

# Independent Technical Report of Songjiagou Gold Project, Shandong Province, the People's Republic of China

Report Prepared for

**Majestic Gold Corp.**



Report Prepared by

 **srk** consulting

SRK Consulting (China) Ltd.

SHK215

July 2013

Amended in Jan 2016

# Independent Technical Report of Songjiagou Gold Project Shandong Province, the People's Republic of China

## Majestic Gold Corp.

Suite 306-1688 152nd Street, Surrey, B.C. V4A 4N2 Canada  
Phone: +1-604-560-9060  
Fax: +1-604-560-9062

## SRK Consulting China Ltd.

B1205, COFCO Plaza, No.8 Jianguomen Nei Dajie, Dongcheng District, Beijing,  
China  
e-mail: china@srk.cn  
website: www.srk.cn  
Tel: +86 10 6511-1000  
Fax: +86 10 8512-0385

SRK Project Number : SHK215

Effective date: July 31, 2013  
Signature date: January 19, 2016

Compiled by:

Peer Reviewed by:



Anshun Xu, Ph.D., FAusIMM  
Corporate Consultant (Geology)



Peter Fairfield BEng, FAusIMM  
Principal Consultant (Project valuations)

### Project Team Members:

Hong Gao, Qiongxong Hu, Changmin Jiang, Yong Huang, Pengfei Xiao, Anshun Xu, Nan Xue, Yiwei Wu, Wanqing Zhang

## Important Notice

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# Executive Summary

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## Introduction

Yantai Zhongjia Mining Corporation Limited (“Zhongjia Mining”) own the Songjiagou Gold Mine (“Songjiagou mine”, “the Project” or “the Mine”) which is currently being exploited via both underground and open pit mining. The Project retains a mining license for a production capacity of 135 thousand tonnes (“kt”), an exploration license, and associated mineral processing plants.

The exploration and mining license holder – Zhongjia Mining is a 100% share owned subsidiary of Majestic Gold Corp (“Majestic”), a Canadian company listed and traded under the symbol of “MJS” on the Toronto Stock Exchange (“TSX”).

This independent technical report (“ITR”) was prepared by SRK at the request of Majestic, and consists of an independent review of the Project’s geology, exploration, mineral resources, mining, mineral processing, capital investment, operating cost, and environmental and social aspects. This report follows the guidelines of the Canadian Securities Administrators’ National Instrument (“NI”) 43-101.

## Property Description and Location

The Songjiagou Gold Property is situated in the eastern part of the Jiaobei Terrane and northeast margin of the Jiaolai Basin on the Shandong Peninsula, and is regarded as a conglomerate type gold deposit, associated with mesothermal filling activities followed by alterations and metasomatism.

Zhongjia Mining holds a mining license covering an area of 0.3421 square kilometres (“km<sup>2</sup>”) and an exploration license covering an area of 3.15 km<sup>2</sup>. The Project is centred at geographical coordinates 121°22’ East and 37°07’ North. No other organization holds financial property rights to the Project.

Zhongjia Mining operates the mineral exploration, mining license, and mineral processing in compliance with the relevant Chinese laws and regulations, and has been granted the following major operating licenses and permits: a business license, exploration license, mining license, safety production license, water usage license and gold exploitation permit.

## Accessibility, Climate, Local Resources, Infrastructure and Physiography

The Songjiagou Mine is located approximately 50 km south of downtown Yantai city, previously known to the West as “Chefoo”, an important coastal city in the well-developed eastern Shandong Peninsula of China. The 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 Project. Industry and agriculture are well developed in the area. Mining equipment and accessories are available in Yantai, as are workshops for mechanical maintenance. Materials such as cement, steel, wood, and chemical agent are generally purchasable in Yantai.

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

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

## History

The exploration license for the Songjiagou Prospect was initially granted to Yantai Muping Gold Mine on 28 October 2003 and renewed on 1 November 2005. On 30 December 2005 ownership of the exploration license was transferred to Zhongjia Mining. Zhongjia Mining renewed the exploration license in 2007, 2009, and 2011.

The area has been explored by various China geological teams since the 1960s, and such exploration was carried out according to Chinese national exploration standards.

- In February 1998, the *Geological Prospecting Report of Songjiagou Gold Mine, Mouping, Yantai, Shandong* was published and approved by the Yantai Bureau of Land and Resources.
- In 1998 the No. 3 Geological Mineral Resource Prospecting Institute of Shandong Province (“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”) of approximately 1.8 million tonnes (“Mt”) with an average grade of 6.8 grams per tonne (“g/t”) of gold. The exploration results were summarized in a report titled *Fayunkuang Gold Prospect in Muping District, Yantai City, Shandong Province*, submitted in October 2012.
- Between 1999 and 2003, the No. 3 Geological Institute was commissioned by Muping Gold to conduct general exploration in the Songjiagou area. Muping Gold completed 20 shallow drill holes, and carried out 1,600 m of induced polarization (“IP”) geophysical profiling that resulted in the identification of nine anomalies. Exploration works completed during this period also included geological mapping, magnetic surveying, trenching, and 14 drill holes with a total depth of 1,640 m and 2,860 m of underground workings.
- Exploratory mining of the deposit by Muping Gold commenced in 1997. Four levels have been developed, at elevations of +9 m, -40 m, -80 m, and -120 m ASL. Two parallel drifts about 300 m in length have been driven on each of the levels within the trend of the mineralization, and crosscuts have been established at 30 – 60 m intervals. Mining has been intermittent; most stopes were between 5 to 10 m in width.
- Since 2005, the Project has been exploited by open pit mining.

## Geological Setting and Mineralization

The Songjiagou Property 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 characterized by two major orogenies: 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; and the Yanshanian subduction of the Pacific Plate beneath Eurasia during the Middle Jurassic epoch.

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

The highest grades of gold mineralization are confined to relatively narrow although vertically and horizontally persistent zones. Gold mineralization is associated with sulphides. Mineralized 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 mineralization occurs in pyrite-sercite 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.

Songjiagou gold mine is a moderate temperature hydrothermal filling and metasomatic conglomerate type gold deposit. There is no clear boundary between wall rocks and ore. Therefore, chemical analysis is used.

## **Exploration**

The Songjiagou property has been fully prospected, with completed works including geophysics and geochemical studies, exploration, geological mapping, surveying, trenching, underground channelling, and drilling.

## **Drilling**

A total of 96 diamond drill holes have been completed since 2005, including 19 underground drill holes with a total depth of 2,170.1 m, and 77 surface drill holes with an aggregate depth of 19,943.4 m. Drilling was conducted by the No. 3 Geological Institute, using mostly HQ and some NQ sized drill rods. More than half of the holes were drilled with a dip of approximately -60° or -45° to the northwest, and a few of them were drilled vertically on the ground (dip angle -90°).

A total of 46 trenches with an aggregate length of 3,628.5 m were excavated by Zhongjia Mining in 2007. Trench sections were trapezoidal with upper width of approximately 1.2 m and bottom width no less than 0.8 m.

A total of 85 underground channels have been completed at 9 m, -40 m, -80 m, and -120 m ASL, from which 1,449 channel samples were collected. The data from these underground channel samples were compiled by Zhongjia Mining.

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.

## **Sample Preparation, Analyses, and Security**

Samples related to resource statement in this Report were derived from exploration conducted between 2005 and 2007.

Sampling was completed by No. 3 Geological Institute or Majestic staff under supervision of a Qualified Person (“QP”) from Majestic. Samples were logged and prepared to rock chips at the Project site and then shipped to the SGS Laboratory (“SGS”) in Tianjin, China. Samples were analyzed by SGS 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 cores were logged by No. 3 Geological Institute and Majestic staff; and core samples were obtained by sawing 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 10 cm × 5 cm and a basic sample length of 1 m.

Underground channel sampling was conducted by Zhongjia Mining. 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 (“SG”) samples were collected and analyzed by No. 3 Geological Institute. Density, humidity, and gold grade were determined.

It is unknown whether there any quality assurance and quality control (“QA/QC”) program was conducted on the exploration prior to 2007. However, the previous technical report and resource estimation were prepared by Wardrop Engineering Inc. (“Wardrop”) in accordance with NI 43-101, and as reported by Zhongjia Mining, a QP was responsible for the exploration. In addition, the previous exploration has been summarized in a report prepared in compliance with Chinese exploration standard by No. 3 Geological Institute; in order to comply with such standards an internal laboratory check and an external check with pulp duplicates are obligatory.

In the opinion of SRK, the sampling preparation, security, and analytical procedures performed from 2005 – 2007 for the Songjiagou Property are consistent with generally accepted industry practices and are therefore adequate.

## Data Verification

The exploration data used for resource estimation in this Report was compiled by Majestic; most it was previously used by Wardrop in preparation of the preliminary economic analysis (“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 Majestic against assay reports issued by SGS.

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 was partly inspected by SRK.

SRK collected a random group of field samples within the current open pit during the site visit; plus three additional samples, one each from feed processing, concentrate, and tailings. The samples randomly collected by SRK were prepared and analyzed by the Intertek Laboratory in Beijing (“Intertek”). The results of this random check verified that the gold mineralization is distributed broadly within the Linsishan Formation conglomerate with gold (“Au”) grades varying from 0.1 g/t up to several grams per tonne of gold.

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

In general there are noticeable discrepancies between coarse rejects and the original assays. Approximately half of the comparable results have a relative deviation within a range of -20% to 20%, and remaining 50% show relatively large deviations. Since the Songjiagou gold mineralization is generally greater than 0.3 g/t Au, the discrepancies discovered in the coarse reject assays are considered reasonable overall considering the

style of mineralization. To further verify this, SRK suggests that consideration is given to revisiting the sample preparation to ensure all processes were compliant with QA/QC protocols.

## Mineral Processing and Metallurgical Testing

There are three processing plants operating in Songjiagou mine. Two processing plants with a capacity of 200 tpd and 1,200 tpd commenced operations in 2006; another processing plant, with a capacity of 6,000 tpd, was put into production in May 2011. The current processing capacity of Songjiagou gold mine is 7,400 tonnes per day (“tpd”). The 200 t/d processing plant is fed from underground mining inventory, while the other two plants are fed with mining inventory from open pit mining.

Yantai Jinyuan Mining Machinery Co. Ltd. Metallurgical Laboratory (“Jinyuan Metallurgical Laboratory”) conducted a preliminary flotation test. The mined material grading 0.68 g/t Au is ground to 52% passing 200 mesh (74 µm). Sodium butyl xanthogenate (SBX”) was employed to collect gold and gold bearing minerals, and No 2. oil (mainly terpenic oil) was employed as a frother. The flowsheet adopted employed one stage of roughing, two stages of scavenging, and one stage of cleaning, and produced concentrate grading 22.5 g/t Au at a recovery rate of 92.9%. The test indicators prove that Songjiagou ore has relatively simple characteristics and good floatability.

The Songjiagou processing plant technology includes conventional three-stage crushing within a closed circuit, grinding within a closed circuit, and flotation consisting of one stage of roughing, one stage of cleaning, and two stages of scavenging. From 2008 to 2012, a total of 2,776,700 tonnes (“t”) of materials grading 0.30 g/t were produced from open pit and were handled by the 1,200 tpd plant and the 6,000 tpd plant; the concentrate produced has a grade of 23.66 g/t Au, and the gold recovery rate was 83.44%.

## Mineral Resource Estimation

SRK converted the database provided by Majestic into CSV format, validated the database, and removed repeated samples. The database used for the resource estimation consists of 227 geological engineering works including 77 drill holes, 46 trenches, and 104 underground engineering (include tunnels and drill holes). Appendix B provides detailed information for all geological engineering works.

The database contains 20,836 gold samples in total, including 13,316 from drill holes, 3,221 from trenches, and 4,299 from underground engineering. The maximum gold grade is 263.09 g/t and the average gold grade is 0.54 g/t prior to grade capping.

The topographic model was converted from the topographic survey map conducted in January 2013. The block model used equally-sized blocks for modelling and has been rotated 45°. Grade interpolation was done using Ordinary Kriging.

As of 31 January 2013, at a cut-off grade of 0.3 g/t Au, within the optimized open pit (also within mining license and exploration permit), the Songjiagou Project contains 26.6 million tonnes of Indicated Mineral Resources at an average gold grade of 1.40 g/t, and 23.4 million tonnes of Inferred Mineral Resources at an average gold grade of 1.45g/t. In addition to the open pit resource, the underground gold resources contain 5.6 million tonnes Inferred Resources grading 2.56 g/t, at a cut-off grade of 0.8 g/t.

*It should be pointed out the resource estimate is categorized as Indicated and Inferred as defined by the CIM guidelines for resource reporting. Mineral resources do not demonstrate economic viability, and there is no certainty that these mineral resources will be converted into mineable reserves once economic considerations are applied. The Indicated and Inferred mineral resource estimate has been prepared in compliance with the standards of NI 43 – 101 by Anshun Xu, Ph.D., FAussIMM.*

*Please note that the historical underground production from 2006 to January 2013 has been excluded from the resource statements.*

## **Mineral Reserves Estimation**

There is no mineral reserve statement in the report, because there is not any prefeasibility study or feasibility study done on the project.

## **Mining**

Songjiagou Mine is currently in production, with a mining capacity of 5,000 to 10,000 tpd.

Mining activities have been outsourced to Dahedong Mineral Processing Co., Ltd (“Dahedong”), and mining equipment is also being supplied by the contractor.

Road development and truck transport are adopted to transport the mining inventory from the mine to the processing plants, a distance of approximately 4 km.

Major mining technologies include hole boring, blasting, secondary crushing, and loading and transport.

Waste benches are 10 m high, and ore benches are 5 m high. Benches are combined in pairs for mining so the final bench height reaches 10 m. The overall pit slope is 48°.

The mine is scheduled to operate 330 days per year, 3 shifts per day and 8 hours per shift.

SRK was requested to conduct a preliminary economic assessment (“PEA”) of developing the project. In the assessment, MineSight Economic Planner (Design) was used for pit optimization, using Lerchs-Grossmann (“LG”) calculations to maximize the net present value (“NPV”).

Three scenarios for the ultimate pit shells were produced and have been studied in the Preliminary Economic Analysis (“PEA”).

*It should be pointed out that a preliminary economic assessment (“PEA”) should not be considered to be a prefeasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

*Please note that the historical underground production from 2006 to January 2013 has been excluded from the resource statements in following studies.*

### **Scenario 1 (Base Case)**

In Scenario 1, only the Indicated mineral resource was used for the pit optimization and design, trying to study the most practical case by using the current resource basis.

The ultimate pit’s maximum length along the east-west axis is 660 m, and the maximum width along the north-south axis is 600 m. The highest elevation of benches is 140 m and the lowest is -125 m. At a bench height of 10 m, there will be a total of 27 benches within the pit.

Haulage roads are arranged in a spiral at a gradient of 1:10. The haulage distance from the pit bottom to the pit access is 2,227 m.

***Despite the limitations imposed by the current mining license***, as of 31 January 2013, at a cut-off grade of 0.3 g/t Au, the Songjiagou Project contains 17,200 kt of resources at an average gold grade of 1.34 g/t and 57,899 kt of waste (including 10,128 kt of Inferred mineral resources at 1.25 g/t Au), and will have an average stripping ratio of 3.37 tonnes of waste per tonne of mining inventory (“t/t”), Inferred resource plus waste rock to Indicated resource.

According to the preliminary production schedule, the Scenario 1 will have a life of mine (“LOM”) of seven years of stable production with a capacity of 7,400 tpd.

The Scenario 1 is deemed as a base case. *It should be pointed out that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

## **Scenario 2**

In Scenario 2, all of the mineral resources have been considered for the pit optimization, while the removal of the two villages near the mine was not considered, trying to study the maximum potential of the development without the removal of villages.

The ultimate pit’s maximum length along the east-west axis is 730 m, and the maximum width along the north-south axis is 640 m. The highest elevation of benches is 140 m and the lowest is -145 m. At a bench height of 10 m, there will be a total of 29 benches within the pit.

Haulage roads are arranged in a zigzag spiral, mainly in the north of the ultimate pit, in order to reduce the amount of inventory locked underground. At a gradient of 1:10, the haulage distance from the pit bottom to the pit access is 2,513 m. The road turns back at an elevation of 5 m.

As of 31 January 2013, at a cut-off grade of 0.30 g/t Au, within the Scenario 2 ultimate pit, there are 19,076 kt of Indicated Resources with an average grade of 1.32 g/t Au and 13,598 kt of Inferred resources with an average grade of 1.37 g/t Au, as well as 65,394 kt of waste. The average stripping ratio is 2.00 t/t of the waste rock to mining inventory.

According to preliminary production schedule, Scenario 2 will have a LOM of 11 years with a capacity of 10,000 tpd, including one year of construction, nine years of stable production and one year of production reduction.

*It should be pointed out that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

## **Scenario 3**

In Scenario 3, all of the mineral resources have been considered for the pit optimization, and the removal of the two villages near the mine was also considered, to estimate the maximum potential of the development with the removal of villages.

The ultimate pit's maximum length along the east-west axis is 830 m, and the maximum width along the north-south axis is 850 m. The highest elevation of benches is 140 m and the lowest is -190 m. At a bench height of 10 m, there will be a total of 33 benches within the pit.

Haulage roads are arranged in a zigzag spiral, mainly in the north of the ultimate pit, in order to reduce the amount of inventory locked underground. At a gradient of 1:10, the haulage distance from the pit bottom to the pit access is 2,983 m. The road turns back at elevations of -25 m and -85 m.

As of 31 January 2013, at a cut-off grade of 0.30 g/t Au, within the ultimate pit, there are 26,284 kt of Indicated Resources with an average grade of 1.35 g/t Au and 22,927 kt of Inferred Resources with an average grade of 1.40 g/t Au, as well as 147,507 kt of waste. The average stripping ratio is 3.00 t/t of the waste rock to mining inventory.

According to preliminary production schedule, Scenario 3 will have a LOM of 13 years with a capacity of 12,000 tpd, including one year of construction, eleven years of stable production, and one year of production reduction.

*It should be pointed out that a preliminary economic assessment ("PEA") should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

## **Project Infrastructure**

Yantai city, which hosts a railway station, port, and airport, is less than 50 km straight line distance from the Project area. The Project is also about 40 km northeast of the downtown Muping District, 8 km north of the Provincial Road 304, 11 km south of State Highway 309, and 1.5 km east of a county road which connects the mine with the nearby cities. The Project area is easily accessible via currently developed roads, which are generally in good condition.

Electrical power for the mine is supplied by a local 10 kV electrical line and standby 120 kW diesel generators. Power for the processing plants is sourced from the 35 kV/10.5 kV substation in Dahedong Village, Wanggezhuang Town, 5 km away from the mine, over dedicated lines km.

Water for industrial and domestic use in the mine is supplied by the Rushanhe River, which passes 10 km east of the Project area. A large well (6 m diameter and 8 m deep) on the bank of Songjiaohe River in Jincheng Village, which is about 2 km west of the processing plant, supplies water for the plant's production demands. Water for domestic use is sourced from a local ground water.

The Project area enjoys a well-developed communications system; a wireless network, cable network, and fixed-line telephone network already in operation.

Infrastructure at the Songjiagou Project is in good condition. A new office building was constructed in 2012 and has already been put into use.

## **Market Studies and Contracts**

Mining (including underground and open-pit) and processing operations for the Songjiagou Mine are contracted out to Dahedong Mineral Processing Co., Limited. The mining equipment is provided by Dahedong.

The product from the mine is gold concentrate. Shandong Humon Smelting Co., Ltd. (“Humon Smelting”) is contracted to smelt the gold concentrate.

## **Environmental, Social, and Health and Safety Impact**

SRK has sighted the following environmental documentations for the Songjiagou Project:

- The environmental impact assessment (“EIA”) report for Yantai Zhongjia Mining Co., Ltd’s Songjiagou Gold Mine Project (0.135 Mtpa); and
- The water and soil conservation plan (“WSCP”) report for Yantai City Muping District Songjiagou Mining and Processing Project.

No EIA reports or approval for the 1,200 tpd or 6,000 tpd processing plants have been sighted as part of this review.

No Environmental Final Check and Acceptance (“FCA”) Approvals for the Songjiagou Project have been sighted at the time of this site visit.

SRK has sighted the Safety Final Check and Acceptance Assessment Report for the Songjiagou Gold Mine Open Pit Project, which was produced by Shandong Shengtai’an Safety Assessment Company in October 2012.

SRK has not sighted the approval by the relevant safety bureau for the above assessment report. No other safety assessment reports or approvals in relation to the tailings storage facility (“TSF”) have been sighted as part of this review.

At the time of the 2012 site visit, the open pit of Songjiagou Mine was generally being developed and operated in accordance with the Project EIA’s approval conditions.

It is SRK’s opinion that the environmental and social risks for the Project can be generally managed if Chinese environmental standards and regulatory requirements are followed.

In summary the most significant environmental risks for the development of the Songjiagou Project, currently identified as part of the project assessment and in this review, are:

- Significant land disturbance, and site rehabilitation and site closure requirements;
- Poor waste rock dump and TSF management; and
- Poor water management.

The above inherent environmental risks are categorised as moderate/low risks (i.e., requiring risk management measures).

SRK has reviewed the Safety Assessment Reports as provided by the Songjiagou Mine and is of the opinion that the reports cover items that are generally in line with recognised Chinese industry practices and Chinese safety regulations.

The operational occupational health and safety (“OHS”) management system/procedures for the Songjiagou Project have been developed. The OHS management system/procedures cover the basic safety production managements for drilling, transportation, boiler management, ventilation, explosives storage, and fire and flood prevention. However, SRK observed that the above OHS management system/procedures were developed based on the previous underground mining operations. The safety assessment report for the Songjiagou Project does provide additional safety management measures including measures related to open

pit mining, flood and fire prevention, explosion, and transportation. SRK notes that these proposed safety management measures could be the basis for the operational OHS management system/procedures.

SRK has not sighted, as part of this review, any operational OHS records for the current operations of the Songjiagou Project.

### Capital Cost and Operating Cost

As of the beginning of 2012, the total historical investment in the Songjiagou Mine was RMB 382 million (“M”). The total historical investment composition is shown in Table ES-1.

**Table ES-1 Historical Investment Composition**

No.	Item	Cost (RMB K)
1	Exploration, feasibility study design and governmental approval	
1.1	Exploration	5,234
1.2	Feasibility study, engineering design and technical services	1,216
1.3	Approval of mining licenses	358
2	Mining and processing facilities	
2.1	Power stations and power supply lines	12,809
2.2	Water supply	18,052
2.3	Road construction	1,988
2.4	Processing facilities	82,656
2.5	Processing workshop	52,790
2.6	Tailings storage facilities	35,450
3	Ancillary facilities	
3.1	Camp facilities	27,788
3.2	Mining office	913
3.3	Laboratory	753
3.4	Warehouse	469
3.5	Temporary accommodation	111
3.6	Diesel generator	124
4	Land lease and relocation	
4.1	Open pit	12,734
4.2	Waste dump	41,630
4.3	Processing plant and tailings pond	69,000
4.4	Relocation and community relations	17,800
5	<b>Total</b>	<b>381,876</b>

The following parameters in Table ES-2 are used to estimate the operating cost in this preliminary economic analysis (“PEA”).

**Table ES-2 Summary of Operating Cost**

Item	Unit	Cost
Mining cost	RMB/t	11.3 (increase by RMB 0.3/t annually)
Stripping cost	RMB/t	8.55(increase by RMB 0.3/t annually)
Processing cost	RMB/t	47.46
Administration cost	RMB/t	4.5
Resource tax	RMB/t	5
Mineral resource compensation fee	%	4% of selling income
Smelting cost	RMB/t	100

## Preliminary Economic Analysis

In the PEA, the gold price used was the average gold price over the past five years, i.e. RMB 273.89/g, or USD 1,355/oz. It is also assumed that the previous investment into the project will not be recovered. The year 0 is 2013 in the study.

*It should be pointed out that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

The results from the three scenarios are summarised in Table ES-3.

**Table ES-3 Summary of Scenarios**

Item	Unit	Scenario 1	Scenario 2	Scenario 3
Indicated Resources	kt	17,094	19,076	26,284
Indicated Resource Grade	g/t Au	1.36	1.32	1.35
Inferred Resources	kt		13,598	22,927
Inferred Resource Grade	g/t Au		1.37	1.40
Stripping Ratio	t/t	3.26	2.0	3.0
Mining Recovery	%	95	95	95
Mining Dilution	%	5	5	5
Dilution Grade	g/t Au	0.12	0.12	0.12
Smelting recovery	%	93	93	93
NPV @ 10%	RMB M	2,107	3,437	4,663
	USD M	335	547	742
NPV @ 7%	RMB M	2,221	3,796	5,253
	USD M	353	604	836
NPV @ 12%	RMB M	2,039	3,229	4,332
	USD M	325	514	689

### Scenario 1

The mining inventory only considered Indicated mineral resources.

A total of 17,094 kt of mining inventory at average gold grade of 1.36 g/t has been considered in the conceptual design; 55,799 kt of waste is expected to be stripped at an average stripping ratio of 3.26 t/t.

The mining recovery is 95% and the dilution is 5%. The grade of the dilution material is 0.12 g/t Au. The processing recovery depends on the feed grade. If the average feed grade is greater than 1.00 g/t Au, 95% of the Au can be recovered. The gold smelting recovery is 93%. The saleable metal is estimated as 20,441 kg, or about 657 thousand ounces (“koz”).

The after-tax net present value (“NPV”) at a discount rate of 10% is estimated as RMB 2,107 M, or about USD 335 M, and the NPVs will be RMB 2,221 M, or about USD 353 M at 7% and RMB 2,039 M or about USD 325 M at 12%.

## **Scenario 2**

Both Inferred resources and Indicated resources were considered in the mining inventory.

A total of 19,076 kt of Indicated Resources with an average grade of 1.32 g/t Au and 13,598 kt of Inferred resources with an average grade of 1.37 g/t Au, as mining inventory have been considered in the conceptual design; the expected volume of waste stripping is 65,394 kt at an average stripping ratio of 2.00 t/t.

The mining recovery is 95% and the dilution is 5%. The grade of the dilution material is 0.12 g/t Au. The processing recovery depends on the feed grade. If the average feed grade is greater than 1.00 g/t Au, 95% of the Au can be recovered. The gold smelting recovery is 93%. The saleable metal is estimated as 38,584 kg, or about 1,241 koz.

The after-tax net present value (“NPV”) at a discount rate of 10% is estimated as RMB 3,437 M, or about USD 547 M, and the NPVs will be RMB 3,796 M, or about USD 604 M at 7% and RMB 3,229 M or about USD 514 M at 12%.

## **Scenario 3**

Inferred resources as well as Indicated resources are considered in the mining inventory.

A total of 26,284 kt of Indicated Resources with an average grade of 1.35 g/t Au and 22,927 kt of Inferred Resources with an average grade of 1.40 g/t Au, as mining inventory have been considered in the conceptual design; the expected volume of waste to be stripped is 147,507 kt, and the average stripping ratio is 3.00 t/t.

The mining recovery is 95% and the dilution is 5%. The grade of the dilution material is 0.12 g/t Au. The processing recovery depends on the feed grade. If the average feed grade is greater than 1.00 g/t Au, 95% of the Au can be recovered. The gold reclamation ratio of the concentrate is 93%. The salable metal is estimated as 59,632 kg, or about 1,917 koz.

The after-tax NPV at a discount rate of 10% is estimated as RMB 4,663 M, or about USD 742 M, and the NPVs will be RMB 5,253 M, or about USD 836 M at 7% and RMB 4,332 M or about USD 689 M at 12%.

Sensitive analysis shows that the changes of gold price will affect the NPV of the project most significantly. Table ES-4 summarizes the changes of NPVs at 10% discount rate against the change of gold prices.

**Table ES-4: NPVs<sub>10</sub> Vs. Changes of Gold Price for Songjiagou Project (RMB Million)**

Scenario	-20%	-10%	Base Case	10%	20%
	US\$1,084/oz	US\$1,220/oz	US\$1,355/oz	US\$1,490/oz	US\$1,626/oz
Scenario 1	1,460	1,784	2,107	2,431	2,755
Scenario 2	2,385	2,911	3,437	3,963	4,489
Scenario 3	3,182	3,923	4,663	5,404	6,144

## Recommendations

### Geology

The mine is located in the Mouping-Rushan gold belt with good mineralization conditions, and Inferred mineral resources account for approximately 55% of the total resource at a cut-off grade of 0.3 g/t Au. SRK recommends enhancing exploration throughout the production period, by step-out drilling within the exploration licensed area, to upgrade the resource category and reduce mining risk.

### Mining

There is insufficient data to support the design of the overall slope and the bench face angle. SRK suggests that slope stability monitoring should be enhanced, and a rock mechanics study should be carried out as soon as possible to finalize these parameters, in order to guarantee production safety.

The optimized pit limits are outside the borders of the current mining license. The actual mining capacity is beyond the permitted capacity. The mine is considering apply for a mining license with larger scope and capacity. To ensure that the mine is operated in compliance with related laws and regulations, the mine should appoint a qualified design institute to prepare a feasibility study for large-scale production as soon as possible, and then submit it to the relevant authorities for approval. Applications for a large scope and capacity mining license and other supporting permits in accordance with local laws and regulations should be prepared.

All the mining activities have been outsourced and the mining equipment is provided by contractors. It is suggested that equipment types and quantities should be determined in feasibility study stage to match the production capacity for the large-scale production.

Daily production fluctuates significantly. SRK recommends optimizing a detailed schedule during the feasibility study stage so it can be used to guide production and mining fleet selection.

The existing waste dump associated with small-scale production is not currently in use. According to the mine plan, waste will be transported to the waste dump after the new laboratory construction and grade control improvement. Based on the preliminary ultimate pit design results, the current waste dump is not large enough to accommodate all the waste from the ultimate pit. SRK suggests standardizing sampling, optimizing assay methods, and improving grade control methods. Location selection, land acquisition and design for a large enough dump also should be carried out as soon as possible.

As the mine is adjacent to two villages, the open pit blasting work should at all times be designed and carried out in strict compliance with all relevant standards, and safety management procedures. SRK recommends taking all necessary shielding measures to protect the workshop, equipment and residential houses near the blasting site, such as constructing anti-blasting embankments, wave walls and protective barriers. If necessary, the mine should inform all villagers who might be affected prior to blasting, so that they can be evacuated to a safe place.

Any issue regarding village relocation and resettlement may have great impact on production schedule and cause certain influence on its profitability. It is recommended that this issue should be carefully studied in feasibility study stage.

SRK also recommends improving organizational structure, introducing geology, mining, surveying and processing professionals and technical personnel, strengthening production management and technical services, so that production can be standardized and operating costs can be reduced.

### **Mineral Recovery**

SRK recommends conducting a mineral processing test and flowsheet optimization to further increase the gold recovery and upgrade gold processing profit.

The capacity of the current tailings storage facility (“TSF”) is insufficient for the current Scenarios. SRK recommends that conducting an optimization study and design of tailings stack pattern; location selection, land acquisition, engineering design and construction of associated facilities for alternative TSF options should be done as soon as possible to ensure effective operation of the mine.

### **Mine Rehabilitation**

SRK recommends conducting detailed land rehabilitation study during feasibility study stage, drawing on the operational experiences of similar and/or nearby mines to determine an appropriate rehabilitation plan and submitting it to the relevant authorities for approval.

SRK also recommends setting up a rehabilitation department to implement the plan and collect and allocate the funds.

### **Capital Investment and Operating Cost**

The unit operating cost is defined by the feed grade in the current contract; SRK recommends breaking down the unit operating cost into inventory mining, waste mining (stripping), mineral processing and administration costs.

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# 1 Introduction and Terms of Reference

Yantai Zhongjia Mining Corporation Limited (“Zhongjia Mining”) possesses the Songjiagou Gold Mine (“SJG”, “Songjiagou Mine”, “the Project” or “the Mine”), which is currently being exploited by both underground and open pit mining. The project retains a mining license for a production capacity of 135 thousand tonnes (“kt”), an exploration license, and associated mineral processing plants.

The exploration and mining license holder, Zhongjia Mining, is a wholly-owned subsidiary of Canadian Majestic Gold Corp (“Majestic”), a Canadian company listed and traded under the symbol of “MJS” in Toronto Stock Exchange.

In September 2012, Majestic commissioned SRK to visit the property and prepare an independent technical report (“ITR”) for the SJG Project in operation.

This Technical Report documents the review and assessment of project’s geology, exploration, mineral resource, mining, mineral recovery, investment cost and operating cost, environmental and social aspects prepared by SRK. It was prepared following the guidelines of the Canadian Securities Administrators’ National Instrument (“NI”) 43-101 and Form 43-101F1. The mineral resource statement reported herein was prepared in conformity with generally accepted Canadian Institute of Mining, Metallurgy, and Petroleum’s (“CIM”) “Estimation of Mineral Resources and Mineral Reserves Best Practice Guidelines.”

## 1.1 Scope of Work

The scope of work, as defined in a letter of engagement executed in 24 September 2012 between Majestic and SRK, includes the construction of a mineral resource model for the gold mineralization delineated by drilling on the Songjiagou Project and the preparation of an independent technical report in compliance with National Instrument 43-101 and Form 43-101F1 guidelines. This work typically involves the assessment of the following aspects of this 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
- Preliminary economic analysis.

## 1.2 Work Program

The mineral resource statement reported herein is a collaborative effort between Majestic and SRK personnel. The exploration database was compiled and maintained by Majestic, and was reviewed by SRK.

The geological model and outlines for the Songjiagou mineralization were constructed by SRK based on the exploration database provided by Majestic. In SRK’s opinion, the geological model is a reasonable representation of the distribution of the targeted mineralization at the current level of sampling. The geostatistical analysis, variography and grade models were completed by SRK from February 2013 to March 2013.

The mineral resource statement reported herein was prepared in conformity with generally accepted CIM “Exploration Best Practices” and “Estimation of Mineral Resource and Mineral Reserves Best Practices”

guidelines. This technical report was prepared following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1.

### 1.3 Basis of Technical Report

This report is based on information collected by SRK during site visits performed between 9 and 11 October 2012 and 23 – 30 November 2012 and on additional information provided by Majestic 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 Majestic. This technical report is based on the following sources of information:

- Discussions with Majestic personnel;
- Inspection of the Songjiagou Project area, including outcrops, drill cores, open pit, pit benches, waste dump, processing plant, and tailings storage facilities;
- Review of exploration and geological data provided by Majestic;
- Data verification, including re-sampling and re-assaying of duplicates and verification drilling; and
- Additional information from public domain sources.

### 1.4 Qualifications of SRK and SRK Team

The SRK Group comprises over 1,600 professionals, offering expertise in a wide range of resource engineering disciplines. The SRK Group'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 Group has also worked with a large number of major international mining companies and their projects, providing mining industry consultancy service inputs.

The mineral resource evaluation work and the compilation of this technical report were completed by Mr Qingxiong Hu, and Mr Pengfei Xiao (MAusIMM) under the supervision of Dr Anshun Xu (FAusIMM). By virtue of their educations, membership in a recognized professional association, and relevant work experience, Dr. Anshun Xu is an independent Qualified Person as this term is defined by National Instrument 43-101.

Mr. Yong Huang (MAusIMM) and Mr. Wanqing Zhang (MAusIMM) reviewed the mining operation, and conducted the mining engineering studies. Mr. Fairfield reviewed the studies and is the Qualified Person on the engineering study of the PEA.

The processing and environmental/social reviews were completed by Ms Yiwei Wu and Mr Hong Gao (MAusIMM) and Mr Nan Xue (MAusIMM).

Mr Peter Fairfield (B.Eng, FAusIMM), SRK Principal Consultant, peer reviewed this report before its submission to Majestic. Mr. Fairfield is the Qualified Person on the engineering study of the PEA.

The short bios of key SRK project team members are given as below:

**Anshun Xu (Anson), PhD (Geology), FAusIMM**, is a Corporate Consultant (Geology) who specializes in the exploration of mineral deposits. He has more than 20 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 resource estimations of several diamond deposits, and for reviews of resource estimations of several gold deposits. He recently managed and completed many due diligence jobs and technical reports for clients from both China and overseas, including technical reporting projects such as Canadian NI43-101 reports and Hong Kong Exchanges and Singapore Exchanges IPO technical reports, which include resource estimate, mineral reserve conversion and economic analysis. Dr. Xu is the Qualified Person of the report.

**Yong Huang, Mining Engineer, PRC Registered Reserve Appraiser**, is a Principal Consultant (Mining). He has over 25 years' experience in mine design, mine exploration and mine consulting. His experience and expertise cover mining operations for precious metals, base metals and other non-ferrous metal deposits under various mining conditions. Yong Huang's other experience includes reserve estimation and on-site management. He has specific expertise in mining scheduling and modelling.

**Peter Fairfield, B.Eng, FAusIMM**, is a Principal Consultant (Mining) with SRK Australasia. He is a mining engineer with over 23 years' experience in operations management and providing technical and operational service and support. He has a strong technical background, having worked in underground metal mines throughout Australia and the United States. Peter has a demonstrated ability to build and manage cross-functional teams to deliver project outcomes, with extensive experience in project evaluation across all levels of the project pipeline. He has held positions including General Manager Technical Services for an Australian gold producer, Manager Mining for a major Australian mining company and Senior Mining Engineer for an Australian mining consultancy.

## 1.5 Site Visits

Mr Anshun Xu, Hong Gao and Pengfei Xiao, Wanqing Zhang and Nan Xue visited the Songjiagou project site between 30 and 31 October 2012, accompanied by personnel of Majestic. The visit covered open pit, exploration site, processing plant, core storage and laboratory. Mr. Yong Huang visited the property several times in 2012 and 2013.

The second site visit, between 23 and 30 November 2012, covered the technical reviewing of mining, processing, licensing/permitting, and environmental and social aspects.

The purpose of the site visits was to review the digitalization 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 project personnel, and collect all relevant information for the preparation of a revised mineral resource model and the compilation of a technical report. During both visits, particular attention was paid to the treatment and validation of historical drilling data.

The site visits also aimed at investigating the geological and structural controls on the distribution of the gold mineralizations in order to aid the construction of three dimensional ("3D") gold mineralization domains.

SRK was given full access to relevant data and conducted interviews with Majestic 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.

Mr Pengfei Xiao also visited the 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.

## **1.6 Acknowledgement**

SRK would like to acknowledge the support and collaboration provided by Majestic personnel for this assignment. Their collaboration was greatly appreciated and instrumental to the success of this project.

## **1.7 Declaration**

SRK's opinion, contained herein and effective 31 January 2013, 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.

This report 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.

SRK is not an insider, associate, or an affiliate of Majestic, and neither SRK nor any affiliate has acted as advisor to Majestic, its subsidiaries or its affiliates in connection with this 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.

## 2 Reliance on Other Experts

SRK trusts the information from Majestic regarding mine ownership, legal and financial liability. SRK did not carry out independent validation of the information regarding land ownership and use rights summarized in Chapter 3 of this report. 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 the Client. SRK was informed by Majestic that there are no known litigations potentially affecting the SJG Project.

Majestic 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 resource estimation has been validated and was collected and built in a professional manner.

The topography used in calculating the mineral resource statement in this report relies on the topographic survey map dated January 2013 provided by Majestic. SRK trusts the results of this survey.

### 3 Property Description and Location

The name of the Songjiagou Mine is derived from Songjiagou village where it is located, approximately 37 km southwest of Muping District, Yantai city, Shandong Province, in eastern China (Figure 3-1).

The Songjiagou Project is comprised of a mining license covering an area of 0.3421 square kilometres (“km<sup>2</sup>”) and a mineral exploration license covering 3.15 km<sup>2</sup>. The geographical coordinates of the Project site are centred at approximately 121°22' East longitude and 37°07' North, and detailed coordinates can be found in the copies of the licenses attached in Appendix A.



Figure 3-1: Location and Access of the Project

Title to the two licenses is solely held by Zhongjia Mining, a wholly-owned subsidiary of Majestic. Other than the shared ownership, there are no known financial encumbrances relating to the Project; and SRK has been advised that there are no external disputes regarding Zhongjia Mining’s mining and exploration licenses.

The SJG Project’s production originates from an open pit, which is currently in operation at a nominally permitted production rate of 135,000 tonnes per annum (“tpa”), associated with a processing plant of corresponding capacity. With atwo additional processing plants, the total processing plant capacity is 7,200t/day, and the application for a mining license with a much larger production rate is in progress.

#### 3.1 Mineral Tenure

The current mining license of Songjiagou Mine owned by Zhongjia Mining was issued by the Shandong Province Bureau of Land and Resources (“Shandong BLR”) and has been effective since 10 February 2012. The mining license is effective until 10 February 2017. Tenure information pertaining to the mining license is shown in Table 3-1: .

**Table 3-1: Songjiagou Mining License Information**

Item	Description
Mining License Number	C3700002009044110010983
Ownership	Yantai Zhongjia Mining Company Limited
Address	Qiansongjiao Village, Wanggezhuang Town, Muping District, Yantai City
Property Name	Songjiagou Mine, Zhongjia Mining
Economic Type	Liability Limited Company
Minerals	Gold, sulphur
Mining Method	Open pit/underground
Production Capacity	135,000 tpa
Area of Mine	0.3421 km <sup>2</sup>
Duration of Validity	Five years, from 10 February 2012 to 10 February 2017
Mining Depth	from 140 m ASL to 300 m below sea level
Issued by	Shandong Province Bureau of Land and Resources

SRK notes that China adopts the revised Yellow Sea datum plane to calculate elevations, as has been obligatory since 1985, and therefore the permitted depth range for mining, in metres above sea level (“ASL”), is specified in the Yellow Sea Elevation System. The mining license also provides a legal mining area with vertices as shown in Table 3-2: .

**Table 3-2: Vertices Coordinates of Songjiagou Mining License Area**

Vertex	Northing	Easting
1	4110998.85	40621569.40
2	4110718.83	40621914.39
3	4110126.85	40621433.36
4	4110438.86	40621086.38

Coordinates above are given in the Chinese Xi'an 1980 System.

In addition, Zhongjia Mining currently holds a license for gold mineral exploration adjacent to the mine, covering an area of 3.15 km<sup>2</sup>. The detailed information for the exploration license is listed in Table 3-3, and the geographic coordinates for the vertices are shown in Table 3-4.

**Table 3-3: Songjiagou Exploration License Information**

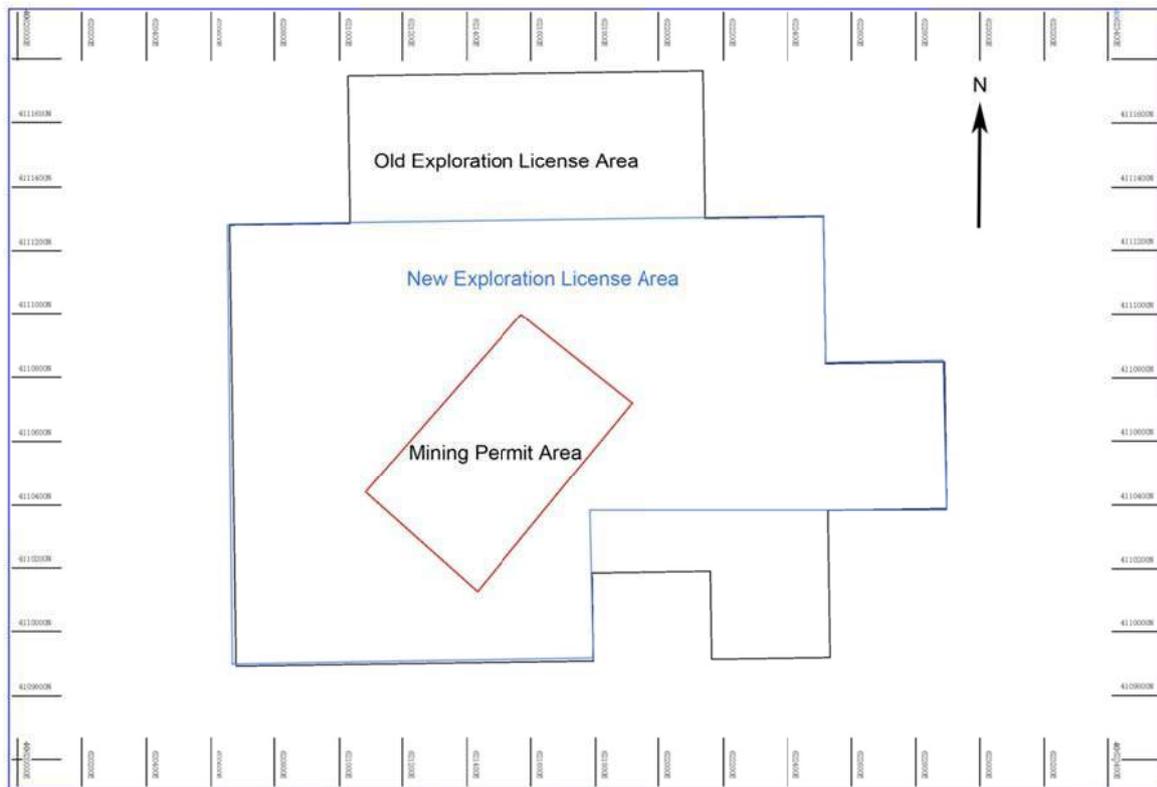
Item	Description
Exploration License Number	T37220090902034373
Ownership	Yantai Zhongjia Mining Company Limited
Owner Address	Qiansongjiao Village, Wanggezhuang Town, Muping District, Yantai City
Exploration Project Name	Songjiagou Deep Zone and Surrounding Area Exploration
Project Location	Muping District, Yantai City
Regional Map Number	J51E018006
Area of Mine	3.15 km <sup>2</sup>
Duration of Validity	from 7 December 2011 to 30 June 2013
Issued by	Shandong Province Bureau of Land and Resources

**Table 3-4: Vertices Coordinates of Songjiagou Exploration License Area**

Vertex	Latitude	Longitude	Vertex	Latitude	Longitude
1	37°07'31"	121°21'28"	9	37°07'01"	121°22'58"
2	37°07'31"	121°21'43"	10	37°07'01"	121°22'43"
3	37°07'46"	121°21'43"	11	37°06'46"	121°22'43"
4	37°07'46"	121°22'28"	12	37°06'46"	121°22'28"
5	37°07'31"	121°22'28"	13	37°06'55"	121°22'28"
6	37°07'31"	121°22'43"	14	37°06'55"	121°22'13"
7	37°07'16"	121°22'43"	15	37°06'46"	121°22'13"
8	37°07'16"	121°22'58"	16	37°06'46"	121°21'28"

During the amendment of the Report, Majestic provided a renewed exploration permit which will expire on June 30, 2017. A copy of the permit has been given in Appendix A. It is noted that the renewed exploration permit covers only 2.4 km<sup>2</sup>, however, it covers the whole explored area with mineral resources.

SRK notes that the geographic coordinates presented in Table 3-4 are converted from Gauss-Kruger projected coordinates with a Xi'an 1980 ellipsoid, and there is about 1 – 2 seconds (") of drift from the World Geodetic System 1984 ("WGS-84") in this case. The old and renewed exploration and mining licensed areas are shown in Figure 3-2.



**Figure 3-2: Songjiagou Licensed Area – China Xi'an 1980 Coordinate System**

### 3.2 Underlying Agreements

SRK is not aware of any underlying agreements other than those disclosed in this Report.

### **3.3 Permits and Authorization**

A list of permits and authorization for Zhongjia Mining to undertake legal gold exploration, exploitation, and production in China has been sighted by SRK as follows:

- Business License;
- Exploration License;
- Mining License;
- Safety Production License;
- Water Use Permit; and
- Gold Exploitation Permit.

### **3.4 Environmental Considerations**

An environmental review has been conducted by SRK. The findings are provided in Section 19 of this Report. It is noted that the Project poses no major environmental risks.

## 4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

### 4.1 Accessibility

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

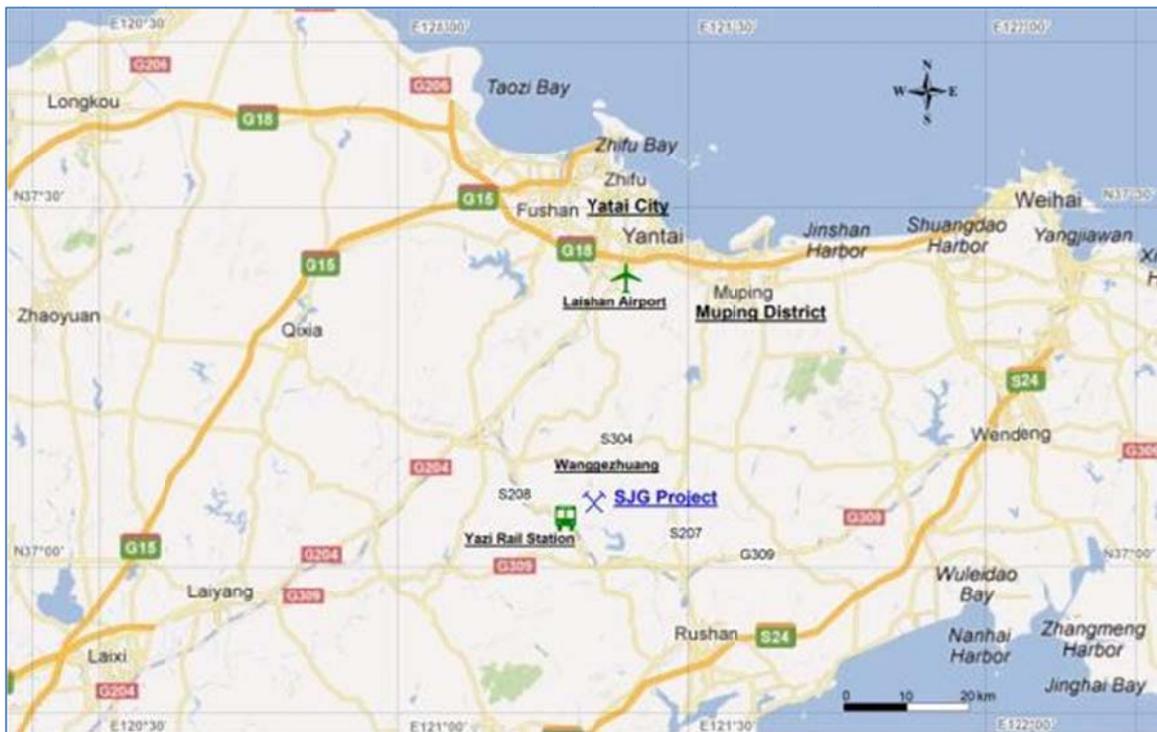


Figure 4-1: Accessibility and Transportation of the Songjiagou Gold Project

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 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 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 Project is approximately 50 km from the shoreline.

