Competent Person's Report of Hengshi Mining's Iron Projects in Laiyuan County, Hebei Province, P.R. China

Report prepared for
Hengshi Mining Investments Limited

Prepared by

srk consulting

18 November 2013

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For

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EXECUTIVE SUMMARY

Hengshi Mining Investments Limited ("Hengshi Mining", "the Company" or "the Customer") commissioned SRK Consulting China Limited ("SRK") to undertake an independent assessment of all relevant technical aspects of Aowei Mining Investments Limited ("Aowei Mining")'s four operating iron mines of the Gufen iron mine ("Gufen Mine"), the Wang'ergou iron mine ("Wang'ergou Mine"), the Shuanmazhuang iron mine ("Shuanmazhuang Mine") and the Zhijiazhuang iron mine ("Zhijiazhuang Mine"), together with their associated processing plants, all of which are located in Laiyuan County, Hebei Province, the People's Republic of China ("P.R. China"). It is understood that the SRK Independent Technical Review Report (the "Report") is required for inclusion in documents that the Company plans to use for a proposed listing (the "Listing") on the Main Board of the Stock Exchange of Hong Kong Limited ("HKEx").

Summary of Principal Objectives

The principal objective of this Report is to provide the Company and financial institutions with an independent technical review report suitable for inclusion in documents for the Listing on the Main Board of the HKEx.

Outline of Work Program

The work program for this project consisted of a review of data provided; a site visit and inspection in August 2012; discussions with Company personnel and the relevant geological and mining professionals and consultants who conducted the geological exploration and feasibility study; Quality Assurance and Quality Control ("QA/QC") supervision from July to September 2011 and from June to July 2012; resource modelling and estimation of the four iron mines, conducted from April to May 2012 and during October 2012; analysis of the data provided by the Company and generated by SRK; preparation of this Report. and another site visit and inspection took place in July 2013 for the update of this Report.

RESULTS

Overall

The reviewed properties are operated by Hengshi Mining's three subsidiaries. Laiyuan County Xinxin Mining Limited ("Xinxin Mining"), which is wholly owned by Aowei Mining, has one mining license of the Gufen Mine covering an area of 1.3821 square kilometres ("km^2"), three dry processing facilities and two wet processing plants. Xinxin Mining has a plan for technical renovation to upgrade capacities of mining and processing plants. Laiyuan County Jingyuancheng Mining Limited ("Jingyuancheng Mining") which is 100% owned by Aowei Mining has two mining licenses of the Shuanmazhuang iron mine covering an area of 2.1871 km^2 and the Wang'ergou iron mine covering an area of 1.5287 km^2, and six dry processing facilities and five wet processing plants, of which four dry processing plants and four wet processing plants have been temporarily closed. Jingyuancheng Mining plans to close four old dry processing facilities and wet processing plants temporarily for technical renovation and capacity update and build one new dry processing facility and one new wet processing plant. Laiyuan County Jiheng Mining Limited ("Jiheng Mining") which is 90% owned by Aowei Mining has one mining license of the Zhijiazhuang iron mine covering an area of 0.3337 km^2 and two dry processing facilities, one of

which has been temporarily closed. Jiheng Mining doesn't have an associated wet processing plant and plans to technically renovate the existing two dry processing facilities and build a new wet processing plant near the mine. The details of mines and associated facilities and plants are listed in the following tables.

Mines	Product	Permit Stated Mining Capacity (Mtpa)[a]	Planned Mining Capacity (Mtpa)[b]	By-product in 2012 (1,000t)[d]			Status as of June 30, 2013
				TFe ≥PAG[c]	TFe ≥8%, <PAG [c]	TFe 8%–5%	
Xinxin Mining							Trial
Gufen Mine	Raw Ore	3.00	5.00	313	859	1,606	Production
Jingyuancheng Mining							Trial
Wang'ergou Mine . . .	Raw Ore	2.40	5.25	382	696	2,302	Production
							Trial
Shuanmazhuang Mine	Raw Ore	4.00	8.75	206	375	1,239	Production
Jiheng Mining							
Zhijiazhuang Mine . .	Raw Ore	1.00	2.40	570	403	2,528	Production
Total		**10.40**	**21.40**	**1,471**	**2,333**	**7,674**	

Notes:

(a) Permit Stated Mining Capacity refers to the mining capacity stated on the mining permit of each mine. For Gufen Mine, Wang'ergou Mine and Shuanmazhuang Mine, it refers to the mining of raw ores with the TFe cut-off grade of 15% or above; for Zhijiazhuang Mine, it refers to the mining of raw ores with the TFe cut-off grade of 25% or above.

(b) Planned Capacity refers to the expanded mining capacity after technical renovation and equipment upgrade stated by Aowei Mining to achieve based on the JORC Code compliant Ore Reserves of each iron mine estimated under a TFe cut-off grade=8%.

(c) As confirmed by relevant administrative authorities in charge of land and resource, working safety and environment, the "iron ores" under the approved mining capacity is defined as minerals with a TFe grade at or above the cut-off grade of 15% for Gufen Mine, Wang'ergou Mine and Shuanmazhuang Mine, and 25% for Zhijiazhuang Mine ("Permit Applied Grade or PAG"), and based on such confirmation letters.

(d) Production in 2012 refers to the by-products during the mine development (carrying out overburden stripping). It included the raw ores with grades of greater than PAG, between PAG and 8% and weakly mineralised wall rocks with grades between 5% and 8% TFe.

Dry Processing Facilities	Feed	Existing Capacity (Mtpa)[e]	Planned Capacity (Mtpa)[f]	Processed in 2012 (1,000t)	Status as of June 30, 2013
Xinxin Mining					
Dry Processing Facility No. 1	Raw Ore	1.35	1.75	586	Production
Dry Processing Facility No. 2	Raw Ore	1.35	1.75	855	Production
Dry Processing Facility No. 3	Raw Ore	1.80	2.25	1,317	Production
Subtotal	**Raw Ore**	**4.50**	**5.75**	**2,758**	
Jingyuancheng Mining					
Dry Processing Facility No. 1	Raw Ore	3.30	4.30	742	Production
Dry Processing Facility No. 2	Raw Ore	4.00	5.30	1,011	Production
Dry Processing Facility No. 3	Raw Ore		8.00		To be built[g]
Dry Processing Facilities Nos. 4–7	Raw Ore	(4.86)		3,437	Closed[h]
Subtotal	**Raw Ore**	**7.30**	**17.60**	**5,191**	
Jiheng Mining					
Dry Processing Facility No. 1	Raw Ore	2.50	3.00		Production[i]
Dry Processing Facility No. 2	Raw Ore	1.20	1.20	1,156	To be renovated[j]
Subtotal	**Raw Ore**	**3.70**	**4.20**	**1,156**	
Total		**15.50**	**27.55**	**9,104**	

Notes:

(e) Existing capacity refers to the raw ore processing capacity stated in the processing design report.

(f) Planned capacity refers to the expanded raw ore processing capacity after technical renovation.

(g) Dry processing facilities No. 3 at Jingyuancheng Mining is planned to be constructed starting from January 2014 and is expected to commence production in late 2014.

(h) Dry processing facilities Nos. 4–7 at Jingyuancheng Mining were temporarily closed on May 22, 2013.

(i) Dry processing facility No. 1 at Jiheng Mining was completed in January 2013 and is now under trial production.

(j) Dry processing facility No. 2 at Jiheng Mining is to be technically renovated in the third quarter of 2013.

Wet Processing Plants	Feed/ Product	Existing Capacity (Mtpa)[e]	Planned Capacity (Mtpa)[f]	Produced in 2012 (1,000t)	Status as of June 30, 2013
Xinxin Mining					
Wet Processing	Pre-Concentrate Feed	0.68	0.80	286	Production
Plant No. 1	Concentrate	0.15	0.25	69	
Wet Processing	Pre-Concentrate Feed	0.68	0.80	339	Production
Plant No. 2	Concentrate	0.23	0.25	81	
Subtotal	**Pre-Concentrate Feed**	**1.36**	**1.60**	**625**	
	Concentrate	**0.38**	**0.50**	**150**	
Jingyuancheng Mining					
Wet Processing	Pre-Concentrate Feed	2.40	3.50		Completed[k]
Plant No. 1	Concentrate	0.80	0.90		
Wet Processing	Pre-Concentrate Feed		1.20		To be built[l]
Plant No. 2	Concentrate		0.40		
Wet Processing	Pre-Concentrate Feed	2.09		1,181	To be closed[m]
Plants Nos. 3–6	Concentrate	0.38		243	
Subtotal	**Pre-Concentrate Feed**	**2.40**	**4.70**	**1,181**	
	Concentrate	**1.18**	**1.30**	**243**	
Jiheng Mining					
Wet Processing	Pre-Concentrate Feed		1.60		To be built[n]
Plant No. 1	Concentrate		1.00		
Subtotal	**Pre-Concentrate Feed**		**1.60**		
	Concentrate		**1.00**		
Total	**Pre-Concentrate Feed**	**3.76**	**7.90**	**1,806**	
	Concentrate	**1.56**	**2.80**	**392**	

Notes:

(e) Existing capacity refers to the iron concentrate production capacity stated in the processing design report.

(f) Planned capacity refers to the expanded iron concentrate production capacity after technical renovation.

(k) Wet processing plant No. 1 at Jingyuancheng Mining was completed in March 2013 and is now under trial production.

(l) Wet processing plant No. 2 at Jingyuancheng Mining is planned to be built in 2015.

(m) Wet processing plants Nos. 3 and 4 at Jingyuancheng Mining were temporarily closed on March 27, 2013 and January 3, 2013, and plants Nos. 5 and 6 were temporarily closed on May 22, 2013, April 8, 2013.

(n) Wet processing plants No. 1 at Jiheng Mining is planned to be built starting from January 2014 and put into production in July 2014.

Aowei Mining's properties including mines, dry processing facilities and wet processing plants, are located in areas approximately 25 to 35 kilometres (km) southwest (SW), or 20 km southeast (SE) of Laiyuan County in Hebei Province, P.R. China. All properties' areas are administered by Laiyuan County. Each property can be easily accessed conveniently by road from the county of Laiyuan.

The mines and associated plants operated by the subsidiary companies of Aowei Mining are relatively well integrated and well managed operations. The operating standards at all sites generally follow the Chinese national iron mining industrial practices. The plants under construction and those designed will continue to apply the same or more advanced technology and should achieve similar or better results to those achieved historically.

As of June 30, 2013, the JORC Code-compliant Indicated Mineral Resource and Inferred Mineral Resource for Aowei Mining's four mines were 413.58 million tonnes (Mt) at average grades of 14.31% TFe and 7.20% mFe and 223.71 Mt at average grades of 13.30% TFe and 6.46% mFe, respectively. Details of the Mineral Resources for each mine are shown in the following table.

			Indicated Mineral Resource			Inferred Mineral Resource		
Company	Mine	Cut-offs (TFe%)	Tonnes (1,000t)	TFe (%)	mFe (%)	Tonnes (1,000t)	TFe (%)	mFe (%)
Xinxin Mining	Gufen Mine	8	158,788	13.24	6.53	101,100	12.44	6.03
Jingyuancheng Mining	Wang'ergou Mine	8	76,432	13.81	6.41	39,250	13.03	5.85
	Shuanmazhuang Mine	8	155,297	13.98	5.73	73,935	12.81	4.92
Jiheng Mining	Zhijiazhuang Mine	8	23,064	25.57	24.40	9,426	27.58	25.82
Total		**8**	**413,580**	**14.31**	**7.20**	**223,711**	**13.30**	**6.46**

The information in this report which relates to Mineral Resources is based on information compiled by Mr Zhu and Dr Jia, full time employees of SRK Consulting (China) Ltd and members of the Australasian Institute of Mining and Metallurgy. Mr Zhu and Dr Jia have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Zhu and Dr Jia consent to the reporting of this information in the form and context in which it appears.

Open-pit mining is used in the four mines. The Gufen, Wang'ergou and Shuanmazhuang mines are proposed to be mined in two stages: stage 1 open-pit mining with designed mining recovery rate of 97% and mining dilution of 3% and stage 2 underground mining with sublevel caving accessed by shaft, decline and/or adit, and underground mining with designed mining recovery rate of 80% and mining dilution of 7%. The Zhijiazhuang Mine is proposed to be mined entirely by open-pit with designed mining recovery rate of 97% and mining dilution of 3%. The designed stripping ratios are 1.49 for the Gufen Mine, 1.16 for both the Wang'ergou Mine and Shuanmazhuang Mine, and 1.50 for the Zhijiazhuang Mine.

The processing flowsheet processes dry magnetic separation followed by wet magnetic separation. The extracted ores are crushed and then separated by dry magnetic separation to obtain preliminary concentrates. The preliminary concentrates are then transported to the wet processing plants for further grinding, liberating the magnetite from the gangue minerals by wet magnetic separation to produce iron ore concentrates. Aowei Mining plans to shut down some of the old processing facilities, technically renovate the existing processing facilities and build new ones in 2013 to 2015 to upgrade the processing capacities and reduce the processing costs. After the renovation, the production capacities for iron ore concentrates at Xinxin Mining, Jingyuancheng Mining, and Jiheng Mining are anticipated to reach 418,130 tpa with an average grade of 66% TFe, 132,570 tpa with an average grade of 66% TFe, and 949,270 tpa with an average grade of 62% TFe, respectively. The iron ore concentrates at the Jiheng Mining is classified as an alkaline concentrate with a high content of magnesium oxide ("MgO"). The alkaline iron concentrate is better received than the normal acid iron concentrate in the market.

SRK has sighted the Occupational Health and Safety (OHS) management system and procedures, which are generally in line with recognised Chinese industry practices and Chinese safety regulations. In addition, according to the OHS statistics provided, there are two minor injuries but no serious injuries or fatalities in the past three years.

The strengths of the Company include high self-sufficiency from established vertical integration based on mining and developing mineral deposits, to on-site processing allowing economical operations with production of good quality concentrates.

As of 30 June, 2013 the Company employed 1,270 persons, including 78 in Aowei Mining's headquarters administration, 193 in the mine management department, 260 in the various mining departments, 470 in the ore processing plants and tailings dams, 111 in the workshops for maintenance, and 158 employees in the safety, back and service departments. Annual staff turnover is estimated at 5% of the workforce. Based on past experiences, there have been no problems with sourcing skilled workers. SRK considers that the workforce numbers can completely meet the Company's production capacities.

A number of the Company's technical management personnel have worked at the mine for more than three years. They have a thorough knowledge of the geology and mining conditions at the four mines, and can employ suitable techniques and experience from a range of plants.

As part of their development program, Hengshi Mining will commit to a greening program at the mines and plants defined in mine site geological rehabilitation plans, such as top soil salvages, regrading in waste dump areas, and seeding and replating in disturbed areas. Once implemented, these practices will demonstrate the Hengshi Mining's responsible approach towards environmental protection and ecological rehabilitation.

Operational Licences and Permits

The following table summarises the status of the key operational licenses and permits for the Project.

Project	Business License	Mining License	Safety Production Permit	Land Use Right*	Water Use Permit	Site Discharge Permit
Xinxin Mining	Y	Y	Y	Y	Y	Y**
Jingyuancheng Mining	Y	Y	Y	Y	Y	Y***
Jiheng Mining	Y	Y	Y	Y	Y	Y

Notes: "Y"denotes the licence/permit is granted and has been sighted by SRK; "*" denotes that some land use right may be obtained through temporary land arrangements with confirmation letters issued by the local government; "**" indicates that this permit is only for the mining activity with one wet processing plant in Xinxin Mining and the one for the other wet processing plant in this site has not yet been required; and "***" indicates that this permit is only for the mining activity in Jingyuancheng Mining and the one for the wet processing plant in this site has not yet been required.

Geology and Mineralogy

The iron deposits in Gufen, Wang'ergou, and Shuanmazhuang properties are recognized as metamorphosed sedimentary iron deposits characterized by low iron grades, and all formed in the same metallogenic condition. On the other hand, Zhijiazhuang iron deposit is a skarn-type iron deposit featuring a relatively high iron grade.

The Gufen, Wang'ergou and Shuanmazhuang mines are located in the northeast part of Fuping quaquaversal fold cluster. Stratigraphically, Neoarchaean metamorphic rocks dominate the area, including gneisses of the Caishuzhuang Formation's Fuping Group and granulites in the Jingangku Formation's Shizui Group. The Jingangku Formation is the ore-bearing stratum in the region. The Zhijiazhuang Property is located in the west of the Wanganzhen complex, in the conjunction zone between the Shanxi Province fault-uplift and the Yanshan platform folded belt in the Sino-Korea paraplatform. Faults and folds are relatively well developed in the region. The Wanganzhen complex includes several dolomite roof pendants and the deposit is situated in the southern contact zone between one of the roof pendants and intrusive rocks.

Nine mineralised zones were identified in the Gufen Mine and numbered 95, 96, 97, 99, 1001, 1005, 1006, 1008 and 1010. Mineralised zones No. 96, No. 97, No. 1006, and No. 1008 are the major zones which together account for about 79% of the total Gufen resources. All of the zones strike east-west and dip to the north with dip angles varying from 25° to 29°. Mineralised zones No. 96 and No. 97 extend over 1,000 m along the strike and over 1,000 m down dip. Mineralised zones No. 1006 and 1008 extend over 300 m along the strike and over 1,000 m down dip.

Twelve mineralised zones were identified in the Wang'ergou Mine and numbered 1 through 12. Mineralised zones No. 1, No. 2, and No. 11 are the major zones which together account for nearly 61% of the total Wang'ergou resources. Zones No.1 through No. 7 have similar attitudes, dipping to the northeast with dip angles varying from 42° to 60°. Zones No. 8 through No. 12 also have similar attitudes, dipping north-northwest with dip angles varying from 40° to 80°.

A total of eight mineralised zones were defined in the Shuanmazhuang Mine and numbered 1 through 8. Mineralised zone No. 1 is the major zone which alone accounts for about 96% of the total Shuanmazhuang resources. It occurs as a in thick plate shape at deep, and is approximately 1,720 m long and 800 m down dip, dipping at 345° to 30° with dip angles between 30° and 69°.

Three mineralised zones were defined in the Zhijiazhuang Mine and numbered 1 through 3. Mineralised zone No. 1 is the major zone which alone accounts for nearly 97% of the total Zhijiazhuang resources. The occurrence and spatial distribution of the deposit is controlled by the contact metamorphic zones, most of which are lensoid in shape. Mineralised zone No. 1 is approximately 900 m long, 20 m to 320 m wide, and extends for 97 m to 500 m down dip, occurring as lens or lesoidal shape. The western part of the mineralised zone lies in the west limb of the anticline and dips to the southwest with dip angles varying from 40° to 60°. The eastern part of the zone lies in the east limb of the anticline, dipping northeast with dip angles varying from 40° to 70°.

The ore of Gufen, Wang'ergou and Shuanmazhuang mines is dominated by low grade magnetite. The major ore mineral is magnetite, content of which is generally less than 30% of the primary ore's total mass. The secondary associated minerals are pyrite, chalcopyrite, and pyrrhotite. Hematite and limonite are also found in outcropping ores on surface with content between 2% to 4%. Gangue minerals are mostly comprised of plagioclase, quartz, amphibole and apatite, which account for 75% of the rock mass in the deposit. Most ore presents in fine granular granoblastic texture and appears in streaked or massive structures. The accompanying useful elements consist of titanium ("Ti", 0.0067% to 0.0120%) and vanadium ("V", 0.23% to 0.39%), which cannot be recovered. The harmful elements are sulphur ("S", 0.12% to 0.20%) and phosphorus ("P", 0.060% to 0.080%), but occur in low enough quantities to be ignored.

The ore mineral in Zhijiazhuang Mine is magnetite, content of which is generally between 30% and 50%. The secondary associated minerals are mostly composed of limonite, pyrite, and chalcopyrite, with content usually less than 1%. Gangue minerals mostly consist of serpentine and olivine. Magnetite ore presents in fine grained, xenomorphic-hypidiomorphic granular or metasomatic relict textures, and appears in banded or taxitic structures associated with less disseminated structure and massive structure. The accompanying useful minerals consist of cobalt ("Co", with an average grade of 0.005%), copper ("Cu", with an average grade of 0.006%), manganese ("Mn," with an average grade of 0.57%), gallium ("Ga", with an average grade of 0.0005%), and vanadium ("V", 0.01% to 0.001%). None of these minerals can be recovered. The harmful elements are sulphur ("S", with an average grade of 0.062%), phosphorus ("P", with an average grade of 0.017%), and arsenic ("As", with an average grade of 0.002%), but occur in low enough quantities to be ignored.

Mineral Resource Estimation

Under SRK's supervision, surface trenching and drilling programs with sampling were conducted by the Baoding Geological and Engineering Exploration Institute ("Baoding Geological Institute") from July to September 2011 and from June to July 2012, and the sample preparation and assaying, and assay QA/QC procedures were conducted by the Baoding Mineral Resource Supervision and Testing Centre, Ministry of Land and Resources ("Baoding Testing Centre"). Surface drilling was conducted according to the Chinese Drilling Standards. The recovery rates for all cores and for the mineralised drill cores were all over 95%. The results for the certified reference material ("CRM") fall within control limits with no indication of systematic assaying problems in TFe or mFe values. The blank samples returned good results, suggesting that neither considerable nor systematic contamination occurred during sample preparation. The results of duplicates and external checks correspond well with those of the regular samples, which indicate that sample results assayed by the Baoding Testing Centre were acceptable.

It is the opinion of SRK that the Baoding Geological Institute and Baoding Testing Centre followed the QA/QC practices. The CRM performance, blank sample performance, core and pulp duplicate performance, and external checks showed acceptable assay results. Therefore, SRK has confidence in the geological database obtained during the exploration program, and the resource estimation meets the requirements of the Australasian Institute of Mining and Metallurgy's Joint Ore Reserves Committee ("JORC") Code.

All the available data was input into a Surpac (version 6.1) database for the estimation procedure. The database was validated within Surpac to search for errors such as missing or overlapping intervals, and to correct hole and trench lengths, azimuths and dips, and to eliminate duplicated samples.

The following table lists a summary of estimated Mineral Resources at Gufen, Wang'ergou, Shuanmazhuang, and Zhijiazhuang iron mines as of June 30, 2013 using a series of TFe cut-off grades of 8%, 10%, 12%, 15%, and 20%. SRK has shown in bold the details of the cut-off grade of 8% TFe, which it believes is reasonable based on the assumptions of an average iron concentrate price (with grade of 66% TFe) in China in the last three years, the Company's mining and processing methodologies, mining and processing capacity and equipment, costs of production as well as parameters from operating iron mines with similar geology in this region cited from the feasibility study. Only the Measured and Indicated Mineral Resources can be used for ore reserve estimation and mine planning.

			Indicated Mineral Resource			Inferred Mineral Resource		
Company	Mine	Cut-offs (TFe%)	Tonnes ('000t)	TFe (%)	mFe (%)	Tonnes ('000t)	TFe (%)	mFe (%)
Xinxin Mining . . .	Gufen Mine	**8**	**158,788**	**13.24**	**6.53**	**101,100**	**12.44**	**6.03**
		10	138,326	13.83	7.00	83,903	13.10	6.60
		12	91,102	15.29	8.13	54,207	14.23	7.51
		15	42,254	17.56	9.91	13,492	17.07	9.82
		20	5,304	22.20	14.39	1,328	21.89	13.71

Company	Mine	Cut-offs (TFe%)	Indicated Mineral Resource Tonnes ('000t)	TFe (%)	mFe (%)	Inferred Mineral Resource Tonnes ('000t)	TFe (%)	mFe (%)
Jingyuancheng Mining	Wang'ergou Mine	**8**	**76,432**	**13.81**	**6.41**	**39,250**	**13.03**	**5.85**
		10	66,080	14.60	7.30	27,118	14.08	6.66
		12	46,854	15.75	8.16	19,570	15.38	8.06
		15	25,215	17.81	10.28	7,318	17.74	10.07
		20	4,803	21.78	13.55	1,697	21.66	13.39
Jingyuancheng Mining	Shuanmazhuang Mine	**8**	**155,297**	**13.98**	**5.73**	**73,935**	**12.81**	**4.92**
		10	133,712	14.75	5.97	55,173	14.07	5.65
		12	100,448	16.00	6.64	36,635	15.70	6.54
		15	58,997	17.84	7.76	20,072	17.49	7.35
		20	7,839	21.72	9.62	2,826	21.25	8.45
Jiheng Mining	Zhijiazhuang Mine	**8**	**23,064**	**25.57**	**24.40**	**9,426**	**27.58**	**25.82**
		10	21,081	27.13	26.02	9,096	28.26	26.44
		12	19,317	28.62	27.48	8,657	29.13	26.99
		15	17,746	29.97	28.61	7,932	30.57	27.99
		20	15,194	32.06	30.25	6,620	33.14	29.82
		25	14,669	32.42	30.13	6,272	33.65	29.99

The information in this report which relates to Mineral Resources is based on information compiled by Mr Zhu and Dr Jia, full time employees of SRK Consulting (China) Ltd and members of the Australasian Institute of Mining and Metallurgy. Mr Zhu and Dr Jia have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Zhu and Dr Jia consent to the reporting of this information in the form and context in which it appears.

Exploration Potential

The geological characteristics of the Gufen, Wang'ergou, Shuanmazhuang, and Zhijiazhuang deposits have been well investigated and studied by a number of geological brigades and institutes. The occurrence and spatial distributions of the major mineralised zones are also suitably controlled by the exploration grid of the channelling and drilling and well interpreted. In addition, major features that affect the mineral distribution, such as faults, folds, intrusions, and shear zones, are well logged and interpreted. In addition, infill drilling is recommended in all four mines because it will undoubtedly lead to an upgrade in the resource categories. The current resources in Gufen, Wang'ergou and Shuanmazhuang iron deposits are not completely closed off down-dip, so SRK suggests additional step out drilling to extend the current resource base. As there is evidence of iron mineralisation surrounding the main mineralised zones of Zhijiazhuang, more drilling around the mineralisation anomaly are recommended which may increase the resource tonnages.

Ore Reserve and Mining Assessment

JORC Code compliant Ore Reserves were estimated by SRK for the Gufen, Wang'ergou, Shuanmazhuang, and Zhijiazhuang iron mines based on each mine's mining recovery rate and dilution rate, and other modifying factors cited either from the previous mining records and/or the feasibility study. The following table summarises the estimated Probable Ore Reserves of the four mines as of June 30, 2013.

Company	Mine	Mining method	Category	Ore Reserve ('000t)	TFe (%)	mFe (%)
Xinxin Mining .	Gufen	Open-pit	Probable	56,103	12.82	6.31
		Underground	Probable	58,750	15.35	8.50
		Subtotal	**Probable**	**114,853**	**14.11**	**7.43**
Jingyuancheng Mining	Wang'ergou	Open-pit	Probable	45,145	13.39	6.23
		Underground	Probable	18,077	15.87	8.50
		Subtotal	**Probable**	**63,222**	**14.10**	**6.88**
Jingyuancheng Mining	Shuanmazhuang	Open-pit	Probable	93,199	13.56	5.56
		Underground	Probable	35,723	16.00	7.11
		Subtotal	**Probable**	**128,922**	**14.24**	**5.99**
Jiheng Mining .	Zhijiazhuang	Open-pit	Probable	19,794	27.16	25.93
		Subtotal	**Probable**	**19,794**	**27.16**	**25.93**
Total		**Open-pit**	**Probable**	**214,241**	**14.59**	**7.78**
		Underground	**Probable**	**112,550**	**15.64**	**8.06**
		Open-pit + Underground	**Probable**	**326,791**	**14.95**	**7.88**

The information in this report which relates to Ore Reserves is based on information compiled by Mr Huang, a full time employee of SRK Consulting (China) Ltd and he is Member of the Australasian Institute of Mining and Metallurgy. Mr Huang has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Huang consents to the reporting of this information in the form and context in which it appears.

According to the *Feasibility Study on the Construction Project of Laiyuan Aowei Mining Investment Co., Ltd*, compiled by Sinosteel Ma'anshan Engineering Investigations and Design Co., Ltd ("Sinosteel") in December 2012, the development methods, mining methods and technical parameters are listed in the following table.

		Xinxin Mining	Jingyuancheng Mining		Jiheng Mining
Item	Unit	Gufen Mine	Wang'ergou Mine	Shuanmazhuang Mine	Zhijiazhuang Mine
Open-pit Mining					
Capacity	Mtpa	5	14		2.4
Life of Mine	Year	13	12		10
Development		Road – truck	Road – truck		Road – truck
Bench Height	m	12	12		10
Bench Width	m	8 to 15	8 to 15		8
Bench Angle	°	65	65		65
Final Slope Angle	°	45–49	45–49		<50
Stripping Ratio	t/t	1.49	1.16		1.5
Ore Loss rate	%	3	3		3
Mining Dilution Rate	%	3	3		3
Underground Mining					
Capacity	Mtpa	4	3		
Life of Mine	Year	14	17		
Development		Shaft – decline	Adit + shaft – decline		
Level Height	m	120	120		
Mining Method		Sublevel caving	Sublevel caving		
Ore Loss rate	%	20	20		
Mining Dilution Rate	%	7	7		

Note: Life of Mine ("LOM") is based on the production plan and estimated ore reserves for each mine.

SRK opines that the feasibility study of the four mines produced by Sinosteel satisfies the basic requirements for a professional feasibility study and the mining design study meets the minimum quality requirements as well. Considering that the life of mines operated by Xinxin Mining and Jingyuancheng Mining for open-pit mining will be more than ten years and significant changes are likely to occur within both the mines and the iron market during the next ten years, a new design for underground mining should be needed.

Also considering that variations in the market price of iron concentrates may pose the most significant impact on the mine in terms of economic return, SRK opines that appropriate and timely adjustments of the cut-off grade and pit limits in response to iron price variations will be necessary, and the open-pit limit should be dynamic.

Ore Processing

Ore in the Dushancheng mining area is low grade metamorphic magnetite. Magnetite, the target mineral, is distributed in fine grains with straight contact boundaries with gangue minerals. It is easy to dissociate and recover. It is indicated from the processing tests that the iron concentrate with a grade of 66.23% TFe is obtained at a recovery rate of 95.19% for mFe and 43.30% for TFe under the circumstance that 45% to 50% of ore is ground into less than 0.074 mm.

Ore in the Zhijiazhuang mining area is a skarn-type iron ore. Magnetite, the target mineral, occurs in the form of cement with gangue minerals and is fine grained. It is difficult to dissociate from the gangue minerals and difficult to process. It is indicated from the processing tests that the iron concentrate with grade of 62.4% TFe is obtained at a recovery rate of 92.99% for mFe and 84.07% for TFe under the circumstance that 90% of ore is ground into less than 0.074 mm.

The processing flow sheet includes dry magnetic separation followed by wet magnetic separation. Raw ore is crushed and magnetically separated in the nearby dry processing facilities to produce preliminary concentrates, which are then transported to the wet processing plant for further grinding and wet magnetic separation to obtain the iron ore concentrates. Aowei Mining plans to expand some of the existing processing facilities and/or build new ones in 2013 to 2015 to upgrade their existing capacities. According to the feasibility study conducted by Sinosteel, the designed production indexes after the proposed renovation are shown in the following table.

Item	Unit	Xinxin Mining	Jingyuancheng Mining	Jiheng Mining
Dry processing				
Raw ore feed	1,000t	5,000	14,000	2,400
Feed grade	TFe%	12.83	13.50	27.11
Pre-concentrate output	1,000t	1,280	3,560	1,511
Pre-concentrate grade	%	28.00	28.00	41.00
Raw ore feed/Pre-concentrate output	t/t	3.91	3.93	1.59
Recovery rate	%	55.87	52.73	95.22
Wet processing				
Pre-concentrate feed	1,000t	1,280	3,560	1,511
Concentrate output	1,000t	18.13	1,132.57	949.27
Concentrate grade	%	66.00	66.00	62.00
Pre-concentrate feed/Concentrate output	t/t	3.06	3.14	1.59
Recovery rate	%	77.00	75.00	95.00
Total Recovery Rate	%	43.02	39.55	90.46
Raw ore feed/ Concentrate output	t/t	11.96	12.36	2.53

During the past three years, a large amount of waste rock stripping and mining stope preparation has been carried out by the three subsidiary companies. The by-product (i.e., ore) and the weakly mineralized wall rock with TFe grade below 8% extracted during mining development were processed. Iron concentrate with grades ranging from 66% to 67% TFe was produced in Xinxin Mining and Jingyuancheng Mining. Jiheng Mining does not have a wet processing plant yet. Currently, the ore with TFe grade above 8% is sold without processing and the weakly mineralised wall rock (with TFe grade below 8%) is processed by dry magnetic separation to obtain the preliminary concentrate for sale.

Occupational Health and Safety

The safety production permits for mining activities in the four open pits (Zhijianzhuang Mine, Gufen Mine, Wang'ergou Mine, and Shuanmazhuang Mine) and for tailings operating in the three TSFs (Taohuazui TSF, Xiaomazong TSF, and Chengzigou TSF) were sighted by SRK. SRK has sighted the Occupational Healthand Safety (OHS) management system and procedures, which are generally in line with recognised Chinese industry practices and Chinese safety regulations.

The company's safety records indicate that there are two minor injuries but no serious injuries or fatalities in the past three years. Incident analysis reports for these two minor injuries were also provided to SRK for review.

Capital Costs and Investment

The three mining companies plan to input the capital expenditures in two stages. The total investment proposed in stage one (open-pit mining) is RMB1,952.77 million, where the loan interest is excluded, covering the slope correction and processing and tailings storage facility renovation and upgrade. Of the investments, RMB961.82 million was invested before June 30, 2013, and RMB990.94 million will be invested between July 1, 2013 and 2015. Details of the total investment and the investments between 2013 and 2015 are shown in the following table.

	Total (Million	Annual Investment (Million RMB)				
Xinxin Mining	**RMB)**	**1H 2013**	**2H 2013**	**2014**	**2015**	**Subtotal**
Engineering	244.21	23.84	53.72	53.87	40.42	171.84
Including:						
Development Engineering	132.81	19.54	30.22	46.49	36.56	132.81
Construction	42.23	3.58	8.24	1.00	1.00	13.82
Facility Purchase	67.60	0.72	14.43	6.38	2.11	23.64
Installation	1.57	0.00	0.83	0.00	0.74	1.57
Other Expenditures	55.81	1.02	4.77	1.97	25.48	33.24
Contingency Allowance	8.88	0.00	4.17	2.79	1.92	8.88
Intangible Assets	27.52	0.00	0.00	0.00	0.00	0.00
Mining Right	33.22	21.70	0.00	10.00	1.52	33.22
Working Capital	25.96	3.38	1.62	5.00	15.96	25.96
Total Investment	**395.61**	**49.94**	**64.28**	**73.63**	**85.30**	**273.15**
Including: new facilities to be invested between July 1, 2013 and 2015	223.22					
Investment before June 30, 2013	172.39					

Jingyuancheng Mining	Total (Million RMB)	Annual Investment (Million RMB)				
		1H 2013	2H 2013	2014	2015	Subtotal
Engineering	639.09	42.64	107.34	113.53	102.24	365.76
Including:						
Development Engineering	170.56	24.61	32.63	50.88	53.57	161.69
Construction	387.09	18.03	56.43	29.11	19.05	122.62
Facility Purchase	70.49	0.00	16.80	28.59	25.10	70.49
Installation	10.95	0.00	1.48	4.95	4.52	10.95
Other Expenditures	247.12	10.18	9.63	19.21	32.13	71.14
Contingency Allowance	20.86	0.00	8.49	6.64	5.73	20.86
Intangible Assets	19.74	0.00	0.00	0.00	0.00	0.00
Mining Right	89.19	34.16	0.00	18.00	37.03	89.19
Working Capital	58.92	13.30	12.89	13.09	19.64	58.92
Total Investment	**1,074.92**	**100.28**	**138.35**	**170.46**	**196.77**	**605.87**
Including: new facilities to be invested between July 1, 2013 and 2015	505.58					
Investment before June 30, 2013	569.34					

Jiheng Mining	Total (Million RMB)	Annual Investment (Million RMB)				
		1H 2013	2H 2013	2014	2015	Subtotal
Engineering	221.25	43.36	22.53	100.25		166.15
Including:						
Development Engineering	63.98	33.68	13.81	4.40		51.89
Construction	86.11	6.73	0.00	49.36		56.09
Facility Purchase	62.99	2.95	8.57	38.47		49.99
Installation	8.17	0.00	0.15	8.02		8.17
Other Expenditures	78.82	4.70	0.00	1.23		5.93
Contingency Allowance	6.82	0.00	3.41	3.41		6.82
Intangible Assets	0.00	0.00	0.00	0.00		0.00
Mining Right	142.33	0.00	20.00	86.73	66.73	106.73
Working Capital	33.01	8.43	2.96	21.62		33.01
Total Investment	**482.24**	**56.49**	**48.90**	**146.51**	**66.73**	**318.63**
Including: new facilities to be invested between July 1, 2013 and 2015	262.14					
Investment before June 30, 2013	220.09					

The working capital in 2016 is estimated as RMB5.70 million for Xinxin Mining and RMB12.50 million for Jingyuancheng Mining based on the planned capacity.

The total investment proposed in stage two (underground mining) from 2022 to 2025 is estimated to be RMB738.97 million, covering the new underground mining facilities and equipment. The detailed information is shown in the following table. In SRK's opinion, the proposed capital investments for both stages are reasonable.

	Unit: Million RMB		
Item	Xinxin Mining	Jingyuancheng Mining	Subtotal
Main shaft, auxiliary shaft, air shaft and ramp engineering	46.93	46.94	93.86
Roadway engineering	85.62	179.86	265.49
Underground mining, tunneling, haulage equipment and installation	76.65	114.97	191.62
Mechanical engineering	19.42	19.42	38.84
Underground electric and installation	18.46	18.46	36.91
Construction engineering	5.75	5.75	11.51
Mining right	53.46	47.28	100.74
Total	**306.29**	**432.68**	**738.97**

Operating Costs

The historical unit costs over the past three years during mining development and the five-year forecast of operating costs between 2013 and 2017 are provided in the following table. The historical unit costs, which were sourced from the management accounts of Aowei Mining's subsidiaries, are relatively higher comparing with the similar iron mining companies in this region. The main reason for the higher operating costs is that Aowei Mining has been focusing on waste rock stripping operation and preparing mining stopes rather than actual mining operation, only a small amount of ores with low grade are produced. SRK opines that with the on-going technological upgrade, as well as the expected increase in production volume and TFe grade of our iron ores, the unit operating costs after the commencement of the trial or commercial production should decrease substantially as compared with the costs in 2010, 2011 and 2012. The five-year forecast of operating costs is sourced from the feasibility study conducted by Sinosteel. SRK also noted an increase in unit operating costs at Xinxin Mining and Jingyuancheng Mining from 2015 to 2016, due to an increase in the forecasted stripping ratios as a result of the expansion of the areas to be mined after the ramp-up period and the specific occurrence of orebodies of these mines. SRK opines that the anticipated operating cost in total are reasonable and classified the costs based on the Chapter 18.12(3) requirements of the Rules Governing the Listing of Securities on the HKEx. Details are summarised in the following table.

		Xinxin Mining	Jingyuancheng Mining	Jiheng Mining*		
Year	Unit	Concentrate	Concentrate	Raw Ore (for Sale)	Preliminary Concentrate	Concentrate
Historical Operating Costs#						
2010	RMB/t	520.37	485.85	127.70	525.01	
2011	RMB/t	653.42	691.54	71.58	212.86	
2012	RMB/t	706.53	685.85	70.91	222.04	
1H 2013	RMB/t	398.01	436.51	30.97	90.89	422.58

		Xinxin Mining	Jingyuancheng Mining	Jiheng Mining*		
Year	Unit	Concentrate	Concentrate	Raw Ore (for Sale)	Preliminary Concentrate	Concentrate
Forecast on Operating Costs						
2H 2013	RMB/t	499.07	384.72	30.25	116.21	496.64
2014	RMB/t	402.16	345.39			154.93
2015	RMB/t	389.81	332.93			155.03
2016	RMB/t	437.37	388.28			156.24
2017	RMB/t	437.37	388.28			156.24

Notes:

Historical operating costs include certain mine development expenses which will be capitalised going forward.

* The unit preliminary concentrate cost of Jiheng Mining refers to the unit preliminary concentrate cost in the time of 2010 to June 2014, during which the previously remaining weakly mineralised wall rock as a by product have been and will be processed by dry magnetic separation. From March 2013, part of the preliminary concentrate was sent to Xinxin Mining's wet processing plant for processing into iron concentrates. From 2014, the iron ore concentrates will be processed primarily from high TFe grade iron ores at Jiheng Mining.

Environmental and Social

The table below summarises the status of the environmental assessments and approvals for the Project.

Project	EIA	Approval for EIA	WSCP	Approval for WSCP	FCA Approval
Xinxin Mining					
Gufen Mine Production Capacity Upgrading (3 Mtpa)	Y	Y	Y	Y	Y
Phase I Wet Processing Plant and Taohuazui TSF	Y	Y	Y	Y	Y
Phase II Wet Processing plant, 3 Dry Processing Plants, and Xiaomazong TSF	Y	Y	Y	Y	NYR
Jingyuancheng Mining					
Shuanmazhuang Mine Production capacity Upgrading (4 Mtpa)	Y	Y	Y	Y	Y
Wang'ergou Iron Mine Production capacity Upgrading (2.4 Mtpa)	Y	Y	Y	Y	Y

Project	EIA	Approval for EIA	WSCP	Approval for WSCP	FCA Approval
2 New Dry Processing Plants and 1 Wet Processing Plant and Chengzigou TSF	Y	Y	Y	Y	NYR
2 New Dry Processing Plants and 1 Wet Processing Plant and Dabugou TSF	Y	Y	Y	Y	NYR
Jiheng Mining					
Zhijiazhuang Mine production capacity upgrading (1.0 Mtpa)	Y	Y	Y	Y	Y
Iron Ore Dry Processing Plant (2.5 Mtpa)	Y	Y	Y	Y	Y

Note: EIA = Environmental Impact Assessment Report; WSCP = Water and Soil Conservation Plan; FCA = Final Checking and Acceptance; "Y" denotes the approval is granted and has been sighted by SRK; "NYR" means that approval is not yet required.

At the time of the most recent site visit (July 2013), the project sites were in rectification and construction, and overall the project was generally being developed and/or operated in accordance with the project's environmental management and approval conditions.

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

- Significant Land disturbance, rehabilitation and site closure;
- Water management (i.e. tailings and mine water);
- Waste rock management;
- Dust management; and
- Land contamination (hazardous substances storage and handling).

It is SRK's opinion that the above environmental risks are categorised as moderate/tolerable risks (i.e., requiring risk management measures) and they are generally manageable. Since various environmental protection measures are planned or conducted by the Company to solve these environmental issues, SRK considers that these environmental risks are controlled properly and not to develop into higher grade risks.

