capital cost increases	Possible	Minor	Low
Higher capital costs — ongoing	Unlikely	Minor	Low
Operating cost underestimated	Possible	Moderate	Medium

In the risk assessment, various risk issues have been assessed for Likelihood, Consequence, and Overall Rating. SRK has used a matrix as described below.

The Likelihood of a risk is considered within a certain time frame, e.g., five years, as:

- **Likely:** will probably occur;
- **Possible:** may occur; or
- **Unlikely:** unlikely to occur.

The Consequence of a risk is classified as:

- **Major:** the factor poses an immediate danger to the SJG Project that, if uncorrected, will have a material effect on the SJG Project cash flow and performance and could lead a project failure;
- **Moderate:** the factor, if uncorrected, will have a significant effect on the SJG Project cash flow and performance; or
- **Minor:** the factor, if uncorrected, will have little or no effect on the SJG Project cash flow and performance.

The overall risk assessment combines the Likelihood and Consequence of a risk and be classified as Low (unlikely and possible minor risks, and unlikely moderate risk), Medium (likely minor, possible moderate, and unlikely major risks) and High (likely moderate and major risks, and possible major risks).

## **24 INTERPRETATION AND CONCLUSIONS**

### **24.1 Geology**

The SJG Project is situated in the eastern part of the Jiaobei Terrane and on the northeast margin of the Jiaolai Basin, on the Shandong Peninsula, and is regarded as a member of the Muping-Rushan gold belt. The gold mineralisation at the SJG Project is hosted within the pyritic-sericitic conglomerate of Linsishan Formation, part of the Cretaceous-age Laiyang Group. Gold enrichment occurs as veins as well as in disseminated structures and stockwork distributions. The SJG Project’s conglomerate gold deposit is associated with mesothermal filling activities followed by alterations and metasomatism.

The boundaries between wall rocks, internal waste, and host rocks are not visually obvious, and must be determined by grade control drilling.

### **24.2 Data verification**

It is SRK’s opinion that the sample preparation, QA/QC, and assay procedures conducted at the SJG Open-Pit Mine since 2005 are reasonable and comply with industrial standards.

SRK made data verification through coarse rejects and pulp duplicates for the original assays in 2012. SRK considers that the results returned from verification samples are satisfying. In 2018, SRK monitored the sampling program for the underground channelling samples at the SJG Underground Mine and satisfied with the results.

### **24.3 Mineral Resource estimation**

As of 30 June 2023, at a cut-off grade of 0.3 g/t Au, within the current mining licence for SJG Open-Pit Mine, it contains 34,200 kt of Indicated Mineral Resources at an average gold grade of 1.10 g/t Au and 36,700 kt of Inferred Mineral Resources at an average gold grade of 0.95 g/t Au.

In addition, as of 30 June 2023, at a cut-off grade of 0.7 g/t Au, within the current mining licence for SJG Underground Mine, it contains 1,640 kt of Indicated Mineral Resources at an average gold grade of 1.38 g/t Au and 3,010 kt of Inferred Mineral Resources at an average gold grade of 1.24 g/t Au.

### **24.4 Mineral Reserve estimation**

#### ***SJG Open-Pit Mine***

SRK was provided a document issued by Shandong Research Institute of Geological Sciences dated 19 November 2019, in which the Institute has examined and approved the application and agreed to increase the production capacity to 900 ktpa for the open-pit mining. The modifying factors included mining and processing were estimated by SRK based on the available information to date. SJG Open-Pit Mine will be exploited as an open pit mine.

A cut-off grade was calculated to be 0.3 g/t au RoM to report Mineral Reserves. Open pit optimisation results indicate that the final open pit designed by Yantai Zhongjia is a little conservative, but it is technically feasible and economically viable. SRK accepts the final open pit design of Yantai Zhongjia.

The SJG Open-Pit Mine was reported to include Probable Mineral Reserves at about 22,600 kt with 1.17 g/t Au, as of 30 June 2023. Without the open pit optimisation, the existing design of the SJG Open-Pit Mine can cater for the mining of approximately 455 kt of Probable Mineral Reserves (representing approximately 2.0% of the Probable Mineral Reserves of approximately 22,600 kt available at the SJG Open-Pit Mine). It is estimated that there are approximately 22,100 kt of Probable Mineral Reserves (representing approximately 98.0% of the Probable Mineral Reserves of approximately 22,600 kt available at the SJG Open-Pit Mine) that can be accessible at the unmined areas next to and below the current infrastructure, which has the potential to increase the mining production output and to cater for mining operations for the next years at Yantai Zhongjia’s current mining capacity.

### ***SJG Underground Mine***

SRK understands that the FSR has been applied to guide the mine development since year 2016.

A cut-off grade was calculated to be 0.7 g/t Au RoM to report Mineral Reserves. Technically feasible stopes were initially designed based on the planned development system and mining methods. Stope economics of each stope were analysed to select economically viable stopes. The materials within economically viable stopes were reported as the Mineral Reserves.

The SJG Underground Mine was reported to include Probable Mineral Reserves at about 530 kt with 1.39 g/t Au grade. The production capacity is supposed to be 90 ktpa ore. The life of mine shall be about 6.0 years.

## **24.5 Mining**

### ***SJG Open-Pit Mine***

Conventional road-truck technique is assumed as the bench development method. Mining sequence will be controlled by two pushbacks.

Conventional drill-blast-load-haul mining cycle is assumed to move rocks within the open pit. The bench height is 12 m high. The mining rate is 3,300 ktpa ore.

No special device is installed to monitor the open pit stability, but the regularly patrolling per month is undergoing.

The waste rock have been and will be sold to third-parties. There is no need to consider permanently waste dumping.

Mine service facilities have been well developed and will be renovated to support daily ongoing operations.

### ***SJG Underground Mine***

The development system mainly consists of a trackless access ramp, six level haulage ways, an auxiliary shaft, a surface upcast and an underground upcast.

Off-road dump trucks are proposed to move both ore and wastes to surface along the level haulage way and the access ramp.

The mining methods include upward cut-and-fill mining and shrinkage stope mining. The designed ore production capacity of ore is 90 ktpa.

The mine plan relies on backfill as a ground support medium.

Mine service facilities have been well developed or shared with the SJG Open-Pit Mine to support daily operations.

### **24.6 Gold recovery**

Inventory from the SJG Project has relatively simple characteristics, with good floatability. The processing recovery rate is assumed to be 95.00% in the future operation.

### **24.7 Capital investment and operating cost**

Records of capital cost and operating cost have been provided to SRK. Production capacity ratio was applied to modify records to estimate future values.

### ***SJG Open-Pit Mine***

The net value of sunk Capex is about RMB474 million. The initial Capex is zero. The sustaining Capex is about RMB128 million.

The operating costs were estimated to be about RMB91 per ton RoM.

### ***SJG Underground Mine***

The net value of sunk Capex is about RMB83 million. The initial Capex is zero. The sustaining Capex is about RMB4.1 million.

The operating costs were estimated to be about RMB261 per ton RoM.

### **24.8 Economic analysis**

The NPVs at a discount rate of 9% are about RMB3,246 million and RMB85 million for SJG Open-Pit Mine and SJG Underground Mine, respectively. These positive NPVs provide an indication that it is economically viable for the SJG Project to report Mineral Reserves.

## **25 RECOMMENDATIONS**

### **25.1 Geology**

Grade control should be performed for both SJG Open-Pit Mine and SJG Underground Mine to meet grade requirement of the processing plant.

As observed by SRK from the mineral resource model, it can be noted that there are significant Inferred Mineral Resources occurred deeply, especially for those occurred in open pit walls and at depth below the open pit base for SJG Open-Pit Mine. SRK suggests further exploration campaign may be performed to upgrade the category of these Inferred Mineral Resources to reduce exploitation risks and extend the life of mine.

### **25.2 Mining**

In order to substantially scale up mining operations, gold concentrate processing and increase gold mineral reserves, optimising open-pit mine design should be implemented to cater for the increase in mining capacity, which includes expanding to the south of the current open pit boundary so that the mineral resources in the expanded area can be accessible as much as possible, the stripping of topsoil, wastes and ore materials to expose mineral resources as soon as possible, the construction of water storage pool and drainage system, the construction of site office and accommodation, the construction of a stockpile to store topsoil for future reclamation, and acquiring of additional equipment to support the expansion plan.

With respect to the SJG Underground Mine, SRK considers Yantai Zhongjia should strengthen its communication with technicians and management to mineral resources to ensure the mining operation could be performed as planned.



**26 REFERENCES**

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3. *Preliminary Assessment Technical Report of Songjiagou Project, Shandong Province, China*, Wardrop Engineering Inc., March 2011
4. *Resource Utilization and Development Plan of Songjiagou Gold Project, Muping Area, Yantai, Shandong*, Yantai Dehe Metallurgical Design and Research Institute Corporation Limited, July 2011
5. *Technical Report on the Cut-off Grade Study of Songjiagou Gold Project in Wanggezhuang Town, Muping District, Yantai City, Shandong Province, China*, SRK Consulting China Ltd., August 2012
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7. *Approval of Land Reclamation Plan for Songjiagou Open-Pit Mine*, Shandong Land and Resources Bureau, 25 February 2014
8. *Mine Site Geological Environment Protection and Rehabilitation Plan for Songjiagou Open-Pit Mine*, Shandong Huaying Geological Engineering Survey Ltd., February 2014
9. *Approval of Mine Site Geological Environment Protection and Rehabilitation Plan for Songjiagou Open-Pit Mine*, Shandong Land and Resources Bureau, 9 April 2014
10. *Land Reclamation Plan for Songjiagou North Mine*, Shandong Haitian Geographic Information Engineering Ltd., June 2014
11. *Mine Site Geological Environment Protection and Rehabilitation Plan for Songjiagou North Mine*, Shandong Huaying Geological Engineering Survey Ltd., July 2014
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15. *Water and Soil Conservation Plan for Songjiagou North Mine*, Weihai Hydrology Bureau, October 2014
16. *Environmental Impact Assessment Report for Songjiagou Gold Project*, Shandong Academy of Environmental Science, December 2014
17. *Approval of Environmental Impact Assessment Report for Songjiagou Gold Project*, Shandong Environmental Protection Bureau, 26 January 2015
18. *Environmental Impact Assessment Report for Songjiagou North Gold Mine*, Shandong Academy of Environmental Science, April 2015
19. *Approval of Environmental Impact Assessment Report for Songjiagou North Gold Mine*, Shandong Environmental Protection Bureau, 5 May 2015
20. *Independent Technical Report of Songjiagou Gold Project, Shandong Province, the People’s Republic of China*, SRK Consulting China Ltd., January 2016
21. *Detailed Feasibility Study Report on SJG Underground Mine for Yantai Zhongjia*, Yantai Dehe Metallurgy Design Institute Ltd., May 2016
22. *Water and Soil Conservation Plan for Songjiagou Open-Pit Mine*, Zhaozhuang Hydrology Survey and Design Institute, February 2017
23. *Approval of Water and Soil Conservation Plan for Songjiagou Open-Pit Mine*, Shandong Water Resources Bureau, 10 March 2017

THIS DOCUMENT IS IN DRAFT FORM, INCOMPLETE AND SUBJECT TO CHANGE AND THE INFORMATION MUST BE READ IN CONJUNCTION WITH THE SECTION HEADED "WARNING" ON THE COVER OF THIS DOCUMENT.