Yantai Laishan International Airport, located approximately 45 km directly north of the Project, hosts daily flights to and from many 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 (1) hour to drive from the airport to the mine site.

Within the licensed area, transportation is by flat gravel and dirt roads. The open pit, processing plant, and office building are readily accessible.

## 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. Overall humid year round with average annual relative humidity of 68%; recorded statistics shows the yearly precipitation is around 650 mm.

The annual average temperature is about 12 degrees Celsius (“°C”), with about 210 frost-free days per year. The highest temperatures reach 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 Project.

Industry and agriculture are well developed in the area. Local agricultural crops include 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.

Domestic and industrial water can be supplied from the Rushan River, which passes about 10 km east of the Project area. Electrical power is available locally. A 10 kV power line connects to the local electrical grid, and a diesel generator owned by the Mine with an installed generation capacity of 120 kW are adequate to support the mine's production.

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

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

## 4.4 Physiography

The geomorphology of the Project area is characterized by gently undulating hills, and overall topography slopes downward from west to east. The highest elevation is 140 m ASL and the lowest is 78 m ASL, with a relief of 62 m in the Project area.

A view of the project area is presented in Figure 4-2.

The main local water system is the Rushan River east of the mine, a seasonal river flowing south through Longjiaoshan Reservoir into the Yellow Sea.



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

## 5 History

### 5.1 Ownership History

The mining license for the Songjiagou Mine was initially issued by the Shandong BLR 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 (“No. 3 Geological Institute”). Mine construction commenced in December 2002. The mining license holder at the time was Yantai Muping Gold Mine (“Muping Gold”). On 2 August 2010, ownership of the Songjiagou Project’s mining license was transferred to Zhongjia Mining, the current owner of the Project.

The exploration license of Songjiagou Prospect was initially granted to Yantai Muping Gold Mine on 28 October 2003 and then renewed on 1 November 2005. On 30 December 2005 the ownership of the exploration license was transferred to Zhongjia Mining. Zhongjia Mining renewed the exploration license in 2007, 2009, and 2011.

### 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 (“No. 6 Geological Institute”) carried out preliminary regional gold investigation and found gold occurrences in the Project area.

Between 1982 and 1989 the Shandong Geophysical and Geochemical Prospecting Institute (“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 (“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 (“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 mineralized bodies were defined by a few trenches and drill holes.

In 1997 and 1998, prospecting work continued with geological mapping, surveying, trenching, tunneling 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 resource of former Chinese Categories D and E (similar to “Inferred”) of approximately 1.8 million tonnes (“Mt”) with an average grade of 6.8 grams per tonne (“g/t”) of gold (“Au”). The exploration results were summarized 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 Songjiagou 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 Muping Gold to conduct general exploration in the Songjiagou Project area. Muping Gold completed 20 shallow drill holes, and carried out 1,600 m of induced polarization (“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 of underground workings.

Exploratory mining of the deposit by Muping Gold commenced in 1997. Four levels were developed, at elevations of +9 m, -40 m, -80 m, and -120 m ASL. Two parallel drifts about 300 m in length have been driven on each of the levels within the trend of mineralization, and crosscuts have been established at 30 – 60 m intervals. Mining has been intermittent; most stopes were between 5 to 10 m in width.

Since 2005, the surface expressions of the zones being mined underground have been mined by open pit. Mineralization had been identified here both by historical near-surface workings, and by drilling conducted by Muping Gold.

The preceding historical exploration and resource estimate is disclosed using the original terminology, and is considered relevant, although its reliability is unknown. SRK has not performed a detailed review of the historical exploration and resource estimation completed prior to 2005. Zhongjia Mining has not treated the historical resource estimate completed before 2005 as a qualified mineral resource as defined in the NI 43-101 report prepared by Wardrop Engineering Inc. (“Wardrop”) and issued on 1 March 2011, or as presented in this Report by SRK.

## 6 Geological Setting and Mineralization

### 6.1 Regional Geology

The Songjiagou Project is located on 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 characterized by two major orogenies, 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 (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 (Laiyang basin), comprising Jurassic and Cretaceous-age sedimentary rocks. The Songjiagou Property 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 characterized by the presence of high-pressure metamorphic minerals and is interpreted to be the eastern extension of the Qinling-Dabie orogenic belt.

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

The eastern Shandong ("Jiaodong") gold district is divided from west to east into the Zhaoyuan-Yexian, Qixia, and Muping-Rushan gold belts (Figure 6-1). The Songjiagou Property is located within the Muping-Rushan gold belt situated in the eastern part of the Jiaobei Terrane, which contains about 20% of the gold reserves of the Shandong Peninsula. Gold mineralization is characterized as either vein-filling or as disseminated structures/stockwork.

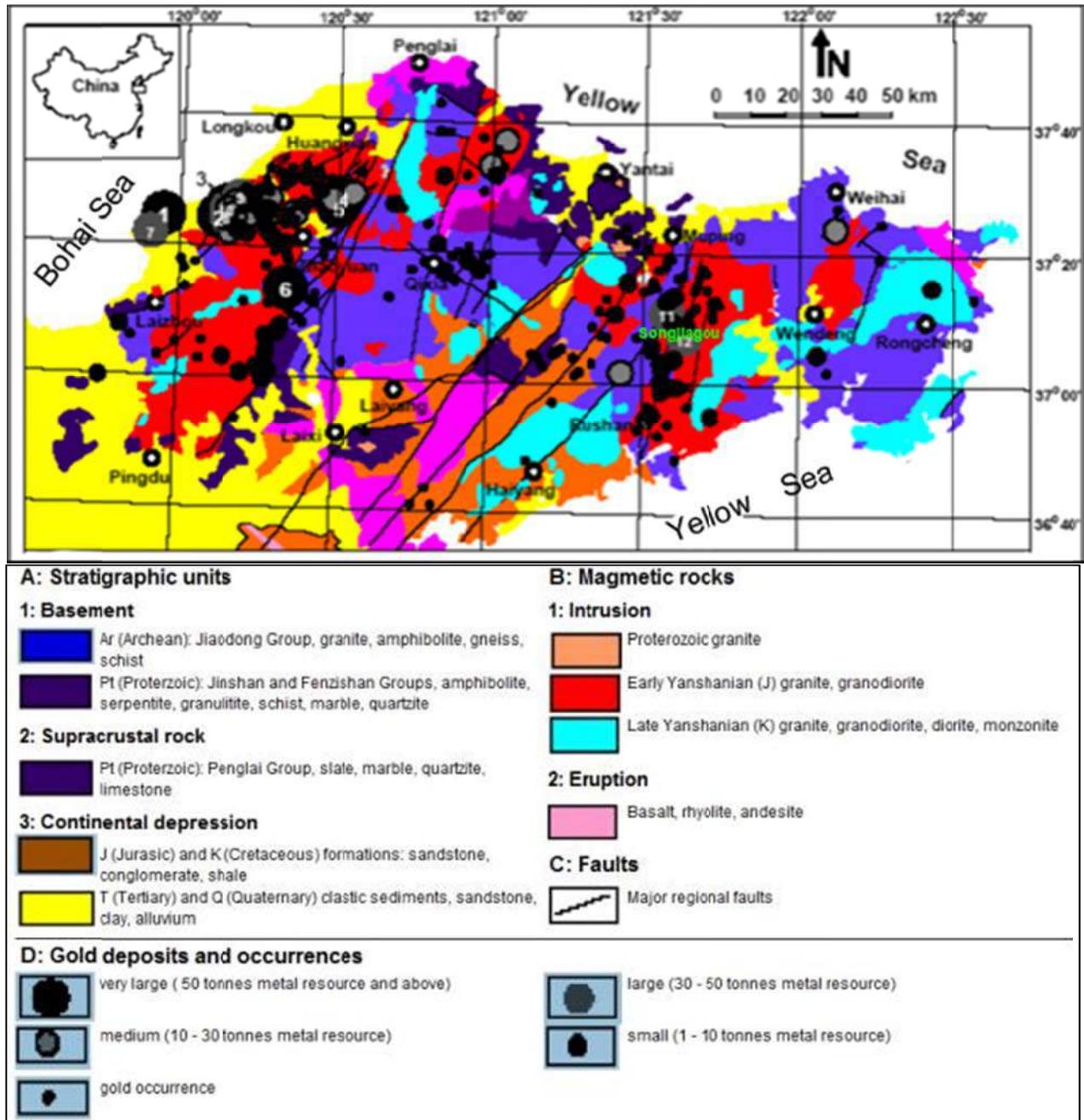


Figure 6-1: Regional Geology of Shandong Peninsula

Note: from Wardrop 2011, Yao 2002

## 6.2 Property Geology

The Songjiagou 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.

Local strata include metamorphic rocks of the Palaeoproterozoic Jingshan Group, sediments of the Mesozoic Cretaceous Laiyang Group, and Cenozoic Quaternary system; the Laiyang Group dominates the Songjiagou

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 veins include diabase, diorite, hornblende porphyrite, and lamprophyre.

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

Cretaceous-age rocks are predominately represented by the Lisishan Formation, part of the Laiyang Group and comprised of conglomerate and sandstone. The Lisishan Formation in the Project area has an overall northeast strike and dips southeast with an angle of 20° to 40°. The formation is dividable into two conformably contacted sections according to the clast size. The first section of Lisishan Formation consists of relatively larger clasts with grain sizes of about 3 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 characterized by more fine grained and rounded clasts made of sandstone and siltstone.

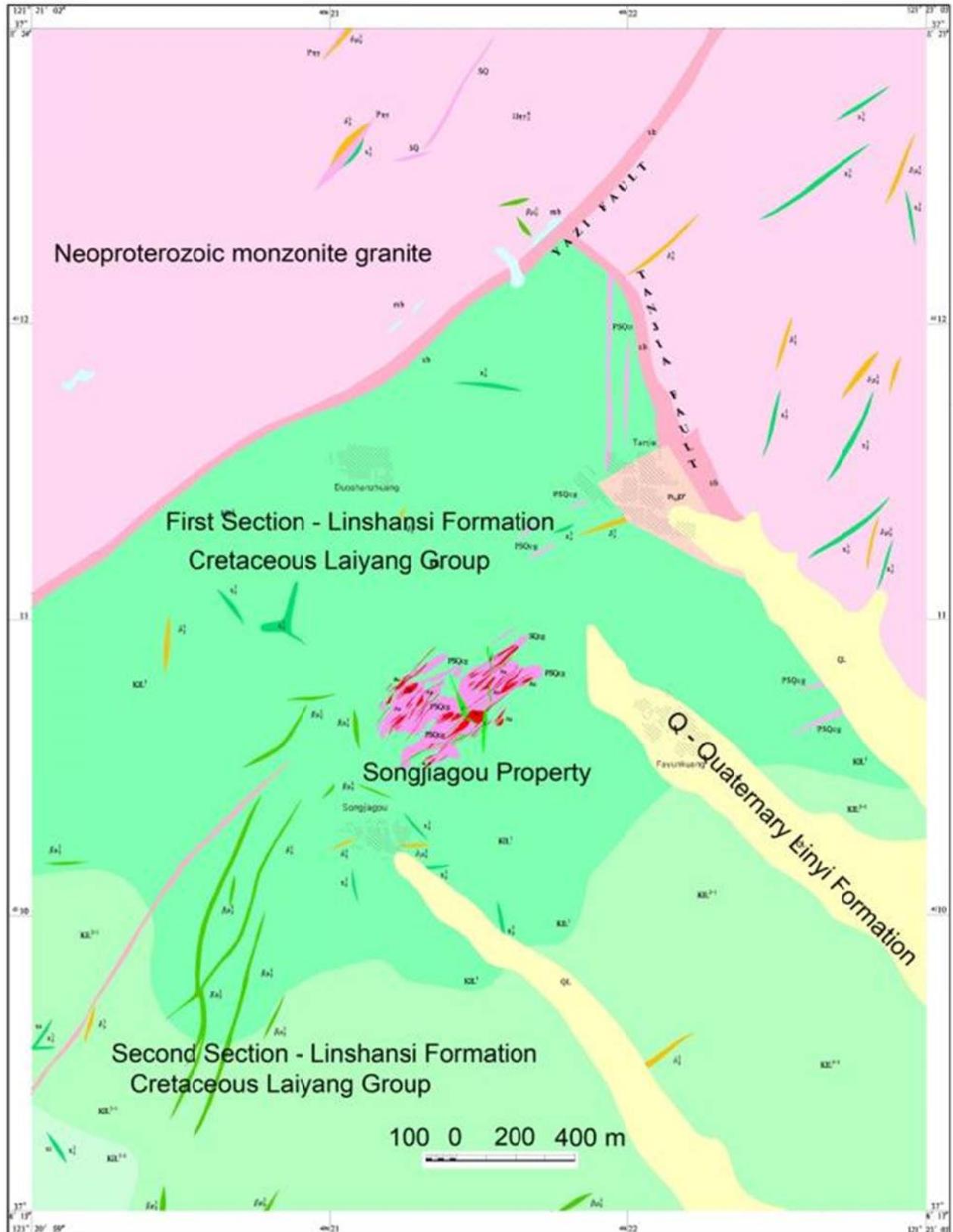
The Songjiagou Project's gold mineralization is mainly hosted within the conglomerate in first section of the Laiyang Group Lisishan Formation.

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 northeasterly striking Yazhi Fault Zone and the northwesterly orientated Tanjia Fault Zone. The two major fault zones mark the margin of the Songjiagou Project's mineralization 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 mineralization.

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.



**Figure 6-2: Simplified Local Geology**

Note: modified from No. 3 Geological Institute 2011.

### 6.3 Mineralized Zones

The Songjiagou Project’s gold mineralized zones are concentrated within an area of approximately 0.4 km<sup>2</sup> which is covered by the aggregate areas of Zhongjia Mining’s currently valid exploration and mining licenses (Figure 6-3). The defined mineralized zones are bounded within the Laiyang Group Lisishan Formation conglomerate without distinct boundaries, and a number of gold enriched bodies present as gold veins occurring within the lithological zone characterized by Lisishan Formation conglomerate (Figure 6-4).

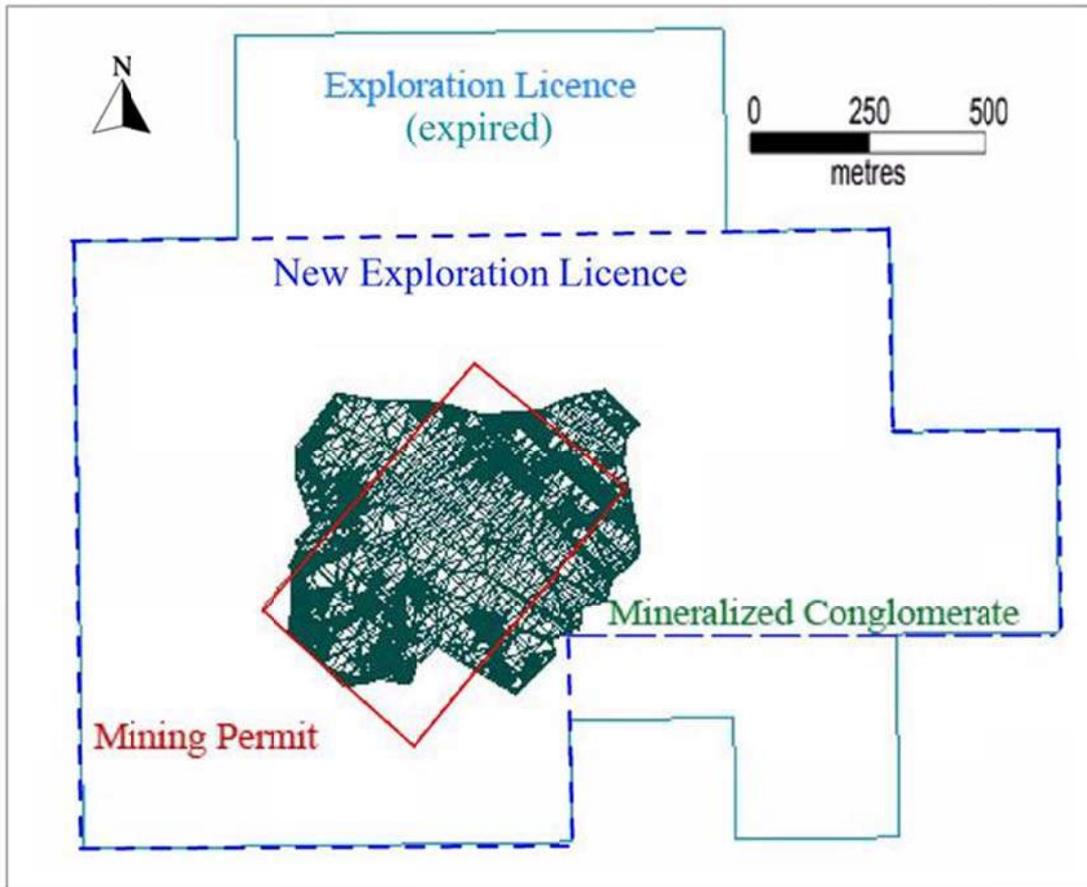


Figure 6-3: Songjiagou Mineralized Zone

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

The open cast mining operation begun in 2005 indicates that the zones of Linsishan Formation conglomerate are generally mineralized. There is also evidence that lamprophyre dykes intruded into the Cretaceous conglomerate and interrupted the gold enriched bodies. The historical exploration before 2005 pursued “higher-grade” gold exploration and explored the rich-mineralized veins (>1g/t Au generally) as shown in

Figure 6-4). Majestic used a lower cut-off grade to define the mineralization zones and the zone includes both higher and lower grade domains which enable an open cast mining. The current resource domain is modelled using both lithological constraints and cut-off grade at 0.2 g/t Au as shown in Figure 6-3.

Gold mineralization 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.

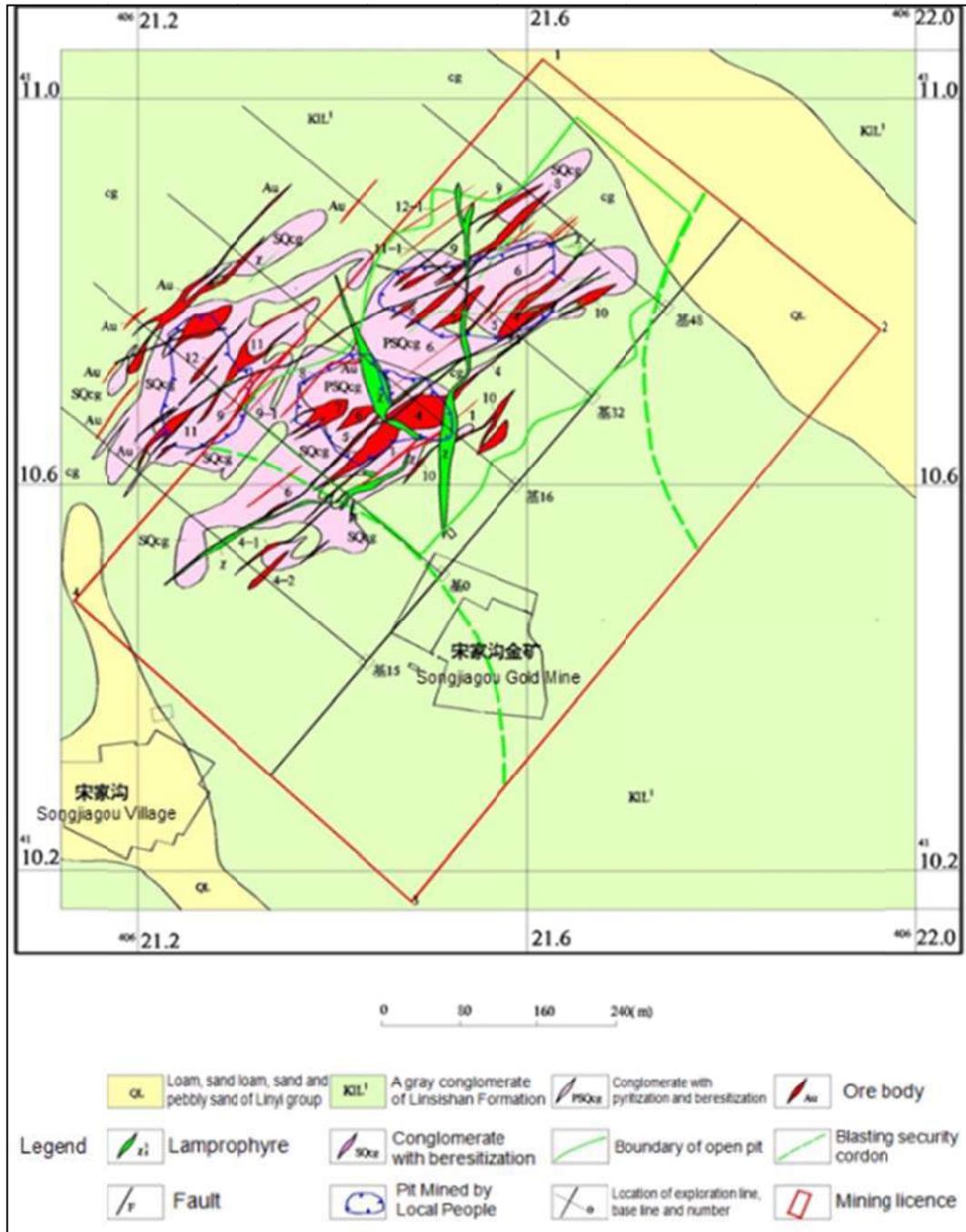


Figure 6-4: Geology of Songjiagou Property

Sulphide (“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 analyzed within a range of 0.5 g/t – 8.5 g/t. The harmful element arsenic (“As”) was found to occur with grades ranging from 40 g/t to 302 g/t.

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



**Figure 6-5: Typical Gold Mineralization Host Rocks at Songjiagou Property**

## 7 Deposit Types

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

The Songjiagou 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. 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 of this Report. The geological report prepared by No. 3 Geological Institute in January 2011 provided geological maps at 1:10,000 and 1:2000 scales. 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 Muping Gold carried out previous underground surveys. Local control points were set up and utilized in these surveys. Handheld global positioning system (“GPS”) and real-time kinematic (“RTK”) instruments were used.

Topography for the 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.

Zhongjia Mining used its own professionally-equipped surveying 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; Zhongjia Mining recently reconciled all the survey results and converted all coordinates to China Xi’an 1980 system.

SRK’s resource estimation as stated in this Report used the topography map dated 31 January 2013 and provided to SRK by Zhongjia Mining.

### **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.

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

## **9 Drilling, Trenching and Underground Workings**

### **9.1 Trenching**

A total of 46 trenches with an aggregate length of 3,628.5 m were excavated by Zhongjia Mining in 2007, from which 3,221 samples were collected. Gold content of these samples ranged from zero to 35.8 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 contractors and were sampled by Zhongjia Mining 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 mineralized 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 in recent mining activities.

### **9.2 Underground Channelling**

A total of 85 underground channels have been completed on the levels of +9 m, -40 m, -80 m, and -120 m ASL, from which 1,449 channel samples were collected. Data from these underground channel samples were compiled by Zhongjia Mining. 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.

The underground channelling suggests that the gold mineralization of Songjiagou Project has a considerable extension from surface down to at least -120 m ALS.

### **9.3 Drilling**

A total of 96 diamond drill holes have been completed since 2005, including 19 underground drill holes with a total length of 2,170 m and 77 surface drill holes with an aggregate length of 19,943 m.

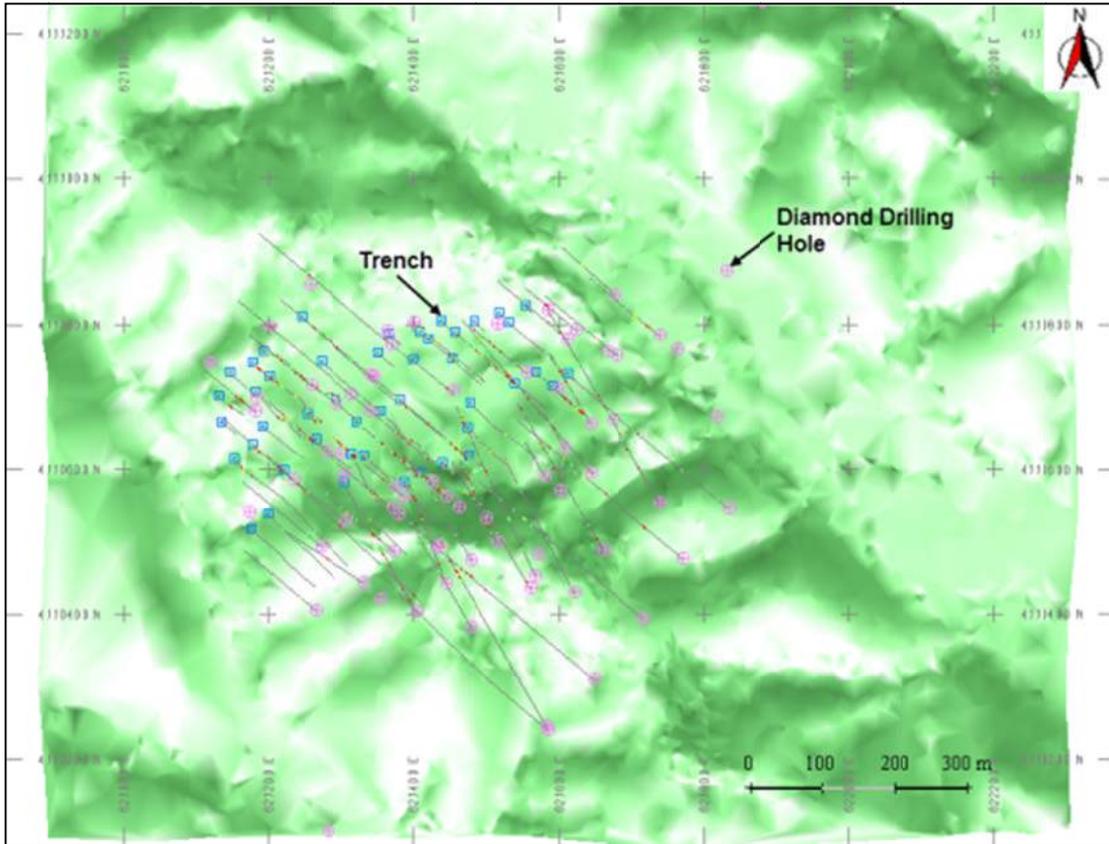
Drilling was conducted by No. 3 Geological Institute. A total of 1,524 samples were collected from the underground drilling and 13,316 samples were collected from the surface drilling.

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° or -45° to the northwest, and a few were drilled vertically (dip angle -90°).

Core recoveries generally averaged above 94% and recoveries of mineralized intersections were greater than 96%. The statistics and calculations were performed by No. 3 Geological Institute.

### **9.4 Drilling and Trenching Pattern and Density**

The database for resource estimation used in this Report consists of 77 diamond holes for a total of 19,943 m drilled on the ground surface between 2005 and 2007, and 104 underground workings including 85 channels and 19 drill holes, as well as 46 trenches. Prospecting pits and other workings had previously been conducted in the Project area but are not included in the database provided. A layout of the drilling and trenching used in the resource estimation in this Report is shown in Figure 9-1.



**Figure 9-1: Distribution of the Diamond Drilling and Trenching**

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 mineralized 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 mineralization was verified by underground cross-cuts spaced about 30 m apart on the levels of +9 m, -40 m, -80 m, and -120 m ASL.

## **10 Sample Preparation, Analyses, and Security**

### **10.1 Sample Preparation and Analyses**

Multiple batches of samples have been prepared and assayed for the Songjiagou Project. The samples used for calculating the resource estimate presented in this Report were derived from exploration conducted between 2005 and 2007.

Sampling was completed by No. 3 Geological Institute or Majestic staff under the supervision of a Qualified Person (“QP”) from Majestic. Samples were logged and prepared to rock chips at the project site and then shipped to the SGS Laboratory in Tianjin, China (“SGS”).

All samples for routine chemical assays collected in 2005 – 2007 were further prepared by SGS following a standard rock preparation procedure of drying, weighing, crushing, splitting, and pulverization. The pulverized pulps were about 74 microns (Tyler 200 mesh).

Samples were analyzed by SGS using screen fire assays, where 1 kilogram (“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 Majestic staff; core samples were obtained by sawing 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 laboratory. 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 Zhongjia Mining’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 Majestic staff.

#### **10.1.3 Underground Channel Samples**

Underground channel sampling was conducted by Zhongjia Mining. 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 (“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; however this value has been not adjusted for moisture content.

#### **10.1.5 Other Information**

The routine chemical assay samples collected in 2008 were prepared and analyzed by No. 3 Geological Institute. The sample preparation was similar to the process for samples taken in 2005 – 2007. No. 3 Geological Institute used fire assays to determine the gold grade. SRK has been advised by Zhongjia Mining

that since no QP was responsible for the sampling and sample preparation process in 2008, these samples were not reviewed for a technical report under NI 43-101 guidelines.

## 10.2 Quality Assurance and Quality Control Programs

It is unknown if any quality assurance and quality control (“QA/QC”) programs were performed for exploration work done prior to 2007. However the previous technical report and resource estimation were prepared by Wardrop in accordance with NI 43-101, and as reported by Zhongjia Mining, there was a QP responsible for the exploration. In addition, previous exploration has been summarized in a report prepared in compliance with China exploration standard by No. 3 Brigade, in which an internal laboratory check and an external check with pulp duplicates are obligatory.

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 economic analysis report (“PEA”) Wardrop prepared in 2011.

*“Assay data was reviewed for 174 blanks (3.5% of the total sample population) that were analyzed 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 (“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 0.121 g/t Au and 2 sd of 0.022 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 summarized below in the below table.”*

**Table 10-1: Standard Analyses in 2007 as Summarized 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	0	18
CDN-GSP1	24	1	0	4	13	0	0	0
CDN-GSP5B	18	0	0	0	12	1	0	0
Total	88				45			

*“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.”*

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

*It is not known what, if any, remedial action was taken by Majestic with respect to the out-of-bound values. Wardrop considers that the assays are suitable for use in the resource estimation that is the subject of this report.*

*Wardrop is of the opinion that sample preparation, analyses and security are acceptable.”*

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

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



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

### 10.3 SRK Comments

In the opinion of SRK, the sampling preparation, security, and analytical procedures performed during 2005 – 2007 for Songjiagou Property are consistent with generally accepted industry practices and are therefore adequate.

# 11 Data Verification

## 11.1 Verifications by Majestic and Wardrop

The exploration data used for resource estimation in this Report was compiled by Majestic; 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 Majestic against assay reports issued by SGS. 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 was partly inspected by SRK.

SRK made a site visit to the Songjiagou Mine to inspect the field geology. The presence of an operating mine was taken as sufficient proof of the existence of gold mineralization.

During SRK’s visit, a random group of field samples was collected from within the current open pit plus three additional samples, one each from the feed processing procedure, concentrate, and tailings. The samples randomly collected by SRK were prepared and analyzed by the Intertek Laboratory in Beijing (“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 No.	Au (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

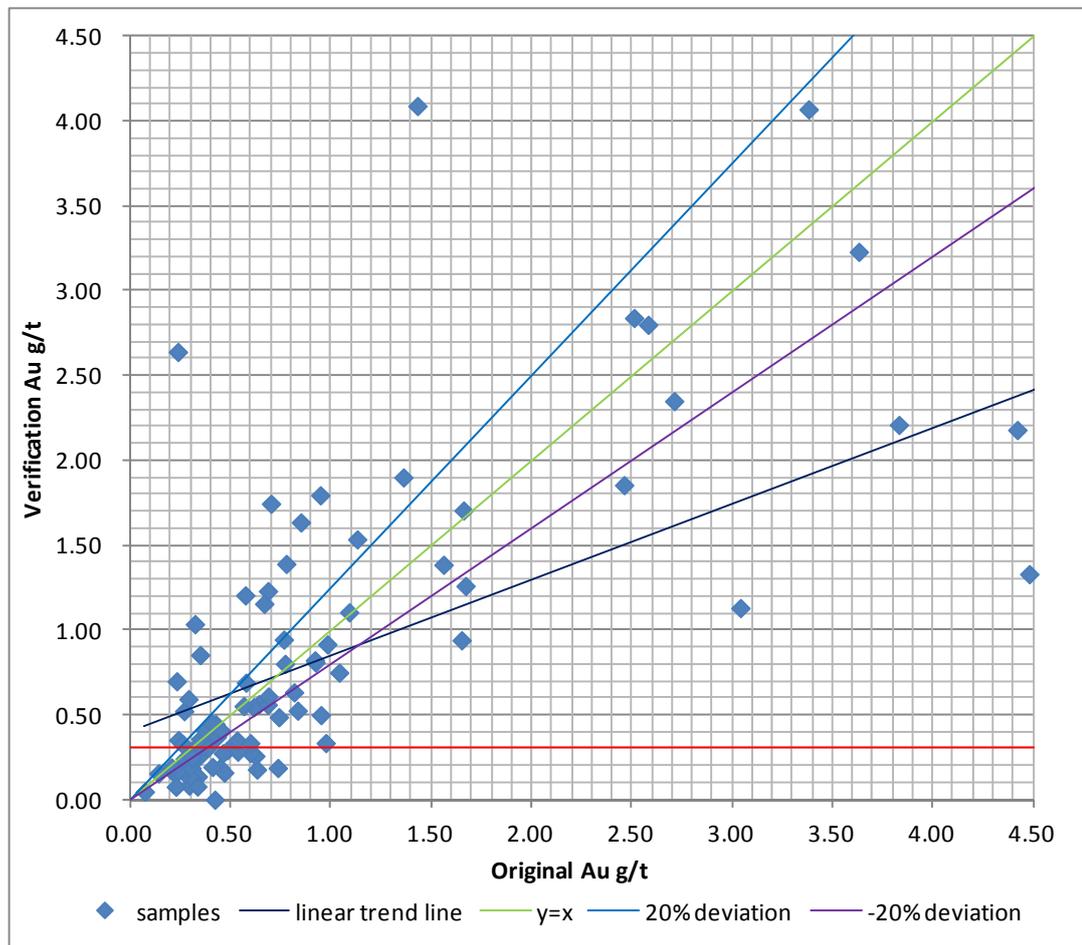
The random check results verified that the gold mineralization is distributed broadly within the Linsishan Formation conglomerate with gold grades varying from about 0.1 g/t up to several grams per tonne.

A total of 102 coarse rejects (1 mm sized) and 48 pulp duplicates (75 microns sized) were selected by SRK for an independent verification purpose. The samples were collected from Zhongjia Mining’s sample storage located near Songjiagou Mine; each sample was approximately about 200 g in weight. The coarse rejects with about 1 mm grain size were further pulverized to 75 microns (“µm”) in the ALS Chemical Assaying Laboratory in Guangzhou, China (“ALS”). All of the verification samples were analyzed 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%, but 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. Since the gold mineralization at Songjiagou Project is generally greater than 0.3 g/t Au, the discrepancies arisen in the coarse reject assays are considered reasonable overall for the style of mineralization under consideration, although SRK is of the opinion that the Songjiagou Mine’s sample preparation might be revisited to that ensure all processes were compliant with QA/QC protocols.

Comparatively, the pulp duplicate assays returned acceptable results considering a cut-off grade of 0.3 g/t Au.



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

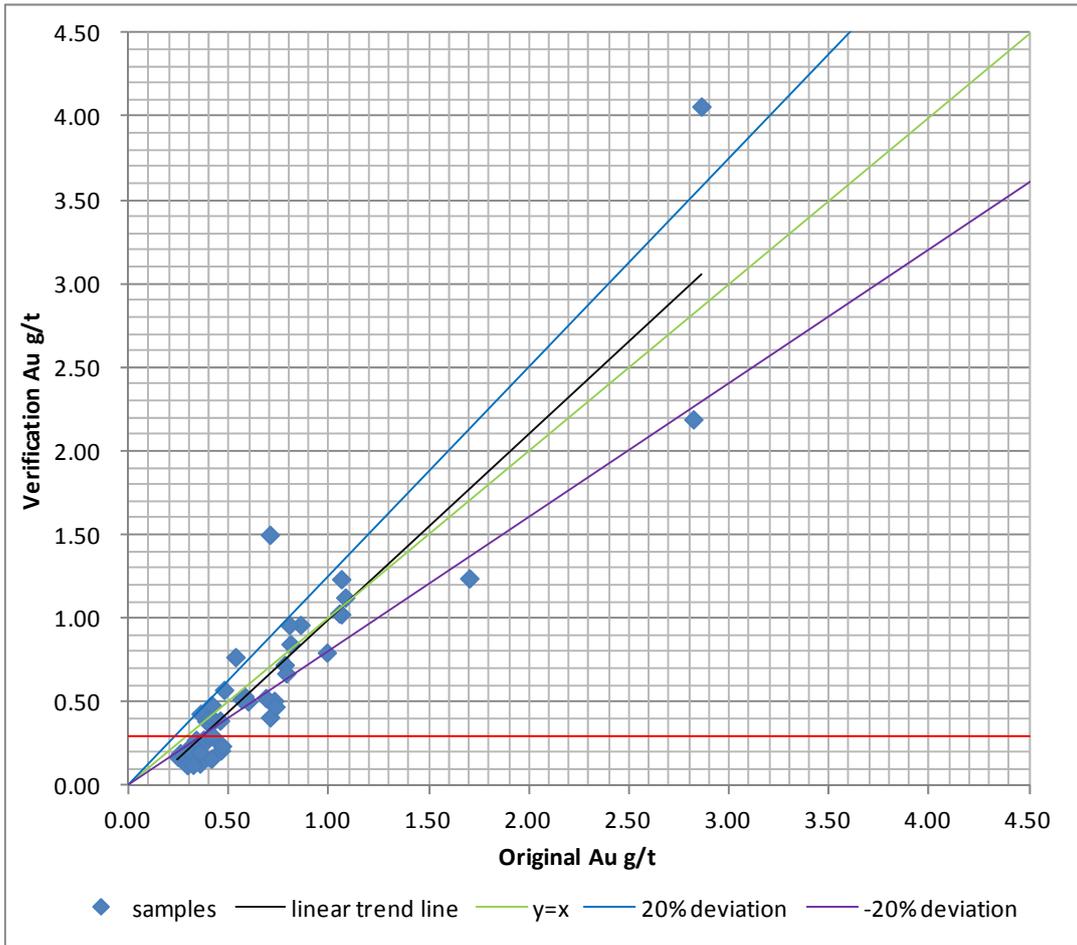


Figure 11-2: Performance of Pulp Duplicate Assays vs. SRK Verification Samples

# 12 Mineral Processing and Metallurgical Testing

## 12.1 Summary

Yantai Jinyuan Mining Machinery Co. Ltd. Metallurgical Laboratory (“Jinyuan Metallurgical Laboratory”) conducted a preliminary flotation test. Run of mine inventory (“ROM”) with a grade of 0.68 g/t Au is subject to grinding to 52% passing 200 mesh (74 µm). Sodium butyl xanthogenate (“SBX”) was employed for collecting gold and gold bearing minerals, and No. 2 oil (mainly terpenic oil) was used as a frother. After one stage of roughing, two stages of scavenging, and one stage of cleaning, concentrate grading 22.5 g/t Au is generated at a gold recovery rate of 92.9%. The test indicators indicate that the inventory’s characteristics are relatively simple, and it is easily floatable.

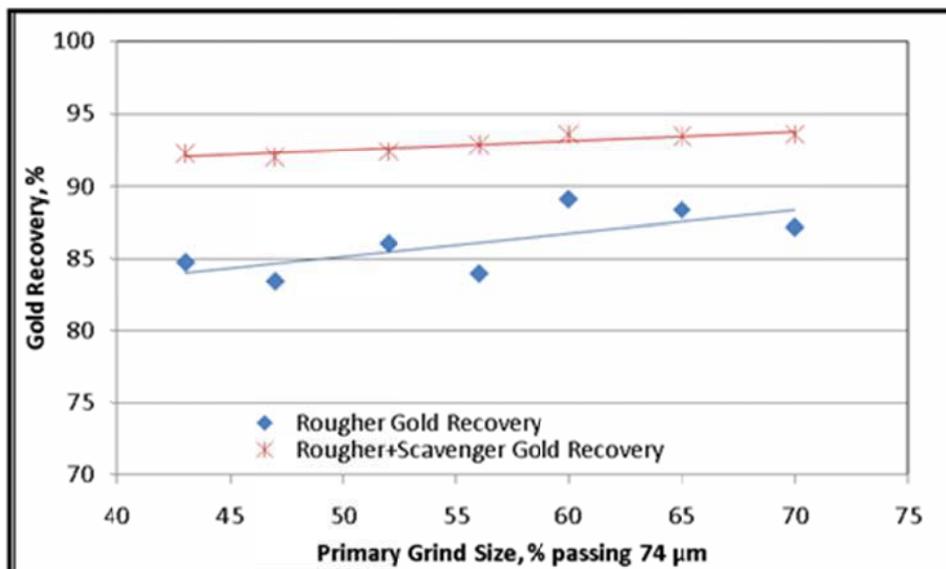
## 12.2 Sample Characteristics

The test sample was collected on 16 January 2010 from the ball mill feed conveyor in a 400 tpd processing plant (its actual productive capacity is around 200 tpd). The collected sample weighed 150 kg, grading 0.68 g/t Au, had a particle size of -12 mm, and a specific gravity of 2.62. Its bulk density was 1.73 tonnes per cubic metre (“t/m<sup>3</sup>”).

SRK believes that although this sample was collected from the 200 tpd processing plant (this plant and the underground mine have been outsourced) which is used for underground mining inventory processing, its principle process correlates well with the inventory’s known characteristics. Thus the sample is accepted as representative.

## 12.3 Effect of Primary Grind Size

Preliminary tests were carried out to investigate the effect of primary grind size on gold flotation recovery. The primary grind sizes tested ranged from 43% passing 74 µm to 70% passing 74 µm. SBX was used as the collector for gold and gold bearing minerals. The effect of primary grind size on gold recovery is shown in Figure 12-1.



**Figure 12-1: Primary Grind Size Effects on Gold Recovery**

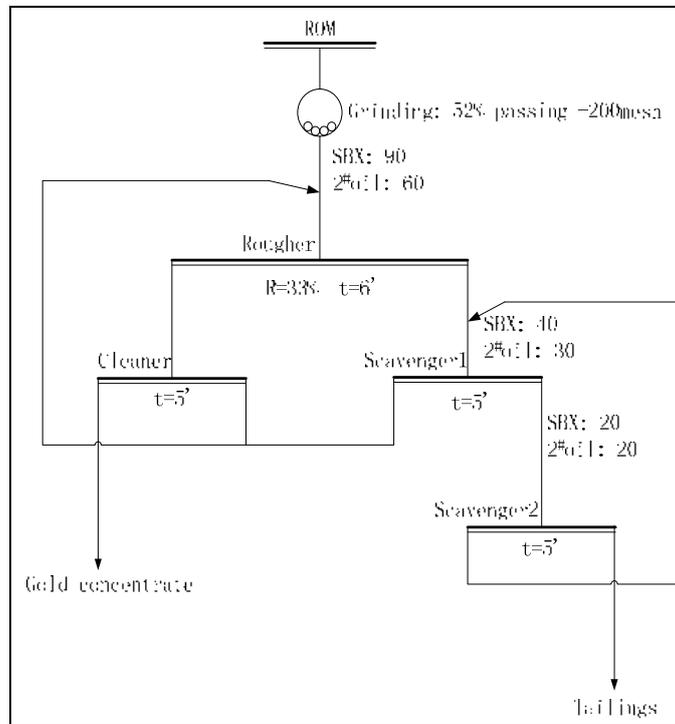
Note: The blue curve represents the relationship between the roughed concentrate recovery rate and grinding size; the red curve represents the relationship between the recovery rate of roughed concentrate+ middlings and grinding size.

The gold recovery rates of both the roughed concentrate and the roughed-plus-scavenged concentrate improve as the primary grind size fineness increases. Results also indicate that the gold-bearing mineral is easily separated from gangue. The laboratory suggested that the optimum primary grind size should be 50% passing 74 µm.

From SRK’s point of view, based on the results presented above, the appropriate grind size is 60% passing 0.074 mm.

### 12.4 Test Method

A close circuit test was conducted for inventory whose primary grind size is 52% passing 74 µm. SBX was employed to collect gold and gold bearing minerals and No. 2 oil was employed as a frother for a flotation test within a closed circuit. The ground sample was subjected to one stage of roughing and two stages of scavenging. The roughed concentrate was upgraded by one stage of cleaning. The final gold concentrate produced graded 22.5 g/t Au, and the gold recovery rate was 92.9%. The test flowsheet is provided in Figure 12-2, and test results are presented in Table 12-1: Table 12-1.



**Figure 12-2: Close Circuit Flow and Condition**

**Table 12-1: Close Circuit Test Results**

Product	Gold Grade (g/t)	Gold Recovery (%)
Cleaning Concentrate	22.5	92.9
Flotation Tailing	0.05	7.1
Feed	0.68	100

Test indicators show that the inventory’s characteristics are simple and the inventory is easy to process.

## 13 Mineral Resource Estimation

### 13.1 Introduction

The Mineral Resource Estimate presented herein represents the mineral resource evaluation prepared for the Songjiagou Project in accordance with the Canadian Securities Administrators' National Instrument 43-101.

The mineral resource model prepared by SRK makes use of 227 core boreholes drilled before 2007. The resource estimation work was completed by Mr Qingxiong Hu, and Mr Pengfei Xiao (MAusIMM), under supervision of Dr Anshun Xu (FAusIMM), an appropriate "independent Qualified Person" as this term is defined in National Instrument 43-101. The effective date of the resource statement is 31 January 2013.

This section describes the resource estimation methodology and summarizes the key assumptions made by SRK. In SRK's opinion, the resource evaluation reported herein is a reasonable representation of the global gold mineral resources found in the Songjiagou Project at the current level of sampling. The mineral resources have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines and are reported in accordance with the Canadian Securities Administrators' National Instrument 43-101. 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 database used to estimate the Songjiagou Project mineral resources was reviewed by SRK. SRK is of the opinion that the current drilling information is sufficiently reliable to interpret with confidence the boundaries for hydrothermal filling metasomatic altered conglomerate mineralization and that the assay data are sufficiently reliable to support mineral resource estimation.

MineSight (Ver. 6.0) was used to construct the mineral resource estimation. MineSight is a software package commonly used internationally for geological modelling and mine planning.

### 13.2 Resource Estimation Procedures

The 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;
- Resource classification and validation; and
- Preparation of the Mineral Resource Statement.

### 13.3 Resource Database

SRK converted the database provided by Majestic into CSV format and conducted validation and removal of repeated samples. The database used for the resource estimation consists of data from 227 geological engineering works, including 77 drill holes, 46 trenches, and 104 underground engineering (include channel and drill holes). Appendix B provides detailed information for all geological engineering works.

As shown in Table 13-1, the database contains 20,836 gold samples in total, including 13,316 from drill holes, 3,221 from trenches, and 4,299 from underground engineering. The maximum gold grade is 263.09 g/t and the average gold grade is 0.54 g/t prior to grade capping.

Please note that there is a lack of sample analysis results in the database. The database used for solid modelling and grade estimation does not contain six drillholes which lack of sample interval information. The six drillholes had not been verified and SRK was told by Majestic that they were un-sampled drill-core intervals. According to Majestic’s reply, these six holes have not been incorporated into solid modelling or grade estimation. There are no value assigned for gold grades of these un-sampled intervals and thus they are not used for constraints of solid modelling. By considering the geological continuity of the gold mineralisation domain, SRK opines that it is appropriate to treat the missing information as blank rather than to assign a “0” value as gold grade in these holes. If conditions permit, it is suggested that missing samples should be collected to guarantee full sets of samples being collected from the entire bore hole.