Project Risk Assessment

Aowei Mining's four iron mine project is a production project, for which risks exist in different areas. SRK has considered various technical aspects which may affect the project's feasibility and future cash flow, and conducted a qualitative risk analysis which has been summarised in the following table.

Risk Issue	Likelihood	Consequence	Overall
Geology and Resource			
Lack of Significant Resource	Unlikely	Minor	Low
Lack of Significant Reserve	Unlikely	Minor	Low
Significant Unexpected Geological Faulting	Unlikely	Moderate	Low
Unexpected Groundwater Ingress	Unlikely	Moderate	Low
Mining			
Production Shortfalls	Possible	Minor	Low
Excessive Surface Subsidence	Possible	Minor	Low
Poor Mine Plan	Unlikely	Moderate	Low
Poor Road Transportation/safety	Unlikely	Moderate	Low
Ore Processing			
Lower Processing Plant Yields	Possible	Minor	Low
Unsuitable Processing Flow Sheet	Unlikely	Moderate	Low
Poor Plant Reliability	Unlikely	Moderate	Low
Environmental			
Land disturbance, rehabilitation and site closure	Certain	Moderate	Medium
Water management (i.e. tailings and mine water)	Possible	Moderate	Medium
Waste rock management	Possible	Moderate	Medium
Tailings storage (i.e. TSF design, construction and operation)	Possible	Minor	Low
Dust management	Likely	Moderate	Medium
Land contamination (hazardous substances storage and handling)	Likely	Moderate	Medium
Capital and Operating Costs			
Mine Management Plan	Possible	Minor	Low
Capital Costs – Ongoing	Unlikely	Minor	Low
Operating Cost Underestimated	Possible	Moderate	Medium

The environmental measures and practices to manage environmental risk of the land disturbance, rehabilitation and site closure include proposed progressive rehabilitation, proposed topsoil stripping, proposed replanting, proposed rehabilitation monitoring and a geological rehabilitation fund deposit of RMB34.0 million; the storm-water and mine water treatment facilities and the water reuse systems in TSFs are the measures to control the risk of water pollution; reuse of waste rock as construction materials to reduce waste rock volume, low concentrations of hazardous components in the waste rock, and no evidence of on-site acid rock drainage indicate that the environmental risk of waste rock is manageable; dust management measures such as regular watering in the mining area and comprehensive dust collection system in the processing plants show that the risk of dust pollution is controlled; and the comprehensive hazardous materials management system and the waste oil recycling system can make the risk of land contamination under control. Therefore, it is SRK's opinion that the medium environmental risks identified above are generally under control and not to develop into higher grade risks due to various environmental measures conducted and more efforts the Company has determined to make to improve environment management.

A few factors may lead potential risks in increase of operating costs; they include: 1) decrease in the grade of mined ore; 2) worsening in the quality of production management; 3) significant increase in tax level in China; 4) increase in raw materials, power, fuel and labour costs as a result of inflation; and 5) mandatory interruption in production required by the authorities. SRK is of the review that of the above five situations, 2 and 3 are extremely unlikely scenarios, whereas there is a possibility that the other three situations may occur. As a result, SRK opines that increase of operating costs is a medium risk.

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DISCLAIMER

The opinions expressed in this report have been based on information supplied to SRK Consulting China Ltd ("SRK") by Hengshi Mining. The opinions in this Report are provided in response to a specific request from Hengshi Mining. SRK has exercised all due care in reviewing the supplied information. While SRK has compared key supplied data with expected values, the accuracy of the results and conclusions from the review are entirely reliant on the accuracy and completeness of the supplied data. SRK does not accept responsibility for any errors or omissions in the supplied information and does not accept any consequential liability arising from commercial decisions or actions resulting from them.

Opinions presented in this Report apply to the site's conditions and features as they existed at the time of SRK's investigations, and those reasonably foreseeable. These opinions do not necessarily apply to conditions and features that may arise after the date of this Report, about which SRK have had no knowledge nor had the opportunity to evaluate.

LIST OF ABBREVIATIONS

%	Percent
°	Degrees, either of temperature or angle of inclination
ASL	Above sea level
AusIMM	Australasian Institute of Mining and Metallurgy
Ore processing	The process of separating the target mineral from gangue minerals
dry processing	The process of ore dressing without water and other liquid medium. The bulk ore size is usually reduced by stages of crushing and target mineral is enriched by stages of magnetic separation in the process
E	East
EIA	Environmental Impact Assessment
g	gram
g/t	gram per tonne
ha	Hectare
HKEx	Stock Exchange of Hong Kong Limited

Indicated Mineral Resource	That part of a resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. It is based on exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes. The locations are too widely or inappropriately spaced to confirm geological and/or grade continuity but are spaced closely enough for continuity to be assumed
Inferred Mineral Resource	That part of a resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. It is inferred from geological evidence and assumed but not verified geological and/or grade continuity. It is based on information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings, and drill holes which may be limited or of uncertain quality and reliability
JORC Code	Joint Ore Reserves Committee Code
JORC Committee	Joint Ore Reserves Committee of The Australasian Institute of Mining and Metallurgy, Australian Institute of Geoscientists and Minerals Council of Australia
kg	kilogram, equivalent to 1,000 grams
km	kilometres, equivalent to 1,000 metres
km^2	square kilometres
kV	kilovolts – equivalent 1,000 volts
kW	Kilowatt, equivalent to 1,000 watt
LOM	Life of Mine is the sum of open-pit mine life and underground mine life and is based on the production plan and estimated ore reserves for each mine.
m	metre
m^2	square metre
m^3	cube metre
M	Million

Measured Mineral Resource	That part of a resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence. It is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes
mFe	magnetic iron
mm	Millimetre/s
Mt	Million tonne (s)
Mtpa	Million tonnes per annum
N	North, also the chemical symbol for Nitrogen
OHS	Occupational Health and Safety
pH	A measure of the acidity or alkalinity of a solution, numerically equal to 7 for neutral solutions, increasing with increasing alkalinity and decreasing with increasing acidity. The pH scale commonly in use ranges from 0 to 14
PPE	personal protective equipment
PRC	People's Republic of China
Probable Ore Reserve	The economically mineable part of an indicated, and in some circumstances measured, resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and government factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified
Proved Ore Reserves	The economically mineable part of a measured resource. It includes diluting materials and allowances for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and include consideration of and modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and government factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified

QA/QC	Quality Assurance/Quality Control
RMB	Renminbi
ROM	Run of mine
S	South, also the chemical symbol for sulphur
stripping ratio	the ratio of waste rock or overburden which must be removed to extract ore in an open-pit operation. For example, a 5:1 stripping ratio means that five tonnes of waste rock or overburden need to be removed to extract one tonne of ore
t	Tonne
TFe	Total iron
TSF	Tailing storage facility
tpa	tonnes per annum
tpd	tonnes per day
Valmin Code	Code for Technical Assessment and Valuation of Mineral and Petroleum Assets and Securities for Independent Expert Reports
Wall Rock	All the rocks on the periphery of ore bodies with TFe < 8%
Waste Rock	Rocks on the periphery of ore bodies which cannot be economically utilized under current technical or economic conditions
Weakly mineralised wall rock	Part of the rocks on the periphery of the ore bodies is weakly mineralized, with TFe grades between 5% and 8%. It is possible that this weakly mineralised rock could be economically utilized after being mined out during stripping, given the Company's current costs and the market price situation
wet processing	The process of ore dressing with water as medium. Ore is usually ground into pulp for the liberation of target mineral granular and then the target mineral is separated from gangue minerals and enriched into concentrate in the process
WSCP	Water and Soil Conservation Plan

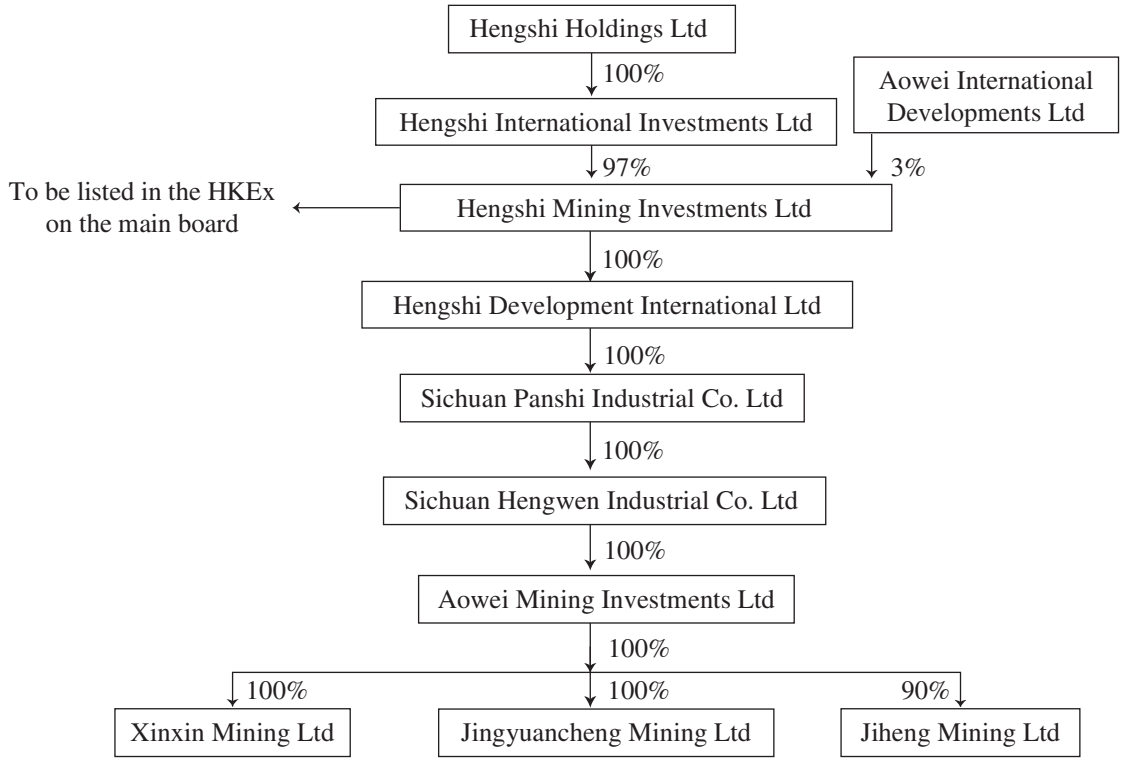
1 INTRODUCTION AND SCOPE OF REPORT

Hengshi Mining Investments Limited ("Hengshi Mining", "the Company" or "the Customer") commissioned SRK to review Aowei Mining Investments Limited ("Aowei Mining")'s four iron projects ("Aowei Project"), including Gufen iron mine ("Gufen Mine"), Wang'ergou iron mine ("Wang'ergou Mine"), Shuanmazhuang iron mine ("Shuanmazhuang Mine") and Zhijiazhuang iron mine ("Zhijiazhuang Mine"), together with their associated processing plants, all of which are located in Laiyuan County, Hebei Province, the People's Republic of China ("P.R. China"). SRK was required to provide an Independent Technical Assessment Report including reviews of the geology and resources, mining technology, processing and metallurgy, and social and environmental aspects. The principal objective of this Report is to provide the Company and the Stock Exchange of Hong Kong Limited ("HKEx") with an Independent Expert Report suitable for inclusion in documents for a proposed listing on the main board of the HKEx.

2 BACKGROUND AND BRIEF

Hengshi Mining commissioned SRK to review and report all relevant technical aspects of Aowei Mining's four iron projects in Laiyuan County, Hebei Province, P.R. China. The mining permits are currently held by the Company's three subsidiary companies. Copies of the original mining permits are shown in Appendix I.

Aowei Mining has three subsidiary mining companies: Laiyuan County Xinxin Mining Ltd ("Xinxin Mining"), Laiyuan County Jingyuancheng Mining Ltd ("Jingyuancheng Mining") and Laiyuan County Jiheng Mining Ltd ("Jiheng Mining"). Each subsidiary company wholly owns the iron mine(s) and associated processing plants. Aowei Mining wholly owns Xinxin Mining and Jingyuancheng Mining, and owns 90% of Jiheng Mining. The proposed target group structure for the listing is shown in Figure 2–1.



Assets:

1. Gufen Mine covering an area of 1.3821 km^2 with mining capacity of 3.0 Mtpa.
2. Three dry processing facilities: Nos. 1, 2 and 3 with a total of processing capacity 4.5 Mtpa.
3. Two wet processing plants: Nos. 1 and 2 with iron concentrate production capacities of 0.15 Mtpa and 0.23 Mtpa, respectively.

Assets:

1. Wang'ergou Mine covering an area of 1.5287 km^2 with mining capacity of 2.4 Mtpa.
2. Shuanmazhuang Mine covering an area of 2.1871 km^2 with mining capacity of 4.0 Mtpa.
3. Two dry processing Facilities: Nos. 1 and 2 with a total of processing capacity of 7.3 Mtpa.
4. One wet processing plants: No. 1 with an iron concentrate production capacity of 0.8029 Mtpa.

Assets:

1. Zhijiazhuang I Mine covering an area of 0.3337 km^2 with a mining capacity of 1.0 Mtpa.
2. One dry processing facility No. 1 with a processing capacity of 2.5 Mtpa.

Figure 2–1: Group Structure

3 PROGRAM OBJECTIVES AND WORK PROGRAM

3.1 Program Objectives

The principal objectives of this Report is to provide existing and potential Shareholders of Hengshi Mining and HKEx with an Independent Technical Assessment Report ("Report") suitable for inclusion in documents that the Company plans to submit to HKEx in relation to the proposed listing on the main board. The SRK report is proposed to provide HKEx and existing and potential Shareholders in Hengshi Mining an unbiased technical assessment of the risks and opportunities associated with the mining and processing assets of the proposed listing company.

3.2 Reporting Standard

This Report has been prepared to comply with the Listing Rules of HKEx. The Report has also been prepared to the standard of a Technical Assessment Report under the guidelines of the Valmin Code. The Valmin Code is the code adopted by the Australasian Institute of Mining and Metallurgy and incorporates the Joint Ore Reserves Committee ("JORC") Code for the reporting of Mineral Resources and Ore Reserves. The standard is binding upon all Australasian Institute of Mining and Metallurgy ("AusIMM") members.

This Report is not a valuation report and does not express an opinion as to the value of mineral asset. Aspects reviewed in this Report do include product prices, socio-political issues, and environmental considerations; however, SRK does not express an opinion regarding the specific value of the assets and tenement involved.

3.3 Limitations Statement

SRK is not professionally qualified to opine upon and/or confirm that Hengshi Mining has 100% ownership of Xinxin Mining and Jingyuancheng Mining and 90% ownership of Jiheng Mining, and that the subsidiary companies each have 100% control of their various underlying tenements and/or have any unresolved legal matters relating to any transfer of ownership or associated fees and royalties. SRK has therefore assumed that no legal impediments regarding the relevant tenements exist and that Hengshi Mining has legal rights to all underlying tenements as purported. Assessing the legal tenure and processing rights to prospects of Hengshi Mining and its subsidiary company are the responsibility of legal due diligence conducted by entities other than SRK.

3.4 Work Program

The work program consisted of a review of data provided by Hengshi Mining and its subsidiary companies; a site visit to the mining tenements and other properties in Laiyuan, Hebei Province, P.R. China in August 2012; inspection of all the operating mines including their geologies and resources, the production sites as well as the ore processing plants; discussions with the Company and its subsidiaries' professionals and consultants who conducted the geological explorations and feasibility study; supervision of the quality assurance and quality control ("QA/QC") procedures followed in the exploration drilling and sampling of the four iron mines from July to September 2011 and from June to July 2012; resource modelling and resource

estimation from April to May 2012 and October 2012; collection and review of relevant documents; and preparation of this Report; another site visit to the mining tenements and other properties in Laiyuan, Hebei Province, P.R. China in July 2013; and update of the Report.

3.5 Project Team

The SRK project team, their title, and their responsibilities within this Report are shown in Table 3–1 below. All team members satisfy the independence requirements under Listing Rule 18.22.

Table 3–1: SRK Project Team

Consultant	Title	Discipline and Task
Dr Yiefei Jia	Principal Consultant (Geology)	Geology and Resources, Overall Reporting
Yuanjian Zhu	Senior Geologist	Geology and Resources
Lanliang Niu	Principal Consultant (Metallurgist)	Processing and Product Quality
Qiuji Huang	Principal Mining Engineer	Mining Assessment
Dr Yuanhai Li	Senior Consultant (Geo-Environmental)	Environment, Permits and Approvals
Qu Xiong	BD Supervisor	Project Coordination
Dr Anson Xu	Principal Consultant (Geology)	Internal Peer Review
Mike Warren	Corporate Consultant (Project Evaluations)	External Peer Review

Yiefei Jia, ***PhD, FAusIMM,*** is a Principal Consultant (geology) with a specialty of exploration of mineral deposits. He has more than 20 years' experience in the field of exploration, development, and resources estimate of precious metal (gold, silver and PGE), base metal (lead, zinc, copper, vanadium and titanium), and black metals (iron and manganese) as well as other metal ore deposits in different geological settings in Australia, Africa, China, and North and Central America. He has extensive experience in project management, exploration design and resource assessment. He, as Competent Person, has coordinated a number of due diligence projects with *technical reports either for fund raising or overseas stock listing such as on HKEx*. ***Dr Jia was the project manager of this project and the Competent Person (CP) who takes overall responsibility for this report.***

Yuanjian Zhu, ***M.Sc, MAusIMM,*** is a Senior Consultant (Geology), graduated and obtained his Master degree in Geology from the Institute of Geology and Geophysics at the Chinese Academy of Sciences in 2008. He also holds a Bachelor's degree in Geology from Peking University. He has been involved in the oil gas profile national investigation project and was a technical leader in a mining company in charge of resource explorations and due diligence reviews for new projects. He has extensive exploration experience in epithermal Au, Ag, Sb, Pb and Zn deposits as well as Cu and Fe deposits. He has expertise in geological modelling, resource/reserve reconciliation and geo-statistical theory and software (GS+, ArcGIS, Grapher, etc.). Yuanjian is proficient with geological and digital graphic processing software such as MapGIS, AutoCAD,

CorelDraw, Surfer, Photoshop, and many others. ***Yuanjian assisted Dr. Jia in completing the geological QA/QC and resource estimate. Mr. Zhu satisfies the professional qualifications and experience requirements with respect to geological QA/QC and resource estimate required under Listing Rule 18.21.***

Qiuji Huang*, B.Eng. MAusIMM, Mining Association of the Chinese Society for Metals Member, China Association of National Gold member,* is a Principal Consultant (Mining). Prior to joining SRK, he was the technical department manager for a number of gold mines in southwest China, responsible for mine development and mining design. Later he joined the Gold Administration Bureau of Guangxi province and the Guangxi Branch of National Gold, where he was in charge of review, purchase, planning, and production management. Qiuji has nearly 30 years of mining experience, including deposit development and planning, open-pit mining, underground mining, mine design and consultation. The commodities involved range from precious metals (Au, Ag) to non-ferrous metals (Cu, Zn, Pb, W, Mo), ferrous metals (Fe, Mn) and other metal deposits as well as non-metallic deposits formed under different conditions (such as: U, K, S, coal and stone). Other experience includes mine technology, review, mine construction, production test, mine management, and more. Since joining SRK, Qiuji has been involved in many due diligence studies in China, Asia, Africa and South America, including CNNC, and CITIC DAMENG, all of which have been listed successfully on the Hong Kong Stock Exchange. ***He was responsible for the mining review. Mr. Huang satisfies the professional qualifications and experience requirements with respect to mining review required under Listing Rule 18.21.***

Lanliang Niu, ***B.Eng. MAusIMM, MCAMRA,*** is a Principal Consultant (Processing) with SRK Consulting China. He has 25 years' experience in processing, hydrometallurgy test study, mine technical support and production management, and is competent in both theoretical study and actual working. He has specific expertise in the processing of precious metal, nonferrous metal, ferrous metal and some non-metal as well as processing test design, data process, plant design and operations. He is actively acquainted with the new development and applications of the processing technologies, facilities and reagents. He received two national awards for his achievements in this area. Since joining SRK, Lanliang has been responsible for ore processing/metallurgical and economic analysis scopes of work and involved in more than 70 independent technical review projects. ***He reviewed the metallurgical and processing aspects of the projects for this report. Mr. Niu satisfies the professional qualifications and experience requirements with respect to processing aspects required under Listing Rule 18.21.***

Yuanhai Li, ***Ph.D, MAusIMM***, is a senior environmental consultant with SRK Consulting China Limited, graduated with a doctoral degree in Environmental Engineering from the Florida State University. He has over 12 years' experience in environmental engineering field and has worked in various environmental projects in USA, China, Mongolia, as well as South Asian Countries. He has particular expertise in environmental due diligence reviews; environmental compliance and impact assessments for mining, mineral processing, refining, and smelting; contaminated site assessments and remedial design; wetland and landfill rehabilitation; and environmental risk assessment. He also has extensive experience in water/wastewater treatment design, water distribution systems, and storm water management system design. ***Dr. Li was responsible for the review of environmental issues. Dr. Li satisfies the professional qualifications and experience requirements with respect to environment issues required under Listing Rule 18.21.***

Qu Xiong (Maggie), ***B.A.,*** is a Business Development Supervisor with SRK China. As a graduate from Sichuan International Studies University, she was engaged in translation work for four years and has accumulated certain experience in project organisation and cooperation. Since joining SRK China, she has been involved in the project cooperation and technical translation for due diligence and IPO projects. ***Miss Xiong was responsible for project coordination.***

Dr Anson Xu***, PhD, FAusIMM,*** is a principal consultant with a specialty in exploration of mineral deposits. He has more than 20 years experience in exploration and development of various types of mineral deposits including copper-nickel sulphide deposits related to ultrabasic rocks, tungsten and tin deposits, diamond deposits, and in particular, various types of gold deposits, vein-type, fracture-breccia zone type, alteration type and Carlin type. He was responsible for the resource estimates of several diamond deposits, and review of resource estimates of several gold deposits. He has recently completed several due diligence jobs for customers in China, including gold, silver, lead-zinc, iron, bauxite, and copper projects, and several technical review projects, as well as technical reports for listing on HKEx. ***Dr Xu provided internal peer review to ensure the quality control of the report. Dr Xu is a Competent Person whose experience satisfies the requirements under Listing Rule 18.21.***

Mike Warren, ***B.Sc (Mining Eng), MBA, FAusIMM, FAICD,*** is a Corporate Consultant (Project Evaluation) and the director of SRK Australia, based in Sydney. Mike is a mining engineer with over 30 years' experience in on-site management and leadership, as well as 5 years' experience in investment banking. Mr. Warren has led SRK teams evaluating mining projects in Australia, New Zealand, Papua New Guinea, Canada, Brazil, Mongolia and China. He has been involved in multiple projects in China, including the listing of the Aluminium Corporation of China on both the Hong Kong and New York stock exchanges, the IPOs of Fujian Zijin, Lingbao Gold, and Xinjiang Xinxin Mining in Hong Kong, and the listing of Sino Gold Mining on the Stock Exchange of Hong Kong, Ltd. ***He completed the external peer review of the report to ensure its quality. Mr. Warren is a Competent Person whose experience satisfies the requirements under Listing Rule 18.21.***

3.6 Statement of Qualification of the Competent Person, Dr Yiefei Jia:

As the author of portions of the Report for Hengshi Mining on certain mineral properties in Hebei province, the People's Republic of China, I, Yiefei Jia, do hereby certify that:

- I am employed by, and carried out the assignment for SRK Consulting China Limited, located at:

  B1205 COFCO Plaza
  8 Jianguomennei Dajie
  Beijing, 100005, P.R. China
  Phone: 86-10-8512 0365, Fax: 86-10-8512 0385, Email: yjia@srk.cn

- I graduated with a Bachelor's degree in Geology and Geochemistry from Jilin University, China (B.Sc.) in 1987, a Master's degree in Geochemistry from Jilin University, China (M.Sc.) in 1990, and a Doctor's degree in Geology and Geochemistry from the University of Saskatchewan, Canada (Ph.D.) in 2001. I was awarded a Post Doctoral Fellowship from the Natural Science and Engineering

Research Council of Canada ("NSERC") from April 2002 to March 2004 to work as a Research Scientist at the Australian National University. From 2004 to 2005, I worked for the Mining and Exploration Division of the Commonwealth Scientific and Industrial Research Organisation ("CSIRO") as a research fellow.

- I am a Fellow of the AusIMM (No. 230607).
- I have been directly involved in geological research and mineral exploration for more than 18 years.
- I have read the definition of a "competent person" as set out in the HKEx Listing Rules and certify that by reason of my education, affiliation with a professional associations (as defined in the listing rules) and past relevant work experience, I fulfil the requirements to be a "competent person" for the purposes of this technical report.
- I visited the Hengshi Mining's properties in August 2012.
- I am the primary author responsible for the preparation and compilation of the report.
- I have had no previous involvement with the Hengshi Mining's Project. I have no interest, nor do I expect to receive any interest, either directly or indirectly, in the Hengshi Mining's Project, nor in the securities of Hengshi Mining.
- I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
- I am independent of the issuer applying all of the tests in sections 18.21 and 18.22 of the Listing Rules of HKEx.
- I consent to the filing of the Technical Report with HKEx and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Mr Mike Warren, Dr. Anson Xu, Mr. Yuanjian Zhu, Mr. Qiuji Huang, Mr. Lanliang Niu, and Dr. Yuanhai Li, are also qualified professionals on overall quality control, geology and resource, mining, ore processing, and environmental and social issues. Their qualifications have been outlined in the short biographical notes above.

3.7 Statement of SRK's Independence

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

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

None of SRK or any authors of this report have any direct or indirect interest in any assets which had been acquired, or disposed of by, or leased to any member of the Company or any of the Company or any of its subsidiaries within the two years immediately preceding the issue of this transaction.

3.8 Representation

Hengshi Mining has represented to SRK that full disclosure has been made of all material information and that, to the best of its knowledge and understanding, such information is complete, accurate, and true. SRK has no reason to doubt this representation.

3.9 Consent

SRK consents to this Report being included in full in the application for a listing of Hengshi Mining on the Main Board of the HKEx, in the form and context in which the technical assessment is provided, and not for any other purpose.

SRK provides this consent on the basis that the technical reviews expressed in the summary and in the individual sections of this Report are considered with, and not independently of, the information set out in the complete Report and the cover letter.

3.10 SRK's Experience

SRK Consulting is an independent, international consulting group with extensive experience in preparing independent technical reports for various stock exchanges around the world (see www.srk.com for a review). SRK is a one-stop consultancy offering specialist services to mining and exploration companies for the entire life cycle of a mining project, from exploration through to mine closure. Among SRK's more than 1,500 customers are most of the world's major and medium-sized metal and industrial mineral mining houses, exploration companies, banks, petroleum exploration companies, agribusiness companies, construction firms, and government departments.

Formed in Johannesburg, South Africa, in 1974 SRK now employs more than 1,400 professionals internationally in 43 permanent offices on six continents. A broad range of internationally recognized associate consultants complements the core staff.

SRK Consulting employs leading specialists in each field of science and engineering. Its seamless integration of services, and global base, has made the company a world's leading practice in due diligence, feasibility studies and confidential internal reviews.

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 permits the SRK Group to provide its customers with conflict-free and objective recommendations on crucial judgment issues.

SRK China was established in early 2005, and is mainly working on Chinese mining projects independently or together with SRK's other offices, mainly SRK Australasia (see www.srk.cn and www.srk.com.au). SRK China has prepared a number of independent technical reports on mining projects for various companies who acquired Chinese projects or completed public listings on overseas stock exchanges, as showing in Table 3–2.

Table 3–2: Recent Reports by SRK for Chinese Companies

Company	Year	Nature of Transaction
Yanzhou Coal Limited (company listed on the Stock Exchange of Hong Kong Limited)	2000	Sale of Jining III coal mine by parent company to the listed operating company
Chalco (Aluminum Corporation of China)	2001	Listing on the Stock Exchange of Hong Kong Limited and New York Stock Exchange
Fujian Zijin Gold Mining Company	2004	Listing on the Stock Exchange of Hong Kong Limited
Lingbao Gold Limited	2005	Listing on the Stock Exchange of Hong Kong Limited
Yue Da Holdings Limited (company listed on the Stock Exchange of Hong Kong Limited)	2006	Proposed acquisition of shareholding in mining projects in P.R. China
China Coal Energy Company Limited (China Coal)	2006	Listing on the Stock Exchange of Hong Kong Limited
Sino Gold Mining Limited	2007	Dual listing on the Stock Exchange of Hong Kong Limited
Xinjiang Xinxin Mining Industry Company Limited	2007	Listing on the Stock Exchange of Hong Kong Limited
Espco Technology Holdings Limited	2008	Acquisition of shareholding in Tongguan Taizhou Gold-Lead projects in P.R. China
China Shenzhou Mining and Resources Inc	2008	Listing (SHZ) on the American Stock Exchange
Green Global Resource Ltd	2009	Acquisition of shareholding in iron project in Mongolia
Ming Fung Jewellery Group Holdings Ltd	2009	Acquisition of shareholding in gold projects in Anhui and Hebei Provinces, P.R. China
Continental Holdings Ltd	2009	Acquisition of a gold project in Henan Province, P.R. China

Company	Year	Nature of Transaction
North Mining Shares Company Ltd .	2009	Acquisition of a molybdenum projects in Shaanxi, Province, P.R. China
CNNC International Ltd	2010	Acquisition of an uranium mine in Africa
New Times Energy Corporation Ltd .	2010	Acquisition of shareholding in gold projects in Hebei, Province, P.R. China
Sino Prosper Mineral Products Ltd .	2010	Acquisition of shareholding in gold projects in Hebei, Province, P.R. China
United Company RUSAL Ltd	2010	Listing on the Stock Exchange of Hong Kong Limited
CITIC Dameng Holdings Ltd	2010	Listing on the Stock Exchange of Hong Kong Limited
China Hanking Holdings Ltd	2011	Listing on the Stock Exchange of Hong Kong Limited
China Non-ferrous Mining Corporation Ltd	2012	Listing on the Stock Exchange of Hong Kong Limited

3.11 Forward-looking Statements

Estimates of Mineral Resources, Ore Reserves and mine and processing plant production are inherently forward-looking statements, which, being projections of future performance, will necessarily differ from actual performance. The errors in such projections result from inherent uncertainties in the interpretation of geologic data, variations in the execution of mining and processing plans, the ability to meet construction and production schedules due to many factors including weather, availability of necessary equipment and supplies, fluctuating prices, and changes in regulations. The possible sources of error in forward-looking statements are addressed in more detail in the appropriate sections of this report. Also provided in the report are comments on the risks inherent in the different areas of mining and processing operations.

4 REGIONAL DESCRIPTION

4.1 Regional Location

The four iron mines with associated processing plants of Hengshi Mining are all located in Laiyuan County, Hebei Province in China (Figure 4–1). The Gufen, Shuanmazhuang and Wang'ergou properties are administrated by Shuibao Town and are southwest of the Laiyuan urban area in Dushancheng mining area, southwest of the town of Laiyuan. The Zhijiazhuang property is located southeast of the Laiyuan urban area and is administered by Yangjiazhuang Town. The geographic coordinates of each project centre are listed below in Table 4–1.

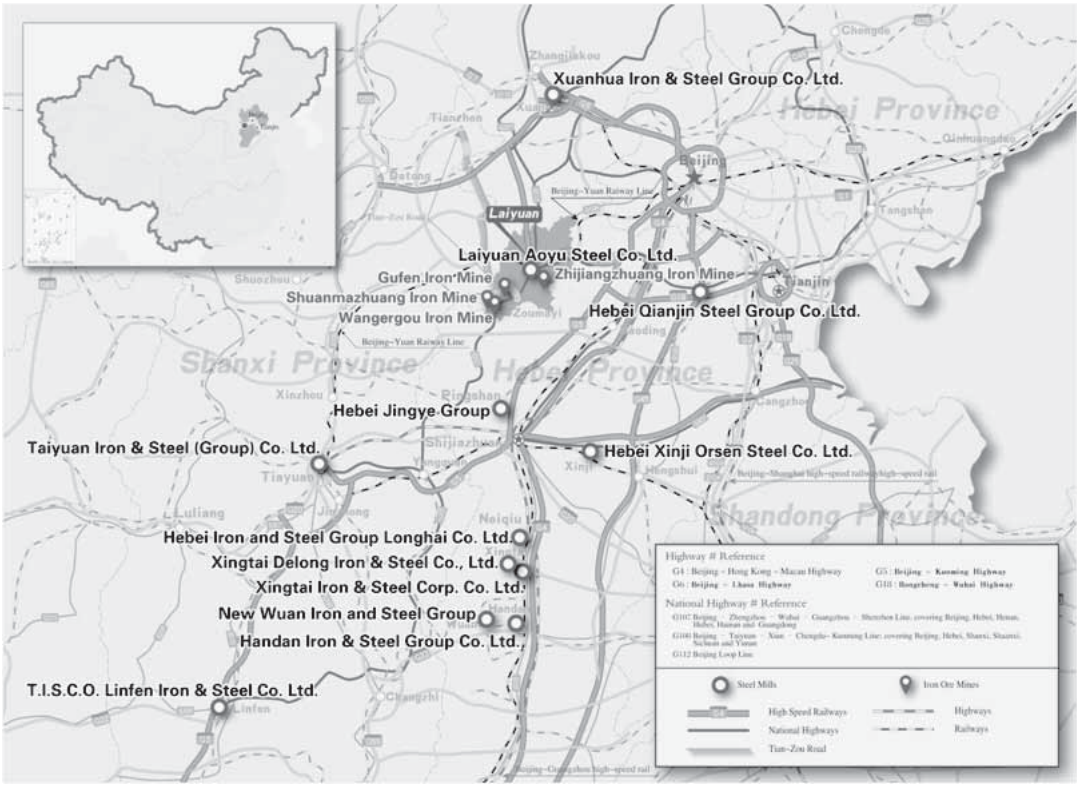


Figure 4–1: Schematic Map of the Locations of the Four Properties

Table 4–1: Centre Geographic Coordinate of Each Property

Property	Centre Coordinate	
	Longitude	Latitude
Gufen	114°30'28"	39°12'26"
Wang'ergou	114°28'10"	39°10'40"
Shuanmazhuang	114°27'00"	39°10'50"
Zhijiazhuang	114°50'00"	39°17'00"

4.2 Access

Access to each property is convenient. The Tianzhen-Zoumayi Road passes by 500m west of the Gufen Mine. Wang'ergou and Shuanmazhuang iron mines are almost 6 kilometres ("km") south of the road. Tianzhen-Zoumayi Road connects with National Road 108 at its north end which leads to Laiyuan urban area approximately 22 km away. The south end of Tianzhen-Zoumayi Road joins National Road 207 about 26 km south of Laiyuan urban area.

National Road 108 also passes by about 12 km north of the Zhijiazhuang mining area, as shown in Figure 4–1. Zhangshi Motorway (S32), which has been open to traffic since late 2012, passes by the Laiyuan urban area and links Zhangjiakou City and Shijiazhuang City. The Pingyuan Railway passes by the Laiyuan urban area and leads to Shanxi Province.

4.3 Climate and Potential Natural Hazards

The mine area is characterised by a semi-humid monsoon climate with seasonal temperatures varying from winter lows reaching –20 degrees of centigrade ("°C") to summer highs up to 42°C and an average annual temperature of 12°C. The average annual precipitation is 556 mm, mainly concentrated between June and September. The frost-free season lasts 120 days to 180 days. The average wind speed in the region is 2.4 metres per second ("m/s").

According to the *China seismic ground motion parameter zonation (GB-18306-2001)*, the seismic peak ground acceleration in Laiyuan is 0.1 g, which indicates a relatively low level of seismic activity. There has been no historical earthquake record in this area.

5 OPERATIONAL LICENCES AND PERMITS

This section summarises related operational licences and permits. SRK relies on the information provided by the Company, and SRK understands that a legal due diligence review of this Project has been undertaken by the Company's legal advisors.

5.1 Business Licenses

The business license details for the Project are presented in Table 5–1. Xinxin Mining and Jingyuancheng Mining are 100% owned by Aowei Mining; and Aowei Mining owns 90% of Jiheng Mining and the remaining 10% is held by a state-owned company.

Table 5–1: Business Licenses

Project/Company	Laiyuan Xinxin Mining
Business License No.	130630000001716
Issued To	Laiyuan Xinxin Mining Co., Limited
Issued By	Laiyuan County Industry and Commerce Bureau
Issue Date	April 12, 2013
Expiry Date	April 21, 2024

Licensed Business Activities	Iron ore mining and processing, sales of iron concentrate
Project/Company	Laiyuan Jingyuancheng Mining
Business License No.	130630000002688
Issued To	Laiyuan Jingyuancheng Mining Co., Limited
Issued By	Laiyuan County Industry and Commerce Bureau
Issue Date	April 12, 2013
Expiry Date	October 17, 2021
Licensed Business Activities	Iron ore mining and processing, sales of iron concentrate

Project/Company	Laiyuan Jiheng Mining
Business License No.	130630000005981
Issued To	Laiyuan Jiheng Mining Co., Limited
Issued By	Laiyuan County Industry and Commerce Bureau
Issue Date	April 12, 2013
Expiry Date	August 15, 2022
Licensed Business Activities	Iron ore mining and processing, sales of iron ore and iron concentrate

5.2 Mining Licenses

The Mining license details for the Project are presented in Table 5–2.

Table 5–2: Mining Licenses

Project	Xinxin Mining: Gufen Mine
Mining License No.	C1300020130121201289 89
Issued To	Laiyuan Xinxin Mining Limited
Issued By	Hebei Province Land and Resources Bureau
Issue Date	January 23, 2013
Expiry Date	January 23, 2023
Area (km^2)	1.3821
Mining Type	Open-pit/Underground Mining
Production Rate (Mtpa)	3.0

Project	Jingyuancheng Mining: Wang'ergou Mine
Mining Licence No.	C1300020130121201289 88
Issued To	Laiyuan Jingyuancheng Mining Limited
Issued By	Hebei Province Land and Resources Bureau
Issue Date	January 23, 2013
Expiry Date	January 23, 2023
Area (km^2)	1.5287
Mining Type	Open-pit/Underground Mining
Production Rate (Mtpa)	2.4

Project	Jingyuancheng Mining: Shuanmazhuang Mine
Mining Licence No.	C1300020013012120128987
Issued To.	Laiyuan Jingyuancheng Mining Limited
Issued By	Hebei Province Land and Resources Bureau
Issue Date	January 23, 2013
Expiry Date	January 23, 2023
Area (km^2)	2.1871
Mining Type	Open-pit/Underground Mining
Production Rate (Mtpa)	4.0

Project	Jiheng Mining: Zhijiazhuang Mine
Mining Licence No.	C1300020011012120105565
Issued To.	Laiyuan Jiheng Mining Limited
Issued By	Hebei Province Land and Resources Bureau
Issue Date	April 12, 2012
Expiry Date	April 12, 2022
Area (km^2)	0.3337
Mining Type	Open-pit/Underground Mining
Production Rate (Mtpa)	1.0

5.3 Safety Operational Permits

The details for the obtained safety operational production permits are presented in Table 5-3. SRK notes that the safety production permit for the Dabugou tailings storage facility ("TSF") in Jingyuancheng Mining has not yet been required.

Table 5–3: Operational Safety Production Permit

Project	Xinxin Taohuazui TSF
Safety Production Permit No.	[2013] Baoyan830328
Issued To	Laiyuan Xinxin Mining Limited
Issued By.	Baoding City Safety Supervision Bureau
Licensed Activity	TSF operation
Issue Date	January 8, 2013
Expiry Date	January 7, 2016

Project	Xinxin Xiaomazong TSF
Safety Production Permit No.	[2013] Baoyan830302
Issued To	Laiyuan Xinxin Mining Limited
Issued By.	Baoding City Safety Supervision Bureau
Licensed Activity	TSF operation
Issue Date	July 7, 2013
Expiry Date	June 6, 2016

Project	Jingyuancheng Chengzigou TSF
Safety Production Permit No.	[2013] Bao830340
Issued To	Laiyuan Jingyuancheng Mining Limited
Issued By	Baoding City Safety Supervision Bureau
Licensed Activity	TSF operation
Issue Date	March 4, 2013
Expiry Date	March 3, 2016

Project	Jiheng Zhijiazhuang Iron Mine
Safety Production Permit No.	[2012] Bao210006
Issued To	Laiyuan Jiheng Mining Limited
Issued By	Baoding City Safety Supervision Bureau
Licensed Activity	Iron ore open-pit
Issue Date	December 5, 2012
Expiry Date	December 4, 2015

Project	Xinxin Mining: Gufen Mine
Safety Production Permit No.	[2013] Bao000025
Issued To	Laiyuan Xinxin Mining Limited
Issued By	Baoding City Safety Supervision Bureau
Licensed Activity	Iron ore open pit/underground mining
Issue Date	September 10, 2013
Expiry Date	September 9, 2016

Project	Jingyuancheng Mining: Wang'ergou Mine
Safety Production Permit No.	[2013] Bao000026
Issued To	Laiyuan Jingyuancheng Mining Limited
Issued By	Baoding City Safety Supervision Bureau
Licensed Activity	Iron ore open pit/underground mining
Issue Date	September 10, 2013
Expiry Date	September 9, 2016

Project	Jingyuancheng Mining: Shuanmazhuang Mine
Safety Production Permit No.	[2013] Bao000027
Issued To	Laiyuan Jingyuancheng Mining Limited
Issued By	Baoding City Safety Supervision Bureau
Licensed Activity	Iron ore open pit/underground mining
Issue Date	September 10, 2013
Expiry Date	September 9, 2016

5.4 Other Operational Permits

The Company states that it has obtained proper land use accesses to carry out mining and processing activities. Disturbance area maps have also been provided to SRK for review. In addition, the Company plans to obtain additional land use right for the future mining. For those lands obtained through temporary land use arrangements, SRK has sighted related confirmation letters issued by the local government.

SRK has sighted all related water use permits for the project and three site discharge permits for all mining activities for the Aowei Project and for one wet processing plant in Xinxin Mining, which were summarized in the following tables. The Company states that the rest related operational permits are being obtained.