## **APPENDICES**

**Appendix A:  
Mining licences**

矿区范围拐点坐标：  
点号 X坐标 Y坐标

(2000国家大地坐标系)

- 1, 4111146.76, 40621497.87
- 2, 4110713.76, 40622031.87
- 3, 4110121.76, 40621550.87
- 4, 4110438.76, 40621098.87
- 5, 4110786.76, 40621036.87
- 6, 4110959.76, 40621164.87

开采深度：由150.0米至-400.0米标高 共有6个拐点圈定

中华人民共和国  
采 矿 许 可 证  
(副本)

证号：C3700002009044110010983

采矿权人：烟台中嘉矿业有限公司

地 址：烟台市牟平区王格庄镇前松椒村

矿山名称：烟台中嘉矿业有限公司宋家沟矿区

经济类型：有限责任公司

开采矿种：金矿、硫

开采方式：露天/地下开采

生产规模：90.0万吨/年

矿区面积：0.5937平方公里

有效期限：壹拾壹年自2020年05月17日至2031年05月17日

发证机关  
采矿登记专用章

二〇二〇年五月十七日

中华人民共和国自然资源部印制

(2000国家大地坐标系)

**矿区范围拐点坐标:**

点号 X坐标 Y坐标

- 1, 4111281.76, 40621594.87
- 2, 4111290.76, 40622129.87
- 3, 4111015.76, 40622582.87
- 4, 4110554.76, 40622253.87
- 5, 4111178.76, 40621502.87

**开采深度:** 由142.0米至-270.0米标高 共有5个拐点圈定

中华人民共和国

## 采矿许可证

(副本)

证号: C3700002016024210141314

**采矿权人:** 烟台中嘉矿业有限公司

**地址:** 烟台市牟平区王格庄镇前松椒村

**矿山名称:** 烟台中嘉矿业有限公司宋家沟北矿区

**经济类型:** 有限责任公司

**开采矿种:** 金矿、银、硫

**开采方式:** 地下开采

**生产规模:** 9.0万吨/年

**矿区面积:** 0.414平方公里

**有效期限:** 壹拾年自2021年02月18日至2031年02月18日

发证机关  
(采矿登记专用章)  
二〇二一年二月十九日

中华人民共和国自然资源部印制

**Appendix B:  
Drilling, trenching and channelling information**

**APPENDIX III**

**SRK REPORT**

<b>Hole ID</b>	<b>Easting (m)</b>	<b>Northing (m)</b>	<b>Elevation (m ASL)</b>	<b>Depth (m)</b>
1-CM0	621,489.30	4,110,444.78	9.00	474.90
1-CM0-3B	621,488.81	4,110,445.25	9.00	420.05
1-CM1	621,582.43	4,110,728.96	9.00	230.00
1-CM10S-3B	621,674.40	4,110,807.16	9.00	13.72
1-CM2N-3B	621,243.84	4,110,670.04	9.00	191.26
1-CM3N-3B	621,282.79	4,110,720.21	9.00	13.38
1-CM4N-3B	621,302.51	4,110,742.49	9.00	13.72
1-CM4S-3B	621,470.49	4,110,613.77	9.00	14.02
1-CM5S-3B	621,492.77	4,110,638.81	9.00	19.35
1-CM6N-3B	621,362.34	4,110,806.86	9.00	240.39
1-CM6S-3B	621,512.03	4,110,656.32	9.00	161.83
1-CM7S-3B	621,549.13	4,110,670.47	9.00	272.04
1-CM8S-3B	621,563.52	4,110,695.64	9.00	11.28
1-CM9-3B	621,581.30	4,110,729.64	9.00	230.00
1-YM1N-3B	621,382.00	4,110,517.35	9.00	510.51
1-YM2N	621,217.07	4,110,635.35	9.00	331.62
1-YM2N-3B	621,358.53	4,110,535.78	9.00	53.60
1-YM3N-3B	621,214.84	4,110,638.89	9.00	332.00
268-ZK58	622,031.11	4,111,078.02	119.11	217.59
280-ZK59	621,781.81	4,111,261.95	126.12	234.45
2-CM0	621,489.73	4,110,445.30	-40.00	373.00
2-CM0-3B	621,489.48	4,110,445.94	-40.00	373.00
2-CM10-1-3B	621,610.79	4,110,741.54	-40.00	15.00
2-CM11-1-3B	621,629.14	4,110,766.10	-40.00	17.10
2-CM1-1-3B	621,423.25	4,110,525.32	-40.00	28.00
2-CM1-2-3B	621,380.98	4,110,564.43	-40.00	10.62
2-CM1-3-3B	621,246.04	4,110,637.02	-40.00	37.00
2-CM2-2-3B	621,402.87	4,110,584.21	-40.00	8.00
2-CM2-3-3B	621,259.92	4,110,662.42	-40.00	21.24
2-CM3-1-3B	621,476.91	4,110,598.94	-40.00	180.96
2-CM3-2-3B	621,428.53	4,110,608.51	-40.00	10.00
2-CM3-3-3B	621,292.04	4,110,668.33	-40.00	33.45
2-CM4-1-3B	621,494.00	4,110,619.96	-40.00	16.00
2-CM4-2-3B	621,449.43	4,110,628.75	-40.00	9.00
2-CM4-3-3B	621,301.65	4,110,704.85	-40.00	20.73
2-CM5-1-3B	621,511.88	4,110,644.65	-40.00	14.56
2-CM5-2-3B	621,463.68	4,110,642.42	-40.00	21.00
2-CM6-1-3B	621,521.06	4,110,656.77	-40.00	15.00
2-CM6-2-3B	621,494.65	4,110,669.34	-40.00	11.00
2-CM7-1-3B	621,533.33	4,110,671.73	-40.00	12.32



**APPENDIX III**

**SRK REPORT**

<b>Hole ID</b>	<b>Easting (m)</b>	<b>Northing (m)</b>	<b>Elevation (m ASL)</b>	<b>Depth (m)</b>
2-CM7-2-3B	621,537.32	4,110,712.78	-40.00	10.44
2-CM8-1-3B	621,567.97	4,110,699.22	-40.00	11.00
2-CM9-1-3B	621,589.71	4,110,717.20	-40.00	34.00
2-CM9-2-3B	621,578.97	4,110,758.15	-40.00	10.44
2-YM1-3B	621,401.92	4,110,494.61	-40.00	400.00
2-YM2-3B	621,350.54	4,110,521.66	-40.00	365.00
2-YM3-3B	621,220.18	4,110,613.59	-40.00	126.00
3-CM0-3B	621,490.76	4,110,444.62	-80.00	262.00
3-CM1N-3B	621,422.81	4,110,573.33	-80.00	29.28
3-CM1S-3B	621,471.67	4,110,535.34	-80.00	24.41
3-CM2N-3B	621,437.43	4,110,598.08	-80.00	24.00
3-CM2S-3B	621,486.11	4,110,557.73	-80.00	22.75
3-CM3N-3B	621,451.95	4,110,624.43	-80.00	10.00
3-CM3S-3B	621,507.49	4,110,586.13	-80.00	16.61
3-CM4N-3B	621,492.68	4,110,675.38	-80.00	8.04
3-CM4S-3B	621,543.41	4,110,638.53	-80.00	61.00
3-CM5N-3B	621,548.68	4,110,706.11	-80.00	15.00
3-CM5S-3B	621,585.61	4,110,674.07	-80.00	12.77
3-CM6N-3B	621,140.23	4,110,320.64	-80.00	9.38
3-CM6S-3B	621,622.67	4,110,722.28	-80.00	59.00
3-CM7N-3B	621,623.55	4,110,791.57	-80.00	12.97
3-YM1N-3B	621,417.44	4,110,493.95	-80.00	360.00
3-YM1NN-3B	621,416.62	4,110,494.73	-80.00	360.00
3-YM1S-3B	621,413.44	4,110,496.31	-80.00	116.00
3-YM1SN-3B	621,412.62	4,110,497.08	-80.00	116.00
3-YM2N-3B	621,365.10	4,110,535.96	-80.00	415.00
3-YM2NN-3B	621,364.28	4,110,536.74	-80.00	415.00
3-YM2S-3B	621,360.56	4,110,538.14	-80.00	311.00
3-YM2SN-3B	621,359.74	4,110,538.92	-80.00	311.00
4-CM0-3B	621,489.52	4,110,446.62	-120.00	181.66
4-CM1-3B	621,485.01	4,110,526.54	-120.00	86.66
4-CM-1N-3B	621,358.61	4,110,458.35	-120.00	44.81
4-CM-1S-3B	621,423.89	4,110,412.20	-120.00	48.40
4-CM2N-3B	621,450.18	4,110,589.43	-120.00	19.04
4-CM2S-3B	621,495.05	4,110,556.17	-120.00	8.50
4-CM3N-3B	621,475.05	4,110,607.97	-120.00	17.88
4-CM3S-3B	621,522.83	4,110,568.38	-120.00	20.40
4-CM4N-3B	621,524.05	4,110,646.76	-120.00	21.30
4-CM4S-3B	621,566.81	4,110,606.89	-120.00	23.23
4-YM1N-3B	621,430.06	4,110,491.78	-120.00	473.00