The drill holes’ distribution is shown in Figure 13-1, overlaid on the topographic 3D model converted from the file provided by Majestic. The topographic map uses the Xi’an 1980 coordinates system on a scale of 1:1,000 and contour intervals of 1 m.

**Table 13-1: Characteristic Value Summary of Original Sample**

<b>All Data</b>	<b>Au g/t Uncapped</b>	<b>Au g/t Capped</b>	<b>Length</b>	<b>Drill Hole Data</b>	<b>Au g/t Uncapped</b>	<b>Au g/t Capped</b>	<b>Length</b>
<b>Num Samples</b>	20,836	20,836	20,836	<b>Num Samples</b>	13,316	13,316	13,316
<b>Minimum</b>	0.00	0.00	0.02	<b>Minimum</b>	0.00	0.00	0.06
<b>Maximum</b>	263.09	40.00	476.90	<b>Maximum</b>	263.09	40.00	476.90
<b>Mean</b>	0.54	0.47	1.29	<b>Mean</b>	0.37	0.33	1.41
<b>Median</b>	0.07	0.07	1.00	<b>Median</b>	0.06	0.06	1.00
<b>Standard Deviation</b>	4.49	2.30	4.08	<b>Standard Deviation</b>	3.65	1.86	5.09
<b>Variance</b>	20.12	5.28	16.66	<b>Variance</b>	13.35	3.47	25.95
<b>Coefficient of Variance</b>	8.30	4.91	3.16	<b>Coefficient of Variance</b>	9.93	5.73	3.61
<b>Skewness</b>	34.72	12.57	79.05	<b>Skewness</b>	48.51	15.68	63.56
<b>Kurtosis</b>	1,605.11	186.67	8,880.95	<b>Kurtosis</b>	3,075.98	290.95	5,722.29
<b>Trench Data</b>	<b>Au g/t Uncapped</b>	<b>Au g/t Capped</b>	<b>Length</b>	<b>Underground Data</b>	<b>Au g/t Uncapped</b>	<b>Au g/t Capped</b>	<b>Length</b>
<b>Num Samples</b>	3,221	3,221	3,221	<b>Num Samples</b>	4,299	4,299	4,299
<b>Minimum</b>	0.00	0.00	0.30	<b>Minimum</b>	0.00	0.00	0.02
<b>Maximum</b>	35.80	35.80	2.00	<b>Maximum</b>	237.80	40.00	16.60
<b>Mean</b>	0.32	0.32	1.01	<b>Mean</b>	1.24	1.02	1.13
<b>Median</b>	0.11	0.11	1.00	<b>Median</b>	0.12	0.12	1.00
<b>Standard Deviation</b>	1.19	1.19	0.07	<b>Standard Deviation</b>	7.38	3.66	0.49
<b>Variance</b>	1.43	1.43	0.01	<b>Variance</b>	54.46	13.40	0.24
<b>Coefficient of Variance</b>	3.73	3.73	0.07	<b>Coefficient of Variance</b>	5.95	3.58	0.43
<b>Skewness</b>	15.73	15.73	5.22	<b>Skewness</b>	19.27	7.91	15.36
<b>Kurtosis</b>	345.51	345.51	70.69	<b>Kurtosis</b>	481.91	72.06	406.25

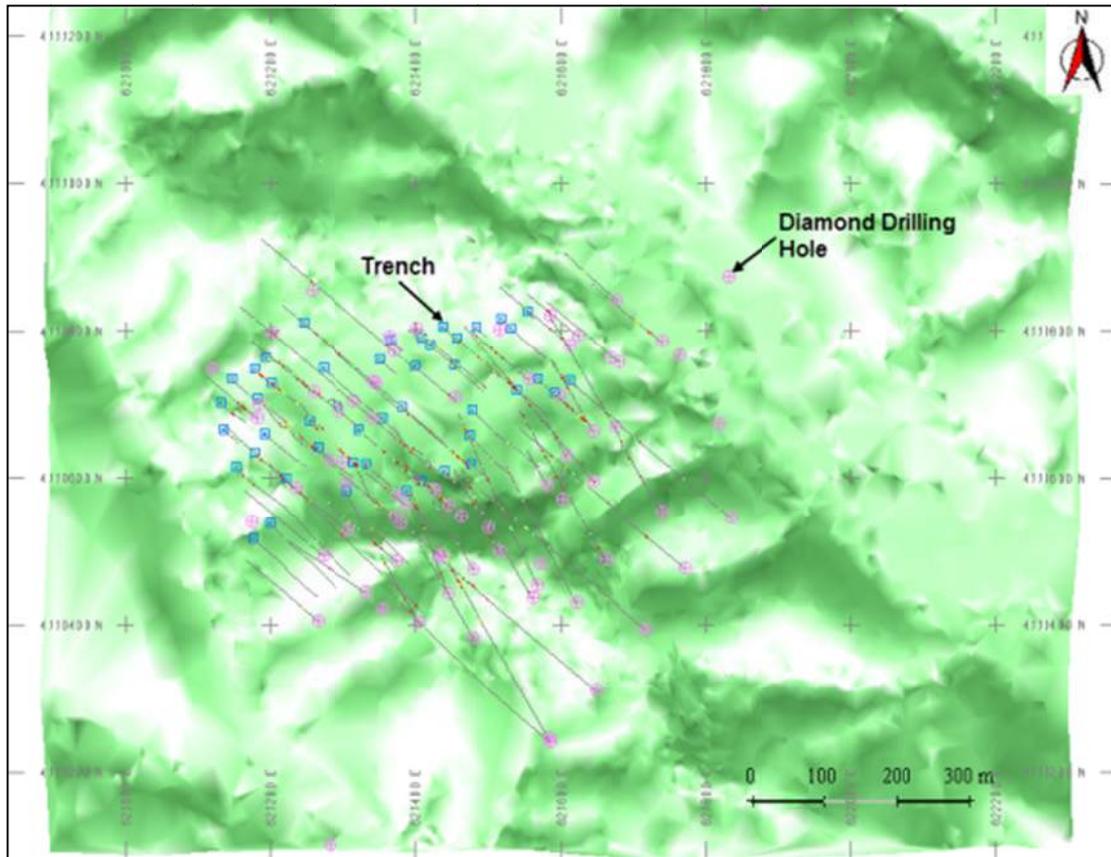


Figure 13-1: Topographic 3D Map (Azimuth: 0°, Dip: -90°)

### 13.4 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 13-2), SRK chose 1 m as the length for compositing.

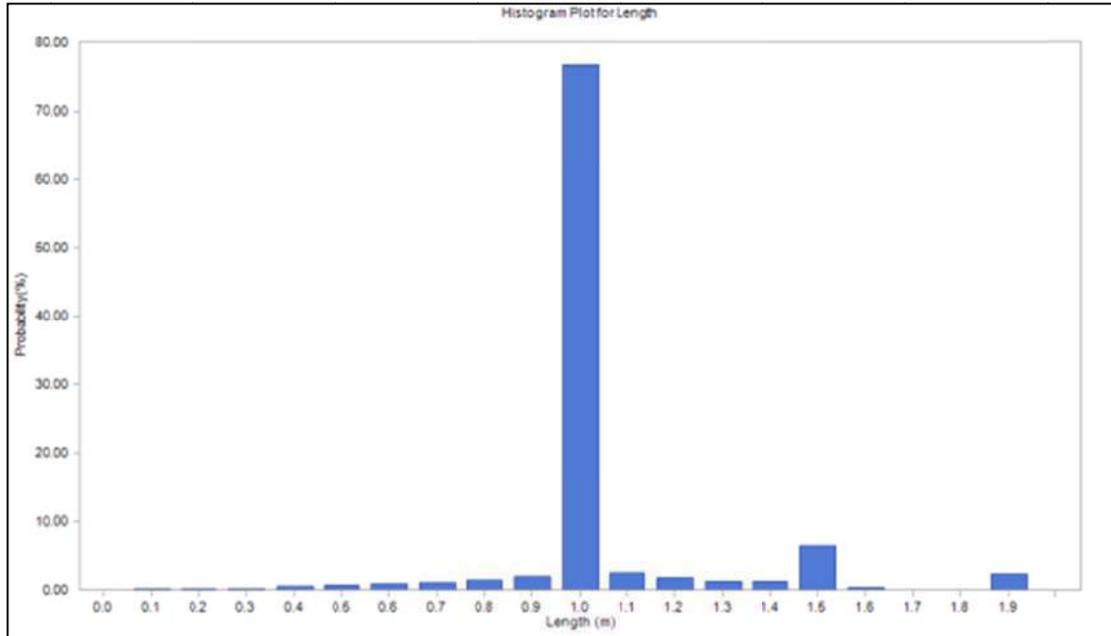


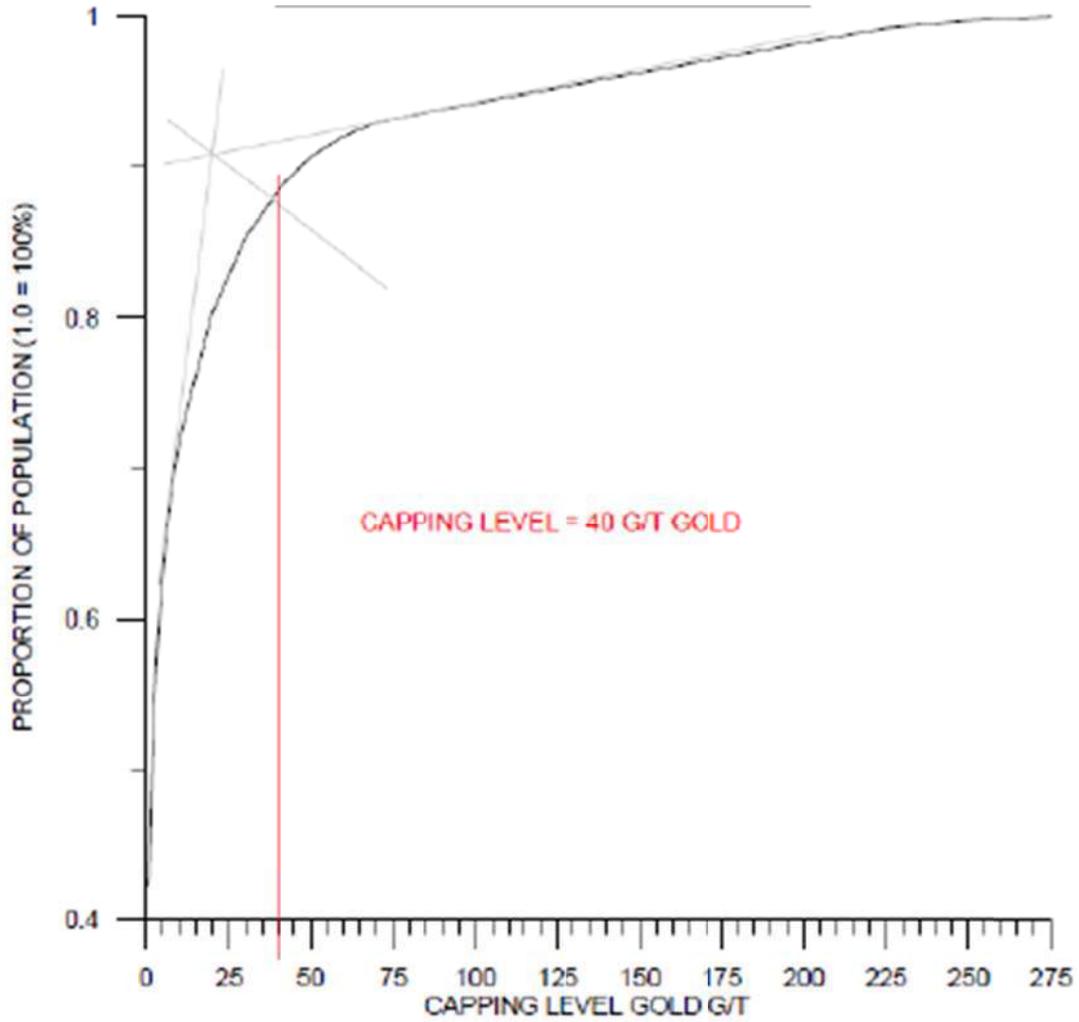
Figure 13-2: Original Sample Length Probability Distribution Histogram

### 13.5 Outlier Value Assessment

Currently, there is no single unified method to process outlying sample values (i.e., extreme high grade samples); among the more common methods is defining the lower limit of outlier values by evaluating the credible range, which is 95% of the grade range of all samples. Thus the lower limit of outlier values lower = [the average value for all samples] + 1.96 × [the standard deviation for all samples].

The gold grade distribution pattern was analysed within the *Preliminary Assessment Technical Report on the Songjiagou Project, Shandong Province, China*, which Wardrop submitted to Majestic on 1 March 2011, which described and curved the relationship between grade values and sample distribution, setting 40 g/t of gold as the outlier value lower limit.

Wardrop has illustrated a grade curve of all assays to support the selection of appropriate capping level. “A capping curve has been generated by plotting a range of possible capping grades against the percent of the sum of all gold assays that remains below each of those potential caps. For example, at no cap, 100% of the original population sum remains; at a cap that reduces the aggregate assay sum by 25%, 75% of the original population sum remains. The appropriate capping grade is taken as the value which corresponds to the maximum flexure of the curve. Capping values above this point has a diminishing impact on the average grade of the population and capping values below this point has an increasingly severe impact. In the case of Songjiagou, the optimal value is taken as 40 g/t gold.”



**Figure 13-3: Capping Curve Analysis – Wardrop**

SRK reviewed the processing method applied to outlier valued samples by Wardrop, and is of the opinion that the analysis and processing methods are reasonable and acceptable. According to the gold grade distribution and probability analysis (Figure 13-4), the value of 40 g/t corresponds to 99.84 percentile. Hence, this resource estimation adopted the method used by Wardrop, which capped and replaced 34 samples with gold grade values above 40 g/t (Table 13-2).

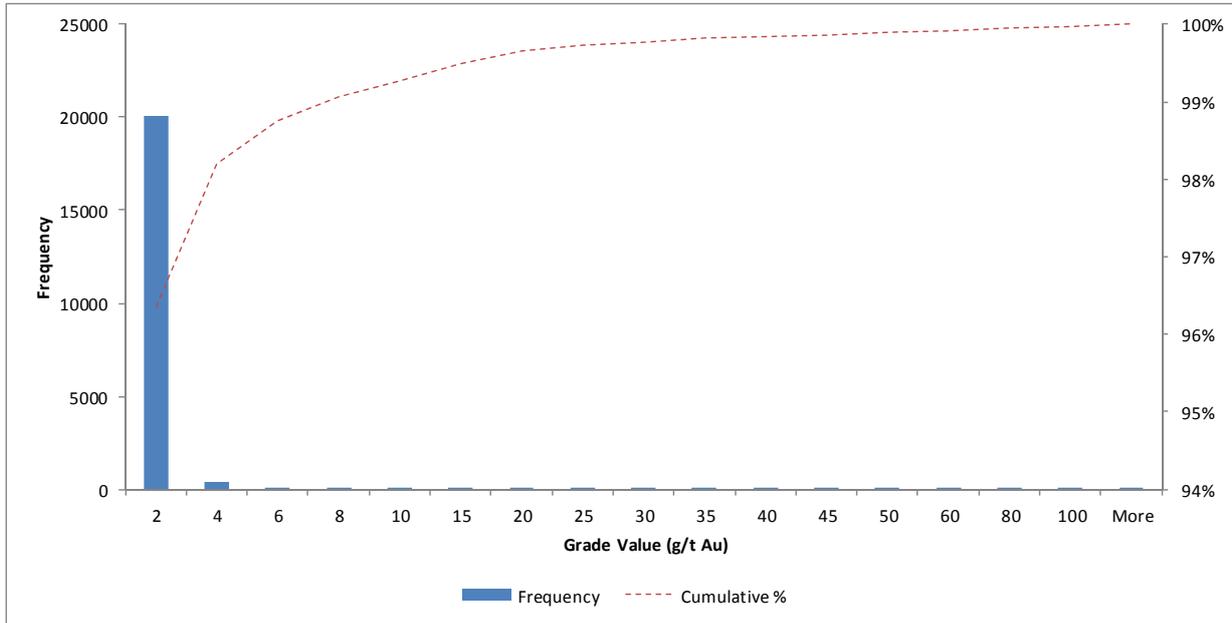


Figure 13-4: Gold Grade Distribution and Probability

Table 13-2: Sample Outlier Characteristic

Sample Units	From	To	Length	Uncapped Grade (g/t Au)	Capped Grade (g/t Au)
SJ05-03	108.00	109.00	1.00	55.34	40.00
SJ05-05	67.00	67.50	0.50	47.38	40.00
SJ05-08	152.00	153.00	1.00	53.12	40.00
SJ05-11	470.40	470.60	0.20	263.09	40.00
SJ05-12	49.00	50.00	1.00	41.48	40.00
SJ05-24	3.00	4.00	1.00	66.23	40.00
SJ06-35	352.00	353.00	1.00	41.51	40.00
SZK8-2	87.99	89.01	1.02	48.70	40.00
ZK1	22.00	23.10	1.10	41.66	40.00
ZK1	107.20	108.20	1.00	65.56	40.00
ZK13	209.40	210.40	1.00	221.99	40.00
ZK19	224.52	225.52	1.00	42.37	40.00
ZK19	226.53	227.53	1.00	46.43	40.00
ZK19	240.19	240.99	0.80	70.44	40.00
ZK52	192.63	193.03	0.40	64.60	40.00
1_CM0_3B	314.61	315.61	1.00	49.07	40.00
1_YM2N_3B	9.81	10.81	1.00	73.62	40.00
2_CM4_1_3B	3.62	4.62	1.00	47.84	40.00
2_CM4_1_3B	4.77	5.77	1.00	63.44	40.00
2_YM1_3B	179.35	180.01	0.66	140.19	40.00
2_YM1_3B	281.22	282.22	1.00	207.75	40.00
2_YM1_3B	325.63	326.63	1.00	56.62	40.00
2_YM3_3B	83.51	84.51	1.00	61.09	40.00
3_CM1S_3B	19.04	19.99	0.95	47.58	40.00
3_YM2N_3B	20.02	21.02	1.00	89.79	40.00

Sample Units	From	To	Length	Uncapped Grade (g/t Au)	Capped Grade (g/t Au)
3_YM2N_3B	23.66	24.66	1.00	51.83	40.00
3_YM2Nn_3B	20.33	21.33	1.00	139.89	40.00
3_YM2Sn_3B	33.72	34.72	1.00	49.30	40.00
4_CM1_3B	17.82	18.69	0.87	47.58	40.00
4_YM2N_3B	10.92	11.92	1.00	117.68	40.00
4_YM2Nn_3B	10.77	11.77	1.00	78.03	40.00
4_YM2Nn_3B	165.06	166.06	1.00	41.65	40.00
L3A	161.00	162.50	1.50	237.80	40.00
L4A	139.50	141.00	1.50	98.05	40.00

## 13.6 Statistical Analysis and Variography

### 13.6.1 Statistical Analysis of Composites

Results of the statistical analysis of 1 m composites are shown in Table 13-3.

**Table 13-3: Statistical Analysis Result of Composites**

Item	Uncapped Grade (g/t Au)	Capped Grade (g/t Au)	Length
Sample Counts	27,108	27,108	27,108
Min.	0.00	0.00	0.10
Max.	237.80	40.00	1.00
Avg.	0.42	0.37	0.99
First Quartile	0.01	0.01	1.00
Median	0.05	0.05	1.00
Third Quartile	0.17	0.17	1.00
Standard Deviation ("SD")	3.56	1.91	0.07
Variance	12.71	3.65	0.00
Coefficient of Variation ("CV")	8.43	5.16	0.07
Skewness	36.83	14.09	-10.19
Kurtosis	1,859.95	242.27	110.42
Length Weighted Mean	0.42	0.37	-
Length Weighted SD	3.48	1.88	-
Length Weighted Variance	12.14	3.52	-
Length Weighted CV	8.33	5.12	-

After grade capping, samples with grades less than 0.1 g/t Au account for approximate 63% of total samples, those with grades less than 0.3 g/t Au account for 83%, and those with grades less than 1.2 g/t Au account for 95%.

Based on the existing analysis of drillhole 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 resource estimation.

### 13.6.2 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 Table 13-4, 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 30 m. horizontally; ranges along east-west direction and south-north axes are 110 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 110 m × 80 m × 30 m (X × Y × Z).

**Table 13-4: Variogram Parameters**

Direction	Nugget	Sill 1	Variation Range 1	Sill 2	Variation Range 2
Along the downhole	2.8418	0.4914	3	0.3181	30
90,0			40		110
0,0			40		80
0,-90			10		30

## 13.7 Block Model and Grade Interpolation

### 13.7.1 Block Modelling

Table 13-5 shows the parameters used for the block model, which used identically-sized blocks for modelling. The model was rotated with an angle of 45° to make sure it is in the same direction with strike of mineralization zone.

**Table 13-5: Limits of the Block Model**

Axis	Min.	Max.	Block Size	Block Counts
X (Easting)	620,600	622,509.19	10	140
Y (Northing)	4,109,710	4,111,619.25	10	130
Z (Elevation)	-400	150	5	110
Original Point Coordinates				
X (Easting)	620,600			
Y (Northing)	4,110,700			
Z (Elevation)	0			

The main criteria and attributes of the block model are shown in Table 13-6.

**Table 13-6: Main Criteria and Attributes of Block Model**

Criteria	Attributes
TOPO	The volume percentage of block unit under surface (as of January 2013)
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	Litho encoding, 1 for conglomerate
CAT	Resource category encoding, 2 for Indicated, 3 for Inferred

### 13.7.2 Grade Interpolation

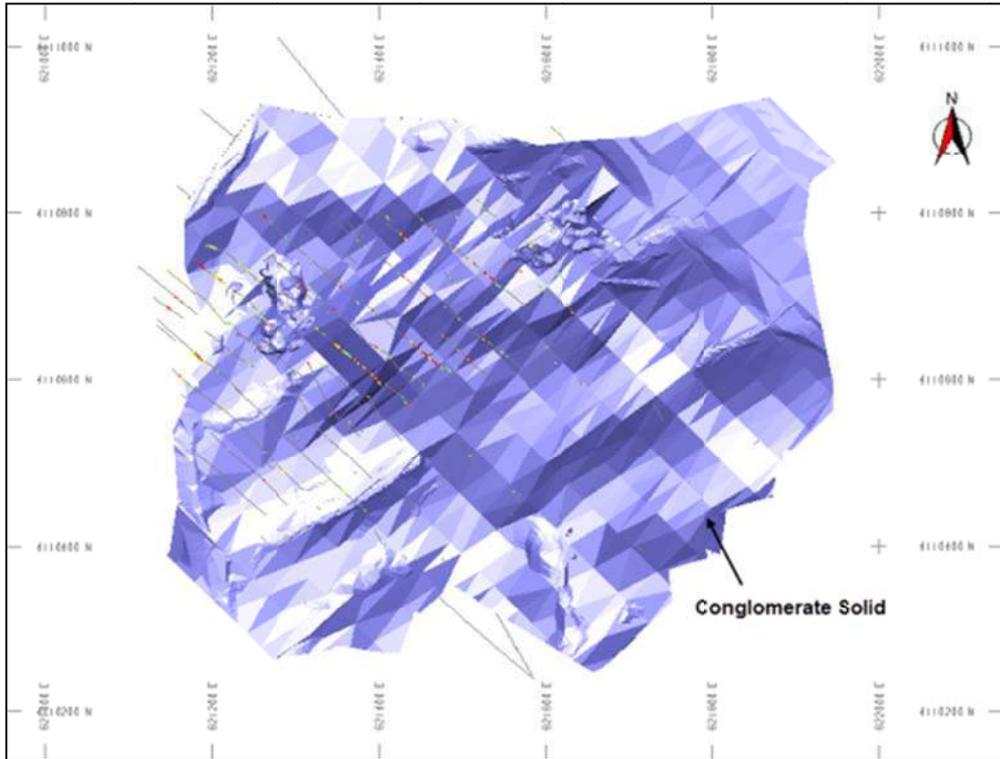
The grade interpolation used ordinary kriging based on the statistical and variogram analysis of the composited samples. The variogram criteria shown in Table 13-4 were used.

Quartered circles were used for grade estimation. SRK converted the solid model and imported it into MineSight (see Figure 13-5) for use in creating solid constraints for the grade interpolation.

Grade interpolation was conducted in two passes, and all estimated blocks were constrained within the solid model and were constrained beneath the surface topography. Percentage for each block containing mineralized zones was calculated to adjust volume estimation.

The ellipsoid used for the first search pass was 110 m × 80 m × 30 m, had a major axis azimuth of 90° and a dip angle of 0°, and a minor axis dip angle of 0°. Four (4) to 12 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 80 m × 40 m × 20 m, had a major axis azimuth of 90° and a dip angle of 0°, and a minor axis dip angle of 0°. Six (6) to 12 composite samples were used to estimate the block grades, with a maximum of two samples for any individual borehole, trench, or channel, and a maximum of two composite samples within one quartered circle. The estimated grades in the second pass overwrote those estimated in the first one.



**Figure 13-5: Solid Model of Mineralized Conglomerate**

### 13.8 Model Validation and Sensitivity Analysis

Based on the 1 m composites’ length, SRK adopted Ordinary Kriging (“OK”), inverse distance squared (“IDW”), and inverse distance power of 5 (“ID5”) to estimate the grade, where the average grade of block model and composites are compared and shown in Table 13-7.

As shown in Table 13-7, the relative error between the grade interpolation results of the average block model and average composites is approximately within 20%, which indicates that the OK method is feasible.

**Table 13-7: Au Grade Comparison between Average Grade of Block Model and Composites**

Sample Composites (CMP)	Estimation Method			Relative Error		
	OK	IDW	ID5	OK/CMP	IDW/CMP	ID5/CMP
0.370	0.452	0.449	0.442	1.22	1.21	1.19

### 13.9 Mineral Resource Classification

Resources at the Songjiagou Project are categorized as Indicated Mineral Resources and Inferred Mineral Resources as shown in Figure 13-6.

Within the optimized final pit shell, estimated blocks with no less than four (4) informing drill holes were classified to Indicated Mineral Resources. After identifying all Indicated resources, all remaining blocks with gold grade value, including all blocks outside the optimized pit and those blocks within the pit which were estimated with sample data from less than 4 drill holes, were classified as Inferred Mineral Resources.

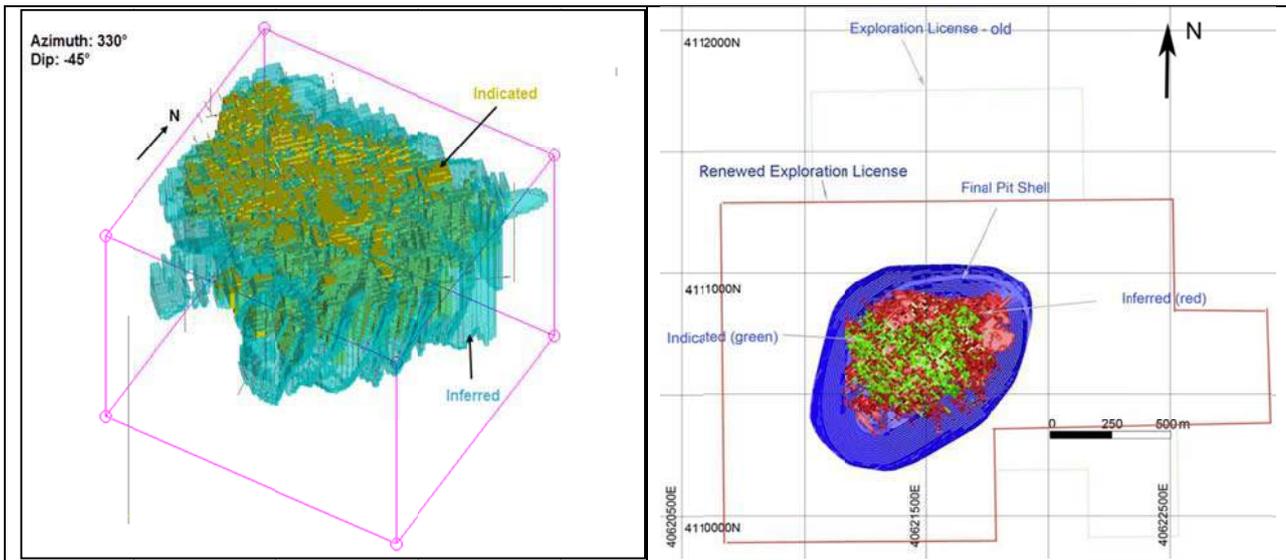


Figure 13-6: Mineral Resource Classification

### 13.10 Mineral Resource Statement

CIM Definition Standards for Mineral Resources and Mineral Reserves (November 2010) defines a mineral resource as:

*“A Mineral Resource is a concentration or occurrence of diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals in or on the Earth’s crust in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction. The location, quantity, grade, geological characteristics and continuity of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge.”*

The “reasonable prospects for eventual economic extraction” requirement generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account extraction scenarios and processing recoveries. In order to determine the quantities of material offering “reasonable prospects for economic extraction” by an open pit, a detailed study of cut-off grade for Songjiagou pit optimization has been conducted by SRK and the report was titled *“Technical Report on the Cut-off Grade Study of Songjiagou Gold Mine in Wanggezhuang Town, Mouping District, Yantai City, Shandong Province, China”* and dated in August 2012. According to the study a cut-off grade of 0.3 g/t Au was recommended for open pit extraction of the project.

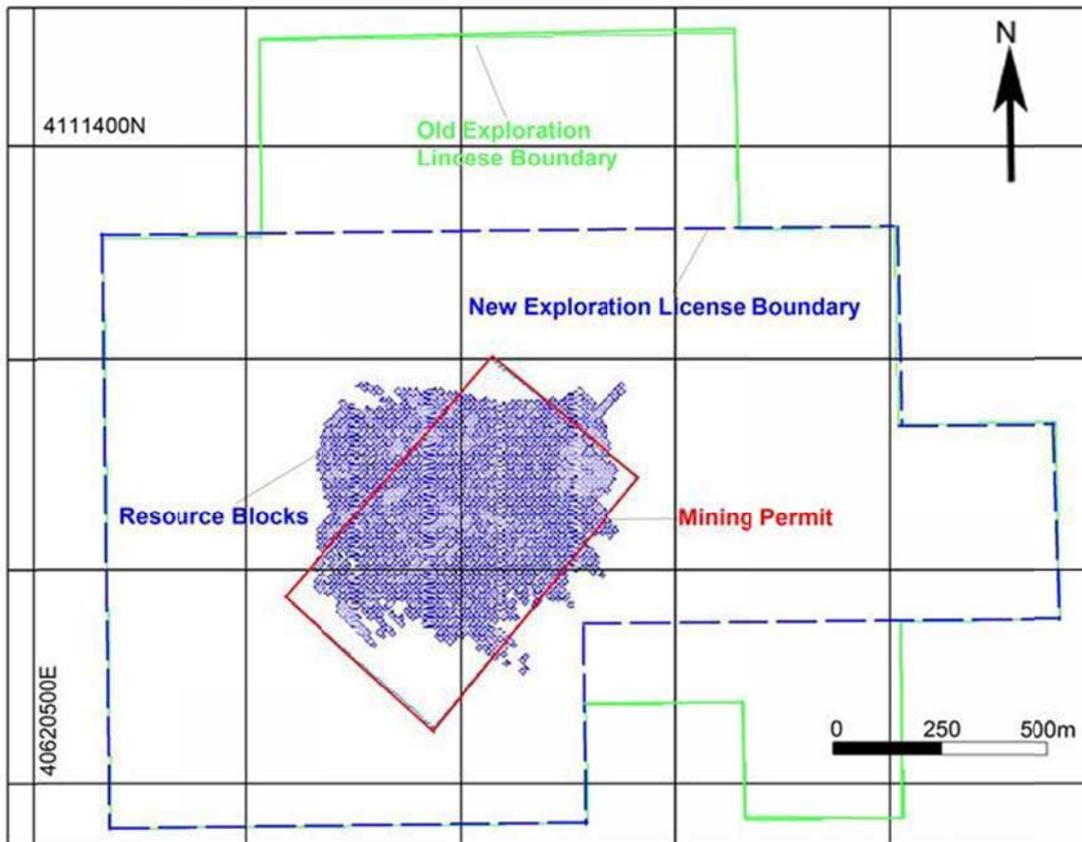
SRK considers that the blocks located within the conceptual pit envelope show “reasonable prospects for economic extraction” and can be reported as a mineral resource, and the blocks not meeting open pit reporting requirements can be considered amenable for underground extraction if they meet underground reporting criteria and reported as underground mineral resources at an underground reporting cut-off. Conceptual assumptions considered by SRK for the underground resources reporting are shown in table below.

**Table 13-8: Conceptual Assumptions Considered for Underground Resource Reporting**

<b>Parameter</b>	<b>Value</b>	<b>Unit</b>
Gold Price	1,355.0	US\$ per ounce
Exchange Rate	6.3	\$US/CNY
Mining Cost	11.0	US\$ per tonne mined
Processing and Smelting Cost	7.5	US\$ per tonne of feed
General and Administrative	4.0	US\$ per tonne of feed
Mining Dilution	14.0	percent
Mining Loss	7.0	percent
Gold Processing and Smelting Recovery	80.0	percent
In Situ Cut-Off-Grade	0.8	grams per tonne

SRK considers it is appropriate to report the mineral resource in the Project separately as Open Pit Resources and Underground Resources, and all underground resources are classified into “Inferred” category in compliance with the CIM definitions.

The current mining license covers an area of 0.3421 km<sup>2</sup> with an approved mining elevation range from +140 m to -300 m ASL. A part of blocks below -300 m ASL in the mining license area have been estimated and assigned to Inferred Resources. SRK has noticed that Majestic also holds an exploration license covers an area of 3.15 km<sup>2</sup> covering and surrounding the mining license area. According to Chinese relevant regulations for mineral licenses, the exploration license does not have an elevation limit. All estimated resource blocks are within either the effective mining license or the exploration license areas (Figure 13-7), therefore SRK considers all mineral resources estimated can be appropriately attributed to Majestic’s Songjiagou Project.



**Figure 13-7: Estimated Resource Blocks and License Areas**

Songjiagou mine has commenced production since 2006 with underground mining. Related depletion models have not been built due to a lack of 3D data for the underground mined-out area. According to the historical production records provided by Zhongjia Mining, from 1 January 2006 to 31 January 2013, the total underground mining inventory has depleted a total of 444 kt with average grade of 0.85 g/t Au, as shown in Table 13-9. The depletion tonnage has been deducted from the estimated Indicated Resource tonnage. SRK did not verify the accuracy and completeness of tonnage and grades about the depletion.

**Table 13-9: Underground Depletion in Songjiagou Mine**

Period	Tonnage (t)	Mined Grade (g/t Au)
2006.1 - 2007.12	24,756	0.88
2008.1 - 2011.3	234,987	0.87
2011.4 - 2013.1	183,815	0.83
<b>Total</b>	<b>443,555</b>	<b>0.85</b>

As of 31 January 2013, at a cut-off grade of 0.3 g/t Au, within the optimized open pit (also within mining license and exploration permit), the Songjiagou Project contains 26.6 million tonnes (“Mt”) of Indicated Mineral Resources at an average gold grade of 1.40 g/t, and 23.4 Mt of Inferred Mineral Resources at an average gold grade of 1.45 g/t. In addition to the open pit resources, the underground gold resources contain 5.6 million tonnes Inferred Resources grading 2.56 g/t Au, at a cut-off grade of 0.8 g/t Au. The stated Mineral Resources shown in Table 13-10 are estimated for the whole Songjiagou Gold Project, including

resources below the current mining permit depth or outside the mining permit area but covered by the effective exploration license. SRK has considered Majestic’s priority in extending the mining permit area and depth.

**Table 13-10: Mineral Resources for the Songjiagou Gold Project – as of 31 January 2013**

Category	Quantity	Au Grade
	Mt	g/t
<b>Open Pit** (cut-off grade: 0.3 g/t Au)</b>		
Indicated	26.6	1.40
Inferred	23.4	1.45
<b>Underground** (cut-off grade: 0.8 g/t Au)</b>		
Inferred	5.6	2.56
<b>Combined Mining</b>		
Indicated	26.6	1.40
Inferred	29.0	1.66

\* The resource estimate is categorized as Indicated and Inferred as defined by the CIM guidelines for resource reporting. Mineral resources do not demonstrate economic viability, and there is no certainty that these mineral resources will be converted into mineable reserves once economic considerations are applied. The Indicated and Inferred mineral resource estimate has been prepared in compliance with the standards of NI 43 – 101 by Anshun Xu, Ph.D., FAussIMM. All figures are rounded to reflect the relative accuracy of the estimate. All composites have been capped where appropriate.

\*\* Open pit mineral resources are reported at a cut-off grade of 0.3 g/t and underground mineral resources are reported at a cut-off grade of 0.8 g/t. Cut-off grades are based on a price of US\$1,355 per ounce of gold and gold recoveries of about 83.44 percent for open pit and gold recoveries of 80 percent underground resources, without considering revenues from other metals.

Within the current mining license area and the permit mining depth range, the Open Pit Resources include 24.1 Mt Indicated Resources at an average grade of 1.44 g/t Au and 18.0 Mt Inferred Resources at an average grade of 1.29 g/t Au. In addition, there are about 4.9 Mt Underground Inferred Resources grading 2.60 g/t Au estimated for

**Table 13-11: Mineral Resources for the Songjiagou Mining License Area – as of 31 January 2013**

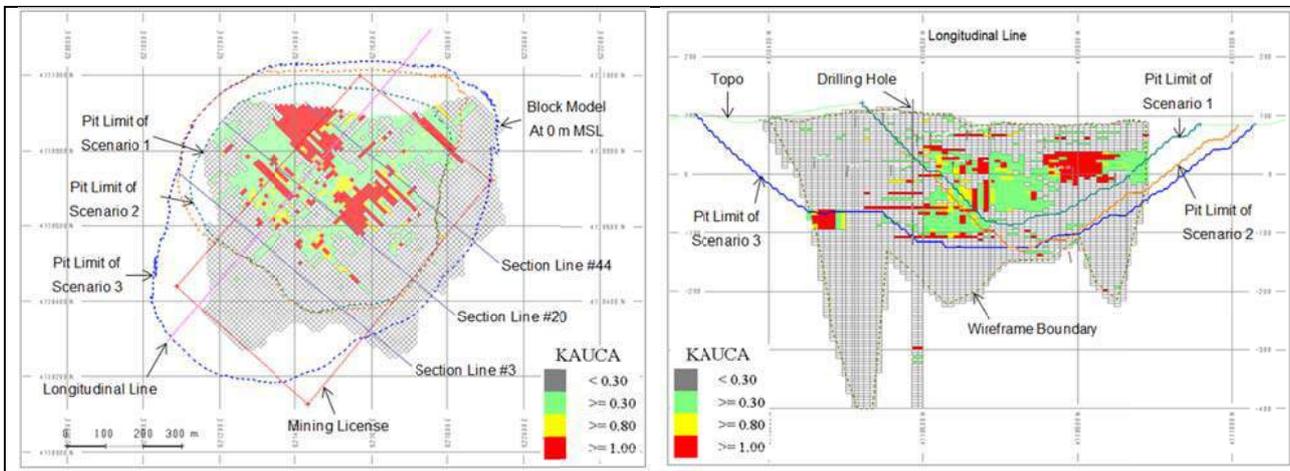
Category	Quantity	Au Grade
	Mt	g/t
<b>Open Pit** (cut-off grade: 0.3 g/t Au)</b>		
Indicated	24.1	1.44
Inferred	18.0	1.29
<b>Underground** (cut-off grade: 0.8 g/t Au)</b>		
Inferred	4.9	2.60
<b>Combined Mining</b>		
Indicated	24.1	1.44
Inferred	22.9	1.57

\* The resource estimate is categorized as Indicated and Inferred as defined by the CIM guidelines for resource reporting. Mineral resources do not demonstrate economic viability, and there is no certainty that these mineral resources will be converted into mineable reserves once economic considerations are applied. The Indicated and Inferred mineral resource estimate has been prepared in compliance with the standards of NI 43 – 101 by Anshun Xu, Ph.D., FAussIMM. All figures are rounded to reflect the relative accuracy of the estimate. All composites have been capped where appropriate.

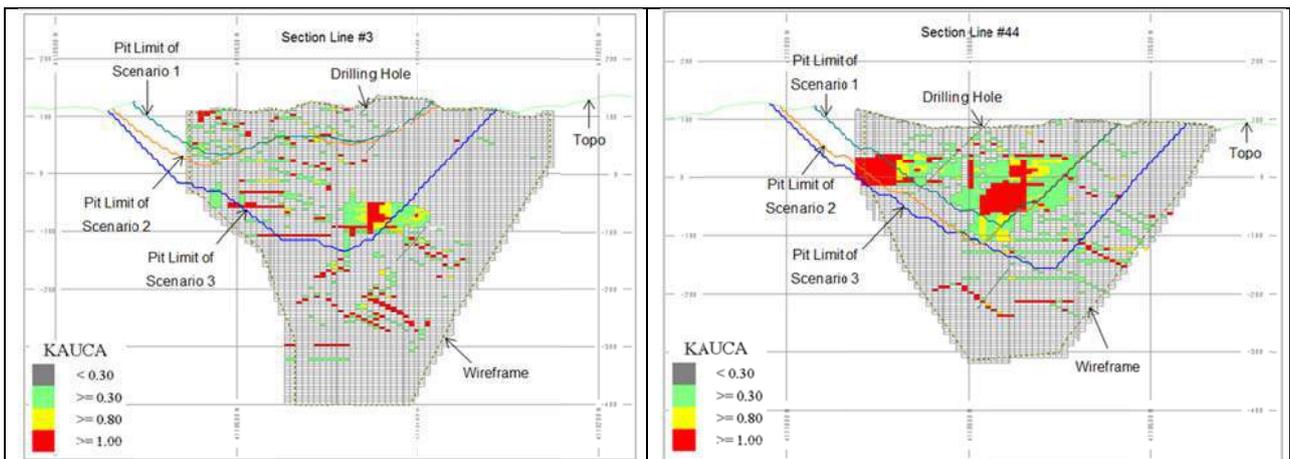
\*\* Open pit mineral resources are reported at a cut-off grade of 0.3 g/t and underground mineral resources are reported at a cut-off grade of 0.8 g/t. Cut-off grades are based on a price of US\$1,355 per ounce of gold and gold recoveries of

about 83.44 percent for open pit and gold recoveries of 80 percent underground resources, without considering revenues from other metals.

The plan and sectional view of estimated blocks are shown in Figure 13-8 and Figure 13-9.



**Figure 13-8: Plan (Left) and Longitudinal Section (Right) View of the Estimated Blocks**



**Figure 13-9: Typical Cross-sections of the Estimated Blocks**

The current resource estimate done in this Report supersedes all the previous resource estimates done by the Company or other parties.

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 resource consisted of 6.1 Mt of Indicated Mineral Resources at an average grade of 0.96 g/t Au and 12.1 Mt 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 resource consisted of 8.8 Mt of Indicated Mineral Resources at an average grade of 1.5 g/t Au and 18.2 Mt 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 0.4g/t Au cut-off grade, and set a lower limit for outlier value at 40 g/t Au. The resource consisted of 24.9 Mt of Indicated Mineral Resources at an average grade of 1.3 g/t Au and 28.1 Mt of Inferred Mineral Resources at an average grade of 1.9 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 resource consisted of 33.7 Mt of Indicated Mineral Resources at an average grade of 1.2 g/t Au and 38.8 Mt of Inferred Mineral Resources at an average grade of 1.5 g/t Au.

The table below summarises previous Mineral Resource estimates for the Songjiagou Project.

**Table 13-12: Previous Resource Estimates**

Date/Year of Estimate	Cut-off Grade (g/t Au)	Resource Category	Tonnes (kt)	Grade (g/t Au)
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	14,900	1.3
		Inferred	28,100	1.9
October 2010	0.3	Indicated	33,700	1.2
		Inferred	38,800	1.5

### 13.11 Grade Sensitivity Analysis

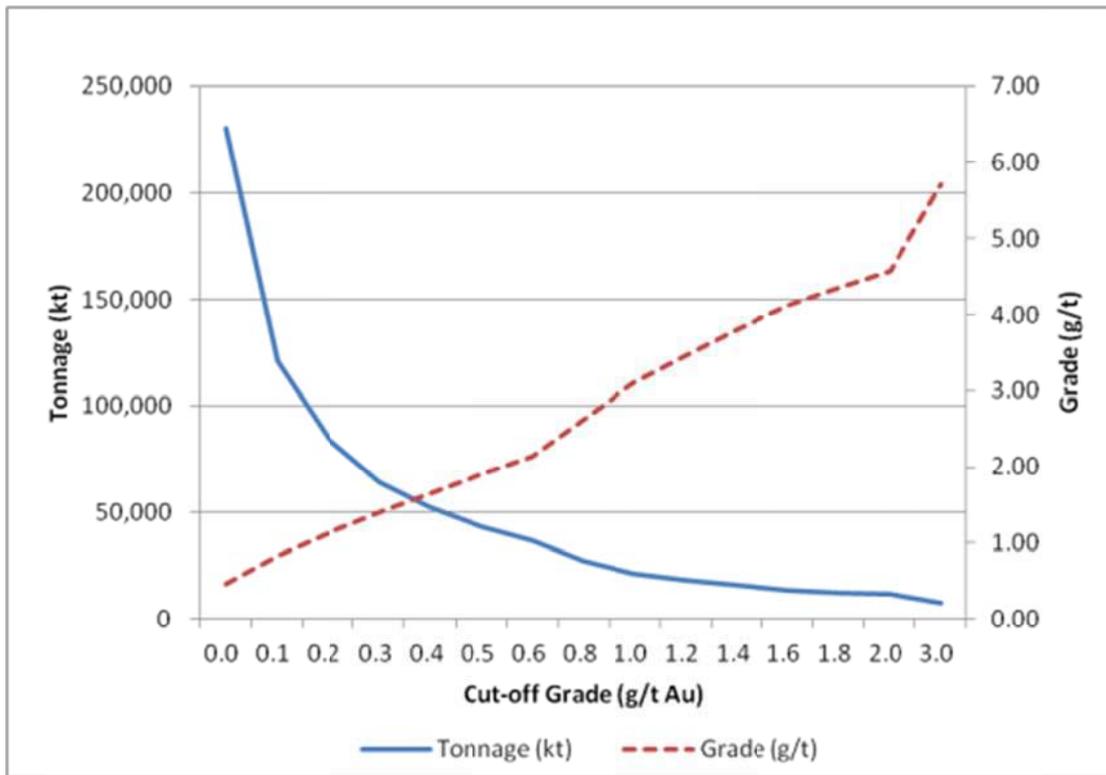
The Mineral Resource as stated for Songjiagou Project is sensitive to the cut-off grade selected. As shown in Table 13-13, the resource is reduced by 21,121 kt (a 33% decrease) when the gold cut-off grade increases from 0.3 g/t to 0.5 g/t while at the same time the average grade increases by 0.49 g/t (a 35% increase).

Please note that Table 13-13 only displays the impact of grade sensitivity on resource tonnage, and should not be misconstrued as representing a mineral resource statement.

**Table 13-13: Global Estimates of Tonnage and Grades under Different Cut-offs**

Cut-off Grade (g/t Au)	Tonnes (kt)	Percentage (%)	Capped Grade (g/t Au)
0.0	230,145	100	0.46
0.1	120,809	52	0.83
0.2	84,335	37	1.13
0.3	64,367	28	1.40
0.4	52,106	23	1.65
0.5	43,246	19	1.89
0.6	36,726	16	2.13
0.8	27,361	12	2.63
1.0	21,469	9	3.10
1.2	18,210	8	3.46
1.4	15,731	7	3.81
1.6	13,829	6	4.12
1.8	12,586	5	4.36
2.0	11,616	5	4.57
3.0	7,552	3	5.72

Note: This table is only intended to demonstrate the impact of grade sensitivity on global tonnage estimation, and does not represent a mineral resource estimate. In this table, mined-out inventory has not been excluded.



**Figure 13-10: Grade – Tonnage Curve**

Note: The mined-out inventory has not been excluded in the global estimates.

### **13.12 Recommendations on Mineral Reserve Conversion**

Songjiagou gold mine's resource estimation is based on industry standards and geological interpretation. Resource estimation fully reflects observation values of grade distribution. Due to the fact that model with high confidence is difficult to build for high grade areas, uncertainty exists concerning deposit modelling. There are certain risks in high grade gold participating in grade estimation. Therefore, geological modelling may exaggerate distribution of high grade gold. If it proves to be true in future mining, the gold grade is overestimated. But the risk level cannot be identified due to the uncertainty of occurrence probability.

Approximate 55% of the Project's mineral resources are defined as Inferred Mineral Resources at a cut-off grade of 0.3 g/t Au, and SRK therefore recommends that the Company conduct further exploration during the mining operation, in order to upgrade the resource category and reduce the operating risks.

## 14 Mineral Reserve Estimation

No Mineral Reserve estimation was done or reported within this ITR, because there is not any pre-feasibility study or feasibility study done on the project.

This study has been completed as a scoping study, it has not been completed to pre-feasibility or feasibility study level as such mineral reserves are not reported.