Table 5–4: Water Use Permit

Project	Laiyuan Xinxin Gufen Mine
Water Use Permit No.	0716075
Issued To	Laiyuan Xinxin Mining Limited
Issued By	Laiyuan County Bureau of Water Resources
Issue Date	June 6, 2013
Expiry Date	June 6, 2018
Water Use Purpose	Mining
Water Supply Source	Groundwater and Surface Water
Water Use Allocation (m^3/year)	103,500
Project	Laiyuan Xinxin Processing Plant
Water Use Permit No.	0716081
Issued To	Laiyuan Xinxin Mining Limited
Issued By	Laiyuan County Bureau of Water Resources
Issue Date	June 6, 2013
Expiry Date	June 6, 2018
Water Use Purpose	Processing
Water Supply Source	Surface water
Water Use Allocation (m^3/year)	170,700
Project	Laiyuan Xinxin Processing Plant
Water Use Permit No.	0716080
Issued To	Laiyuan Xinxin Mining Limited
Issued By	Laiyuan County Bureau of Water Resources
Issue Date	June 6, 2013
Expiry Date	June 6, 2018
Water Use Purpose	Processing and Domestic Use
Water Supply Source	Groundwater
Water Use Allocation (m^3/year)	188,100
Project	Laiyuan Jingyuancheng Processing Plant
Water Use Permit No.	0716079
Issued To	Laiyuan Jingyuancheng Mining Limited
Issued By	Laiyuan County Bureau of Water Resources
Issue Date	June 6, 2013
Expiry Date	June 6, 2018
Water Use Purpose	Processing and Domestic Use
Water Supply Source	Groundwater
Water Use Allocation (m^3/year)	319,100

Project	Laiyuan Jingyuancheng Processing Plant
Water Use Permit No.	0716078
Issued To	Laiyuan Jingyuancheng Mining Limited
Issued By	Laiyuan County Bureau of Water Resources
Issue Date	June 6, 2013
Expiry Date	June 6, 2018
Water Use Purpose	Processing and Domestic Use
Water Supply Source	Groundwater
Water Use Allocation (m^3/year)	656,100

Project	Laiyuan Jingyuancheng Shuanmazhuang Mine
Water Use Permit No.	0716077
Issued To	Laiyuan Jingyuancheng Mining Limited
Issued By	Laiyuan County Bureau of Water Resources
Issue Date	June 6, 2013
Expiry Date	June 6, 2018
Water Use Purpose	Mining
Water Supply Source	Groundwater and Surface Water
Water Use Allocation (m^3/year)	135,300

Project	Laiyuan Jingyuancheng Wang'ergou Mine
Water Use Permit No.	0716076
Issued To	Laiyuan Jingyuancheng Mining Limited
Issued By	Laiyuan County Bureau of Water Resources
Issue Date	June 6, 2013
Expiry Date	June 6, 2018
Water Use Purpose	Mining
Water Supply Source	Groundwater and Surface Water
Water Use Allocation (m^3/year)	84,000

Project	Laiyuan Jiheng Zhijiazhuang Mine
Water Use Permit No.	0716066
Issued To	Laiyuan Jiheng Mining Limited
Issued By	Laiyuan County Bureau of Water Resources
Issue Date	July 18, 2011
Expiry Date	July 18, 2016
Water Use Purpose	Mining
Water Supply Source	Groundwater
Water Use Allocation (m^3/year)	166,700

Table 5–5: Site Discharge Permit

Project	Xinxin Mining Activity with a Wet Processing Plant
Site Discharge Permit No.	PWD-130630-0072
Issued To.	Laiyuan Xinxin Mining
Issued By	Baoding Environmental Protection Bureau
Issue Date	24 October, 2013
Expiry Date	23 October, 2014
Pollutants Discharge Type	COD, Dust
Project	Jiheng Mining Activity only
Site Discharge Permit No.	PWD-130630-0151
Issued To.	Laiyuan Jiheng Mining
Issued By	Baoding Environmental Protection Bureau
Issue Date	April 27, 2013
Expiry Date	April 26, 2014
Pollutants Discharge Type	COD, NH_3-N
Project	Jingyuancheng Mining Activity only
Site Discharge Permit No.	PWD-130630-0070
Issued To.	Laiyuan Jingyuancheng Mining
Issued By	Baoding Environmental Protection Bureau
Issue Date	October 24, 2013
Expiry Date	October 23, 2014
Pollutants Discharge Type	COD, Dust

6 GEOLOGICAL DESCRIPTION

Hengshi Mining has four mining licenses for the Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang mining properties. The iron deposits in Gufen, Wang'ergou and Shuanmazhuang properties are recognized as metamorphosed sedimentary iron deposits characterized by low iron grades and are formed in the same metallogenic condition. In contrast, Zhijiazhuang iron deposit is recognized as a contact metamorphic iron deposit (skarn deposit) featuring relatively high iron grade ore.

6.1 Gufen, Wang'ergou and Shuanmazhuang Mines

6.1.1 Regional Geology

The Gufen, Wang'ergou and Shuanmazhuang Mines are located in the northeastern part of the Fuping quaquaversal fold cluster, which is part of the Wutai anteclise in the Sino-Korean paraplatform. Stratigraphically, Neoarchaean metamorphic rocks dominate the area, which include gneisses in the Caishuzhuang Formation's Fuping Group and granulites in the Jingangku Formation's Shizui Group. The Jingangku Formation is recognized as the ore-bearing stratum in the region. Dolomites outcrop in the northeastern part of the region and belong to the Mesoproterozoic Changcheng Group (see Figure 6–1).

Igneous rocks are less developed with a few Mesozoic magmatites distributed in the northwestern part of the region. The Wang'ergou synclinorium is the primary structure and controls the spatial distribution of the iron deposits with a fold axis trending north-northwest. Strata on the east limb strike northeast and dip northwest with dip angles between 30° and 60°. Strata on the west limb strike northwest and dip northeast with dip angles between 30° and 80°. Some post-faults were discovered to have dislocated the mineralised bodies.

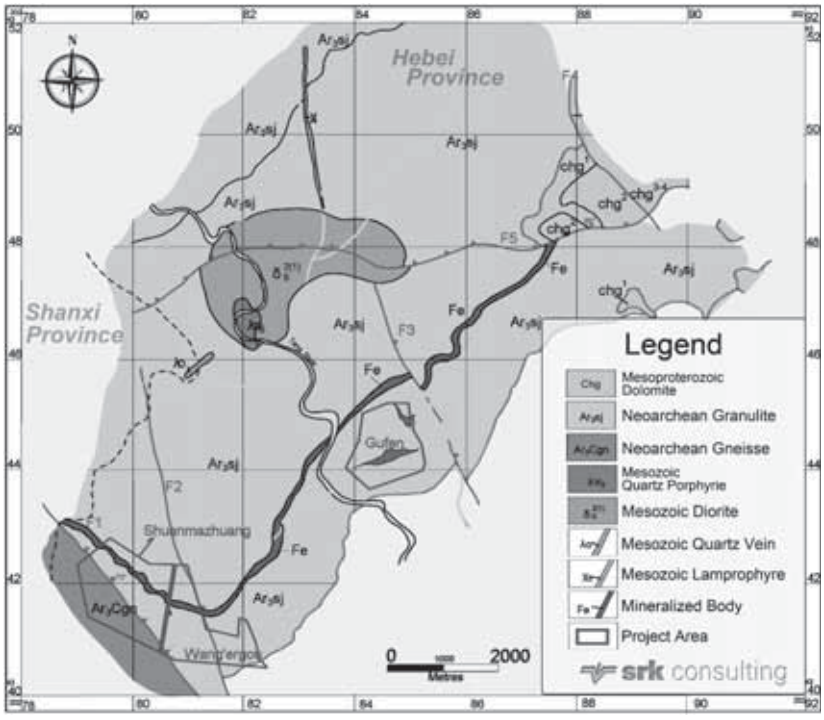


Figure 6–1: Regional Geological Map of Gufen, Wang'ergou and Shuanmazhuang Mines

6.1.2 Deposit Geology

6.1.2.1 Stratigraphy

The predominate strata in Gufen, Wang'ergou and Shuanmazhuang mining areas consist of the Jingangku Formation, the Caishuzhuang Formation and Quaternary deposits as shown in Figure 6–2 and Figure 6–3 and described below.

- The Jingangku Formation (Ar_3Sj) is recognized as the primary ore-bearing layer, widely distributed in all three mining areas. It mostly consists of biotite plagioclase granulites, biotite hornblende granulites, biotite granulites, plagioclase hornblende gneisses, amphibolites and hornblende magnetite quartzites.

- The Caishuzhuang Formation (Ar_3Cgn) is characterized by biotite monzonitic gneisses. It is mostly distributed in the southwestern part of Shuanmazhuang.

- Quaternary sediments are locally distributed along riversides and in valleys.

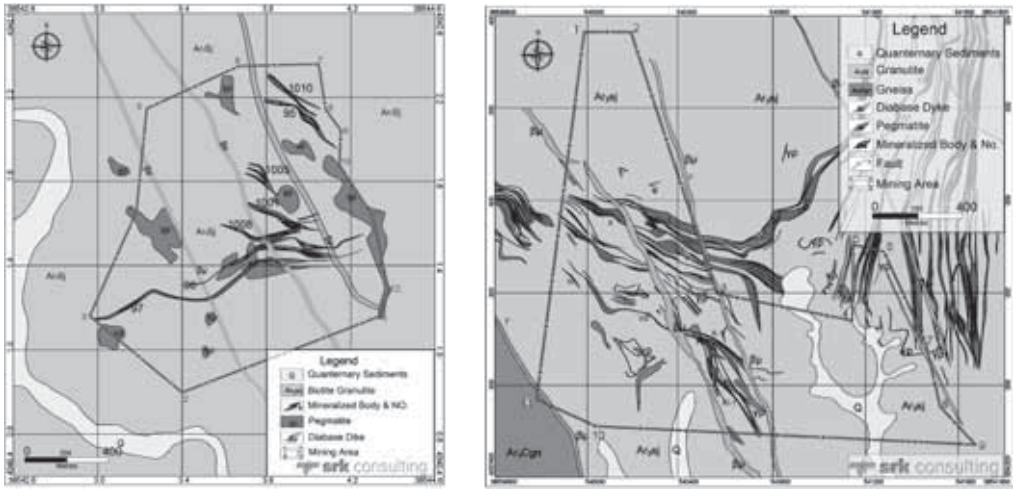


Figure 6–2: Simplified Geological Maps of Gufen Mine (left), Wang'ergou Mine (right)

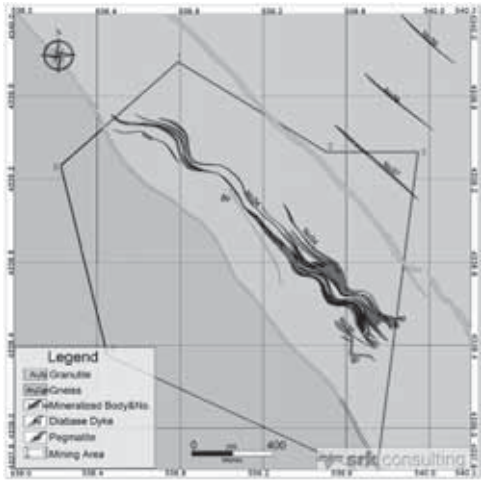


Figure 6–3: Simplified Geological Maps of and Shuanmazhuang Mine

6.1.2.2 Structure

After multiple ages and series of deformations and alterations, the region has developed relatively complicated structural features, as shown in Figure 6–2. Wang'ergou synclinorium dominates the area and rules the spatial distribution of iron mineralised zones. The Wang'ergou and Shuanmazhuang deposits lie on the west wing of the Wang'ergou Synclinorium while the Gufen deposit lies on the east. Secondary folds feature monoclines and contribute to the specific characteristic of the deposit distribution. Interlayer flexures associated with boudinages thickened, snapped, or thinned the mineralised bodies locally. Post-fractures filled with diabase stretch from north-northwest to south-southeast with almost vertical dip angles, and locally dislocate the deposit to a certain extent.

6.1.2.3 Magmatism

Intrusive rocks outcropping in the regions include diabase and granite pegmatite. Diabase dikes trending north-northwest intruded into wall rocks, breaking the continuity of the mineralised bodies. These dikes are over 1,000 m long and are between 10 m and 40 m wide. Scattered instances of granite pegmatite occur in various shapes such as veins, veinlets and masses. The majority of the pegmatite crosscuts the gneissic schistosity. The intrusive rocks disrupt the mineralised bodies to a certain degree.

6.1.3 Mineralised Zone Geology

6.1.3.1 Characteristics of Mineralised Zone

A total of 29 magnetite mineralised zones have been defined, including nine (9) mineralised zones in the Gufen Property, 12 mineralised zones in the Wang'ergou Property and eight (8) mineralised zones in the Shuanmazhuang Property. Magnetite deposits in the regions are hosted in Jingangku Formation granulites and are recognised as metamorphosed sedimentary deposits. The mineralised bodies occur in quasi-stratiform or lensoidal shapes and are in conformity with wall rocks in attitude. Details of the major mineralised zones are provided below:

Mineralised Zone in the Gufen Mine

Nine mineralised zones were identified in the Gufen Mine and numbered 95, 96, 97, 99, 1001, 1005, 1006, 1008 and 1010. Mineralised zones No. 96, No. 97, No. 1006 and No. 1008 are recognised as the major zones which together account for about 79% of the total Gufen resources. The Gufen mineralised zones are shown in Figure 6–4 and have the following characteristics:

- Mineralised zone No. 96 was defined by 21 trenches and 70 drillholes. It strikes east-west and dips north at 310° to 0° with an average dip angle of 27°. It is located in the middle part of the Gufen Mine (Figure 6–2). The zone is quasi-stratiform in shape, with local swellings and constrictions, and has been dislocated by three diabase dykes. It is recognised as 927 m long and 5 m to 90m wide, with a down dip extension up to 1,200 m.

- Mineralised zone No. 97 was defined by 28 trenches and 70 drillholes. It is located to the south of mineralised zone No. 96, as shown in Figure 6–2. The deposit is quasi-stratiform or lensoidal in shape and has also been dislocated by three diabase dykes. Like the gneiss in the wall rocks, the mineralised zone strikes east-west and dips north at 330° to 0° with dip angles varying from 24° to 30°. It has an approximate length of 1,050 m along the strike and up to 1,350 m down dip, varying from 10 m to 80 m wide.

- Mineralised zone No. 1006 was defined by one (1) trench and 17 drillholes. It is located north of mineralised zone No. 96, as shown in Figure 6–2. The deposit is quasi-stratiform. Like the gneiss in the wall rocks, the mineralised zone strikes east-west and dips north at 350° to 0°, with dip angles varying from 25° to 28°. It is approximately 387 m long and extends up to 1,120 m down dip, varying from 10 m to 90 m wide.

- Mineralised zone No. 1008 was defined by three (3) trenches and 24 drillholes. It is situated north of mineralised zone No. 96. It is quasi-stratiform in shape and has been dislocated by one diabase dyke in the middle of the zone. It's attitude is similar to that of mineralised zone No. 96, striking east-west and dipping north at 350° to 0° with an average dip angle of 28°. It is about 377 m long, 8 m to 70 m wide and extends up to 1,140 m down dip.

- Mineralised zones No. 95, No. 1001, No. 1005 and No. 1010 are relatively small and defined by a few drillholes each. The attitudes of these zones are similar to those of mineralised zone No. 96.

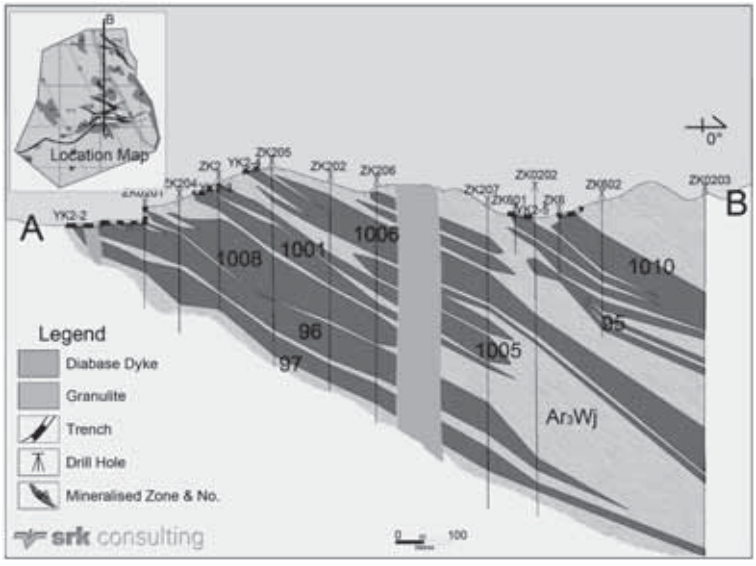


Figure 6–4: Schematic Exploration Section in Gufen Mine

Mineralised Zone in the Wang'ergou Mine

A total of twelve mineralised zones were identified in the Wang'ergou Mine and numbered 1 through 12. Mineralised zones No. 1, No. 2 and No. 11 are recognised as the major zones which together account for nearly 61% of the total Wang'ergou resources. The mineralised zones are shown in Figure 6–5 and have the following characteristics:

- Mineralised zone No. 1 was defined by seven (7) drill holes and 12 trenches. It is approximately 527 m long and extends 455 m down dip. It is quasi-stratiform in shape and dips northeast at 5° to 50° with dip angles from 48° to 52°.

- Mineralised zone No. 2 was defined by 10 drill holes and 12 trenches. The mineralised body is quasi-stratiform in shape and situated to the south of mineralised zone No. 1. It dips northeast at 27° with dip angles between 42° and 61°. The mineralised zone is about 700 m long and extends 508 m down dip.

- Mineralised zone No. 11 was defined by 14 drill holes and 10 trenches. It is quasi-stratiform in shape and situated in the middle south of Wang'ergou region. The zone stretches over 835 m on the surface and extends for about 667 m below the surface. It dips from 330° to 20°, with dip angles between 40° and 85°.

- Other mineralised zones are relatively small and defined by a few drillholes each. They are all quasi-stratiform in shape. The attitudes of zones No. 3 through No. 7 are similar to those of Mineralised Zone No. 1. The attitudes of zones No. 8 through No. 10 are similar to those of Mineralised Zone No. 12.

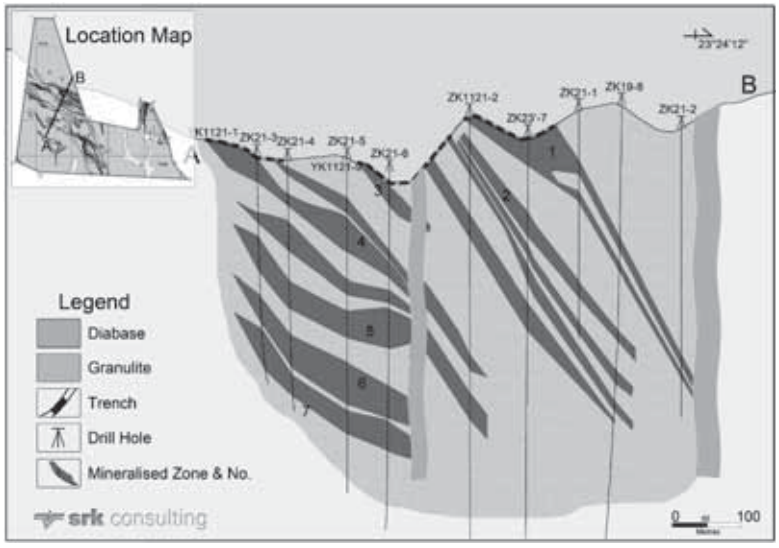


Figure 6–5: Schematic Exploration Section in Wang'ergou Mine

Mineralised Zone in the Shuanmazhuang Mine

A total of eight mineralised zones were defined in the Shuanmazhuang Mine and numbered 1 through 8. Mineralised zone No. 1 is recognised as the major zone which accounts for about 96% of the total Shuanmazhuang resources. The mineralised zones are shown in Figure 6–6 and have the following characteristics:

- Mineralised zone No. 1 is located in the northeastern part of the Shuanmazhuang mining area and was defined by 31 trenches and 33 drillholes. It outcrops on the surface in S-shapes and diverges on the western end and occurs in a thick plate shape at depth. The mineralised zone is approximately 1,720 m long and extends 800 m down dip, dipping at 345° to 30° with dip angles between 30° and 69°.

- Mineralised zones No. 2, No. 3, No. 4, No. 5, No. 6, No. 7 and No. 8 are relatively small and defined by a few drillholes each. They all occur in quasi-stratiform shapes and the attitudes of these zones are similar to those of Mineralised Zone No. 1.

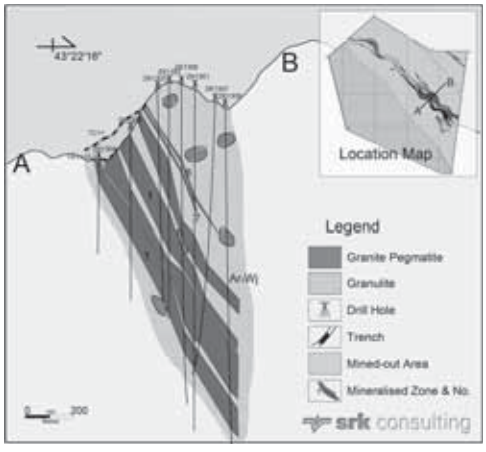


Figure 6–6: Schematic Exploration Section in Shuanmazhuang Mine

6.1.3.2 Ore Mineralogy

The deposits of Gufen, Wang'ergou and Shuanmazhuang are homological and therefore have the same ore characteristics. The ore of Gufen, Wang'ergou and Shuanmazhuang mines is represented by low grade magnetite, content of which is generally less than 30% of the primary ore's total mass. The secondary associated minerals are pyrite, chalcopyrite and pyrrhotite. Hematite and limonite are also found in outcropping ores on the surface with contents between 2% to 4%. Gangue minerals are mostly comprised of plagioclase, quartz, amphibole, biotite and apatite, which account for 75% of the rock mass in the deposit.

Magnetite exhibits subhedral to allotriomorphic grains with diameters varying from 0.02 mm to 0.80 mm. Most ores present in fine granular granoblastic textures and appear in streaked or massive structures. Figure 6–7 shows photomicrographs of thin sections of ore specimens from the Dushancheng region, in which, Photo a shows acicular-shaped hematite ("Hem") distributed between banded biotite ("Bt"); Photo b shows subhedral or allotriomorphic magnetite ("Mag") disseminated between hornblende ("Hbl") and quartz ("Qtz"); Photo c illustrates the banded structure with magnetite ("Mag") and other leucocratic minerals; and Photo d shows granular magnetite ("Mag") distributed between quartz ("Qtz") and biotite ("Bt").

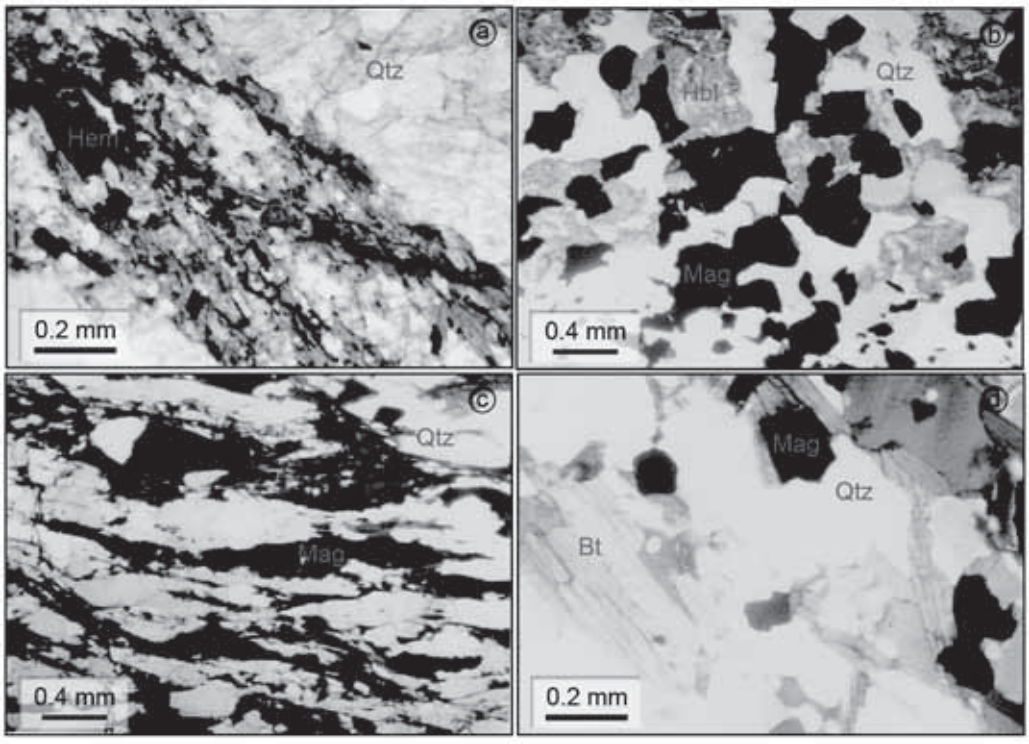


Figure 6–7: Photomicrographs of Magnetite Specimens from the Dushancheng Region

The accompanying useful elements consist of titanium ("Ti", 0.0067% to 0.0120%) and vanadium ("V", 0.23% to 0.39%), which cannot be recovered. The harmful elements are sulphur ("S", 0.12% to 0.20%) and phosphorus ("P", 0.060% to 0.080%), but occur in low enough quantities to be ignored.

6.2 Zhijiazhuang Mine

6.2.1 Regional Geology

The Zhijiazhuang Property is located in the western part of the Wanganzhen complex, the conjunction zone between the Shanxi Province fault-uplift and the Yanshan platform folded belt in the Sino-Korean Paraplatform. Faults and folds are relatively well developed in the region. The Wanganzhen complex includes several dolomite roof pendants and the deposit is situated in the south contact zone of one of the roof pendants with intrusive rocks.

The property is adjacent to Yucheng iron mine in the east and adjoins Dawan zinc-molybdenum mine in the west. The area is recognised as one of the most important metallogenic zone in Taihangshan region.

6.2.2 Local Geology

6.2.2.1 Stratigraphy

Outcrops in the Zhijiazhuang Mine are dominated by altered dolomites of the Middle Proterozoic Gaoyuzhuang Formation (see Figure 6–8). The lower layers of the Gaoyuzhuang Formation consist of moderately-thick grey bedded dolomite with some chert nodules; the upper layers feature grey or dark grey moderately-thick bedded chert-banded dolomite. In addition, Quaternary deposits are widespread over the region.

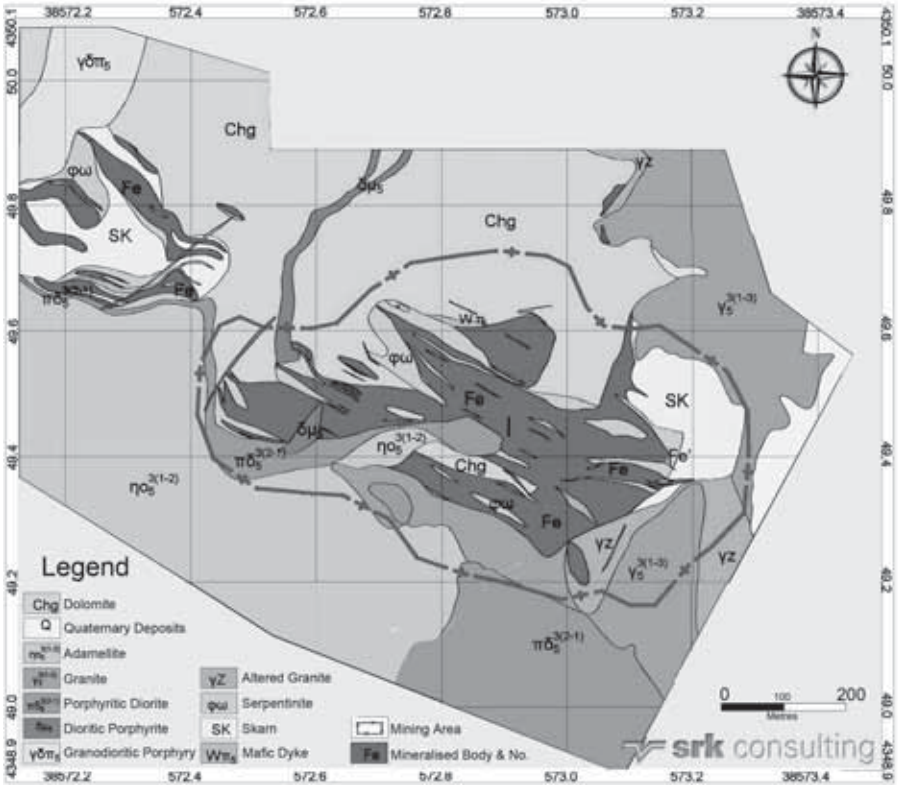


Figure 6–8: Simplified Geological Map of Zhijiazhuang Mine

6.2.2.2 Structure

Folds and faults are well developed in the Zhijiazhuang mining area. The Zhijiazhuang-Qiaomaidi anticline developed in association with a number of subsidiary synclines and anticlines, as a result of the effect of intruding granites from east to west. These north-northeast (NNE) trending folds control the spatial distribution of the iron deposits to a certain extent, by thickening or thinning out mineralised zones in the hinge zones.

The Zhijiazhuang-Qiaomaidi anticline is recognised as the major ore-controlling structure in the area. The axis of the anticline strikes approximately north. Strata on the west limb dip west or northwest with dip angles varying from 10° to 30°. Strata in the east limb dip northeast or east with a dip angle of 30°.

6.2.2.3 Alteration

Alterations such as marbleisation, serpentinization and skarnisation are widely developed in the region. Skarnisation is recognised as a prospecting indicator for magnetite deposits and serpentine skarn is thought to serve as the ore-bearing wall rocks.

6.2.2.4 Intrusion

Igneous rocks outcropping in this region belong to the Yanshanian Wanganzhen complex. Early Yanshanian igneous rocks are the primary source rocks of the iron deposit. The iron element derived from hydrothermal fluids and wall rocks was enriched and deposited during the intrusion of the granite. Igneous rocks in the region consist of adamellite, granite, porphyritic diorite, granodioritic porphyry and dioritic porphyry. Some mafic dykes including diabase, gabbro and amphibolite, strike at 30° to 60° with nearly vertical dip angles and are 2 m to 10 m wide with lengths varying from 40 m to 230 m. These dykes disrupt the mineralised zones but caused generally imperceptible degrees of dislocations.

6.2.3 Mineralised Zone Geology

6.2.3.1 Characteristics of Mineralised Zone

A total of three mineralised zones were defined in the region and numbered 1 through 3. Mineralised zone No. 1 is recognised as the major zone which accounts for nearly 97% of the total Zhijiazhuang resources (Figure 6–9). The occurrence and spatial distribution of the deposit is controlled by the contact metamorphic zones, most of which are lensoidal in shape.

Mineralised zone No. 1 was defined by 21 trenches and 54 drillholes. It is approximately 900 m long, 20 m to 320 m wide and extends for 97 m to 500 m down dip, in a lensoidal shape. This mineralised zone is distributed along the Zhijiazhuang-Qiaomaidi anticline. The western part of the mineralised zone lies in the west limb of the anticline and dips southwest with dip angles varying from 40° to 60°. The eastern part of the zone lies in the east limb of the anticline, dipping northeast with dip angles varying from 40° to 70°.

The other two mineralised zones are relatively small and defined by several drillholes each. In addition, they are both located outside of the Zhijiazhuang mining license area.

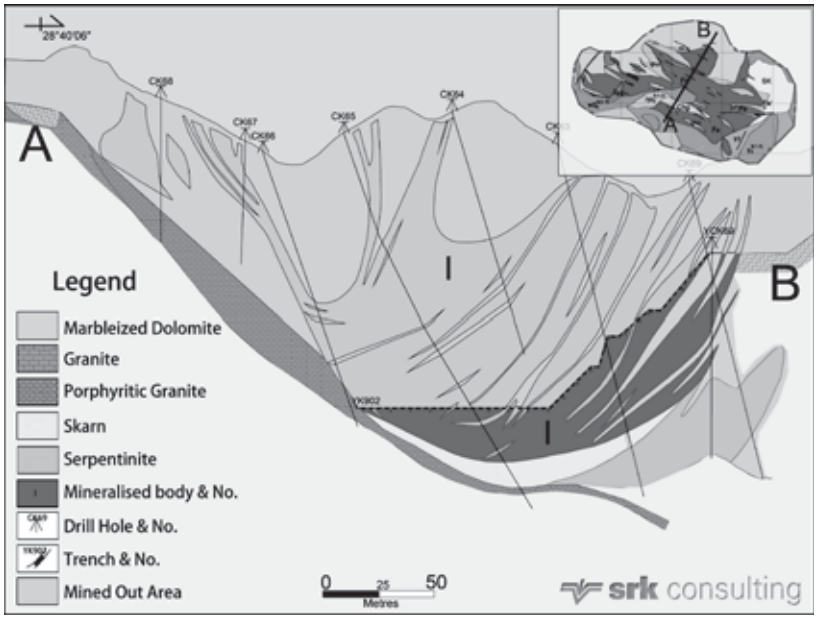


Figure 6–9: Schematic Exploration Section in Zhijiazhuang Mine

6.2.3.2 Ore Mineralogy

The target ore mineral in Zhijiazhuang mine is magnetite, content of which is generally between 30% and 50%. The secondary associated minerals mostly comprise limonite, pyrite and chalcopyrite, with content usually less than 1%. Gangue minerals mostly consist of serpentine and olivine.

Magnetite mostly presents in fine grained, xenomorphic-hypidiomorphic granular or metasomatic relict textures, and appears in banded or taxitic structures associated with less disseminated structures and massive structures.

The accompanying useful minerals consist of cobalt ("Co", with an average grade of 0.005%), copper ("Cu", with an average grade of 0.006%), manganese ("Mn," with an average grade of 0.57%), gallium ("Ga", with an average grade of 0.0005%) and vanadium ("V", 0.01% to 0.001%). None of these minerals can be economically recovered. The harmful elements are sulphur ("S", with an average grade of 0.062%), phosphorus ("P", with an average grade of 0.017%) and arsenic ("As", with an average grade of 0.002%), but these occur in low enough quantities to be ignored.

6.3 Exploration, Sampling, Analytical Procedures, Quality Assurance and Quality Control

Under SRK's supervision, the Baoding Geological and Engineering Exploration Institute ("Baoding Geological Institute") conducted drilling and trenching programs at the Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang deposits from July to September 2011 and from June to July 2012. Figure 6–10 shows the distribution of all drillholes and trenches used for the resource estimates presented in this Report. The following sections summarise the resource data verification and reconciliation for the properties.

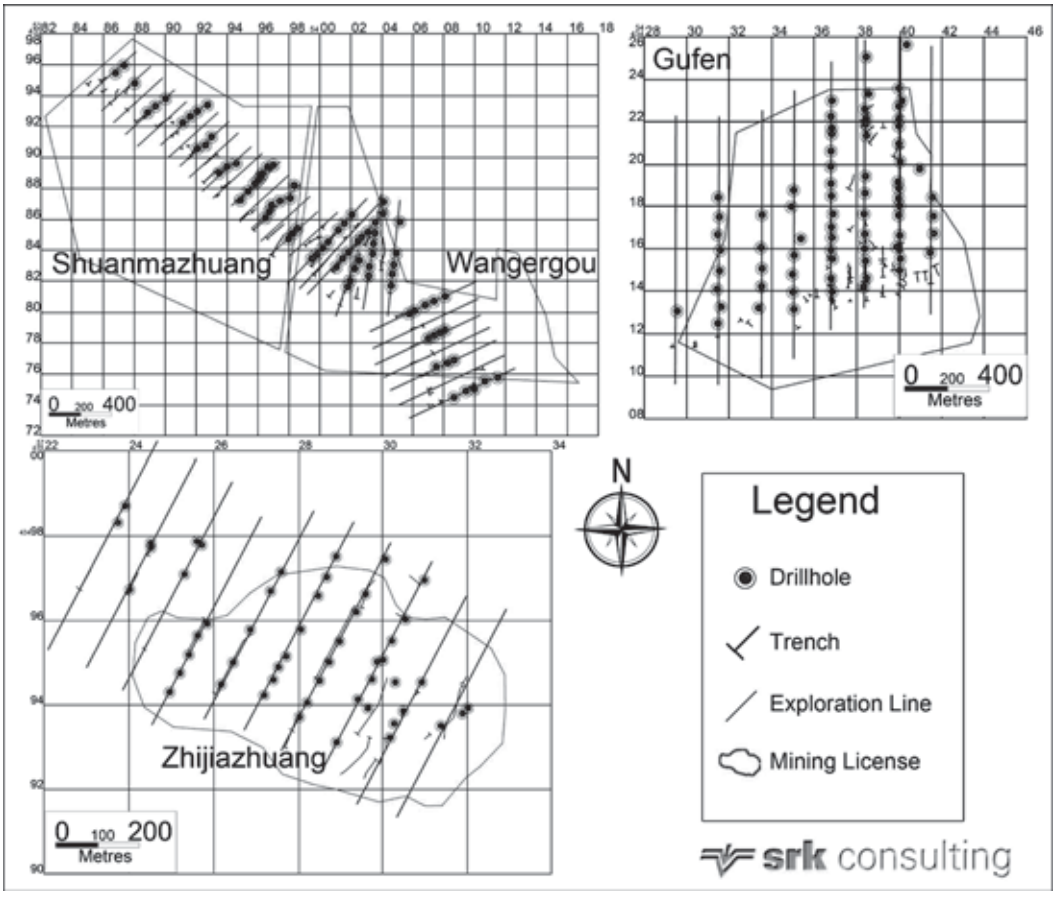


Figure 6–10: Drill Hole Distribution Plan Map

6.3.1 Exploration and Sampling Procedures and Quality Control

As of the end of 2012, a total of 150 trenches and 207 drillholes had been carried out at the four mines. Of these, 65 trenches and 71 drillholes were in the Gufen Property, 33 trenches and 47 drillholes were in the Wang'ergou Property, 31 trenches and 33 drillholes were in the Shuanmazhuang Property and 21 trenches and 56 drillholes were in the Zhijiazhuang Property. The collars of the drill holes were properly surveyed and down-hole surveying was undertaken at minimum 50 m intervals. The drill cores were logged completely. The recovery rates for all cores and for all mineralised drill cores exceeded 95%. Figure 6–11 shows core logging and mineralised core splitting as observed on site in drill cores.

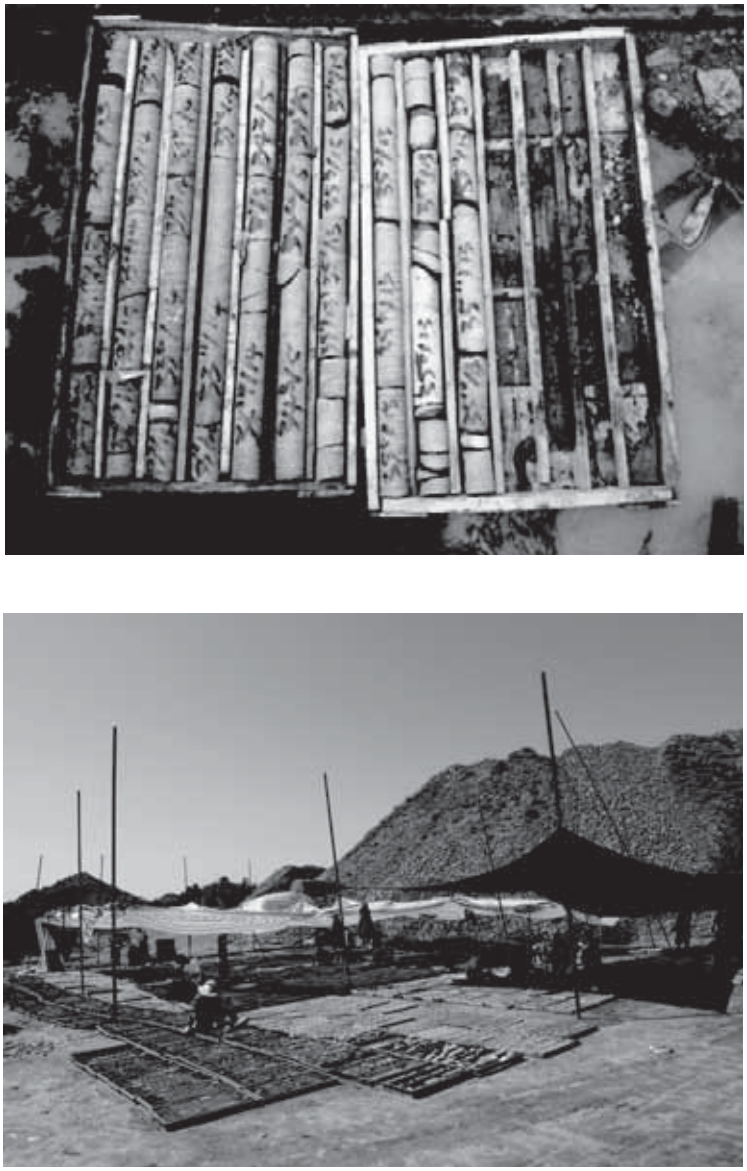


Figure 6–11: Drill Cores with High Recovery Rate (upper) and, On-site Geological Logging and Core Splitting (bottom)

All trenches were arranged along exploration lines. The bottom of each trench was 0.8 m wide and tops were 1.2 m wide.

Samples were taken from drill cores by splitting along the core axis. Trench samples were collected from fresh rocks in the floor of trenches by channelling. The channel section size was about 10 cm long by 3 cm wide. Sample intervals were marked by geologists and ranged from 1 m to 3 m in length. Sample intervals of 2 m are most common in drillhole cores and sample intervals of 2 m to 3 m are more common in trench samples. Wall rocks and ore were sampled separately. Upon completion of each hole/trench, preliminary logging was carried out by a geologist to record various aspects including weathering, texture, lithology, alteration and structure. After logging, the core was stored in core trays and each core tray was digitally photographed before being transported to core shed for storage. Core trays were clearly marked with box and hole numbers and the start and end depths. Further details of each run were also recorded on a paper chart and kept in a sealed plastic envelope inside the tray. The trench samples were directly bagged and labelled for sample processing and analysis.

6.3.2 Analytical Procedures and Quality Control

6.3.2.1 Sample Preparation and Analysis

A total of 19,614 samples from the four deposits were collected and utilised for resource estimate, of which 2,698 samples from 11 trenches and 32 drillholes in Zhijiazhuang deposit, which were prepared and analysed by the Laboratory of the Laiyuan Geological Brigade ("Laiyuan Brigade"), part of the Hebei Office of Ministry of Geology. The remaining 16,916 samples were processed and analysed by the Baoding Mineral Resource Supervision and Testing Centre of the Ministry of Land and Resources ("Baoding Testing Centre").

Samples were first crushed to 1 mm. The crushed samples were then divided into four portions using a quartering approach in which the two portions diagonally opposite each other were taken for further processing while the other half of the samples was kept as a spare (coarse reject). Following crushing the samples were pulverised to –200 mesh (0.074 mm). A 30 gram ("g") charge was then taken for assay and the remains of the pulverised material were stored in the laboratories. Total iron ("TFe") and magnetic iron ("mFe") were assayed using dichromate titration and mFe was manually separated using strong magnet.