**APPENDIX III**

**SRK REPORT**

<b>Hole ID</b>	<b>Easting (m)</b>	<b>Northing (m)</b>	<b>Elevation (m ASL)</b>	<b>Depth (m)</b>
4-YM1NN-3B	621,429.44	4,110,492.36	-120.00	473.00
4-YM1S-3B	621,430.06	4,110,491.78	-120.00	78.29
4-YM1SN-3B	621,429.44	4,110,492.36	-120.00	78.29
4-YM2N-3B	621,380.61	4,110,531.03	-120.00	250.80
4-YM2NN-3B	621,379.99	4,110,531.62	-120.00	250.80
4-YM2S-3B	621,380.61	4,110,531.03	-120.00	86.43
4-YM2SN-3B	621,379.99	4,110,531.62	-120.00	86.16
624-ZK52	621,460.85	4,110,547.15	133.08	147.13
624-ZK53	622,572.88	4,110,556.28	107.98	260.14
624-ZK90	622,178.54	4,110,930.84	115.90	220.00
CK0-1	621,161.70	4,110,705.28	129.72	125.70
CK12-1	621,353.98	4,110,678.17	133.23	135.20
CK16-1	621,380.66	4,110,693.37	128.39	146.90
CK24-1	621,398.44	4,110,750.58	123.83	82.20
CK28-1	621,451.87	4,110,751.06	87.34	119.00
CK3-1	621,192.15	4,110,658.49	121.18	85.00
CK32-1	621,456.81	4,110,787.85	120.73	125.00
CK36-1	621,498.78	4,110,790.33	116.44	111.20
CK40-1	621,530.19	4,110,802.69	112.01	113.00
CK4-1	621,280.65	4,110,675.17	127.61	112.90
CK4-2	621,316.74	4,110,635.25	127.69	25.00
CK7-1	621,177.77	4,110,631.82	114.21	57.50
CK8-1	621,321.99	4,110,664.28	132.65	134.80
KDZK1	621,414.88	4,110,508.88	-120.45	120.60
KDZK10	621,529.70	4,110,564.19	-119.85	91.07
KDZK11	621,360.45	4,110,460.63	-119.58	104.28
KDZK2	621,462.85	4,110,469.78	-120.40	120.30
KDZK3	621,488.90	4,110,523.76	-120.95	50.60
KDZK4	621,458.60	4,110,554.04	-119.80	86.28
L2A	621,488.73	4,110,445.27	-40.00	357.50
L3A	621,488.60	4,110,445.24	-80.00	252.50
L3B1	621,541.97	4,110,641.09	-80.00	60.00
L3B2	621,490.91	4,110,673.50	-80.00	117.50
L4A	621,489.52	4,110,446.62	-120.00	180.00
L4B	621,485.01	4,110,526.54	-120.00	100.00
SHK1	621,502.48	4,110,926.02	107.23	550.50
SJ05-01	621,444.51	4,110,441.09	138.90	150.40
SJ05-02	621,479.20	4,110,472.74	139.42	160.00
SJ05-03	621,515.56	4,110,497.29	138.39	185.00
SJ05-04	621,404.09	4,110,402.52	135.81	150.00

**APPENDIX III**

**SRK REPORT**

<b>Hole ID</b>	<b>Easting (m)</b>	<b>Northing (m)</b>	<b>Elevation (m ASL)</b>	<b>Depth (m)</b>
SJ05-05	621,643.52	4,110,661.80	119.41	160.00
SJ05-06	621,606.88	4,110,628.62	122.07	84.18
SJ05-07	621,580.98	4,110,588.69	123.02	77.40
SJ05-08	621,387.18	4,110,561.08	137.36	180.03
SJ05-09	621,611.88	4,110,779.21	100.34	180.00
SJ05-10	621,554.94	4,110,732.57	95.66	150.00
SJ05-11	621,717.37	4,110,392.23	129.81	576.05
SJ05-12	621,373.63	4,110,485.43	118.62	180.00
SJ05-13	621,264.44	4,110,404.87	103.03	180.00
SJ05-14	621,646.99	4,110,309.67	113.32	527.70
SJ05-15	621,272.43	4,110,491.75	124.17	200.00
SJ05-16	621,313.80	4,110,702.67	138.16	200.09
SJ05-17	621,330.60	4,110,443.02	109.88	178.40
SJ05-18	621,400.09	4,110,802.12	122.16	182.90
SJ05-19	621,369.07	4,110,772.01	131.73	61.00
SJ05-20	621,369.09	4,110,772.05	131.73	314.00
SJ05-21	621,833.91	4,110,543.57	102.20	599.50
SJ05-22	621,341.69	4,110,728.25	136.10	182.92
SJ05-23	621,344.87	4,110,726.28	135.91	230.12
SJ05-24	621,313.80	4,110,702.67	138.16	275.91
SJ05-25	621,771.39	4,110,474.98	99.67	600.03
SJ05-26	621,584.82	4,110,239.31	102.75	600.14
SJ06-27	621,739.65	4,110,551.71	114.71	482.00
SJ06-28	621,660.71	4,110,487.23	124.69	471.30
SJ06-29	621,583.03	4,110,243.75	102.86	458.16
SJ06-30	621,644.76	4,110,593.89	114.56	377.90
SJ06-31	621,644.76	4,110,593.89	114.56	391.60
SJ06-32	621,478.99	4,110,381.03	130.59	306.13
SJ06-33	621,560.69	4,110,434.07	131.54	405.09
SJ06-34	621,620.12	4,110,428.54	134.05	418.00
SJ06-35	621,567.73	4,110,451.51	134.05	390.22
SJ06-40	621,879.99	4,111,244.63	123.00	200.00
SZK0-1	621,182.78	4,110,678.33	127.63	130.03
SZK0-2	621,278.81	4,110,623.32	119.31	153.67
SZK0-3	621,372.08	4,110,543.44	134.66	170.05
SZK0-5	621,755.04	4,110,222.79	133.63	658.75
SZK0-6	621,066.38	4,110,801.92	122.02	264.35
SZK108-1	622,166.50	4,110,953.69	117.91	313.65
SZK108-2	622,278.63	4,110,831.56	117.56	305.00
SZK16-3	621,248.32	4,110,806.57	139.65	335.34

**APPENDIX III**

**SRK REPORT**

<b>Hole ID</b>	<b>Easting (m)</b>	<b>Northing (m)</b>	<b>Elevation (m ASL)</b>	<b>Depth (m)</b>
SZK16-4	621,790.76	4,110,351.94	113.54	552.50
SZK16-5	621,365.31	4,110,725.55	104.49	318.10
SZK2011-10	621,396.86	4,110,922.87	122.85	282.40
SZK2011-11	621,571.28	4,110,924.39	88.36	312.27
SZK24-1	621,236.63	4,110,884.55	142.43	262.23
SZK24-2	621,297.01	4,110,842.47	125.18	252.60
SZK24-3	621,373.89	4,110,778.88	106.88	299.95
SZK31-1	621,249.36	4,110,332.98	106.90	470.72
SZK32-2	621,441.58	4,110,820.12	113.92	310.92
SZK32-3	621,368.27	4,110,860.59	108.54	291.01
SZK40-1	621,985.42	4,110,419.50	98.97	453.10
SZK40-3	621,453.28	4,110,863.28	99.37	367.29
SZK48-1	621,623.51	4,110,791.68	97.85	130.19
SZK48-2	621,679.78	4,110,756.09	88.12	183.45
SZK48-3	621,497.67	4,110,918.56	107.22	389.70
SZK48-5	621,417.42	4,110,978.31	115.12	373.75
SZK48-6	621,203.38	4,111,148.55	107.67	457.65
SZK56-1	621,676.07	4,110,841.20	85.93	132.66
SZK56-2	621,739.85	4,110,783.72	84.62	180.35
SZK56-4	621,496.63	4,111,000.28	87.54	331.26
SZK56-5	621,896.84	4,110,646.35	78.47	391.65
SZK63-1	620,977.88	4,110,246.50	89.33	613.10
SZK64-1	621,804.71	4,110,798.93	82.09	211.94
SZK64-2	621,901.81	4,110,731.87	78.30	501.28
SZK64-3	621,952.26	4,110,683.58	77.15	407.92
SZK7-1	621,233.08	4,110,583.98	114.26	182.12
SZK7-2	621,305.66	4,110,527.25	131.90	160.35
SZK72-1	621,898.91	4,110,800.63	82.31	282.04
SZK72-2	621,759.36	4,110,917.26	81.21	358.79
SZK72-3	621,629.04	4,111,027.75	85.21	256.65
SZK72-4	621,969.76	4,110,764.49	80.56	297.57
SZK72-5	622,009.00	4,110,714.65	78.85	262.92
SZK7-4	621,113.42	4,110,682.22	118.69	266.53
SZK80-1	621,999.51	4,110,832.83	94.45	370.92
SZK80-2	622,049.43	4,110,766.21	90.64	346.70
SZK80-3	622,130.86	4,110,680.25	82.70	392.60
SZK8-1	621,293.79	4,110,687.78	133.37	50.35
SZK8-2	621,444.00	4,110,561.83	131.59	200.04
SZK8-3	621,258.13	4,110,714.93	141.58	193.38
SZK8-6	621,140.50	4,110,815.85	118.45	264.69

**APPENDIX III**

**SRK REPORT**

<b>Hole ID</b>	<b>Easting (m)</b>	<b>Northing (m)</b>	<b>Elevation (m ASL)</b>	<b>Depth (m)</b>
SZK8-7	620,944.72	4,110,971.98	126.37	307.65
SZK92-3	622,112.10	4,110,833.45	92.73	247.56
SZK92-4	621,977.36	4,110,924.61	117.30	386.95
SZK92-5	621,806.98	4,111,078.35	117.72	399.76
SZK92-6	622,453.13	4,110,538.69	87.89	271.65
SZK92-7	622,190.98	4,110,759.07	108.81	295.75
SZK96-2	622,010.97	4,110,905.59	111.00	250.50
TC0-1	621,146.82	4,110,732.25	128.62	45.00
TC0-2	621,264.60	4,110,640.74	123.52	66.30
TC0-3	621,314.57	4,110,620.11	128.65	113.00
TC0-4	621,118.40	4,110,749.17	119.69	35.70
TC108-1	621,716.01	4,111,342.09	122.76	117.30
TC11-1	621,153.31	4,110,612.66	109.68	220.00
TC12-1	621,272.15	4,110,747.49	144.95	105.20
TC12-2	621,439.61	4,110,607.21	124.17	23.00
TC12-3	621,224.41	4,110,781.45	138.98	61.00
TC124-1	621,797.78	4,111,366.68	93.37	43.60
TC124-2	622,586.52	4,110,766.73	72.04	68.30
TC124-3	622,641.66	4,110,667.64	76.47	54.00
TC15-1	621,198.53	4,110,536.30	105.72	131.00
TC15-2	621,118.83	4,110,624.05	106.46	110.00
TC16-1	621,245.50	4,110,809.13	139.86	181.00
TC16-2	621,474.87	4,110,617.59	118.25	24.00
TC16-3	621,217.74	4,110,825.72	138.45	28.70
TC19-1	621,176.40	4,110,515.26	105.42	119.00
TC20-1	621,350.11	4,110,760.26	136.39	33.30
TC20-2	621,473.24	4,110,656.19	113.25	77.50
TC24-1	621,365.13	4,110,786.42	130.78	37.00
TC24-2	621,477.19	4,110,690.91	106.64	127.50
TC24-3	621,319.26	4,110,828.34	120.62	63.00
TC24-4	621,281.20	4,110,850.34	132.10	26.00
TC24-5	621,213.22	4,110,908.90	142.29	99.80
TC28-1	621,408.56	4,110,787.76	124.44	14.00
TC3-1	621,131.19	4,110,699.93	124.68	44.00
TC3-2	621,303.73	4,110,581.27	130.54	66.00
TC32-1	621,437.12	4,110,804.42	120.09	25.00
TC32-2	621,539.06	4,110,716.98	97.63	57.50
TC32-3	621,374.13	4,110,850.95	106.68	81.50
TC32-4	621,288.13	4,110,921.67	138.80	115.70
TC3-3	621,352.90	4,110,522.20	132.24	22.00