*This PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

## 15 Mining Methods

### 15.1 Current Status

Songjiagou mine is currently in production from the Open Pit and Underground operation.

#### 15.1.1 Surface Mining

Surface mining activities are outsourced to Dahedong Mineral Processing Co., Ltd (“Dahedong”). The planned production capacity is 7,400 tonnes per day (“tpd”). The actual production has varied between 5,000 - 10,000 tpd. The grade of the recovered mining inventory is about 0.3 g/t Au.

Mining inventory is loaded by excavator and then transported to the processing plant by truck.

#### 15.1.2 Underground Mining

During this report compilation, underground mining had been completed in the +9 m, -40 m, and -80 m levels. The grade of recovered inventory is about 0.8 g/t Au. The -120 m level will be mined out in the next stage and the mine will then transition to surface mining. Therefore, underground mining is not taken into consideration by SRK in this report. The underground mining activities are outsourced.

### 15.2 Mining Technical Conditions

Hydrogeological conditions are relatively straight forward. Since there are no large surface water bodies in the mining area, the main source for water inrush is water held in veins and fissures in the fractured zone. Atmospheric precipitation is another major factor in water inrush via seepage through fractures in the weathered zone. Additionally, Quaternary pore water and bedrock weathering fissure water have certain impact on water inrush during the wet season, but significantly less during the dry season.

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.

Engineering geological conditions and the topography and morphology of Songjiagou Mine are straight forward, with unitary lithology and a simple structure. Wall rocks of the roof and floor are stable, with good rock mass stability. Minimal or no supports have been necessary during underground development. There are no large areas of collapses or roof falls, implying good stability.

Environmental geological conditions are moderately complicated. Environmental geological problems are mainly related to the waste dump’s and open pit’s impact on the local landscape, pollution caused by mine water drainage and its impact on the quality of water used by nearby residents. The major environmental problems are water pollution and environmental degradation caused by the open pit.

Generally speaking, the mining technical conditions are moderately complicated in terms of environmental geology. The Songjiagou Mine is a medium-sized deposit with major environmental geological concerns. These are discussed further in Chapter 19.

## 15.3 Resource Verification and Optimization Preparation

### 15.3.1 Resource Verification

According to the resource model updated by SRK, as of 31 January 2013, at a cut-off of 0.30 g/t Au, within the optimized open pit (also within mining license and exploration permit), Songjiagou Mine contains 26.6 million tonnes of Indicated Mineral Resources at an average gold grade of 1.40 g/t, and 23.4 million tonnes of Inferred Mineral Resources at an average gold grade of 1.45g/t. In addition to the open pit resource, the underground gold resources contain 5.6 million tonnes Inferred Resources grading 2.56 g/t, at a cut-off grade of 0.8 g/t. *Please note that the historical underground production from 2006 to January 2013 has been excluded from the resource statements.*

Eleven (11) samples were randomly collected by SRK from the open pit in October 2012. The samples were sent to Intertek Laboratory in Beijing for assay. Assay results are shown in Table 15-1. The minimum grade among the 11 samples is 0.121 g/t Au, and the maximum is 6.34 g/t Au, averaging 1.312 g/t Au.

**Table 15-1: Open Pit Sampling Verification by SRK**

Sample No.	Grade (g/t Au)
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

SRK summarized the gold grade of the global blocks intersecting with the topography in the resource model. The major features of these blocks are compared with the random sampling results in Table 15-2. The minimum and maximum values of randomly collected samples are within the minimum and maximum scopes of the resource model, indicating that the resource model is reliable. Therefore, pit optimization was carried out based on this resource model.

**Table 15-2: Comparison between Open Pit Sampling and Resource Model**

Items	SRK Randomly Collected Sample Grade(g/t Au)	SRK Resource Model Grade* (g/t Au)
Min.	0.121	0.004
Max.	6.340	7.894
Average	1.312	0.257

Note: Only blocks intersecting the topography in the model are included.

### 15.3.2 Block Size

According to *Songjiagou Gold Mine Resource Development and Utilization Plan* (“Development and Utilization Plan”) delivered by Yantai Dehe Metallurgy Research and Design Co., Ltd in July 2011, the bench height is designed to be 12 m.

During the site visit, SRK learned that the excavator type used by Dahedong is a DOOSAN DH300LC-7 that has a maximum excavating height is 10 m.

In order to effectively control the grade and match excavator capacities, block sizes in the resource model were set at 10 m × 10 m × 5 m. Two benches were combined into one during optimization, and the final bench height is 10 m.

### 15.3.3 Topography

The topographic data (new topo.dtm) used in pit optimization was surveyed at the end of January 2013.

## 15.4 Pit Limit Optimization and Design

### 15.4.1 Optimization Method and Instrument

MineSight’s Economic Planner (Design) was used for pit optimization, and the calculation method used is the Lerchs-Grossmann (“LG”) method, in order to maximize net present value (“NPV”).

All materials in the mine are divided into six types based on the relationship between unit operating cost and feed grade shown in Table 15-3. Materials with grades lower than 0.30 g/t Au are regarded as waste.

### 15.4.2 Parameters for Pit Optimization

*All technical and economic parameters described below were selected by SRK during the site visit and confirmed by Majestic.*

#### 15.4.2.1 Exchange Rate Assumption

In this report, the base date of exchange rate and price are assumed to be 30 March 2013.

Exchange rates between US Dollars (“USD”), Chinese Yuan (“RMB” or “CNY”), and Canadian Dollars (“CAD”) are fixed at USD 1 to RMB 6.2834 and CAD 1 to RMB 6.2789. These conversion rates are the averages of the past year (from 31 March 2012 to 30 March 2013) as shown in Figure 15-1.



Figure 15-1: Trends of Exchange Rates of USD/CNY and CAD /CNY

### 15.4.2.2 Operating Costs

According to the contract signed between Zhongjia Mining and Dahedong, the unit operating cost is dependent on the feed grade, as shown in Table 15-3.

**Table 15-3: Modified Unit Operating Cost**

Feed Grade (g/t)		Mining Costs (RMB/t)	Processing Costs (RMB/t)
From	To		
0.00	0.30	8.55	-
0.30	0.35	11.30	23.96
0.35	0.40	11.30	29.76
0.40	0.45	11.30	35.56
0.45	0.50	11.30	41.36
0.50	>0.50	11.30	47.46

Note: When mining occurs below 80 m, both stripping costs and mining costs increase by 0.15 RMB/t every 10 m lower.

### 15.4.2.3 Mining Recovery Rate

For the open pit optimization, the mining recovery rate was 95%, and the dilution rate was 5%.

The No. 3 Geological Institute conducted various geological exploration works on the Songjiagou Project, and published the *Resource and Reserve Verification Report for the Songjiagou Gold Mine in Mouping District, Yantai, Shandong Province* in January 2011. The report states that gold contents in wall rocks and internal waste are generally lower than 0.10 g/t Au, with occasion maxima reaching 0.50 g/t Au, and an average of 0.12 g/t Au. There are no clear boundaries between wall rocks/waste and the ore body, which merge into each other via gradual change and transition. SRK assumed the dilution material has a grade of 0.12 g/t Au.

The processing recovery rate is related to the feed grade, as shown in Table 15-4. When the feed grade is no lower than 1.00 g/t Au, the processing recovery rate is 95%.

**Table 15-4: Relationship between Processing Recovery Rate and Feed Grade**

Feed Grade (g/t)	Gold Recovery Rate (%)
0.20 - 0.30	80
0.30 - 0.35	85.3
0.35 - 1.00	$7.0325 \times \ln(\text{feed grade, g/t}) + 93.907$
$\geq 1.00$	95

### 15.4.2.4 Management Costs

As the Canadian dollar has weakened against the RMB in recent years, in concert with price inflation and other factors, the management cost is determined at RMB 4.50/t.

### 15.4.2.5 Gold Concentrate Processing Costs

Gold concentrate is the final product. Production of this concentrate is outsourced to Shandong Humon Smelting Co., Ltd (“Humon Smelting”). According to the contract signed between Zhongjia Mining and Humon Smelting, the processing charges are RMB 100 per tonne of dry gold concentrate.

**15.4.2.6 Resource Tax**

The resource tax is RMB 5/t.

**15.4.2.7 Gold Price**

SRK reviewed the trend of gold prices (shown in Figure 15-2) over the last five years (31 March 2008 - 30 March 2013). Though the gold price has fluctuated during the last few years, it shows a general upward trend. The economic crisis resulted in a fall in gold prices from the end of 2008 to the beginning of 2009, but prices recovered in 2009 and peaked at USD 1,900.30 per (troy) ounce (“oz”; 1 oz = 31.1035 g) in 2011. Last year (from March 2012 to March 2013), gold price fluctuated between USD 1,564.3/oz and USD 1,781.3/oz.

Based on prices reported by the World Bank on 15 January 2013 (Table 15-5), the price forecast from 2013 to 2025 is USD 1,300 - 1,600/oz.

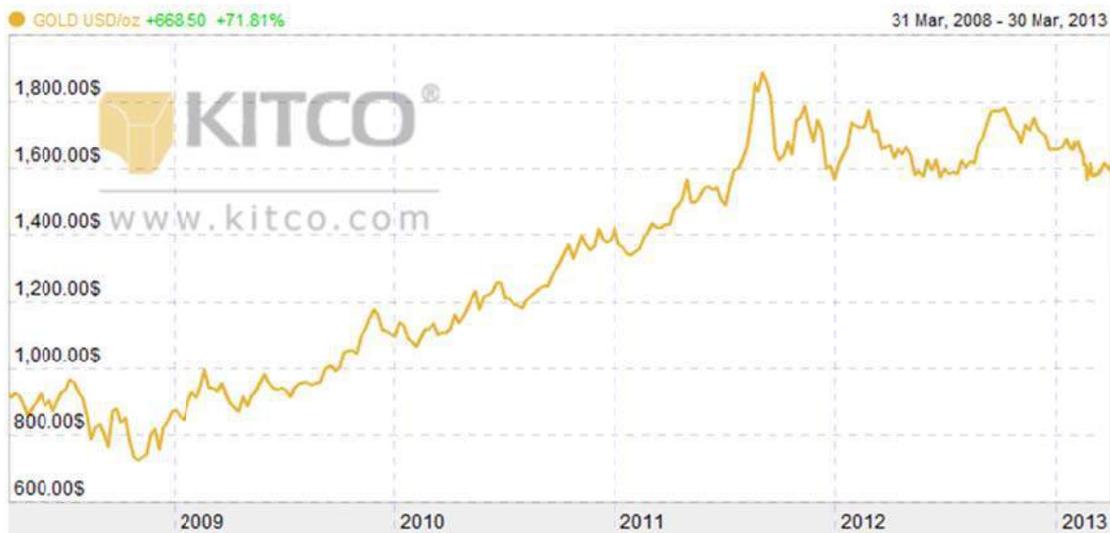
**Table 15-5: Gold Price Records and Price Forecast**

Unit	Records								
	1980	1990	2000	2010	2011	2012	-	-	-
USD/oz	608	383	279	1,225	1,569	1,670	-	-	-
Unit	Forecast								
	2013	2014	2015	2016	2017	2018	2019	2020	2025
USD/oz	1,600	1,550	1,500	1,479	1,458	1,437	1,417	1,396	1,300

Note: Data above are quoted from the World Bank, Development Prospects Group, released 15 January, 2013.

SRK selected the average gold price over the last five years, USD 1,355/oz or RMB 273.89/gram, as the price used for the pit optimization.

As a special commodity, the price of gold is greatly influenced by external factors. SRK suggests conducting a detailed study on its demand and supply as well as the price during the feasibility study stage.



**Figure 15-2: Gold Price Trends over the Past Five Years**

### 15.4.2.8 Overall Slope

Based on the data supplied by Majestic, the overall slope for the optimization was 48°. The overall slope recommended in the Development and Utilization Plan is no steeper than 47°.

There is insufficient data to support the design of the overall slope, and the bench face angle, SRK suggests that slope stability monitoring should be enhanced, and a rock mechanics study should be carried out as soon as possible to finalize these parameters, in order to guarantee production safety.

### 15.4.3 Pit Optimization Results

Three scenarios were modelled in the optimizations:

Scenario 1 – Indicated Resourced only, constrained by village relocations;

Scenario 2 – Inferred and Indicated Resources, constrained by village relocations; and

Scenario 3 - Inferred and Indicated Resources, un-constrained by village relocations.

Chapter 13.6 of *Safety Regulations for Blasting Practices (GB6722-2011)* defines the allowable safety distance for individual blasting methods; relevant details are provided in Table 15-6.

**Table 15-6: Minimum Allowable Safety Distances**

Blasting Type and Method	Minimum Allowable Safety Distance (m)
Secondary (Chunk) breaking by adobe blasting	400 m
Secondary (Chunk) breaking by short-hole blasting	300 m
Short-hole bench blasting	200 m (No less than 300 m when the geological conditions are complex or when no bench working face has been formed)
Deep-hole bench blasting	As designed, no less than 200 m
Chamber blasting	As designed, no less than 300 m

Note: When blasting along the slope is conducted, the allowable minimum safety distance down this slope should be increased by 50%.

Short-hole bench blasting is the major method used at the Songjiagou Project. An allowable minimum safety distance of 200 m is selected to constrain pit limits during optimization.

Major input parameters for pit optimization are listed in Table 15-7.

**Table 15-7: Pit Optimization Input Parameters**

Items	Unit	Values	Remarks
Cut-off grade	g/t Au	0.30	
Stripping costs	RMB/t	8.55	For benches below 80 m, there is an increase of RMB 0.15 every 10 m
Mining costs	RMB/t	11.30	For benches below 80 m, there is an increase of RMB 0.15 every 10 m
Processing costs	See Table 15-3		
Management fee	RMB/t	4.50	
Gold concentrate processing charges	RMB/t	100	
Gold Reclaim Rate	%	93.00	
Mining recovery rate	%	95.00	

Items	Unit	Values	Remarks
Mining dilution rate	%	5.00	
Grade of dilution material	g/t Au	0.12	
Processing recovery rate	See Table 15-4		
Resource tax	RMB/t	5.00	
Gold price	RMB/g	273.89	Average of last five years (from 31 March 2008 to 30 March 2013)
Overall slope	°	48.00	
Discount rate	%	10.00	Empirical value is selected by SRK.
Exchange rate	USD:CNY	6.2834	Average of the last year (31 March 2012 to 30 March 2013)
	CAD:CNY	6.2789	Average of the last year (31 March 2012 to 30 March 2013)

### 15.4.3.1 Scenario 1

Only Indicated Resources are considered for pit optimization in Scenario 1. Pit limits are constrained by the minimum allowable blast safety distance, so that the surrounding villages are not impacted.

*Please note that Zhongjia Mining is currently in the process of applying for an enlargement of the mining area. Therefore, the optimized pit limits in Scenario 1 are not constrained by the current approved mining area.*

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

A plan view of the optimize shell is presented in Figure 15-3. Its maximum length along the east-west axis is 650 m and its maximum width along the north-south axis is 600 m, with a vertical height of 300 m. The elevation of the lowest pit bottom is -160 m.

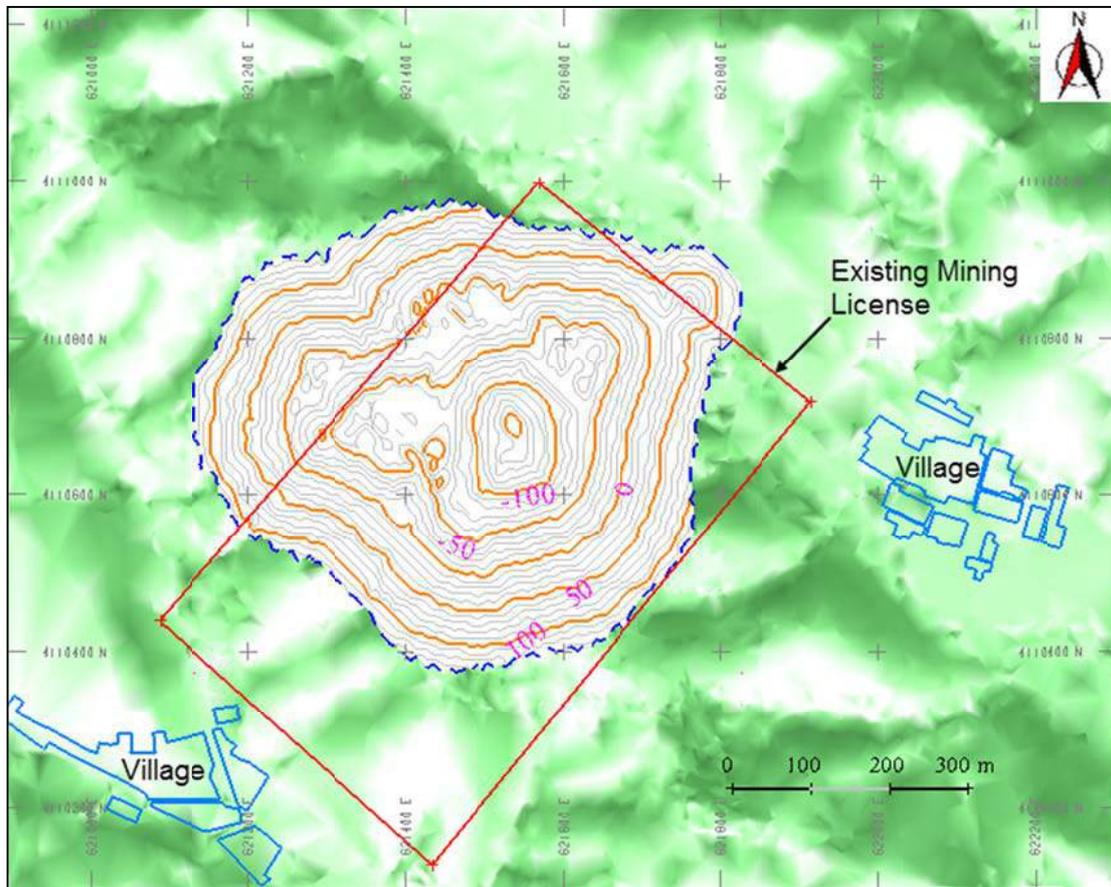
The mining inventory within the optimized pit limits are summarized in Table 15-8.

Figure 15-4 shows that the optimized pit limits are outside the approved mining license. SRK notes that the actual mining license also exceeds the approved mining license during the site visit. It is suggested that the application for mining license enlargement should be completed as soon as possible to guarantee its sustainable production in accordance with the law.

**Table 15-8: Inventory within the Optimized Pit Limits (Scenario 1)**

Cut-off Grade (g/t Au)	Indicated		Inferred		Waste Mined (kt)	Stripping Ratio (t/t)
	Tonnes (kt)	Grade (g/t Au)	Tonnes (kt)	Grade (g/t Au)		
0.3	17,907	1.34	9,217	1.25	43,079	2.92
0.4	15,185	1.52	7,342	1.49	47,676	3.62
0.5	12,810	1.71	6,244	1.67	51,149	4.48
1.0	6,599	2.75	3,125	2.66	60,923	9.71

Notes: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;  
 \*\*Mining recovery rate: 95%, dilution rate: 5%;  
 \*\*\*Inferred resources are regarded as waste when calculating stripping ratio.



**Figure 15-3: Pit Optimization of Scenario 1 (Azimuth: 0°, Dip: -90°)**

**15.4.3.2 Scenario 2**

Scenario 2 considers both Indicated Resources and Inferred Resources. The pit optimization is constrained by the minimum allowable blast safety distance of 200 m, so that the surrounding villages are not influenced.

*A preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too*

*speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

*According to NI 43-101 guidelines, Inferred Resources generally cannot be converted into Reserves. In the preliminary economic analysis (“PEA”) stage, Inferred Resources are considered for evaluation in this optimization. This should not be taken to imply that Inferred Resources can be necessarily converted into Reserves and then mined out.*

A plan view of the optimized shell is presented in Figure 15-4. Its maximum length along the east-west axis is about 700 m and its maximum width along the north-south axis is about 650 m, with a vertical height of 320 m. The elevation of the lowest pit bottom is -180 m.

The mining inventory within the optimized pit limits are summarized in Table 15-9.

Figure 15-4 shows that the optimized pit limits are outside the approved mining license. SRK notes that the actual mining license also exceeds the approved mining license during the site visit. It is suggested that application for mining license enlargement should be conducted as soon as possible to guarantee its sustainable production in accordance with the law.

**Table 15-9: Inventory within the Optimized Pit Limits (Scenario 2)**

Cut-off Grade (g/t Au)	Indicated		Inferred		Waste (kt)	Stripping Ratio (t/t)
	Tonnes (kt)	Grade (g/t Au)	Tonnes (kt)	Grade (g/t Au)		
0.3	19,494	1.30	14,718	1.42	63,422	1.85
0.4	16,396	1.48	12,088	1.66	69,150	2.43
0.5	13,694	1.68	10,290	1.87	73,650	3.07
1.0	6,963	2.73	5,274	3.00	85,841	7.01

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;

\*\*Mining recovery rate: 95%, dilution rate: 5%;

\*\*\*Inferred resources are regarded as mining inventory when calculating stripping ratio.

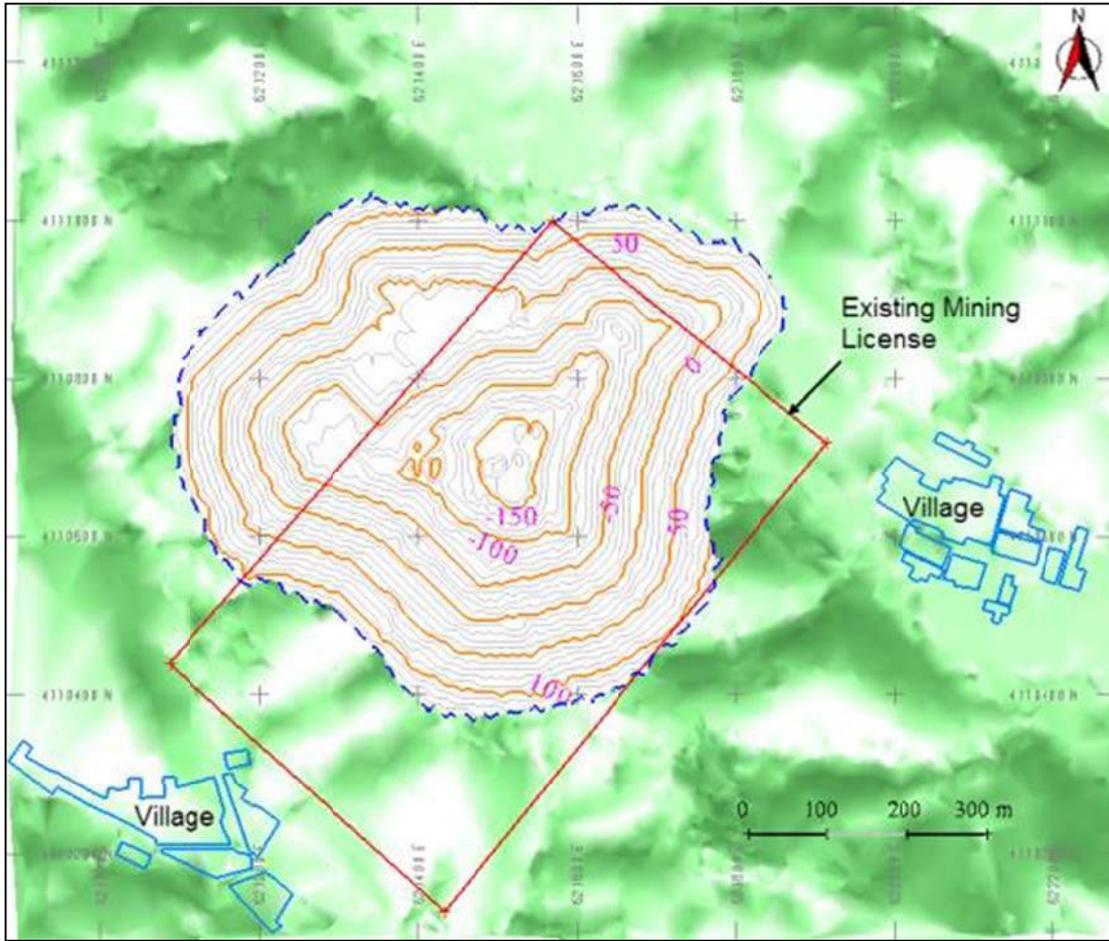


Figure 15-4: Pit Optimization of Scenario 2 (Azimuth: 0°, Dip: -90°)

### 15.4.3.3 Scenario 3

Scenario 3 considers both Indicated Resources and Inferred Resources for valuation during pit optimization. The affected villages will be relocated to maximise the extraction of the Resource.

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

*According to NI 43-101 guidelines, Inferred Resources generally cannot be converted into Reserves. In the PEA stage, Inferred Resources are used for valuation in this optimization, but this does not mean that the Inferred Resources can be necessarily converted into Reserves and then mined out.*

Optimized pit limits are shown in Figure 15-5. Its maximum length along the east-west axis is about 830 m and its maximum width along the north-south axis is about 850 m, with a vertical height of 330 m. The elevation of the lowest pit bottom is -190 m.

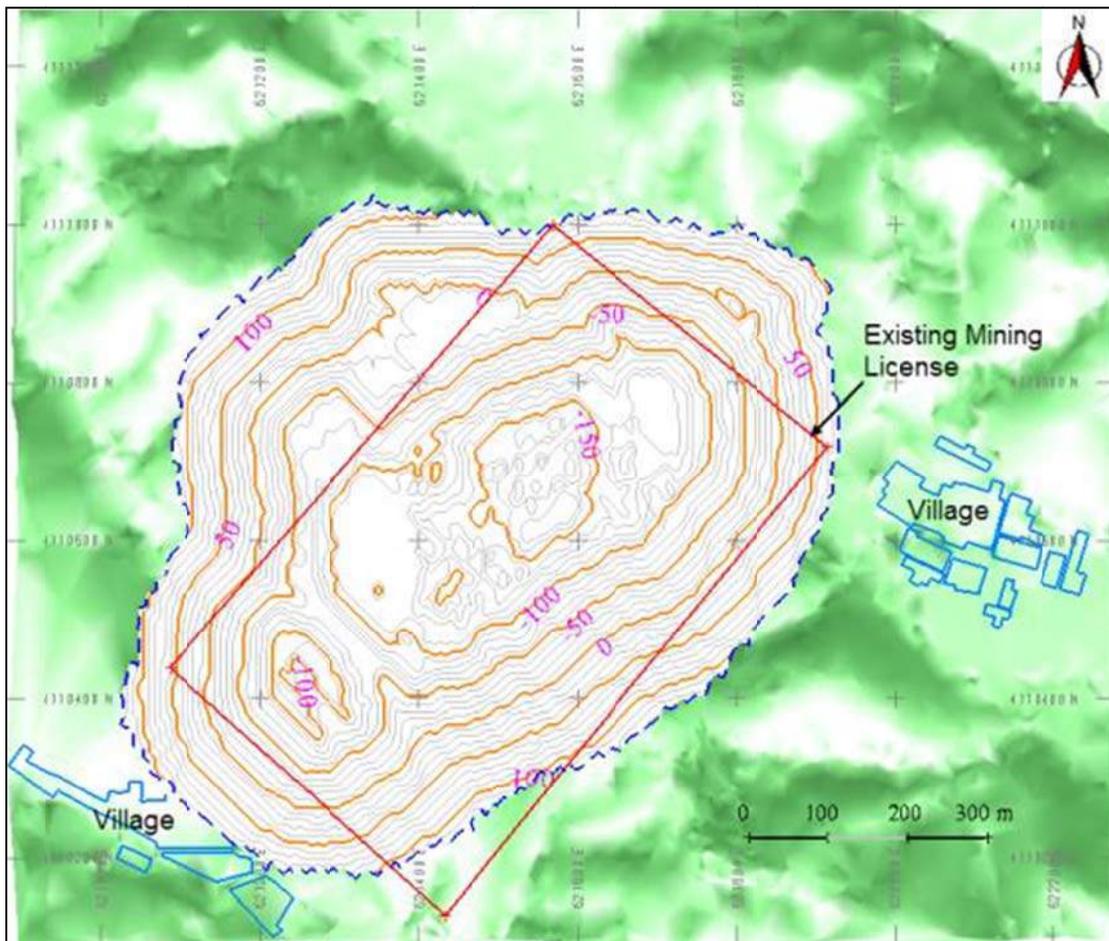
The mining inventory within the optimized pit limits are summarized in Table 15-10.

Figure 15-5 shows that the optimized pit limits are outside the approved mining license. SRK notes that the actual mining license also exceeds the approved mining license during the site visit. It is suggested that application for mining license enlargement should be conducted as soon as possible to guarantee its sustainable production in accordance with the law.

**Table 15-10: Inventory within the Optimized Pit Limits (Scenario 3)**

Cut-off Grade (g/t Au)	Indicated		Inferred		Waste (kt)	Stripping Ratio (t/t)
	Tonnes (kt)	Grade (g/t Au)	Tonnes (kt)	Grade (g/t Au)		
0.3	26,124	1.36	23,814	1.45	136,492	2.73
0.4	21,956	1.55	19,565	1.69	144,909	3.49
0.5	18,430	1.75	16,444	1.93	151,556	4.35
1.0	9,365	2.85	8,491	3.11	169,018	9.47

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;  
 \*\*Mining recovery rate: 95%, dilution rate: 5%;  
 \*\*\*Inferred resources are regarded as mining inventory when calculating stripping ratio



**Figure 15-5: Pit Optimization of Scenario 3 (Azimuth: 0°, Dip: -90°)**

### 15.4.4 Ultimate Pit Design

Based on the results of the pit optimization, SRK used MineSight (Ver. 6.0) software package to design the ultimate pit for each scenario. The major pit design input parameters used are listed in Table 15-11.

**Table 15-11: Ultimate Pit Design Input Parameters**

Items	Unit	Values	Remarks
Bench height	m	10	
Bench face angle	°	65	
Overall slope	°	48	
Safety/cleaning berm width	m	4 - 10	
Road width	m	18/12	Dual lane/single lane
Road gradient	%	10	
Minimum turning radius	m	35	

#### 15.4.4.1 Scenario 1

The ultimate pit design results are shown in Figure 15-6 and Figure 15-7.

The ultimate pit’s maximum length along the east-west axis is about 660 m, and the maximum width along the north-south axis is 600 m. The highest elevation of benches is 140 m and the lowest is -125 m. At a bench height of 10 m, there will be a total of 27 benches within the pit.

In order to fully utilize the existing road infrastructure, main accesses to the mine are connected with these roads. Haulage roads are arranged in a spiral to reduce the amount of inventory locked underground. The haulage distance from the pit bottom to the pit access is 2,227 m.

Although SRK considered the minimum allowable safety distance for blasting, as the boundaries of the pit are quite near the two villages, the following measures are recommended when mining occurs in the upper benches on the sides near the villages.

- Select small diameter drills, reduce the blasthole spacing (along the row) and burden (between rows);
- Strictly control and adjust the charge quantity used in each blasthole based on rock and inventory properties; and
- Do not break up lump inventory by secondary blasting.

Additionally, shielding measures, such as blast-resistant embankments, wave resistant walls, and protective barriers, should also be constructed to protect nearby plants, equipment, and residential houses. Village residents who may be subjected to potential danger should be informed prior to blasting and evacuated to a safe location. All these measures should be considered for safety production.

The existing waste dump associated with small-scale production is located to the southeast of the pit. The dump is not currently in use as all recovered materials are transported directly to the processing plant. According to the mine plan, waste will be separated and transported to the waste dump once a grade control program has been established following completion of a new laboratory. Based on the ultimate pit design results, the current waste dump is too small to accommodate all the waste within the ultimate pit. SRK recommends standardizing sampling, optimizing assay methods, and improving grade control. Location selection, land acquisition and design for a large enough waste dump should also be carried out.

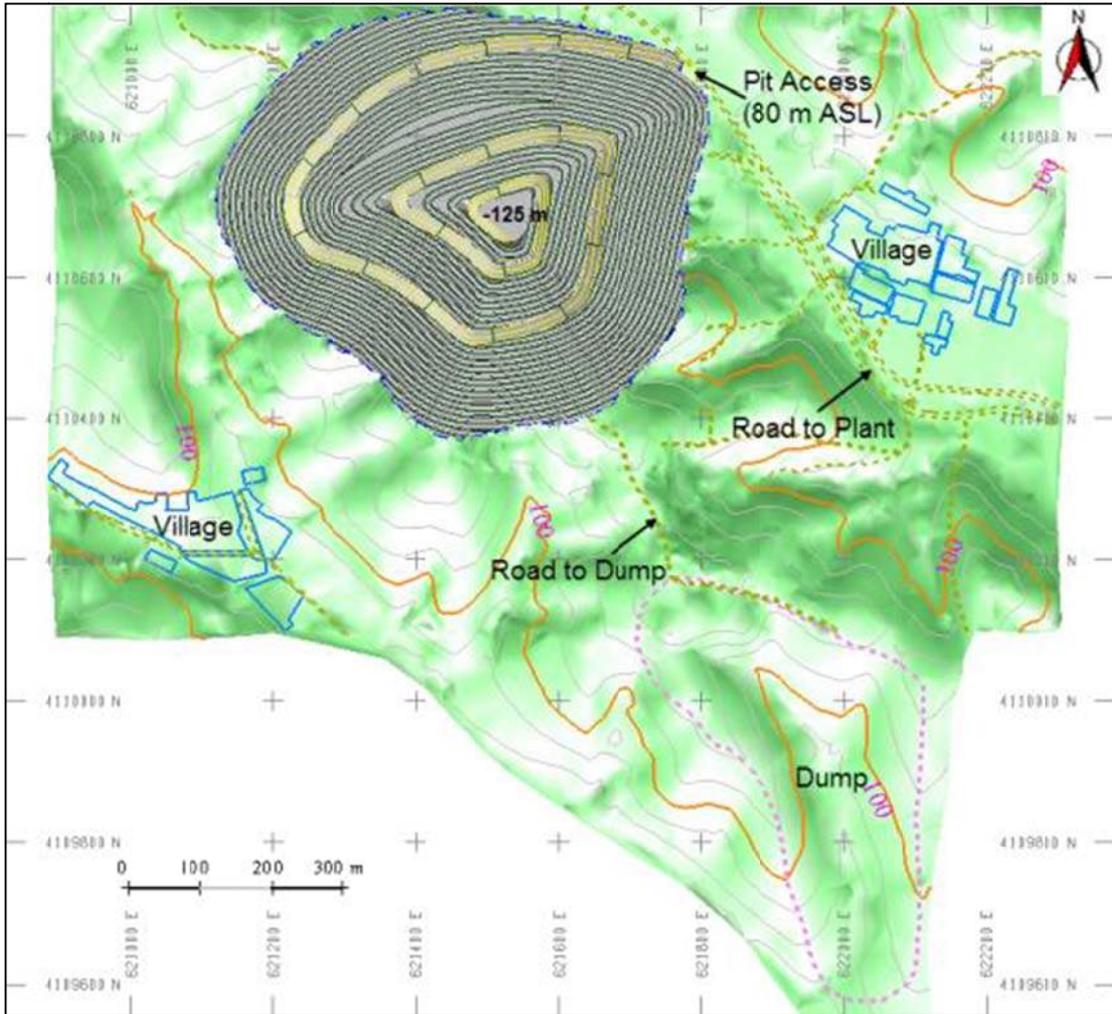


Figure 15-6: Ultimate Pit Design of Scenario 1 (Azimuth: 0°; Dip: -90°)

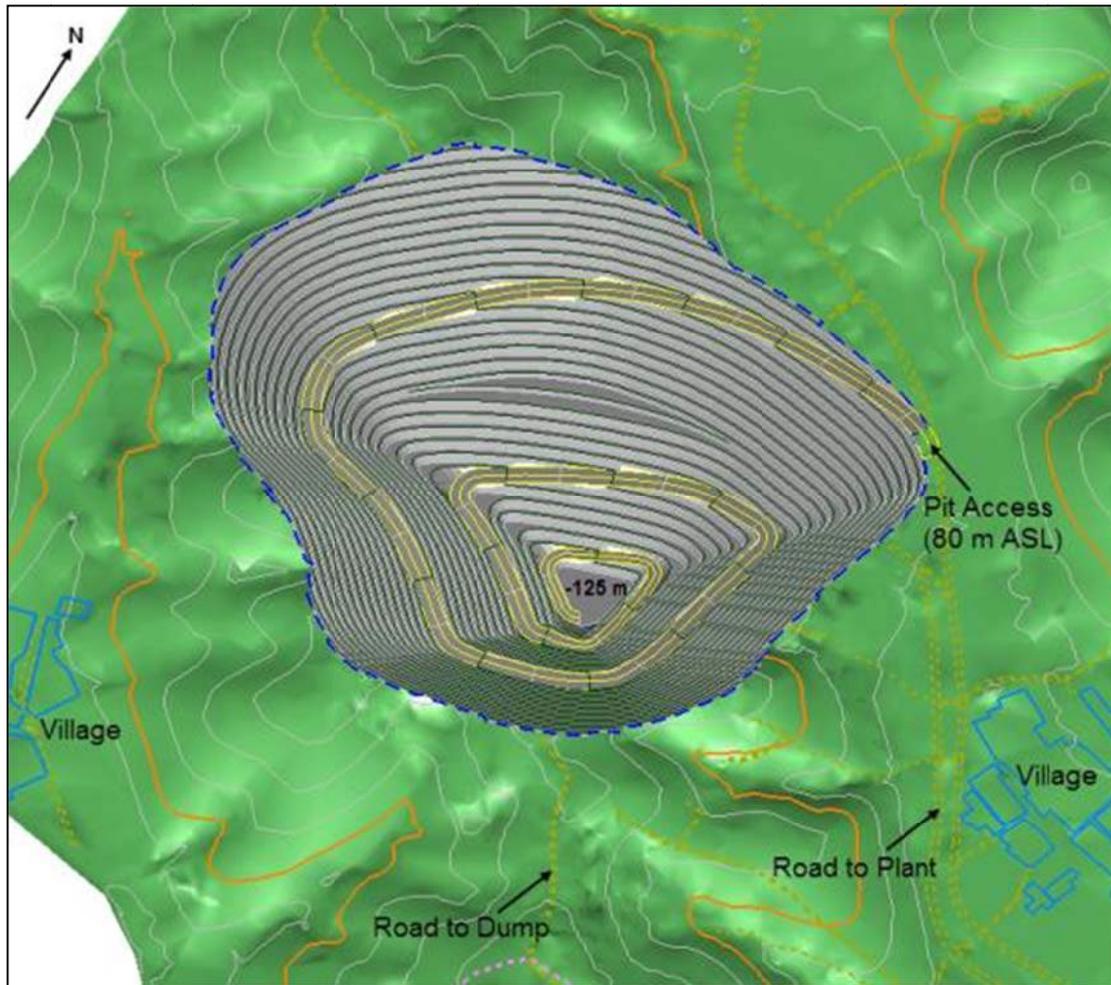


Figure 15-7: Ultimate Pit Design of Scenario 1 (Azimuth: 330°; Dip: -60°)

The mining inventory within the ultimate pit after considering loss and dilution are listed in Table 15-12 and Table 15-13

**Table 15-12: Inventory within Ultimate Pit of Scenario 1**

Cut-off Grade (g/t Au)	Indicated		Inferred		Waste (kt)	Stripping Ratio (t/t)
	Inventory (kt)	Grade (g/t Au)	Inventory (kt)	Grade (g/t Au)		
0.3	17,200	1.34	10,128	1.25	47,771	3.37
0.4	14,517	1.52	8,031	1.49	52,551	4.17
0.5	12,191	1.72	6,810	1.68	56,098	5.16
1.0	6,317	2.77	3,303	2.74	65,923	10.96

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;

\*\*Mining recovery rate: 95%, dilution rate: 5%;

\*\*\*Inferred resources are regarded as waste when calculating stripping ratio

**Table 15-13: Inventory by Benches within Ultimate Pit of Scenario 1**

Bench (m)	Indicated		Inferred		Waste (kt)	Stripping Ratio (t/t)
	Inventory (kt)	Grade (g/t Au)	Inventory (kt)	Grade (g/t Au)		
140	-	-	-	-	17	-
130	1	0.34	-	-	533	533.00
120	16	0.46	22	0.61	1,438	91.25
110	94	0.93	92	0.84	2,341	25.88
100	216	1.05	255	1.29	3,107	15.56
90	324	0.90	267	0.85	3,984	13.12
80	521	0.92	504	0.97	5,040	10.64
70	459	0.88	600	0.91	5,433	13.14
60	351	0.87	544	0.85	5,128	16.16
50	267	0.78	540	0.76	4,759	19.85
40	275	0.77	628	0.69	4,222	17.64
30	1,743	1.48	698	1.41	2,256	1.69
20	2,003	1.42	804	1.53	1,477	1.14
10	1,982	1.46	880	1.49	1,020	0.96
0	1,748	1.28	860	1.32	894	1.00
-10	1,441	1.16	722	1.26	972	1.18
-20	1,234	1.49	547	1.40	896	1.17
-30	1,010	1.42	562	1.65	666	1.22
-40	966	1.66	459	1.67	469	0.96
-50	822	1.68	394	1.48	448	1.02
-60	613	1.59	217	1.31	543	1.24
-70	324	1.07	152	1.12	684	2.58
-80	251	0.98	118	1.11	541	2.63
-90	228	1.06	68	1.29	378	1.96
-100	180	1.36	69	1.23	232	1.67
-110	78	1.57	74	2.07	167	3.09
-120	39	1.61	42	2.37	100	3.64
-130	15	1.68	8	3.24	25	2.20
<b>Total</b>	<b>17,200</b>	<b>1.34</b>	<b>10,128</b>	<b>1.25</b>	<b>47,771</b>	<b>3.37</b>

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;

\*\*Mining recovery rate: 95%, dilution rate: 5%;

\*\*\*Inferred resources are regarded as waste when calculating stripping ratio. At a cut-off grade of 0.30 g/t Au, as of 31 January 2013, 17,200 kt of Indicated Resources with an average grade of 1.34 g/t Au remain within the ultimate pit, as well as 57,899 kt of waste (include 10,128 kt of Inferred Resources with an average grade of 1.25 g/t Au), it has an average stripping ratio of 3.37 t/t.

#### 15.4.4.2 Scenario 2

Results of the ultimate pit design for Scenario 2 are shown in Figure 15-8 and Figure 15-9.

The ultimate pit's maximum length along the east-west axis is about 730 m, and the maximum width along the north-south axis is 640 m. The highest elevation of benches is 140 m and the lowest is -145 m. At a bench height of 10 m, there will be a total of 29 benches within the limits.

In order to fully utilize the existing road infrastructure, main accesses to the mine are connected with these roads. Haulage roads are arranged in a zigzag spiral, mainly in the north of the ultimate pit, in order to reduce the amount of inventory locked underground. At a gradient of 1:10, the haulage distance from the pit bottom to the pit access is about 2,513 m. The road turns back at an elevation of 5 m.

Although SRK has considered the minimum allowable safety distance for blasting, boundaries of the pit are quite near the two villages, so the following measures are recommended when mining occurs in the upper benches on the side near the villages.

- Select small diameter drills, reduce the spacing between blast holes along the row and the burden (spacing between rows);
- Strictly control and adjust the charge quantity used in each blast hole based on rock and inventory properties; and
- Do not break up lump inventory by secondary blasting.

Additionally, shielding measures such as blast-resistant embankments, wave resistant walls, and protective barriers, should be constructed to protect the nearby plants, equipment and residential houses. Village residents who may be subject to potential danger should be informed prior to blasting and evacuated to a safe location. All these measures should be considered to manage risks associated with blasting.

The existing waste dump associated with small-scale production is located to the southeast of the pit. The dump is not currently in use as all recovered materials are transported directly to the processing plants. According to the mine plan, waste will be separated and transported to the waste dump once a grade control program has been in place with the completion of a new laboratory. Based on the preliminary ultimate pit design results, the current waste dump is too small to accommodate all the waste within the pit. SRK recommends standardizing sampling, optimizing assay methods, and improving grade control. Location selection, land acquisition and design for a large enough waste dump should also be carried out.



Figure 15-8: Ultimate Pit Design of Scenario 2 (Azimuth: 0°; Dip: -90°)

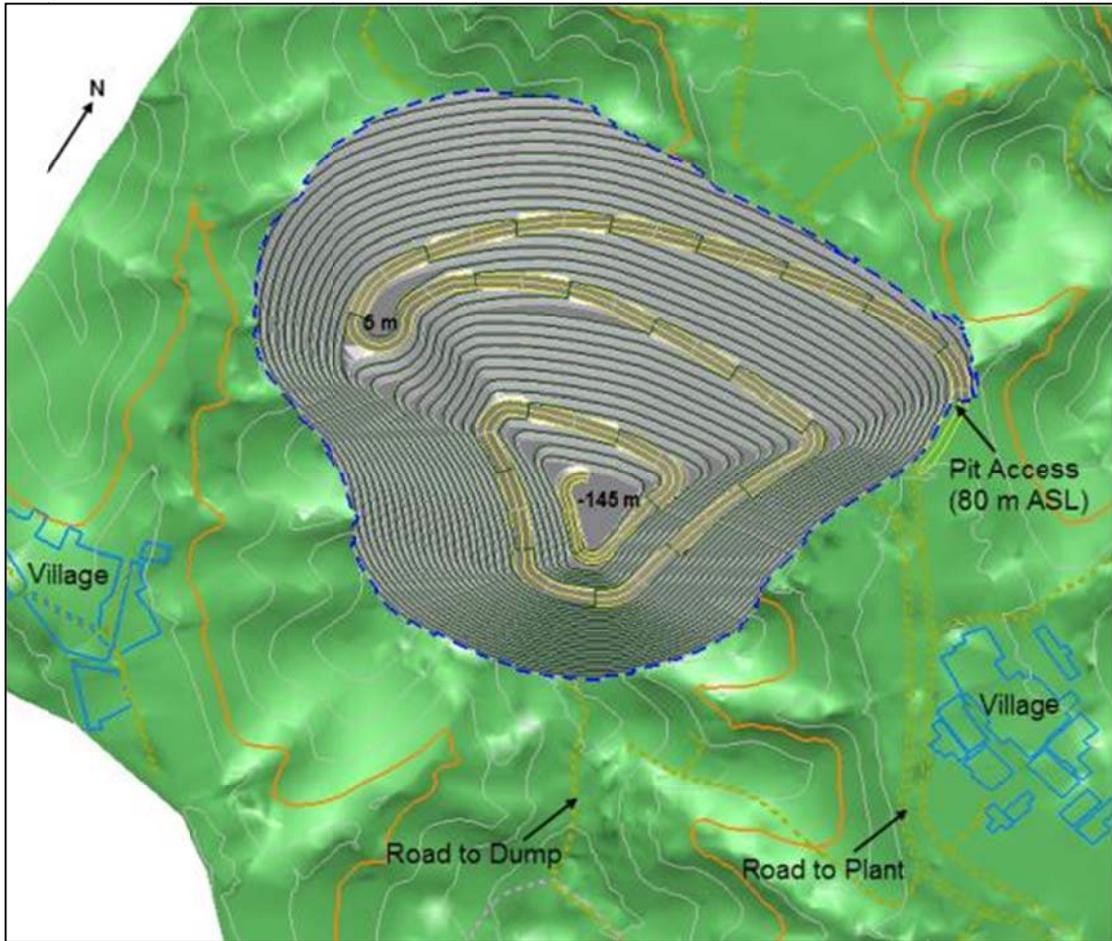


Figure 15-9: Ultimate Pit Design of Scenario 2 (Azimuth: 330°; Dip: -60°)

The quantities of inventory within the ultimate pit after considering loss and dilution are listed in Table 15-14 and Table 15-15.

Table 15-14: Inventory within Ultimate Pit of Scenario 2

Cut-off Grade (g/t Au)	Indicated		Inferred		Waste (kt)	Stripping Ratio (t/t)
	Inventory (kt)	Grade (g/t Au)	Inventory (kt)	Grade (g/t Au)		
0.3	19,076	1.31	13,598	1.37	65,394	2.00
0.4	16,036	1.48	10,949	1.62	71,083	2.63
0.5	13,405	1.69	9,237	1.84	75,426	3.33
1.0	6,756	2.75	4,533	3.04	87,223	7.73

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;  
 \*\*Mining recovery rate: 95%, dilution rate: 5%;  
 \*\*\*Inferred resources are regarded as mining inventory when calculating stripping ratio.