6.3.2.2 Control Sample Insertion

Samples were divided into 100 sample batches that each included 10 QA/QC samples, consisting of two types of certified reference materials ("CRM") including high grade and low grade materials, two blanks, two core duplicates, two coarse rejects and two pulp duplicates. Additionally, five (5) out of every 100 samples were randomly chosen and sent to a third independent laboratory for the external check. A total of 2,102 QA/QC samples were inserted, consisting of 924 external check samples, 238 CRMs, 237 blanks, 236 core duplicates, 234 coarse rejects, and 233 pulp duplicates.

6.3.2.3 CRM

The certified standards for magnetite were purchased from the Chinese National Institute of Metrology. CRM performance is considered acceptable, and the assay process well-controlled, if at least 90% of the results fall within ±10% of the accepted value. As shown in Figure 6–12, only one (1) sample out of the 238 assayed CRMs (with a disqualification rate of 0.4%) fell outside of the control limits. There is no indication of systematic assaying problems in the TFe and mFe analysis.

6.3.2.4 Blank

A total of 237 blank samples were submitted for analysis. The results are all within the control limit for the blank material assays, with all TFe and mFe grades assayed less than 0.5% (Figure 6–13). The results of blank samples suggest that there neither considerable nor systematic contamination occurred during sample preparation.

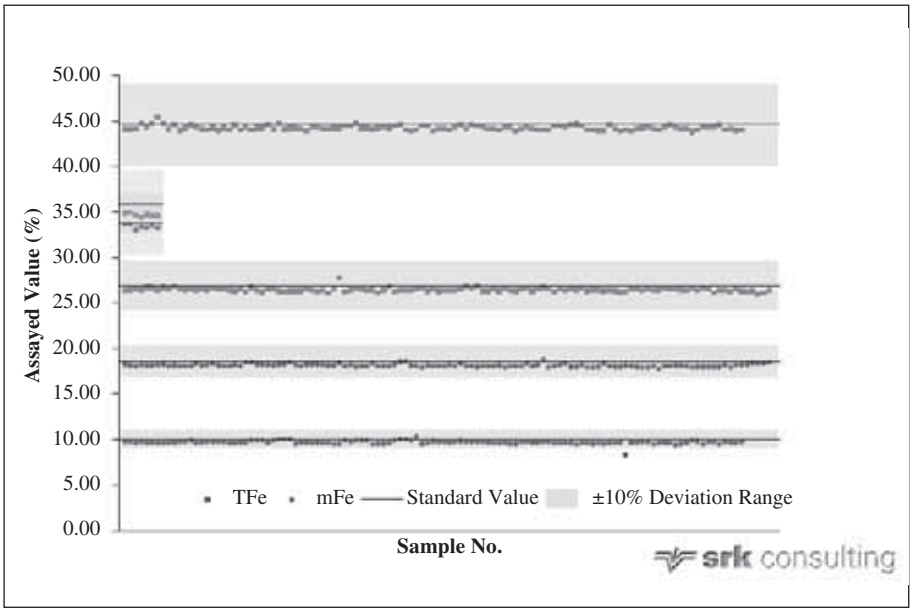


Figure 6–12: CRM Performance

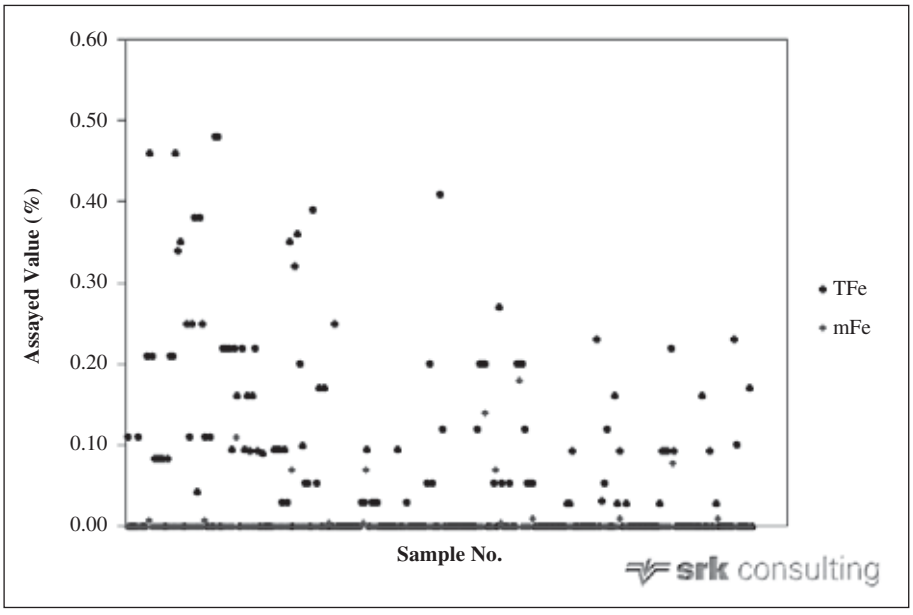
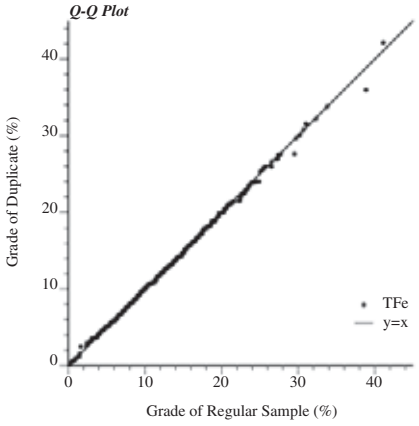
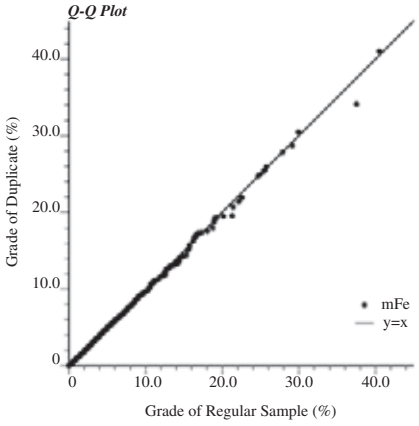


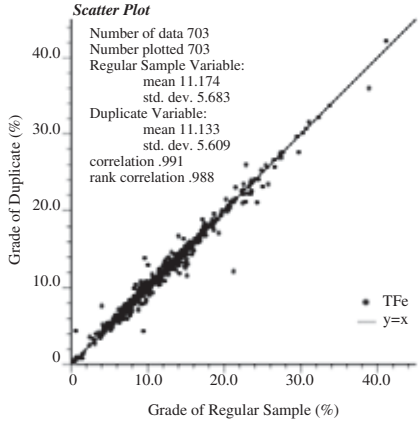
Figure 6–13: Blank Performance for TFe and mFe results

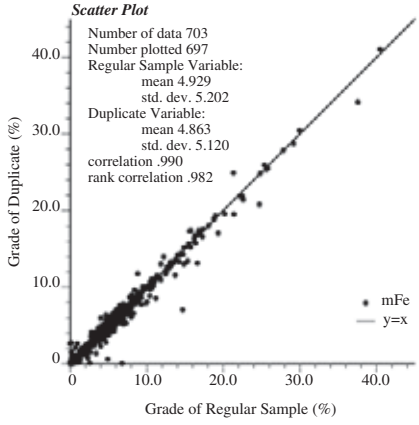
6.3.2.5 Duplicates

Duplicate samples, including core duplicates, coarse rejects and pulps, were inserted into each batch of regular samples during the assaying procedure to ensure the quality of the assay. SRK completed a repeatability analysis of the regular samples and duplicates, as shown in Figure 6–14. The duplicates display good correspondence with the regular samples, with only a small number of samples returning relatively large deviations. The assays are considered accurately repeatable.









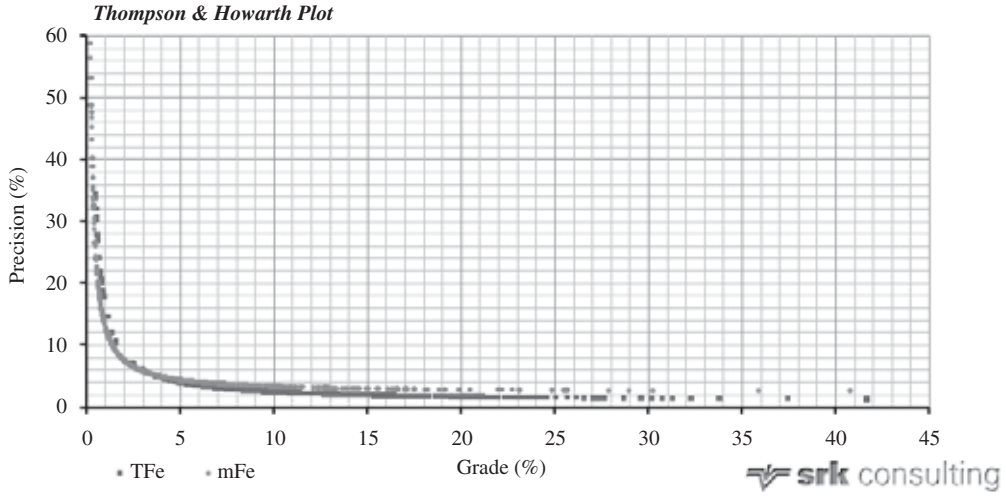


Figure 6–14: Duplicate Performance

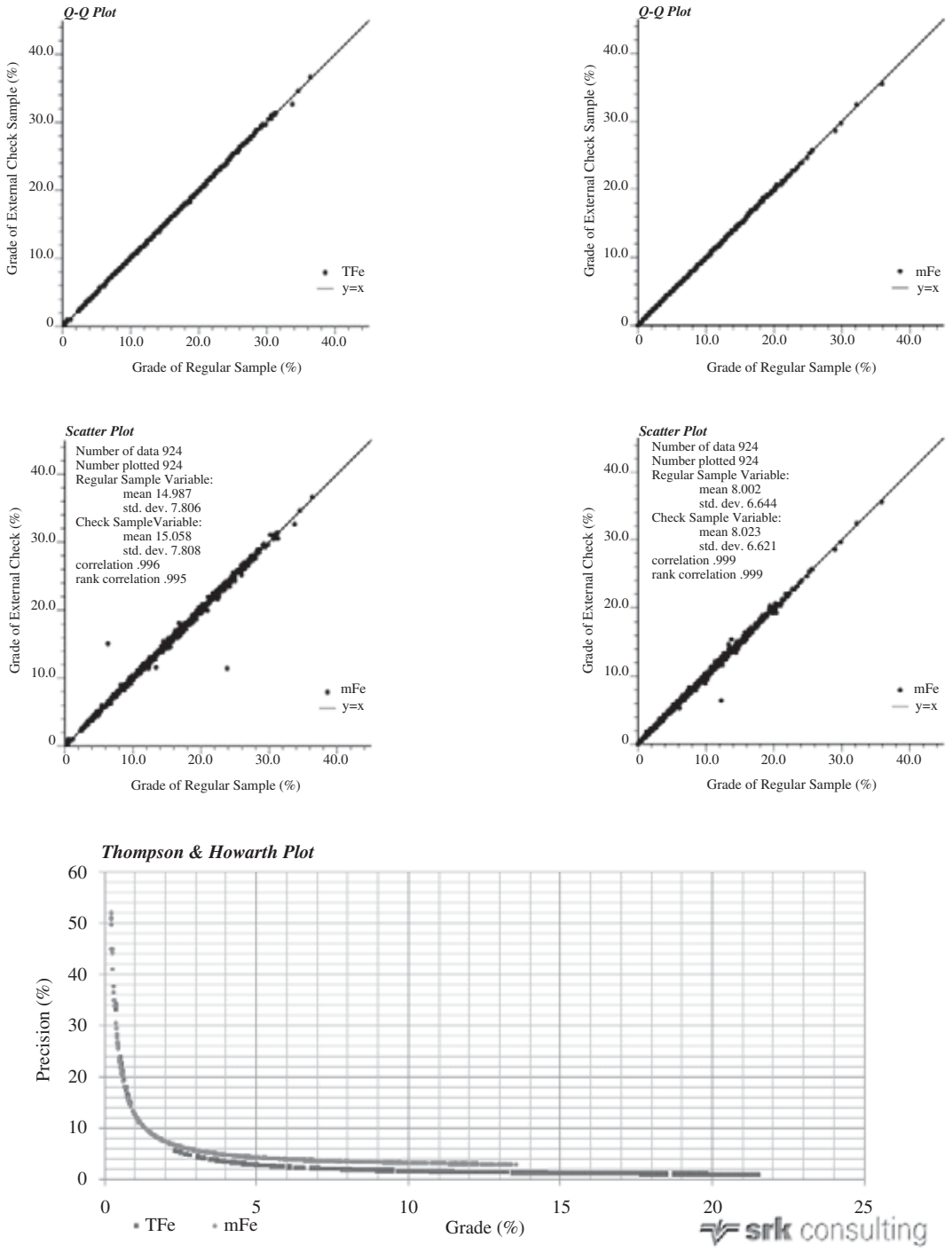


Figure 6–15: External Check Sample Performance

6.3.2.6 External Sample Performance

External checks of the primary assay were performed by Inner Mongolia Minerals Experimental Research Institute and Testing Centre of the China Metallurgical Geology Bureau No. 1 ("IMMERI") on approximately 5% of the total samples. SRK compared the resulting data with the regular sample tests; the results are shown in Figure 6–15. The external checks indicate a strong correspondence with regular samples, with only a small number of samples returning relatively large deviations. The repeatability of the assay conducted by the Baoding Testing Centre is considered excellent.

6.3.2.7 Bulk Density Sample Analysis

A total of 178 bulk density samples were collected from various ore bodies and locations in the four mining areas, and were measured by the Baoding Testing Centre for ore density. Scatter diagrams for the sample's bulk density versus TFe grade in the four mines are shown in Figure 6–16. Overall, there is an upward trend of density as the TFe grade increases. For the Gufen, Wang'ergou and Shuanmazhuang properties, the trends are relatively gradual and the densities mostly concentrate in the range from 2.9 grams per cubic centimetre ("g/cm^3") to 3.4 g/cm^3. The average densities for the Gufen, Wang'ergou and Shuanmazhuang deposits are 3.08 g/cm^3, 3.10 g/cm^3, and 3.18 g/cm^3 respectively. For the Zhijiazhuang property, the trend is swifter and the density varies from 3.0 g/cm^3 to 4.5 g/cm^3 as the TFe grade changes, with an average density of 3.55 g/cm^3.

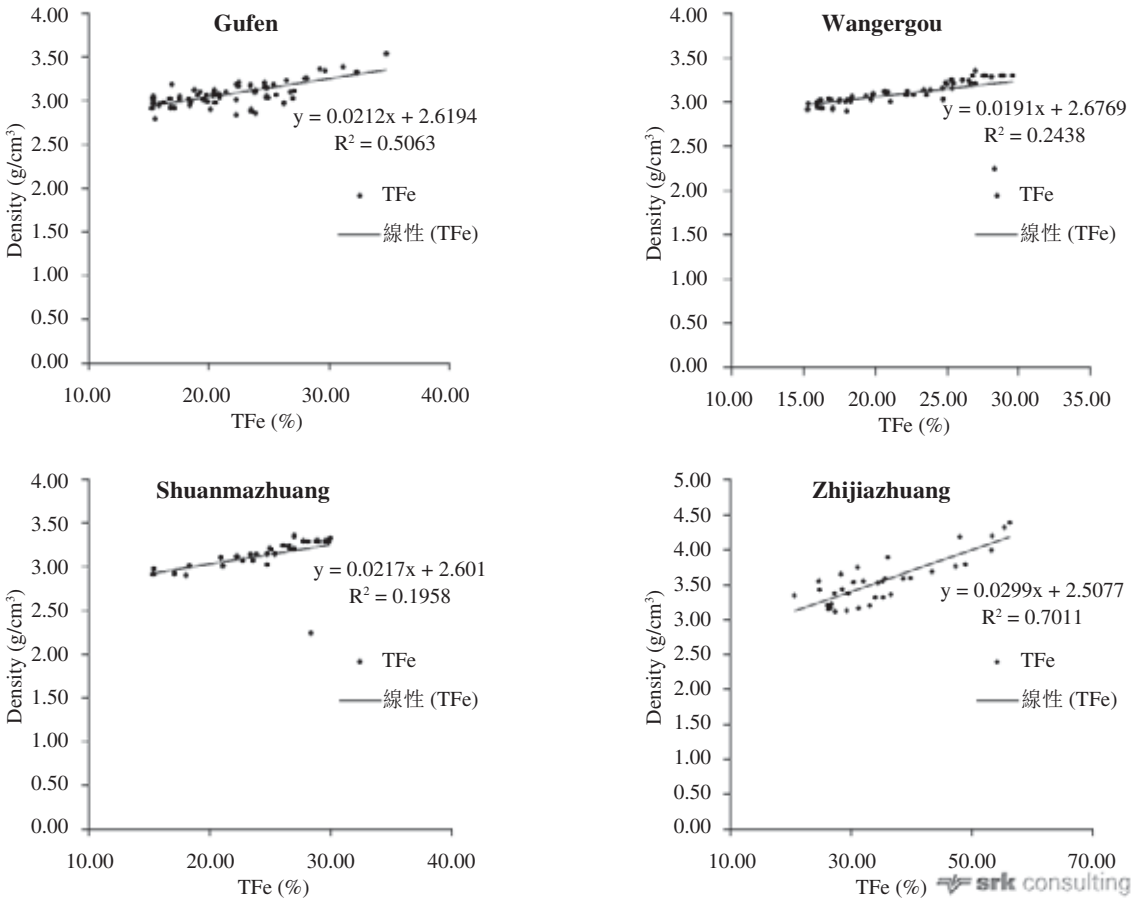


Figure 6–16: Scatter Diagrams for Bulk Density vs. Grade of TFe

In general, SRK is satisfied with the quality and result of the sample preparation and assay performed by the Baoding Testing Centre and is confident that the primary sample results are suitably reliable for use in resource estimation.

6.4 Resource Estimation under the JORC Code

6.4.1 Introduction

The Mineral Resource Statement presented herein represents the Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang mineral resource evaluations prepared for the Aowei Project in accordance with the 2004 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code").

This section describes the resource estimation methodology and summarizes the key assumptions considered by SRK. In SRK's opinion, the resource evaluation reported herein is a reasonable representation of the global iron mineral resources found in the Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang Mines at the current level of sampling. The mineral resources are reported in accordance with the JORC Code.

The project limits are based on the Beijing Geodetic Coordinate System 1954 ("BJS54"). The database used to estimate the mineral resources was audited by SRK. SRK is of the opinion that the current drilling information is sufficiently reliable to interpret with confidence the boundaries for mineralisation and that the assay data are sufficiently reliable to support mineral resource estimation.

Surpac Version 6.1 was used to construct the geological solids, prepare assay data for geostatistical analysis, construct the block model, estimate metal grades and tabulate mineral resources. The Geostatistical Software Library ("GSLib") family of software and Excel were used for geostatistical analysis.

6.4.2 Resource Database

The drillhole database used for the resource estimation consists of 150 trenches and 207 core holes. Of these, 65 trenches and 71 drillholes are in the Gufen Property, 33 trenches and 47 drillholes are in the Wang'ergou Property, 31 trenches and 33 drillholes are in the Shuanmazhuang Property and 21 trenches and 56 drillholes are in the Zhijiazhuang Property. A total of 5,262 intervals were sampled at Gufen Mine, representing 10,251 m of sampled drilling and channelling; 6,629 intervals were sampled at Wang'ergou Mine, representing 13,456 m of sampled drilling and channelling; 4,087 intervals were sampled at Shuanmazhuang Mine, representing 8,073 m of sampled drilling and channelling; and 3,636 intervals were sampled in Zhijiazhuang Mine, representing 6,607 m of sampled drilling and channelling. Each interval contains assays for TFe and mFe. Drillhole collars for the holes and trenches used in this estimate are shown in Figure 6–10.

All drilling data as well as the digital topographic surface have been provided to SRK in the BJS54 coordinate system and resource modelling and grade estimation work was conducted in this coordinate space.

Wireframe digital terrain models ("DTM") of the surface topographies of the four mines were modelled by SRK based on the contour maps provided by the Customer. A visual comparison between the trenches/drillhole collars and the topographies shows very good agreement in most areas, and SRK considers that the topographic maps covering the deposits as provided by the Customer are appropriate for use in the resource estimation.

6.4.3 Solid Modeling

Mineralised zones were modelled by SRK based on cross-sectional interpretations. A total of nine (9) mineralised zones at Gufen Mine, 12 mineralised zones at Wang'ergou Mine, eight (8) mineralised zones at Shuanmazhuang Mine and three (3) mineralised zones at Zhijiazhuang Mine were modelled and their 3-dimensional ("3D") views are shown in Figure 6–17. A cut-off grade of 8% TFe was used for boundary interpretations. For the four mines, the minimum mineable thickness is 1 m with a maximum allowed band thickness of 1 m.

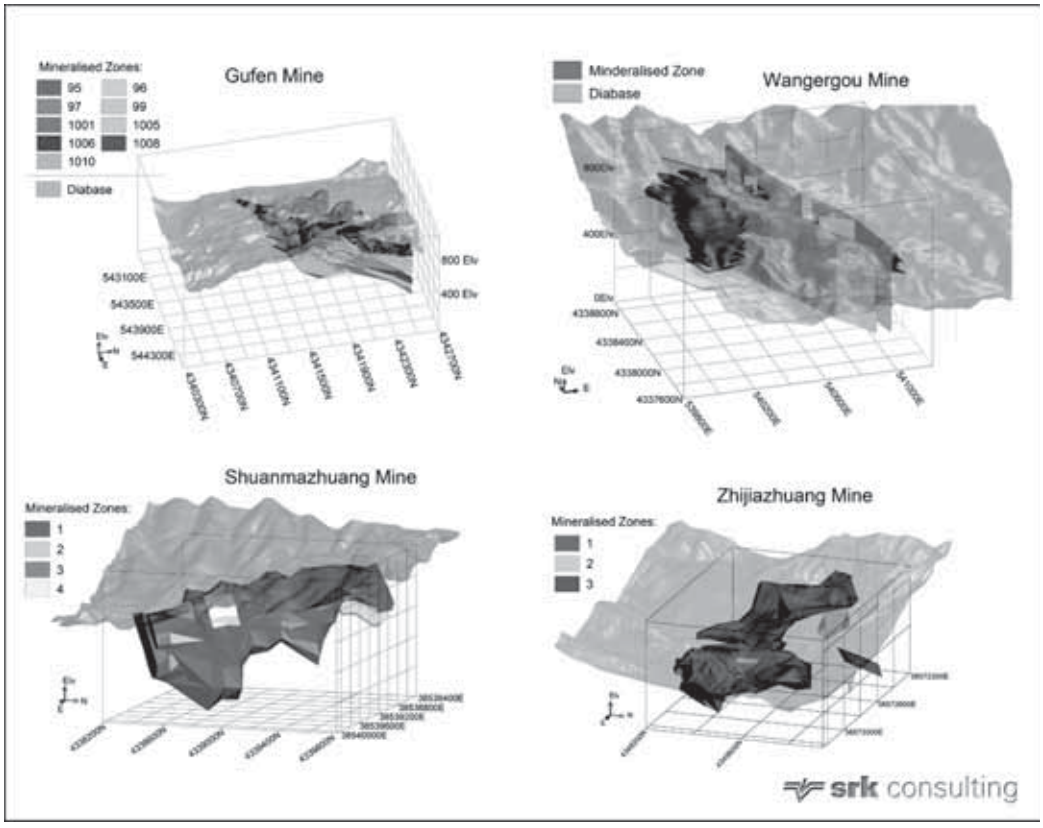


Figure 6–17: Three-Dimensional View of Mineralised Zones in Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang Mines

6.4.4 Compositing

The cumulative probability plots for TFe and mFe are provided in Figure 6–18 and Figure 6–19, respectively. No assay cap was applied for the four deposits and composites were created at 2 m down-hole intervals, broken at zone boundaries, as the majority of the core lengths were 2 m.

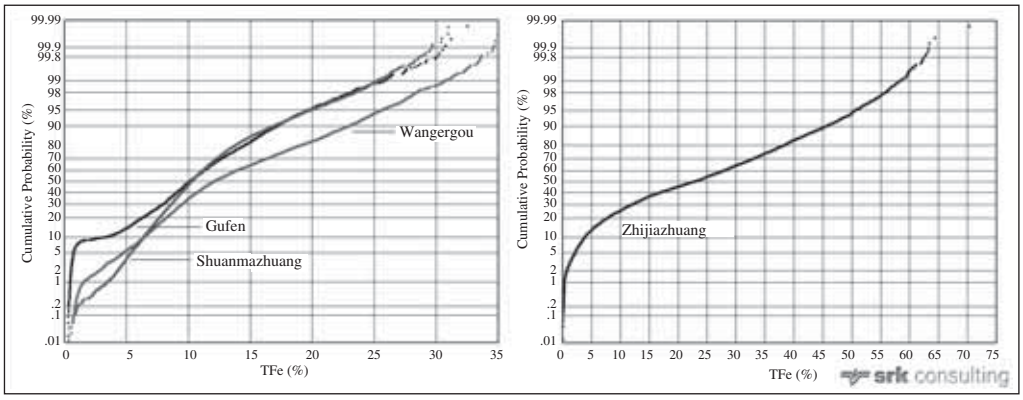


Figure 6–18: Cumulative Probability Plot for TFe in Four Mines

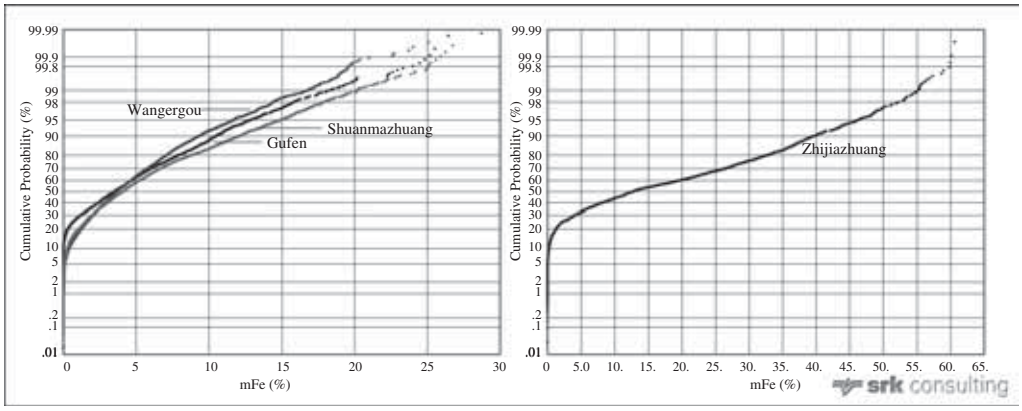


Figure 6–19: Cumulative Probability Plot for mFe in Four Mines

6.4.5 Statistical Analysis

The histograms of the composited TFe data from Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang Mines are displayed in Figure 6–20. Histogram analysis indicates that the distributions of TFe composites in Gufen, Wang'ergou and Shuanmazhuang deposits all approach normality, while the distribution of TFe in Zhijiazhuang deposit approach log normality.

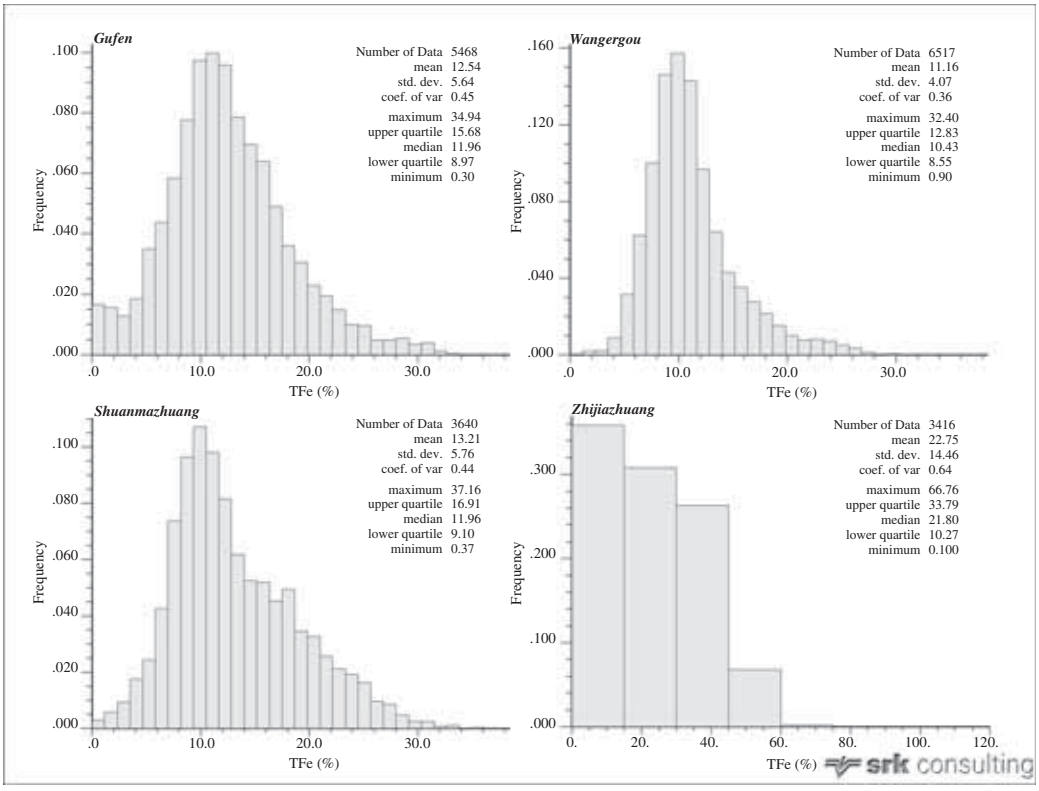


Figure 6–20: Frequency Distribution Histograms for TFe in Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang Mines

6.4.6 Block Model and Grade Estimation

Grade estimations for Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang Mines were done using inverse-distance squared ("IDS") method for all mineralised zones. The maximum and minimum numbers of composites used for grade estimation were 15 and 3, respectively. In all cases two passes were used for block estimation, controlled by a search ellipsoid with attitudes adjusted for each mineralised body. The search radius and ellipsoid parameters used for each deposit are listed in Table 6–1. The coordinate extents of the block model in each property are represented in Table 6–2.

Table 6–1: Search Parameters Used for Grade Estimation

	Search Radius (m)		Major/	
Property	1st pass	2nd pass	Semi-Major	Major/ Minor
Gufen	200	400	1	4
Wang'ergou	150	300	1.2	1.5
Shuanmazhuang	200	400	2	4
Zhijiazhuang	100	200	1.5	2

An average bulk density of 3.08 g/cm^3 was used for the purposes of reporting resources and reserves for Gufen deposit; similarly, average bulk densities of 3.10 g/cm^3 and 3.18 g/cm^3 were used for Wang'ergou and Shuanmazhuang deposits, respectively. For Zhijiazhuang deposit, the used bulk density varies as the TFe grade changes, as detailed in Table 6–3.

Table 6–2: Coordinate Extents of Block Model in each Property

Mine	Coordinate	Min	Max	Block Size
Gufen	Northing	4340404.56	4342604.56	20
	Easting	38542804.36	38544404.36	20
	Elevation	120.00	1020.00	10
Wang'ergou Part 1	Northing	4338090.00	4338730.00	8
	Easting	38539820.00	38540540.00	8
	Elevation	400.00	900.00	4
Wang'ergou Part 2	Northing	4337450.00	4338150.00	8
	Easting	38540400.00	38541040.00	8
	Elevation	400.00	860.00	4
Wang'ergou Part 3	Northing	4337380.00	4338620.00	8
	Easting	38539940.00	38540940.00	8
	Elevation	240.00	840.00	4

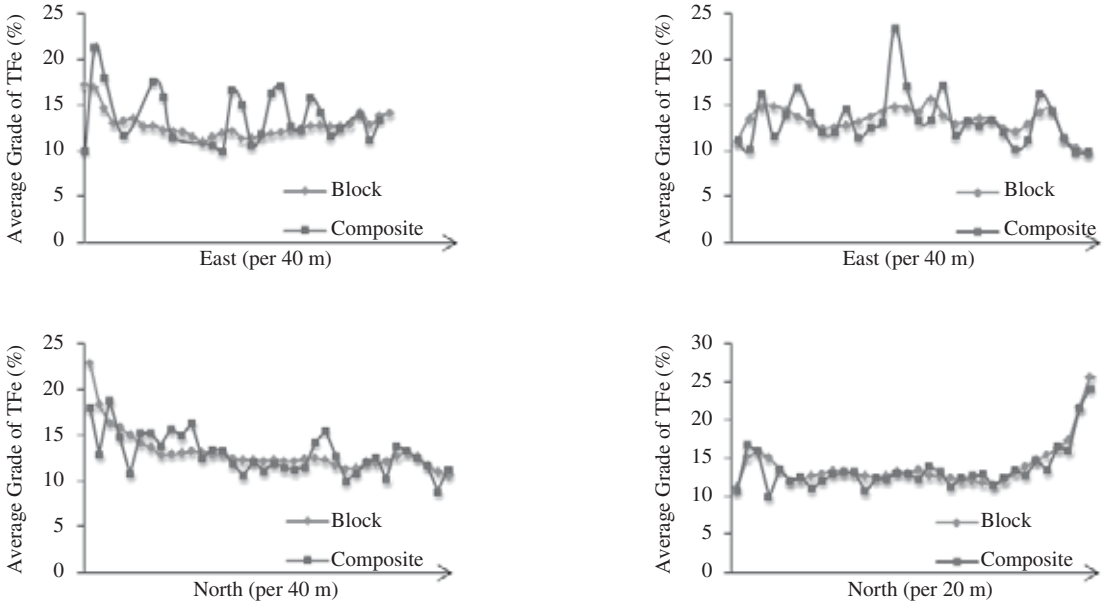
Mine	Coordinate	Min	Max	Block Size
Shuanmazhuang	Northing	4338340.00	4339660.00	30
	Easting	38538500.00	38539924.00	30
	Elevation	400.00	860.00	10
Zhijiazhuang	Northing	4349200.00	4349750.00	4
	Easting	38572400.00	38573300.00	4
	Elevation	820.00	1240.00	4

Table 6–3: Bulk Densities Chosen for Zhijiazhuang Mine

TFe Grade	Density
	(g/cm³)
8%≤TFe<20%	3.08
20%≤TFe<30%	3.32
30%≤TFe<40%	3.55
TFe≥40%	3.98

6.4.7 Model Validation

Swaths plot of TFe were implemented in three orthogonal directions (north, east and vertical) for all mines to validate the resultant block models, as shown in Figure 6–21 and Figure 6–22. The block models and composites match reasonably well in all orthogonal directions. This comparison shows close agreement between the block models and composites in terms of overall distribution as a function of X, Y and Z locations.



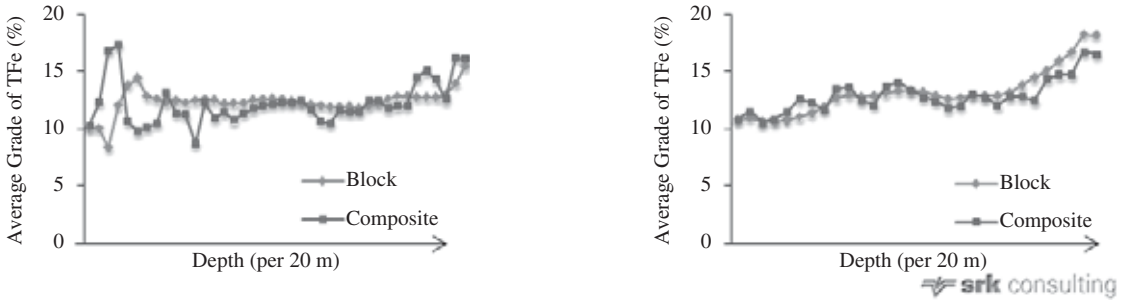


Figure 6–21: Swath Plots of Gufen (left) and Wang'ergou (right) Mines

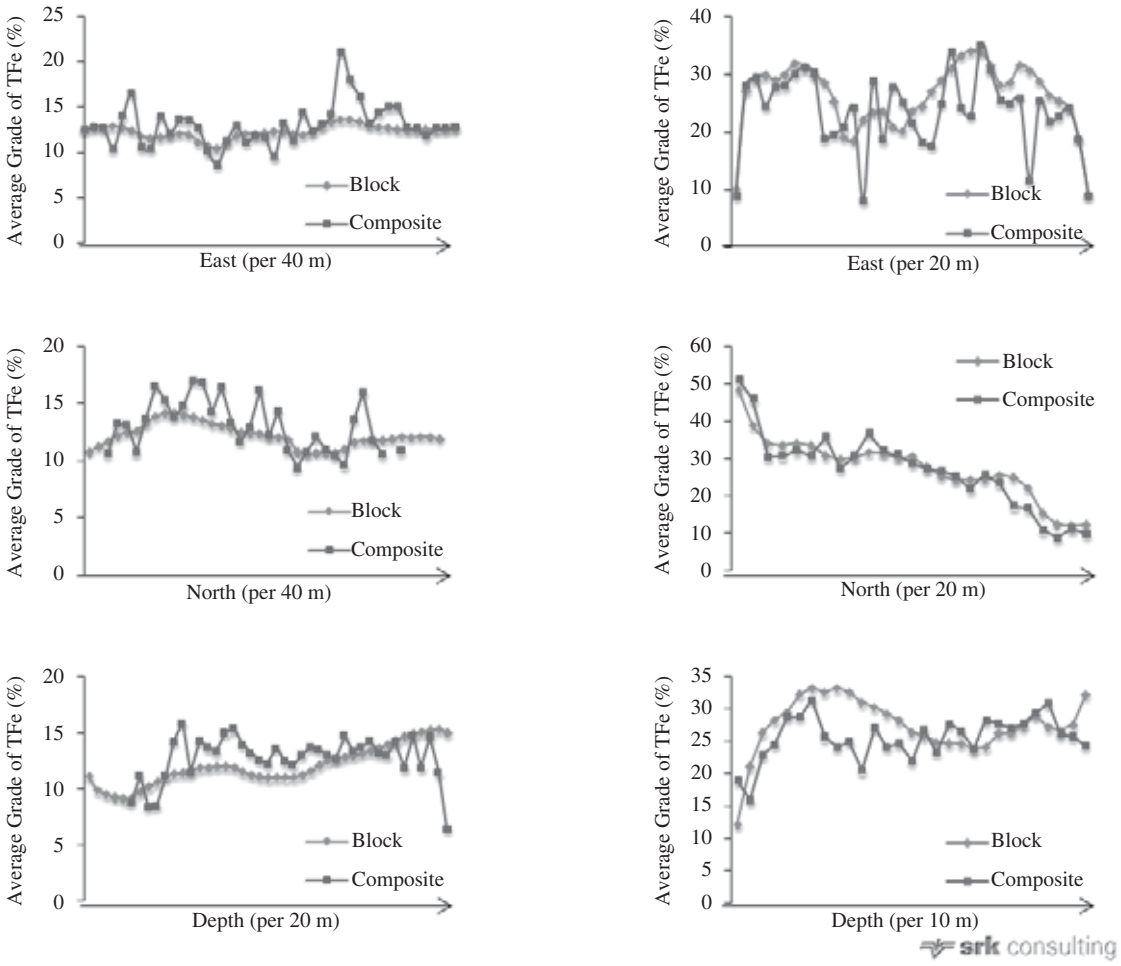


Figure 6–22: Swath Plots of Shuanmazhuang (left) and Zhijiazhuang (right) Mines

6.4.8 Mineral Resource Classification

Block model quantities and grade estimates for the Aowei Project were classified according to the JORC Code. Mineral resource classification is typically a subjective concept; industry best practices suggest that resource classification should consider both the level of confidence in the geological continuity of the mineralized structures and the quality and quantity of exploration data supporting the estimates and the geostatistical confidence in the tonnage and grade estimates. Appropriate classification criteria should aim at integrating both concepts to delineate regular areas at similar resource classification.

SRK is satisfied that the geological modelling presented in this report honours the current geological information and knowledge. The locations of the samples and the assay data are sufficiently reliable to support resource evaluation. The sampling information was acquired primarily by core drilling and trenching on sections spaced 200 m apart for Gufen, Wang'ergou and Shuanmazhuang Mines and 100 m apart for Zhijiazhuang Mine.

Generally, for main mineralised zones exhibiting good geological continuity investigated at an adequate spacing with reliable sampling information accurately located, SRK considers that blocks estimated within an exploration grid of 200 m × 200 m in Gufen, Wang'ergou, and Shuanmazhuang Mines, or within an exploration grid of 100 m × 100 m in Zhijiazhuang Mine, can be classified as Indicated Resources as defined in the JORC Code. For those blocks, SRK considers that the level of confidence is sufficient to allow appropriate application of technical and economic parameters to support mine planning and to allow evaluation of the economic viability of the deposit. Conversely, other blocks beyond the grid in the main mineralised zones and all blocks in the small mineralised zones should be classified as Inferred Resources, because the confidence in the estimate is insufficient to allow for the meaningful application of technical and economic parameters or to enable an evaluation of economic viability.

6.4.9 Mineral Resources and Competent Person Statement

In general, the Mineral Resources of the Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang Properties as estimated according to the JORC Code are calculated based on a TFe cut-off grade of 8%. The information in this report which relates to Mineral Resources is based on information compiled by Mr Yuanjia Zhu and Dr Yiefei Jia, full time employees of SRK Consulting (China) Ltd and Members of the Australasian Institute of Mining and Metallurgy. They have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources, and Ore Reserves". Mr Zhu and Dr Jia consent to the reporting of this information in the form and context in which it appears.

6.4.9.1 Gufen Mine

As of August 31, 2011, the Gufen deposit, under a cut-off grade of 8% TFe, was estimated to contain 161.88 Mt of Indicated Resource at average grades of 13.25% TFe and 6.53% mFe; and 101.10 Mt of Inferred Resource at average grades of 12.44% TFe and 6.03% mFe as shown in Table 6–4.

Table 6–4: Estimated Resources at Gufen Mine, as of August 31, 2011

	Indicated			Inferred		
Zone	**Tonnage**	**TFe**	**mFe**	**Tonnage**	**TFe**	**mFe**
	('000t)	***(%)***	***(%)***	***('000t)***	***(%)***	***(%)***
97	50,021	13.59	6.54	13,839	13.59	6.39
96	54,411	14.08	6.94	14,293	13.17	6.02
99	135	9.80	3.80	8,227	10.86	4.91
1008	15,092	12.36	5.80	15,750	12.09	5.08
1001	7,970	13.30	6.87	3,616	13.73	6.87
1005	9,015	12.03	6.23	12,550	12.52	7.16
1006	18,282	11.35	5.89	19,165	11.55	5.96
95	2,031	12.45	6.11	3,702	11.84	5.59
1010	4,921	12.94	6.86	9,957	12.98	6.53
Total	161,878	13.25	6.53	101,100	12.44	6.03

Based on the monthly mining records, a total of 3,122,508 t of Probable Reserves at average grades of 13.50% TFe and 6.79% mFe were mined out from September 1, 2011 to June 30, 2013. On the basis of mining loss rate of 3%, dilution rate of 3% and waste mixed rate of 4%, a total of 3,090,317 t of Indicated Resources at average grades of 13.92% TFe and 7.00% mFe were consumed by the end of June 2013. The remaining Indicated Resource and Inferred Resource at Gufen Mine were 158.79 Mt at average grades of 13.24% TFe and 6.53% mFe, and 101.10 Mt at average grades of 12.44% TFe and 6.03% mFe, respectively as of June 30, 2013.