**APPENDIX III**

**SRK REPORT**

<b>Hole ID</b>	<b>Easting (m)</b>	<b>Northing (m)</b>	<b>Elevation (m ASL)</b>	<b>Depth (m)</b>
TC36-1	621,481.98	4,110,804.35	116.72	21.50
TC36-2	621,567.91	4,110,732.26	97.63	33.00
TC40-1	621,517.28	4,110,815.81	112.23	18.40
TC40-2	621,611.21	4,110,730.56	92.51	21.50
TC40-3	621,476.43	4,110,855.21	97.70	58.30
TC40-4	621,301.29	4,110,995.31	132.93	205.70
TC4-1	621,178.90	4,110,746.15	136.84	29.00
TC4-2	621,280.65	4,110,675.17	127.61	55.00
TC4-3	621,387.36	4,110,581.03	131.44	71.00
TC44-1	621,554.22	4,110,825.84	109.79	15.00
TC48-1	621,539.75	4,110,854.33	95.34	153.00
TC48-2	621,501.07	4,110,902.02	104.39	28.00
TC48-3	621,352.43	4,111,030.90	120.50	200.00
TC56-1	621,541.27	4,110,917.77	97.35	20.00
TC56-2	621,404.88	4,111,064.93	103.00	65.70
TC624-1	622,509.27	4,110,667.47	100.99	8.00
TC624-2	622,514.57	4,110,661.50	101.43	30.50
TC624-3	622,086.32	4,110,979.31	97.29	85.00
TC7-1	621,136.29	4,110,664.11	118.96	52.00
TC7-2	621,219.83	4,110,598.34	118.23	174.30
TC7-3	621,115.38	4,110,684.66	118.83	32.00
TC7-4	621,092.24	4,110,708.33	115.85	45.60
TC80-1	621,803.43	4,110,966.99	83.68	119.90
TC8-1	621,301.81	4,110,698.66	137.10	131.00
TC8-2	621,290.40	4,110,694.05	135.28	44.00
TC8-3	621,407.75	4,110,595.15	132.30	44.20
TC8-4	621,189.48	4,110,772.90	133.12	21.50
TC92-1	621,569.19	4,111,280.89	110.99	185.55
TC92-2	621,854.37	4,111,040.54	99.84	104.60
UL106-A	621,681.30	4,110,753.95	9.00	105.00
UL106-C	621,511.33	4,110,621.47	9.00	99.70
UL106-D	621,497.62	4,110,612.03	9.00	100.36
UL106-E	621,483.45	4,110,585.56	9.00	100.13
UL206-A	621,501.79	4,110,575.13	-40.00	65.28
UL206-B	621,502.82	4,110,574.16	-40.00	63.24
UL206-C	621,578.40	4,110,684.64	-40.00	83.64
UL206-D	621,676.08	4,110,760.79	-40.00	65.28
UL206-E	621,515.42	4,110,650.62	-40.00	60.52
UL206-F	621,357.05	4,110,689.66	-40.00	75.10
UL206-G	621,550.48	4,110,649.73	-40.00	43.49

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**APPENDIX III****SRK REPORT**

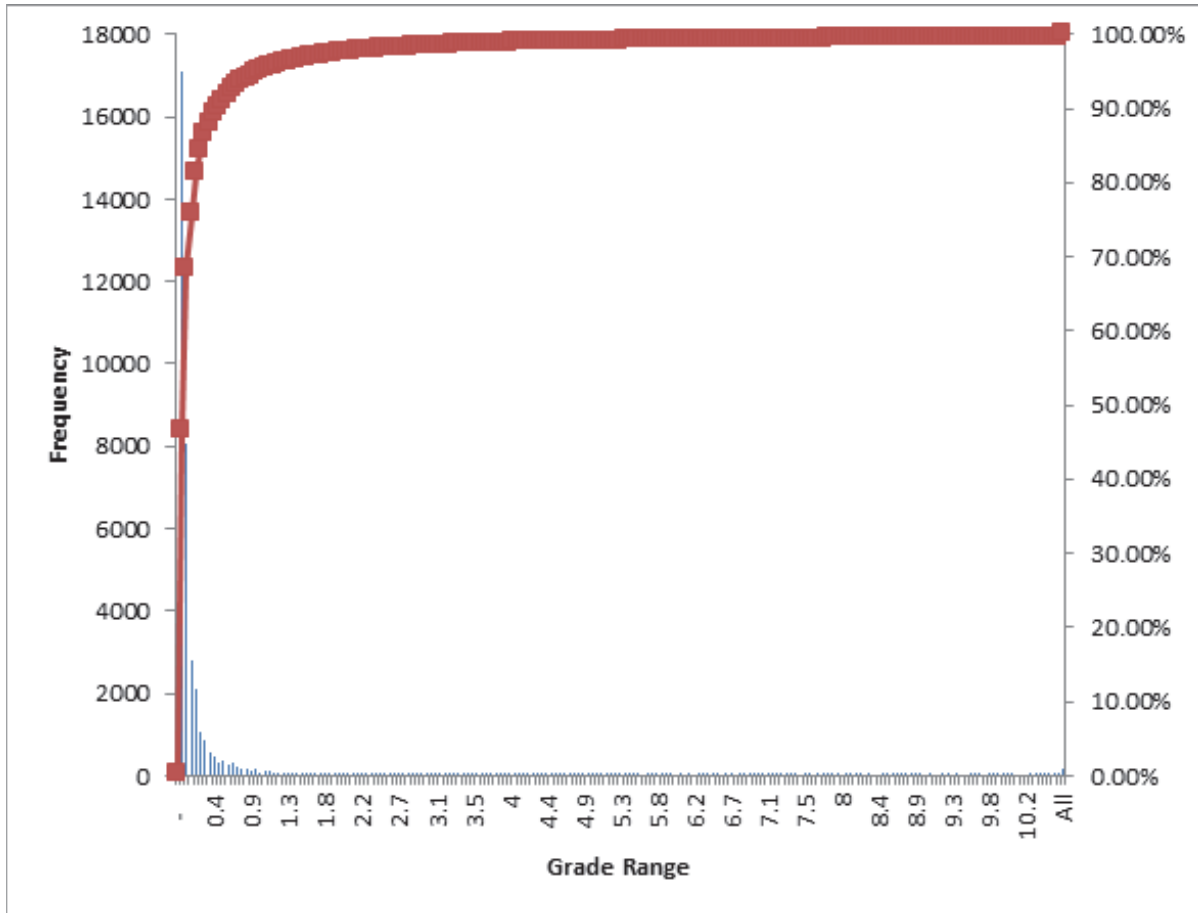
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<b>Hole ID</b>	<b>Easting (m)</b>	<b>Northing (m)</b>	<b>Elevation (m ASL)</b>	<b>Depth (m)</b>
ZK1	621,597.36	4,110,710.46	91.98	409.00
ZK11	621,515.51	4,110,799.13	115.40	403.64
ZK13	621,375.41	4,110,575.95	139.62	507.76
ZK150	621,436.75	4,110,489.61	135.24	201.48
ZK151	621,380.12	4,110,537.03	133.91	200.39
ZK16	621,500.13	4,110,531.67	132.33	470.62
ZK17	621,675.44	4,110,667.46	113.22	375.00
ZK18	621,303.65	4,110,591.41	129.34	250.60
ZK19	621,431.17	4,110,492.83	133.79	253.74
ZK2	621,762.65	4,110,765.92	83.55	328.50
ZK2011-05	621,187.11	4,110,558.92	110.70	260.08
ZK2011-08	621,161.90	4,110,719.50	131.36	226.06
ZK21	621,182.98	4,110,699.06	130.20	80.53
ZK23	621,364.79	4,110,790.45	129.80	80.20
ZK26	621,340.58	4,110,678.85	134.90	84.10
ZK27	621,454.92	4,110,708.06	106.81	64.25
ZK28	621,584.21	4,110,820.05	104.00	50.81
ZK3	621,827.27	4,110,870.61	81.09	292.20
ZK33	621,354.78	4,110,419.65	124.10	70.52
ZK35	621,570.58	4,110,480.24	133.60	79.61
ZK4	621,667.46	4,110,762.32	88.65	362.30
ZK40	621,119.99	4,110,746.86	115.00	70.08
ZK41	621,200.39	4,110,796.86	133.40	80.76
ZK42	621,257.19	4,110,853.76	139.80	88.01
ZK5	621,817.05	4,110,670.91	82.44	315.00
ZK51	621,424.52	4,110,581.88	132.88	200.04
ZK52	621,460.85	4,110,547.15	133.08	200.20
ZK6	621,602.34	4,110,569.71	122.76	440.00
ZK7	621,281.18	4,110,100.95	82.71	616.90
ZK8	621,174.87	4,110,538.15	109.96	510.70
ZK9	621,299.27	4,110,618.40	131.58	530.00

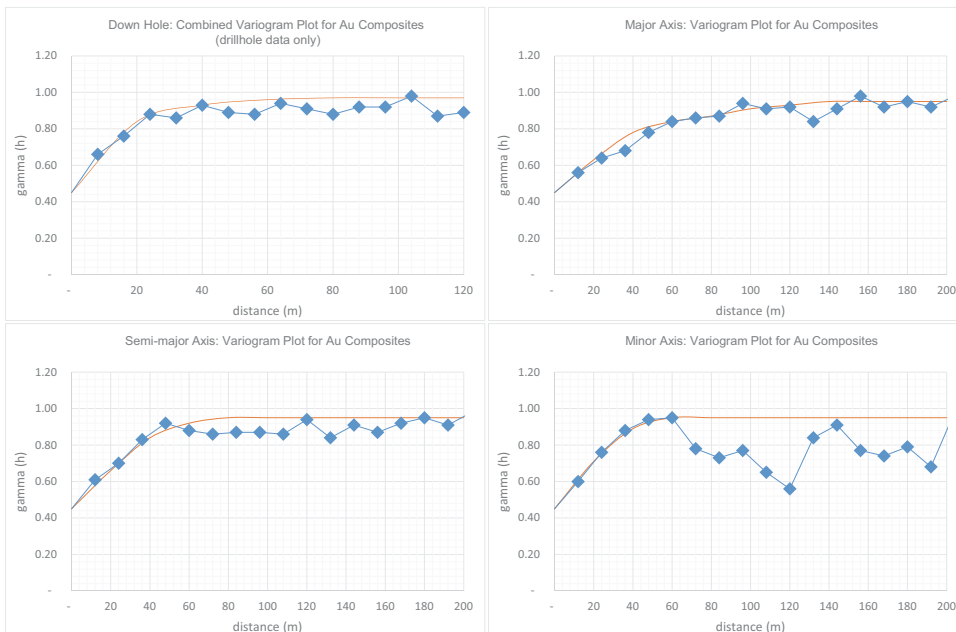
*Note:* 1980 Xi'an Coordinate System

**Appendix C:  
Basic statistic and variogram**





Probability Histogram and Cumulative Frequency Curve for Capped Au Grades



Variogram (drill hole data)