**Table 15-15: Inventory by Benches within Ultimate Pit of Scenario 2**

Bench (m)	Indicated		Inferred		Waste (kt)	Stripping Ratio (t/t)
	Tonnes (kt)	Au (g/t)	Tonnes (kt)	Au (g/t)		
140	-	-	-	-	57	-
130	1	0.34	-	-	752	752.00
120	16	0.46	22	0.61	1,824	48.00
110	94	0.93	94	0.84	2,975	15.82
100	216	1.05	258	1.30	3,910	8.25
90	327	0.90	276	0.85	4,807	7.97
80	526	0.92	512	0.97	6,101	5.88
70	460	0.88	622	0.90	6,844	6.33
60	355	0.87	545	0.85	6,504	7.23
50	269	0.78	560	0.75	6,070	7.32
40	281	0.76	677	0.68	5,448	5.69
30	1,768	1.49	863	1.56	3,296	1.25
20	2,091	1.41	1,163	1.77	2,208	0.68
10	2,145	1.41	1,335	1.78	1,532	0.44
0	1,935	1.22	1,315	1.67	1,271	0.39
-10	1,623	1.15	1,109	1.66	1,308	0.48
-20	1,367	1.43	812	1.43	1,354	0.62
-30	1,122	1.38	740	1.45	1,250	0.67
-40	1,105	1.57	649	1.43	974	0.56
-50	1,024	1.53	552	1.30	867	0.55
-60	781	1.54	316	1.17	1,011	0.92
-70	412	1.02	236	0.93	1,202	1.85
-80	304	0.91	210	0.85	1,044	2.03
-90	271	0.98	174	0.81	838	1.88
-100	237	1.19	143	1.01	652	1.72
-110	130	1.37	140	2.22	523	1.94
-120	81	1.38	102	2.12	403	2.20
-130	63	1.68	88	1.96	232	1.54
-140	52	1.74	59	1.21	116	1.05
-150	19	1.28	26	0.89	21	0.47
<b>Total</b>	<b>19,076</b>	<b>1.31</b>	<b>13,598</b>	<b>1.37</b>	<b>65,394</b>	<b>2.00</b>

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;

\*\*Mining recovery rate: 95%, dilution rate: 5%;

\*\*\*Inferred resources are regarded as mining inventory when calculating stripping ratio

At a cut-off grade of 0.30 g/t Au, as of 31 January 2013, within the ultimate pit, there are 19,076 kt of Indicated Resources with an average grade of 1.32 g/t Au, and 13,598 kt of Inferred Resources with an average grade of 1.37 g/t Au. The pit also contains 65,394 kt of waste, and the average stripping ratio is 2.00 t/t.

### 15.4.4.3 Scenario 3

Results of the ultimate pit design for Scenario 3 are shown in Figure 15-10 and Figure 15-11.

The ultimate pit's maximum length along the east-west axis is 830 m, and the maximum width along the north-south axis is about 850 m. The highest elevation of benches is 140 m and the lowest is -190 m. At a bench height of 10 m, there will be a total of 33 benches within the pit.

In order to fully utilize the existing road infrastructure, main accesses to the mine are connected with these roads. Haulage roads are arranged in a zigzag spiral, mainly in the north of the ultimate pit, in order to reduce

the amount of inventory locked underground. The haulage distance from the pit bottom to the pit access is about 2,983 m. The road turns back at elevations of -25 m and -85 m.

The existing waste dump associated with small-scale production is located to the southeast of the pit, the dump is not currently in use as all recovered materials are transported directly to the processing plants. According to the mine plan, waste will be separated and transported to the waste dump once a grade control program has been established following completion of a new laboratory. Based on the preliminary ultimate pit design results, the current waste dump is too small to accommodate all the waste within the ultimate pit. SRK recommends standardizing sampling, optimizing assay methods, and improving grade control. Location selection, land acquisition and design for a large enough waste dump should also be carried out.

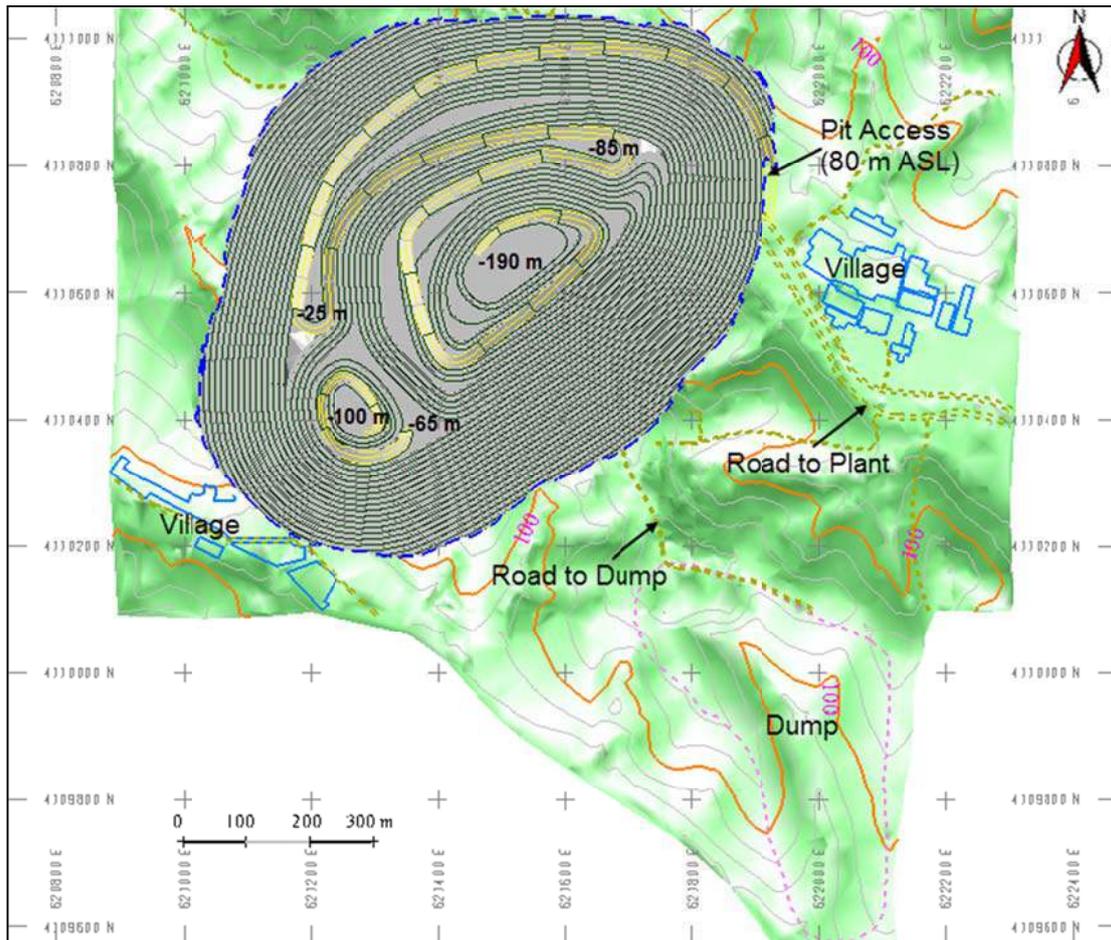


Figure 15-10: Ultimate Pit Design of Scenario 3 (Azimuth: 0°; Dip: -90°)

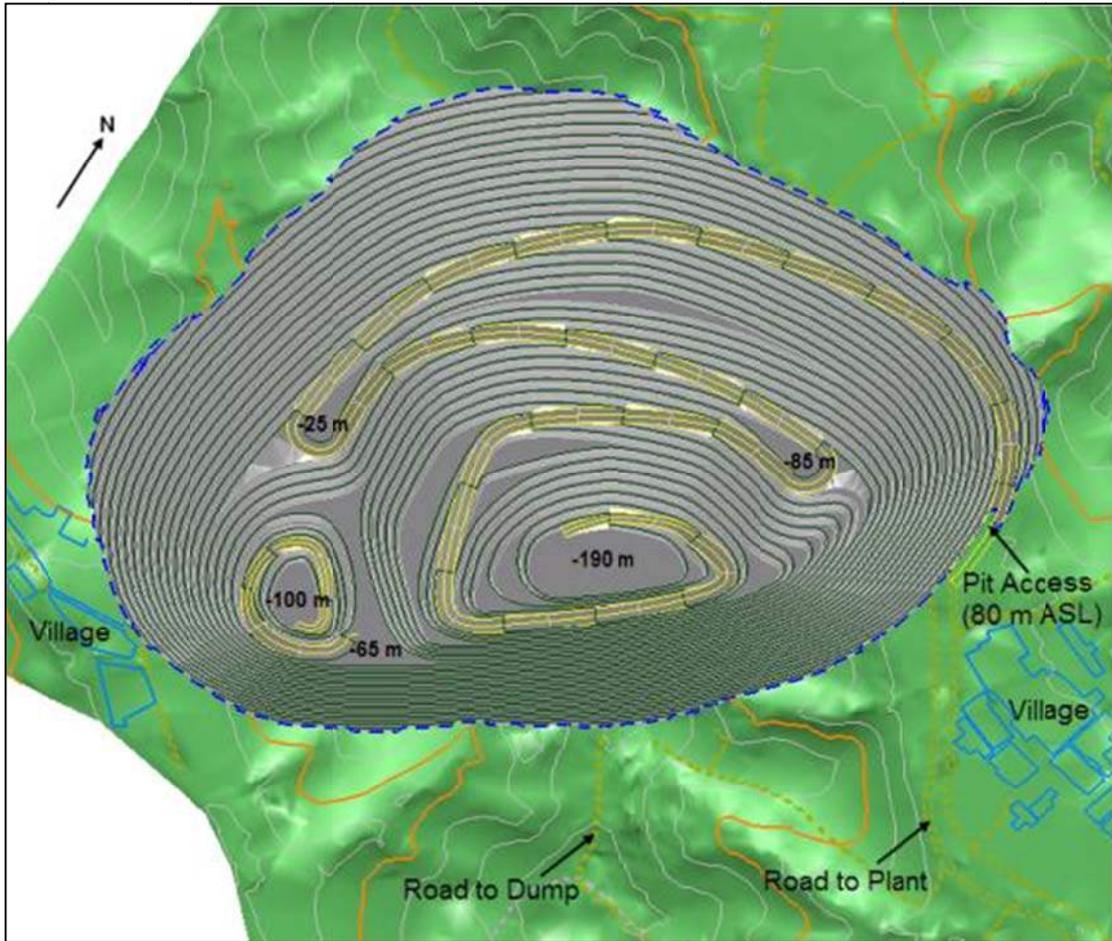


Figure 15-11: Ultimate Pit Design of Scenario 3 (Azimuth: 330°; Dip: -65°)

The quantity of inventory within the ultimate pit after considering loss and dilution are listed in Table 15-16 and Table 15-17.

Table 15-16: Inventory within Ultimate Pit (Scenario 3)

Cut-off Grade (g/t Au)	Indicated		Inferred		Waste (kt)	Stripping Ratio (t/t)
	Tonnes (kt)	Au (g/t)	Tonnes (kt)	Au (g/t)		
0.3	26,284	1.34	22,927	1.40	147,507	3.00
0.4	21,963	1.54	18,465	1.66	156,290	3.87
0.5	18,384	1.75	15,316	1.91	163,018	4.84
1.0	9,299	2.85	7,793	3.10	180,070	10.54

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;

\*\*Mining recovery rate: 95%, dilution rate: 5%;

\*\*\* Inferred resources are regarded as mining inventory when calculating stripping ratio

**Table 15-17: Inventory by Benches within Ultimate Pit (Scenario 3)**

Bench (m)	Indicated		Inferred		Waste (kt)	Stripping Ratio (t/t)
	Tonnes (kt)	Au (g/t)	Tonnes (kt)	Au (g/t)		
140	-	-	-	-	57	-
130	1	0.34	-	-	836	836.00
120	16	0.46	22	0.61	2,416	63.58
110	94	0.93	98	0.82	4,453	23.19
100	221	1.05	275	1.25	6,592	13.29
90	343	0.92	317	0.91	8,553	12.96
80	546	0.97	552	1.03	10,748	9.79
70	500	0.90	711	0.91	12,138	10.02
60	402	0.87	598	0.87	11,712	11.71
50	322	0.79	732	0.67	11,014	10.45
40	324	0.74	911	0.64	10,205	8.26
30	1,799	1.48	1,112	1.42	7,914	2.72
20	2,174	1.38	1,510	1.63	6,542	1.78
10	2,207	1.40	1,692	1.68	5,740	1.47
0	2,044	1.20	1,735	1.57	5,288	1.40
-10	1,791	1.14	1,578	1.55	5,141	1.53
-20	1,533	1.38	1,253	1.37	5,076	1.82
-30	1,327	1.34	1,193	1.31	4,736	1.88
-40	1,429	1.47	1,305	1.35	3,786	1.38
-50	1,355	1.44	1,110	1.23	3,620	1.47
-60	1,288	1.46	1,110	1.67	3,199	1.33
-70	1,034	1.67	891	1.91	3,139	1.63
-80	986	1.47	822	1.72	2,617	1.45
-90	908	1.46	753	1.62	2,190	1.32
-100	894	1.85	542	2.10	1,845	1.28
-110	730	1.56	610	1.41	1,448	1.08
-120	499	1.27	210	2.10	1,663	2.35
-130	487	1.24	226	1.93	1,236	1.73
-140	446	1.31	156	1.77	1,006	1.67
-150	355	1.21	325	0.82	634	0.93
-160	101	0.85	284	0.86	664	1.72
-170	86	1.08	150	0.74	560	2.37
-180	38	0.70	109	0.58	406	2.76
-190	2	0.51	34	0.49	334	9.28
<b>Total</b>	<b>26,284</b>	<b>1.34</b>	<b>22,927</b>	<b>1.40</b>	<b>147,507</b>	<b>3.00</b>

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;

\*\*Mining recovery rate: 95%, dilution rate: 5%;

\*\*\*Inferred resources are regarded as mining inventory when calculating stripping ratio

As of 31 January 2013, at a cut-off grade of 0.30 g/t Au, within the ultimate pit there are 26,284 kt of Indicated Resources with an average grade of 1.35 g/t Au, and 22,927 kt of Inferred Resources with an average grade of 1.40 g/t Au. The pit also contains 147,507 kt of waste, and the average stripping ratio is 3.00 t/t.

## 15.5 Production Schedule

The current surface mining production capacity is 5,000 - 10,000 tpd and the processing capacity is 7,400 tpd (2,442 ktpa). Majestic is considering plans to build a new processing plant to increase the processing capacity to 10,000 tpd or 12,000 tpd.

SRK used the MineSight Economic Planner (Evaluate) to complete the preliminary production schedule, which is based on the following assumptions:

- Mining inventory only include Indicated Resources for Scenario 1
- Mining inventory include both Inferred Resources and Indicated Resources for Scenarios 2 and 3;
- Under the premise of material stable supply, high grade resources should be mined first to maximize the NPV;
- The mine is planned to operate 330 days per year,
- Power and water supplies can meet the needs of the increased production;
- A solution to the waste dump constraints will be found;
- All mining inventory are extracted from the designed ultimate pit; inventory outside the pit are not considered;
- Constraints of the current approved mining license and capacity are not considered during scheduling;
- Dahedong will be able to provide all necessary related mining facilities to meet the requirements of the capacity enlargement project;
- After one year of construction, the new processing plant will be commissioned;
- A stockpile will be maintained at the processing plant to balance annual production;
- A new tailing storage facility which can store all the tailings from processing plants will be in place;
- Villages which may be affected will be relocated successfully, causing no impact on normal production; and
- All licenses and permits can be issued to Zhongjia Mining in a timely manner so that production is sustained in accordance with law.

### 15.5.1.1 Scenario 1

At a production capacity of 2,442 ktpa, the life of mine is seven years, and 106 kt of resources and 2,100 kt of waste (including 985 kt of Inferred Resources) remain within the ultimate pit. In order to maximize NPV, the remaining resources are not planned to be mined in the preliminary production schedule. The production scheduling results are shown in Table 15-18 and Figure 15-12.

**Table 15-18: Production Schedule of Scenario 1**

Year	Indicated Resources (kt)	Grade (g/t Au)	Inferred Resources (kt)	Grade (g/t Au)	Waste Mined (kt)	Stripping Ratio (t/t)
2013	2,442	1.77	1,446	1.09	8,996	4.28
2014	2,442	2.21	1,123	1.68	6,252	3.02
2015	2,442	1.20	1,281	1.22	6,150	3.04
2016	2,442	1.14	1,316	1.28	6,512	3.21
2017	2,442	1.19	1,083	1.35	5,910	2.86
2018	2,442	1.05	1,057	1.01	6,351	3.03
2019	2,442	0.94	1,837	1.28	6,485	3.41
<b>Total</b>	<b>17,094</b>	<b>1.36</b>	<b>9,143</b>	<b>1.27</b>	<b>46,656</b>	<b>3.26</b>

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;

\*\*Mining recovery rate: 95%, dilution rate: 5%;

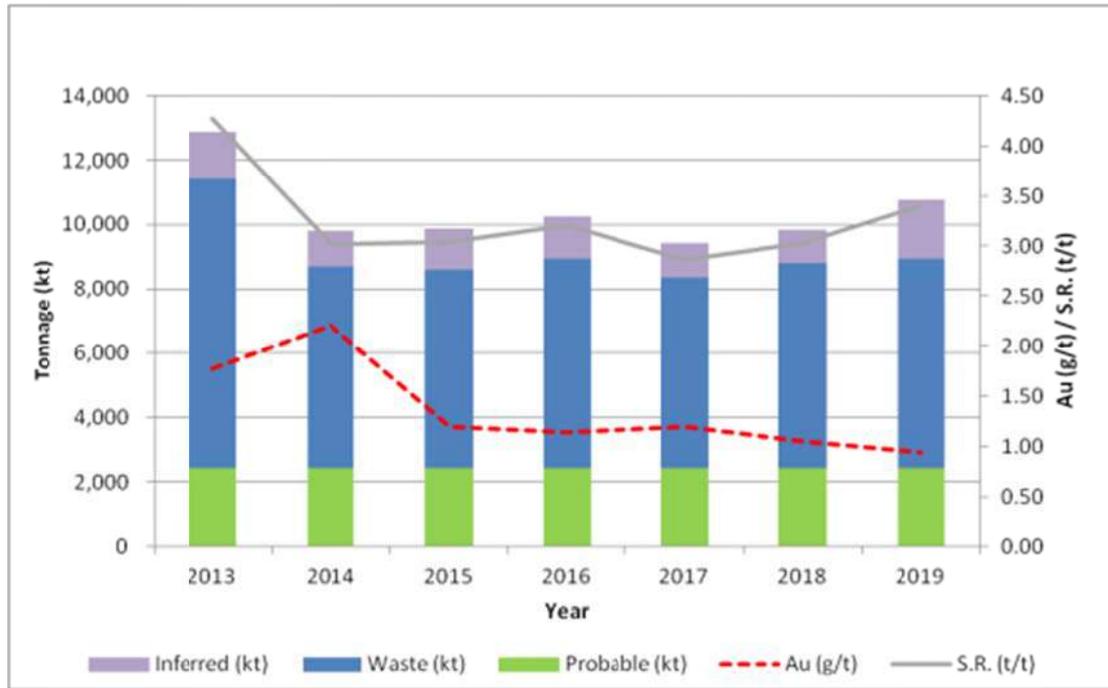
\*\*\*Inferred resources are regarded as waste when calculating stripping ratio.

*The preliminary production scheduling is optimized based on a series of nested push-backs within the ultimate pit. It is one of technically feasible cases and may differ from the actual situation. It is suggested that the production schedule be optimized during the feasibility study stage.*

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources*

*that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

SRK completed year end views of the first three years based on the preliminary production schedule. Details can be found in Appendix E.



**Figure 15-12: Production Schedule of Scenario 1**

### 15.5.1.2 Scenario 2

With the increased inventory of Scenario 2, it was assumed that the processing plant capacity increased to 10,000 tpd. The preliminary production schedule can be seen in Table 15-19 and Figure 15-13.

At a production capacity of 3,300 ktpa, the life of mine can reach 11 years, with one year for transition, nine years of stable production, and one year of production reduction.

**Table 15-19: Production Schedule of Scenario 2**

Year	Mining Inventory (kt)	Grade (g/t Au)	Waste (kt)	Stripping Ratio(t/t)
2013	2,442	1.16	8,151	3.34
2014	3,300	1.24	9,148	2.77
2015	3,300	2.22	6,046	1.83
2016	3,300	1.77	6,247	1.89
2017	3,300	1.46	6,125	1.86
2018	3,300	1.44	5,810	1.76
2019	3,300	1.21	5,914	1.79
2020	3,300	1.17	5,959	1.81
2021	3,300	0.93	5,843	1.77
2022	3,300	0.83	5,858	1.78
2023	532	0.90	292	0.55
<b>Total</b>	<b>32,674</b>	<b>1.34</b>	<b>65,394</b>	<b>2.00</b>

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;

\*\*Mining recovery rate: 95%, dilution rate: 5%;

\*\*\*Inferred resources are regarded as mining inventory when calculating stripping ratio.

*According to NI 43-101 guidelines, Inferred Resources cannot be converted into Mineral Reserves. In the PEA stage, Inferred Resources are used for valuation during preliminary scheduling. This does not mean that Inferred Resources can be necessarily converted into Reserves and then mined out.*

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

*The preliminary production scheduling is optimized based on a series of nested pushbacks within the ultimate pit. It is one of technically feasible cases and may differ from the actual situation. It is suggested that the production schedule be optimized during the feasibility study stage.*

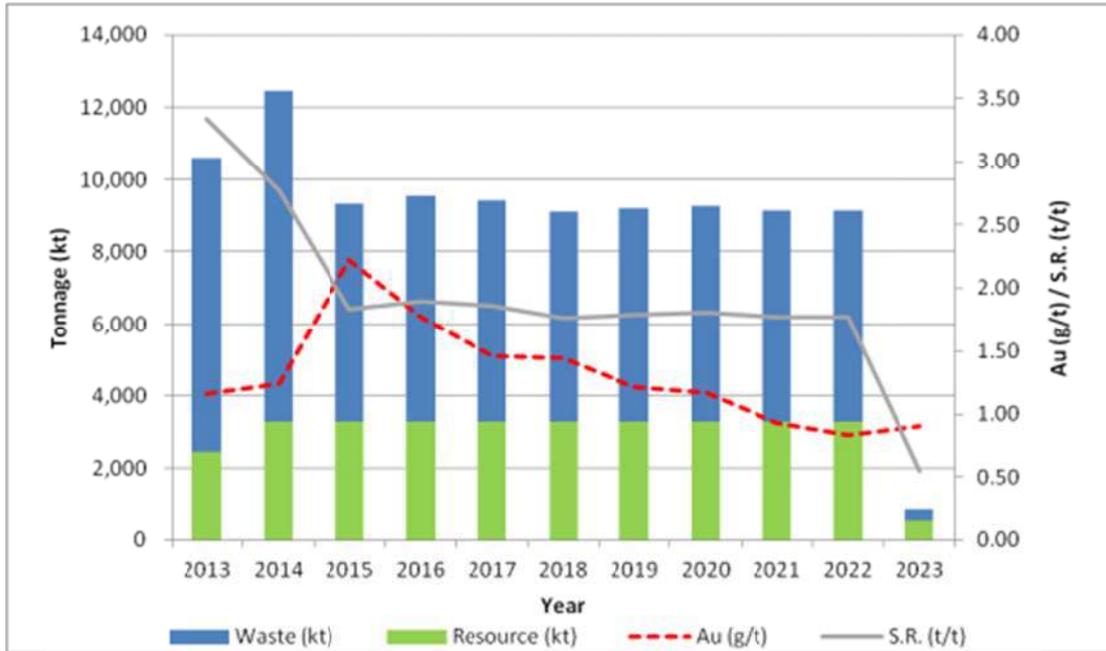


Figure 15-13: Production Schedule of Scenario 2

15.5.1.3 Scenario 3

With further increases in inventory, it was assumed that the processing plant capacity increased to 12,000 tpd. The preliminary production schedule can be seen in Table 15-20 and Figure 15-14.

At a production capacity of 3,960 ktpa, the life of mine will be 13 years, with one year for transition, 11 years of stable production and one year of production reduction.

Table 15-20: Production Schedule of Scenario 3

Year	Mining Inventory (kt)	Grade (g/t Au)	Waste (kt)	Stripping Ratio (t/t)
2013	2,442	1.16	8,650	3.54
2014	3,960	2.13	12,315	3.11
2015	3,960	2.19	12,130	3.06
2016	3,960	1.53	12,663	3.20
2017	3,960	1.33	12,042	3.04
2018	3,960	1.12	12,002	3.03
2019	3,960	1.10	12,151	3.07
2020	3,960	1.15	12,242	3.09
2021	3,960	1.16	12,017	3.03
2022	3,960	1.20	12,414	3.13
2023	3,960	1.95	13,483	3.40
2024	3,960	1.13	13,015	3.29
2025	3,209	0.45	2,383	0.74
<b>Total</b>	<b>49,211</b>	<b>1.37</b>	<b>147,507</b>	<b>3.00</b>

Note: \*Cut-off grade: 0.30 g/t Au; dilution materials' grade: 0.12 g/t Au;  
 \*\*Mining recovery rate: 95%, dilution rate: 5%;  
 \*\*\*Inferred resources are regarded as ore when calculating stripping ratio

*According to NI 43-101 guidelines, Inferred Resources cannot be converted into Mineral Reserves. In the PEA stage, Inferred Resources are used for valuation during preliminary scheduling. This does not mean that Inferred Resources can be necessarily converted into Reserves and then mined out.*

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

*The preliminary production scheduling is optimized based on a series of nested push-backs within the ultimate pit. It is one of technically feasible cases and may differ from the actual situation. It is suggested that the production schedule be optimized during the feasibility study stage.*

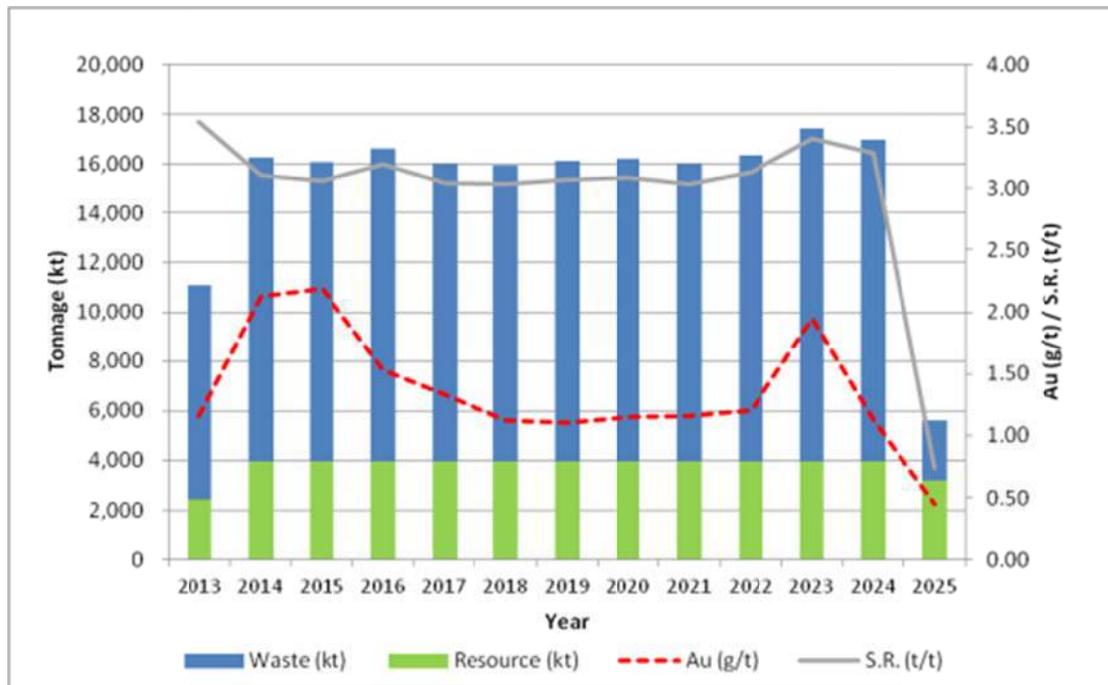


Figure 15-14: Production Schedule of Scenario 3

## 15.6 Mining Technology and Equipment

Mining activities have been outsourced to Dahedong, which provides all necessary equipment for its workers. Road development and truck transport are undertaken also by Dahedong. Major mining technologies include blast hole boring, blasting, secondary crushing, loading and transport.

Waste benches are 10 m high; ore benches are 5 m tall. Benches are combined in pairs for mining and the final bench height is 10 m. The overall pit slope is 48°.

Track-mounted drills are used to blast holes. The blast holes are 115 mm in diameter and 12 - 13 m long. The blasting pattern is 4 m spacing and 4 m burden, and emulsion explosives are used for blasting.

Mining inventory is loaded by excavator and then transported to the processing plant by truck (see Figure 15-15). Dahedong owns six DOOSAN DH300LC-7 type excavators with a bucket capacity of 1 m<sup>3</sup>, and twenty-eight (28) 40 t SHANQI heavy truck 310 and similar trucks. Each truck can transport about 400 t of mining inventory per day. The distance from mine to processing plant is about 4 km.



Figure 15-15: Mining Production

## 15.7 Operating Schedule

The mine is scheduled to operate 330 days per year, with three shifts per day and eight hours per shift.

## 15.8 Water Drainage and Dust Control

Gravity drainage is used during surface mining. However, when in-pit mining activities occur, a mobile pump station at the pit bottom is used to pump water out of the pit.

Three 125 kW 250QJ200-150 submersible pumps are designed to be used, each with a discharge capacity of 200 cubic metres per hour (“m<sup>3</sup>/h”) and lift of 150 m. Normally, one pump is in operation; however, two pumps work simultaneously when it rains, and the third is kept for maintenance. Two  $\Phi 203 \times 6$  mm seamless steel pipes are designed, one in use and the other standby. The pipes are laid from the water sump at the pit bottom to surface.

Water from a tank is used to lay the dust on the stopes and roads.

## 15.9 Risks and Opportunities

There is insufficient data to support the design of the overall pit slope and the bench face angle. SRK suggests that slope stability monitoring should be enhanced, and a rock mechanics study should be carried out as soon as possible to finalize these parameters and advance the study..

Both Inferred Resources and Indicated Resources are used in the pit optimizations and production schedule for Scenarios 2 and 3. In Scenario 2, the Inferred Resources account for 41.6% of total mining inventory, and in Scenario 3 it account for 46.6%. According to NI 43-101 guidelines, using Inferred Resources for economic evaluation presents significant risks and should be avoided.

Operating costs used for open pit optimization and preliminary economic evaluation are based on the contract signed between Zhongjia Mining and Dahedong, mainly including mining costs, processing costs, stripping costs and transport costs. According to the contract, current operating costs are only related to feed grade. Operating costs increase as the feed grade becomes higher. It is known that investments, by Dahedong, on mining & auxiliary equipment and its future replacement have been included in the contract. They are not included in the total investment in the financial analysis. With the increase of waste rock stripping quantity, mining depth and transport distance, the contractor may require changes to the contract. The operating costs and investment costs will increase and have not been included in the economic analysis.

The optimized pit limits are outside the borders of the current mining license and the proposed mining capacity is beyond the permitted capacity. The mine is considering apply for a mining license with larger scope and capacity. To ensure that the mine is operated in compliance with related laws and regulations, the mine should appoint a qualified design institute to prepare a feasibility study for large-scale production for submission to the relevant authorities for approval. Applications for a large scope and capacity mining license and other supporting permits in accordance with local laws and regulations should be conducted.

All the mining activities have been outsourced and the mining equipment is provided by contractors. It is suggested that equipment types and quantities should be determined in the feasibility study stage to match the production capacity for the large-scale production.

Daily production fluctuates significantly. SRK recommends optimizing a detailed schedule during the feasibility study so it can be used to guide production.

The existing waste dump associated with small-scale production is not currently in use. According to the mine plan, waste will be separated and transported to the waste dump once a grade control has been in established after the completion of a new laboratory. Based on the preliminary design results, the current waste dump is not large enough to accommodate all the waste within the ultimate pit. SRK recommends standardizing sampling, optimizing assay methods, and improving grade control. Location selection, land acquisition and design for a large enough waste dump should be carried out.

As the mine is adjacent to two villages, the open pit blasting work should be designed in strict compliant with all relevant standards; and safety management procedures should be carried out at all times. SRK recommends taking all necessary shielding measures to protect the workshop, equipment, and residential houses near the blasting site, such as constructing anti-blasting embankments, wave walls, and protective barriers. If necessary, the mine should inform all villagers who might be affected prior to blasting, so that they can be evacuated to a safe place.

In Scenario 3, it is assumed that the affected villages need to be relocated. Any issue and delay about village relocation and resettlement may have great impact on production schedule and cause certain influence on its profitability. It is suggested that this issue should be carefully studied in feasibility study stage.

Strengthening production management and technical services will help reduce operating costs. SRK also suggests improving organizational structure, introducing geology, mining, surveying and processing professionals and technical personnel, strengthening production management and technical services, so that production can be standardized and operating costs can be reduced.

## 16 Recovery Methods

### 16.1 Introduction

Songjiagou Mine owns three processing plants. Two of them were put into operation in 2006 with capacities of 200 tpd and 1,200 tpd, and the third was put into operation in May 2011 with a capacity of 6,000 tpd. The total processing capacity is 7,400 tpd. Inventory extracted from the underground mine are processed in the 200 tpd plant while the inventory mined in the open pit is processed in the other two plants.

The three plants in close proximity, lie about 4.2 km southeast of the open pit. The 1,200 tpd plant is in the centre of the processing area, and the 200 tpd plant and the 6,000 tpd plant are located respectively northwest and east of the 1,200 tpd plant.

From 2006 to January 2013, a total of 444 kt of underground run of mine inventory (“ROM”), with an average grade of 0.85 g/t Au, has been processed in the 200 tpd plant.

Similar flowsheets are adopted in the two plants which process the inventory mined from the open pit (the 1,200 tpd plant and the 6,000 tpd plant). The flowsheet comprises conventional three-stage crushing in a closed circuit and grinding in a closed circuit. The slurry has a particle size of 50% >0.074 mm after spiral classification is subjected to a flotation circuit comprising of one stage of roughing, one stage of cleaning, and two stages of scavenging. The gold concentrate is dehydrated and then sent for metallurgical processing. From 2008 to 2012, a total of 2.7767 Mt of ROM with an average grade of 0.30 g/t Au, has been processed in these two plants to produce gold concentrate grading 23.66 g/t Au, with an overall recovery rate of 83.44%.

### 16.2 Process Flowsheets and Facilities

#### 16.2.1 Flowsheets

The flowsheets of the 1,200 tpd plant and 6,000 tpd plants are shown in Figure 16-1 and Figure 16-2.

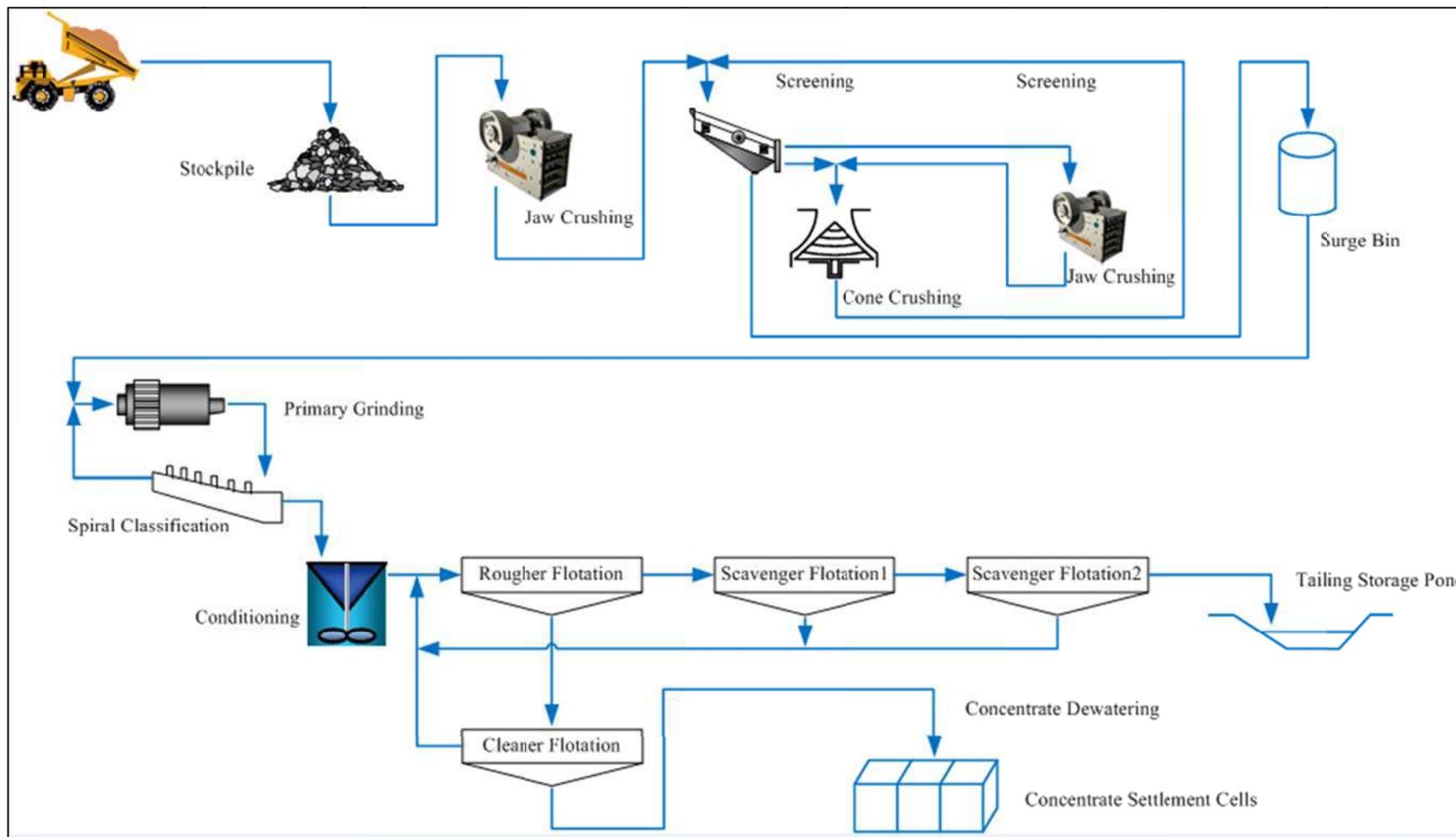


Figure 16-1: Flowsheet Adopted in 1,200 tpd Plant

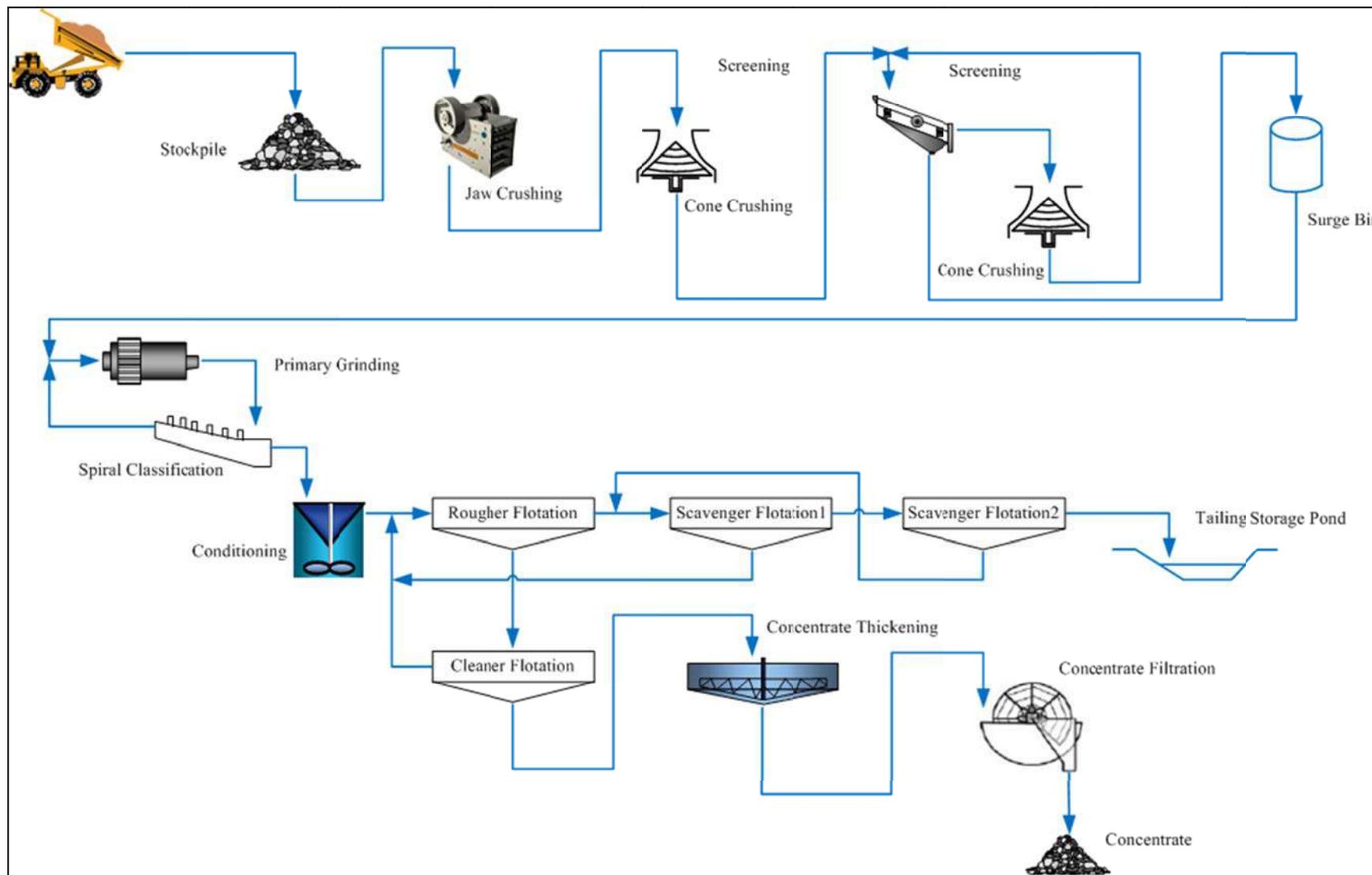


Figure 16-2: Flowsheet Adopted in 6,000 tpd Plant

### **16.2.1.1 Primary Crushing**

Haul trucks deliver the mining inventory from the open pit to the primary crushing workshop for grid screening, the underflow of which is sent to the mining inventory bin. Inventory with particle sizes less than 500 mm are fed to the jaw crusher by a heavy apron feeder, and the jaw crusher's discharge is subjected to secondary crushing.

### **16.2.1.2 Secondary/Tertiary Crushing**

A vibrating feeder feeds the primary crushing product to the cone crusher for secondary crushing. The crusher's discharge is delivered to the vibrating screen for classification.

The screen oversize is conveyed to the cone crusher for tertiary crushing, and its discharge is conveyed back to the vibrating screen for classification. Particles passing the screen (-20 mm) are sent to the fine ore bin.

### **16.2.1.3 Grinding**

The fine ore (-20 mm) is conveyed by the belt feeders to the ball mills. Each ball mill and its respective spiral classifier form a closed circuit for grinding. Ball mill discharge is classified by a spiral classifier. The continuously revolving spirals carry the settled sands up and discharge the sands into the mill feed chute. Overflow from the classifier flows to the flotation conditioning tank.

### **16.2.1.4 Flotation**

The flotation process includes one stage of roughing, one stage of cleaning, and two stages of scavenging.

The slurry, mixed with sodium butyl xanthogenate ("SBX") and frother (No. 2 oil) in the agitation tank, flows to the head cell of the roughing. The flotation tailings flow to the first scavenger flotation cells for further gold recovery. The rougher flotation concentrate is sent to cleaner flotation for upgrading; The cleaning flotation tailings go back to rougher flotation. The cleaning concentrate is pumped to dewatering facilities. Concentrates from the first and second scavenging are returned to the flotation circuit and tailings flow to tailings pump station.

The collector, SBX, No.2 oil, and lime are added to the flotation circuits where required.

### **16.2.1.5 Concentrate Dewatering**

The gold concentrate is thickened in a conventional thickener. The thickener underflow is pumped to ceramic disc filters to further reduce water content. The dewatered concentrate is transported to the smelters.

### **16.2.1.6 Reagents Handling**

All the reagents are prepared and stored separately. The collector and frother are added at appropriate points by metering pumps. Lime slurry is pumped to the addition points by slurry pumps.

## **16.3 Production Data**

This report does not discuss the 200 tpd plant responsible for processing mining inventory from the underground mine in detail as Majestic has informed SRK that operation of this plant was contracted out in April 2011. The production figures of the plants are shown in Table 16-1. In 2006 and 2007, the production figures of the 200 tpd plant and 1,200 tpd plant were calculated cumulatively, and therefore separate figures are not available for that year.

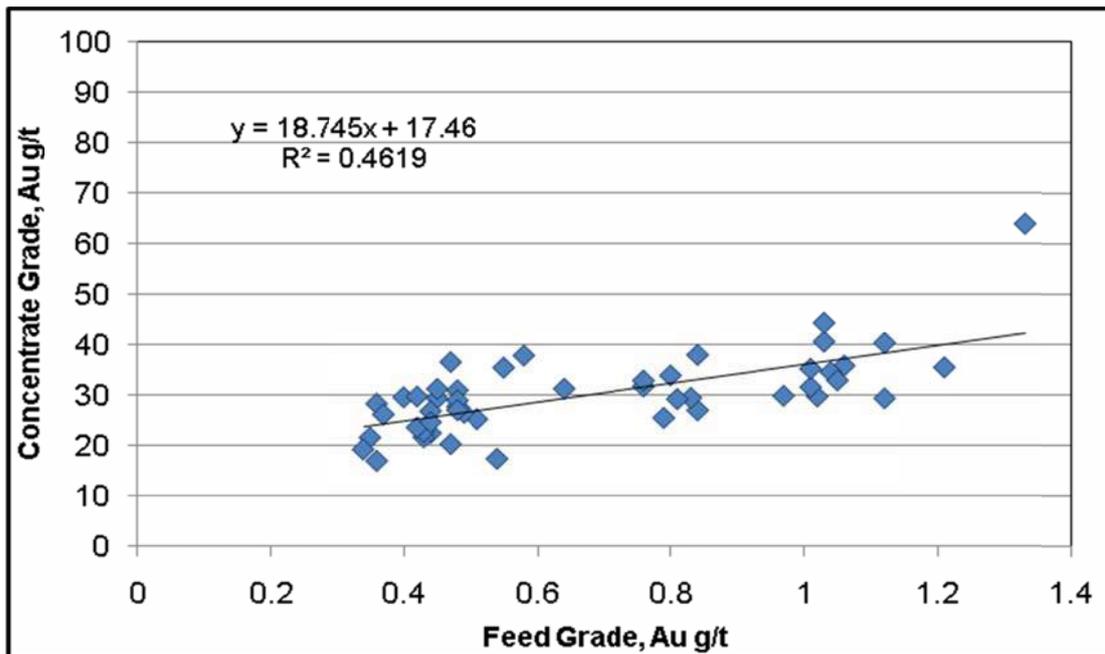
**Table 16-1: Historical Production Figures**

Date	Processing Capacity (tpd)	Mining Inventory		Concentrate		Gold recovery rate (%)
		Tonnes (t)	Grade (g/t)	Grade (g/t)	Gold metal (g)	
2006-2007	200+1200	208,337	0.52	29.92	98,830.00	90.60
2008.1-2011.3	200	234,984	0.87	34.02	188,834.00	92.77
2008-2012	1,200	310,626	0.39	25.24	106,473.47	86.93
2011.5-2012.12	6,000	2,214,879	0.30	23.45	558,280.61	83.89
2011.5-2012.12	1,200+6,000	2,776,746	0.30	23.66	700,751.66	83.93

Note: \* Figures for the 6,000 tpd plant represent continuous production data from May 2011 to December 2012.  
 \*\*The 200 tpd and 1,200 tpd plants commenced production in 2006, but their production data were not calculated separately until 2008.

As shown in Table 16-1 (weighted mean), clearly, the rom grade has a significant impact on gold processing indicators. In general, Songjiagou gold inventory is easy to liberate and process.

Wardrop produced the graphs shown in Figure 16-3 and Figure 16-4 using the processing plants’ production data, to show the correlations of ROM grade, concentrate grade, and recovery rate.



**Figure 16-3: Correlation of Mining Inventory’s Grade and Concentrate Grade**

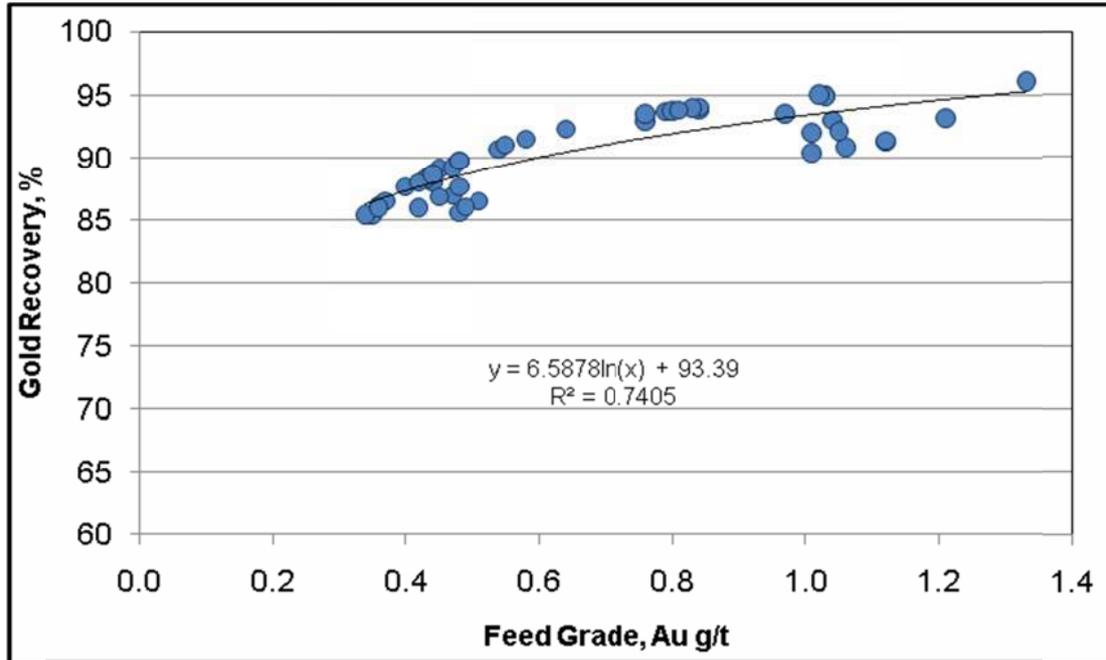


Figure 16-4: Correlation of ROM Grade and Recovery Rate

SRK recommends that Majestic carry out more tests to optimise the processing technical indicators to increase profits.