6.4.9.2 Wang'ergou Mine

As of August 31, 2011, the Wang'ergou deposit, under a cut-off grade of 8% TFe, was estimated to contain 79.36 Mt of Indicated Resource at average grades of 13.82% TFe and 6.40% mFe; and 39.25 Mt of Inferred Resource at average grades of 13.03% TFe and 5.85% mFe (see Table 6–5).

Table 6–5: Estimated Resources at Wang'ergou Mine, as of August 31, 2011

	Indicated			Inferred		
Zone	Tonnage	TFe	mFe	Tonnage	TFe	mFe
	('000t)	*(%)*	*(%)*	*('000t)*	*(%)*	*(%)*
1	11,548	17.52	7.01	2,577	14.97	6.12
2	9,449	12.85	6.34	8,485	12.64	6.31
3	769	12.33	5.79	1,267	13.25	5.82
4	5,707	12.85	4.79	7,035	12.58	4.82
5				404	12.82	5.55
6	10,991	13.49	6.43	3,804	13.29	6.38
7	7,590	12.53	5.07	1,316	12.28	5.38
8				1,083	11.61	4.95
9				343	11.65	5.03
10	3,564	12.77	6.00	2,054	13.12	6.04
11	29,740	13.49	6.88	10,545	13.36	6.10
12				337	11.93	5.13
Total	79,358	13.82	6.40	39,250	13.03	5.85

Based on the monthly mining records, a total of 2,956,664 t of Probable Reserves at average grades of 13.57% TFe and 5.90% mFe were mined out from September 1, 2011 to June 30, 2013. On the basis of mining loss rate of 3%, dilution rate of 3% and waste mixed rate of 4%, a total of 2,926,183 t of Indicated Resources at average grades of 13.99% TFe and 6.08% mFe were consumed by the end of June 2013. The remaining Indicated Resource and Inferred Resource at Wang'ergou Mine were 76.43 Mt at average grades of 13.81% TFe and 6.41% mFe, and 39.25 Mt at average grades of 13.03% TFe and 5.85% mFe, respectively as of June 30, 2013.

6.4.9.3 Shuanmazhuang Mine

As of August 31, 2011, the Shuanmazhuang deposit, under a cut-off grade of 8% TFe, was estimated to contain 157.14 Mt of Indicated Resource at average grades of 13.98% TFe and 5.74% mFe; and 73.94 Mt of Inferred Resource at average grades of 12.81% TFe and 4.92% mFe (see Table 6–6).

Table 6–6: Estimated Resources at Shuanmazhuang Mine, as of August 31, 2011

	Indicated			Inferred		
Zone	**Tonnage**	**TFe**	**mFe**	**Tonnage**	**TFe**	**mFe**
	('000t)	*(%)*	*(%)*	*('000t)*	*(%)*	*(%)*
1	153,676	14.03	5.58	69,011	12.98	5.05
2				144	9.16	2.73
3				182	9.83	3.09
4	3,462	11.62	3.97	3,422	10.51	3.17
5				279	9.22	3.31
6				16	8.19	2.69
7				520	10.75	2.99
8				361	10.51	2.67
Total	157,137	13.98	5.74	73,935	12.81	4.92

Based on the monthly mining records, a total of 1,859,358 t of Probable Reserves at average grades of 13.42% TFe and 5.84% mFe were mined out from September 1, 2011 to June 30, 2013. On the basis of mining loss rate of 3%, dilution rate of 3% and waste mixed rate of 4%, a total of 1,840,190 t of Indicated Resources at average grades of 13.83% TFe and 6.03% mFe were consumed by the end of June 2013. As of June 30, 2013, the remaining Indicated Resource and Inferred Resource at Shuanmazhuang Mine were 155.30 Mt at average grades of 13.98% TFe and 5.73% mFe, and 73.94 Mt at average grades of 12.81% TFe and 4.92% mFe, respectively.

6.4.9.4 Zhijiazhuang Mine

As of August 31, 2011, the Zhijiazhuang deposit, under a cut-off grade of 8% TFe, was estimated contain 26.24 Mt of Indicated Resource at average grades of 25.48% TFe and 24.27% mFe; and 9. 43 Mt of Inferred Resource at average grades of 27.58% TFe and 25.82% mFe (see Table 6–7).

Table 6–7: Estimated Resources at Zhijiazhuang Mine, as of August 31, 2011

	Indicated			Inferred		
Zone	**Tonnage**	**TFe**	**mFe**	**Tonnage**	**TFe**	**mFe**
	('000t)	*(%)*	*(%)*	*('000t)*	*(%)*	*(%)*
1	25,424	25.83	24.63	8,920	28.16	26.39
2	591	12.92	11.19	76	17.44	15.95
3	221	19.29	17.83	430	17.32	15.82
Total	26,236	25.48	24.27	9,426	27.58	25.82

Based on the monthly mining records, a total of 3,205,896 t of Probable Reserves at average grades of 24.12% TFe and 22.59% mFe were mined out from September 1, 2011 to June 30, 2013. On the basis of mining loss rate of 3%, dilution rate of 3% and waste mixed rate of 4%, a total of 3,172,845 t of Indicated Resources at average grades of 24.86% TFe and 23.29% mFe were consumed by the end of June 2013. As of June 30, 2013, the remaining Indicated Resource and Inferred Resource at Zhijiazhuang Mine were 23.06 Mt at average grades of 25.57% TFe and 24.40% mFe, and 9.43 Mt at average grades of 27.58% TFe and 25.82% mFe, respectively.

6.4.10 Grade Sensitivity Analysis

The cut-off grade was selected based on the data gained from the feasibility study report. The cut-off grade mostly depends on the market price of the iron concentrate, followed by the operating costs and the processing recovery rates. Giving the relatively good mining conditions and easy and simple mineral separation process at the four mines and having considered the average price of iron concentrate in China in the last three years, the Company's mining and processing methodologies, mining and processing capacity and equipment, costs of production as well as parameters from operating iron mines with similar geology in this region cited from the feasibility study, SRK believes the cut-off grade of 8% TFe is reasonable. Table 6–8 lists the parameters used for the estimation of cut-off grade. The following formula was applied by SRK to calculate the cut-off grade:

$$G = \frac{(MC+PC+GC)\cdot CG}{P\cdot PR\cdot(1-STR)\cdot(1-MD)}$$

The cut-off grade is sensitive to the selection of the iron concentrate price. Consequently, the tonnages and grades of the mineral resources of the Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang Mines are sensitive to the selection of the reporting cut-off grade. To illustrate this sensitivity, a global grade and tonnage table is presented in Table 6–9. The reader is cautioned that the figures presented in this table should not be mistaken for a Mineral Resource Statement. The figures in Table 6–9 are only presented to show the sensitivity of the block model estimates to the choice of cut-off grade. Figure 6–23 presents this sensitivity as grade tonnage curves for the Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang mines.

Table 6–8: Assumptions Used for Cut-Off-Grade Calculation

Parameter	Value	Unit
Iron Concentrate Price (P)	900	RMB per tonne
Concentrate Grade (CG)	66	percent
Sale Tax Rate (STR)	17	percent
Mining Cost (MC)	17.85	RMB per tonne of ore
Processing Cost (PC)	16.61	RMB per tonne of ore
General and Administration Cost (GC)	3.4	RMB per tonne of ore
Mining Dilution (MD)	3.0	percent
Processing Recovery Rate (PR)	43.3	percent
In Situ Cut-Off-Grade (G)	8.00	percent

Table 6–9: Global Grade-Tonnage Table*, as of June 30, 2013

			Indicated Resource			Inferred Resource		
Company	Mine	Cut-offs	Resource	TFe	mFe	Resource	TFe	mFe
		(TFe%)	*(1,000t)*	*(%)*	*(%)*	*(1,000t)*	*(%)*	*(%)*
Xinxin Mining	Gufen Mine	**8**	**158,788**	**13.24**	**6.53**	**101,100**	**12.44**	**6.03**
		10	138,326	13.83	7.00	83,903	13.10	6.60
		12	91,102	15.29	8.13	54,207	14.23	7.51
		15	42,254	17.56	9.91	13,492	17.07	9.82
		20	5,304	22.20	14.39	1,328	21.89	13.71
Jingyuancheng Mining	Wang'ergou Mine	**8**	**76,432**	**13.81**	**6.41**	**39,250**	**13.03**	**5.85**
		10	66,080	14.60	7.30	37,118	14.08	6.66
		12	46,854	15.75	8.16	19,570	15.38	8.06
		15	25,215	17.81	10.28	7,318	17.74	10.07
		20	4,803	21.78	13.55	1,697	21.66	13.39
Jingyuancheng Mining	Shuanmazhuang Mine	**8**	**155,297**	**13.98**	**5.73**	**73,935**	**12.81**	**4.92**
		10	133,712	14.75	5.97	55,173	14.07	5.65
		12	100,448	16.00	6.64	36,635	15.70	6.54
		15	58,997	17.84	7.76	20,072	17.49	7.35
		20	7,839	21.72	9.62	2,826	21.25	8.45
Jiheng Mining	Zhijiazhuang Mine	**8**	**23,064**	**25.57**	**24.40**	**9,426**	**27.58**	**25.82**
		10	21,081	27.13	26.02	9,096	28.26	26.44
		12	19,317	28.62	27.48	8,657	29.13	26.99
		15	17,746	29.97	28.61	7,932	30.57	27.99
		20	15,194	32.06	30.25	6,620	33.14	29.82
		25	14,669	32.42	30.13	6,272	33.65	29.99

* The reader is cautioned that the figures in this table should not be misconstrued as a Mineral Resource Statement. The figures are only presented to show the sensitivity of the block model estimates to the choice of cut-off grade.

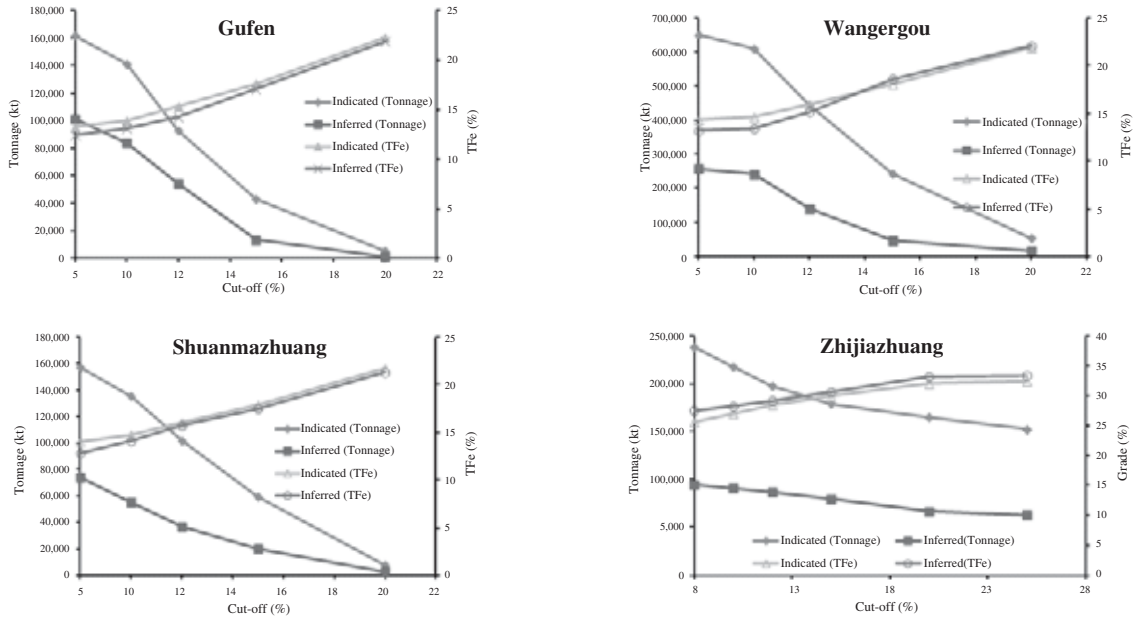


Figure 6–23: Grade Tonnage Curves for the Four Mines

6.5 Exploration and Mining History

6.5.1 Gufen, Wang'ergou and Shuanmazhuang Mines

Historical explorations in the Dushancheng iron area (including the Gufen, Wang'ergou and Shuanmazhuang regions) began in 1954. Between 1954 and 1979, a series of geological and geophysical exploration activities were conducted in this area by several geological brigades, including the No. 244 Brigade of the North China Geological Bureau, the No. 8 Geological Brigade of Hebei Province and the No. 6 Geological Brigade of Hebei Province Geology and Mineral Bureau.

From 1998 to 2002, the Baoding Geological Institute conducted a geological prospecting in the area. In 2005, the Handan Branch of the Geological Exploration Institute of China Metallurgical Geology Bureau No. 1 conducted geological prospecting in the region and in 2008 they conducted general exploration.

6.5.2 Zhijiazhuang Mine

From 1953 to 1955, the Nos. 101, 224 and 225 Brigades of the North China Geological Bureau conducted a series of geological exploration activities in the Zhijiazhuang area. In 1958, the Laiyuan Brigade submitted a detailed exploration report of Zhijiazhuang iron deposit in which a total of 45.84 Mt were estimated resources in Chinese Categories B and C1.

6.6 Exploration Potential

The geological characteristics of the Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang deposits have been investigated competently and studied by a number of geological brigades and institutes. The occurrence and spatial distribution of the major mineralised zones are also suitably controlled by the exploration grid of the channelling and drilling and well interpreted. In addition, major features that affect the mineral distribution, such as faults, folds, intrusions and shear zones, were logged and interpreted competently. Considering all of the above, SRK still recommends infill drilling in all four mines because it is expected to lead to an upgrade in the resource categories. As the current resources are not completely closed off down-dip in Gufen, Wang'ergou and Shuanmazhuang deposits, SRK suggests additional step out drilling to extend the current resource base. As there is evidence of iron mineralisation surrounding the main mineralised zones of Zhijiazhuang, more drilling programs around the mineralisation anomaly are recommended which may increase the resource tonnages.

7 MINING ASSESSMENT

7.1 General Information

Open-pit mining is currently used at the Gufen, Shuanmazhuang, Wang'ergou and Zhijiazhuang mines. In 2012, as by products during stripping, mining development and mining stope preparation, a total of 1.17 Mt ore from Gufen Mine; 1.67 Mt ore from Shuanmazhuang Mine and Wang'ergou Mine; and 0.97 Mt ore from Zhijiazhuang Mine were extracted at a cut-off grade of 8% TFe, respectively. During the first half of 2013, a total of 1.49 Mt ore from Gufen Mine; 2.57 Mt ore from Shuanmazhuang Mine and Wang'ergou Mine; and 1.59 Mt ore from Zhijiazhuang Mine were extracted at a cut-off grade of 8% TFe, respectively.

In keeping with Chinese legislative requirements for mineral resource integration in Hebei province, Aowei Mining produced a plan of the production capacities and overall layouts of Xinxin Mining, Jingyuancheng Mining and Jiheng Mining and commissioned Sinosteel Ma'anshan Engineering Investigations and Design Co., Ltd ("Sinosteel") to compile the *Feasibility Study on the Construction Project of Laiyuan Aowei Mining Investment Co., Limited* ("FS"). Properties operated by Xinxin Mining and Jingyuancheng Mining are proposed to be mined in two stages: open-pit mining in stage 1 and underground mining in stage 2; a property operated by Jiheng Mining is proposed to be mined by open-pit.

Based on currently available ore reserves and the production capacities of the existing and proposed dry processing plants, the proposed production schedule is as follows:

- Gufen Mine: 5 million tonnes per year ("Mtpa") in stage 1 and 4 Mtpa in stage 2;
- Wang'ergou Mine and Shuanmazhuang Mine (cumulative totals): 14 Mtpa in stage 1 and 3 Mtpa in stage 2; and
- Zhijiazhuang Mine: 2.4 Mtpa.

The proposed development methods, mining methods and main technical parameters given in the FS are shown in Table 7–1.

Table 7–1: Mine General Information and Main Technical Parameters

Item	Unit	Xinxin Mining	Jingyuancheng Mining	Jiheng Mining
Open-pit Mining				
Capacity	1,000tpa	5,000	14,000	2,400
Life of Mine	Year	13	12	10
Development		Road–truck	Road–truck	Road–truck
Highest Mining level	m	1,016	1,152	1,200
Pit Bottom Level	m	608	600	880
Closed Level	m	815	768	1080
Upper Pit Size (Length × Width)	m	1,030×780	3,100×720	900×600
Pit Bottom Size (Length × Width)	m	460 × 245	1,030 × 150	130 × 50
Bench Height	m	12	12	10
Bench Width	m	8 to 15	8 to 15	8
Bench Slope	°	65	65	
Final Slope Angle	°	45–49	45–49	<50
Stripping Ratio	t/t	1.49	1.16	1.50
Average Grade of Extracted Ore (TFe)	%	12.83	13.50	27.11
Ore Loss Rate	%	3	3	3
Dilution Rate	%	3	3	3
Underground Mining				
Capacity	1,000tpa	4,000	3,000	
Life of Mine	Year	14	17	
Development		Shaft – Decline	Adit + Shaft – Decline	
Level Height	m	120	120	
Mining Level	mRl	700, 580, 460, 340	820, 700, 580, 460	
Mining Method		Sublevel caving	Sublevel caving	
Average Grade of Extracted Ore (TFe)	%	15.35	15.96	
Ore Loss Rate	%	20	20	
Dilution Rate	%	7	7	

Note: The life of mine estimate has included the production expansion years.

SRK opines that the feasibility study of the three mines produced by Sinosteel satisfies the basic requirements for a professional feasibility study and the mining design meets the minimum quality requirements as well. Considering that the LOMs of the properties operated by Xinxin Mining and Jingyuancheng Mining for open-pit mining are each more than 10 years and significant changes are likely to occur in both the mines and the iron market over the next decade and a new design for underground mining may be needed.

7.2 Mining Conditions

7.2.1 Geotechnical Conditions

7.2.1.1 Geotechnical Conditions in Dushancheng Mining Area

Gufen Mine, operated by Xinxin Mining, and Wang'ergou and Shuanmazhuang Mines, operated by Jingyuancheng Mining, are part of Dushancheng iron mining area and present similar conditions in mineralization genesis, ore type and structure. In 2011, Shuanmazhuang Mine was merged into Jingyuancheng Mining as a response to Hebei government's call for mineral resource consolidation. Gufen mine, Wang'ergou Mine and Shuanmazhuang Mine have similar geotechnical and hydrogeological conditions.

Based on the historical geotechnical investigation, the Dushancheng mining area is classified into three engineering geological groups.

- Hard mass igneous rock group: based on the borehole engineering geological logging data, the rock quality designation ("RQD") value of the weathering zone generally ranges from 6% to 8%, and the RQD value of the zone beneath generally ranges from 28% to 98%. The quality index of rock mass ranges between 0.023 and 0.368 and the average is 0.196, which indicates that the rock quality is moderate. The results of physical mechanical and hydro-physical analysis on borehole core samples returned a water absorption rate of 0.06% to 0.08%, water content of 0.02% to 0.05%, compressive strength of 87.0% to 177.5 Megapascals ("Mpa"), and an anti-shear strength of 9.43% to 21.6 MPa. The results indicate that most of the igneous rock is hard rock.

- Hard to semi-hard mass metamorphic rock group: based on the borehole engineering geological logging data, the RQD value of the weathering zone generally ranges between 0 and 59%, and the RQD value of the zone beneath generally ranges between 35% and 80%. The quality index of rock mass ranges between 0.165 and 0.376, and the average is 0.271, which indicates that the rock quality is moderate. The results of physical mechanical and hydro-physical analysis on borehole core samples indicate a water absorption rate of 0.17%, water content of 0.12%, compressive strength of 112.6 MPa, and anti-shear strength of 17.4 MPa. The results indicate that the vein rock is not impacted by the structure and most of the metamorphic rock is hard to semi-hard rock.

- Loose soft rock group: this group is represented by layers of alluvial sandy gravel, deluvial gravel, and accumulated slag gravel; it is 0.5–110 m thick and is characterised by an unconsolidated rock stratum with loose structure and poor stability.

Iron ore bodies in the Dushancheng area are widely distributed and buried deeply. The topographic conditions are simple and good for natural drainage. The stratum is characterized by simple lithology and geological structure; the boundaries between most of the ore bodies and wall rocks are clear; most of the rock occurs in massive structures; weathering intensity is low to moderate; rock strength at depth is high and stable. In general, the Dushancheng mining area comprises bedded rock deposits with simple engineering geological conditions.

7.2.1.2 Geotechnical Conditions in Zhijiazhuang Iron Mine

Most of the wall rock is hard dolomite and igneous rock; folds and fractures are developed locally; the rock is not badly broken except in the floor of the ore body within the contact zone of the igneous rock and ore body, which should be noted during mining activities; the ore is magnetic iron ore with a compact texture, in moderate to coarse sizes and compact structures in massive and stripped shapes; and the hardness coefficient of ore and wall rock is f = 8 to 12; and the boundaries between most of the ore bodies and wall rocks are clear.

7.2.2 Hydrogeological Conditions

7.2.2.1 Hydrogeological Conditions in Dushancheng Mining Area

Based on available information, Dushancheng mining area is characterized by a continental semiarid climate zone with four distinctive seasons. The annual average temperature is +12.6°C, with summer highs reaching 42.4°C and winter lows dropping to -20°C. The annual average rainfall is 556 mm, about 70%–80% of which falls between July and September. The annual evaporation is 2170 mm. The frozen period lasts for 75 days on average, from December to the following March, and winter lasts from October to March. The maximum depth of frozen earth is 53 cm.

Tanghe River is the largest nearby surface water body. Approximately 2.8 km of the Tanghe River flow through the mining area in a cut 80–200 m in width, with an erosion base level of 530 m. Several seasonal streams, such as Baidao'an stream, Zhangkoushicai stream, and Xiaoqiao stream are distributed approximately northeast to southwest on both sides of Tanghe River, and temporary torrential flood pour into Tanghe River during the rainy season. These seasonal streams are 7.61 to 4.3 km in length, 45 to 240 m wide, and have an erosion base level of about 560 m to 790 m. The mining area is mainly located northwest of Baidao'an stream, whose catchment area within this region is 14.07 km^2.

According to the available geological exploration report, the groundwater is classified into two types based on the conditions of their occurrence: quaternary loose rock pore water and igneous rock/metamorphic rock fissure water.

The quaternary pore aquifer zone is distributed around the Tanghe River and the main streambed of Baidao'an stream. Most of this aquifer is composed of a gravel layer with a general width from 2.2 m to 10.5 m. The groundwater is 0.3 m to 3.5 m below the surface. According to the available water supply data, the water inflow is about 30 to 90 cubic metres per day ("m^3/d").

The igneous rock/metamorphic rock fissure water aquifer is distributed in the north central part of the license area. Based on borehole intersection data, the fissure zone is about 25 to 55 m deep, and the upper part is an intensely weathered zone 15 to 45 m wide. The groundwater level varies with the topology. Based on limited borehole water inflow observation, the water inflow rate is approximately 0.281 litres per second ("L/s").

Groundwater in the deposit area is recharged only by rainfall. Due to the limited amount of rainfall and the integrity of the deep metamorphic rock, surface water does not pose significant impacts on the water recharge rate in the deep aquifers.

7.2.2.2 Hydro-geological Conditions in Zhijiazhuang Mine

The mine is at high altitude with steep terrain. The lowest altitude is 1,004 m ASL and the highest altitude is 1,312 m ASL, with an altitude difference of 308 m. The mine area is characterized by low to moderate hills and slopes downward from south to north.

Xiaodonghe River, 2 km away from the mining area, is the main surface water system. It cuts through the Qiaomaidi ore body east of the Zhijiazhuang Mine, flows through Zhijiazhuang and neighbouring Dongjiazhuang mine, and converges with other rivers to flow into Jumahe River. The Xiaodonghe River is quite narrow in its upstream bed. It flows from its source, at an elevation of 1,350 m ASL, through the Qiaomaidi eastern ore body, at an elevation of 1,030 m, with a downward slope of 16%. The normal water flow is 1.9 to 172.0 L/s, and increases dramatically to 10 cubic metres per second ("m^3/s") in the rainy season when the water level rises by 1.5 m to 2 m. Floods last 24 hours at most. Diversion engineering on the Xiaodonghe River has been completed.

Groundwater and surface water are only recharged by rainfall. Although rain falls heavily during the rainy season, groundwater is not significantly affected by local rainfall due to its steep terrain, poor surface permeability and good surface runoff conditions.

The main aquifer is a dolomite fissure aquifer, whose yield is greatly reduced due to the fact that large fractures and fissures are filled with various veins. No karst is developed locally.

Most of the ore body, which occurs at the elevation of 827.65 m to 1,243.37 m, is above the local base of erosion at 940 m. This was verified by a pumping test on two boreholes, which indicated that there is no close hydraulic relationship between groundwater and surface water and that the local hydrogeological conditions are quite simple.

7.2.3 Geological Resource

Based on available geological exploration reports, Gufen Mine, Shuanmazhuang Mine, and Wang'ergou Mine are metamorphosed sedimentary iron mines, and Zhijiazhuang Mine is a skarn-type iron deposit. Magnetic ore is the main ore mineral for the four iron mines.

A total of nine (9) ore bodies have been delineated in Gufen Mine. Mineralised bodies No. 96, No. 97, No. 1006 and No. 1008 are the main ore bodies; the remaining six are small and most were intersected by only a single borehole.

A total of eight (8) ore bodies have been delineated in Shuanmazhuang iron mine, numbered 1 through 8. The No. 1 ore body is the main and largest body; the others are small and most were intersected by only a single borehole.

A total of 12 ore bodies were identified in the Wang'ergou iron mine and numbered 1 through 12. Mineralised zones No. 1, No. 2, and No. 11 are recognised as the major ore bodies; the others are small and most were intersected by only a single borehole.

Ore body 1 is the main ore body of Zhijiazhuang iron mine and occurs in the east and west wings of Zhijiazhuang-Qiaomaidi anticline. The Zhijiazhuang iron deposit was divided into three blocks including the Qiaomaidi eastern block, the Qiaomaidi western block and Zhijiazhuang northern block. The Zhijiazhuang iron mine owns the Qiaomaidi eastern block which accounts for most of the total resource. In addition, the Qiaomaidi western block and the Zhijiazhuang northern block are covered by five mining licenses which are owned by other mining companies. The characteristics of the main ore bodies are shown in Table 7–2.

Table 7–2: Characteristics of Main Ore Bodies

Mine (Block)	No.	Occurrence level	Strike length	Extension length	Dip angle	Orebody width	Average grade (%) TFe	Average grade (%) mFe	Indicated Resource
		(m)	*(m)*	*(m)*		*(m)*			*(1,000t)*
Gufen.	96	145 to 910	927	1,200	27	5 to 90	14.08	6.94	54,411
	97	120 to 830	1,050	1,350	26	10 to 80	13.57	6.52	49,252
	1006	240 to 864	387	1,120	26	10 to 90	11.35	5.89	18,282
	1008	240 to 867	377	1,140	28	8 to 70	12.36	5.80	15,092
Shuanmazhuang .	1	300 to 1,087	1,720	670	52	10 to 120	14.04	5.59	152,951
	1	531 to 875	527	455	49	10 to 60	17.56	7.02	10,062
Wang'ergou . . .	2	473 to 866	700	508	50	12 to 52	12.85	6.34	9,449
	11	430 to 870	835	667	50	11 to 50	13.51	6.89	22,729
Zhijiazhuang . . .	1	847 to 1,132	900	500	53	20 to 320	27.08	25.96	23,122

The ore bodies listed in Table 7–2 are the main ore bodies currently being exploited by open-pit mining. Large scale open-pit mining is appropriate because of the quantity of resources and because the upper parts of the resources are shallowly buried. SRK notes that some ore bodies which are of comparatively small scale and buried much deeper are not included in the feasibility study produced by Sinosteel. For a better use of the resource, SRK suggests that the Company consider mining the small ore bodies adjacent to the main ore bodies listed in the above table.

7.3 Ore Reserves

Sinosteel optimized the open-pit limits of Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang mines based on the resource block model provided by SRK. The optimized limit parameters are shown in Table 7–1 and the open-pit limit model is shown in Figure 7–1.

Based on the open-pit limit model and the parameters listed in Table 7–1 and benchmarking against similar project, the JORC Code compliant Ore Reserves were estimated with cut-off grades of 8% TFe for open-pit mining and 12% TFe for underground mining at the four iron mines. Table 7–3 lists a summary of the estimated Probable Ore Reserves of the four mines, as of June 30, 2013.

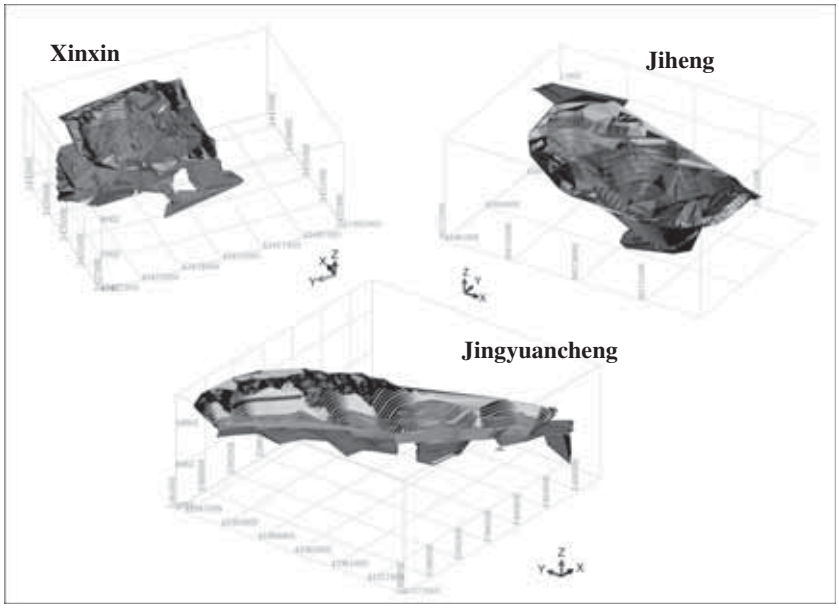


Figure 7–1: Open-pit Model Designed in the Feasibility Study

Table 7–3: Estimated Ore Reserves of the Four Mines, as of June 30, 2013

Company	Mine	Mining Method	Category	Ore Reserve	TFe	MFe
				('000t)	*(%)*	*(%)*
Xinxin Mining	Gufen	Open-pit	Probable	56,103	12.82	6.31
		Underground	Probable	58,750	15.35	8.50
		Subtotal	Probable	114,853	14.11	7.43
Jingyuancheng Mining.	Wang'ergou	Open-pit	Probable	45,145	13.39	6.23
		Underground	Probable	18,077	15.87	8.50
		Subtotal	Probable	63,222	14.10	6.88
Jingyuancheng Mining.	Shuanmazhuang	Open-pit	Probable	93,199	13.56	5.56
		Underground	Probable	35,723	16.00	7.11
		Subtotal	Probable	128,922	14.24	5.99
Jiheng Mining	Zhijiazhuang	Open-pit	Probable	19,794	27.16	25.93
		Subtotal	Probable	19,794	27.16	25.93
Total		Open-pit	Probable	214,241	14.59	7.78
		Underground	Probable	112,550	15.64	8.06
		Open-pit +Underground	Probable	326,791	14.95	7.88

The information in this report which relates to Ore Reserves is based on information compiled by Mr Huang, a full time employee of SRK Consulting China Ltd who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Huang has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Huang consents to the reporting of this information in the form and context in which it appears.

According to JORC Code, only Measured and Indicated Resource are convertible to Reserve and the Measured Resource is usually convertible to Proved Reserve while the Indicated Resource is convertible to Probable Reserve. Based on the geological exploration results and the technical parameters designed in the feasibility study, SRK estimated the Ore Reserves of all the mines operated by Aowei Mining and concludes that in terms of available Ore Reserves, Gufen, Wang'ergou and Shuanmazhuang mines are large-scale mines whether the open-pit or underground mining method is used and Zhijiazhuang mine is a medium-scale mine.

SRK notes that Gufen, Wang'ergou, Shuanmazhuang and Zhijiazhuang mines still have potential for further exploration to identify more geological resources and reserves because the mineralisation at these mines are open at depth.

SRK has been informed that some of the mineralisation with lower degrees of exploration and grades below cut-off grade of 8% has previously been mined, which is called "weakly mineralised wall rock" by the Company, although they are not accounted for in the ore reserves as this would not comply with JORC Code. However, SRK is of the opinion that it is reasonable to make use of the mineralisation with lower grades if a positive economic return can be assured. Furthermore, it is encouraged by the government to utilize low grade ore in China.

7.4 Mine Design

7.4.1 Mining Method and Scope

The mining methods and scopes selected by Sinosteel are presented in Table 7–4 according to the occurrence conditions and depths of the ore bodies.

Table 7–4: Mining Method and Scope Summaries

Company name	Mine name	Mining method	Mining scope	Planned capacity	Life of mine
				(1,000t/a)	*(years)*
Xinxin Mining . . .	Upper Part of Gufen Mine	Open-pit	Above 608 m ASL	5,000	13
	Lower Part of Gufen Mine	Underground	Beneath 608 m ASL	4,000	14
Jingyuancheng Mining	Wang'ergou Block	Open-pit	Above 600 m ASL	14,000	12
	Shuanmazhuang Block	Open-pit	Above 600 m ASL	14,000	12
	Wang'ergou Block	Underground	Beneath 600 m ASL	3,000	17
	Shuanmazhuang Block	Underground	Beneath 600 m ASL	3,000	17
Jiheng Mining . . .	Zhijiazhuang Mine	Open-pit	Above 880 m ASL	2,400	10

Based on the site visit and review of related information, SRK's opinion is that the mining methods and limits recommended by Sinosteel are reasonable and feasible. Meanwhile, the production capacity and life of each mine are in line with the actual mineral resource tonnages and situations. However, there is considerable amount of resource beneath 880 m ASL in Zhijiazhuang mine. For a better use of mineral resource, SRK suggests the Company consider underground mining at Zhijiazhuang based on the results of deep exploration. SRK recommends the Company to acquire the Zhijiazhuang northern block and the Qiaomaidi western block resources, which will extend the life of mine operated by Jiheng Mining by three to four years longer.

7.4.2 Ultimate Pit Limits Definition

Open-pit mining is used in all mines operated by Aowei Mining at present. After open-pit mining is completed, underground mining will be employed in Gufen, Wang'ergou and Shuanmazhuang mines. In the FS prepared by Sinosteel, the pit limits were optimized and delineated based on the occurrences of the ore bodies and the actual production situations. The key parameters are shown in Table 7–5.

Table 7–5: Ultimate Pit Limits Parameters

Pit limit parameters	Unit	Gufen Mine	Wang'ergou and Shuanmazhuang Mines	Zhijiazhuang Mine
Elevation of Final Pit Surface	m	1,016	1,152	1,200
Elevation of Closed Circle	m	815	768	1,030
Elevation of Final Pit Bottom	m	608	600	880
Upper Part Size of the Pit	m	1,030×780	3,100×720	900×600
Bottom Part Size of the Pit	m	460×245	1030×150	130×50
Bench Height	m	12	12	10
Final Bench Combination Height	m	24	24	20
Bench Width	m	15	15	8
Road Width (Double Lane/Single Lane)	m	18/16	16	
Bench Slope Angle (Operational)	°	75	75	75
Bench Slope Angle (Finished)	°	65	65	65
Final Slope Angle	°	45 to 49	45 to 49	50
Average Stripping Ratio	t/t	1.49	1.16	1.5
Mining Loss Ratio	%	3	3	3
Mining Dilution Ratio	%	3	3	3

SRK reviewed the FS prepared by Sinosteel and is of the opinion that the pit limit parameters are within a reasonable range. Figure 7–2 shows the proposed ultimate pit limit of Gufen Mine as designed by Sinosteel.

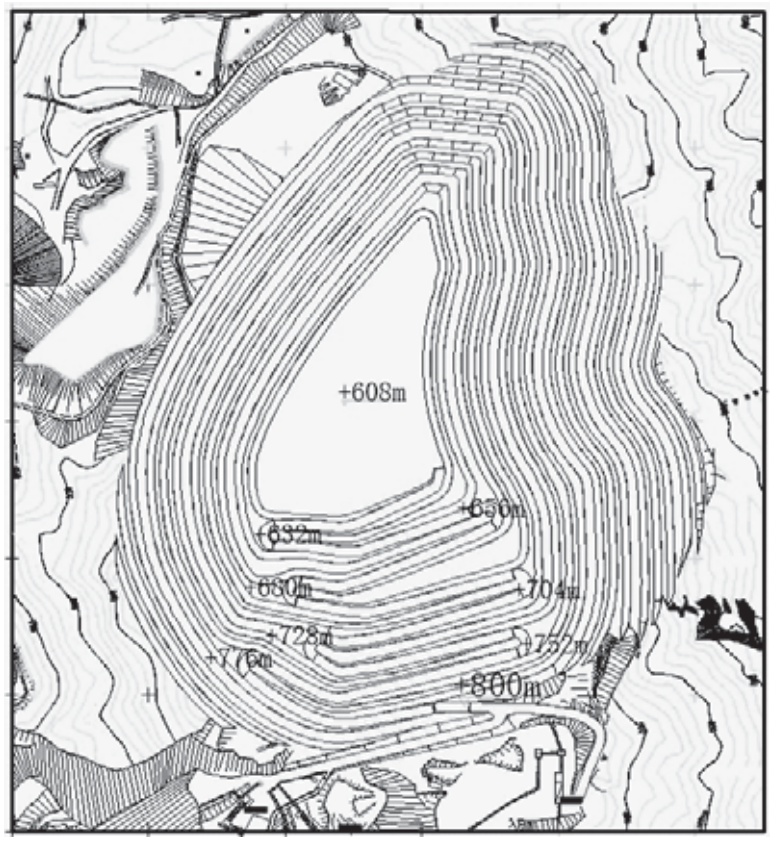


Figure 7–2: Proposed Ultimate Pit Limit of Gufen Mine

It is noted by SRK that there are currently several mines owned by other firms in the periphery of Gufen Mine, Wang'ergou Mine and Shuanmazhuang Mine, which poses restrictions to the final open limit optimisation made by Sinosteel. SRK is informed by the Company leadership that the local government prefers that the mining activities in the whole Dushancheng mining area are carried out alone by Hengshi Mining, a highly competent company, as a response to the call for resource consolidation. Hengshi Mining is currently under the negotiation with relevant firms about the acquisition. Once the acquisition is implemented as scheduled, the mining right owned by Hengshi Mining would cover more areas, which will accordingly allow the limit extension of the open-pit and extend the life of open-pit. In terms of economy and safety, open-pit cost is far less and much safer than underground mining. Therefore, SRK recommends the Company to acquire the nearby mines as soon as possible to further optimize the open-pit limits.

7.4.3 Open-pit Development

Since consolidating the mines, Aowei Mining has focused on slope correction and mining engineering work. Iron ore has been incidentally recovered along with weakly mineralized wall rocks, as a result of the blasting and associated operations to correct the slope and to optimize the open pit. All of the iron ore was recovered due to such correction work.

The open-pit development and the main parameters designed by Sinosteel are shown in Table 7–6.

Table 7–6: Open-pit Development and Main Parameters

Item	Gufen Mine	Wang'ergou Mine	Shuanmazhuang Mine	Zhijiazhuang Mine
Development	Road – Truck	Road – Truck	Road – Truck	Road – Ramp*
Road Width	15 m	15 m	15 m	13 m
Minimum Turning Radius	15 m	15 m	15 m	15 m
Minimum Gentle Slope Length	50 m	40 m	40 m	50–80 m
Maximum Longitudinal Degree	i=8%	i=8%	i=8%	i=9%
Slope Length with Limited Degree	<300 m	<300 m	<300 m	<200 m

Note:

* The ramp portal is at 1,006 m ASL and bottom at 880 m ASL. The ramp is 1418m long and with a section of 7.6 m × 5.1 m

Based on the occurrences of the various ore bodies and the actual technological conditions, SRK is of the opinion that the mine development method recommended by Sinosteel is appropriate, technically feasible, and economically viable.

7.4.4 Open-pit Mining

Based on Sinosteel's design, the typical mining sequence for each mine is proposed to proceed downward bench by bench with a gentle operating slope. The usual procedure comprises drilling, blasting, loading, and haulage.

For Gufen mine, Wang'ergou mine and Shuanmazhuang mine, drilling is done using YZ-35 rotary drills on a 9 m by 7 m drill pattern. Each hole is 13 m deep. For Zhijiazhuang mine, the drills used are KQG-150 down-the-hole drills, the drill spacing is 5 m by 4.4 m, and the hole length is 12.64 m.

Ammonium nitrate/fuel oil ("ANFO") and emulsified explosives are used for multi-row compression blasting with millisecond delays. Non-electrical conduits and remote detonating devices are used for initiation. Pre-splitting blasting is employed if the blasting row is near the pit limit in order to reduce damage to the slope. Secondary rock breaking is completed by GT150 type hydraulic hammers.

Broken ore and waste rock are loaded by 4 cubic metre ("m^3") capacity electric shovels or 2 m^3 hydraulic excavators into 45 to 50 tonne ("t") dump trucks and hauled to the stockpiles or waste dumps.

SRK is of the opinion that the mining method is widely applied to similar iron mines worldwide and the technology is mature. The mining method is applicable to the topographic conditions and mining technical conditions.

SRK notes that the equipment actually used by the mine is not exactly the same as designed by Sinosteel. For example, down-the-hole drills are employed for drilling rather than rotary drills, and hydraulic excavators are employed for loading rather than electric shovels. SRK was told that as the mining operation is contracted out to professional engineering firms, they are not required to follow the strict requirements exactly in terms of equipment model, specification, and quantity except when the contractors' chosen equipment interferes with achieving the promised production targets. SRK opines that this is a reasonable arrangement. The operating open-pit of Gufen mine is shown in Figure 7–3.

Figure 7–3: Operating Open-pit of Gufen Iron Mine

7.4.5 Open-pit Mining Equipment

The major mining and auxiliary equipment used by the mines operated by Aowei Mining are presented in Table 7–7. This list is based on the information provided by the Company and the contractors. SRK opines that the equipment configuration meets the normal production needs.