**Appendix D:  
SRK independent sampling and assay**

**APPENDIX III**

**SRK REPORT**

**Coarse duplicates' assay result**

**Samples taken on Jan 30 – 31 2012 by SRK  
Coarse duplicate**

<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG001	D0004167	0.482	0.292
SJG002	STC15-1H94	3.830	2.210
SJG003	STC3-1H37	0.446	0.188
SJG004	STC0-1H35	0.294	0.156
SJG005	STC0-1H34	0.210	0.168
SJG006	STC0-1H39	0.071	0.047
SJG007	STC4-1H17	0.922	0.809
SJG008	STC4-1H16	3.380	4.070
SJG009	STC3-1H36	0.290	0.189
SJG010	SCK32-1H129	0.267	0.522
SJG011	SCK32-1H128	0.271	0.154
SJG012	STC7-1H175	0.271	0.192
SJG013	STC7-1H174	0.292	0.083
SJG014	STC7-1H173	0.348	0.359
SJG015	STC7-1H171	0.622	0.258
SJG016	STC7-1H170	0.323	0.297
SJG017	STC11-1H71	0.233	0.177
SJG018	STC11-1H75	0.207	0.168
SJG019	STC7-1H12	0.640	0.564
SJG020	STC7-1H195	0.295	0.234
SJG021	STC4-1H07	0.919	0.822
SJG022	STC4-1H08	0.270	0.242
SJG023	STC4-1H09	2.460	1.855
SJG024	STC4-1H10	2.580	2.800
SJG025	STC4-1H11	0.849	1.635
SJG026	STC11-1H76	0.237	0.167
SJG027	STC11-1H80	0.407	0.446
SJG028	STC11-1H81	0.614	0.546
SJG029	STC20-2H13	0.204	0.190
SJG030	SCK8-1H122	0.420	<0.005
SJG031	SCK8-1H43	0.423	0.446
SJG032	SCK8-1H37	0.304	0.186
SJG033	SCK12-1H105	0.238	0.352
SJG034	SCK7-1H01	0.564	0.552
SJG035	SCK7-1H02	0.326	0.268
SJG036	SCK7-1H03	0.422	0.366

**APPENDIX III**

**SRK REPORT**

**Samples taken on Jan 30 – 31 2012 by SRK**  
**Coarse duplicate**

<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG037	SCK7-1H05	0.236	2.640
SJG038	SCK16-1H279	0.949	0.499
SJG039	SCK28-1H7	0.597	0.276
SJG040	SCK28-1H8	2.510	2.840
SJG041	SCK28-1H9	0.289	0.593
SJG042	SCK12-1H77	0.430	0.370
SJG043	SCK12-1H78	0.946	1.795
SJG044	SCK16-1H246	1.430	4.090
SJG045	SCK16-1H261	0.815	0.633
SJG046	SCK16-1H276	0.700	1.745
SJG047	SCK16-1H277	1.650	0.940
SJG048	SCK16-1H239	0.666	1.155
SJG049	SCK16-1H240	1.090	1.105
SJG050	SCK8-1H111	4.480	1.330
SJG051	SCK8-1H113	0.342	0.256
SJG052	SCK8-1H58	0.973	0.334
SJG053	SCK8-1H59	0.764	0.944
SJG054	SCK8-1H61	0.630	0.178
SJG055	SCK8-1H63	0.347	0.853
SJG056	SCK32-1H120	0.981	0.916
SJG057	SCK32-1H119	0.770	0.801
SJG058	SCK32-1H118	4.420	2.180
SJG059	SCK32-1H117	0.685	1.230
SJG060	SCK28-1H30	1.660	1.705
SJG061	SCK16-1H241	0.335	0.137
SJG062	SCK16-1H247	3.040	1.130
SJG063	SCK16-1H248	1.130	1.535
SJG064	SCK16-1H250	20.000	7.080
SJG065	SCK16-1H251	0.360	0.312
SJG066	SCK8-1H107	0.684	0.560
SJG067	SCK28-1H5	1.670	1.260
SJG068	SCK16-1H257	7.300	3.760
SJG069	SCK16-1H258	5.560	2.960
SJG070	SCK16-1H260	1.560	1.385
SJG071	SCK28-1H37	0.534	0.283
SJG072	SCK28-1H38	0.337	0.325
SJG073	SCK28-1H40	0.739	0.487

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**SRK REPORT**

**Samples taken on Jan 30 – 31 2012 by SRK**  
**Coarse duplicate**

<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG074	SCK28-1H41	0.317	0.115
SJG075	SCK8-1H13	0.371	0.411
SJG076	SCK12-1H68	0.572	1.205
SJG077	SCK8-1H52	0.406	0.448
SJG078	SCK8-1H53	0.531	0.349
SJG079	SCK16-1H253	0.460	0.274
SJG080	SCK16-1H254	0.387	0.309
SJG081	SCK12-1H17	0.687	0.609
SJG082	SCK16-1H267	49.200	22.900
SJG083	SCK28-1H29	0.734	0.187
SJG084	SCK0-1H23	0.230	0.698
SJG085	STC4-2H33	0.258	0.329
SJG086	STC4-2H35	0.307	0.238
SJG087	SCK0-1H122	0.306	0.253
SJG088	STC4-2H7	0.597	0.333
SJG089	STC4-2H8	0.408	0.193
SJG090	STC4-2H10	0.333	0.078
SJG091	SCK3-1H18	0.226	0.076
SJG092	SCK3-1H33	0.833	0.525
SJG093	SCK3-1H25	0.467	0.160
SJG094	SCK3-1H28	0.575	0.690
SJG095	SCK4-1H11	1.040	0.749
SJG096	SCK4-1H12	2.710	2.350
SJG097	SCK4-1H19	0.458	0.211
SJG098	SCK4-1H18	0.725	0.508
SJG099	SCK4-1H17	0.406	0.370
SJG100	STC24-2H93	0.562	0.517
SJG101	STC24-2H94	0.243	0.173
SJG102	STC24-2H95	0.255	0.195

**APPENDIX III**

**SRK REPORT**

**Pulp duplicates' assay result**

**Samples taken on Jan 30 – 31 2012 by SRK  
Pulp duplicate**

<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG103	SCK3-1H66	0.313	0.243
SJG104	SCK3-1H68	0.319	0.176
SJG105	STC24-2H85	0.411	0.483
SJG106	STC4-2H45	0.316	0.194
SJG107	SCK32-1H25	0.357	0.431
SJG108	SCK4-1H102	0.290	0.123
SJG109	SCK32-1H19	1.060	1.235
SJG110	SCK0-1H54	0.353	0.133
SJG111	STC8-1H115	0.319	0.125
SJG112	STC8-1H118	1.700	1.240
SJG113	SCK32-1H21	0.703	1.500
SJG114	SCK32-1H24	0.856	0.962
SJG115	SCK32-1H8	1.060	1.025
SJG116	SCK4-2H8	0.594	0.504
SJG117	SCK4-2H19	0.334	0.275
SJG118	SCK4-2H22	0.988	0.796
SJG119	SCK4-2H24	0.800	0.961
SJG120	SCK4-2H20	2.860	4.060
SJG121	SCK4-2H1	0.395	0.398
SJG122	SCK4-2H8	0.704	0.409
SJG123	SCK4-1H91	0.731	0.473
SJG124	SCK4-1H97	0.385	0.388
SJG125	SCK4-1H95	0.777	0.723
SJG126	SCK4-1H108	1.050	1.030
SJG127	SCK4-1H107	0.575	0.536
SJG128	SCK4-1H111	0.464	0.238
SJG129	SCK36-1H21	0.371	0.276
SJG130	SCK32-1H19	0.385	0.272
SJG131	SCK32-1H25	0.531	0.769
SJG132	SCK32-1H28	0.683	0.525
SJG133	SCK32-1H21	0.785	0.672
SJG134	SCK32-1H27	0.353	0.199
SJG135	SCK32-1H52	0.410	0.162
SJG136	SCK32-1H53	2.820	2.190
SJG137	SCK32-1H54	0.400	0.288
SJG138	SCK7-1H2	0.422	0.392

**Samples taken on Jan 30 – 31 2012 by SRK**

**Pulp duplicate**

<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG139	SCK36-1H3	0.566	0.518
SJG140	SCK36-1H4	1.080	1.125
SJG141	SCK36-1H2	0.806	0.847
SJG142	SCK8-1H9	0.416	0.297
SJG143	SCK8-1H77	0.454	0.390
SJG144	SCK8-1H10	0.474	0.573
SJG145	SCK8-1H75	3.630	3.230
SJG146	SCK8-1H11	0.453	0.405
SJG147	SCK36-1H1	0.139	0.155
SJG148	SCK36-1H2	0.776	1.390
SJG149	SCK36-1H3	0.321	1.035
SJG150	SCK36-1H4	1.360	1.900