### 16.4 Process Control

No automatic control systems are installed at the existing plants, apart from the water supply system and the tailings pumping system.

### 16.5 Water Supply

Three water sources supply the processing plants: tailings dam backwater, concentrate thickener overflow water, and water from the Songjiaohe River in Jincheng Village. Water from the Songjiaohe River, located 2 km southwest of the processing plants, is used for flotation slurry blending.

### 16.6 Laboratory

The existing assay laboratory is equipped with basic titration analytical instruments to provide routine gold assays by iodine titration after aqua regia digestions.

SRK notes that a new assay laboratory is under construction and atomic adsorption after aqua regia digestion will be the method adopted to analyse gold content. Once the new laboratory is put into use, the impact of improper operations on analytical precision will be greatly reduced and the laboratory will play a more effective role in guiding the processing plant and mining grade control.

### 16.7 Tailings Storage Facilities

The tailings are discharged from the stage-two scavenger flow to the nearby pump station, from where tailings slurries are pumped to the TSF southeast of the processing plant.

The supernatant liquor of the overflow returns to the backwater tank, where it is pumped to the water tank in the processing plant for production use. The backwater tank is located at the foot of the main dam.

The mine operates three TSF's. Two TSF's are located south of the processing plants; one of them is abandoned while the other one has completed its service life. Part of this tailings storage area has been revegetated. The third TSF is located 2.5 km southeast of the processing plants and is in operation. Its total capacity is 9.47 million cubic metres ("m<sup>3</sup>") for an effective capacity of about 7.11 million m<sup>3</sup>. ***This tailing dam has been operating for two (2) years.*** Based on the Songjiagou Project's designed processing capacity of 2,850 tpd, the life of this tailings dam is expected to be 10.2 years. However, considering that the Project's processing capacity has been upgraded to 7,400 tpd, its service life is expected to be reduced to about four (4) years. Based on the average processing capacity of 5,039 tpd after May 2011, the life of the tailing dam is expected to be about five (5) years.

SRK concludes that the existing TSF capacity is inadequate. SRK recommends that Majestic carry out studies on the optimisation of the tailing storage facilities and prepare for the construction of new TSF's, i.e. by selecting an appropriate site and conducting land acquisition and facility design work, to ensure orderly, and effective operation of the mine.

## 17 Project Infrastructure

### 17.1 Accessibility

The railway station, port, and airport of Yantai City are within 50 km of the project area in straight line distance. Songjiagou Mine is about 40 km northeast of downtown Muping District, 8 km north of Provincial Road 304, 11 km south of State Highway 309, and 1.5 km east of the county road which connects the mine with the nearby cities. The project area is easily accessed and local roads are in good condition.

The concrete paved road shown in Figure 17-1 connects the mining area and the processing plant over a distance of about 4 km.



**Figure 17-1: Concrete Paved Road Connecting Mining Area and Processing Plant**

### 17.2 Industrial Sites

The industrial sites mainly include open pit, waste dump, processing plant, TSF, etc. Its layout is shown in Figure 17-2.



Figure 17-2: Mine Industrial Sites Lay-out

### 17.3 Power Supply

Electrical power for the mine is supplied by the local 10 kilovolt (“kV”) electricity line and by 120 kW diesel generators on standby. Electricity for the processing plants is sourced from the 35 kV/10.5 kV substation in Dahedong Village, Wanggezhuang Town, 5 km away from the mine, and delivered over dedicated lines. The voltage of the substation is flexible and can be switched to 10 kV, 6 kV, and 380 volts (“V”) as required by the mine. The power supply is adequate to support the mine and the processing plants.

### 17.4 Water Supply

Water for industrial use is extracted from the Rushanhe River, which flows by 10 km east of the project area. A big well (Φ6 m ×8 m; 6m in diameter and 8 m deep) shown in Figure 17-3 on the bank of Songjiaohe River, Jincheng Village, about 2 km west of the processing plants, supplies water for the plants’ production demand. Water for domestic use is sourced from a local ground well. The water supply is adequate to support the mine and the processing plants.



**Figure 17-3: Well for Processing Production**

## **17.5 Communication**

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

## **17.6 Community and Office**

Zhongjia Mining 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 standardized production.

The work environment and operational facilities are in good condition. A new office building shown in Figure 17-4, constructed in 2012, is already put into use.



**Figure 17-4: New Office Building**

## 18 Market Studies and Contracts

The metal market is globally mature. Smelters and refineries with good reputations exist all over the world and demand for gold remains high. The average price of gold on the London Metal Exchange over the past five years (From March 2008 to March 2013) is RMB 273.89/g or approximately USD 1,355/oz (1 oz = 31.1035 g). Figure 15-2 shows the trend of gold prices on the London Metal Exchange over the past five years.

There is a huge consumer market for gold and a large number of gold smelters in China. When the smelters purchase the gold concentrate, sellers can negotiate very good payment terms.

Gold prices have risen in recent years. Prices declined during the financial crisis from the end of 2008 to the beginning of 2009, but recovered and peaked at USD 1,900.3/oz in 2011. The gold price has since fluctuated between USD 1,564.3/oz and USD 1,781.3/oz over the past twelve months from March 2012 to March 2013.

For Songjiagou Mine, mining (including underground and open-pit) and processing operations are contracted out to Dahedong, which also provides all necessary mining equipment.

As stipulated in the contract signed by Zhongjia Mining and Dahedong on 5 October, 2011, unit operating costs depend on feed grade (see Table 18-1) at present.

**Table 18-1: Contractor Mining and Processing Cost**

Feed Grade (g/t)		Cost (RMB/t)
From	To	
0.30	0.35	51.50
0.35	0.40	57.30
0.40	0.45	63.10
0.45	0.50	68.90
0.50	>0.50	75.00

The product from the mine is gold concentrate. Shandong Humon Smelting Co., Ltd (“Humon Smelting”) is commissioned to smelt the gold concentrate.

The processing agreement of gold concentrate signed by Zhongjia Mining and Humon Smelting includes the following stipulations:

- No inclusions of stone, sand, bags, or other debris are allowed in the gold concentrate; any volume of impurities will be deducted from the total tonnage processed by Humon Smelting.
- Concentrate sent to the smelter should have an even grade distribution; otherwise, Humon Smelting has the right to charge according to the minimum grade.
- At least 70% of the gold concentrate should pass -200 meshes in size; otherwise, Humon Smelting has the right to treat it as lump ore and charge RMB 50/t for grinding.
- Humon Smelting picks up the gold concentrate at the mine and bears the cost for delivery.
- Humon Smelting charges RMB 100/t of ore powder for dry ore processing.
- For deliveries whose gold grade is less than 20 g/t, the average grade among the deliveries should be used for settlement.
- If the silver grade is greater than or equal to 150 g/t, smelting will be charged at RMB 0.7/g; other elements are not priced.

The gold recovery standard is shown in Table 18- 2 .

**Table 18- 2 : Gold Recovery Standard**

<b>Grade range (g/t)</b>	<b>Gold recovery rate (%)</b>
20.00 - 20.99	93
30.00 - 39.99	94
40.00 - 49.99	95
50.00 - 59.99	96
Above 60	97

## 19 Environmental, Permit, Social and Community Impact

### 19.1 Environmental, Social, and Health and Safety Review Objective

The objective of this Technical Report is to identify and or verify the existing and potential Environmental, Social, Health and Safety (“ESHS”) liabilities and risks, and assess any associated proposed remediation measures for the Songjiagou Project.

### 19.2 ESHS Review Process, Scope and Standards

The process for the verification of the environmental compliance and conformance for the Project comprised a review and inspection of the project’s environmental management performance against:

- Chinese national environmental regulatory requirements; and
- Equator Principles (World Bank/International Finance Corporation (“IFC”) environmental and social standards and guidelines) and internationally recognised environmental management practices.

The site visit for the environmental review was undertaken from 30 October to 1 November 2012.

### 19.3 Status of ESHS Approvals and Permits

The details of the Environmental Impact Assessment (“EIA”) reports and approvals for the Songjiagou Project are presented in Table 19-1.

**Table 19-1: Details of EIA Reports and Approvals**

Project	Produced By	Production	Approved By	Approval date
Songjiagou Gold Mine Yantai Zhongjia Mining Co.,Ltd Songjiagou Gold Mine Project (0.135Mtpa)	Shandong Province Environmental Science Institute	Nov-11	Shandong Province Environmental Protection Bureau	13-Dec-11

No EIA reports and approval for the 1,200 tpd or 6,000 tpd processing plants have been sighted as part of this review.

The details of the Water and Soil Conservation Plan (“WSCP”) reports and approvals for the Songjiagou Project are presented below.

**Table 19-2: WSCP Reports and Approvals**

Project	Produced By	Production date	Approved By	Approval date
Songjiagou Gold Mine Yantai City Muping District Songjiagou Mining and Processing Project	Yantai City Muping District Water Survey Institute	9-Aug-11	Yantai City Muping District Water Bureau	11-Oct-11

No environmental Final Check and Acceptance (“FCA”) approvals for the Songjiagou Project have been sighted at the time of this site visit.

SRK has sighted the *Safety Final Check and Acceptance Assessment Report for the Songjiagou Gold Mine Open Pit Project*, which was produced by Shandong Shengtai’an Safety Assessment Company on October 2012.

SRK has not sighted the approval by the relevant safety bureau for the above assessment report. No other safety assessment reports and approvals in relation to the TSF have been sighted as part of this review.

## 19.4 Environmental Conformance and Compliance

SRK notes that the EIA report for the Songjiagou Mine has been compiled in accordance with relevant Chinese laws and regulations. SRK has reviewed these EIA report and conducted an environmental site visit against recognized international industry environmental management standards, guidelines, and practices. At the time of the 2012 site visit, the open pit and processing plants (1,200 tpd and 6,000 tpd) were in the formal production stage. During the time of this site visit, the Songjiagou Mine was generally being developed and/or operated in accordance with the its EIA approval conditions. However, no EIA report or approvals for the processing plants have been provided as part of this review.

In the following sections, SRK provides comments in respect to the project's existing and proposed environmental management measures.

## 19.5 Key Environmental, Social, and Health and Safety Aspects

### 19.5.1 Land Disturbance

The WSCP report for the Songjiagou Mining and Processing Project estimates that the construction will lead to a total land disturbance of 93.14 hectares ("ha"), which is broken down into the following project areas:

- Open pit, roads and living area – 11.67 ha; and
- Processing area – 81.47 ha.

Section 4.3.4 of the EIA report for the Songjiagou Mine states the total land disturbance for the mining area will be 110,200 square metres ("m<sup>2</sup>").

The disturbed land estimates in the WSCP report and EIA report are generally consistent with SRK's observation at the time of this site visit.

No current surveyed documented estimated areas of land disturbance for the Songjiagou Project have been sighted as part of this review. SRK recommends that the operational areas of land disturbed and progressively rehabilitated for the Songjiagou Project be surveyed and recorded on an annual basis.

### 19.5.2 Flora and Fauna

The EIA report makes the following statements in relation to flora and fauna:

*"The main vegetation comprises Japanese red pines, oaks, black locusts, apple trees, pear trees, lespedeza, etc; hedgehogs, lepus capensis, sparrows, magpies, snakes and frogs live within the mining area; no protected vegetation or animals have been found in the mine area."*

### 19.5.3 Waste Rock and Tailings Management

The EIA report makes the following statements in relation to the waste rock management for the open pit mining:

*"The waste rock dump ("WRD") is located southeast of the mine site and covers an area of 40,000 m<sup>3</sup>; the project will generate 4,780,200 m<sup>3</sup> of waste rock, of which 198,600 m<sup>3</sup> of it is to be stored in the WRD and be finally backfilled while the rest will be reused as construction material."*

The EIA report also states that the waste rock generated by the previous underground mining is to be fully backfilled. However, SRK observed a temporary waste rock dump (“WRD”) next to the shaft collar and no records of the rates and volumes of waste rock backfilled/stored for the project have been sighted as part of this review. The Company informed SRK that all of the waste rock from previous mining was reused for road paving.

During the site visit, SRK sighted two TSFs constructed for the Songjiagou Project. The Songjiagou Mine reported to SRK that one of the TSFs was closed and that the closure design was under way, and that the TSF other was operating.

The preliminary design report for the operating TSF states “the total capacity and effective capacity of the TSF are 9,475,800 m<sup>3</sup> and 7,106,800 m<sup>3</sup> respectively”. The Songjiagou Mine reported that the tailings from processing plants are discharged into the operating TSF and about 4,000,000 m<sup>3</sup> tailings had already been stored in the TSF. No online monitoring system has been sighted as part of this review. However, SRK noted that a water retaining ditch was constructed and the dam at the operating TSF was being reinforced by rocks at the time of SRK’s site visit.

SRK has not sighted a comprehensive geochemical/acid rock drainage (“ARD”) assessment for the Songjiagou Mine’s waste rock and tailings. However, the EIA report states that a toxic leaching test has been undertaken on the waste rock. The EIA report states that “the waste rock is general industrial solid waste; leaching water from this waste rock meets all relevant standards; the discharged leaching water will not affect the water environment.”

#### **19.5.4 Solid Waste Management**

The EIA report also states that 17.04 tpa of domestic waste will be sent to the local sanitation department for treatment. During the site visit, the Songjiagou Mine reported that the entire mine’s domestic waste is disposed of at a landfill site.

#### **19.5.5 Water Management**

The EIA report states that “the water supply for the open pit is sourced from underground mine water; the demands for mining and sprinkling are 100 cubic metres per day (“m<sup>3</sup>/d”) and 40 m<sup>3</sup>/d respectively; the 8.5 m<sup>3</sup>/d required for domestic use is sourced from bottled water”. However, during the site visit, underground mining had ceased. The EIA report also states that water in the open pit water is 493.31 m<sup>3</sup>/d in the wet season and 53.2 m<sup>3</sup>/d in the dry season, and that all water from the open pit will be discharged into the Rushan River after being treated at a sedimentation facility.

The Songjiagou Mine informed SRK that fresh water for the 6,000 tpa processing plant is sourced from Rushan River and all the wastewater from two processing plants will be reused. The preliminary design report for the operating TSF states that, “return water from the TSF is 6,412.5 m<sup>3</sup>/d; seepage and rainwater in the TSF is collected and stored in the head tank”.

The EIA report for the Songjiagou Mine predicts that all 1,800 cubic metres per year (“m<sup>3</sup>/y”) of domestic wastewater produced will be reused as fertilizer. The Songjiagou Mine informed SRK that the domestic wastewater from both the mining site and processing plants is treated by septic systems and reused.

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 project at the time of the site visit.

### **19.5.6 Air Emissions**

The fugitive dust emission sources for the Songjiagou Project are mainly from blasting, mining, loading, ore crushing and screening, waste rock storage and handling, open areas, and movement of vehicles and mobile equipment. SRK did not observe any significant site fugitive dust emissions during the time of the site visit.

The EIA report provides the following proposed site dust management measures:

- Use of water sealed blast holes; and
- Water sprinkling of the waste rock loading area and roads.

The Songjiagou Mine stated that there is a water truck on the mining site. However, SRK did not sight any water trucks during the site visit. SRK did observe the dust collector installed in the 6,000 tpd processing plant.

### **19.5.7 Noise Emissions**

The main sources of noise emissions for the Songjiagou Project are blasting, rock drills, loaders, processing equipment, mobile equipment, air compressors, and other loud equipment and machinery. The EIA report proposes the following noise management measures:

- Install muffler on air compressors;
- Slow down the speed for vehicles and no hooking;
- Adopt sound insulation measures; and
- Conduct explosions in the daytime.

The EIA report states 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 workshop are clearly posted. No operational noise monitoring report or plans have been sighted as part of this review.

### **19.5.8 Hazardous Materials Management**

The Company told SRK that there are no maintenance workshops or fixed fuel storage facilities on the sites. However, SRK noted that some maintenance works were conducted in the yard of the 1,200 tpd processing plant and there are a number of lubricant drums stored in the workshop of the 6,000 tpd processing plant. The Company states that there is no explosives magazine on site and that blasting is conducted by a contractor. During the site visit, SRK observed the processing reagents (SBX) are stored in the workshop of the 6,000 tpd processing plant with no secondary containment.

### **19.5.9 Environmental Protection and Management Plan**

Section 14 of the EIA report provides the structure and scope for an operational Environmental Protection and Management Plan (“EPMP”), which is inclusive of 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 project. The environmental monitoring program proposed in the EIA report specifies the monitoring points, analysis items, and monitoring frequency and methods. The proposed monitoring items comprise domestic wastewater, waste gas, groundwater, noise, and solid waste.

### **19.5.10 Emergency Response Plan**

SRK has reviewed the emergency response plan for the Songjiagou Project which describes the project's emergency response process for overall management. The emergency response plan for overall management describes the general rules for accident treatment. No emergency response plans that specifically address the open pit mining and processing plants have been sighted as part of this review.

SRK recommends that the Songjiagou Project develop a fully functioning emergency response plan in line with Chinese national requirements and recognised international practices.

### **19.5.11 Site Closure Planning and Rehabilitation**

The Chinese national requirements for mine closure are covered under Article 21 of the *Mineral Resources Law* (1996), the *Rules for Implementation of the Mineral Resources Law of the People's Republic of China* (2006), the *Land Use Regulations of the People's Republic of China* (1986.6.25), and the *Land Rehabilitation Regulation* issued by the State Council on 5 March 2011. In summary these legislative requirements cover the need to conduct land rehabilitation, to prepare a site closure report, and to submit a site closure application for assessment and approval.

At the time of the site visit, SRK has not sighted the proposed rehabilitation measures for the roads on site, although these measures were proposed to be put into practice starting in 2011. However, SRK is informed that Majestic Gold has made a plan to conduct land rehabilitation work for the land destroyed by the Songjiagou project in order to minimize the damage caused by mine construction and production activities and improve the utilization of land resources. The frame work of the plan was provided to SRK as below:

Due to the climatic conditions and tree growth rate in Muping District, the management and maintenance period of rehabilitation projects is generally three years. Therefore, the total rehabilitation period will comprise the life of mine plus the management and maintenance period.

The waste rock and tailings are designed to be piled up in a cone shape; the stacking platforms in the yard and at the top of the slope are horizontal. The volumes of waste rocks and tailings that the waste dump and tailings pond need to accommodate are estimated based on the stripping ratio and the total amount of stripping. The rehabilitation areas for the waste dump and TSF can be estimated based on the results of these calculations. All of the waste rock is expected to be used for backfilling, so the rehabilitation area in the waste dump consists of the bottom area of the cone. The TSF will not be removed, so the rehabilitation area in the TSF consists of the total surface area of the cone. The rehabilitation area of the stope is estimated by measuring the final surface area of pit after all waste rocks have been used for backfill.

Excavation costs and transportation costs for the dump truck are included in the waste dump's rehabilitation budget.

The backfilled pit stope, waste dump, and TSF should be covered by a layer of topsoil 1 m thick for ecological restoration. A local field and orchard are targeted for ecological restoration by sowing grass seed and planting seedlings according to the actual terrain and conditions surrounding the mine.

Table 19-3 presents an illustration of the various components of the rehabilitation investment.

**Table 19-3: Rehabilitation Investment Composition of Songjiagou Gold Mine**

Static investment	Engineering construction cost	Direct cost	Direct engineering cost	Road construction and maintenance		
				Building demolition and removal		
				Stope	Topsoil backfill	
					Formation and consolidation	
					Ecological restoration	Sowing grass seed
						Planting seedlings
				Waste Dump	Rock excavation and transportation	
					Topsoil backfill	
					Formation and consolidation	
					Ecological restoration	Sowing grass seed
				Planting seedlings		
				Tailings pond	Topsoil backfill	
					Formation and consolidation	
					Ecological restoration	Sowing grass seed
						Planting seedlings
				Miscellaneous expenses		
				Indirect cost		
	Target profit					
	Tax					
	Other costs	Preliminary engineering cost				
		Engineering supervision cost				
		Final check and acceptance cost				
		Property management cost				
Relocation compensation						
Contingency cost						
Rehabilitation supervision and maintenance cost						
Dynamic investment						

The investment on rehabilitation is composed of engineering construction costs, other costs, contingency costs, and supervision and maintenance costs. As rehabilitation is a long-term project, some economic factors such as price increases, inflation, state economic policies, and economic development should be taken into account when calculating the dynamic investment.

The actual scale of the mine production and rehabilitation work in future may be different from the currently estimated scope, so a more accurate estimate of future rehabilitation investment should be determined in the feasibility study stage.

Rehabilitation is a long-term and complex project carried out continually throughout the entire life of the mine. SRK recommends that the Company conduct a detailed study of the rehabilitation requirements in the feasibility study stage, actively learn from the successful experiences of other mines, determine the appropriate rehabilitation program, and submit it to the relevant authorities for approval.

### 19.5.12 Occupational Health and Safety

SRK has reviewed the Safety Assessment Reports as provided by the Songjiagou Mine and is of the opinion that the reports cover items that are generally in line with recognised Chinese industry practices and Chinese safety regulations.

Basic operational occupational health and safety (“OHS”) management systems and procedures have been developed for the Songjiagou Project. The OHS management systems and procedures cover basic safety

production management for drilling, transportation, boiler management, ventilation, explosive storage, and fire and flood prevention. However, SRK observed that the above OHS management systems and procedures are developed based on the previous underground mining. In addition, the safety assessment report for the Songjiagou Gold Mine Open Pit Project 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.

SRK has not sighted, as part of this review, any operational OHS records for the current operations of the Songjiagou Project.

### **19.5.13 Social Aspects**

Songjiagou Mine is located in Wanggezhuang Township, approximately 37 km southwest of Muping District, Yantai City, Shandong Province. The general surrounding land use mainly comprises forest and agriculture land.

The main administrative body for the Songjiagou Project is the Shandong 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 Project's mines and processing operations.

The EIA reports do not report any natural reserves and significant cultural heritage sites, within or surrounding the Songjiagou Project. The nearest residents live in Qiansongjiao Village; all are Han Chinese. No land compensation agreements for the Songjiagou Project have been sighted as part of this review.

The EIA report for the Songjiagou Mine provided a public participation survey for project construction. The survey results showed 100% support for the project. However, noise and waste rock were raised as the key environmental concerns for the project's development.

The Songjiagou Mine informed SRK that "from 2008 to 2010, they had donated over RMB 1,000,000 to water supply and road construction for the local village".

SRK has not sighted any documentation in relation to any actual or potential impacts of non-governmental organisations on the sustainability of the Songjiagou Project's mine and processing operations.

## 20 Capital Investment and Operating Costs

### 20.1 Capital Investment

#### 20.1.1 Historical Capital Investment

As in January 2012, the total historical investment of Songjiagou Gold Mine was approximately RMB 382 Million (“M”). The total historical investment composition is shown in Table 20-1.

**Table 20-1: Historical Investment Composition**

No.	Item	Cost (RMB K)
1	Exploration, feasibility study design and governmental approval	
1.1	Exploration	5,234
1.2	Feasibility study, engineering design and technical services	1,216
1.3	Approval of mining licenses	358
2	Mining and processing facilities	
2.1	Power stations and power supply lines	12,809
2.2	Water supply	18,052
2.3	Road construction	1,988
2.4	Processing facilities	82,656
2.5	Processing workshop	52,790
2.6	Tailings storage facilities	35,450
3	Ancillary facilities	
3.1	Camp facilities	27,788
3.2	Mining office	913
3.3	Laboratory	753
3.4	Warehouse	469
3.5	Temporary accommodation	111
3.6	Diesel generator	124
4	Land lease and relocation	
4.1	Open pit	12,734
4.2	Waste dump	41,630
4.3	Processing plant and tailings pond	69,000
4.4	Relocation and community relations	17,800
5	<b>Total</b>	<b>381,876</b>

Note: The actual mining operation at Songjiagou Mine is contracted out, so there is no cost for the purchase of mining equipment.

#### 20.1.2 Future Investment

The open pit has a mining capacity between 5,000 tpd and 10,000 tpd and the processing capacity is 7,400 tpd. Majestic plans to construct a new processing plant to increase the processing capacity to between 10,000 tpd and 12,000 tpd. This requires additional capital investment.

Additional funds will also be required as the existing capacities of the waste dump and TSF’s are inadequate, Majestic will conduct site selection, land acquisition, and design work for the anticipated new tailings and waste storage facilities and their supporting facilities. Detailed information for the preliminary plan for future investment is shown in Table 20-2, Table 20-3 , and Table 20-4.

**Table 20-2: Future Investment for Scenario 1**

No.	Item	Cost (RMB K)
1	Exploration, feasibility study design and governmental approval	
1.1	Exploration	8,000
1.2	Feasibility study, engineering design and technical services	4,500
1.3	Approval of mining licenses	4,000
2	Mining and processing facilities	
2.1	Water supply	4,000
2.2	Road construction	12,000
2.3	Processing facilities	6,000
2.4	Processing workshop	1,000
2.5	Tailings storage facilities	13,500
3	Ancillary facilities	
3.1	Camp facilities	2,000
3.2	Laboratory	500
4	Land lease and relocation	
4.1	Open pit	5,000
4.2	Waste dump	10,000
4.3	Processing plant and tailings pond	30,000
4.4	Relocation and community relations	10,000
5	Contingency cost	20,000
6	Rehabilitation	70,000
7	<b>Total</b>	<b>200,500</b>

**Table 20-3: Future Investment for Scenario 2**

No.	Item	Cost (RMB K)
1	Exploration, feasibility study design and governmental approval	
1.1	Exploration	13,000
1.2	Feasibility study, engineering design and technical services	18,400
1.3	Approval of mining licenses	14,000
2	Mining and processing facilities	
2.1	Power upgrade	6,000
2.2	Water supply	14,200
2.3	Road construction	20,000
2.4	Processing facilities	38,000
2.5	Processing workshop	28,000
2.6	Tailings storage facilities	49,500
3	Ancillary facilities	
3.1	Camp facilities	2,400
3.2	Mining office	1,100
3.3	Laboratory	1,500
3.4	Warehouse	1,000
4	Land lease and relocation	
4.1	Open pit	11,000
4.2	Waste dump	22,000
4.3	Processing plant and tailings pond	128,000
4.4	Relocation and community relations	36,500
5	Contingency cost	35,250
6	Rehabilitation	84,000
7	<b>Total</b>	<b>523,850</b>

**Table 20-4: Future Investment for Scenario 3**

No.	Item	Cost (RMB K)
1	Exploration, feasibility study design and governmental approval	
1.1	Exploration	15,000
1.2	Feasibility study, engineering design and technical services	28,000
1.3	Approval of mining licenses	17,800
2	Mining and processing facilities	
2.1	Power upgrade	15,000
2.2	Water supply	23,000
2.3	Road construction	25,400
2.4	Processing facilities	65,000
2.5	Processing workshop	53,000
2.6	Tailings storage facilities	67,500
3	Ancillary facilities	
3.1	Camp facilities	4,600
3.2	Mining office	1,300
3.3	Laboratory	2,000
3.4	Warehouse	2,000
4	Land lease and relocation	
4.1	Open pit	23,000
4.2	Waste dump	23,000
4.3	Processing plant and tailings pond	185,000
4.4	Relocation and community relations	59,000
5	Contingency cost	52,200
6	Rehabilitation	120,000
7	<b>Total</b>	<b>781,800</b>

*Please note that the above future investment plan is based on a rough estimation, and a more accurate plan is required in the feasibility study.*

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

## 20.2 Operating Costs

### 20.2.1 Mining and Processing Costs

The mining and processing work at the Songjiagou Project is contracted out to Dahedong. According to the contract signed by Zhongjia Mining and Dahedong, the processing cost is dependent upon the feed grade. The correlation between processing cost and feed grade is shown in Table 15-3.

In the preliminary economic analysis, the mining cost is RMB 11.3/t and the stripping cost is RMB 8.55/t for operations carried out above 80 m elevation; the mining and stripping cost increases by RMB 0.15/t with every 10 m increase in depth below 80 m elevation. Assuming that the elevation of the bench drops by 20 m every year, and the stripping and mining cost will increase by RMB 0.3/t every year.

This is summarised with the average annual grade used to calculate the processing cost according in Table 20-5. Note the processing costs are sourced from Table 15-3.

**Table 20-5: Summary of Operating Cost.**

Item	Unit	Cost
Mining cost	RMB/t	11.3 (increase by RMB 0.3/t annually);
Stripping cost	RMB/t	8.55(increase by RMB 0.3/t annually);
Processing cost	RMB/t	47.46
Administration cost	RMB/t	4.5
Resource tax	RMB/t	5
Mineral resource compensation fee	RMB/year (%)	200,000(4% of selling income)
Smelting cost	RMB/t	100

### 20.2.2 Processing Costs of Gold Concentrate

Smelting of the gold concentrate is contracted out to Humon Smelting, which charges Zhongjia Mining RMB 100/t for processing dry gold concentrate.

### 20.2.3 Management Cost

The Canadian dollar has weakened against RMB in recent years; due to this, as well as to price inflation, and other factors, the management cost is determined at RMB 4.5/t.

### 20.2.4 Resource Tax and Compensation

According to the data provided by Majestic, the resource tax is RMB 5/t.

The resource compensation fee is 4% of selling income.

*SRK notes that the resource compensation fee may fluctuate based in the future in response to changes in national laws and regulations.*

### 20.2.5 Operating Cost Estimation

The operating costs in Scenario 1, 2 and 3 within the life of mine are estimated as RMB 2,017 M, RMB 3,503 M and RMB 5,852 M, respectively.

Detailed information about the annual operating costs for Scenario 1, 2 and 3 are shown in Table 20-6, Table 20-7, and Table 20-8.

**Table 20-6: Annual Operating Costs for Scenario 1 (RMB M)**

Item	Total	2013	2014	2015	2016	2017	2018	2019
Mining cost	209	28	28	29	30	31	31	32
Stripping cost	525	89	65	68	74	68	74	86
Processing cost	811	116	116	116	116	116	116	116
Processing cost of gold concentrate	86	16	20	11	10	11	9	8
Management cost	77	11	11	11	11	11	11	11
Resource tax	85	12	12	12	12	12	12	12
Resource compensation	224	42	52	28	27	28	25	22
<b>Total</b>	<b>2,017</b>	<b>314</b>	<b>305</b>	<b>275</b>	<b>280</b>	<b>277</b>	<b>279</b>	<b>287</b>

**Table 20-7: Annual Operating Costs for Scenario 2 (RMB M)**

Item	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Mining cost	415	28	38	39	40	41	42	43	44	45	46	8
Stripping cost	641	70	81	55	59	60	58	61	63	64	66	3
Processing cost	1,551	116	157	157	157	157	157	157	157	157	157	25
Processing cost of gold concentrate	163	10	15	28	22	18	18	15	14	11	10	2
Management cost	147	11	15	15	15	15	15	15	15	15	15	2
Resource tax	163	12	17	17	17	17	17	17	17	17	17	3
Resource compensation	423	27	40	71	57	47	46	39	37	29	26	5
<b>Total</b>	<b>3,503</b>	<b>274</b>	<b>362</b>	<b>381</b>	<b>366</b>	<b>354</b>	<b>352</b>	<b>346</b>	<b>347</b>	<b>338</b>	<b>336</b>	<b>48</b>

**Table 20-8: Annual Operating Costs for Scenario 3 (RMB M)**

Item	Total	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Mining cost	646	28	46	47	48	50	51	52	53	54	55	57	58	48
Stripping cost	1,518	74	109	111	120	117	121	126	130	132	140	156	154	29
Processing cost	2,316	116	188	188	188	188	188	188	188	188	188	188	188	133
Processing cost of gold concentrate	251	10	32	33	23	20	16	16	17	17	18	29	16	5
Management cost	221	11	18	18	18	18	18	18	18	18	18	18	18	14
Resource tax	246	12	20	20	20	20	20	20	20	20	20	20	20	16
Resource compensation	653	27	82	84	59	51	43	42	44	44	46	75	43	13
<b>Total</b>	<b>5,852</b>	<b>279</b>	<b>494</b>	<b>500</b>	<b>475</b>	<b>463</b>	<b>456</b>	<b>461</b>	<b>470</b>	<b>473</b>	<b>484</b>	<b>542</b>	<b>497</b>	<b>258</b>

## 21 Preliminary Economic Analysis

### 21.1 Introduction

The following assumptions are made in this preliminary economic analysis:

- For Scenario 1, mining inventory only include Indicated Resources;
- For Scenarios 2 and 3, mining inventory include Inferred Resources and Indicated Resources;
- The after-tax net present value (“NPV”) is estimated;
- The basis of the preliminary production plan is the designed ultimate pit (Scenarios 1 and 2 consider the minimum safety distance for blasting, the detailed definition of which is shown in **Error! Reference source not found.**);
- It is assumed that all extracted inventory are processed within the life of the mine;
- It is assumed that no grade variation has been caused by stockpiling for the purpose of balancing annual production; and
- It is assumed that all the products are sold in the period they are produced.

### 21.2 Production Plan

The production details within the life of mine are shown in Table 21-1, Table 21-2, and Table 21-3, according to the preliminary production schedules set out for Scenario 1, Scenario 2, and Scenario 3.

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

**Table 21-1: Production Plan of Scenario 1**

Item	Mining Inventory Mined (kt)	Au (g/t)	Waste Mined (kt)	Stripping Ratio (t/t)
2013	2,442	1.77	10,442	4.28
2014	2,442	2.21	7,375	3.02
2015	2,442	1.20	7,431	3.04
2016	2,442	1.14	7,828	3.21
2017	2,442	1.19	6,993	2.86
2018	2,442	1.05	7,408	3.03
2019	2,442	0.94	8,322	3.41
<b>Total</b>	<b>17,094</b>	<b>1.36</b>	<b>55,799</b>	<b>3.26</b>

**Table 21-2: Production Plan of Scenario 2**

Year	Mining Inventory Mined (kt)	Au (g/t)	Waste Mined (kt)	Stripping Ratio (t/t)
2013	2,442	1.16	8,151	3.34
2014	3,300	1.24	9,148	2.77
2015	3,300	2.22	6,046	1.83
2016	3,300	1.77	6,247	1.89
2017	3,300	1.46	6,125	1.86
2018	3,300	1.44	5,810	1.76
2019	3,300	1.21	5,914	1.79
2020	3,300	1.17	5,959	1.81
2021	3,300	0.93	5,843	1.77
2022	3,300	0.83	5,858	1.78
2023	532	0.90	292	0.55
<b>Total</b>	<b>32,674</b>	<b>1.34</b>	<b>65,394</b>	<b>2.00</b>

**Table 21-3: Production Plan of Scenario 3**

Year	Mining Inventory Mined (kt)	Au (g/t)	Waste Mined (kt)	Stripping Ratio (t/t)
2013	2,442	1.16	8,650	3.54
2014	3,960	2.13	12,315	3.11
2015	3,960	2.19	12,130	3.06
2016	3,960	1.53	12,663	3.20
2017	3,960	1.33	12,042	3.04
2018	3,960	1.12	12,002	3.03
2019	3,960	1.10	12,151	3.07
2020	3,960	1.15	12,242	3.09
2021	3,960	1.16	12,017	3.03
2022	3,960	1.20	12,414	3.13
2023	3,960	1.95	13,483	3.40
2024	3,960	1.13	13,015	3.29
2025	3,209	0.45	2,383	0.74
<b>Total</b>	<b>49,211</b>	<b>1.37</b>	<b>147,507</b>	<b>3.00</b>

*For scenario 2 and scenario 3, please note that as defined in NI 43-101, Inferred Resources cannot be converted into Reserves. Although Inferred Resources are used for valuation included in this PEA, this does not mean that Inferred Resource can be necessarily converted into Reserves and then mined out.*

## 21.3 Saleable Metal

### 21.3.1 Gold Reclaim Rate

The average grade of the gold concentrate is about 26 g/t Au. According to the gold concentrate processing agreement signed by Zhongjia Mining and Humon Smelting, if the gold concentrate grade is between 20 g/t and 29.99 g/t Au, 93% of the gold can be reclaimed.

The saleable metal estimated in Scenarios 1, 2, and 3 is shown in Table 21-4.

**Table 21-4: Saleable Metal Estimated in Scenarios 1, 2, and 3**

Year	Scenario 1 (kg)	Scenario 2 (kg)	Scenario 3 (kg)
2013	3,814	2,503	2,503
2014	4,768	3,615	7,452
2015	2,585	6,473	7,662
2016	2,454	5,161	5,353
2017	2,574	4,257	4,653
2018	2,258	4,198	3,918
2019	1,988	3,528	3,849
2020	-	3,411	4,023
2021	-	2,666	4,058
2022	-	2,359	4,198
2023	-	415	6,822
2024	-	-	3,953
2025	-	-	1,186
<b>Total</b>	<b>20,441</b>	<b>38,584</b>	<b>59,632</b>

## 21.4 Gold Price

The gold price is set at RMB 273.89/g (or USD 1,355/oz), the average price over the past five years. A detailed description of the gold price is provided in Chapter 15.4.2 of this Report.

## 21.5 Cost

The detail cost components please refer to Chapter 20.2.

## 21.6 Investment

For scenario 2 and scenario 3, additional investment will arrange for the waste dump and TSF, the details please refer to Chapter 20.1.

## 21.7 Taxes

The corporate income tax rate is 25%, there is not value-added tax for a favourable policy of selling gold in China.

## 21.8 Preliminary Economic Analysis

In this Technical Report, the scenarios are evaluated using the NPV method. NPV refers to after-tax NPV in this section unless otherwise specified. *Scenario 1 is treated as base case for PEA.*

Please note that the following factors are not taken into account in this NPV estimation:

- City maintenance and construction tax, educational surcharge;
- Sunk costs and other costs related to outstanding contracts and land leases;
- Exchange rate fluctuations;
- Financing costs;
- Refundable taxes and tariffs;
- Time loss caused by bad weather;

- Time loss caused by irresistible factors; and
- Relationships with the community.

The base date for calculation of after-tax NPV is 30 December 2013. The year 0 is 2013 in the study. The discount rate is fixed at 10%. Majestic states that the bank loans and relevant fees for historical investment have now been repaid. Therefore, during preliminary economic analysis, historical investment will not be considered when calculating NPV. It is also assumed that the previous investment into the project will not be recovered.

***It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.***

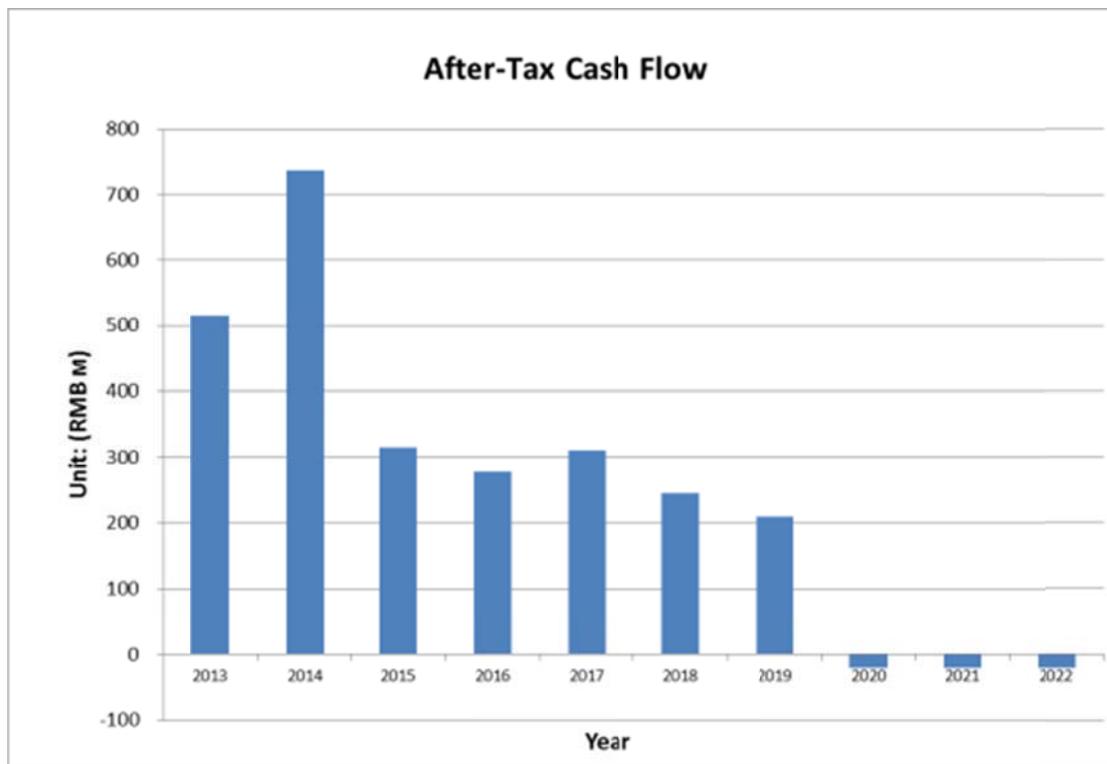
A summary of the after-tax NPV for each scenario at varying discount rates is presented in the Table 21-5. The annual after-tax cashflows are presented in the following sections.

**Table 21-5: Summary of Scenarios' NPVs**

Items	Units	Base Case	Scenario 2	Scenario 3
NPV @ 7%	RMB M	2,221	3,796	5,253
	USD M	353	604	836
NPV @ 10%	RMB M	2,107	3,437	4,663
	USD M	335	547	742
NPV @ 12%	RMB M	2,039	3,229	4,332
	USD M	325	514	689

**21.8.1 Base Case (Scenario 1)**

The annual after-tax net cash flow is shown in Figure 21-1 and Table 20-6.



**Figure 21-1: After-tax Net Cash Flow of Base Case (Scenario 1)**

*Please note that the after-tax NPV estimation is based on the optimised preliminary production plan, which is one of technically feasible cases and may be different from the actual conditions. SRK suggests that the production plan be optimized during the feasibility study period.*

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

**Table 21-6: NPV Estimation of Base Case**

No.	Item	Subtotal (RMB M)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
1	<b>Cash inflow</b>											
1.1	Business revenue	5,599	1,045	1,306	708	672	705	618	544			
1.2	Recovery of residual value of fixed assets	37							37			
	<b>Subtotal</b>	5,636	1,045	1,306	708	672	705	618	581			
2	<b>Cash outflow</b>											
2.1	Historical investment											
2.2	Exploration, engineering and approval											
2.2.1	Exploration	8	2	1	1	1	1	1	1			
2.2.2	FS, design and technical service	4.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5			
2.2.3	Governmental approval i.e. mining right	4	1.0	1.0	0.4	0.4	0.4	0.4	0.4			
2.3	Mining and processing facilities											
2.3.1	Water supply	4	1.0	0.5	0.5	0.5	0.5	0.5	0.5			
2.3.2	Road construction	12	3.0	1.5	1.5	1.5	1.5	1.5	1.5			
2.3.3	Processing facilities	6				6						
2.3.4	Processing workshop	1				1						
2.3.5	Tailing storage facilities	13.5	3.0	3.0	1.5	1.5	1.5	1.5	1.5			
2.4	Auxiliary facilities											
2.4.1	Camp facilities	2	0.8	0.2	0.2	0.2	0.2	0.2	0.2			
2.4.2	Laboratory	0.5				0.5						
2.5	Land lease and relocation											
2.5.1	Open pit	5	2.0	0.5	0.5	0.5	0.5	0.5	0.5			
2.5.2	Waste dump	10	3	2	1	1	1	1	1			
2.5.3	Processing plant and TSF	30	4	4	4	4	4	4	6			
2.5.4	Relocation and community relationship	10	3	2	1	1	1	1	1			
2.6	Contingency cost	20	20									
2.7	Rehabilitation	70	1	1	1	1	1	1	1	21	21	21
2.8	Operating cost	2,017	314	305	275	280	277	279	287			

	<b>Subtotal</b>	1,995	318	270	261	274	261	267	280	21	21	21
3	<b>Income tax</b>	870	171	246	105	93	104	82	70			
4	<b>After-tax net cash flow</b>	2,547	514	738	315	279	311	245	209	-21	-21	-21
5	<b>After-tax NPV (r = 10%)</b>	2,107										

### 21.8.2 Scenario 2

The annual after-tax net cash flow is shown in Figure 21-2 and Table 21-7.

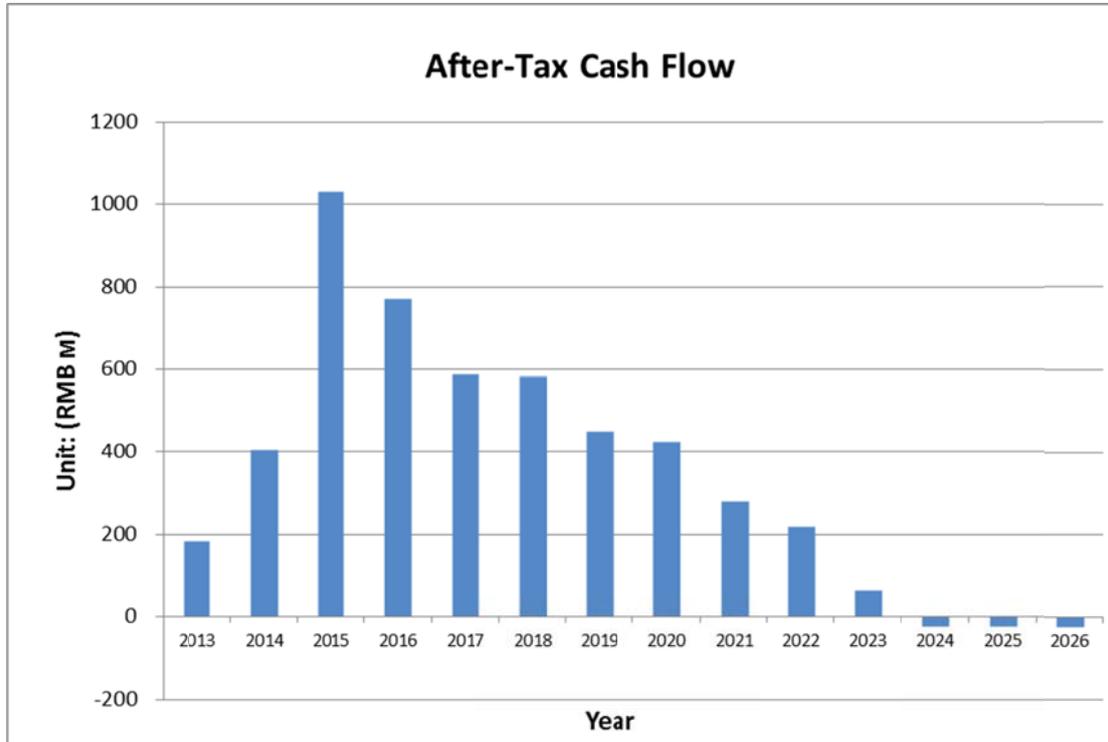


Figure 21-2: After-tax Net Cash Flow of Scenario 2

*Please note that the after-tax NPV estimation is based on the optimised preliminary production plan, which is one of technically feasible cases and may be different from the actual conditions. SRK recommends that the production plan be optimized during the feasibility study period.*

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

**Table 21-7: NPV Estimation of Scenario 2**

No.	Item	Total (RMB M)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
<b>1</b>	<b>Cash inflow</b>															
1.1	Business revenue	10,568	685	990	1,773	1,413	1,166	1,150	966	934	730	646	114			
1.2	Recovery of residual value of fixed assets	40											40			
	<b>Subtotal</b>	<b>10,607</b>	<b>685</b>	<b>990</b>	<b>1773</b>	<b>1413</b>	<b>1166</b>	<b>1150</b>	<b>966</b>	<b>934</b>	<b>730</b>	<b>646</b>	<b>153</b>			
<b>2</b>	<b>Cash outflow</b>															
2.1	Historical investment															
2.2	Exploration, engineering and approval															
2.2.1	Exploration	13.0	2.0	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.2.2	FS, design and technical service	18.4	2.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.8	1.0	1.0			
2.2.3	Governmental approvals i.e. mining right	14.0	5.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5			
2.3	Mining and processing facilities															
2.3.1	Power upgrade	6.0	1.0	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5			
2.3.2	Water supply	14.2	3.2	2.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.3.3	Road construction	20.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.0			
2.3.4	Processing facilities	38.0	15.0	15.0			8.0									
2.3.5	Processing workshop	28.0	13.0	13.0			2.0									
2.3.6	Tailing storage facilities	49.5	9.5	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0			
2.4	Auxiliary facilities															
2.4.1	Camp facilities	2.4	0.4	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2			
2.4.2	Mining office	1.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
2.4.3	Laboratory	1.5	1.0				0.5									
2.4.4	Warehouse	1.0	1.0													
2.5	Land lease and relocation															
2.5.1	Open pit	11.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.5.2	Waste dump	22.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
2.5.3	Processing plant and TSF	128.0	48.0	44.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0			
2.5.4	Relocation and community relationship	36.5	21.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5			
2.6	Contingency cost	35.25	35.25													
2.7	Rehabilitation	84.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	25.0	24.0	24.0
2.8	Operating cost	3,503	274	362	381	366	354	352	346	347	338	336	48			
	<b>Subtotal</b>	<b>4,027</b>	<b>438</b>	<b>453</b>	<b>402</b>	<b>387</b>	<b>385</b>	<b>373</b>	<b>367</b>	<b>368</b>	<b>359</b>	<b>355</b>	<b>66</b>	<b>25</b>	<b>24</b>	<b>24</b>
<b>3</b>	<b>Income tax</b>	<b>1,664</b>	<b>62</b>	<b>134</b>	<b>343</b>	<b>257</b>	<b>195</b>	<b>194</b>	<b>150</b>	<b>141</b>	<b>93</b>	<b>73</b>	<b>22</b>			
<b>4</b>	<b>After-tax net cash flow</b>	<b>4,918</b>	<b>185</b>	<b>403</b>	<b>1028</b>	<b>770</b>	<b>586</b>	<b>582</b>	<b>449</b>	<b>424</b>	<b>279</b>	<b>219</b>	<b>65</b>	<b>-25</b>	<b>-24</b>	<b>-24</b>

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5	After-tax NPV (r = 10%)	3,437																
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### 21.8.3 Scenario 3

The annual after-tax net cash flow is shown in Figure 21-3 and Table 21-8.