Table 7–7: Main Equipment for Open-pit Mining

Series No.	Equipment name and type	Unit	Gufen Mine	Wang'ergou Mine, Shuanmazhuang Mine	Zhijiazhuang Mine
1	KQG-120 Down-the-hole Drill	Set	8	11	10
2	Excavator (1.2–1.5 m^3)	Set	21	35	30
3	Dump Truck (30–45t)	Set	68	80	130
4	Mobile Air Compressor	Set	8	11	10
6	ZL50 Front-end Loader	Set	6	8	6
8	Water Spray Truck	Set	2	4	2

SRK is informed during the site visit that the drilling equipment is owned by the Company and the drilling operation is carried out by the mine itself. However, the blasting, loading and transporting operations are contracted out to professional firms and the necessary equipment is supplied by the contractors themselves. Usually, the contractor is able to provide sufficient equipment to meet production needs.

7.4.6 Underground Development

According to the feasibility study, the Gufen Mine, Wang'ergou Mine and Shuanmazhuang Mine will convert from open-pit mining to underground mining after the open-pit is mined out. Based on Sinosteel's design, a development plan utilising main and auxiliary shaft – ramp development within the mining areas covered by the existing mining rights permits will be used for underground mining. The main shaft will be used for ore transportation via a skip. The auxiliary shaft will be used as the main passage for personnel, materials, and waste rock. The ramps, the access channel for trackless equipment, will connect each level and sublevel and will be used for the transportation of some material and equipment. They will also serve as secondary emergency exits. The main development parameters designed by Sinosteel are presented in Table 7–8 and Table 7–9.

Table 7–8: Main Development Parameters of Gufen Mine

Development	Diameter	Elevation(m)		Depth	Hoisting container	Usage
		Portal	Bottom			
	(m)			*(m)*		
Main Shaft	4.5	810	250	560	Skip	Transport Ore
Auxiliary Shaft . .	5.5	815	320	495	Cage	Transport Personnel, Materials and Waste
East Ventilation Shaft.	6	890	700	190		Air Discharge
West Ventilation Shaft.	6	695	580	115		Air Discharge
Decline	4.2 x 3.5	815	700	620		Transport Trackless Equipment and Safety Exit

Table 7–9: Main Development Parameters of Wang'ergou Mine and Shuanmazhuang Mine

Development	Diameter	Elevation (m)		Depth	Hoisting container	Usage
		Portal	Bottom			
	(m)			*(m)*		
Main Shaft	4.5	780	370	510	Skip	Transport Ore
Auxiliary Shaft . .	5.5	780	440	340	Cage	Transport Personnel, Materials and Waste
Downcast Shaft. .	6	830	460	370		Air Inlet
South Ventilation Shaft.	6	780	460	320		Air Discharge
South Ventilation Shaft.	6	1,120	700	420		Air Discharge
820 m Adit		820				Mining the Ore above 820 m ASL
Decline	4.2 x 3.5	850				Transport Trackless Equipment and Safety Exit

Based on the consideration of the mineralization condition and ore controlling factors, Sinosteel determined an appropriate level height of 120 m. A total of four levels are laid out at elevations of 700 m, 580 m, 460 m, and 340 m ASL for Gufen Mine. For Wang'ergou and Shuanmazhuang Mines, four levels will be developed at 820 m, 700 m, 580 m, and 460 m ASL. It should be noted that 820 m is an adit level. Sublevel caving stoping will be employed, which will involve many sublevel drives, winzes, and ore passes. In order to speed up the preparation and development of cutting works, a sublevel is needed between two adjacent levels.

Considering that the LOMs of the mines operated by Xinxin Mining and Jingyuancheng Mining for open-pit mining each exceed 10 years and significant changes are likely to occur in all the mines and the iron market over the next decade, and the current underground mining design will have to be upgraded and amended according to actual mine development and economic conditions.

In terms of mining technology, SRK opines that the development plan for underground mining presented in the feasibility study is generally reasonable. The level height of 120 m seems rather too high, but a sublevel is designed between every two levels to shorten the actual level height to 60 m, a reasonable level. Figure 7–4 shows a sketch map of the development system.

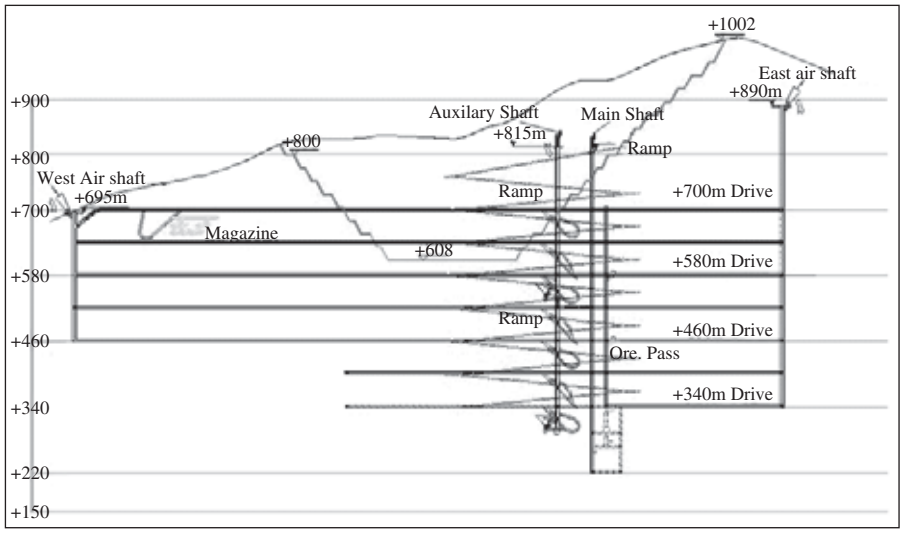


Figure 7–4: Sketch Map of Development System

7.4.7 Underground Mining Method

Based on the FS, sublevel caving mining method is recommended for Gufen, Wang'ergou and Shuanmazhuang mines after a comparison of sublevel open stoping and sublevel caving. SRK agrees with this selection.

For Gufen Mine, the final pit bottom is 608 m ASL and the first mining sublevel is 580 m ASL. Therefore, the pit pillar is about 28 m thick. Longhole drilling and blasting are used; ore will be removed from the crosscut works. The overburden thickness is 28 m. Stripped waste will be dumped on the top of the ore body in the final pit as artificial overburden.

For Wang'ergou and Shuanmazhuang Mines, the final pit bottom is 600 m ASL and the first mining sublevel is 580 m ASL. Therefore, the pit pillar is about 20 m thick. The mining method and characteristics are similar to those at Gufen Mine.

Sublevel caving mining techniques are detailed below.

7.4.7.1 Stope Layout and Structure Parameters

Stope arrangement: The stope will be arranged across the strike of the ore body and a few stopes may be laid along the strike if the ore body is thin.

Panel and block division: A 180 m long panel will be divided evenly along the ore body into three blocks. Each block will be 60 m long. Three crosscuts will be contained in each block, spaced 20 m apart. The width of the panel, equal to the distance between any two adjacent drifts along the vein, will usually be less than 100 m.

Stope structure parameters: The level height will be 120 m, and sublevels will be 20 m high. A total of six sublevel stopes will be laid out.

Preparation and cutting work: Two to three preparation drifts along the ore body will be set in each sublevel. Along the drift, one ore pass will be set up every 60 m, one air returning well will be arranged every 180 m, and one waste pass will be laid out every 200 m. A slot and winze will be set at the end of each crosscut.

Stoping sequence: Stoping will retreat from north to south, and the ore body will be mined from hanging wall to footwall. In addition, the stope at the hanging wall should be one sublevel ahead of the stope at the footwall.

7.4.7.2 Stope Operation and Equipment

Drilling: Holes will be drilled in fan shapes by Atalas Simba 1354 rigs. The hole diameters will be 76 mm, and the maximum hole depth will be 27 m. A total of 8 t of ore will be blasted for each 1 m of drilling hole.

Blasting: Emulsion explosives will be charged by Charmet6315XCR chargers. Non-electric blasting tubes will be used for detonating. The explosive specific charge will be 0.42 kilograms per tonne ("kg/t"). Secondary rock breaking will be completed by TM15HD crushers rather than blasting in order to reduce adverse impacts on production. The blasted ore will be 0 to 650 mm.

Ore removal: Blasted ore will be removed from draw points to ore passes using TORO-400E electric load-haul-dumps ("LHD") whose bucket capacity is 4.6 m^3. Each LHD can haul 600 t of ore per shift. Blasted waste rock will be transported by ST-3.5 diesel boggers to the waste pass.

Ground support: Bolt supports will be used in crosscuts using BoLtec 235H bolting rigs.

Ventilation: One JK55-No. 4.5 local fan will be set in each crosscut for air inlet. Blasting fumes will be drawn into ventilation shafts through the air return wells.

The mining methods and main technological parameters recommended by Sinosteel are shown in Table 7–10.

Table 7–10: Mining Method and Parameter

Technological Parameters	Unit	Item
Mining Method		Sublevel Caving
Stope Arrangement		Across Strike Direction of Ore Body
Level Height	m	120
Block Length	m	60
Sublevel Height	m	20
Panel Length	m	180
Panel Width	m	100
Crosscut Distance	m	20
Throughput of Each Block	1,000tpa	710
Mining Loss Rate	%	20
Mining Dilution rate	%	7

SRK is of the opinion that sublevel caving is a mature technology widely used in large iron mines all over the world. Figure 7–5 presents a sketch map of sublevel caving.

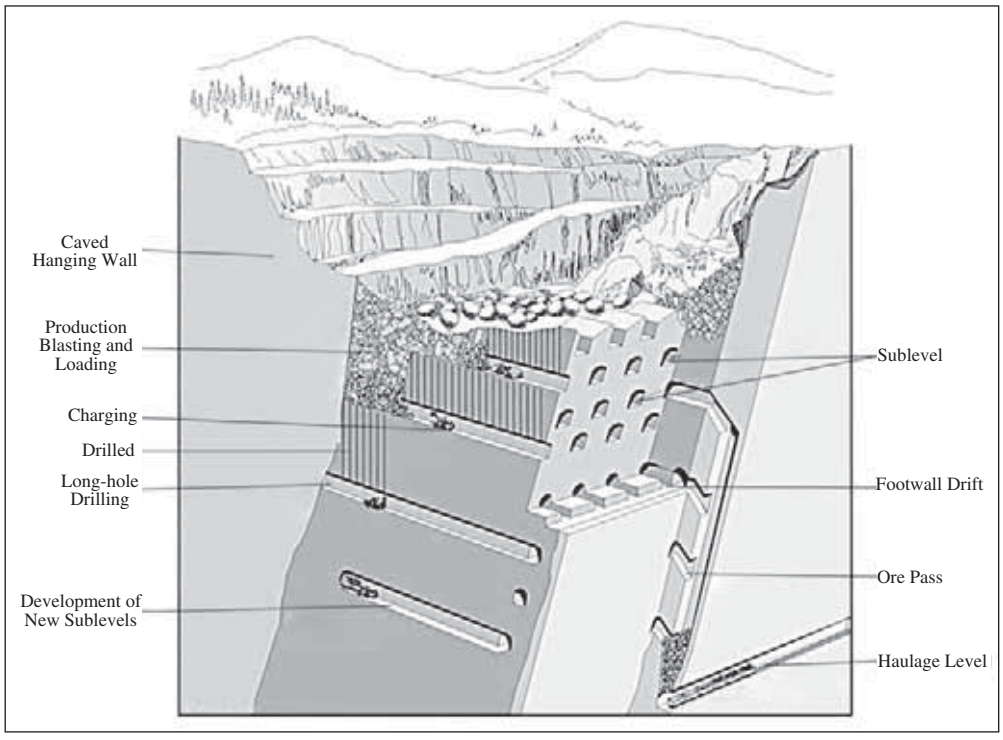


Figure 7–5: Sketch Map of Sublevel Caving Mining

7.5 Mine Production Plan

7.5.1 Operation Schedule, Production Capacity and LoM

Based on the feasibility study report, the planned production capacity, operation schedule, and LoM are shown in Table 7–11. The LoM is calculated based on the current available probable extractable reserve and the planned mining capacity of open-pit and underground mining.

Table 7–11: Production Capacity, LOM Summary

Item		Unit	Xinxin	Jingyuancheng	Jiheng	Remark
Capacity	Open-pit Mining	1,000tpa	5,000	14,000	2,400	
	Underground Mining	1,000tpa	4,000	3,000		
LOM	Open-pit Mining	year	13	12	10	
	Underground Mining	year	14	17		
	Total	year	27	29	10	
Pre-production Period	Open-pit Reconstruction and Expansion	year	3	3	2	Included in O/P LOM
	Pre-production for Underground Mining	year	3	3		Excluded in U/G LOM
Operation Schedule		day	330	330	330	
		shift/d	3	3	3	
		h/shift	8	8	8	
Starting Year of Pre-production			2013	2013	2013	
First Year with Full Capacity (O/P)			2016	2016	2015	
Last Year of Mine			2039	2041	2022	

In SRK's opinion, the proposed production capacity and LOM are generally reasonable, and the 330 working days per year in this region is reasonable as well.

7.5.2 Production Plan

Aowei Mining currently holds 100% of shares in Xinxin Mining and Jingyuancheng Mining and 90% of shares in Jiheng Mining. Supplementary geological exploration was carried out on all four properties after they were acquired. Based on the exploration results, reconstruction and expansion work is being carried out on mining and processing facilities and plants; the recovered material as a by product was processed during the reconstruction and expansion work. Mining data figures of all mines operated by Aowei Mining from 2010

to 2012 are shown in Table 7–12. Mining production data from January to September 2013 was also provided by the client after the second site visit in July 2013 and is listed in Table 7–13.

Table 7–12: Mining and Processing Figures 2010–2012

		Xinxin Mining		
Item	Unit	2010	2011	2012
Excavated by product during stripping	1,000t	3,917	3,386	2,778
Inc.: ≥15% TFe raw ore	1,000t	461	391	313
8%–15% TFe raw ore	1,000t	1,267	1,073	859
8%–5% TFe weakly mineralised wall rocks	1,000t	2,189	1,923	1,606
Ore and Rock (Slope Fixing Excluded)	1,000t	6,978	7,141	6,900
Stripping ratio in production	t/t	3,04	3,88	4,89
Ore and Rock (Including Slope Fixing)	1,000t	6,978	7,141	6,900
Total stripping ratio	t/t	3.04	3.88	4.89
Average ore grade	%TFe	9.47	9.41	9.34

		Jingyuancheng Mining					
		Wang'ergou			Shuanmazhuang		
Item	Unit	2010	2011	2012	2010	2011	2012
Excavated by product during stripping	1,000t	2,601	3,266	3,380	1,476	1,759	1,820
Inc.: 15% TFe raw ore	1,000t	349	414	382	199	222	206
8%–15% TFe raw ore	1,000t	638	753	696	360	406	375
8%–5% TFe weakly mineralised wall rocks	1,000t	1,614	2,099	2,302	917	1,131	1,239
Ore and Rock (Slope Fixing Excluded)	1,000t	2,727	4,562	5,734	1,529	1,996	3,396
Stripping ratio in production	t/t	1.76	2.91	4.32	1.74	2.18	4.85
Ore and Rock (Including Slope Fixing)	1,000t	2,727	4,562	5,734	1,529	1,996	3,396
Total stripping ratio	t/t	1.76	2.91	4.32	1.74	2.18	4.85
Average ore grade	%TFe	9.38	9.24	9.04	9.21	9.00	8.55

Item	Unit	Jiheng Mining 2010	2011	2012
Excavated by product during stripping	1,000t	326	3,113	3,501
Inc.: ≥25% TFe raw ore	1,000t	145	397	570
8%–25% TFe raw ore	1,000t	0	953	403
8%–5% TFe weakly mineralised wall rocks	1,000t	181	1,763	2,528
Ore and Rock (Slope Fixing Excluded)	1,000t	2,773	12,743	14,997
Stripping ratio in production	t/t	18.12	8.44	14.41
Ore and Rock (Including Slope Fixing)	1,000t	2,773	12,743	14,997
Total stripping ratio	t/t	18.12	8.44	14.41
Average ore grade	%TFe	18.80	14.00	12.62

Table 7–13: Mining Production Figures, January–September 2013

Item		Unit	Xinxin Mining Jan.	Feb.	Mar.	Apr.	May	Jun.	1H 2013	Jul.	Aug.	Sep.
Production	Raw Ore (TFe: ≥15%)	1,000t	71	12	94	77	122	88	464	53	28	39
	Raw Ore (TFe: <15%, ≥8%)	1,000t	166	28	219	174	244	193	1,025	147	67	69
	8%–5% TFe weakly mineralised wall rocks	1,000t	0	0	0	0	0	0	0	0	0	0
Ore and Rock (Slope Fixing Excluded)		1,000t	397	82	620	409	595	463	2,566	329	154	179
Stripping Ratio in Production		t/t	0.68	1.01	0.98	0.63	0.62	0.65	0.72	0.64	0.62	0.65
Ore and Rock (Including Slope Fixing)		1,000t	754	127	1,148	1,222	1,205	943	5,399	954	905	1,031
Total Stripping Ratio		t/t	2.18	2.13	2.67	3.86	2.29	2.36	2.63	3.77	8.53	8.50
Average Ore Grade		% TFe	13.46	13.79	13.57	13.62	13.69	14.17	13.71	13.77	14.24	12.81

			Jingyuancheng Mining									
Item		Unit	Jan.	Feb.	Mar.	Apr.	May	Jun.	1H 2013	Jul.	Aug.	Sep.
Production												
Wang'ergou	Raw Ore (TFe: ≥15%)	1,000t	46	16	68	6	47	35	217	20	35	11
	Raw Ore (TFe: <15%, ≥8%)	1,000t	77	26	114	400	357	307	1,283	217	235	69
	8%–5% TFe weakly mineralised wall rocks	1,000t	109	37	161	0	0	0	307	0	0	0
Ore and Rock (Slope Fixing Excluded)		1,000t	307	108	470	577	542	499	2,504	336	451	302
Stripping Ratio in Production		t/t	1.49	1.59	1.59	0.42	0.34	0.46	0.67	0.42	0.67	0.66
Ore and Rock (Including Slope Fixing)		1,000t	583	167	1,007	1,058	1,028	870	4,713	988	750	825
Total Stripping Ratio		t/t	3.73	3.01	4.54	1.60	1.54	1.54	2.14	3.17	1.78	3.53
Average Ore Grade		% TFe	10.5	11.55	10.89	12.83	13.07	13.29	12.25	13.33	12.87	14.23
Shuanmazhuang	Raw Ore (TFe: ≥15%)	1,000t	25	8	36	4	37	32	143	16	105	195
	Raw Ore (TFe: <15%, ≥8%)	1,000t	42	14	62	272	277	266	932	112	296	112
	8%–5% TFe weakly mineralised wall rocks	1,000t	59	20	87	0	0	0	165	0	0	0
Ore and Rock (Slope Fixing Excluded)		1,000t	217	74	317	440	452	443	1,943	213	576	447
Stripping Ratio in Production		t/t	2.26	2.30	2.24	0.59	0.44	0.48	0.81	0.65	0.43	0.46
Ore and Rock (Including Slope Fixing)		1,000t	411	116	580	777	730	702	3,315	708	767	876
Total Stripping Ratio		t/t	5.18	4.15	4.92	1.82	1.32	1.35	2.08	4.50	0.91	1.86
Average Ore Grade		% TFe	10.41	11.45	10.79	12.88	13.15	13.38	12.46	13.84	13.22	14.36

			Jiheng Mining									
Item		Unit	Jan.	Feb.	Mar.	Apr.	May	Jun.	1H 2013	Jul.	Aug.	Sep.
Production	Raw Ore (TFe: ≥25%)	1,000t	144	45	0	96	185	80	550	70	59	68
	Raw Ore (TFe: <25%, ≥8%)	1,000t	325	67	270	212	64	104	1,041	26	18	25
	8%–5% TFe weakly mineralised wall rocks	1,000t	229	195	383	288	21	59	1,175	79	41	95
Ore and Rock (Slope Fixing Excluded)		1,000t	1,121	438	881	903	320	292	3,955	215	164	239
Stripping Ratio in Production		t/t	1.39	2.91	2.26	1.93	0.29	0.59	1.48	1.24	1.10	1.57
Ore and Rock (Including Slope Fixing)		1,000t	1,794	534	2,130	1,388	670	592	7,108	506	426	567
Total Stripping Ratio		t/t	2.83	3.77	6.89	3.51	1.69	2.22	3.47	4.27	4.47	5.10
Average Ore Grade		% TFe	26.56	24.65	18.71	23	28.74	25.76	24.56	31.11	31.60	31.72

Before being acquired by Aowei Mining, ores were extracted in a disorderly manner; not enough waste rocks were stripped at any of the mines. As a result, the slopes became steeper and steeper and the tonnages of ores minable within the pit limits decreased, posing difficulties for normal mine operations and creating a large number of potential safety hazards. To resolve all these issues, Aowei Mining decided to correct the slope angles based on designed open-pit limits before it conducts trial or commercial production. Since commencing trial or commercial production, Aowei Mining has focused on continuing stripping engineering and technical renovation works as it ramps up toward full capacity. It is expected to take as long as three years to complete this project. SRK is informed that after the ramp-up period, mines will start normal production at full capacity as designed in the

FS. SRK has been provided with the future production plan for the next five years, as shown in Table 7–14, Table 7–15 and Table 7–16.

Table 7–14: Production Plan of Gufen Mine from 2013 to 2017

			Technical Renovation			Years with Full Capacity	
Item		Unit	2H 2013	2014	2015	2016	2017
Capacity	Raw Ore (TFe: ≥8%)	1,000tpa	711	2,900	3,900	5,000	5,000
Production	Raw Ore (TFe: ≥15%)	1,000t	130	783	1,016	1,350	1,350
	Raw Ore (TFe: <15%, ≥8%)	1,000t	581	2,117	2,747	3,650	3,650
	Waste Rock	1,000t	463	2,030	2,640	6,500	6,500
Slope Fixing	Raw Ore (TFe: ≥8%)	1,000t			138		
	Waste rock	1,000t	4,627	6,970	5,359		
Ore and Rock (Slope Fixing Excluded)		1,000t	1,174	4,930	6,402	11,500	11,500
Stripping Ratio in Production		t/t	0.65	0.70	0.68	1.30	1.30
Ore and Rock (Including Slope Fixing)		1,000t	5,801	9,783	9,152	11,500	11,500
Total Stripping Ratio		t/t	7.16	3.10	2.05	1.30	1.30
Average Ore Grade		% TFe	14.18	12.83	12.83	12.83	12.83

Table 7–15: Production Plan of Wang'ergou and Shuanmazhuang Mines from 2013 to 2017

			Technical Renovation			Years with Full Capacity	
Item		Unit	2H 2013	2014	2015	2016	2017
Capacity	Raw Ore (TFe: ≥8%)	1,000tpa	2,953	8,000	11,000	14,000	14,000
Production	Raw Ore (TFe: ≥15%)	1,000t	1,573	2,912	3,914	5,096	5,096
	Raw Ore (TFe: <15%, ≥8%)	1,000t	1,380	5,088	6,839	8,904	8,904
	Waste Rock	1,000t	1,601	4,000	5,400	16,000	16,000
Slope Fixing	Raw Ore (TFe: ≥8%)	1,000t			247		
	Waste rock	1,000t	5,418	8,000	8,243		
Ore and Rock (Slope Fixing Excluded)		1,000t	4,554	12,000	16,153	30,000	30,000
Stripping Ratio in Production		t/t	0.54	0.50	0.50	1.14	1.14
Ore and Rock (Including Slope Fixing)		1,000t	9,972	20,000	24,643	30,000	30,000
Total Stripping Ratio		t/t	2.38	1.50	1.24	1.14	1.14
Average Ore Grade		% TFe	13.50	13.50	13.50	13.50	13.50

Table 7–16: Production Plan of Zhijiazhuang Mine from 2013 to 2017

Item		Unit	Technical Renovation			Years with Full Capacity	
			2H 2013	2014	2015	2016	2017
Capacity	Raw Ore (TFe: ≥8%)	1,000tpa	558	2,300[1]	2,400	2,400	2,400
Production	Raw Ore (TFe: ≥25%)	1,000t	428	990	958	958	958
	Raw Ore (TFe: <25%, ≥8%)	1,000t	130	1,310	1,442	1,442	1,442
	Waste Rock	1,000t	765	2,990	3,120	3,120	3,120
Slope Fixing	Raw Ore (TFe: ≥8%)	1,000t					
	Waste rock	1,000t	1,747				
Ore and Rock (Slope Fixing Excluded)		1,000t	1,323	5,290	5,520	5,520	5,520
Stripping Ratio in Production		t/t	1.37	1.30	1.30	1.30	1.30
Ore and Rock (Including Slope Fixing)		1,000t	3,070	5,290	5,520	5,520	5,520
Total Stripping Ratio		t/t	4.50	1.30	1.30	1.30	1.30
Average Ore Grade		% TFe	32.09	27.11	27.11	27.11	27.11

Note:

1 half of raw ore will be sold directly and the rest half will be processed to produce iron concentrate.

In SRK's opinion, the production plans of all mines operated by Aowei Mining for the next five years have taken into account the Permit Approved Grade stated on the mining permits and are reasonable and feasible. According to the production data of Jiheng Mining during the past two years, a total of 5.6452 Mt of weakly mineralised wall rock was produced from November 2010 to June 2013, of which a total of 2.043 Mt (audited) was in stock as of June 30, 2013. The Company will continue to produce more weakly mineralised wall rock in the future.

SRK is informed by the Company management that given the adequate capacity of dry processing facilities and favourable economic returns, the Company processes the weakly mineralised wall rocks with TFe% more than 5% and less than 8% in dry if the production cost and market iron price permit. SRK is in favour of this kind of practice. SRK is also informed that about 1.6 Mt weakly mineralised wall rocks at Zhijiazhuang Mine are expected to be mined out and processed in 2014 with the similar cost and recovery rate as 2013, and the ratio of raw ore feed to concentrate output is expected to be 12.

In SRK's opinion, the progress of the slope correction project and the price fluctuation of iron in the market will have the most significant impacts on these plans. Therefore, SRK suggests the mines to adhere to the implementation of their efforts on stripping engineering and slope fixing and make timely and appropriate adjustments to cut-off grades and mining limits in response to market price fluctuations to achieve better economic returns.

7.6 Conclusions

Based on available documents and findings made during the site visits, SRK is of the opinion that there are no significant faults that must be addressed in terms of mining technology except the insufficient stripping engineering, which is already being remedied by appropriate measures.

Resource integration and supplementary exploration have further expanded the mining limits and increased the mineral resource, which lays a sound foundation for future capacity expansion. The feasibility study made by Sinosteel for the four mines generally satisfies the basic requirements, and the mine design meets the minimum requirements as well. Considering that underground mining is to be employed in 10 years when the open-pit mining production ends, it is SRK's opinion that the existing design for underground mining will likely be have to be re-evaluated and adjusted according to the status of the mine development and market conditions in due course.

SRK opines that the market price of iron concentrate may pose the most significant impact on the mines' economic returns. Therefore, better management and lower mining costs seem essential to the mines. At the same time, appropriate and timely adjustments of cut-off grades and mining limits in response to fluctuations of iron's market price are also very important.

8 METALLURGY AND PROCESS

8.1 Ore Properties and Beneficiability

8.1.1 Dushancheng Ore

Ore from Shuanmazhuang Mine, Wang'ergou Mine and Gufen Mine presents the same properties and beneficiability because they are all located in the Dushancheng mining area, and are metamorphic iron mines. Quartz, hornblende, plagioclase, and biotite are the main components of local minerals, followed by magnetite. The ore is classified as low grade magnetite ore. Iron is the only valuable element, and most iron occurs in magnetite, hematite, limonite, pyrite, chalcopyrite, and some iron-bearing non-metal minerals. Magnetite is a strongly magnetic mineral, and can be recovered by magnetic separation. Other minerals have extremely low or no magnetism, and cannot be recovered by magnetic separation. Additionally, the low content of iron in other minerals renders them economically unrecoverable. Therefore, the target of ore processing is to liberate the magnetite grains from all other minerals and enrich the magnetite separately to obtain iron concentrate.

In September 2011, Hebei Province Central Laboratory of Geology and Mineral Resources ("Hebei Laboratory") conducted an ore property study and processing test on three sets of samples with different grades. According to the processing test report on Dushancheng ore, the magnetite occurs in automorphic to xenomorphic crystalline shape with various grain sizes, generally ranging from 0.03 to 0.70 mm. Magnetite is distributed among and closely associated with quartz, hornblende, potash, feldspar, and biotite. The contact between magnetite and other minerals is flat and straight, making it easy to

disassociate, so the ore is easy to process. Some magnetite occurs as fine grains, generally from 0.015 to 0.045 mm, contained in quartz, hornblende, potash, feldspar and biotite grains. This fine-grained magnetite is difficult to disassociate due to its small size and low content. A small amount of magnetite is replaced by hematite or limonite at the verges of grains or in fissures. Another small amount of magnetite is closely associated with pyrite and chalcopyrite and is distributed sporadically.

The processing test followed a flowsheet calling for dry magnetic separation with tailings discarded in advance + dry concentrate grinding + wet magnetic separation. The ore was crushed to less than 10 mm, and then separated by dry magnetic separation to produce preliminary concentrates. The preliminary concentrate was ground to 45%–50% less than 0.074 mm, then processed by wet magnetic separation (one stage of roughing and one stage of cleaning) to produce the final concentrate. The test results are shown in Table 8–1 and indicate that Dushancheng ore is easy to process and the recovery rate of magnetic iron can exceed 95%. The value of mFe and TFe increases with the increase of ore grade, and therefore the TFe recovery rate also increases with the increase of ore grade.

Table 8–1: Dushancheng Ore Processing Test Results

		Grade (%)		Recovery (%)	
Operations	**Mass Recovery (%)**	**TFe**	**mFe**	**TFe**	**mFe**
Sample Set 1					
Ore Feed		12.19	5.36		
Dry Magnetic Pre-separation . .	30.37	23.77	17.03	59.22	96.49
Wet Magnetic Separation	26.24	66.23	64.02	73.11	98.64
Whole Flow Sheet	7.97	66.23	64.02	43.3	95.19
Sample Set 2					
Ore Feed		18.50	11.74		
Dry Magnetic Pre-separation . .	61.69	24.53	18.80	81.80	98.79
Wet Magnetic Separation	27.96	66.73	66.25	76.06	98.53
Whole Flow Sheet	17.25	66.73	66.25	62.22	97.34
Sample Set 3					
Ore Feed		22.64	16.59		
Dry Magnetic Pre-separation . .	68.48	29.86	24.05	90.31	99.27
Wet Magnetic Separation	36.30	66.14	65.47	80.41	98.83
Whole Flow Sheet	24.86	66.14	65.47	72.62	98.11

8.1.2 Zhijiazhuang Ore

Zhijiazhuang is a skarn iron mine. Humite, diopside, serpentine, and magnetite are the main components of minerals. Most iron occurs in magnetite, and smaller amounts in hematite, limonite, silicate minerals, carbonate minerals and pyrite. Magnetite is the only target mineral for recovery in processing.

In September 2011 and July 2012, Hebei Laboratory conducted an ore property study and processing test on three sets of samples with different grades. According to the processing test report on Zhijiazhuang ore, magnetite occurs in xenomorphic crystalline shapes with various grain sizes, generally ranging from 0.03 to 0.75 mm. Humite, in granoblastic texture, is replaced in various degrees by magnetite that was formed after the formation of humite along the edge of grains and in fissures. As most humite has been replaced along the edges of grains, humite grains have become round and smooth. Magnetite, distributed among humite grains, acts as a cement to bind humite grains and occurs in sideronitic crystalloblastic texture. Small amounts of humite contain magnetite in extremely small grain sizes of about 0.012 mm. Some diopside has been replaced by magnetite. Some magnetite is replaced by serpentine only along the edge of magnetite grains, and small amounts of magnetite are seen in serpentine aggregates in acicular or particulate shapes. This portion of magnetite occurs in extremely small grain sizes and is closely associated with serpentine, so it is difficult to separate. A positive correlation is presented between magnetite and humite grain sizes. A small amount of magnetite in acicular or particulate shape is distributed in chlorite veins, caused by the disruption of serpentine aggregates by later-forming chlorite vein. This portion of magnetite and gangue minerals are replaced by each other and are closely associated with each other. To obtain qualified iron concentrate and favourable recovery rate, it has a higher level of requirement on grinding fineness to disassociate the magnetite grain.

The processing test results are shown in Table 8–2. Sample set 1 is low grade ore, Sample set 2 is industrial ore and Sample set 3 is weakly mineralised wall rock. Two samples were crushed to less than 8 mm and separated by dry magnetic separation to produce preliminary concentrate. The preliminary concentrate was then ground in two stages and then separated in two-stage magnetic separation to produce the final concentrate. In stage one grinding, 38.5%–39.8% of the ore was ground to less than 0.074 mm; in stage two, 90.8% of the ore was ground to less than 0.074 mm. The third sample was composed of weakly mineralised wall rock. This sample was crushed to less than 15 mm, and separated by dry magnetic separation. The preliminary concentrate was ground in two stages and then separated to get the final concentrate in three-stage magnetic separation. In stage one grinding, 47% of the ore was ground to less than 0.074 mm; in stage two, 88.5% of the ore was ground to less than 0.074 mm. The results indicate that Zhijiazhuang ore comprises fine-grained magnetite. To obtain qualified iron concentrate and favourable recovery rate, at least 90% of the ore must be ground to less than 0.074 mm. If 74.44% of the preliminary concentrate is further ground to less than 0.038 mm in size through stage three grinding, the iron concentrate is obtained with a grade as high as 65.26%, but the recovery rates are 58.03% for TFe and 80.18% for mFe.

Table 8–2: Processing Test Result of Zhijiazhuang Ore

Operations	Mass Recovery(%)	Grade (%)		Recovery (%)	
		TFe	mFe	TFe	mFe
Sample Set 1	Final grinding fineness: 90.8%-200 mesh				
Ore Feed		20.13	17.92		
Dry Magnetic Separation	66.18	28.79	26.87	94.63	99.23
1st Wet Magnetic Separation	55.03	48.11	46.47	92.00	95.18
2nd Wet Magnetic Separation	74.48	62.38	61.43	96.58	98.47
Whole Flow Sheet	27.13	62.38	61.43	84.07	92.99
Sample Set 2	Final grinding fineness: 90.8%-200 mesh				
Ore Feed		33.93	31.69		
Dry Magnetic Separation	77.92	42.1	40.27	96.68	99.01
1st Wet Magnetic Separation	75.00	54.8	53.47	97.61	99.58
2nd Wet Magnetic Separation	85.03	62.88	61.39	97.58	98.75
Whole Flow Sheet	49.69	62.88	61.39	92.09	97.36
Sample Set 3	Final grinding fineness: 88.5%-200 mesh				
Ore Feed		7.54	5.42		
Dry Magnetic Separation	32.29	19.40	16.50	83.08	98.30
1st Wet Magnetic Separation	32.89	49.26	–	83.45	–
2nd Wet Magnetic Separation	75.52	61.03	–	93.56	–
3rd Wet Magnetic Separation	93.39	63.45	–	97.09	–
Whole Flow Sheet	7.49	63.45	62.89	63.01	86.87
Sample Set 3	Final grinding fineness: 74.44%-400 mesh				
Ore Feed		7.54	5.42		
Dry Magnetic Separation	32.29	19.40	16.50	83.08	98.30
1st Wet Magnetic Separation	32.89	49.26	–	83.45	–
2nd Wet Magnetic Separation	73.35	61.62	–	91.76	–
3rd Wet Magnetic Separation	86.01	65.26	–	91.09	–
Whole Flow Sheet	7.49	65.26	64.89	58.03	80.18

8.1.3 Quality of Iron Concentrate

The analysis results of the iron concentrate produced in the processing tests are listed in Table 8–3. It is indicated that the iron concentrate is of good quality. Ores from Dushancheng area and Zhijiazhuang area are processed to obtain iron concentrate with grade above 66% and 62%, respectively, and low content of harmful impurities, i.e., SiO_2, P and S. The iron concentrate of ores from Zhijiazhuang area is alkaline concentrate with high content of MgO. It can be blended with acid iron concentrate in appropriate proportion to adjust the pH value of the component in blast furnace with an effect that no or minimal flux would be needed in iron making, thus largely preventing the grade decrease of the component materials. Furthermore, it reduces the coke consumption by improving metallurgical performance of sinter, improves the furnace efficiency and lowers down the iron making cost. This kind of iron concentrate is popular among the market.

Table 8–3: Quality of Iron Concentrate

	TFe	SiO_2	Al_2O_3	CaO	MgO	P	S	C/A*
From Dushancheng								
Sample Set 1	66.23	2.2	0.59	0.94	0.16	0.017	0.091	0.39
Sample Set 2	66.73	4.75	0.8	1.13	0.23	0.017	0.091	0.25
Sample Set 3	66.14	3.06	0.77	0.96	0.18	0.017	0.057	0.3
From Zhijiazhuang								
Sample Set 1	62.38	2.46	1.11	0.78	6.16	0.01	0.054	1.94
Sample Set 2	62.88	1.98	0.96	0.56	5.16	0.015	0.039	1.95
Sample Set 3	63.45	3.28	1.06	1.02	0.57	0.038	0.047	0.37#

Note: *C/A = (CaO+MgO)/(SiO_2+Al_2O_3). The ore is acid if C/A<0.5, half self-fluxed if c/a = 0.5 to 0.8, self-fluxed if C/A = 0.8 to 1.2, and alkaline if C/A>1.2. No flux or less flux is needed for making iron from the self-fluxed ore. This kind of ore is considered of good performance in iron making as it reduces the coke consumption and improves the furnace efficiency.

Sample set 3 represents low grade rock which is not representative of the Zhijiazhuang deposit.

8.2 Processing Flow Sheet

Both dry magnetic separation and wet magnetic separation processes are included in the flowsheet. The extracted ore, transported by truck to the dry processing facilities, is crushed and then separated by using dry magnetic separation. Dry magnetic separation aims to pre-discard waste rocks in the run of mine ore ("ROM") and improve the feed grade for grinding to an appropriate level. Two flowsheets, as shown in Figure 8–1, are used in the dry processing plants. Flowsheet I is simple and applicable to small-scale and older facilities. Its product is usually less than 25 mm in grain size. Most of the newly-built dry processing facilities follow the flowsheet II, in which another process is introduced to concentrate the preliminary concentrate using a second magnetic pulley prior to dry magnetic separation. It is more efficient and the product is usually less than 12 mm in grain size. Aowei Mining plans to introduce high-pressure roller crusher and dry magnetic separator for further grinding and classification to the preliminary concentrate, reducing its grain size to less than 6 mm and improving its grade. It is expected to upgrade the capacities of wet magnetic separation and eventually increase the output of iron concentrate and lower the production cost.

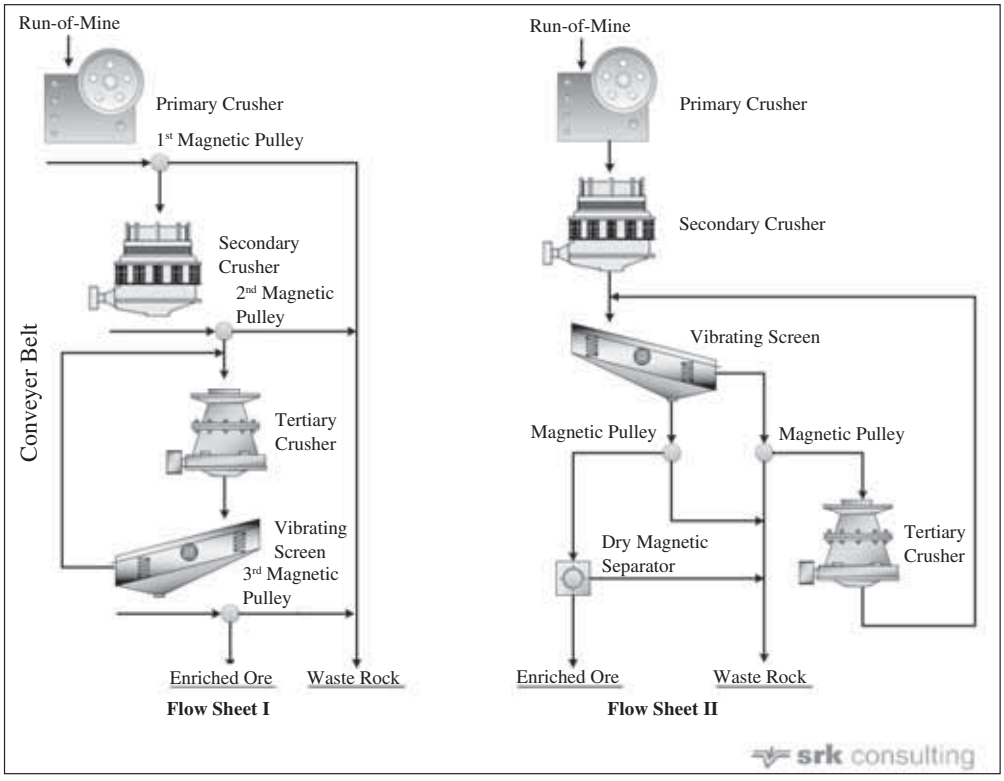


Figure 8–1: Flow Sheets in Dry Processing Plant

The preliminary concentrate is sent to the wet processing plants for further grinding to disassociate the target mineral with gangue minerals. The magnetite is separated by wet magnetic separators and enriched to obtain iron concentrate. The concentrate is then dewatered to get the final concentrate. All the wet processing plants operated by Aowei Mining follow basically the same flowsheet: two-stage grinding + multi-stage magnetic separation. The only minor difference is in the classifying facilities. The wet processing flowsheet is shown in Figure 8–2.

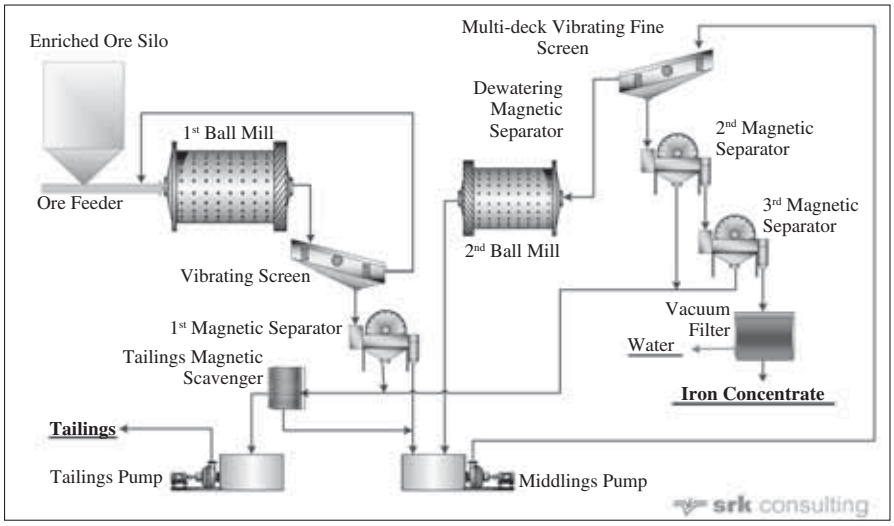


Figure 8–2: Flow Sheet in Wet Processing Plant

8.3 Processing Capacity and Upgrade Plan

Hengshi Mining plans to conduct a technical upgrade to some of the existing processing plants and build a new dry processing facility and two wet processing plants from 2013 to 2015 to improve their processing capacity, reduce tailings discharge and extend the life of tailings storage facilities. Sinosteel produced the design for this technical upgrade in their feasibility study conducted in December 2012. Table 8–4 shows the existing capacities and planned capacities of dry processing facilities and wet processing plants in 2013, 2014 and 2015.