**Appendix E:  
Innovation Company Certificate**





**Appendix F:  
Compliance with Chapter 18**

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SRK REPORT

Chapter 18		SRK
18.01	DEFINITIONS AND INTERPRETATION	Noted.
18.02–18.04	CONDITIONS FOR [REDACTED] OF NEW APPLICANT MINERAL COMPANIES	
18.02	In addition to satisfying the requirements of Chapter 8, a Mineral Company which has applied for [REDACTED] must also satisfy the requirements of this Chapter.	1.4
18.03	A Mineral Company must:	
(1)	establish to the Exchange’s satisfaction that it has the right to participate actively in the exploration for and/or extraction of Natural Resources, either:	Figure 1-1
(a)	through control over a majority (by value) of the assets in which it has invested together with adequate rights over the exploration for and/or extraction of Natural Resources; or <i>Note: ‘control over a majority’ means an interest greater than 50%.</i>	
(b)	through adequate rights (arising under arrangements acceptable to the Exchange), which give it sufficient influence in decisions over the exploration for and/or extraction of the Natural Resources;	
(2)	establish to the Exchange’s satisfaction that it has at least a portfolio of:	12.11
(a)	Indicated Resources; or	
(b)	Contingent Resources, identifiable under a Reporting Standard and substantiated in a Competent Person’s Report. This portfolio must be meaningful and of sufficient substance to justify a [REDACTED];	
(3)	if it has commenced production, provide an estimate of cash operating costs including the costs associated with:	19.2 19.3
(a)	workforce employment;	
(b)	consumables;	
(c)	fuel, electricity, water and other services;	
(d)	on and off-site administration;	
(e)	environmental protection and monitoring;	
(f)	transportation of workforce;	
(g)	product marketing and transport;	
(h)	non-income taxes, royalties and other governmental charges; and	
(i)	contingency allowances;	
	<i>Note: A Mineral Company must:</i> <ul style="list-style-type: none"> <li>• set out the components of cash operating costs separately by category;</li> <li>• explain the reason for any departure from the list of items to be included under cash operating costs; and</li> <li>• discuss any material cost items that should be highlighted to [REDACTED].</li> </ul>	
(4)	demonstrate to the Exchange’s satisfaction that it has available working capital for 125% of the group’s present requirements, that is for at least the next 12 months, which must include:	19.2.4 19.3.4
(a)	general, administrative and operating costs;	
(b)	property holding costs; and	
(c)	the cost of any proposed exploration and/or development; and	
	<i>Note: Capital expenditures do not need to be included in working capital requirements. Where they are financed out of borrowings, relevant interest and loan repayments must be included.</i>	
(5)	ensure that its working capital statement in the [REDACTED] document under Listing Rule 8.21A states it has available sufficient working capital for 125% of the group’s present requirements, that is for at least 12 months from the date of its [REDACTED] document.	19.2.4 19.3.4
18.04	If a Mineral Company is unable to satisfy either the profit test in rule 8.05(1), the market capitalisation/ revenue/cash flow test in rule 8.05(2), or the market capitalisation/revenue test in rule 8.05(3), it may still apply to be [REDACTED] if it can establish to the Exchange’s satisfaction that its directors and senior managers, taken together, have sufficient experience relevant to the exploration and/or extraction activity that the Mineral Company is pursuing. Individuals relied on must have a minimum of five years relevant industry experience. Details of the relevant experience must be disclosed in the [REDACTED] document of the new applicant.	Not applicable. Satisfied rule 8.05(1).
	<i>Note: A Mineral Company relying on this rule must demonstrate that its primary activity is the exploration for and/or extraction of Natural Resources.</i>	

**APPENDIX III**

**SRK REPORT**

<b>Chapter 18</b>		<b>SRK</b>
<b>18.05–18.08</b>	<b>CONTENTS OF [REDACTED] DOCUMENTS FOR NEW APPLICANTS</b>	
18.05	In addition to the information set out in Appendix 1A, a Mineral Company must include in its [REDACTED] document:	
(1)	a Competent Person’s Report;	1.1
(2)	a statement that no material changes have occurred since the effective date of the Competent Person’s Report. Where there are material changes, these must be prominently disclosed;	1.5.2
(3)	the nature and extent of its prospecting, exploration, exploitation, land use and mining rights and a description of the properties to which those rights attach, including the duration and other principal terms and conditions of the concessions and any necessary licences and consents. Details of material rights to be obtained must also be disclosed;	3
(4)	a statement of any legal claims or proceedings that may have an influence on its rights to explore or mine;	1.9
(5)	disclosure of specific risks and general risks. Companies should have regard to Guidance Note 7 on suggested risk analysis; and	23
(6)	if relevant and material to the Mineral Company’s business operations, information on the following:	
(a)	project risks arising from environmental, social, and health and safety issues;	18.6
(b)	any non-governmental organisation impact on sustainability of mineral and/or exploration projects;	18.5
(c)	compliance with host country laws, regulations and permits, and payments made to host country governments in respect of tax, royalties and other significant payments on a country by country basis;	18.4
(d)	sufficient funding plans for remediation, rehabilitation and, closure and removal of facilities in a sustainable manner;	18.5
(e)	environmental liabilities of its projects or properties;	18.5
(f)	its historical experience of dealing with host country laws and practices, including management of differences between national and local practice;	18.4
(g)	its historical experience of dealing with concerns of local governments and communities on the sites of its mines, exploration properties, and relevant management arrangements; and	18.4 18.5
(h)	any claims that may exist over the land on which exploration or mining activity is being carried out, including any ancestral or native claims.	3 18.3
<b>18.06–18.08</b>	<b>Additional disclosure requirements that apply to certain new applicant Mineral Companies</b>	
18.06	If a Mineral Company has begun production, it must disclose an estimate of the operating cash cost per appropriate unit for the minerals and/or Petroleum produced.	19.2.5, 19.2.6 19.3.5, 19.3.6
18.07	If a Mineral Company has not yet begun production, it must disclose its plans to proceed to production with indicative dates and costs. These plans must be supported by at least a Scoping Study, substantiated by the opinion of a Competent Person. If exploration rights or rights to extract Resources and/or Reserves have not yet been obtained, relevant risks to obtaining these rights must be prominently disclosed.	Not applicable. Has commenced production.
18.08	If a Mineral Company is involved in the exploration for or extraction of Resources, it must prominently disclose to [REDACTED] that its Resources may not ultimately be extracted at a profit.	12.1
<b>18.09–18.13</b>	<b>RELEVANT NOTIFIABLE TRANSACTIONS INVOLVING THE ACQUISITION OR DISPOSAL OF MINERAL OR PETROLEUM ASSETS</b>	Not applicable. No such notifiable transaction.
18.09	A Mineral Company proposing to acquire or dispose of assets which are solely or mainly Mineral or Petroleum Assets as part of a Relevant Notifiable Transaction must:	
(1)	comply with Chapter 14 and Chapter 14A, if relevant;	
(2)	produce a Competent Person’s Report, which must form part of the relevant circular, on the Resources and/or Reserves being acquired or disposed of as part of the Relevant Notifiable Transaction;	
	<i>Note: The Exchange may dispense with the requirement for a Competent Person’s Report on disposals where shareholders have sufficient information on the assets being disposed of.</i>	
(3)	in the case of a major (or above) acquisition, produce a Valuation Report, which must form part of the relevant circular, on the Mineral or Petroleum Assets being acquired as part of the Relevant Notifiable Transaction; and	
(4)	comply with the requirements of rules 18.05 to 18.05 in respect of the assets being acquired.	
	<i>Note: Material liabilities that remain with the issuer on a disposal must also be discussed.</i>	

**APPENDIX III**

**SRK REPORT**

<b>Chapter 18</b>		<b>SRK</b>
<b>18.10–18.11</b>	<b>Requirements that apply to listed issuers</b>	
18.10	A listed issuer proposing to acquire assets which are solely or mainly Mineral or Petroleum Assets as part of a Relevant Notifiable Transaction must comply with rule 18.09.	
18.11	On completion of a Relevant Notifiable Transaction involving the acquisition of Mineral or Petroleum Assets, unless the Exchange decides otherwise, a listed issuer will be treated as a Mineral Company.	
<b>18.12–18.13</b>	<b>Requirements that apply to Mineral Companies and listed issuers</b>	
18.12	The Exchange may dispense with the requirement to produce a new Competent Person’s Report or a Valuation Report under rules 18.05(1), 18.09(2) or 18.09(3), if the issuer has available a previously published Competent Person’s Report or Valuation Report (or equivalent) which complies with rules 18.18 to 18.34 (where applicable), provided the report is no more than six months old. The issuer must provide this document and a no material change statement in the [REDACTED] document or circular for the Relevant Notifiable Transaction.	
18.13	An issuer must obtain the prior written consent of a Competent Person(s) or Competent Evaluator for their material to be included in the form and context in which it appears in a [REDACTED] document or circular for the Relevant Notifiable Transaction, whether or not such person or firm is retained by the [REDACTED] applicant or the issuer.	
<b>18.14–18.17</b>	<b>CONTINUING OBLIGATIONS</b>	Not applicable. Will comply after [REDACTED].
<b>18.14</b>	<b>Disclosure in reports</b>	
18.14	A Mineral Company must include in its interim (half-yearly) and annual reports details of its exploration, development and mining production activities and a summary of expenditure incurred on these activities during the period under review. If there has been no exploration, development or production activity, that fact must be stated.	
<b>18.15–18.17</b>	<b>Publication of Resources and Reserves</b>	
18.15	A listed issuer that publicly discloses details of Resources and/or Reserves must give an update of those Resources and/or Reserves once a year in its annual report, in accordance with the reporting standard under which they were previously disclosed or a Reporting Standard.	
18.16	A Mineral Company must include an update of its Resources and/or Reserves in its annual report in accordance with the Reporting Standard under which they were previously disclosed.	
18.17	Annual updates of Resources and/or Reserves must comply with rule 18.18. <i>Note: Annual updates are not required to be supported by a Competent Person’s Report and may take the form of a no material change statement.</i>	
<b>18.18–18.27</b>	<b>STATEMENTS ON RESOURCES AND/OR RESERVES</b>	
<b>18.18</b>	<b>Presentation of data</b>	
18.18	Any data presented on Resources and/or Reserves by a Mineral Company in a [REDACTED] document, Competent Person’s Report, Valuation Report or annual report, must be presented in tables in a manner readily understandable to a non-technical person. All assumptions must be clearly disclosed and statements should include an estimate of volume, tonnage and grades.	12.11 13.4.6 13.5.5
<b>18.19</b>	<b>Basis of evidence</b>	
18.19	All statements referring to Resources and/or Reserves:	
	(1) in any new applicant [REDACTED] document or circular relating to a Relevant Notifiable Transaction, must be substantiated in a Competent Person’s Report which must form part of the document; and	12.11 13.4.6 13.5.5
	(2) in all other cases, must at least be substantiated by the issuer’s internal experts.	Not applicable. Will comply after [REDACTED].
<b>18.20</b>	<b>Petroleum Competent Persons’ Reports</b>	Not applicable. Not a petroleum company.
18.20	A Competent Person’s Report for Mineral Companies involved in the exploration for and/or extraction of Petroleum Resources and Reserves must include the information set out in Appendix 25.	