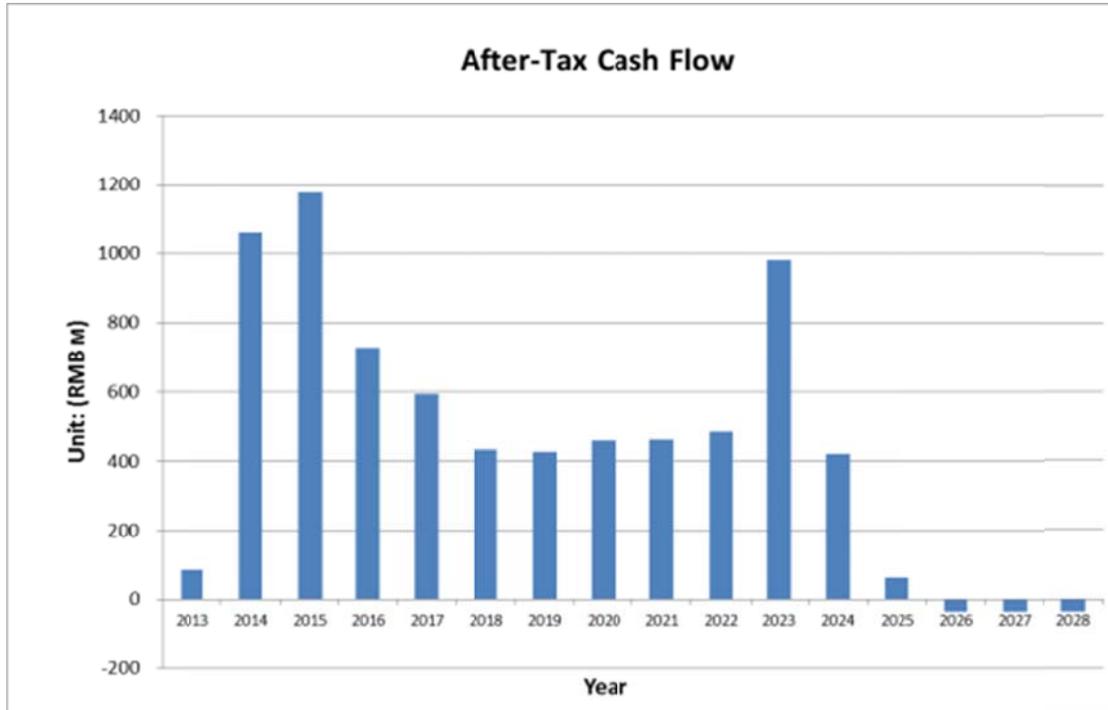


Figure 21-3: After-tax Net Cash Flow of Scenario 3

*Please note that the after-tax NPV estimation is based on the optimised preliminary production plan, which is one of technically feasible cases and may be different from the actual conditions. SRK recommends that the production plan be optimized during the feasibility study period.*

*It should also be emphasized that a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

**Table 21-8: NPV Estimation of Scenario 3**

No.	Item	Total (RMB M)	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
<b>1</b>	<b>Cash inflow</b>																	
1.1	Business revenue	16,333	685	2,041	2,099	1,466	1,274	1,073	1,054	1,102	1,112	1,150	1,869	1,083	325			
1.2	Recovery of residual value of fixed assets	37													37			
	<b>Subtotal</b>	<b>16,370</b>	<b>685</b>	<b>2,041</b>	<b>2,099</b>	<b>1,466</b>	<b>1,274</b>	<b>1,073</b>	<b>1,054</b>	<b>1,102</b>	<b>1,112</b>	<b>1,150</b>	<b>1,869</b>	<b>1,083</b>	<b>362</b>			
<b>2</b>	<b>Cash outflow</b>																	
2.1	Historical investment																	
2.2	Exploration, engineering and approval																	
2.2.1	Exploration	15	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.2.2	FS, design and technical service	28	16.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.2.3	Governmental approval i.e. mining right	18	5.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.3	Mining and processing facilities																	
2.3.1	Power upgrade	15	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.3.2	Water supply	23	5.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5			
2.3.3	Road construction	25	7.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5			
2.3.4	Processing facilities	65	25.0	25.0				15.0										
2.3.5	Processing workshop	53	25.0	25.0				3.0										
2.3.6	Tailing storage facilities	68	25.5	6.0	6.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0			
2.4	Auxiliary facilities																	
2.4.1	Camp facilities	5	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3			
2.4.2	Mining office	1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1			
2.4.3	Laboratory	2	1.0					1.0										
2.4.4	Warehouse	2	2.0															
2.5	Land lease and relocation																	
2.5.1	Open pit	23	9.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.5.2	Waste dump	23	9.0	3.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0			
2.5.3	Processing plant and TSF	185	75.0	50.0	10.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0			
2.5.4	Relocation and community relationship	59.0	25.0	12.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0			
2.6	Contingency cost	52.2	52.2															
2.7	Rehabilitation	120.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	36.0	36.0	35.0
2.8	Operating cost	5,852	279	494	500	475	463	456	461	470	473	484	542	497	258			
	<b>Subtotal</b>	<b>6,634</b>	<b>570</b>	<b>626</b>	<b>529</b>	<b>495</b>	<b>483</b>	<b>496</b>	<b>482</b>	<b>490</b>	<b>493</b>	<b>505</b>	<b>562</b>	<b>518</b>	<b>279</b>	<b>36</b>	<b>36</b>	<b>35</b>
<b>3</b>	<b>Income tax</b>	<b>2,461</b>	<b>29</b>	<b>354</b>	<b>392</b>	<b>243</b>	<b>198</b>	<b>144</b>	<b>143</b>	<b>153</b>	<b>155</b>	<b>161</b>	<b>327</b>	<b>141</b>	<b>21</b>			
<b>4</b>	<b>After-tax net cash flow</b>	<b>7,275</b>	<b>87</b>	<b>1061</b>	<b>1,177</b>	<b>728</b>	<b>593</b>	<b>433</b>	<b>429</b>	<b>459</b>	<b>464</b>	<b>484</b>	<b>980</b>	<b>424</b>	<b>62</b>	<b>-36</b>	<b>-36</b>	<b>-35</b>
<b>5</b>	<b>After-tax NPV (r = 10 %)</b>	<b>4,663</b>																

## 21.9 Sensitivity Analysis

SRK conducted a sensitivity analysis on the Songjiagou Project’s post-expansion NPV with respect to gold prices and operating costs (including mining, stripping, processing, concentrate processing, and administrative costs). The correlation between the NPV and gold prices/operating costs, which fluctuates within 20% for Scenarios 1, 2, and 3, is shown in Figure 21-4, Figure 21-5, and Figure 21-6. All three Scenarios are more sensitive to gold prices than to operating costs.

When gold price falls by 20%, the after-tax NPVs of Scenarios 1, 2, and 3 are RMB 1,460 M, RMB 2,385 M and RMB 3,182 M, respectively; when gold price goes up by 20%, the after-tax NPVs of Scenarios 1, 2, and 3 are RMB 2,755 M, RMB 4,489 M, and RMB 6,144 M.

When operating costs fall by 20%, the after-tax NPVs of Scenarios 1, 2, and 3 are RMB 2,304 M, RMB 3,729 M and RMB 5,103 M, respectively; when operating costs rise by 20%, the after-tax NPVs of Scenarios 1, 2, and 3 are RMB 1,911M, RMB 3,146 M, and RMB 4,223 M.



Figure 21-4: Sensitivity of Scenario 1 NPV (7,400 tpd)

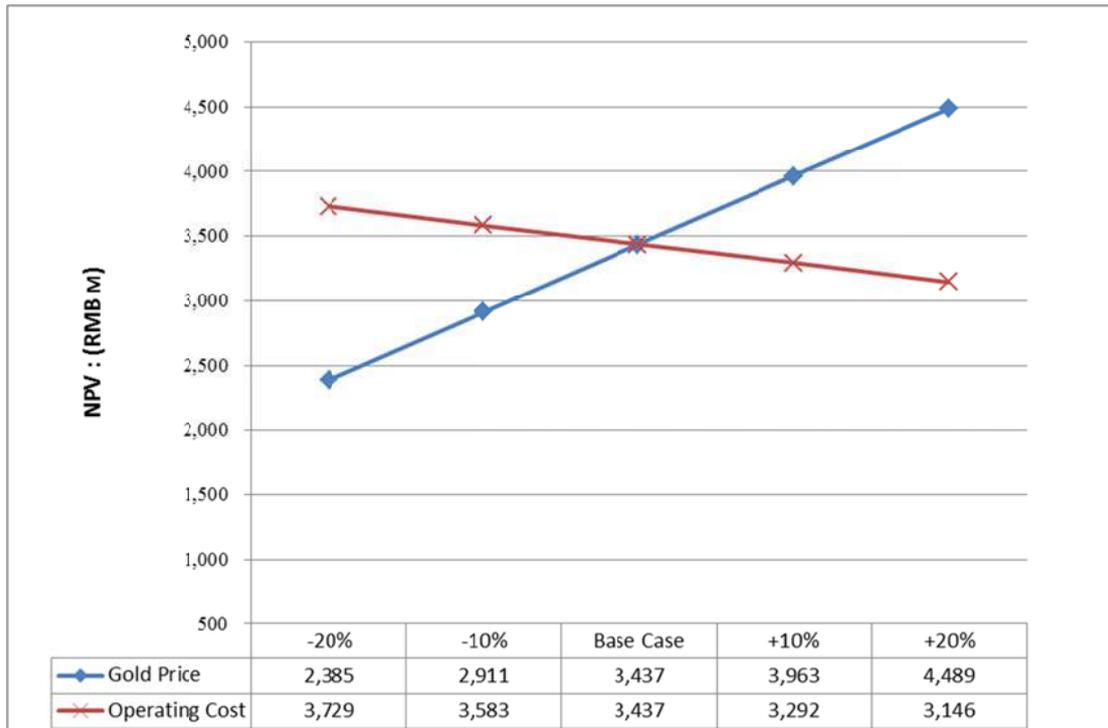


Figure 21-5: Sensitivity of Scenario 2 NPV (10,000 tpd)

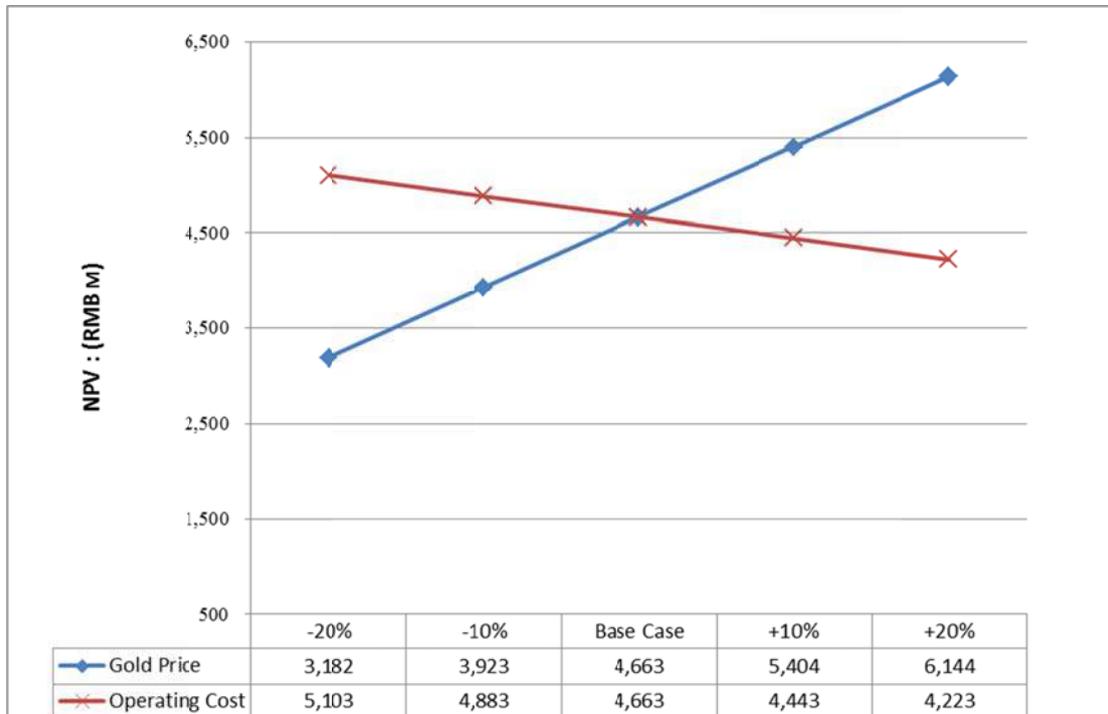


Figure 21-6: Sensitivity of Scenario 3 NPV (12,000 tpd)

## 22 Adjacent Properties

No information is available regarding any adjacent properties.

## **23 Other Relevant Data and Information**

No other relevant data or information is available for the Songjiagou Project.

## 24 Interpretation and Conclusions

### 24.1 Geology

The Songjiagou Property 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 mineralization at the Songjiagou Property 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 Songjiagou 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 chemical analysis.

### 24.2 Data Verification

It is SRK's opinion that the sample preparation, QA/QC, and assay procedures conducted at Songjiagou Mine between 2005 and 2007 are reasonable and comply with industrial standards.

That the differences between the assay results of the coarse and pulp duplicate samples between the original samples and SRK independent verification samples, besides, the assay result of pulp duplicates is acceptable.

### 24.3 Resource Estimation

**Within both mining license and exploration permit**, as of 31 January 2013, at a cut-off grade of 0.3 g/t Au, within the optimized open pit in Scenario 3 of PEA study, the Songjiagou Project contains 26.6 million tonnes of Indicated Mineral Resources at an average gold grade of 1.40 g/t, and 23.4 million tonnes of Inferred Mineral Resources at an average gold grade of 1.45g/t.

In addition to the open pit resource, the underground gold resources contain 5.6 million tonnes Inferred Resources grading 2.56 g/t, at a cut-off grade of 0.8 g/t.

**Within in the mining license**, as of 31 January 2013, at a cut-off grade of 0.3 g/t Au, within the optimized open pit in Scenario 3 of PEA study (within both mining license and exploration permit), there are 24.1 million tonnes of Indicated Mineral Resources at an average gold grade of 1.44 g/t, and 18.0 million tonnes of Inferred Mineral Resources at an average gold grade of 1.29g/t.

In addition to the open pit resource, within the mining license, the underground gold resources contain 4.9 million tonnes Inferred Resources grading 2.60 g/t, at a cut-off grade of 0.8 g/t.

*It should be pointed out that the resources within the mining license are included in the resource within both mining license and exploration permit.*

*Please note that the historical underground production from 2006 to January 2013 has been excluded from the resource statements.*

### 24.4 Mining

For a PEA, SRK considers three scenarios in the report. It should be pointed out that *a preliminary economic assessment (“PEA”) should not be considered to be a pre-feasibility or feasibility study, as the economics and technical viability of the Project have not been demonstrated at this time. A PEA is*

*preliminary in nature, it includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized.*

#### **24.4.1 Scenario 1**

*Despite the limitations imposed by the current mining license*, as of 31 January 2013, at a cut-off grade of 0.3 g/t Au, 17,200 kt of resources at an average Au grade of 1.34 g/t remain within the ultimate pit, along with 57,899 kt of waste including 10,128 kt of Inferred Resources; the average stripping ratio is 3.37 t/t.

According to the preliminary production schedule, the Scenario 1 pit is anticipated to have seven (7) years of stable production with a capacity of 7,400 tpd.

#### **24.4.2 Scenario 2**

At a cut-off grade of 0.30 g/t Au, as of 31 January 2013, within the ultimate pit there are 19,076 kt of Indicated Resources with an average grade of 1.32 g/t Au and 13,598 kt of Inferred Resources with an average grade of 1.37 g/t Au. The pit also contains 65,394 kt of waste, and the average stripping ratio is 2.00 t/t.

According to preliminary production schedule, the LOM of Scenario 2 pit will be 11 years with a capacity of 10,000 tpd, including one year of construction, nine years of stable production, and one year of production reduction.

#### **24.4.3 Scenario 3**

At a cut-off grade of 0.30 g/t Au, as of 31 January 2013, within the ultimate pit there are 26,284 kt of Indicated Resources with an average grade of 1.35 g/t Au, and 22,927 kt of Inferred Resources with an average grade of 1.40 g/t Au. The pit also contains 147,507 kt of waste, and the average stripping ratio is 3.00 t/t.

According to preliminary production schedule, the Scenario 3 pit will have a LOM of 13 years with a capacity of 12,000 tpd, including one year of construction, eleven (11) years of stable production and one year of production reduction.

### **24.5 Mineral Recovery**

Mining inventory from the Songjiagou Mine has relatively simple characteristics, with good floatability.

### **24.6 Capital Investment and Operating Cost**

Scenario 3 requires the relocation of the villages located within the ultimate pit and 200 m around. The previously expected relocation costs may be underestimated. Majestic has put some consideration into coping with increased relocation costs.

The existing waste dump and tailings storage facility are planned for the currently permitted production scale of 135 kt. However, as the current actual production capacity is 7,400 tpd, Majestic plans to construct an enlarged waste dump and tailings storage facilities. More accurate cost estimation is required in the feasibility study stage.

## 24.7 Environmental Issues and occupational health and safety (“OHS”)

SRK has sighted the following environmental documentations for the Songjiagou Project:

- The environmental impact assessment (“EIA”) report for Yantai Zhongjia Mining Co., Ltd’s Songjiagou Gold Mine Project (0.135 Mtpa); and
- The water and soil conservation plan (“WSCP”) report for Yantai City Muping District Songjiagou Mining and Processing Project.

No EIA reports or approval for the processing plants (1,200 tpd and 6,000 tpd) have been sighted as part of this review.

No Environmental Final Check and Acceptance (“FCA”) Approvals for the Songjiagou Project have been sighted at the time of this site visit.

SRK has sighted the Safety Final Check and Acceptance Assessment Report for the Songjiagou Gold Mine Open Pit Project, which was produced by Shandong Shengtai’an Safety Assessment Company in October 2012.

SRK has not sighted the approval by the relevant safety bureau for the above assessment report. No other safety assessment reports or approvals in relation to the tailings storage facility (“TSF”) have been sighted as part of this review.

At the time of the 2012 site visit, the open pit of Songjiagou Mine was generally being developed and/or operated in accordance with the Project EIA’s approval conditions.

It is SRK’s opinion that the environmental and social risks for the Project can be generally managed if Chinese environmental standards and regulatory requirements are followed.

In summary the most significant environmental risks for the development of the Songjiagou Project, currently identified as part of the project assessment and in this review, are:

- Significant land disturbance, and site rehabilitation and site closure requirements;
- Poor waste rock dump and TSF management; and
- Poor water management.

The above inherent environmental risks are categorised as moderate/low risks (i.e., requiring risk management measures).

SRK has reviewed the Safety Assessment Reports as provided by the Songjiagou Mine and is of the opinion that the reports cover items that are generally in line with recognised Chinese industry practices and Chinese safety regulations.

The operational occupational health and safety (“OHS”) management system/procedures for the Songjiagou Project have been developed. The OHS management system/procedures cover the basic safety production managements for drilling, transportation, boiler management, ventilation, explosives storage, and fire and flood prevention. However, SRK observed that the above OHS management system/procedures were developed based on the previous underground mining. The safety assessment report for the Songjiagou Project does provide additional safety management measures including measures related to open pit mining, flood and fire prevention, explosion, and transportation. SRK notes that these proposed safety management measures could be the basis for the operational OHS management system/procedures.

SRK has not sighted, as part of this review, any operational OHS records for the current operations of the Songjiagou Project.

## **24.8 Preliminary Economic Analysis**

### **24.8.1 Scenario 1 (Base Case)**

Based on the assumed technical and economic parameters described in Chapter 21, the estimated after-tax NPV is RMB 2,107 M (about USD 335 M).

The after-tax NPV is RMB 1,460 M when the gold price decreases by 20%, and the after-tax NPV is RMB 2,755 M when the gold price increases by 20%.

The after-tax NPV will increase to RMB 2,304 M, if the operating cost falls 20%; the after-tax NPV will decrease to RMB 1,911 M if the operating cost rises 20%.

### **24.8.2 Scenario 2**

Based on the assumed technical and economic parameters described in Chapter 21, the estimated after-tax NPV is RMB 3,437 M (about USD 547 M).

The after-tax NPV is RMB 2,385 M when the gold price decreases by 20%, and the after-tax NPV is RMB 4,489 M when the gold price increases by 20%.

The after-tax NPV will increase to RMB 3,729 M, if the operating cost falls 20%; the after-tax NPV will decrease to RMB 3,146 M if the operating cost rises 20%.

### **24.8.3 Scenario 3**

Based on the assumed technical and economic parameters described in Chapter 21, the estimated after-tax NPV is RMB 4,663 M (about USD 742 M).

The after-tax NPV is RMB 3,182 M when the gold price decreases by 20%, and the after-tax NPV is RMB 6,144 M when the gold price increases by 20%.

The after-tax NPV will increase to RMB 5,103 M, if the operating cost falls 20%; the after-tax NPV will decrease to RMB 4,223 M if the operating cost rises 20%.

## 25 Recommendations

### 25.1 Geology

Inferred mineral resources account for approximate 55% of the total resource at a cut-off grade of 0.3 g/t Au for the Songjiagou Project, and the locations and positions of previously mined-out areas of underground tunnelling and mining activities were not fully identified so far, SRK strongly recommends enhancing production exploration throughout the production period to upgrade the resource categories and reduce mining risk.

The mine is located in the Mouping-Rushan gold belt and mineralization conditions are good. SRK recommends increased exploration, including step-out drilling within the exploration licensed area.

### 25.2 Mining

There is insufficient data to support the design of the overall slope and the bench face angle. SRK suggests that slope stability monitoring should be enhanced, and a rock mechanics study should be carried out as soon as possible to finalize these parameters, in order to guarantee production safety.

The optimized pit limits are outside the limits of the mining license, and the actual mining capacity exceeds the permitted capacity. The mine is considering apply for a mining license with larger scope and capacity. To ensure that the mine is operated in compliance with related laws and regulations, the mine should appoint a qualified design institute to prepare a feasibility study for large-scale production as soon as possible, and then submit it to the relevant authorities for approval. Applications for a large scope and capacity mining license and other supporting permits in accordance with local laws and regulations should be conducted.

All the mining activities have been outsourced and the mining equipment is provided by contractors. It is suggested that equipment types and quantities should be determined in feasibility study stage to match the production capacity for the large-scale production.

Daily production fluctuates significantly. SRK recommends optimizing a detailed schedule during the feasibility study stage so it can be used to guide production, and having a stricter grade control program for current production.

The existing waste dump associated with small-scale production is not in use currently. According to the mine plan, waste will be transported to the waste dump after the new laboratory construction and grade control improvement. Based on the preliminary ultimate pit design results, the current waste dump is not large enough to accommodate all the waste within the ultimate pit. SRK suggests standardizing sampling, optimizing assay methods, and improving grade control. Location selection, land acquisition and design for a large enough dump also should be carried out as soon as possible.

As the mine is adjacent to two villages, the open pit blasting work should be designed strictly complying with all relevant standards, and safety management procedures should be carried out at all times. SRK recommends taking all necessary shielding measures to protect the workshop, equipment and residential houses close to the blasting site, such as constructing anti-blasting embankments, wave-walls and protective barriers. If necessary, the mine should inform all villagers who might be affected prior to blasting, so that they can be evacuated to a safe location.

Any issue about village relocation and resettlement may have great impact on production schedule and cause certain influence on its profitability. It is suggested that this issue should be carefully studied in feasibility study stage.

SRK also suggests improving organizational structure, introducing geology, mining, surveying and processing professionals and technical personnel, strengthening production management and technical services, so that production can be standardized and operating costs can be reduced.

### **25.3 Mineral Recovery**

SRK recommends conducting a mineral processing test and flowsheet optimization to further increase the gold recovery and upgrade gold processing profit.

The capacity of the current TSF is insufficient; SRK recommends conducting an optimization study and design of tailings stack pattern; location selection, land acquisition, engineering design and construction of associated facilities for large enough TSF should be conducted as soon as possible, thus safe, orderly, and effective operation of the mine can be ensured.

### **25.4 Mine Rehabilitation**

SRK recommends conducting a detailed land rehabilitation study during feasibility study stage, drawing on the operational experiences of similar and/or nearby mines to determine an appropriate rehabilitation plan, and submitting it to the authorities for approval.

SRK also recommends setting up a rehabilitation department to implement the plan and collect and allocate the funds.

### **25.5 Capital Investment and Operating Cost**

The unit operating cost is defined by feed grade in the contract; SRK recommends providing a breakdown of the unit operating cost into mining, stripping, and mineral processing costs.

## 26 References

1. No 3 Geological Mineral Resource Prospecting Institute of Shandong Province, *Resource Verification Report of Songjiagou Gold Mine, Mouping Area, Yantai, Shandong*, January 2011.
2. Yantai Dehe Metallurgical Design and Research Institute Corporation Limited, *Resource Utilization and Development Plan of Songjiagou Gold Mine, Mouping Area, Yantai, Shandong*, July 2011.
3. Wardrop Engineering Inc., *Preliminary Assessment Technical Report of Songjiagou Project, Shandong Province, China*, March 2011.
4. SRK Consulting (China) Ltd, *Memo on 18 Months Mining Plan of Songjiagou Gold Mine*, June 2011.
5. SRK Consulting (China) Ltd, *Technical Report on the Cut off Grade Study of Songjiagou Gold Mine in Wanggezhuang Town, Mouping District, Yantai City, Shandong Province, China*, August 2012.
6. Mintec, *Minesight User's Manual*, 2012.
7. Yantai Jinyuan Machinery Processing and Metallurgy Laboratory, *Mouping Dahedong Gold Ore Processing Test Report*, February 2010.
8. Majestic Gold Corp, *Historical Production Figures*, March 2013.
9. Dahedong Mineral Processing Company Limited, *Major Equipment Configuration Record*, March 2013.

## 27 Certificate of Qualified Persons

### 27.1 Anshun Xu

To accompany the report entitled Independent Technical Report Independent Technical Report of Songjiagou Gold Project, Shandong Province, the People's Republic of China and dated July 2013 (amended in January 2016),

I, Anshun Xu, do hereby certify that:

- 1) I am a Principal Consultant in Geology and Mineral Resources with the firm and carried out the assignment for SRK Consulting China Limited, located at:

B1205 COFCO Plaza  
8 Jianguomen Nei Dajie  
Beijing, People's Republic of China  
100005  
Email: axu@srk.cn

- 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, resource estimates, and technical review 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 recently managed and completed many due diligence jobs and technical reports, including technical reporting projects such as Canadian NI43-101 reports and Hong Kong Exchanges and Singapore Exchanges IPO technical reports, which include resource estimate, mineral reserve conversion and economic analysis.

- 3) I am a fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM) (No. 224861) since 2005, and in a good standing.
- 4) I have visited the subject property from 30 to 31 October 2012; and 11 April 2013.
- 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 fulfill 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 responsible for the entire technical report titled "Independent Technical Report of Songjiagou Gold Project, Shandong Province, the People's Republic of China" I am personally responsible for the preparation of the mineral resource model described in Section 13, and the economic analysis in this technical report. I supervised and take responsibility for the preparation of all of the other sections of the report;
- 8) I have had no prior involvement with this project;

- 9) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith;
- 10) SRK Consulting (China) Ltd. was retained by Majestic Gold Corp to prepare a technical report about the Songjiagou Gold project, Shandong Province, China pursuant to Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1 guidelines. The preceding report is based on a site visit, a review of project files, and discussions with Majestic's and Songjiagou mine's personnel;
- 11) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Songjiagou Gold project or securities of Majestic Gold Corp;
- 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.

Dated this 19th day of January, 2016  
Beijing, People's Republic of China



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*Signature of QP*

**Anshun Xu**  
*Print name of QP*

## 27.2 Peter Fairfield

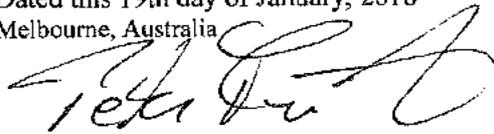
I, Peter Fairfield, do hereby certify that:

- 1) I am a Principal Consultant in mining and Project Evaluations with SRK Consulting Australia Pty Ltd:

Level 9, 99 William St  
Melbourne, 3000, Vic  
Australia  
Email: pfairfield@srk.com.au

- 2) I am a graduate of the Ballarat College of Advanced Education (Bachelor of Engineering (Mining) 1987). My relevant experience is 16 years of operational and management experience in large-scale underground base metal mining at Broken Hill, NSW (6 years), Underground gold mining at Norseman, WA (3 years), Underground Tin mining in Tasmania (1 year), Underground base metal mining at Cobar, NSW (3 years) and Underground mining at Gordonsville, Tennessee, USA (3 years). Of particular relevance for the study in support of the practical experience, I have spent the past 11 years in consulting roles at AMC Consultants (3.5 years), corporate internal consulting role with gold miner St Barbara Ltd (3 years) and the past 5 years with SRK Consulting. I am a “Qualified Person” for the purposes of National Instrument 43-101 (“the Instrument”)
- 3) I am a fellow of the Australasian Institute of Mining and Metallurgy (FAusIMM) (No. 106754) since 1986, and in a good standing.
- 4) I have not visited the property.
- 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 fulfill 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 have undertaken a review of the technical work and am responsible for Section 15 of the technical report titled “Independent Technical Report of Songjiagou Gold Project, Shandong Province, the People’s Republic of China”;
- 8) I have had no prior involvement with this project;
- 9) I have read National Instrument 43-101 and confirm that this technical report has been prepared in compliance therewith;
- 10) SRK Consulting (China) Ltd. was retained by Majestic Gold Corp to prepare a technical report about the Songjiagou Gold project, Shandong Province, China pursuant to Canadian Securities Administrators National Instrument 43-101 and Form 43-101F1 guidelines. The preceding report is based on a review of project files, and discussions with Majestic’s and Songjiagou mine’s personnel;
- 11) I have not received, nor do I expect to receive, any interest, directly or indirectly, in the Songjiagou Gold project or securities of Majestic Gold Corp;
- 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.

Dated this 19th day of January, 2016  
Melbourne, Australia



*Signature of QP*

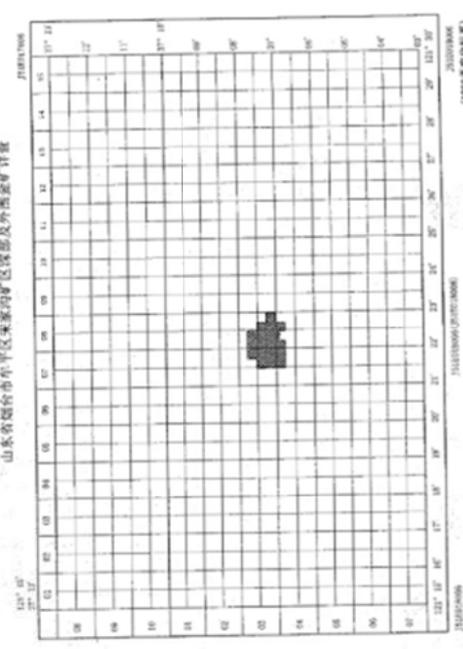
**Peter Fairfield**

## **Appendix A: Operating Licenses**

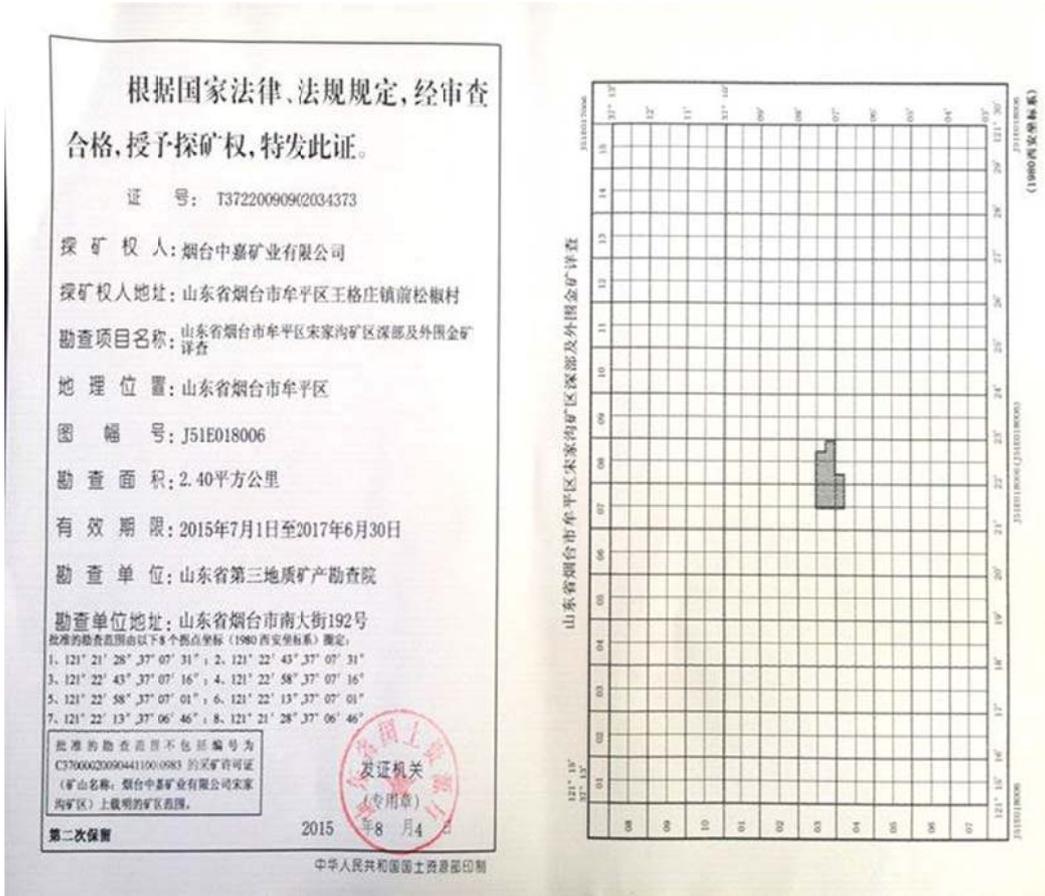
**Business License**

 <b>企业法人</b> <b>营业执照</b>	编号: N9 0594159
	<b>名称</b> 烟台中嘉矿业有限公司 <b>住所</b> 烟台市牟平区王格庄镇前松椒村 <b>法定代表人</b> 孔凡忠 <b>注册资本</b> 人民币682.90万元 <b>实收资本</b> 人民币682.90万元 <b>公司类型</b> 有限责任公司(中外合作) <b>经营范围</b> 对黄金和贵金属及矿床进行地质勘查、开采(采矿许可证有效期至2017年2月10日)、加工、并销售自产产品。3838※
注册号: 37060400031686 成立日期: 二零零五年三月十七日 登记机关 二零一三年 月 日	<b>股东(发起人)</b> WJSTC WNNI QID LTD; 烟台大河湾透矿有限公司  <b>营业期限</b> 自 2005年03月17日 至 2016年03月16日

**Old Exploration License**

<p style="text-align: center;"><b>根据国家法律、法规规定,经审查合格,授予探矿权,特发此证。</b></p> <p>证 号: T37220090902014373</p> <p><b>探矿权人:</b> 烟台中嘉矿业有限公司</p> <p><b>探矿权人地址:</b> 山东省烟台市牟平区王格庄镇前松椒村</p> <p><b>勘查项目名称:</b> 山东省烟台市牟平区宋家沟矿区深部及外围金矿详查</p> <p><b>地理位置:</b> 山东省烟台市牟平区</p> <p><b>图 幅 号:</b> J51E018006</p> <p><b>勘 查 面 积:</b> 3.15平方公里</p> <p><b>有效期限:</b> 2011年12月7日至2013年6月30日</p> <p><b>勘 查 单 位:</b> 山东省第三地质矿产勘查院</p> <p><b>勘查单位地址:</b> 山东省烟台市南大街192号</p> <p>批准的勘查范围由以下16个点坐标(1980西安坐标系)确定:                  1. 121° 21' 28" 37' 07" 31"; 2. 121° 21' 43" 37' 07" 31";                  3. 121° 21' 43" 37' 07" 46"; 4. 121° 22' 28" 37' 07" 46";                  5. 121° 22' 28" 37' 07" 31"; 6. 121° 22' 43" 37' 07" 31";                  7. 121° 22' 43" 37' 07" 16"; 8. 121° 22' 58" 37' 07" 16";                  9. 121° 22' 58" 37' 07" 01"; 10. 121° 22' 43" 37' 07" 01";                  11. 121° 22' 43" 37' 06" 46"; 12. 121° 22' 28" 37' 06" 46";                  13. 121° 22' 28" 37' 06" 35"; 14. 121° 22' 13" 37' 06" 35";                  15. 121° 22' 13" 37' 06" 46"; 16. 121° 21' 28" 37' 06" 46"</p> <p>批准的勘查范围不包括编号为 C370000200904410010143 的采矿许可证(矿名名称: 烟台中嘉矿业有限公司宋家沟矿区)上覆盖的矿区范围 Q1</p> <p style="text-align: right;">2011年12月7日</p> <p style="text-align: center;">中华人民共和国国土资源部</p>	
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**Renewed Exploration Permit**



Mining License

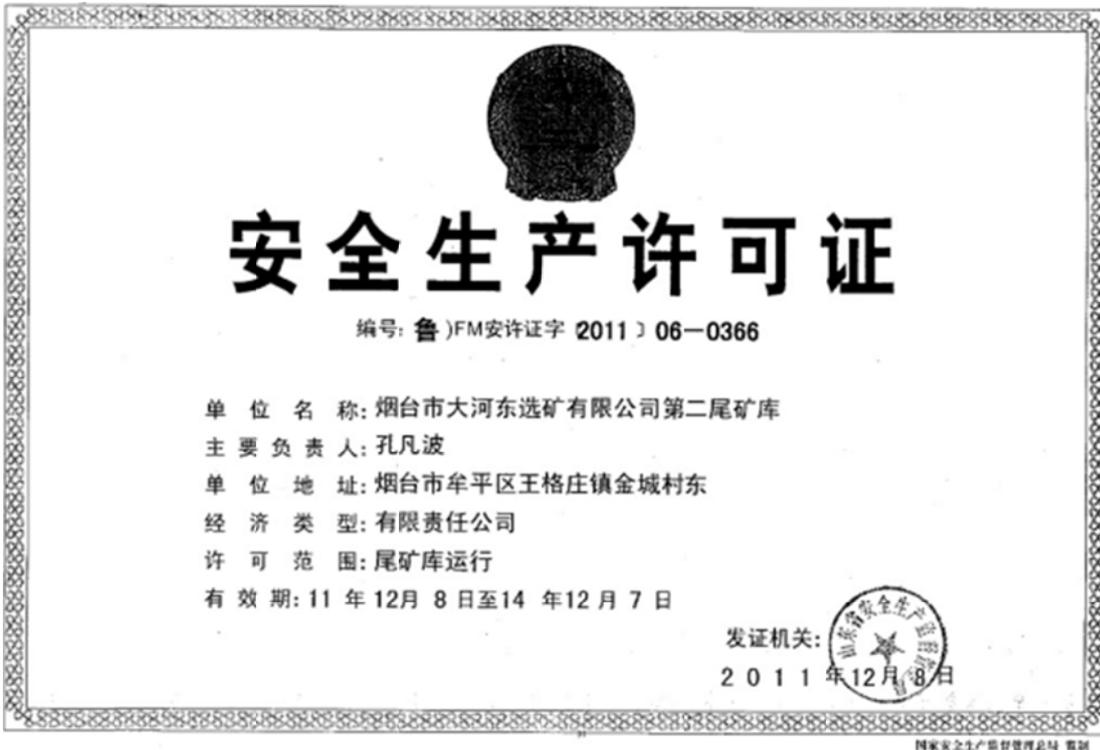
<p>中华人民共和国</p> <h1>采矿许可证</h1> <p>(副本)</p> <p>证号: C3700002009044110010983</p> <p>采矿权人: 烟台中嘉矿业有限公司</p> <p>地 址: 烟台市牟平区王格庄镇前松椒村</p> <p>矿山名称: 烟台中嘉矿业有限公司宋家沟矿区</p> <p>经济类型: 有限责任公司</p> <p>开采矿种: 金矿、硫</p> <p>开采方式: 露天/地下开采</p> <p>生产规模: 13.50万吨/年</p> <p>矿区面积: 0.3421平方公里</p> <p>有效期限: 伍年 自 2012年2月10日 至 2017年2月10日</p> <div style="text-align: center;"><p>二〇一二年二月十日</p></div>	<p style="text-align: right;">(1980西安坐标系)</p> <p>矿区范围拐点坐标:</p> <p>五号 (注: 1、2、3、4号)</p> <ol style="list-style-type: none"><li>1, 4110998.85, 40621568.40</li><li>2, 4110718.83, 40621914.39</li><li>3, 4110126.85, 40621433.36</li><li>4, 4110438.86, 40621086.38</li></ol> <p>开采深度: 由140米至-300米标高 共有4个拐点圈定</p>
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中华人民共和国国土资源部印制

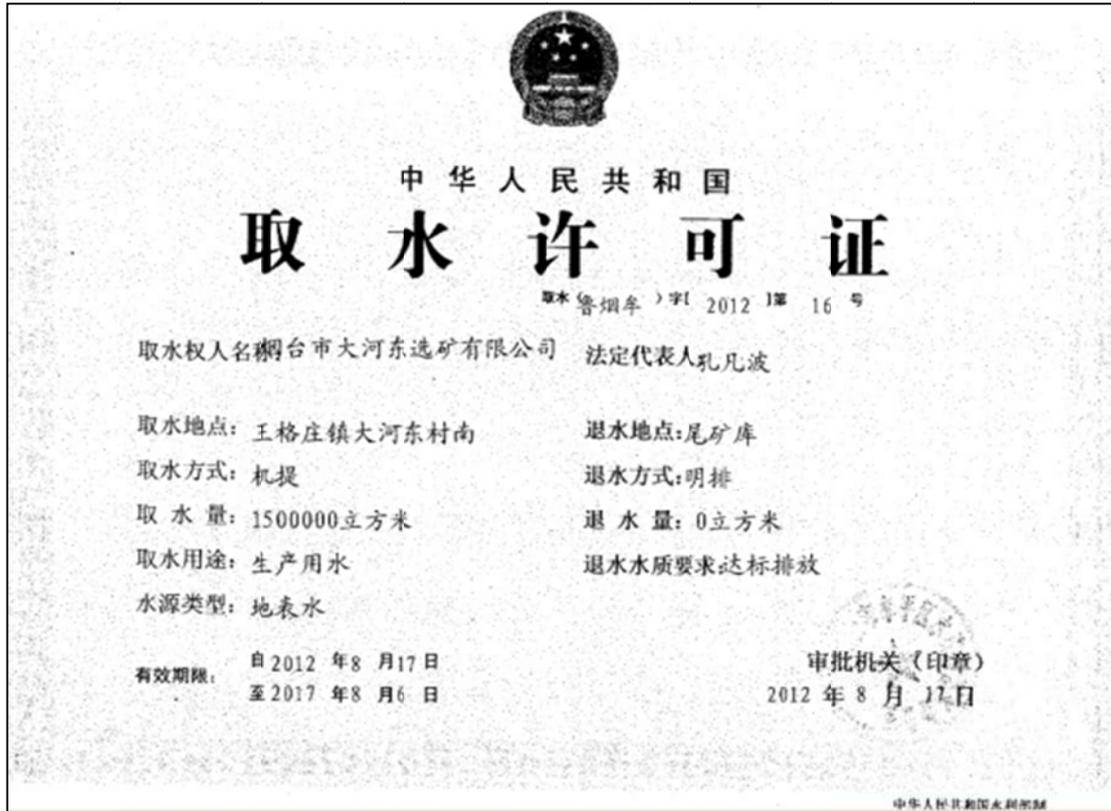
Safety Production License - Open Pit



Safety Production License - TSF



Water Use License



Gold Exploitation Permit



## **Appendix B: Drilling Information**

Hole ID	Azimuth	Dip	Length (m)	Easting (m) <sup>1</sup>	Northing (m) <sup>1</sup>	Elevation (m) *
SJ05-01	330	-45	150.40	40621444.51	4110441.09	138.90
SJ05-02	330	-45	160.00	40621479.20	4110472.74	139.42
SJ05-03	330	-45	185.00	40621515.56	4110497.29	138.39
SJ05-04	330	-45	150.00	40621404.09	4110402.52	135.81
SJ05-05	330	-45	160.00	40621643.52	4110661.80	119.41
SJ05-06	330	-45	76.70	40621606.88	4110628.62	122.07
SJ05-07	330	-45	77.40	40621580.98	4110588.69	123.02
SJ05-08	310	-45	180.00	40621387.18	4110561.08	137.36
SJ05-09	310	-45	180.00	40621611.88	4110779.21	100.34
SJ05-10	310	-45	150.00	40621554.94	4110732.57	95.66
SJ05-11	310	-45	576.05	40621717.37	4110392.23	129.81
SJ05-12	310	-45	180.00	40621373.63	4110485.43	118.62
SJ05-13	310	-45	180.00	40621264.44	4110404.87	103.03
SJ05-14	310	-60	527.70	40621646.99	4110309.67	113.32
SJ05-15	310	-45	200.00	40621272.43	4110491.75	124.17
SJ05-16	130	-45	200.10	40621313.80	4110702.67	138.16
SJ05-17	303	-45	178.40	40621330.60	4110443.02	109.88
SJ05-18	130	-45	182.90	40621400.09	4110802.12	122.16
SJ05-19	130	-45	61.00	40621369.07	4110772.01	131.73
SJ05-20	310	-45	314.00	40621369.09	4110772.05	131.70
SJ05-21	310	-60	599.50	40621833.91	4110543.57	102.20
SJ05-22	130	-45	183.00	40621341.69	4110728.25	136.10
SJ05-23	310	-45	230.10	40621344.87	4110726.28	135.91
SJ05-24	310	-45	276.00	40621313.80	4110702.67	138.16
SJ05-25	310	-60	600.03	40621771.39	4110474.98	99.67
SJ05-26	310	-60	600.14	40621584.82	4110239.31	102.75
SJ06-27	330	-50	483.00	40621739.65	4110551.71	114.71
SJ06-28	330	-60	471.30	40621660.71	4110487.23	124.69
SJ06-29	330	-60	458.16	40621583.03	4110243.75	102.86
SJ06-30	320	-58	377.90	40621644.76	4110593.89	114.56
SJ06-31	320	-45	391.60	40621644.76	4110593.89	114.56
SJ06-32	330	-45	306.13	40621478.99	4110381.03	130.59
SJ06-33	330	-60	405.09	40621560.69	4110434.07	131.54
SJ06-34	333	-60	418.00	40621620.12	4110428.54	134.05
SJ06-35	335	-48	390.22	40621567.73	4110451.51	134.05
SJ06-40	330	-50	200.00	40621879.99	4111244.63	123.00
SZK0-1	310	-45	130.03	40621182.78	4110678.33	127.63
SZK0-2	310	-45	153.67	40621278.81	4110623.32	119.31
SZK0-3	310	-45	170.05	40621372.08	4110543.44	134.66
SZK48-1	310	-45	130.19	40621623.51	4110791.68	97.85
SZK48-2	310	-45	183.45	40621679.78	4110756.09	88.12
SZK56-1	312	-43	132.66	40621676.07	4110841.20	85.93
SZK56-2	310	-45	180.35	40621739.85	4110783.72	84.62
SZK7-1	312	-44	182.12	40621233.08	4110583.98	114.26
SZK7-2	308	-46	160.35	40621305.66	4110527.25	131.90
SZK8-1	310	-45	50.35	40621293.79	4110687.78	133.37
SZK8-2	310	-45	200.04	40621444.00	4110561.83	131.59
SZK8-3	310	-55	193.38	40621258.13	4110714.93	141.58