Table 8–4: Existing Capacities and Planned Capacities of Processing Facilities and Plants

	Existing capacity (Mtpa)	Planned Capacity (Mtpa)		
	as of 30 June, 2013	as of 31 December, 2013	as of 31 December, 2014	as of 31 December, 2015
Dry Processing Facilities				
Xinxin Mining	4.50	5.75	5.75	5.75
Jingyuangcheng Mining	7.30	9.60	17.60	17.60
Jiheng Mining	3.70	4.20	4.20	4.20
Wet Processing Plants				
Xinxin Mining	1.36	1.60	1.60	1.60
Jingyuancheng Mining	2.40	2.40	3.50	4.70
Jiheng Mining	–	–	1.60	1.60

8.3.1 Xinxin Mining

Xinxin Mining owns Gufen Mine, three dry processing facilities, and two wet processing plants. Two wet processing plants are adjacent to each other. The dry processing facilities No. 1 and No. 3 are 10.3 km away from the wet processing plants, and No.2 is 10.6 km away from the wet processing plants. Figure 8–3 shows the wet processing plant operated by Xinxin Mining.

Figure 8–3: Wet Processing Plant Operated by Xinxin Mining

The Company plans to spend Chinese Yuan ("RMB") 9.79 million ("M") from April to November in 2013 to renovate the processing plants in the following aspects:

- Replace the belt conveyer's waste rock electrical roller with a magnetic pulley to scavenge the discard material to improve magnetite recovery (the renovation had been accomplished as of the end of June 2013);

- Build a high-press roller crusher workshop for dry processing facilities No. 1 and No. 3. Employ a 160–140 high-press roller crusher to reduce the grain size of preliminary concentrate to less than 6 mm; employ two rotary dry magnetic separators to improve the preliminary concentrate's grade from 21% to more than 28% Fe;

- Add one 100–80 high-press roller crusher and one rotary dry magnetic separator in dry processing facility No. 2 to reduce the grain size of the preliminary concentrate to less than 6 mm and improve the grade up to more than 28% Fe; and

- Add two more ball mills and one set of hydrocyclone to the existing stage-two grinding in the wet processing plant to upgrade the grinding capacity; replace GTB1018 magnetic separator by LCTY-1021 magnetic separator in stage-one separation, replace GTB0918 magnetic separator by LCTY-1018 magnetic separator in stage-two separation, and replace three GTB0918 magnetic separators by the existing two GTB1021 magnetic separators and one GTB1018 magnetic separator in stage-three separation; replace three outdated GN20 cylinder internal filters by one ZPG96-8 disc filter. The processing capacity is expected to increase from 1.36 Mtpa to 1.6 Mtpa and the iron concentrate output is expected to increase by 30% to 35%.

The list of equipment employed before and after renovation is shown in Table 8–5 and the production capacity comparison is shown in Table 8–5.

Table 8–5: Main Equipment in Xinxin Mining's Processing Facilities

No.	Equipment Name	Specification	Quantity	Power (KW)
1	**Dry Separation Facility No. 1**			
1.1	Jaw Crusher	C110	1	160
1.2	Cone Crusher	PYB1750	1	180
1.3	Cone Crusher	GP11F	1	160
1.4	Raw Ore Vibrating Feeder	JZD1642	1	5.5×2
1.5	Vibrating Screen	YA2460	1	30
1.6	Dry Pre-Separator	CCXCY-111-814	2	11×4
1.7	End Product Vibrating Feeder	GZG1103	1	1.1×2

No.	Equipment Name	Specification	Quantity	Power (KW)
2	**Dry Separation Facility No. 2**			
2.1	Jaw Crusher	PEWD 900×1200	1	110
2.2	Vibrating Feeder	G2T 1642	1	5.5×2
2.3	Cone Crusher	PYB 1750	1	155
2.4	Cone Crusher	PYD 1750	2	155×2
2.5	Vibrating Screen	YA2460	1	30
2.6	Magnetic Separator	CCXG-3-814	2	11×4
3	**Dry Separation Facility No. 3**			
3.1	Bar Screen Feeder	GZT1642	1	5.5×2
3.2	Jaw Crusher	C125	1	160
3.3	Cone Feeder	GZG1231	2	2.2×2
3.4	Cone Crusher	GP100S	1	90
3.5	Cone Crusher	GP11F	1	160
3.6	Vibrating Screen	2YAH2460	1	30
3.7	Feeder for Magnetic Separation.	Home made	1	2.2
3.8	Magnetic Separator	CTF0930	1	7.5
4	**Wet Separation Plants**			
4.1	Inertial Vibrating Feeder .	GZG	4	(0.75+1.1)×4
4.2	Grate Antifriction Bearing Ball Mill	MQCG2727	4	320×4
4.3	Spiral Classifier	2FG-15	4	7.5×8
4.4	Overflow Antifriction Bearing Ball Mill	MQCY2727	2	320×2
4.5	Permanent Magnet Drum Magnetic Separator . . .	CTB-1021	4	5.5×4
4.6	Permanent Magnet Drum Magnetic Separator . . .	CTB-918	4	4×4
4.7	Slurry Pump (Middlings).	100ZJ-1-A50	4	75×4
4.8	Slurry Pump (Tailings) . .	150GZB	4	280×4
4.9	Slurry Pump (Secondary pump station)	150GZB	4	280×4
4.10	Cylinder Type Inner Vacuum Filter	GN20	4	4.75×4
4.11	Tailings Recovery	ZX-1200-7	2	8

No.	Equipment Name	Specification	Quantity	Power (KW)
5	**Equipment Proposed for Technical Renovation**			
5.1	Magnetic Pulley Belt Conveyor		3	12×3
5.2	High Pressure Roller Mill	160-140	1	400
5.3	High Pressure Roller Mill	100-80	1	230
5.4	Rotary Magnetic Separator	GTGY-1021	3	18.5×3
5.5	Overflow type ball mil . .	MQY2727	2	320×2
5.6	Wet Permanent Magnetic Cylinder Magnetic Separator	GTGY-1021	3	18.5×3
5.7	Hydrocyclone	GN500	1	
5.8	Wet Permanent Magnetic Cylinder Magnetic Separator	LCTY1021	3	5.5×3
5.9	Wet Permanent Magnetic Cylinder Magnetic Separator	LCTY1018	3	5.5×3
5.10	Vacuum Filter.	ZPG-96-8	1	55

Table 8–6: Capacities before and after Renovation in Xinxin Mining

Operation	Existing Capacity (1,000tpa)	Capacity after Renovation (1,000tpa)
Mining (Raw Ore)		
Gufen Iron Mine	2,200	5,000
Total	2,200	5,000
Dry Separation (Raw Ore Feed)		
Dry Processing Facility No. 1	1,350	1,750
Dry Processing Facility No. 2	1,350	1,750
Dry Processing Facility No. 3	1,800	2,250
Total	4,500	5,750
Wet Separation (Pre-concentrate Feed)		
Wet Processing Plant No. 1	6,800	8,000
Wet Processing Plant No. 2	6,800	8,000
Total	13,600	16,000
Wet Separation (Concentrate Output)		
Wet Processing Plant No. 1	150	250
Wet Processing Plant No. 2	230	250
Total	380	500

8.3.2 Jingyuancheng Mining

Jingyuancheng Mining owns the Shuanmazhuang Mine and Wang'ergou Mine, six dry processing facilities, and five wet processing plants. As of May 2013, Jingyuancheng Mining has temporarily closed four dry processing facilities and four wet processing plants which employed outdated technologies and equipment, and plans to build one dry processing plant and one wet processing plant. The distance between each dry processing facility and wet processing plant is shown in Table 8–7. Figure 8–4 shows an overview of dry processing facility No. 1, and Figure 8–5 is an overview of wet processing plant No. 1.

Table 8–7: Distance between Dry Processing Facilities and Wet Processing Plants

Facilities/Plants	Wet Processing Plant No.1	Wet Processing Plant No.2 (to be constructed)
Dry processing facility No.1	10.2km	11.2km
Dry processing facility No.2	5.9km	6.9km
Dry processing facility No.3 (to be constructed)	6.9km	7.9km

Figure 8–4: Dry Processing Facility No. 1 Operated by Jingyuancheng Mining

Figure 8–5: Wet Processing Plant No. 1 Operated by Jingyuancheng Mining

The Company plans to spend RMB11.38 million from July to November in 2013 to renovate dry processing facilities No. 1 and No. 2 to reduce the product's grain size and increase the grade. The Company also plans to invest RMB51.95 million from January to September in 2014 to build a dry processing facility No. 3 and RMB40.69 million from January to October in 2015 to build a new wet processing plant No. 2. Specifically the Company plans to:

- Increase the conveying speed of all belt conveyers to enhance the transport capacity in all dry processing facilities;

- Add one high-press roller crusher and two dry magnetic separators for each dry processing facility for further crushing, reducing the grain size of preliminary concentrate to less than 6 mm and improving the preliminary concentrate grade from 20% to 26%–29% Fe;

- Build a new dry processing facility No. 3 with a capacity of 8.0 Mtpa in Wang'ergou area. After the finish of construction and renovation, the total capacity of dry processing facilities of No. 1, No. 2, and No. 3 will sum to 17.6 Mtpa; and

- Build a new wet processing plant No. 2 with a production capacity of 0.4 Mtpa of iron concentrate. When the construction is complete, the cumulative capacity of wet processing plants No. 1 and No. 2 will reach a production capacity of 1.3 Mtpa of iron concentrate.

The list of equipment employed after renovation and construction is shown in Table 8–8 and the production capacity comparison is shown in Table 8–9.

Table 8–8: Main Equipment in Jingyuancheng Mining's Processing Facilities

No	Equipment Name	Specification	Quantity	Power (KW)
1	**Dry Separation Facility No. 1**			
1.1	Jaw Crusher	C125	1	160
1.2	Standard Cone Crusher . .	HP400	1	315
1.3	Short Head Cone Crusher	HP400	1	315
1.4	Vibrating Screen	2YAH3073	2	22×2
1.5	Magnetic Pulley	CT1412-3800	2	11×1+45×1
1.6	Permanent Magnet Rotary Magnetic Separator	GYGY-1021	2	18.5×2
2	**Dry Separation Facility No. 2**			
2.1	Jaw Crusher	C140	1	200
2.2	Standard Cone Crusher . .	HP500	1	400
2.3	Short Head Cone Crusher	HP500	1	400
2.4	Vibrating Screen	2YAH3375	2	3×20
2.5	Magnetic Pulley	CT1612-3800	2	75×1+45×1
2.6	Dry Magnetic Separator .	GTGY-1021	2	18.5×2

No	Equipment Name	Specification	Quantity	Power (KW)
3	**Dry Separation Facility No. 3**			
3.1	Jaw Crusher	C140	1	200
3.2	Standard Cone Crusher	HP500	1	400
3.3	Short Head Cone Crusher	HP500	1	400
3.4	Vibrating Screen	2YAH3375	2	3×20
3.5	Magnetic Pulley	CT1612	2	75×2
3.6	Dry Magnetic Separator	GTGY-1021	2	18.5×2
3.7	Grizzly Feeder	GZZ1560	1	37
3.8	High Pressure Roller Mill	160-140	1	400
4	**Wet Separation Plant No. 1**			
4.1	Grate Ball Mill	MQG3600×6000	2	1,250×2
4.2	Overflow Ball Mill	MQY3000×5400	2	630×2
4.3	Hydrocyclone Group	FX610-GT×6	2	
4.4	Hydrocyclone Group	FX500-GT×4	2	
4.5	Magnetic Separator	XCTB-1530	2	14.5×2
4.6	Magnetic Separator	XCTB-1230	3	11×3
4.7	Magnetic Separator	CTB-1030	3	7.5×3
4.8	Dish Filter	ZPG-45	3	(90+5.5+7.5)×3
5	**Wet Separation Plant No. 2**			
5.1	Ball Mill	MQY3600×6000	1	1,250
5.2	Ball Mill	MQY3000×5400	1	630
5.3	Cyclone Classifier	FX610-6	1	220
5.4	Cyclone Classifier	FX500	1	110
5.5	High Frequency Fine Screen	DXF1014	2	6.85×2
5.6	Magnetic Separator	CTB-1230	1	11
5.7	Magnetic Separator	CTB-1030	2	7.5×2
5.8	Filter	GPT2000-45	2	(90+5.5+7.5)×2
6	**Equipment proposed for technical renovation on dry separation**			
6.1	High Pressure Roller Mill	140-120	2	375×2
6.2	Dry Magnetic Separator	GTGY-1021	4	18.5×4

Table 8–9: Capacities before and after Technical Renovation in Jingyuancheng Mining

Operation	Existing Capacity (1,000tpa)	Capacity after Renovation (1,000tpa)
Mining (Raw Ore)		
Shuanmazhuang Iron Mine	3,750	8,750
Wang'ergou Iron Mine	2,250	5,250
Total	6,000	14,000
Dry Separation (Raw Ore Feed)		
Dry Processing Facility No. 1	3,300	4,300
Dry Processing Facility No. 2	4,000	5,300
Dry Processing Facility No. 3		8,000
Total	7,300	17,600
Wet Separation (Pre-concentrate Feed)		
Wet Processing Plant No. 1	2,400	3,500
Wet Processing Plant No. 2		1,200
Total	2,400	4,700
Wet Separation (Concentrate Output)		
Wet Processing Plant No. 1	800	900
Wet Processing Plant No. 2		400
Total	800	1,300

8.3.3 Jiheng Mining

Jiheng Mining owns the Zhijiazhuang Mine and two dry processing facilities. The newer dry processing facility (No. 1 Plant) was built in January 2013 (Figure 8–6). The dry processing facility has a designed ore processing capacity of 2.5 Mtpa. Jiheng Mining plans to employ high-pressure roller crusher and dry magnetic separator to reduce the grain size and improve the grade of the preliminary concentrate in the fourth quarter of 2013. It is anticipated to upgrade the capacities of the dry processing facility to more than 3 Mtpa. The No. 2 dry processing facility was temporarily closed in April 2013 to prepare for the upcoming technical renovation in the third quarter of 2013. Jiheng Mining does not currently have a wet processing plant. Historically and at the moment, the ore with high grade is sold without processing, while the weakly mineralised wall rock are processed by dry magnetic separation to enrich and produce preliminary concentrate for sale. From March 2013, part of the preliminary concentrate was sent to Xinxin Mining's wet processing plant for processing into iron concentrates which are sold to third party customers. Jiheng Mining plans to invest RMB84.42 million from January to June in 2014 to build a wet processing plant with a production capacity of 1.0 Mtpa of iron concentrate, and RMB14.43 million to construct an associated tailings storage facility. The plant is proposed to be built in Yangjiazhuang Town, Laiyuan County, where the Jumahe River flows nearby. The chosen location has favourable access to local power supply. It is about 8 km away from Zhijiazhuang iron mine and is 3 km from National Highway No. 108. It is anticipated to commence operation in July 2014.

Figure 8–6: Dry Processing Facility Operated by Jiheng Mining

Table 8–10 lists the main processing facilities and Table 8–11 lists the production capacities.

Table 8–10: Main Equipment in Jiheng Mining

No	Equipment Name	Specification	Quantity	Power (KW)
1	**Dry Separation Facility No. 1**			
1.1	Grizzly Feeder.	ZSW-600×150	1	37
1.2	Jaw Crusher	C125	1	160
1.3	Standard Cone Crusher	GP300S	1	250
1.4	Short Head Cone Crusher. . .	HP400	1	315
1.5	Vibrating Screen	2YKR2460	2	37×2
1.6	Magnetic Pulley	LCT0814	2	
1.7	Dry Magnetic Separator	LCG-1021	2	18.5×2
2	**Wet Separation Plant No. 1 (planned to be constructed)**			
2.1	Grate Ball Mill	MQG4260	1	1,500
2.2	Overflow Ball Mill	MQY3660	1	750
2.3	Hydrocyclone Group	FX610-GT×6	2	
2.4	Cyclone Feeder	200ZJB-A65	4	220×4
2.5	Hydrocyclone Group	FX500-GT×6	1	
2.6	Cyclone Feeder	150ZJB-A65	2	110×2
2.7	High Frequency Fine Screen		2	7.5×2
2.8	Magnetic Separator	XCTB-1530	2	14.5×2
2.9	Magnetic Separator	XCTB-1230	1	11
2.10	Magnetic Separator	CTB-1030	1	7.5
2.11	Dish Filter	ZPG-45	2	103x2

Table 8–11: Capacities before and after Renovation in Jiheng Mining

Operation	Existing Capacity (1,000tpa)	Capacity after Renovation and planned (1,000tpa)
Mining (Raw Ore)		
Zhijiazhuang Iron Mine	2,150	2,400
Total	2,150	2,400
Dry Separation (Raw Ore Feed)		
Dry Processing Facility No. 1	2,500	3,000
Dry Processing Facility No. 2	1,200	1,200
Total	3,700	4,200
Wet Separation (Pre-concentrate Feed)		
Wet Processing Plant No. 1		1,600
Total		1,600
Wet Separation (Concentrate Output)		
Wet Processing Plant No. 1		1,000
Total		1,000

8.4 Historical Production Data and Designed Production Plan

8.4.1 Historical Production Data

During the past three years, the main activities carried out in Dushancheng and Zhijiazhuang areas are waste stripping, mining development, and mining stope preparation. The weakly mineralized wall rock are processed in processing facilities. The historical production data for the past three years for Xinxin Mining, Jingyuancheng Mining and Jiheng Mining are shown in Table 8–12. There is no wet processing plant in Jiheng Mining. The ores are sold without processing while the weakly mineralized wall rock are processed by dry magnetic separation to produce preliminary concentrate for sale.

Table 8–12: Historical Production Records from 2010 to 2012

Xinxin Mining	Unit	2010	2011	2012
Dry processing				
By-product feed	1,000t	3,898	3,406	2,758
Pre-concentrate output	1,000t	841	749	637
By-product feed/pre-concentrate output	t/t	4.64	4.55	4.33
Feed grade	TFe%	9.47	9.41	9.34
Pre-concentrate grade	TFe%	22.35	21.78	20.38
Recovery rate	TFe%	50.90	50.89	50.41
Wet processing				
Pre-concentrate feed	1,000t	933	776	624
Concentrate output	1,000t	218	186	150
Pre-concentrate output/concentrate output	t/t	4.28	4.18	4.17
Concentrate grade	%	66.23	66.31	65.78
Recovery rate	TFe%	69.16	72.77	77.31
By-product feed/concentrate output	t/t	19.86	19.02	18.07
Total recovery rate	TFe%	35.20	37.03	38.97

Jingyuancheng Mining	Unit	2010	2011	2012
Dry processing				
By-product feed	1,000t	4,048	5,052	5,191
Pre-concentrate output	1,000t	1,164	1,395	1,197
By-product feed/pre-concentrate output	t/t	3.48	3.62	4.34
Feed grade	TFe%	9.32	9.15	8.87
Pre-concentrate grade	TFe%	17.50	17.81	18.8
Recovery rate	TFe%	53.99	53.74	48.86
Wet processing				
Pre-concentrate feed	1,000t	1,107	1,423	1,181
Concentrate output	1,000t	203	257	243
Pre-concentrate output/concentrate output	t/t	5.46	5.54	4.87
Concentrate grade	%	66.88	66.69	66.71
Recovery rate	TFe%	70.00	67.53	72.89
By-product feed/concentrate output	t/t	18.99	20.07	21.12
Total recovery rate	TFe%	37.79	36.29	35.61

Jiheng Mining	Unit	2010	2011	2012
Dry processing				
By-product feed	1,000t	73	555	1,155
Pre-concentrate output	1,000t	19	188	360
By-product feed/pre-concentrate output	t/t	3.83	2.95	3.21
Feed grade	TFe%	6.40	7.65	7.60
Pre-concentrate grade	TFe%	20.63	19.14	21.63
Recovery rate	TFe%	84.21	84.77	84.77

8.4.2 Facility and Plant Operation Rate

The operation rate, or capacity utilization rate, of a processing plant is calculated by dividing the volume of feed material (raw ore for dry processing plant and preliminary concentrate for wet processing plant) processed during the year with the designed annual production capacity on a pro rata basis in accordance with the actual number of months in a year during which the processing plant in operation. The plant operation rates of Xinxin Mining, Jingyuancheng Mining and Jiheng Mining are shown in Table 8–13. The historical plant operation rates are quite low. The outdated facility is one of the reasons, but the main reason is that the raw ore output was so few during the past three years' focus on stope correction rather than active production that the dry and wet processing plants do not have sufficient feed to process. In 2012, a total of about 3.8 Mt weakly mineralized wall rocks were produced in Jiheng Mining. The designed capacity of the dry processing facilities is 1.2 Mtpa, but actually a total of 155 Mt was processed in 2012 by extending the effective plant operation time. Thereby, there was about 2.6 Mt in stock as of early 2013.

Table 8–13: Facility and Plant Operation Rate

		Unit	2010	2011	2012	2013.1-6
Xinxin Mining	Designed capacity					
	Ore feed for dry processing. .	1,000t	4,500	5,650	4,550	2,250
	Pre-concentrate feed for wet processing	1,000t	1,360	1,360	1,360	680
	Actual processed					
	Ore feed for dry processing. .	1,000t	3,898	3,406	2,758	1,391
	Pre-concentrate feed for wet processing	1,000t	933	776	624	425
	Facility and plant operation rate					
	Dry processing facility . . .	**%**	**86.63**	**60.28**	**60.61**	**61.82**
	Wet processing plant	**%**	**68.59**	**57.08**	**45.88**	**62.55**
Jingyuancheng Mining	Designed capacity					
	Ore feed for dry processing. .	1,000t	6,252	8,235	9,218	5,270
	Pre-concentrate feed for wet processing	1,000t	1,540	2,163	2,090	1,268
	Actual processed					
	Ore feed for dry processing. .	1,000t	4,048	5,052	5,197	2,836
	Pre-concentrate feed for wet processing	1,000t	1,107	1,423	1,181	1,030
	Facility and plant operation rate.					
	Dry processing facility . . .	**%**	**64.74**	**61.34**	**56.38**	**53.81**
	Wet processing plant	**%**	**71.87**	**65.76**	**56.51**	**81.23**

		Unit	2010	2011	2012	2013.1-6
Jiheng Mining	Designed ore feed for dry processing	1,000t	200	1,200	1,200	1,650
	Actual ore feed for dry processing	1,000t	73	555	1,155	1,805
	Dry plant operation rate	**%**	**36.60**	**46.23**	**96.28**	**109.40[1]**

Note:

[1] During the six months ended June 30, 2013, the actual volume of feed material exceeded the designed processing capacity as the actual operating days of the dry processing plant of Jiheng Mining exceeded the initially designed operating days of 300 days per year.

8.4.3 Designed Production Plan

Xinxin Mining plans to produce 5 Mtpa of raw ore with an average grade of 12.83% TFe from open-pit mining upon full capacity during stage one and to produce 4 Mtpa of ore with an average grade of 15.35% TFe from underground mining during stage two. The designed production plan is shown in Table 8–14.

Table 8–14: Designed Parameters in Technical Renovation for Xinxin Mining

		Technical Renovation			Full Capacity	
Item	**Unit**	**2H 2013**	**2014**	**2015**	**2016**	**2017**
Dry Magnetic Separation						
Raw Ore Feed	1,000t	809	2,900	3,900	5,000	5,000
Pre-Concentrate Output	1,000t	309	895	998	1,280	1,280
Raw Ore Feed/Pre-Concentrate Output	t/t	2.62	3.24	3.91	3.91	3.91
Feed Raw Ore Grade	TFe%	14.18	12.83	12.83	12.83	12.83
Pre-Concentrate Grade	TFe%	20.30	24.00	28.00	28.00	28.00
Dry Separation Recovery Rate	%	54.64	57.70	55.87	55.87	55.87
Wet Magnetic Separation						
Pre-Concentrate Feed	1,000t	334	895	998	1,280	1,280
Concentrate Output	1,000t	74.00	243.97	326.14	418.13	418.13
Pre-Concentrate Feed/ Concentrate Output	t/t	4.51	3.67	3.06	3.06	3.06
Concentrate Grade	TFe%	66.65	66.00	66.00	66.00	66.00
Wet Separation Recovery Rate	%	72.80	75.00	77.00	77.00	77.00
Raw Ore Feed/Concentrate Output	t/t	11.81	11.89	11.96	11.96	11.96
Total Recovery Rate	%	39.78	43.28	43.02	43.02	43.02

Jingyuancheng Mining plans to produce 14 Mtpa of raw ore with an average grade of 13.50% TFe from open-pit mining upon full capacity during stage one and produce 3 Mtpa of ore with an average grade of 15.96% TFe from underground mining during stage two. The designed production plan is shown in Table 8–15.

Table 8–15: Designed Parameters in Technical Renovation for Jingyuancheng Mining

		Technical Renovation			Full Capacity	
Item	**Unit**	**2H 2013**	**2014**	**2015**	**2016**	**2017**
Dry Magnetic Separation						
Raw Ore Feed	1,000t	3,164	8,000	11,000	14,000	14,000
Pre-Concentrate Output	1,000t	1,204	2,441	2,797	3,560	3,560
Raw Ore Feed/ Pre-Concentrate Output	t/t	2.63	3.28	3.93	3.93	3.93
Feed Raw Ore Grade	TFe%	13.50	13.50	13.50	13.50	13.50
Pre-Concentrate Grade	TFe%	20.50	24.00	28.00	28.00	28.00
Dry Separation Recovery Rate	%	57.74	54.24	52.73	52.73	52.73
Wet Magnetic Separation						
Pre-Concentrate Feed	1,000t	1,240	2,441	2,797	3,560	3,560
Concentrate Output	1,000t	274.34	647.92	889.88	1,132.57	1,132.57
Pre-Concentrate Feed/ Concentrate Output	t/t	4.52	3.77	3.14	3.14	3.14
Concentrate Grade	TFe%	66.65	66.00	66.00	66.00	66.00
Wet Separation Recovery Rate	%	72.25	73.00	75.00	75.00	75.00
Raw Ore Feed/Concentrate Output	t/t	11.84	12.35	12.36	12.36	12.36
Total Recovery Rate	%	41.72	39.60	39.55	39.55	39.55

The designed processing parameters of Xinxin Mining and Jingyuancheng Mining for underground mining in stage two are shown in Table 8–16.

Table 8–16: Designed Processing Parameters of Xinxin and Jingyuancheng for Underground Mining

Item	Unit	Xinxin Mining	Jingyuancheng Mining
Dry Magnetic Separation			
Raw Ore Feed	1,000t	4,000	3,000
Feed Raw Ore Grade	TFe%	15.35	15.96
Pre-Concentrate Output	1,000t	1,526	1,125
Pre-Concentrate Grade	%	30.00	30.00
Raw Ore Feed/Pre-Concentrate Output	t/t	2.62	2.67
Recovery Rate	%	74.56	70.50
Wet Magnetic Separation			
Pre-Concentrate Feed	1,000t	1,526	1,125
Concentrate Output	1,000t	527.19	388.70
Concentrate Grade	%	66.00	66.00
Pre-Concentrate Feed/Concentrate Output	t/t	2.89	2.89
Recovery Rate	%	76.00	76.00
Total Recovery Rate	%	56.67	53.58
Raw Ore Feed/Concentrate Output	t/t	7.59	7.72

Jiheng Mining plans to produce 2.4 Mtpa of ore from open-pit mining at Zhijiazhuang Mine. The average grade of ore is 27.11% TFe. The designed production plan is shown in Table 8–17. The proposed new wet processing plant is anticipated to operate starting from July 2014. Before that, the products of Jiheng Mining remain to be the preliminary concentrate and high grade raw ore. By the end of 2012, Jiheng Mining has about 2.6 million tones of by product with TFe <8% excavated during stripping and mine development, which is also processed in the dry processing plant to produce preliminary concentrate for sale. Jiheng mining plans to technically renovate the outdated dry processing facility No. 2 to handle this kind of material from the third quarter of 2013.

Table 8–17: Designed Parameters in Technical Renovation for Jiheng Mining

		Technical Renovation			Full Capacity	
Item	**Unit**	**2H 2013**	**2014**	**2015**	**2016**	**2017**
Dry Magnetic Separation						
Raw Ore Feed	1,000t	2,162[1]	1,150	2,400	2,400	2,400
Pre-Concentrate Output	1,000t	515	724	1,511	1,511	1,511
Raw Ore Feed/Pre-Concentrate Output	t/t	4.20	1.59	1.59	1.59	1.59
Feed Grade	TFe%	7.80	27.11	27.11	27.11	27.11
Pre-Concentrate Grade	TFe%	24.50	41.00	41.00	41.00	41.00
Dry Separation Recovery Rate	%	74.79%	95.22	95.22	95.22	95.22
Wet Magnetic Separation						
Pre-Concentrate Feed	1,000t	429	724	1,511	1,511	1,511
Concentrate Output	1,000t	155.80	454.86	949.27	949.27	949.27
Pre-Concentrate Feed/ Concentrate Output	t/t	2.75	1.59	1.59	1.59	1.59
Concentrate Grade	%	62.00	62.00	62.00	62.00	62.00
Wet Separation Recovery Rate	%	92.02	95.00	95.00	95.00	95.00
Raw Ore Feed/Concentrate Output	t/t	11.55	2.53	2.53	2.53	2.53
Total Recovery Rate	%	68.82	90.46	90.46	90.46	90.46

Note:

[1] Raw ore feed in 2H 2013 at Jiheng dry processing facilities is weakly mineralised wall rock.

The dry and wet processing plants are both capable of processing more than what is mined out annually. Therefore, the weakly mineralised wall rock is also processed to achieve a better use of the mineral resource and a larger output of the iron concentrate. SRK is in favour of this kind of practice, and recommends timely and appropriate control of the feed grade according to the market condition for a better cost control, which would eventually bring more profit to Jiheng Mining.

8.4.4 Assessment on Designed Production Plan

Based on the processing test results, it is possible for Xinxin Mining and Jingyuancheng Mining to reach the designed levels of recovery and concentration ratios (feed ore/concentrate) if the feed grade is as high as the designed value. However, considering that the processing tests were conducted under laboratory conditions with strict controls on ore size, magnetic intensity, and washing water quantity, the actual operational conditions must also be strictly controlled to achieve the expected technical parameters.

The designed level of recovery rate for Jiheng Mining is much higher compared with the processing test results. In the processing test, 84.07% of the iron was recovered from feed ore grading 20.13% TFe, and 92.09% of the iron was recovered from feed ore grading 33.93% TFe. Given that the ore grade is designed as 27.11%. SRK opines that it can achieve the designed level of recovery rates between 90% and 92%.

Improving recovery rates and reducing production costs are both important ways to obtain higher economic returns. For low grade magnetite, grinding costs are the key input in total processing costs. A higher recovery rate puts stricter requirements on grinding fineness, which would accordingly increase the cost. Considering that the magnetite in the three Dushancheng mines and Zhijiazhuang mine is fine-grained and the magnetite in Zhijiazhuang mine, a skarn iron mine, occurs as cement in gangue minerals, SRK is of the opinion that the existing two-stage grinding procedure poses restrictions on the improvement of production capacity and cost reduction, and it is feasible to introduce the high pressure roller crushers between the existing dry and wet processing operations. SRK opines that it is hard to achieve a satisfactory result to separate the fine-grained ore in dry, and recommends Aowei Mining to employ wet magnetic separator instead of dry magnetic separator after the high pressure roller crushing. Aowei Mining states that they will implement these recommendations.

Generally, maintaining a much high requirement on concentrate grade will inevitably cause a fall of recovery rate to some extent. Zhijiazhuang ore is alkaline. Iron making has a lower level of requirement on the grade of alkaline ore than acid ore. It is recommended that in the future production Jiheng Mining adjust the product grade to appropriate levels according to various market conditions so as to maintain an appropriate level of recovery rate and maximize the economic returns.

8.4.5 Production Plan of 2013

Jiheng Mining's wet processing plant is planned to commence production in July 2014. During the construction period, to fully utilize the current wet processing capacities and improve the economic benefit, Aowei Mining has temporarily re-arranged the production plan for all current wet processing plants:

The preliminary concentrate produced from Jiheng Mining is transferred to Xinxin Mining's wet processing plant to produce iron concentrate. Xinxin Mining's wet processing plant has been expanded its original two lines to three, which can process both the preliminary concentrate from Jiheng Mining and Xinxin Mining. With regard to the concentrate's low grade issue, one set of magnetite separation column has been installed at the end of its original flowsheet to improve the final iron concentrate's grade. By the time of SRK's second site visit in July 2013, the magnetite separation column is under the trial and testing procedure. The preliminary testing result shows the concentrate's grade has been improved from 62% to 62.9% to 63.4%. Since March 2013, the preliminary concentrate produced by Jiheng has been transferred to Xinxin for wet processing. About 2 Mt weakly mineralised rock which is in stock currently will all be processed by Jiheng's dry processing facility, the preliminary concentrate from which will be transferred to Xinxin for wet processing during the second half of 2013.

Part of the preliminary concentrate produced from Xinxin Mining is transferred to Jingyuancheng Mining for wet processing. The main reasons behind of using Jingyuancheng Mining's wet processing plant to treat Xinxin Mining's preliminary concentrate are: Jinyuancheng Mining's Shuanmazhuang Mine and Wang'ergou Mine are now under the pit correction procedure which limited the mining and concentrating output which released some of the processing capacity and Jingyuancheng Mining's wet processing plant can treat both the preliminary product without any further adjustment of the flowsheet. Since April 2013, part of the preliminary concentrate from Xinxin has been transferred to Jingyuancheng for wet processing.

The above production plan will be effective until July 2014 when the wet processing plant in Jiheng is put into service. The production records from January to September 2013 are presented in Table 8–18.

Table 8–18: Processing Production, January–September 2013

		Actual Production									
Item	Unit	Jan.	Feb.	Mar.	Apr.	May.	Jun.	1H 2013	Jul.	Aug.	Sep.
Xinxin Mining Dry											
Magnetic Separation											
Raw Ore Feed	1,000t	256.86	33.42	299.02	244.66	303.19	253.79	1,390.94	181.91	125.23	130.42
Pre-Concentrate Output	1,000t	93.31	12.45	102.09	92.73	116.30	97.53	514.45	69.33	47.88	49.86
Raw Ore Feed/Pre-Concentrate Output	t/t	2.75	2.68	2.93	2.64	2.61	2.60	2.70	2.62	2.62	2.62
Feed Grade	%	13.41	13.82	13.49	13.68	13.77	14.03	13.68	13.53	13.94	12.98
Pre-Concentrate Grade	%	20.32	20.73	19.32	19.33	20.32	20.20	19.93	19.82	19.57	20.29
Dry Separation Recovery Rate	%	55.05	55.86	48.89	53.57	56.61	55.34	53.90	55.82	53.67	59.76
Xinxin Wet Magnetic Separation											
Pre-Concentrate Feed	1,000t	106.47	2.42	98.30	61.04	27.83		296.06	6.20	32.32	38.52
Concentrate Output	1,000t	26.00	0.61	23.20	13.61	6.98		74.32[1]	1.57	7.52	8.84
Pre-Concentrate Feed/Concentrate Output	t/t	4.09	3.97	4.24	4.49	3.99		3.98	3.95	4.30	4.36
Feed Grade	%	20.42	20.73	20.22	19.96	20.57		20.28	20.13	19.28	19.54
Concentrate Grade	%	66.07	66.05	66.26	66.65	66.42		66.28	66.67	66.17	66.72
Wet Separation Recovery Rate	%	79.01	80.76	77.33	74.43	80.93		82.04	83.86	79.82	78.38
Transferred to Jingyuancheng											
Wet Magnetic Separation											
Pre-Concentrate Feed	1,000t				22.95	102.73	67.82	193.50	69.03	13.52	15.75
Concentrate Output	1,000t				5.10	22.83	15.07	43.00	15.34	3.01	3.50
Pre-Concentrate Feed/Concentrate Output	t/t				4.50	4.50	4.50	4.50	4.50	4.50	4.50
Feed Grade	%				20.22	20.01	19.82	19.97	20.55	19.98	20.73
Concentrate Grade	%				66.59	66.52	66.45	66.50	66.70	66.53	66.66
Wet Separation Recovery Rate	%				73.18	73.87	74.51	74.01	71.88	73.80	71.10

Item	Unit	Actual Production									
		Jan.	Feb.	Mar.	Apr.	May.	Jun.	1H 2013	Jul.	Aug.	Sep.
Jingyuancheng Mining Dry Magnetic Separation											
Raw Ore Feed	1,000t	362.26	104.86	475.18	705.45	696.64	491.46	2,835.84	467.92	527.76	526.68
Pre-Concentrate Output	1,000t	108.01	35.61	150.34	204.04	207.47	186.21	891.68	180.03	203.00	201.07
Raw Ore Feed/Pre-Concentrate Output	t/t	3.35	2.95	3.16	3.46	3.36	2.64	3.18	2.60	2.60	2.62
Feed Grade	%	10.50	11.55	10.89	12.35	12.75	13.52	12.14	13.51	13.58	13.70
Pre-Concentrate Grade	%	18.45	18.96	19.05	20.37	20.51	21.04	20.03	20.55	20.61	20.84
Dry Separation Recovery Rate	%	52.40	55.73	55.31	47.71	47.90	58.96	51.87	58.52	58.38	58.08
Jingyuancheng Wet Magnetic Separation											
Pre-Concentrate Feed	1,000t	122.51	25.67	152.34	213.70	166.80	155.01	836.04	194.66	193.36	220.80
Concentrate Output	1,000t	27.16	5.45	32.62	44.91	35.40	34.33	179.86	43.06	42.84	48.80
Concentrate Feed/Concentrate Output	t/t	4.51	4.71	4.67	4.76	4.71	4.52	4.65	4.52	4.51	4.52
Feed Grade	%	18.95	18.96	19.05	19.79	20.01	19.82	19.55	20.55	19.98	20.73
Concentrate Grade	%	66.93	66.63	66.50	66.57	66.52	66.45	66.58	66.70	66.53	66.66
Dry Separation Recovery Rate	%	78.31	74.57	74.76	70.68	70.55	74.26	73.24	71.88	73.80	71.10

Item	Unit	Actual Production									
		Jan.	Feb.	Mar.	Apr.	May.	Jun.	1H 2013	Jul.	Aug.	Sep.
Jiheng Mining Dry Magnetic Separation											
Raw Ore Feed	1,000t	200.24	210.16	376.20	344.77	336.05	337.71	1,805.12[2]	336.88	312.59	345.07
Pre-Concentrate Output	1,000t	72.23	76.36	126.45	126.22	123.87	75.61	600.73	79.53	74.99	83.17
Raw Ore Feed/Pre-Concentrate Output	t/t	2.77	2.75	2.98	2.73	2.71	4.47	3.00	4.24	4.17	4.15
Feed Grade	%	9.04	8.24	8.31	10.09	8.51	6.77	8.47	7.81	7.58	7.76
Pre-Concentrate Grade	%	22.16	19.38	21.20	24.58	20.09	23.24	21.82	25.32	24.33	26.74
Dry Separation Recovery Rate	%	88.43	85.45	85.75	89.18	87.02	76.86	85.72	76.54	77.00	83.05
Transferred to Xinxin Wet Magnetic Separation											
Pre-Concentrate Feed	1,000t			2.82	25.87	37.04	63.53	129.26	87.34	66.51	69.71
Concentrate Output	1,000t			1.21	8.79	12.29	25.88	48.17	29.34	24.05	25.43
Pre-Concentrate Feed/Concentrate Output	t/t			2.33	2.94	3.01	2.45	2.68	2.98	2.77	2.74
Feed Grade	%			27.97	23.26	22.72	27.66	25.37	23.18	24.52	24.77
Concentrate Grade	%			61.97	62.38	61.92	61.93	62.01	62.22	62.74	62.85
Wet Separation Recovery Rate	%			95.05	91.12	90.41	91.23	91.09	90.16	92.53	92.55

Note:

1 The figure includes inventory overage of 3924.77 t;

2 The figure includes 1,738,977.9 t weakly mineralised wall rock and 66,142 t raw ore with TFe grade ≥8%.

8.5 Tailing Storage Facilities

8.5.1 Conditions of the Tailings Storage Facilities

Tailing storage facilities ("TSF") are important for mine production. Dry magnetic separation facilities are built around the open-pits to pre-separate the waste rocks from the ores. The waste rocks are stored at the waste dump, and the ores are delivered to the wet separation plants for further processing. Tailings are generated after the iron is concentrated, and stored in the tailings dam.

Xinxin Mining currently has two tailings dams in use, namely Xiaomazong and Taohuazui. Tailings are dumped in wet, and the sub-dam is built upstream. Tailings pulps from the processing plant are pumped to the tailings dams.

Xiaomazong tailings dam is located in the south of the wet processing facility, with a distance of about 600 m. This dam was designed by Beijing Dongfang Yanjing Geological and Mining Design Institute in April 2004 and was put into use in the end of June that year. The initial dam, constructed by compaction of permeable rock, 25 m high, is 3 m wide on the top and 83 m wide at most at the bottom. The slope ratio is 1:1.6. The dam base of the initial dam is bed rock. The upstream slope is lined by geotextile and dry stone; the downstream slope is lined by dry stone. The actual height of the initial dam is 13 m. The designed total height of the tailing dam is 60 m and the embankment height is 45 m. The total capacity is 1.2 M m^3, and the effective capacity is 0.92 M m^3. It is classified as the fourth category. The technical renovation, safety design section and working drawing design was completed by Sinosteel in 2011 and was approved for construction. The technical renovation work has been finished, increasing the total height of the dam to 89 m. Therefore, the total capacity of the dam is increased to 5.4 M m^3 and the effective capacity is increased to 3.8 M m^3.

Taohuazui tailings dam is located in the north of the wet processing facility, with a distance of about 800 m. This dam was designed by Sinosteel in June 2005 and was put into use in October that year. The initial dam, constructed by compaction of permeable rock, 21 m high, is 3.5 m wide and 102 m long on the top. The slope ratio is 1:1.6. The slope is lined by dry stone. The initial dam is lined with sand and gravel which is 3–5 m thick. The stacking dam, or sub dam, is constructed by tailings. The designed average exterior slope ratio is 1:4 and the average interior slope ratio is 1:40. The designed embankment height is 64 m, the total height of the dam is 85 m, and the total capacity is 6.2 M m^3. The effective capacity is 4.3 M m^3, and the balance by the end of 2012 is 3.5 M m^3.