**APPENDIX III**

**SRK REPORT**

<b>Chapter 18</b>		<b>SRK</b>
<b>18.21–18.22</b>	<b><i>Competent Person</i></b>	
18.21	A Competent Person must:	1.6
	(1) have a minimum of five years experience relevant to the style of mineralization and type of deposit under consideration or to the type of Petroleum exploration, reserve estimate (as appropriate), and to the activity which the Mineral Company is undertaking;	1.6
	(2) be professionally qualified, and be a member in good standing of a relevant Recognised Professional Organisation, in a jurisdiction where, in the Exchange’s opinion, the statutory securities regulator has satisfactory arrangements (either by way of the IOSCO Multilateral MOU or other bi-lateral agreement acceptable to the Exchange) with the Commission for mutual assistance and exchange of information for enforcing and securing compliance with the laws and regulations of that jurisdiction and Hong Kong; and	1.6
	(3) take overall responsibility for the Competent Person’s Report.	1.6
18.22	A Competent Person must be independent of the issuer, its directors, senior management and advisers. Specifically the Competent Person retained must:	1.9.3
	(1) have no economic or beneficial interest (present or contingent) in any of the assets being reported on;	
	(2) not be remunerated with a fee dependent on the findings of the Competent Person’s Report;	
	(3) in the case of an individual, not be an officer, employee or proposed officer of the issuer or any group, holding or associated company of the issuer; and	
	(4) in the case of a firm, not be a group, holding or associated company of the issuer. Any of the firm’s partners or officers must not be officers or proposed officers of any group, holding or associated company of the issuer.	
<b>18.23</b>	<b><i>Additional requirements of Competent Evaluators</i></b>	Not applicable. This is not an evaluation report.
18.23	In addition to the requirements set out in rules 18.21(2) and 18.22, a Competent Evaluator must:	
	(1) have at least ten years relevant and recent general mining or Petroleum experience (as appropriate);	
	(2) have at least five years relevant and recent experience in the assessment and/or valuation of Mineral or Petroleum Assets or securities (as appropriate); and	
	(3) hold all necessary licences.	
	<i>Note: A Competent Person’s Report or Valuation Report may be performed by the same Competent Person provided he or she is also a Competent Evaluator.</i>	
<b>18.24</b>	<b><i>Scope of Competent Persons’ Reports and Valuation Reports</i></b>	
18.24	A Competent Person’s Report or Valuation Report must comply with a Reporting Standard as modified by this Chapter, and must:	
	(1) be addressed to the Mineral Company or listed issuer;	1.4
	(2) have an effective date (being the date when the contents of the Competent Person’s Report or Valuation Report are valid) less than six months before the date of publishing the [REDACTED] document or circular relating to a Relevant Notifiable Transaction required under the Listing Rules; and	1.5
	(3) set out what Reporting Standard has been used in preparing the Competent Person’s Report or Valuation Report, and explain any departure from the relevant Reporting Standard.	1.4
<b>18.25–18.26</b>	<b><i>Disclaimers and Indemnities</i></b>	
18.25	A Competent Person’s Report or Valuation Report may contain disclaimers of sections or topics outside their scope of expertise in which the Competent Person or Competent Evaluator relied upon other experts’ opinions, but must not contain any disclaimers of the report in its entirety.	1.4.3
18.26	The Competent Person or Competent Evaluator must prominently disclose in the Competent Person’s Report or Valuation Report the nature and details of all indemnities provided by the issuer. Indemnities for reliance placed on information provided by issuers and third party experts (for information outside the Competent Person’s or Competent Evaluator’s expertise) are generally acceptable. Indemnities for fraud and gross negligence are generally unacceptable.	1.9 1.10
<b>18.27</b>	<b><i>Obligations of sponsor</i></b>	
18.27	Any sponsor appointed to or by a new applicant Mineral Company under Chapter 3A must ensure that any Competent Person or Competent Evaluator meets the requirements of this Chapter.	1.6

**APPENDIX III**

**SRK REPORT**

Chapter 18		SRK
18.28–18.34	<b>REPORTING STANDARD</b>	
18.28–18.30	<i>Mineral reporting standard</i>	
18.28	In addition to satisfying the requirements of Chapter 13 (as modified by this Chapter), a Mineral Company exploring for and/or extracting mineral Resources and Reserves must also satisfy rules 18.29 and 18.30.	
18.29	A Mineral Company must disclose information on mineral Resources, Reserves and/or exploration results either:	1.4
(1)	under:	
(a)	the JORC Code;	
(b)	NI 43–101; or	
(c)	the SAMREC Code,	
	as modified by this Chapter; or	
(2)	under other codes acceptable to the Exchange as communicated to the market from time to time, provided the Exchange is satisfied that they give a comparable standard of disclosure and sufficient assessment of the underlying assets.	
	<i>Note: The Exchange may allow presentation of Reserves under other reporting standards provided reconciliation to a Reporting Standard is provided. A Reporting Standard applied to specific assets must be used consistently.</i>	
18.30	A Mineral Company must ensure that:	
(1)	any estimates of mineral Reserves disclosed are supported, at a minimum, by a Pre-feasibility Study;	13.2
(2)	estimates of mineral Reserves and mineral Resources are disclosed separately;	12, 13
(3)	Indicated Resources and Measured Resources are only included in economic analyses if the basis on which they are considered to be economically extractable is explained and they are appropriately discounted for the probabilities of their conversion to mineral Reserves. All assumptions must be clearly disclosed. Valuations for Inferred Resources are not permitted;	12.11
(4)	for commodity prices used in Pre-feasibility Studies, Feasibility Studies and valuations of Indicated Resources, Measured Resources and Reserves:- (a) the methods to determine those commodity prices, all material assumptions and the basis on which those prices represent reasonable views of future prices are explained clearly; and (b) if a contract for future prices of mineral Reserves exists, the contract price is used; and	17.2
(5)	for forecast valuations of Reserves and profit forecasts, sensitivity analyses to higher and lower prices are supplied. All assumptions must be clearly disclosed.	Not applicable. No forecast valuation of Reserves included.
18.31–18.33	<i>Petroleum reporting standard</i>	Not applicable. This is not a petroleum company.
18.31	In addition to satisfying the requirements of Chapter 13 (as modified by this Chapter), a Mineral Company exploring for and/or extracting Petroleum Resources and Reserves must also satisfy rules 18.32 and 18.33.	
18.32	A Mineral Company must disclose information on Petroleum Resources and Reserves either:	
(1)	under PRMS as modified by this Chapter; or	
(2)	under other codes acceptable to the Exchange if it is satisfied that they give a comparable standard of disclosure and sufficient assessment of the underlying assets.	
	<i>Note: A Reporting Standard applied to specific assets must be used consistently.</i>	

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**SRK REPORT**

<b>Chapter 18</b>		<b>SRK</b>
18.33	A Mineral Company must ensure that:	
(1)	where estimates of Reserves are disclosed, the method and reason for choice of estimation are disclosed (i.e. deterministic or probabilistic methods, as defined in PRMS). Where the probabilistic method is used, the underlying confidence levels applied must be stated;	
(2)	if the NPVs attributable to Proved Reserves and Proved plus Probable Reserves are disclosed, they are presented on a post-tax basis at varying discount rates (including a reflection of the weighted average cost of capital or minimum acceptable rate of return that applies to the entity at the time of evaluation) or a fixed discount rate of 10%;	
(3)	Proved Reserves and Proved plus Probable Reserves are analysed separately and principal assumptions (including prices, costs, exchange rates and effective date) and the basis of the methodology are clearly stated;	
(4)	if the NPVs attributable to Reserves are disclosed, they are presented using a forecast price as a base case or using a constant price as a base case. The bases for the forecast case must be disclosed. The constant price is defined as the unweighted arithmetic average of the closing price on the first day of each month within the 12 months before the end of the reporting period, unless prices are defined by contractual arrangements. The basis on which the forecast price is considered reasonable must be disclosed and Mineral Companies must comply with rule 18.30;  <i>Note: In the forecast case under PRMS, the economic evaluation underlying the investment decision is based on the entity's reasonable forecast of future conditions, including costs and prices, which will exist during the life of the project.</i>	
(5)	if estimated volumes of Contingent Resources or Prospective Resources are disclosed, relevant risk factors are clearly stated;  <i>Note: Under PRMS, wherever the volume of a Contingent Resource is stated, risk is expressed as the chance that the accumulation will be commercially developed and graduate to the reserves class. Wherever the volume of a Prospective Resource is stated, risk is expressed as the chance that a potential accumulation will result in a significant discovery of Petroleum.</i>	
(6)	economic values are not attached to Possible Reserves, Contingent Resources or Prospective Resources; and	
(7)	where an estimate of future net revenue is disclosed, whether calculated without discount or using a discount rate, it is prominently disclosed that the estimated values disclosed do not represent fair market value.	
<b>18.34</b>	<b><i>Mineral or Petroleum Asset Valuation Reports</i></b>	Not applicable. This is not a mineral or petroleum asset valuation report.
18.34	A Mineral Company must ensure that:	
(1)	any valuation of its Mineral or Petroleum Assets is prepared under the VALMIN Code, SAMVAL Code, CIMVAL or such other code approved by the Exchange from time to time;	
(2)	the Competent Evaluator states clearly the basis of valuation, relevant assumptions and the reason why a particular method of valuation is considered most appropriate, having regard to the nature of the valuation and the development status of the Mineral or Petroleum Asset;	
(3)	if more than one valuation method is used and different valuations result, the Competent Evaluator comments on how the valuations compare and on the reason for selecting the value adopted; and	
(4)	in preparing any valuation a Competent Evaluator meets the requirements set out in rule 18.23.	



**CERTIFICATE AND CONSENT**

To accompany the report entitled Qualified Person’s Report for Songjiagou Gold Project, Shandong Province, People’s Republic of China (the “**SJG Project**”) and dated 30 June 2023,

I, Anshun Xu, do hereby certify that:

- 1) I am a Corporate Consultant in Geology and Mineral Resources, partner and director with the firm of SRK Consulting China Ltd. (the “**SRK**”) with an office at: B315 COFCO Plaza, 8 Jianguomennei Dajie, Beijing, the People’s Republic of China (the “**PRC**” or “**China**”).
- 2) I graduated with a Bachelor’s degree in Geology of Mineral Deposits from Nanjing University, China (B.Sc.) in 1982, a Master’s degree in Geology of Mineral Deposits from Chengdu University of Technology, China (M.Sc.) in 1988, and a Doctoral degree in Geology from University of Nebraska-Lincoln, USA (Ph.D.) in 1996. I have practiced my profession since 1982. From 1982 to 1990 I worked in teaching geochemistry and geology of ore deposits in Chengdu University of Technology. From 1990 to 1996, I worked in University of Nebraska-Lincoln in teaching and researching assistance; and from 1996 to 2004 I worked in Canadian mining companies, and since 2005 I worked in mining consulting business in SRK. I worked in exploration management, mineral resource estimates, and technical review and preliminary economic assessment and reporting for various types of mineral deposits, including iron, gold, silver, copper, nickel, cobalt, lead-zinc, diamond, bauxite, and others located in China, Canada, Mongolia, Kazakhstan, Indonesian, Philippines, North Korea, Congo (King), Cameron, Madagascar, and Peru, etc. I authored/co-authored several technical reports for [REDACTED] or transactions in the TSX/TSXV and The Stock Exchange of Hong Kong Limited.
- 3) I am a fellow of the Australasian Institute of Mining and Metallurgy (the “**FAusIMM**”) (No. 224861) since 2005, and in a good standing.
- 4) I have visited the subject property from 30 to 31 October 2012; on 11 April 2013, between 6 and 8 June 2018, between 14 and 16 November 2019, and between 24 and 26 July 2023.
- 5) I have read the definition of Qualified Person set out in National Instrument 43-101 and certify that by virtue of my education, affiliation to a professional association, and past relevant work experience, I fulfilled the requirements to be a Qualified Person for the purposes of National Instrument 43-101 and this technical report has been prepared in compliance with National Instrument 43-101 and Form 43-101F1.
- 6) I, as a Qualified Person, am independent of the issuer as defined in Section 1.5 of National Instrument 43-101.
- 7) I am a co-author and chief compiler of this technical report and have supervised the independent verification completed by SRK and the preparation of the mineral resource model described in Section 13, and Sections 20, 23, 24, and 25 of this technical report. I accept professional responsibility for those sections I co-authored.