Hole ID	Azimuth	Dip	Length (m)	Easting (m) <sup>1</sup>	Northing (m) <sup>1</sup>	Elevation (m) *
ZK1	0	-90	409.00	40621597.36	4110710.46	91.98
ZK11	0	-90	403.64	40621515.51	4110799.13	115.40
ZK13	0	-90	507.76	40621375.41	4110575.95	139.62
ZK150	310	-75	201.48	40621436.75	4110489.61	135.24
ZK151	310	-75	200.39	40621380.12	4110537.03	133.91
ZK16	0	-90	470.62	40621500.13	4110531.67	132.33
ZK17	0	-90	375.00	40621675.44	4110667.46	113.22
ZK18	0	-90	250.60	40621303.65	4110591.41	129.34
ZK19	0	-90	253.74	40621431.17	4110492.83	133.79
ZK2	0	-90	328.50	40621762.65	4110765.92	83.55
ZK21	0	-90	80.53	40621182.98	4110699.06	130.20
ZK23	0	-90	80.20	40621364.79	4110790.45	129.80
ZK26	0	-90	84.10	40621340.58	4110678.85	134.90
ZK27	0	-90	64.25	40621454.92	4110708.06	106.81
ZK28	0	-90	50.81	40621584.21	4110820.05	104.00
ZK3	0	-90	292.20	40621829.89	4110873.44	81.09
ZK33	0	-90	70.52	40621354.78	4110419.65	124.10
ZK35	0	-90	79.61	40621570.58	4110480.24	133.60
ZK4	0	-90	362.30	40621667.46	4110762.32	88.65
ZK40	0	-90	70.08	40621119.99	4110746.86	115.00
ZK41	0	-90	80.76	40621200.39	4110796.86	133.40
ZK42	0	-90	88.01	40621257.19	4110853.76	139.80
ZK5	0	-90	315.00	40621817.05	4110670.91	82.44
ZK51	310	-75	200.04	40621424.52	4110581.88	132.88
ZK52	310	-75	200.20	40621460.85	4110547.15	133.08
ZK6	0	-90	440.00	40621602.34	4110569.71	122.76
ZK7	0	-90	616.90	40621281.18	4110100.95	82.71
ZK8	0	-90	510.70	40621174.87	4110538.15	109.96
ZK9	0	-90	530.00	40621299.27	4110618.40	131.58
CK0-1	130	-70	125.70	40621181.70	4110705.28	129.72
CK12-1	130	-58	135.20	40621353.98	4110678.17	133.23
CK16-1	130	-40	146.90	40621380.65	4110693.37	128.89
CK24-1	130	-15	82.00	40621398.44	4110750.58	123.83
CK28-0	130	-30	58.00	40621419.92	4110779.60	122.81
CK28-1	130	-30	62.00	40621451.87	4110751.06	87.34
CK3-1	130	-40	85.00	40621192.15	4110658.49	121.18
CK32-1	130	-23	126.00	40621456.81	4110787.85	120.73
CK36-1	130	-15	111.20	40621567.45	4110732.39	95.84
CK40-1	130	-19	113.00	40621530.19	4110802.69	112.01
CK4-1	125	-65	111.90	40621200.24	4110727.20	135.40
CK4-2	130	-57	25.00	40621252.23	4110674.96	137.40
CK7-1	135	-15	57.50	40621177.76	4110631.82	114.21
CK8-1	130	-60	134.80	40621321.99	4110664.28	132.65
TC0-1	130	5	45.00	40621146.83	4110732.25	128.62
TC0-2	136	4	66.30	40621264.60	4110640.74	123.52
TC0-3	135	3	113.20	40621314.57	4110620.11	128.65
TC11-1	135	10	220.00	40621153.31	4110612.66	109.68
TC12-1	130	-5	105.20	40621272.15	4110747.49	144.95

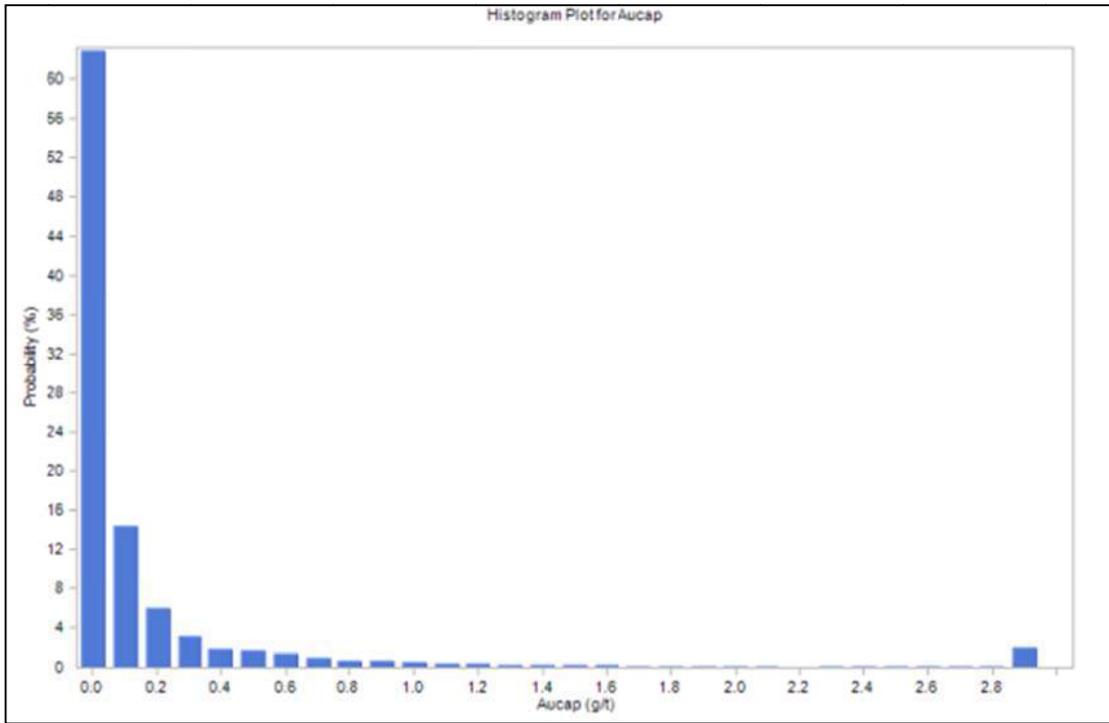
Hole ID	Azimuth	Dip	Length (m)	Easting (m) <sup>1</sup>	Northing (m) <sup>1</sup>	Elevation (m) *
TC12-2	135	8	23.00	40621439.61	4110607.21	124.17
TC15-1	135	23	131.00	40621198.53	4110536.30	105.72
TC16-1	130	0	181.00	40621245.50	4110809.13	139.86
TC16-2	126	9	24.40	40621474.87	4110617.59	118.25
TC19-1	130	14	119.00	40621176.40	4110515.26	105.42
TC20-1	130	-12	33.00	40621350.11	4110760.26	136.39
TC20-2	130	8	77.30	40621473.24	4110656.19	113.25
TC24-1	129	-2	25.50	40621365.13	4110786.42	130.78
TC24-2	135	0	127.50	40621477.19	4110690.91	106.64
TC28-1	130	-5	14.00	40621408.56	4110787.76	124.44
TC3-1	132	2	44.00	40621131.19	4110699.93	124.68
TC3-2	151	7	137.50	40621303.73	4110581.27	130.54
TC32-1	130	5	25.00	40621437.12	4110804.42	120.09
TC32-2	130	-3	57.50	40621539.06	4110716.98	97.63
TC36-1	130	9	21.50	40621481.98	4110804.35	116.72
TC36-2	130	9	33.00	40621590.94	4110713.45	95.67
TC40-1	130	9	18.40	40621517.28	4110815.81	112.23
TC40-2	130	-4	21.50	40621611.21	4110730.56	92.51
TC4-1	130	0	29.00	40621178.90	4110746.15	136.84
TC4-2	130	17	55.00	40621331.72	4110616.89	132.79
TC4-3	154	5	71.00	40621387.36	4110581.03	131.44
TC44-1	138	13	15.00	40621554.22	4110825.84	109.79
TC7-1	130	-6	27.00	40621136.29	4110664.11	118.96
TC7-2	135	-6	174.30	40621219.83	4110598.34	118.23
TC8-1	110	5	131.00	40621193.48	4110762.11	136.22
TC8-2	130	-12	44.00	40621290.40	4110694.05	135.28
TC8-3	128	0	44.20	40621407.75	4110595.15	132.30
1_CM0	300	0	474.90	40621557.34	4110463.79	9.00
1_CM0_3B	301	0	420.05	40621556.85	4110464.26	9.00
1_CM10S_3B	312	0	13.72	40621742.44	4110826.17	9.00
1_CM2N_3B	321	0	191.26	40621311.88	4110689.05	9.00
1_CM3N_3B	320	0	13.38	40621350.83	4110739.22	9.00
1_CM4N_3B	326	0	13.72	40621370.55	4110761.50	9.00
1_CM4S_3B	340	0	14.02	40621538.53	4110632.78	9.00
1_CM5S_3B	317	0	19.35	40621560.81	4110657.82	9.00
1_CM6N_3B	321	0	240.39	40621430.38	4110825.87	9.00
1_CM6S_3B	324	0	161.83	40621580.07	4110675.33	9.00
1_CM7S_3B	316	0	272.04	40621617.17	4110689.48	9.00
1_CM8S_3B	316	0	11.28	40621631.56	4110714.65	9.00
1_CM9_3B	316	0	230.00	40621649.34	4110748.65	9.00
1_YM1N_3B	46	0	510.51	40621450.04	4110536.36	9.00
1_YM2N	15	0	331.62	40621285.11	4110654.36	9.00
1_YM2N_3B	47	0	53.60	40621426.57	4110554.79	9.00
1_YM3N_3B	44	0	332.00	40621282.88	4110657.90	9.00
1-CM1	315	0	230.00	40621650.47	4110747.97	9.00
2_CM0	300	0	373.00	40621557.34	4110463.79	-40.00
2_CM0_3B	301	0	373.00	40621557.09	4110464.43	-40.00
2_CM1_1_3B	307	0	28.00	40621490.86	4110543.81	-40.00

Hole ID	Azimuth	Dip	Length (m)	Easting (m) <sup>1</sup>	Northing (m) <sup>1</sup>	Elevation (m) *
2_CM1_2_3B	320	0	10.62	40621448.59	4110582.92	-40.00
2_CM1_3_3B	319	0	37.00	40621313.65	4110655.51	-40.00
2_CM10_1_3B	320	0	15.00	40621678.40	4110760.03	-40.00
2_CM11_1_3B	317	0	17.10	40621696.75	4110784.59	-40.00
2_CM2_2_3B	324	0	8.00	40621470.48	4110602.70	-40.00
2_CM2_3_3B	315	0	21.24	40621327.53	4110680.91	-40.00
2_CM3_1_3B	310	0	180.96	40621544.52	4110617.43	-40.00
2_CM3_2_3B	316	0	10.00	40621496.14	4110627.00	-40.00
2_CM3_3_3B	322	0	33.45	40621359.65	4110686.82	-40.00
2_CM4_1_3B	317	0	16.00	40621561.61	4110638.45	-40.00
2_CM4_2_3B	342	0	9.00	40621517.04	4110647.24	-40.00
2_CM4_3_3B	320	0	20.73	40621369.26	4110723.34	-40.00
2_CM5_1_3B	309	0	14.56	40621579.49	4110663.14	-40.00
2_CM5_2_3B	319	0	21.00	40621531.29	4110660.91	-40.00
2_CM6_1_3B	311	0	15.00	40621588.67	4110675.26	-40.00
2_CM6_2_3B	332	0	11.00	40621562.26	4110687.83	-40.00
2_CM7_1_3B	313	0	12.32	40621600.94	4110690.22	-40.00
2_CM7_2_3B	323	0	10.44	40621604.93	4110731.27	-40.00
2_CM8_1_3B	309	0	11.00	40621635.58	4110717.71	-40.00
2_CM9_1_3B	319	0	34.00	40621657.32	4110735.69	-40.00
2_CM9_2_3B	297	0	9.00	40621646.58	4110776.64	-40.00
2_YM1_3B	357	0	400.00	40621469.53	4110513.10	-40.00
2_YM2_3B	358	0	365.00	40621418.15	4110540.15	-40.00
2_YM3_3B	5	0	126.00	40621287.79	4110632.08	-40.00
3_CM0_3B	297	0	262.00	40621558.50	4110463.14	-80.00
3_CM1N_3B	311	0	29.28	40621490.55	4110591.85	-80.00
3_CM1S_3B	309	0	23.33	40621539.41	4110553.86	-80.00
3_CM2N_3B	320	0	24.00	40621505.17	4110616.60	-80.00
3_CM2S_3B	316	0	22.75	40621553.85	4110576.25	-80.00
3_CM3N_3B	319	0	10.00	40621519.69	4110642.95	-80.00
3_CM3S_3B	315	0	16.61	40621575.23	4110604.65	-80.00
3_CM4N_3B	320	0	8.04	40621560.42	4110693.90	-80.00
3_CM4S_3B	316	0	61.00	40621611.15	4110657.05	-80.00
3_CM5N_3B	314	0	15.00	40621616.42	4110724.63	-80.00
3_CM5S_3B	315	0	12.77	40621653.35	4110692.59	-80.00
3_CM6N_3B	318	0	8.00	40621207.97	4110339.16	-80.00
3_CM6S_3B	309	0	59.00	40621690.41	4110740.80	-80.00
3_CM7N_3B	316	0	12.97	40621691.29	4110810.09	-80.00
3_YM1N_3B	8	0	360.00	40621485.18	4110512.47	-80.00
3_YM1Nn_3B	8	0	360.00	40621484.36	4110513.25	-80.00
3_YM1S_3B	217	0	116.00	40621481.18	4110514.83	-80.00
3_YM1Sn_3B	217	0	116.00	40621480.36	4110515.60	-80.00
3_YM2N_3B	8	0	415.00	40621432.84	4110554.48	-80.00
3_YM2Nn_3B	8	0	415.00	40621432.02	4110555.26	-80.00
3_YM2S_3B	222	0	311.00	40621428.30	4110556.66	-80.00
3_YM2Sn_3B	222	0	311.00	40621427.48	4110557.44	-80.00
4_CM0_3B	309	0	181.66	40621556.34	4110463.76	-120.00
4_CM1_3B	310	0	86.66	40621551.83	4110543.68	-120.00

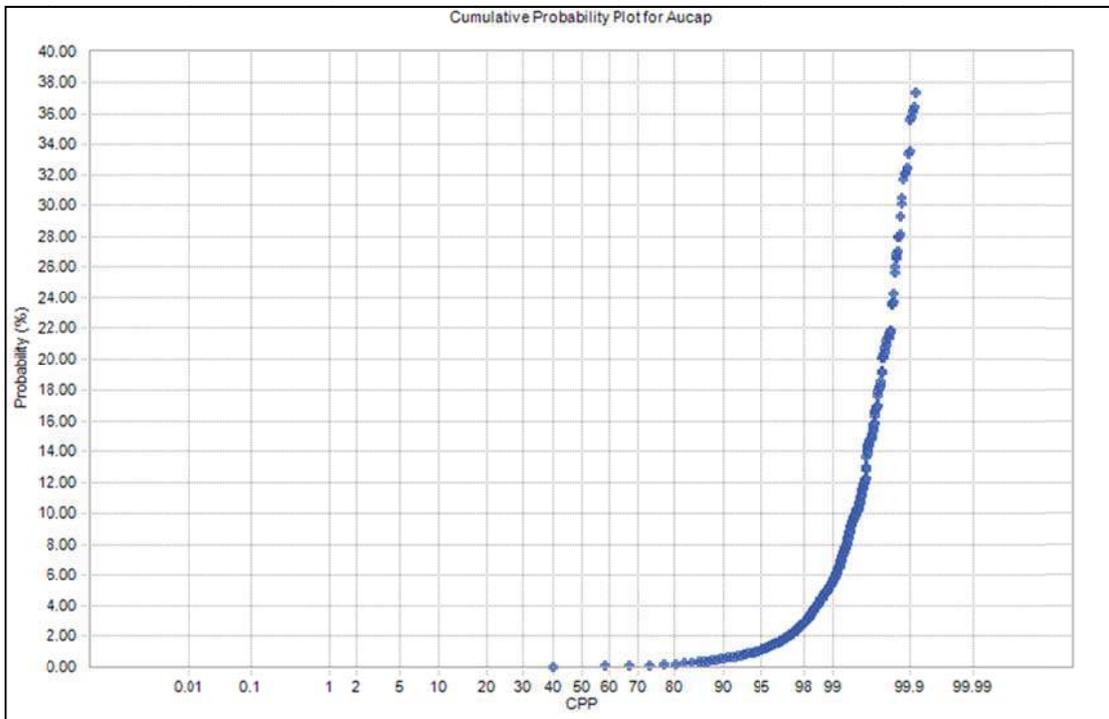
Hole ID	Azimuth	Dip	Length (m)	Easting (m) <sup>1</sup>	Northing (m) <sup>1</sup>	Elevation (m) *
4_CM-1N_3B	321	0	44.81	40621425.43	4110475.49	-120.00
4_CM-1S_3B	316	0	48.40	40621490.71	4110429.34	-120.00
4_CM2N_3B	324	0	19.04	40621517.00	4110606.57	-120.00
4_CM2S_3B	318	0	8.50	40621561.87	4110573.31	-120.00
4_CM3N_3B	314	0	17.88	40621541.87	4110625.11	-120.00
4_CM3S_3B	316	0	20.40	40621589.65	4110585.52	-120.00
4_CM4N_3B	320	0	21.30	40621590.87	4110663.90	-120.00
4_CM4S_3B	316	0	23.23	40621633.63	4110624.03	-120.00
4_YM1N_3B	41	0	473.00	40621496.88	4110508.92	-120.00
4_YM1Nn_3B	41	0	473.00	40621496.26	4110509.50	-120.00
4_YM1S_3B	223	0	78.29	40621496.88	4110508.92	-120.00
4_YM1Sn_3B	223	0	77.70	40621496.26	4110509.50	-120.00
4_YM2N_3B	49	0	250.80	40621447.43	4110548.17	-120.00
4_YM2Nn_3B	49	0	250.80	40621446.81	4110548.76	-120.00
4_YM2S_3B	229	0	85.43	40621447.43	4110548.17	-120.00
4_YM2Sn_3B	229	0	86.16	40621446.81	4110548.76	-120.00
KDZK1	310	-80	120.60	40621472.62	4110529.46	-120.00
KDZK2	310	-80	120.30	40621523.12	4110493.48	-120.00
L2A	301	0	357.50	40621556.34	4110463.76	-40.00
L3A	303	0	252.50	40621556.34	4110463.76	-80.00
L3B1	314	0	60.00	40621609.71	4110659.61	-80.00
L3B2	328	0	117.50	40621558.65	4110692.02	-80.00
L4A	310	0	180.00	40621556.34	4110463.76	-120.00
L4B	310	0	100.00	40621551.83	4110543.68	-120.00
UL106-A	314	-30	105.00	40621681.30	4110753.95	9.00
UL106-C	320	-60	99.70	40621511.33	4110621.47	9.00
UL106-D	325	-30	100.36	40621497.62	4110612.03	9.00
UL106-E	323	-30	100.13	40621483.45	4110585.56	9.00
UL206-A	330	-10	65.28	40621501.79	4110575.13	-40.00
UL206-B	150	-30	63.24	40621502.82	4110574.16	-40.00
UL206-C	150	-10	83.64	40621578.40	4110684.64	-40.00
UL206-D	330	-30	65.28	40621676.08	4110760.79	-40.00
UL206-E	330	-30	60.52	40621515.42	4110650.62	-40.00
UL206-F	330	-60	75.10	40621357.05	4110689.66	-40.00
UL206-G	140	-10	43.49	40621550.48	4110649.73	-40.00

Note: \*1980 Xi An Coordinate System

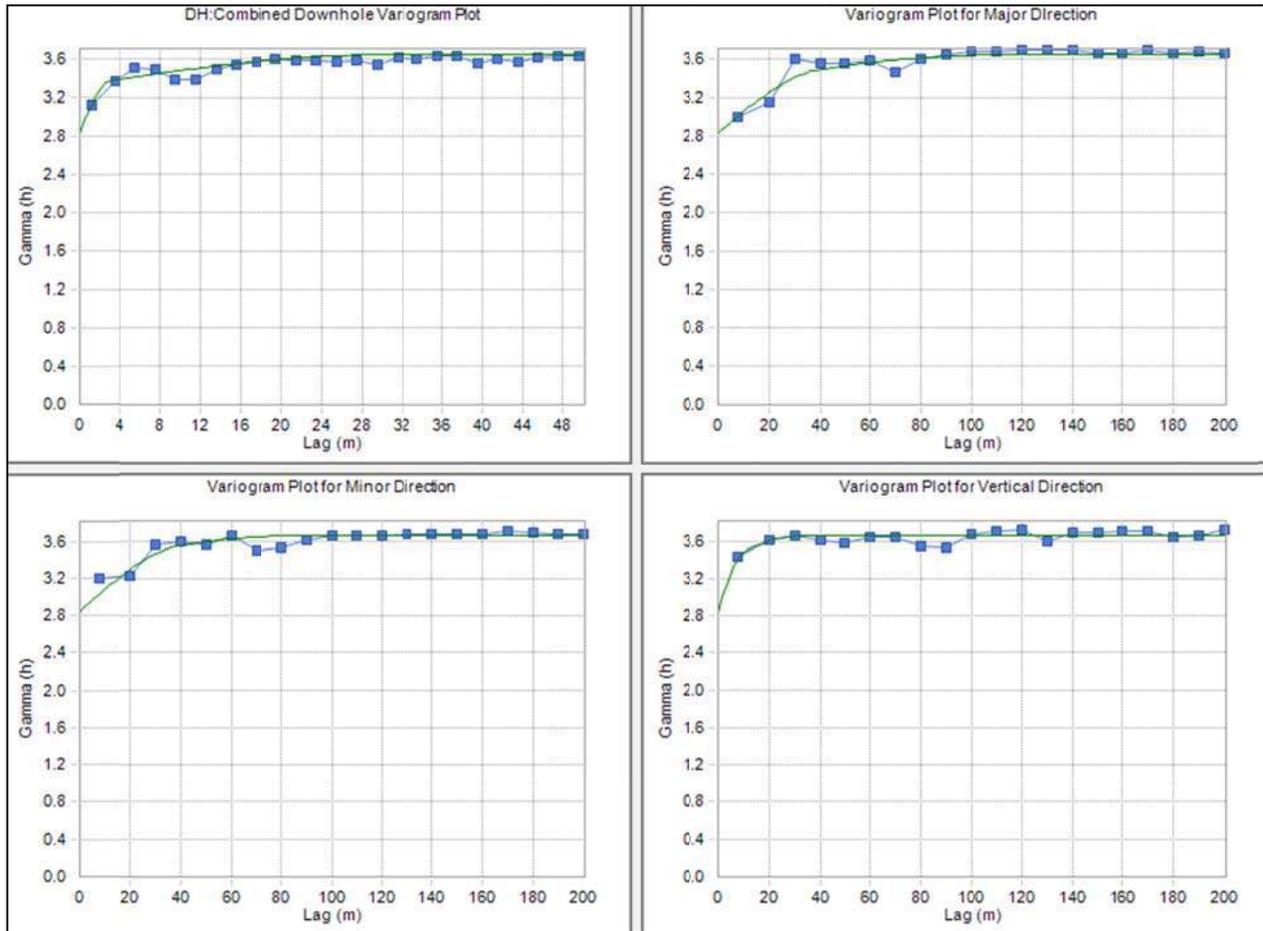
## Appendix C: Basic Statistic and Variogram



Aucap Probability Histogram



Aucap Cumulative Frequency Curve



Variogram

## **Appendix D: SRK Independent Sampling and Assay**

**Coarse Duplicates' Assay Result**

<b>Samples taken on Jan 30 - 31 2012 by SRK</b>			
<b>Coarse duplicate</b>			
<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	STC15-1 H94	3.830	2.210
SJG003	STC3-1 H37	0.446	0.188
SJG004	STC0-1 H35	0.294	0.156
SJG005	STC0-1 H34	0.210	0.168
SJG006	STC0-1 H39	0.071	0.047
SJG007	STC4-1 H17	0.922	0.809
SJG008	STC4-1 H16	3.380	4.070
SJG009	STC3-1 H36	0.290	0.189
SJG010	SCK32-1 H129	0.267	0.522
SJG011	SCK32-1 H128	0.271	0.154
SJG012	STC7-1 H175	0.271	0.192
SJG013	STC7-1 H174	0.292	0.083
SJG014	STC7-1 H173	0.348	0.359
SJG015	STC7-1 H171	0.622	0.258
SJG016	STC7-1 H170	0.323	0.297
SJG017	STC11-1 H71	0.233	0.177
SJG018	STC11-1 H75	0.207	0.168
SJG019	STC7-1 H12	0.640	0.564
SJG020	STC7-1 H195	0.295	0.234
SJG021	STC4-1 H07	0.919	0.822
SJG022	STC4-1 H08	0.270	0.242
SJG023	STC4-1 H09	2.460	1.855
SJG024	STC4-1 H10	2.580	2.800
SJG025	STC4-1 H11	0.849	1.635
SJG026	STC11-1 H76	0.237	0.167
SJG027	STC11-1 H80	0.407	0.446
SJG028	STC11-1 H81	0.614	0.546
SJG029	STC20-2 H13	0.204	0.190
SJG030	SCK8-1 H122	0.420	<0.005
SJG031	SCK8-1 H43	0.423	0.446
SJG032	SCK8-1 H37	0.304	0.186
SJG033	SCK12-1 H105	0.238	0.352
SJG034	SCK7-1 H01	0.564	0.552
SJG035	SCK7-1 H02	0.326	0.268
SJG036	SCK7-1 H03	0.422	0.366
SJG037	SCK7-1 H05	0.236	2.640
SJG038	SCK16-1 H279	0.949	0.499
SJG039	SCK28-1 H7	0.597	0.276
SJG040	SCK28-1 H8	2.510	2.840
SJG041	SCK28-1 H9	0.289	0.593
SJG042	SCK12-1 H77	0.430	0.370
SJG043	SCK12-1 H78	0.946	1.795

<b>Samples taken on Jan 30 - 31 2012 by SRK</b>			
<b>Coarse duplicate</b>			
<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG044	SCK16-1 H246	1.430	4.090
SJG045	SCK16-1 H261	0.815	0.633
SJG046	SCK16-1 H276	0.700	1.745
SJG047	SCK16-1 H277	1.650	0.940
SJG048	SCK16-1 H239	0.666	1.155
SJG049	SCK16-1 H240	1.090	1.105
SJG050	SCK8-1 H111	4.480	1.330
SJG051	SCK8-1 H113	0.342	0.256
SJG052	SCK8-1 H58	0.973	0.334
SJG053	SCK8-1 H59	0.764	0.944
SJG054	SCK8-1 H61	0.630	0.178
SJG055	SCK8-1 H63	0.347	0.853
SJG056	SCK32-1 H120	0.981	0.916
SJG057	SCK32-1 H119	0.770	0.801
SJG058	SCK32-1 H118	4.420	2.180
SJG059	SCK32-1 H117	0.685	1.230
SJG060	SCK28-1 H30	1.660	1.705
SJG061	SCK16-1 H241	0.335	0.137
SJG062	SCK16-1 H247	3.040	1.130
SJG063	SCK16-1 H248	1.130	1.535
SJG064	SCK16-1 H250	20.000	7.080
SJG065	SCK16-1 H251	0.360	0.312
SJG066	SCK8-1 H107	0.684	0.560
SJG067	SCK28-1 H5	1.670	1.260
SJG068	SCK16-1 H257	7.300	3.760
SJG069	SCK16-1 H258	5.560	2.960
SJG070	SCK16-1 H260	1.560	1.385
SJG071	SCK28-1 H37	0.534	0.283
SJG072	SCK28-1 H38	0.337	0.325
SJG073	SCK28-1 H40	0.739	0.487
SJG074	SCK28-1 H41	0.317	0.115
SJG075	SCK8-1 H13	0.371	0.411
SJG076	SCK12-1 H68	0.572	1.205
SJG077	SCK8-1 H52	0.406	0.448
SJG078	SCK8-1 H53	0.531	0.349
SJG079	SCK16-1 H253	0.460	0.274
SJG080	SCK16-1 H254	0.387	0.309
SJG081	SCK12-1 H17	0.687	0.609
SJG082	SCK16-1 H267	49.200	22.900
SJG083	SCK28-1 H29	0.734	0.187
SJG084	SCK0-1 H23	0.230	0.698
SJG085	STC4-2 H33	0.258	0.329
SJG086	STC4-2 H35	0.307	0.238
SJG087	SCK0-1 H122	0.306	0.253

<b>Samples taken on Jan 30 - 31 2012 by SRK</b>			
<b>Coarse duplicate</b>			
<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG088	STC4-2 H7	0.597	0.333
SJG089	STC4-2 H8	0.408	0.193
SJG090	STC4-2 H10	0.333	0.078
SJG091	SCK3-1 H18	0.226	0.076
SJG092	SCK3-1 H33	0.833	0.525
SJG093	SCK3-1 H25	0.467	0.160
SJG094	SCK3-1 H28	0.575	0.690
SJG095	SCK4-1 H11	1.040	0.749
SJG096	SCK4-1 H12	2.710	2.350
SJG097	SCK4-1 H19	0.458	0.211
SJG098	SCK4-1 H18	0.725	0.508
SJG099	SCK4-1 H17	0.406	0.370
SJG100	STC24-2 H93	0.562	0.517
SJG101	STC24-2 H94	0.243	0.173
SJG102	STC24-2 H95	0.255	0.195
SJG103	SCK3-1 H66	0.313	0.243
SJG104	SCK3-1 H68	0.319	0.176
SJG105	STC24-2 H85	0.411	0.483
SJG106	STC4-2 H45	0.316	0.194
SJG107	SCK32-1 H25	0.357	0.431
SJG108	SCK4-1 H102	0.290	0.123
SJG109	SCK32-1 H19	1.060	1.235
SJG110	SCK0-1 H54	0.353	0.133
SJG111	STC8-1 H115	0.319	0.125
SJG112	STC8-1 H118	1.700	1.240
SJG113	SCK32-1 H21	0.703	1.500
SJG114	SCK32-1 H24	0.856	0.962
SJG115	SCK32-1 H8	1.060	1.025
SJG116	SCK4-2 H8	0.594	0.504
SJG117	SCK4-2 H19	0.334	0.275
SJG118	SCK4-2 H22	0.988	0.796
SJG119	SCK4-2 H24	0.800	0.961
SJG120	SCK4-2 H20	2.860	4.060
SJG121	SCK4-2 H1	0.395	0.398
SJG122	SCK4-2 H8	0.704	0.409
SJG123	SCK4-1 H91	0.731	0.473
SJG124	SCK4-1 H97	0.385	0.388
SJG125	SCK4-1 H95	0.777	0.723
SJG126	SCK4-1 H108	1.050	1.030
SJG127	SCK4-1 H107	0.575	0.536
SJG128	SCK4-1 H111	0.464	0.238
SJG129	SCK36-1 H21	0.371	0.276
SJG130	SCK32-1 H19	0.385	0.272
SJG131	SCK32-1 H25	0.531	0.769

<b>Samples taken on Jan 30 - 31 2012 by SRK</b>			
<b>Coarse duplicate</b>			
<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG132	SCK32-1 H28	0.683	0.525
SJG133	SCK32-1 H21	0.785	0.672
SJG134	SCK32-1 H27	0.353	0.199
SJG135	SCK32-1 H52	0.410	0.162
SJG136	SCK32-1 H53	2.820	2.190
SJG137	SCK32-1 H54	0.400	0.288
SJG138	SCK7-1 H2	0.422	0.392
SJG139	SCK36-1 H3	0.566	0.518
SJG140	SCK36-1 H4	1.080	1.125
SJG141	SCK36-1 H2	0.806	0.847
SJG142	SCK8-1 H9	0.416	0.297
SJG143	SCK8-1 H77	0.454	0.390
SJG144	SCK8-1 H10	0.474	0.573
SJG145	SCK8-1 H75	3.630	3.230
SJG146	SCK8-1 H11	0.453	0.405
SJG147	SCK36-1 H1	0.139	0.155
SJG148	SCK36-1 H2	0.776	1.390
SJG149	SCK36-1 H3	0.321	1.035
SJG150	SCK36-1 H4	1.360	1.900

**Pulp Duplicates' Assay Result**

<b>Samples taken on Jan 30 - 31 2012 by SRK</b>			
<b>Pulp duplicate</b>			
<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	STC15-1 H94	3.830	2.210
SJG003	STC3-1 H37	0.446	0.188
SJG004	STC0-1 H35	0.294	0.156
SJG005	STC0-1 H34	0.210	0.168
SJG006	STC0-1 H39	0.071	0.047
SJG007	STC4-1 H17	0.922	0.809
SJG008	STC4-1 H16	3.380	4.070
SJG009	STC3-1 H36	0.290	0.189
SJG010	SCK32-1 H129	0.267	0.522
SJG011	SCK32-1 H128	0.271	0.154
SJG012	STC7-1 H175	0.271	0.192
SJG013	STC7-1 H174	0.292	0.083
SJG014	STC7-1 H173	0.348	0.359
SJG015	STC7-1 H171	0.622	0.258
SJG016	STC7-1 H170	0.323	0.297
SJG017	STC11-1 H71	0.233	0.177
SJG018	STC11-1 H75	0.207	0.168
SJG019	STC7-1 H12	0.640	0.564

<b>Samples taken on Jan 30 - 31 2012 by SRK</b>			
<b>Pulp duplicate</b>			
<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG020	STC7-1 H195	0.295	0.234
SJG021	STC4-1 H07	0.919	0.822
SJG022	STC4-1 H08	0.270	0.242
SJG023	STC4-1 H09	2.460	1.855
SJG024	STC4-1 H10	2.580	2.800
SJG025	STC4-1 H11	0.849	1.635
SJG026	STC11-1 H76	0.237	0.167
SJG027	STC11-1 H80	0.407	0.446
SJG028	STC11-1 H81	0.614	0.546
SJG029	STC20-2 H13	0.204	0.190
SJG030	SCK8-1 H122	0.420	<0.005
SJG031	SCK8-1 H43	0.423	0.446
SJG032	SCK8-1 H37	0.304	0.186
SJG033	SCK12-1 H105	0.238	0.352
SJG034	SCK7-1 H01	0.564	0.552
SJG035	SCK7-1 H02	0.326	0.268
SJG036	SCK7-1 H03	0.422	0.366
SJG037	SCK7-1 H05	0.236	2.640
SJG038	SCK16-1 H279	0.949	0.499
SJG039	SCK28-1 H7	0.597	0.276
SJG040	SCK28-1 H8	2.510	2.840
SJG041	SCK28-1 H9	0.289	0.593
SJG042	SCK12-1 H77	0.430	0.370
SJG043	SCK12-1 H78	0.946	1.795
SJG044	SCK16-1 H246	1.430	4.090
SJG045	SCK16-1 H261	0.815	0.633
SJG046	SCK16-1 H276	0.700	1.745
SJG047	SCK16-1 H277	1.650	0.940
SJG048	SCK16-1 H239	0.666	1.155
SJG049	SCK16-1 H240	1.090	1.105
SJG050	SCK8-1 H111	4.480	1.330
SJG051	SCK8-1 H113	0.342	0.256
SJG052	SCK8-1 H58	0.973	0.334
SJG053	SCK8-1 H59	0.764	0.944
SJG054	SCK8-1 H61	0.630	0.178
SJG055	SCK8-1 H63	0.347	0.853
SJG056	SCK32-1 H120	0.981	0.916
SJG057	SCK32-1 H119	0.770	0.801
SJG058	SCK32-1 H118	4.420	2.180
SJG059	SCK32-1 H117	0.685	1.230
SJG060	SCK28-1 H30	1.660	1.705
SJG061	SCK16-1 H241	0.335	0.137
SJG062	SCK16-1 H247	3.040	1.130
SJG063	SCK16-1 H248	1.130	1.535

<b>Samples taken on Jan 30 - 31 2012 by SRK</b>			
<b>Pulp duplicate</b>			
<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG064	SCK16-1 H250	20.000	7.080
SJG065	SCK16-1 H251	0.360	0.312
SJG066	SCK8-1 H107	0.684	0.560
SJG067	SCK28-1 H5	1.670	1.260
SJG068	SCK16-1 H257	7.300	3.760
SJG069	SCK16-1 H258	5.560	2.960
SJG070	SCK16-1 H260	1.560	1.385
SJG071	SCK28-1 H37	0.534	0.283
SJG072	SCK28-1 H38	0.337	0.325
SJG073	SCK28-1 H40	0.739	0.487
SJG074	SCK28-1 H41	0.317	0.115
SJG075	SCK8-1 H13	0.371	0.411
SJG076	SCK12-1 H68	0.572	1.205
SJG077	SCK8-1 H52	0.406	0.448
SJG078	SCK8-1 H53	0.531	0.349
SJG079	SCK16-1 H253	0.460	0.274
SJG080	SCK16-1 H254	0.387	0.309
SJG081	SCK12-1 H17	0.687	0.609
SJG082	SCK16-1 H267	49.200	22.900
SJG083	SCK28-1 H29	0.734	0.187
SJG084	SCK0-1 H23	0.230	0.698
SJG085	STC4-2 H33	0.258	0.329
SJG086	STC4-2 H35	0.307	0.238
SJG087	SCK0-1 H122	0.306	0.253
SJG088	STC4-2 H7	0.597	0.333
SJG089	STC4-2 H8	0.408	0.193
SJG090	STC4-2 H10	0.333	0.078
SJG091	SCK3-1 H18	0.226	0.076
SJG092	SCK3-1 H33	0.833	0.525
SJG093	SCK3-1 H25	0.467	0.160
SJG094	SCK3-1 H28	0.575	0.690
SJG095	SCK4-1 H11	1.040	0.749
SJG096	SCK4-1 H12	2.710	2.350
SJG097	SCK4-1 H19	0.458	0.211
SJG098	SCK4-1 H18	0.725	0.508
SJG099	SCK4-1 H17	0.406	0.370
SJG100	STC24-2 H93	0.562	0.517
SJG101	STC24-2 H94	0.243	0.173
SJG102	STC24-2 H95	0.255	0.195
SJG103	SCK3-1 H66	0.313	0.243
SJG104	SCK3-1 H68	0.319	0.176
SJG105	STC24-2 H85	0.411	0.483
SJG106	STC4-2 H45	0.316	0.194
SJG107	SCK32-1 H25	0.357	0.431

<b>Samples taken on Jan 30 - 31 2012 by SRK</b>			
<b>Pulp duplicate</b>			
<b>Number</b>	<b>Original ID</b>	<b>Original-Au (g/t)</b>	<b>ALS-Au (g/t)</b>
SJG108	SCK4-1 H102	0.290	0.123
SJG109	SCK32-1 H19	1.060	1.235
SJG110	SCK0-1 H54	0.353	0.133
SJG111	STC8-1 H115	0.319	0.125
SJG112	STC8-1 H118	1.700	1.240
SJG113	SCK32-1 H21	0.703	1.500
SJG114	SCK32-1 H24	0.856	0.962
SJG115	SCK32-1 H8	1.060	1.025
SJG116	SCK4-2 H8	0.594	0.504
SJG117	SCK4-2 H19	0.334	0.275
SJG118	SCK4-2 H22	0.988	0.796
SJG119	SCK4-2 H24	0.800	0.961
SJG120	SCK4-2 H20	2.860	4.060
SJG121	SCK4-2 H1	0.395	0.398
SJG122	SCK4-2 H8	0.704	0.409
SJG123	SCK4-1 H91	0.731	0.473
SJG124	SCK4-1 H97	0.385	0.388
SJG125	SCK4-1 H95	0.777	0.723
SJG126	SCK4-1 H108	1.050	1.030
SJG127	SCK4-1 H107	0.575	0.536
SJG128	SCK4-1 H111	0.464	0.238
SJG129	SCK36-1 H21	0.371	0.276
SJG130	SCK32-1 H19	0.385	0.272
SJG131	SCK32-1 H25	0.531	0.769
SJG132	SCK32-1 H28	0.683	0.525
SJG133	SCK32-1 H21	0.785	0.672
SJG134	SCK32-1 H27	0.353	0.199
SJG135	SCK32-1 H52	0.410	0.162
SJG136	SCK32-1 H53	2.820	2.190
SJG137	SCK32-1 H54	0.400	0.288
SJG138	SCK7-1 H2	0.422	0.392
SJG139	SCK36-1 H3	0.566	0.518
SJG140	SCK36-1 H4	1.080	1.125
SJG141	SCK36-1 H2	0.806	0.847
SJG142	SCK8-1 H9	0.416	0.297
SJG143	SCK8-1 H77	0.454	0.390
SJG144	SCK8-1 H10	0.474	0.573
SJG145	SCK8-1 H75	3.630	3.230
SJG146	SCK8-1 H11	0.453	0.405
SJG147	SCK36-1 H1	0.139	0.155
SJG148	SCK36-1 H2	0.776	1.390
SJG149	SCK36-1 H3	0.321	1.035
SJG150	SCK36-1 H4	1.360	1.900

## **Appendix E: Year End Pit of First Three Years of Scenario 1**



Figure 1: First Year End (2013)

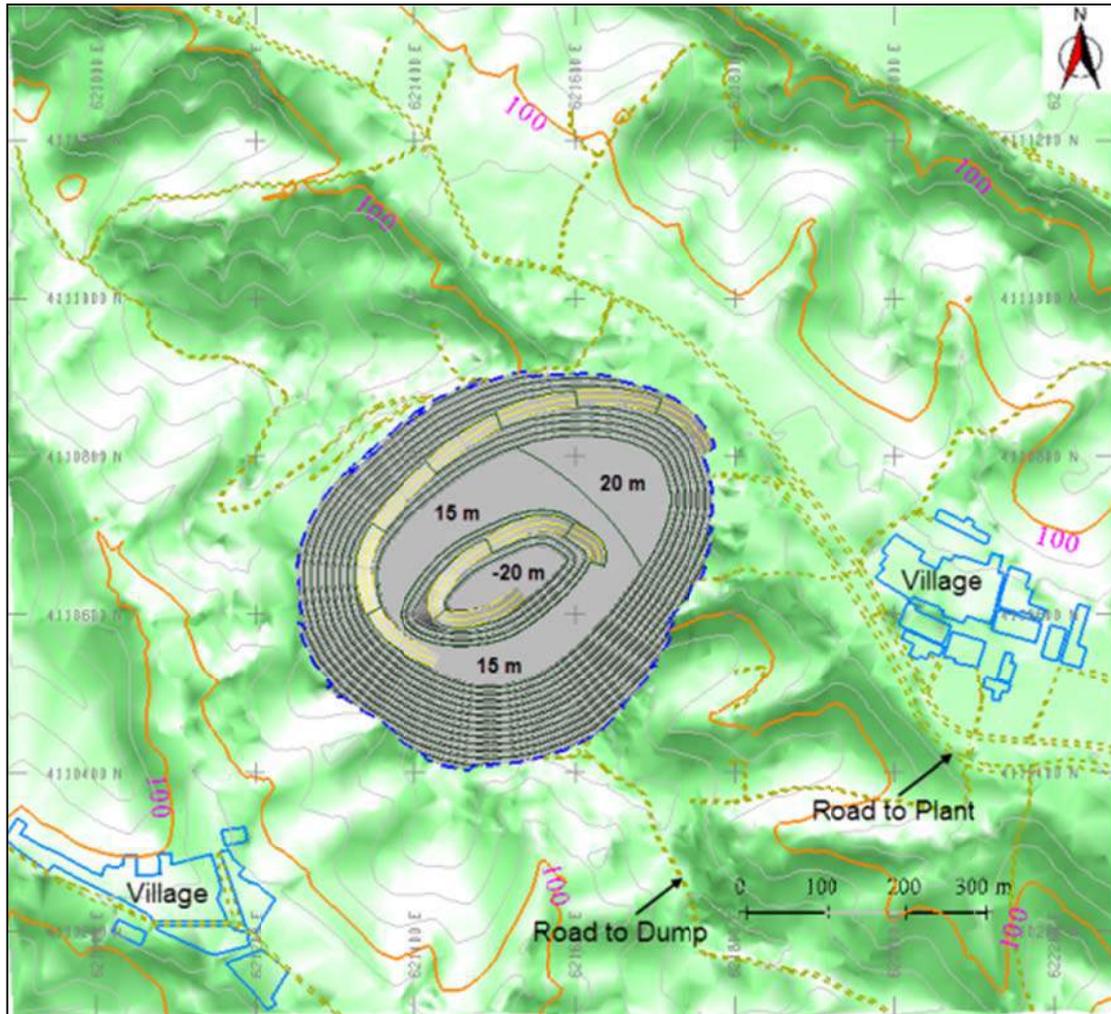


Figure 2: Second Year End (2014)

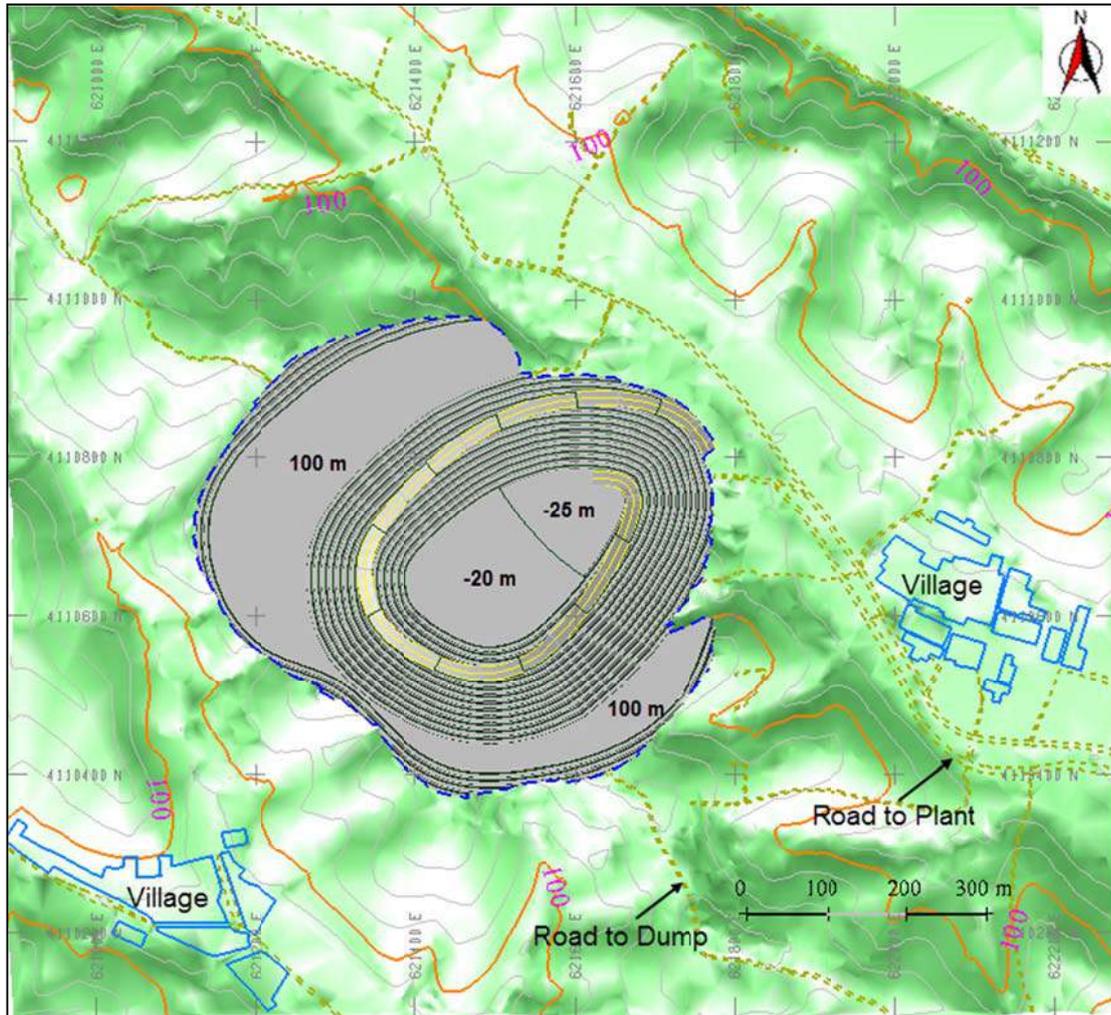


Figure 3: Third Year End (2015)