- 8) I have had no prior involvement with SJG Project.
- 9) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.
- 10) SRK was retained by Persistence Resources Group Ltd (the “**Persistence Resources**”) to prepare a technical report about the SJG Project pursuant to Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1 guidelines. The preceding report is based on site visits, a review of project files, and discussions with Persistence Resources and Songjiagou mine’s personnel.
- 11) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the SJG Project or securities of Persistence Resources.
- 12) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Anson Xu, PhD, FAusIMM (#224861)  
Corporate Consultant (Geology)

To accompany the report entitled Qualified Person’s Report for Songjiagou Gold Project, Shandong Province, People’s Republic of China (the “**SJG Project**”) and dated 30 June 2023,

I, Yuanhai Li, do hereby certify that:

- 1) I am a Principal Environmental Consultant with the firm of SRK Consulting China Ltd. (the “**SRK**”) with an office at: B315 COFCO Plaza, 8 Jianguomennei Dajie, Beijing, the People’s Republic of China (the “**PRC**” or “**China**”).
- 2) I graduated with a Bachelor’s degree in Environmental Engineering from Tsinghua University, China (B.Sc.) in 1999, a Master’s degree in Structural Engineering from Shantou University, China (M.Sc.) in 2002, and a Doctoral degree in Environmental Engineering from Florida State University, USA (Ph.D.) in 2006. I am a Principal Environmental Consultant with SRK with over 19 years’ experience in the environmental engineering field. Since I graduated with a doctoral degree in Environmental Engineering from the Florida State University, I have worked in various environmental projects in New Jersey/New York area of USA, China, Mongolia, as well as South Asian Countries. I have particular expertise in environmental due diligence reviews, environmental compliance and impact assessments for mining, mineral processing, refining, smelting; and infrastructure/hydropower project. In addition, I have extensive experience in environmental engineering with a thorough knowledge of various environmental hazardous waste/solid waste issues, including contaminated site assessment, landfill closures/brownfield redevelopment, and contaminated site remedial designs. I also have a deep understanding of water/wastewater treatment design, water distribution systems, storm water management systems.
- 3) I am a member of the Australasian Institute of Mining and Metallurgy (the “**MAusIMM**”) (No. 314225) since 2013, and in a good standing.
- 4) I have visited the subject property between 6 and 8 June 2018.
- 5) I am a co-author of this technical report and prepared the Licences and Permits, and Environmental, Permit, Social and Community Impact described in Section 3, 18, 23, and 26 of this technical report. I accept professional responsibility for those sections I co-authored.
- 6) I have had no prior involvement with SJG Project.
- 7) I have read National Instrument 43–101 and confirm that this technical report has been prepared in compliance therewith.
- 8) SRK was retained by Persistence Resources Group Ltd (the “**Persistence Resources**”) to prepare a technical report about the SJG Project pursuant to Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1 guidelines. The preceding report is based on site visits, a review of project files, and discussions with Persistence Resources and Songjiagou mine’s personnel.

- 9) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the SJG Project or securities of Persistence Resources.
  
- 10) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Yuanhai Li, PhD, MAusIMM (#314225)  
Principal Environmental Consultant

To accompany the report entitled Qualified Person’s Report for Songjiagou Gold Project, Shandong Province, People’s Republic of China (the “**SJG Project**”) and dated 30 June 2023,

I, Lanliang Niu, do hereby certify that:

- 1) I am a Principal Consultant in Mineral Processing, working for SRK Consulting China Ltd. (the “**SRK**”) with an office at: B315 COFCO Plaza, 8 Jianguomennei Dajie, Beijing, the People’s Republic of China (the “**PRC**” or “**China**”).
- 2) I graduated with a Bachelor’s degree in Mineral Processing from Beijing University of Science & Technology in 1987. I have practiced my profession since 1983. From 1983 to 1995 I worked in technical research and consulting of gold industry in Rock and Mineral Test Centre of Henan Province. I am rewarded a Second Prize and a Third Prize of Ministry of Geology and Minerals of PRC for the significant contribution to development of geological technology practices on gold heap leach. From 1996 to 2005, I am engaged in mineral processing research on various minerals. From 2005 to 2007 I worked in a rare earth mine in Sichuan Province. Since 2007 I worked in mineral processing consulting business in SRK. I participated in more than a hundred projects in SRK.
- 3) I am a member of the Australasian Institute of Mining and Metallurgy (the “**MAusIMM**”) (No. 301789) since 2009.
- 4) I have visited the subject property from 6 to 8 June 2018, and from 14 to 16 November 2019.
- 5) I am a co-author of this technical report and prepared the section 15 of this technical report. I accept professional responsibility for those sections I co-authored.
- 6) I have had no prior involvement with SJG Project.
- 7) I have read National Instrument 43–101 and confirm that this technical report has been prepared in compliance therewith.
- 8) SRK was retained by Persistence Resources Group Ltd (the “**Persistence Resources**”) to prepare a technical report about the SJG Project pursuant to Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1 guidelines. The preceding report is based on site visits, a review of project files, and discussions with Persistence Resources and Songjiagou mine’s personnel.
- 9) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the SJG Project or securities of Persistence Resources.

- 10) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Lanliang Niu, MAusIMM (#301789)  
Principal Consultant (Mineral Processing)

As a co-author of the report entitled Qualified Person’s Report for Songjiagou Gold Project, Shandong Province, the People’s Republic of China and dated 30 June 2023,

I, Pengfei Xiao, do hereby certify that:

- 1) I am employed by, and carried out the assignment (Principal Geologist and Managing Director) for SRK Consulting China Limited (“**SRK**”) with an office at: B315 COFCO Plaza, 8 Jianguomennei Dajie, Beijing, 100005, the People’s Republic of China; Phone: 86-10-6511 1000, Fax: 86-10-8512 0385, Email: pxiao@srk.cn.
- 2) I graduated with a Bachelor’s degree in Geophysics in China University of Sciences (B.Sc.) in 2005, a Master’s degree in Solid Earth Physics and Mineral Exploration from China University of Sciences; Institute of Geology and Geophysics, China Academy of Sciences (M.Sc.) in 2008.  
I have been directly involved in mineral project evaluation for this type of gold mineralization for more than 12 years.
- 3) I am a Member with the Australasian Institute of Mining and Metallurgy since 2011 (**MAusIMM #307962**).
- 4) I have visited the subject property together with SRK team in October 2012; accompanying by client personnel in January 2013 and May 2018.
- 5) I have read the definition of “Competent Person” set out in HKEx listing rules and certify that by reason of my education, affiliation with a professional association (as defined in the listing rules) and past relevant work experience, I fulfil the requirements to be a “competent person” for the purposes of the technical report.
- 6) I have had no prior involvement with SJG Project; I have no interest, nor do I expect to receive any interest, either directly or indirectly, in the SJG Project, nor in the securities of the Company, or their subsidiary mining companies.
- 7) I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
- 8) I consent to the filing of the Technical Assessment Report with HKEx and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Pengfei Xiao  
Principal Consultant (Geology)

To accompany the report entitled Qualified Person’s Report for Songjiagou Gold Project, Shandong Province, People’s Republic of China (the “**SJG Project**”) and dated 30 June 2023,

I, Yonggang Wu, do hereby certify that:

- 1) I am a Principal Consultant in Mining Engineering with the firm of SRK Consulting China Ltd. (the “**SRK**”) with an office at: Room 1405-1, Investment Building, No. 66 East Yangming Road, Donghu District, Nanchang City, Jiangxi Province, the People’s Republic of China (the “**PRC**” or “**China**”).
- 2) I graduated with a Bachelor’s degree in Mining Engineering from Jiangxi University of Science and Technology, China (B.Eng.) in 2004, and a Master’s degree in Mining Engineering from Jiangxi University of Science and Technology, China (M.Eng.) in 2007. I joined SRK after graduation from Jiangxi University of Science and Technology in 2007. I have acquired specialised knowledge of mining engineering and MineSight software and has been involved in a large number of projects to date. Minerals involved include Au, Pb, Zn, Mn, Cu, Fe, fluorite, potassium salts, alum, phosphorus, and many more. I have accumulated extensive experience in mineral resource/reserve estimation, open pit limit optimisation and design, underground mining design, long-term production planning, and due diligence studies. I have expertise in geological and mining modelling and is proficient in using MineSight, AutoCAD, and other specialised software packages.
- 3) I am a member of the Australasian Institute of Mining and Metallurgy (the “**MAusIMM**”) (No. 320985) since 2015, and in a good standing.
- 4) I have visited the subject property from 6 to 8 June 2018, from 10 to 12 October 2020 and from 7 to 8 November 2021, and between 24 and 26 July 2023.
- 5) I am a co-author of this QPR and the preparation of the mineral reserve model described in Section 13, and Sections 14, 16, 17, 19 and 20 of this QPR. I accept professional responsibility for those sections I co-authored.
- 6) I have had no prior involvement with SJG Project.
- 7) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith.
- 8) SRK was retained by Persistence Resources Group Ltd (the “**Persistence Resources**”) to prepare a technical report about the SJG Project pursuant to Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1 guidelines. The preceding report is based on site visits, a review of project files, and discussions with Persistence Resources and Songjiagou mine’s personnel.
- 9) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the SJG Project or securities of Persistence Resources.



- 10) That, as of the date of this certificate, to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.

Yonggang Wu, MAusIMM (#320985)  
Principal Consultant (Mining)