An overview of Xiaomazong tailing dam is shown in Figure 8–7. The drainage system under construction is visible in the foreground, and the dam surface is visible in the distance.

Figure 8–7: Overview of Xiaomazong Tailing Dam

Jingyuancheng Mining owns one tailing dam, i.e., Chengzigou tailing dam, which was designed by Sinosteel and was put into use in March 2013. Figure 8–8 shows the tailings' dewatering facility and discharging after dewatering of Chengzigou TSF.

Tailings will be dumped in dry at Chengzigou dam. Thickened tailings from the wet separation plant will be pumped to the tailings dam for dewatering. After classification by hydrocyclone, coarse tailings will be dewatered by belt filter and fine tailings will be thickened and dewatered. The dewatered tailings, whose water content will be less than 15% according to the design, will be delivered to the tailings dam by belt conveyer, and piled up in compaction. The design for Dabugou tailing dam has been completed and the Company has finished the governmental procedures to open the dam, which is expected to start construction in the fourth quarter of 2013 with an investment estimated at RMB7 million.

Figure 8–8: Tailings' Dewatering Facility and Discharge after Dewatering of Chengzigou TSF

As the life of the existing tailing dams is not as long as the lives of their associated mines, the Company plans to take the following measures to ensure the proper storage of tailings. First, two new tailing dams, one for Jingyuancheng Mining named Dabugou tailings dam and another for Jiheng Mining, will be constructed in 2014; after that one more tailing dam (Xiaobugou tailings dam) for Jingyuancheng Mining will be constructed in the future. Second, tailings will be dumped in dry at Dabugou tailings dam rather than wet. Finally, the dry separation process will be improved (i.e., by reducing the grain size of the preliminary concentrates and improving their grade) to reduce tailings output, which could thereby extend the lives of the tailings dams. They are capable to accommodate all the tailings expected in future production. The service life of all the tailing dams can support about eleven years for all mines. Summaries of the capacities of the tailings dams after the above measures are taken are shown in Table 8–19.

Table 8–19: Summaries of Tailing Dams Service Lives

TFS Name	Xinxin Mining		Jingyuancheng Mining		
	Xiaomazong	Taohuazui	Chengzigou	Dabugou	Xiaobugou
Storage (1,000 m^3)	5,400	6,200	4,490	8,000	6,000
Effective Storage (1,000 m^3)	3,800	4,300	4,250	7,500	4,900
Remaining Effective Storage (1,000 m^3)	3,800	3,500	4,250	7,500	4,900
Initial Dam Height (m)	25	21	24	22	23
Accumulated Dam Height (m)	64	64	68	77	75
Total Height (m)	89	85	92	99	98
Total Existing Height (m)	56	54			
Total Remaining Effective Storage (1,000 m^3)	7,300			16,650	
Total Tailings Output from 2013 (1,000 m^3)	16,128			24,890	
Remaining Life (Year)	13.4			11.4	

Note:

The data in above table is as of 31 December, 2012

9 WORKFORCE ASSESSMENT

9.1 Workforce Numbers

Workforce numbers at the end of June 2013 are shown in Table 9–1 and Table 9–2. Aowei Mining's headquarter employs 78 personnel including 15 for management and 30 professional technical personnel, and 33 supporting staff (Table 9–1). The four operating mines and their associated ore processing plants and others have a total of 1,192 personnel (Table 9–2). SRK considers that the workforce numbers are completely adequate to meet the Company's production capacities.

Table 9–1: Company Headquarter Workforce Numbers

Department	Corporate Leadership	Audit & Supervision	Production Technology	Financial	Human Resource	Equipment & Material Supply
Personnel	6	2	8	4	4	9

Department	Marketing	Business Planning	Administration & Management	Key Office	Project	Others
Personnel	10	2	9	2	5	17

Table 9–2: Workforce Numbers of Operating Mines

Department	Xinxin Mining	Jingyuancheng Mining	Jiheng Mining
Mine Management	**54**	**83**	**56**
Mine manager and Assistant	3	5	3
Geologists and engineers	1	6	1
Accountant and others	3	3	3
Others	47	69	49
Mining Department	**74**	**90**	**96**
Management	2	6	3
Technology	4	3	4
Mining and transport workers	68	81	89
Ore Processing Plant	**160**	**248**	**62**
Management	3	7	3
Technology	2	2	1
General workers	155	239	58
Workshop & Maintenance	**37**	**57**	**17**
Management	3	2	1
General workers	34	55	16
Safety Department	**43**	**75**	**40**
Total	**368**	**553**	**271**

9.2 Assessment of Workforce

According to the law of the Chinese National Ministry Labour and the work contract regulations of Hebei Province Bureau of Work and Social Security, all Company staff and employees have signed work contracts. The Company has also acquired endowment, medical, work injury, unemployment, and pension insurance, plus housing accumulation funds, for employees on May 1, 2013. SRK was informed during the site visit that the Company staff and contractors have relatively low turnover.

As of June 30, 2013, a total of workforce numbers were 1,270 persons, including 78 for the Aowei Mining headquarters, 193 in subsidiary company mine management, 260 in the mining departments, 470 in the ore processing plants, 111 for workshop and maintenance, and 158 in the safety department. The total staff turnover is about 5% per year, mostly due to migrant workers in the mining department. SRK was informed during the site visit that the Company is planning to decrease the turnover rate and build more stable management and production teams by further improving safety conditions and increasing salary levels.

10 OCCUPATIONAL HEALTH AND SAFETY

10.1 Project Safety Assessment and Approvals

SRK sighted the safety production permits for mining activities operated for Zhijiazhuang Mine of Jiheng Mining, for Gufen Mine of Xinxin Mining, and for Wang'ergou Mine and Shuanmazhuang Mine of Jingyuancheng Mining respectively. In addition, SRK sighted and three other safety production permits for the Taohuazui TSF operation and Xiaomazong TSF operation in Xinxin Mining and Chengzigou TSF operation in Jingyuancheng Mining respectively.

10.2 Occupational Health and Safety Management and Observations

During SRK's site visit, SRK observed that safety signs were in place, safety provisions and rules were also displayed within the work areas, moving machinery parts were appropriately guarded and covered, guard railings were installed on all gantries, and proper Personal Protection Equipment ("PPE") was provided and was being used by the workers, such as hardhats, traffic vests, and steel toed shows.

SRK has sighted the OHS management system and procedures, which provide the following summary in respect to the proposed OHS management measures for the Project:

- Mining, crushing, blasting and explosives handling,
- Side slope failure prevention,
- Waste rock disposal,
- Environmental dust and noise suppression,
- Emergency response,
- Fire protection and fire extinguishment,
- Sanitary provision,
- Power provision,
- Labour and supervision, and
- Safety administration.

SRK notes that the above site occupational health and safety ("OHS") management measures are generally in line with recognised Chinese industry practices and Chinese safety regulations.

10.3 Historical Occupational Health and Safety Records

The company's safety records indicate that there are two minor injuries but no serious injuries or fatalities in the past three years. Incident analysis reports for these two minor injuries were also provided to SRK for review. These two reports analysed the cause of injuries and identified measures to prevent a recurrence, which are in line with international recognized OHS accident monitoring practice.

11 CAPITAL EXPENDITURES AND OPERATING COSTS

11.1 Capital Expenditures

11.1.1 Designed Production Plan in Feasibility Study

All four mines owned by Aowei Mining are in normal operation, and have a long history of investment and production, during which a large amount of fixed assets have been established. Some of the fixed assets are still in use, some are abandoned, and some are out of use. In December 2012, Sinosteel compiled the *Feasibility Study on the Construction Project of Laiyuan Aowei Mining Investment Co. Limited*, which includes a design for the technical renovation of all the mines. The designed production plans are shown in Table 11–1 and Table 11–2.

Table 11–1: Designed Production Plan in Stage One (Open-pit Mining)

Company	Product (1,000t)	Years with Production Capacities 2013	2014	2015	2016	2017	2018	2019
Xinxin Mining[1]	Raw Ore	2,200	2,900	3,900	5,000	5,000	5,000	5,000
	Concentrate	191.24	243.97	326.14	418.13	418.13	418.13	418.13
Jingyuancheng Mining[1]	Raw Ore	6,000	8,000	11,000	14,000	14,000	14,000	14,000
	Concentrate	454.15	647.92	889.88	132.57	132.57	132.57	132.57
Jiheng Mining[2]	Raw Ore	2,150	2,300	2,400	2,400	2,400	2,400	2,400
	Concentrate	204.04	454.86	949.27	949.27	949.27	949.27	949.27
Total	**Raw Ore**	**10,350**	**13,200**	**17,300**	**21,400**	**21,400**	**21,400**	**21,400**
	Concentrate	**849.43**	**1,346.75**	**2,165.29**	**2,499.98**	**2,499.98**	**2,499.98**	**2,499.98**

Company	Product (1,000t)	Years with Production Capacities 2020	2021	2022	2023	2024	2025
Xinxin Mining	Raw Ore	5,000	5,000	5,000	5,000	5,000	4,615
	Concentrate	418.13	418.13	418.13	418.13	418.13	385.94
Jingyuancheng Mining	Raw Ore	14,000	14,000	14,000	12,000	6,683	
	Concentrate	1,132.57	1,132.57	1,132.57	970.77	540.67	
Jiheng Mining	Raw Ore	2,400	1,400	900			
	Concentrate	949.27	553.74	355.98			
Total	**Raw Ore**	**21,400**	**20,400**	**19,900**	**17,000**	**11,683**	**4,615**
	Concentrate	**2,499.98**	**2,104.44**	**1,906.68**	**1,388.91**	**958.81**	**385.94**

Notes:

1 Technical renovation will be carried out from 2013 to 2015 and the underground development and infrastructure construction will be carried out from 2022 to 2025.

2 The concentrate in 2013 was produced from weakly mineralised wall rock of Jiheng which was processed by Jiheng's dry processing facilities and Xinxin's wet processing plants. The pre-concentrate and high grade ore from Jiheng Mining will be processed into iron concentrate at Jiheng Mining's own wet processing plant starting from July 2014. SRK is informed by the Company management that about 1.6 Mt weakly mineralised wall rocks at Zhijiazhuang Mine are expected to be mined out and processed in 2014 with the similar cost and recovery rate as 2013, and the ratio of raw ore feed to concentrate output is expected to be about 12.

Table 11–2: Designed Production Plan in Stage Two (Underground Mining)

Company	Product (1,000t)	Years with Production Capacities					
		2025	2026	2027	2028	2029	2030
Xinxin Mining	Raw Ore		4,000	4,000	4,000	4,000	4,000
	Concentrate		527.19	527.19	527.19	527.19	527.19
Jingyuancheng Mining	Raw Ore	3,000	3,000	3,000	3,000	3,000	3,000
	Concentrate	388.70	388.70	388.70	388.70	388.70	388.70
Total	**Raw Ore**	**3,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**
	Concentrate	**388.70**	**915.89**	**915.89**	**915.89**	**915.89**	**915.89**

Company	Product (1,000t)	Years with Production Capacities					
		2031	2032	2033	2034	2035	2036
Xinxin Mining	Raw Ore	4,000	4,000	4,000	4,000	4,000	4,000
	Concentrate	527.19	527.19	527.19	527.19	527.19	527.19
Jingyuancheng Mining	Raw Ore	3,000	3,000	3,000	3,000	3,000	3,000
	Concentrate	388.70	388.70	388.70	388.70	388.70	388.70
Total	**Raw Ore**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**	**7,000**
	Concentrate	**915.89**	**915.89**	**915.89**	**915.89**	**915.89**	**915.89**

Company	Product (1,000t)	Years with Production Capacities				
		2037	2038	2039	2040	2041
Xinxin Mining	Raw Ore	4,000	4,000	2,714		
	Concentrate	527.19	527.19	357.69		
Jingyuancheng Mining	Raw Ore	3,000	3,000	3,000	2,000	1,058
	Concentrate	388.70	388.70	388.70	259.13	137.08
Total	**Raw Ore**	**7,000**	**7,000**	**5,714**	**2,000**	**1,058**
	Concentrate	**915.89**	**915.89**	**746.40**	**259.13**	**137.08**

11.1.2 Estimated Capital Expenditures in Feasibility Study

Two stages for construction are proposed in the design. In stage one, open-pit mining is used; existing processing facilities and plants and tailing storage facilities are to be expanded and new ones are built as part of the technical upgrade. In stage two, underground mining is proposed for Gufen, Wang'ergou, and Shuanmazhuang Mines, and construction work will begin three years before the end of open-pit mining. In the feasibility study, RMB1,952.77 million, where the loan interest is excluded, covering the slope correction and processing and tailings storage facility renovation and upgrade. Of the investments, RMB961.82 million was invested before June 30, 2013, and RMB990.94 million will be invested between April 2013 and 2015. Details of the total investment and the investments between 2013 and 2015 are shown in Table 11–3. The total investment in stage two for undergrounding mining from 2023 to 2025 is estimated to be RMB738.97 million on new underground workings and equipment (Table 11–4).

Table 11–3: Estimated Investment of Stage One (Open-pit) in Feasibility Study

Xinxin Mining	Total (Million RMB)	Annual Investment (Million RMB)				
		1H 2013	2H 2013	2014	2015	Subtotal
Engineering	244.21	23.84	53.72	53.87	40.42	171.84
Including: Development Engineering	132.81	19.54	30.22	46.49	36.56	132.81
Construction	42.23	3.58	8.24	1.00	1.00	13.82
Facility Purchase	67.60	0.72	14.43	6.38	2.11	23.64
Installation	1.57	0.00	0.83	0.00	0.74	1.57
Others Expenditures	55.81	1.02	4.77	1.97	25.48	33.24
Contingency allowance	8.88	0.00	4.17	2.79	1.92	8.88
Intangible Assets	27.52	0.00	0.00	0.00	0.00	0.00
Mining right	33.22	21.7	0.00	10.00	1.52	33.22
Working capital	25.96	3.38	1.62	5.00	15.96	25.96
Total investment	**395.61**	**49.94**	**64.28**	**73.63**	**85.30**	**273.15**
Including: new facilities to be invested between July 1, 2013 and 2015	223.22					
Investment before June 30, 2013	172.39					

Jingyuancheng Mining	Total (Million RMB)	Annual Investment (Million RMB)				
		1H 2013	2H 2013	2014	2015	Subtotal
Engineering	639.09	42.64	107.34	113.53	102.24	365.76
Including: Development Engineering	170.56	24.61	32.63	50.88	53.57	161.69
Construction	387.09	18.03	56.43	29.11	19.05	122.62
Facility Purchase	70.49	0.00	16.80	28.59	25.10	70.49
Installation	10.95	0.00	1.48	4.95	4.52	10.95
Other Expenditures	247.12	10.18	9.63	19.21	32.13	71.14
Contingency Allowance	20.86	0.00	8.49	6.64	5.73	20.86
Intangible Assets	19.74	0.00	0.00	0.00	0.00	0.00
Mining Right	89.19	34.16	0.00	18.00	37.03	89.19
Working Capital	58.92	13.30	12.89	13.09	19.64	58.92
Total Investment	**1,074.92**	**100.28**	**138.35**	**170.46**	**196.77**	**605.87**
Including: new facilities to be invested between July 1, 2013 and 2015	505.58					
Investment before June 30, 2013	569.34					

Jiheng Mining	Total (Million RMB)	Annual Investment (Million RMB)				
		1H 2013	2H 2013	2014	2015	Subtotal
Engineering	221.25	43.36	22.53	100.25		166.15
Including: Development Engineering	63.98	33.68	13.81	4.40		51.89
Construction	86.11	6.73	0.00	49.36		56.09
Facility Purchase	62.99	2.95	8.57	38.47		49.99
Installation	8.17	0.00	0.15	8.02		8.17
Other Expenditures	78.82	4.70	0.00	1.23		5.93
Contingency Allowance	6.82	0.00	3.41	3.41		6.82
Intangible Assets	0.00	0.00	0.00	0.00		0.00
Mining Right	142.33	0.00	20.00	20.00	66.73	106.73
Working Capital	33.01	8.43	2.96	21.62		33.01
Total Investment	**482.23**	**56.49**	**48.90**	**146.51**	**66.73**	**318.63**
Including : new facilities to be invested between July1, 2013 and 2015	262.14					
Investment before June 30, 2013	220.09					

Table 11–4: Estimated Investment of Stage Two (Underground Mining) in Feasibility Study

	Annual Investment (Million RMB)			
Xinxin Mining	**2023**	**2024**	**2025**	**Subtotal**
Main shaft, auxiliary shaft, air shaft and ramp engineering	27.75	19.17		46.93
Roadway engineering		85.62		85.62
Underground mining, tunneling and haulage equipment and installation			76.65	76.65
Mechanical engineering.			19.42	19.42
Underground electric and installation	10.39		8.07	18.46
Construction engineering	5.75			5.75
Mining right	17.82	17.82	17.82	53.46
Total	**61.71**	**122.61**	**121.96**	**306.29**

	Annual Investment (Million RMB)			
Jingyuancheng Mining	**2022**	**2023**	**2024**	**Subtotal**
Main shaft, auxiliary shaft, air shaft and ramp engineering	35.76	11.17		46.94
Roadway engineering		179.86		179.86
Underground mining, tunneling and haulage equipment and installation			114.97	114.97
Mechanical engineering.			19.42	19.42
Underground electric and installation			18.46	18.46
Construction engineering	5.75			5.75
Mining right	15.76	15.76	15.76	47.28
Total	**57.28**	**206.80**	**168.61**	**432.68**

11.2 Operating Costs

11.2.1 Historical Operating Costs

The historical unit costs were sourced from the management accounts of the Aowei Mining's subsidiaries, Xinxin Mining, Jingyuancheng Mining, and Jiheng Mining. Auditing these data is not SRK's workscope. In addition, SRK has no reason to doubt the reliability of the information provided by Aowei Mining. SRK only classified the costs based on the Chapter 18 requirements on the HKEx. Table 11–5 and Table 11–6 show the historical unit costs, which indicate substantial increases in production costs over the past three years. One reason for the cost increase is the increasing costs in salary and raw materials, but the main reason is that in recent years the mines have been focusing on the stope correction project and on stripping waste rock as the Company focused on performing consolidation and correction work in consolidation of the mines and preparing them for production. The ore incidentally extracted has been low in grade, which results in higher direct production costs, and small in quantity, which results in higher indirect production costs. SRK opines that with the on-going technological upgrade, as well as the expected increase in production volume and TFe grade of our iron ores, the unit operating costs after the commencement of the trial or commercial production will decrease substantially as compared with the costs in 2010, 2011 and 2012, and optimisation of the processing flowsheet is expected to further reduce production costs. SRK also noted an increase in unit operating costs at Xinxin Mining and Jingyuancheng Mining from 2015 to 2016, due to an increase in the forecasted stripping ratios as a result of the expansion of the areas to be mined after the ramp-up period and the specific occurrence of orebodies of these mines.

As there is no existing wet processing plant in Jiheng Mining, some high grade raw ores and preliminary concentrate are currently being sold, which will allow it to capture further profits from processing. Jiheng Mining plans to build a new wet processing plant with a production capacity of 1.0 Mtpa iron concentrate with a grade of 62%.

Table 11–5: Historical Unit Costs of Xinxin Mining and Jingyuancheng Mining, 2010 to 2012

	Xinxin Mining			Jingyuancheng Mining		
Cash Operating Costs	2010	2011	2012	2010	2011	2012
Mining (Unit Raw Ore)	**10.85**	**15.57**	**19.17**	**7.44**	**11.37**	**13.91**
Mining contracting	3.70	5.22	6.65	2.69	5.14	5.76
Workforce employment	0.18	0.40	0.76	0.03	0.00	0.67
Consumables	3.05	3.16	5.29	1.36	2.07	3.37
Fuel, electricity, water and other services	0.81	1.26	0.85	2.20	2.48	0.81
Transportation of ore	3.00	5.53	5.61	1.00	1.62	3.29
Safety Production	0.00	0.00	0.00	0.00	0.06	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.10	0.00	0.01	0.15	0.01	0.02
Dry Processing (Unit Pre-Concentrate)	**18.40**	**23.68**	**24.12**	**18.50**	**25.19**	**24.67**
Workforce employment	4.16	6.90	6.85	4.31	5.93	6.49
Consumables	3.69	5.34	4.23	2.39	3.25	3.80
Fuel, electricity, water and other services	10.24	8.95	6.39	5.60	9.25	7.56
Transportation of preliminary concentrate	0.15	2.43	6.46	5.53	6.58	6.70
Safety Production	0.00	0.00	0.00	0.04	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.15	0.06	0.19	0.64	0.18	0.11
Wet Processing (Unit Concentrate)	**113.40**	**116.12**	**114.96**	**120.50**	**148.49**	**140.27**
Workforce employment	9.14	14.55	17.31	12.50	19.18	17.41
Consumables	25.51	36.02	33.62	41.22	43.05	32.81
Fuel, electricity, water and other services	50.55	56.38	54.17	57.24	65.15	61.49
Safety Production	0.29	8.90	9.09	6.85	7.51	1.55
Environmental protection and monitoring	0.00	0.00	0.00	2.68	13.60	27.01
On-site administration	27.90	0.26	0.77	0.00	0.00	0.00
Off-site administration (Unit Concentrate)	**40.77**	**75.43**	**88.28**	**57.38**	**118.74**	**84.14**
Workforce employment	13.05	15.59	30.23	10.73	18.53	32.25
Environmental protection and monitoring	2.77	3.82	3.50	2.41	4.05	3.00
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00
Other administration	24.94	56.02	54.55	44.24	96.17	48.89
Product marketing and sales (Unit Concentrate)	**18.33**	**11.08**	**0.08**	**21.80**	**12.78**	**0.00**
Non-income taxes, royalties and other governmental charges (Unit Concentrate)	**53.56**	**55.53**	**56.12**	**43.85**	**43.59**	**47.57**
Total Cash Operating Cost (Unit Concentrate)	**520.37**	**653.42**	**706.53**	**485.85**	**691.54**	**685.85**

Table 11–6: Historical Unit Costs of Jiheng Mining, 2010 to 2012

	Unit Ore			Unit Pre-Concentrate		
Cash Operating costs	2010	2011	2012	2010	2011	2012
Mining (Unit Ore)	**90.45**	**43.10**	**42.19**	**90.45**	**43.10**	**42.19**
Mining contracting	31.81	16.54	14.13	31.81	16.54	14.13
Workforce employment	3.08	1.42	1.83	3.08	1.42	1.83
Consumables	18.56	7.48	7.24	18.56	7.48	7.24
Fuel, electricity, water and other services	4.25	1.61	1.72	4.25	1.61	1.72
Transportation of ore	32.74	16.03	16.15	32.74	16.03	16.15
Safety Production	0.00	0.01	1.11	0.00	0.01	1.11
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.02	0.01	0.01	0.02	0.01	0.01
Dry Processing (Unit Pre-Concentrate)				**36.16**	**14.90**	**13.42**
Workforce employment				5.60	2.36	1.53
Consumables				2.22	1.95	0.87
Fuel, electricity, water and other services				15.75	6.32	5.97
Transportation of preliminary concentrate				12.54	4.04	2.58
Safety Production				0.00	0.00	0.00
Environmental protection and monitoring				0.00	0.00	0.00
On-site administration				0.05	0.23	2.48
Off-site admin (Unit Ore/Pre-Concentrate)	**37.25**	**19.50**	**17.54**	**142.59**	**57.19**	**56.25**
Workforce employment	1.65	1.12	1.91	6.32	3.28	6.12
Environmental protection and monitoring	0.00	6.95	6.95	0.00	20.38	22.29
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00
Other admin	35.59	11.43	8.68	136.27	33.53	27.83
Product marketing and sales (Unit Ore/Pre-Concentrate)	**0.00**	**0.00**	**0.81**	**0.00**	**0.00**	**2.58**
Non-income taxes, royalties and other governmental charges (Unit Ore/Pre-Concentrate)	**0.00**	**8.98**	**10.37**	**0.00**	**13.62**	**14.36**
Total Cash Operating Costs	**127.70**	**71.58**	**70.91**	**525.01**	**212.86**	**222.04**

11.2.2 Operating Costs from January to September 2013

Aowei re-arranged the wet processing plan in 2013, Xinxin wet processing plant started to treat the preliminary concentrate from Jiheng and Jingyuancheng we processing plant started to treat the preliminary concentrate from Xinxin. Such arrangement leads to some discrepancies between the actual operating cost and the budget in the feasibility study. The operating cost's record from January to September 2013 is shown in Table 11–7, Table 11–8, Table 11–9, Table 11–10 and Table 11–11.

Table 11–7: Operating Costs from January to September 2013 – Xinxin Mining

	2013									
Cash Operating Costs	Jan.	Feb.	Mar.	Apr.	May	Jun.	1H 2013	Jul.	Aug.	Sep.
Mining (Unit Ore)	**11.74**	**14.05**	**14.27**	**11.10**	**11.16**	**12.05**	**12.14**	**12.81**	**14.69**	**11.84**
Mining contracting	2.29	-10.13	7.22	4.13	4.30	5.06	4.32	4.46	4.43	4.56
Workforce employment	0.56	3.26	0.58	0.48	0.47	0.83	0.65	0.65	0.67	0.63
Consumables	5.05	13.61	2.38	3.20	3.06	2.50	3.44	3.31	3.54	2.48
Fuel, electricity, water and other services	0.71	3.88	0.62	0.55	0.52	0.75	0.71	0.53	0.74	0.66
Transportation of ore	3.14	3.44	3.46	2.74	2.81	2.91	3.02	2.76	2.73	2.84
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.10	2.58	0.67
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Dry Processing (Unit Pre-Concentrate)	**15.04**	**46.75**	**12.06**	**13.71**	**9.52**	**13.05**	**13.35**	**15.12**	**22.90**	**24.17**
Workforce employment	3.89	14.94	3.61	4.29	3.32	5.05	4.26	7.05	10.38	10.52
Consumables	1.47	15.73	4.05	4.09	2.01	2.77	3.17	2.70	3.40	3.40
Fuel, electricity, water and other services	4.55	10.47	4.40	5.33	4.19	5.23	4.85	5.37	5.33	5.20
Transportation of preliminary concentrate	5.14	5.61	0.00	0.00	0.00	0.00	1.07	0.00	3.79	5.05
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wet Processing (Unit Concentrate)[1]	**80.04**	**361.96**	**91.60**	**127.73**	**126.28**	**137.59**	**116.09**	**125.60**	**95.72**	**97.41**
Workforce employment	10.15	74.93	9.88	12.05	8.39	11.07	11.48	6.40	11.59	10.62
Consumables	17.32	53.54	32.95	27.25	30.74	31.34	28.23	27.21	17.67	16.65
Fuel, electricity, water and other services	44.74	197.13	40.51	68.34	58.94	58.07	56.60	55.90	54.80	58.81
Safety Production	7.82	36.36	8.27	12.16	7.27	8.01	9.11	0.00	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	2.08	5.50	7.64	2.80	16.95	5.64	5.35
On-site administration	0.00	0.00	0.00	5.85	15.45	21.46	7.87	19.13	6.01	5.98

	2013									
Cash Operating Costs	Jan.	Feb.	Mar.	Apr.	May	Jun.	1H 2013	Jul.	Aug.	Sep.
Off-site administration										
(Unit Concentrate)	**42.93**	**345.65**	**34.56**	**61.84**	**28.63**	**76.15**	**51.41**	**98.63**	**153.22**	**74.47**
Workforce employment	24.65	169.33	18.41	23.13	13.34	25.67	23.45	57.66	52.58	45.64
Environmental protection and monitoring	2.43	24.31	2.73	3.38	1.99	4.20	3.24	1.23	20.91	0.00
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other admin	15.85	152.01	13.43	35.33	13.30	46.29	24.72	39.74	79.73	28.84
Product marketing and sales										
(Unit Concentrate)	**0.00**	**0.00**	**0.18**	**0.00**	**0.00**	**0.00**	**0.03**	**0.00**	**0.00**	**0.00**
Non-income taxes, royalties and other governmental charges (Unit Concentrate)	**37.60**	**40.70**	**41.36**	**36.57**	**43.52**	**32.20**	**37.77**	**35.26**	**36.97**	**42.26**
Total Cash Operating Cost (Unit Concentrate)	**354.55**	**826.94**	**395.97**	**419.15**	**357.24**	**445.74**	**398.01**	**476.26**	**553.11**	**456.71**

Note:

[1] Including concentrate produced from Xinxin preliminary concentrate processed at Jingyuancheng.

Table 11–8: Operating Costs from January to September 2013 – Jingyuancheng Mining

	2013									
Cash Operating Costs	Jan.	Feb.	Mar.	Apr.	May	Jun.	1H2013	Jul.	Aug.	Sep.
Mining (Unit Ore)	**10.55**	**10.63**	**10.42**	**10.31**	**10.03**	**10.34**	**10.31**	**10.63**	**10.94**	**10.97**
Mining contracting	4.62	1.74	5.65	4.72	4.70	5.66	4.23	3.69	5.49	4.16
Workforce employment	0.41	0.38	0.49	0.27	0.24	0.31	0.33	0.33	0.42	0.37
Consumables	2.84	5.05	1.67	2.67	2.33	1.58	2.30	3.60	2.27	3.52
Fuel, electricity, water and other services	0.30	1.38	0.15	0.09	0.15	0.09	0.19	0.11	0.12	0.10
Transportation of ore	2.08	2.04	2.46	2.56	2.61	2.52	2.47	2.57	2.53	2.73
Safety Production	0.30	0.04	0.00	0.01	0.00	0.17	0.07	0.32	0.10	0.08
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	0.00	0.00	0.00	0.00	0.72	0.00	0.00	0.00
Dry Processing										
(Unit pre concentrate)	**20.39**	**25.65**	**20.88**	**18.37**	**17.22**	**19.17**	**19.23**	**19.35**	**17.06**	**18.36**
Workforce employment	5.17	7.49	5.55	3.67	3.57	3.28	4.22	3.19	3.09	3.14
Consumables	2.77	4.81	3.68	3.61	3.25	4.73	3.72	5.88	4.50	4.97
Fuel, electricity, water and other services	7.82	9.21	7.09	5.85	5.98	6.31	6.56	6.04	5.45	5.57
Transportation of preliminary concentrate	4.63	4.14	4.56	5.24	4.41	4.86	4.74	4.24	4.01	4.67
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Wet Processing										
(Unit concentrate)	**116.52**	**263.25**	**98.64**	**76.89**	**83.56**	**92.61**	**96.72**	**98.93**	**113.80**	**105.03**
Workforce employment	12.91	30.49	13.70	7.61	5.91	6.66	9.69	6.06	7.19	6.04
Consumables	20.17	82.48	24.99	22.36	26.66	26.26	25.92	25.28	29.40	33.81
Fuel, electricity, water and other services	63.33	104.35	43.79	45.09	47.72	48.21	50.52	50.59	56.31	48.34
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	19.75	45.94	16.17	1.82	3.27	11.48	10.59	17.01	20.91	16.85
On-site administration	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Off-site administration										
(Unit concentrate)	**74.81**	**240.92**	**47.47**	**41.43**	**54.77**	**65.66**	**60.86**	**31.05**	**57.47**	**21.70**
Workforce employment	22.57	123.58	25.58	15.66	20.20	20.05	23.50	20.51	20.24	16.94
Environmental protection and monitoring	5.33	26.57	4.44	3.22	4.09	4.22	4.83	0.38	9.70	0.72
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other administration	46.91	90.77	17.46	22.55	30.48	41.40	32.53	10.16	27.52	4.04
Product marketing and sales										
(Unit concentrate)	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Non-income taxes, royalties and other governmental charges (Unit concentrate)	**35.77**	**28.80**	**37.85**	**38.86**	**43.28**	**32.29**	**37.15**	**37.02**	**35.08**	**34.22**
Total Cash Operating Cost (Unit Concentrate)	**478.68**	**801.37**	**435.27**	**414.21**	**421.45**	**400.32**	**436.51**	**379.35**	**411.71**	**373.95**

Table 11–9: Operating Costs from January to September 2013 – Jiheng Mining (Ore Mined for Sale)

	2013									
Cash Operating Costs	Jan.	Feb.	Mar.	Apr.	May	Jun.	1H2013	Jul.	Aug.	Sep.
Mining (Unit Ore)	**16.67**	**15.17**	**14.34**	**16.28**	**14.45**	**12.12**	**15.25**	**15.30**	**17.31**	**15.29**
Mining contracting	1.16	3.29	2.27	1.33	0.70	1.53	1.68	3.60	4.41	3.61
Workforce employment	0.54	0.84	0.57	0.67	1.00	1.20	0.71	1.60	2.09	1.50
Consumables	3.61	1.15	1.59	2.85	3.01	2.21	2.52	2.29	2.04	2.32
Fuel, electricity, water and other services	1.04	0.32	0.59	0.73	1.00	1.04	0.78	0.63	0.63	0.81
Transportation of ore	10.29	9.57	9.31	10.71	8.72	6.05	9.55	5.20	5.18	5.04
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	2.96	2.02
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-Site administration	0.04	0.01	0.01	0.00	0.01	0.10	0.02	0.00	0.00	0.00
Off-site administration (Unit Ore)	**4.71**	**23.00**	**2.01**	**3.65**	**3.26**	**0.96**	**3.05**	**1.39**	**2.23**	**1.80**
Workforce employment	0.69	20.09	–0.38	0.73	0.73	0.30	0.74	0.51	1.23	0.76
Environmental protection and monitoring	0.68	7.14	0.70	0.63	0.66	0.27	0.67	0.04	0.05	0.05
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other administration	3.34	–4.23	1.69	2.30	1.88	0.39	1.64	0.84	0.95	0.99
Product marketing and sales	**1.49**	**0.63**	**1.48**	**1.34**	**1.64**	**0.57**	**1.24**	**0.91**	**0.98**	**0.94**
Non-income taxes, royalties and other governmental charges	**11.37**	**10.36**	**12.02**	**11.74**	**12.03**	**10.46**	**11.43**	**10.85**	**11.13**	**11.25**
Total Cash Operating Cost (Unit Ore)	**34.24**	**49.16**	**29.85**	**33.01**	**31.38**	**24.11**	**30.97**	**28.46**	**31.64**	**29.28**

Table 11–10: Operating Costs from January to September 2013 – Jiheng (Ore Treated to Produce Pre-Concentrate)

	2013									
Cash Operating Costs	Jan.	Feb.	Mar.	Apr.	May	Jun.	1H2013	Jul.	Aug.	Sep.
Mining (Unit Ore)	**16.67**	**15.17**	**14.34**	**16.28**	**14.45**	**12.12**	**15.25**	**15.30**	**17.31**	**15.29**
Mining contracting	1.16	3.29	2.27	1.33	0.70	1.53	1.68	3.60	4.41	3.61
Workforce employment	0.54	0.84	0.57	0.67	1.00	1.20	0.71	1.60	2.09	1.50
Consumables	3.61	1.15	1.59	2.85	3.01	2.21	2.52	2.29	2.04	2.32
Fuel, electricity, water and other services	1.04	0.32	0.59	0.73	1.00	1.04	0.78	0.63	0.63	0.81
Transportation of ore	10.29	9.57	9.31	10.71	8.72	6.05	9.55	5.20	5.18	5.04
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.98	2.96	2.02
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.04	0.01	0.01	0.00	0.01	0.10	0.02	0.00	0.00	0.00
Dry Processing (Unit pre-concentrate)	**20.26**	**21.21**	**19.41**	**14.25**	**11.91**	**19.32**	**17.10**	**18.21**	**21.01**	**19.27**
Workforce employment	4.65	4.28	2.71	1.83	2.11	3.52	2.94	4.59	4.83	5.00
Consumables	0.99	3.12	2.08	2.45	2.09	3.34	2.32	2.87	3.51	2.37
Fuel, electricity, water and other services	4.59	3.40	4.05	4.81	4.40	7.40	4.69	5.83	5.79	5.51
Transportation of preliminary concentrate	10.04	10.42	10.56	5.16	3.28	4.92	7.13	0.00	1.23	1.47
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	0.00	0.00	0.02	0.15	0.02	4.91	5.64	4.92
Off-site administration (Unit pre concentrate)	**13.06**	**63.30**	**5.98**	**9.98**	**8.85**	**4.29**	**9.16**	**5.90**	**9.28**	**7.47**
Workforce employment	1.92	55.30	–1.13	1.99	1.98	1.32	2.23	2.17	5.15	3.13
Environmental protection and monitoring	1.88	19.64	2.07	1.71	1.79	1.21	2.01	0.19	0.19	0.22
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other administration	9.26	–11.63	5.04	6.28	5.09	1.76	4.93	3.55	3.94	4.12
Product marketing and sales (Unit pre concentrate)	**4.13**	**1.74**	**4.41**	**3.67**	**4.45**	**2.54**	**3.71**	**3.87**	**4.08**	**3.88**
Non-income taxes, royalties and other governmental charges (Unit pre concentrate)	**14.50**	**11.69**	**16.80**	**15.38**	**16.19**	**13.43**	**15.10**	**14.88**	**15.96**	**16.45**
Total Cash Operating Cost (Unit pre-concentrate)	**98.16**	**139.69**	**89.26**	**87.75**	**80.60**	**93.71**	**90.89**	**107.67**	**122.50**	**110.54**

Table 11–11: Operating Costs from January to September 2013 – Jiheng (Ore Treated to Produce Concentrate)

	2013									
Cash Operating Costs	Jan.	Feb.	Mar.	Apr.	May	Jun.	1H2013	Jul.	Aug.	Sep.
Mining (Unit Ore)			**14.34**	**16.28**	**14.45**	**12.12**	**15.25**	**15.30**	**17.31**	**15.29**
Mining contracting			2.27	1.33	0.70	1.53	1.68	3.60	4.41	3.61
Workforce employment			0.57	0.67	1.00	1.20	0.71	1.60	2.09	1.50
Consumables			1.59	2.85	3.01	2.21	2.52	2.29	2.04	2.32
Fuel, electricity, water and other services			0.59	0.73	1.00	1.04	0.78	0.63	0.63	0.81
Transportation of ore			9.31	10.71	8.72	6.05	9.55	5.20	5.18	5.04
Safety Production			0.00	0.00	0.00	0.00	0.00	1.98	2.96	2.02
Environmental protection and monitoring			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration			0.01	0.00	0.01	0.10	0.02	0.00	0.00	0.00
Dry Processing (Unit pre concentrate)			**19.41**	**14.25**	**11.91**	**19.32**	**17.10**	**18.21**	**21.01**	**19.27**
Workforce employment			2.71	1.83	2.11	3.52	2.94	4.59	4.83	5.00
Consumables			2.08	2.45	2.09	3.34	2.32	2.87	3.51	2.37
Fuel, electricity, water and other services			4.05	4.81	4.40	7.40	4.69	5.83	5.79	5.51
Transportation of preliminary concentrate			10.56	5.16	3.28	4.92	7.13	0.00	1.23	1.47
Safety Production			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration			0.00	0.00	0.02	0.15	0.02	4.91	5.64	4.92
Wet Processing (Unit concentrate)[1]			**185.98**	**204.30**	**206.21**	**178.35**	**190.39**	**191.75**	**183.45**	**183.75**
Workforce employment			14.10	14.91	13.94	12.54	13.37	12.65	14.78	13.30
Consumables			47.02	27.51	34.12	30.70	31.40	25.55	18.04	21.66
Fuel, electricity, water and other services			57.81	77.22	71.44	64.29	68.31	69.36	73.33	69.54
Safety Production			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration			67.06	84.67	86.72	70.81	77.30	84.19	77.30	79.25
Off-site administration (Unit concentrate)				**29.36**	**26.69**	**10.52**	**24.59**	**17.57**	**25.66**	**20.47**
Workforce employment				5.86	5.96	3.25	5.97	6.45	14.23	8.59
Environmental protection and monitoring				5.03	5.38	2.96	5.39	0.56	0.54	0.59
Safety Production				0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other administration				18.47	15.34	4.32	13.23	10.55	10.90	11.28
Product marketing and sales (Unit concentrate)				**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Non-income taxes, royalties and other governmental charges (Unit concentrate)				**41.00**	**43.85**	**33.41**	**38.76**	**39.72**	**41.59**	**42.79**
Total Cash Operating Cost (Unit Concentrate)			**330.66**	**477.47**	**430.82**	**402.57**	**422.58**	**496.21**	**508.37**	**473.84**

Note:

1 Processed at Xinxin's wet processing plant. The concentrate is mostly produced from weakly mineralised wall rock of Zhijiazhuang Mine.

11.2.3 Forecast on Operating Costs in Feasibility Study

Table 11–12, Table 11–13, and Table 11–14 show the forecast of the operating costs of open-pit mining in Stage one. Table 11–5 shows the forecast of the operating costs of underground mining in Stage two estimated in the feasibility study conducted by Sinosteel. The major costs are salary, consumables, fuel, electricity and other costs, on and off-site administration, and non-income taxes, royalties and other governmental charges. The forecast cost estimates are sourced from the Sinosteel's feasibility study. The consumption of the consumable materials, fuel and electricity is estimated based on the historical data as well as the conditions after technical renovation of the four mines, where their prices are based on the local market level. The labour cost is estimated based on the local mining industrial salary level. SRK classified the costs based on the requirements of the HKEx in the Chapter 18.

Table 11–12: Forecast on Operating Costs for Open-pit Operation – Xinxin Mining

Cash Operating Costs	2H2013	2013	2014	2015	2016	2017
Mining (Unit Ore)	**13.36**	**12.54**	**12.84**	**12.84**	**16.84**	**16.84**
Mining contracting	4.34	4.32	0.00	0.00	0.00	0.00
Workforce employment	0.66	0.65	0.51	0.51	0.69	0.69
Consumables[1]	3.21	3.37	9.03	9.03	12.21	12.21
Fuel, electricity, water and other services	0.64	0.69	1.81	1.81	2.44	2.44
Transportation of ore	2.83	2.96	0.00	0.00	0.00	0.00
Safety Production	1.68	0.55	1.50	1.50	1.50	1.50
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	0.00	0.00	0.00	0.00
Dry Processing (Unit pre concentrate)	**21.93**	**16.58**	**24.71**	**29.64**	**29.74**	**29.74**
Workforce employment	9.78	6.34	5.51	6.65	6.65	6.65
Consumables[2]	3.38	3.25	14.32	17.28	17.28	17.28
Fuel, electricity, water and other services	5.47	5.08	3.47	4.18	4.18	4.18
Transportation of preliminary concentrate	3.30	1.91	0.00	0.00	0.00	0.00
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	1.42	1.52	1.63	1.63

Cash Operating Costs	2H2013	2013	2014	2015	2016	2017
Wet Processing (Unit concentrate)	**108.13**	**112.98**	**84.33**	**70.64**	**70.96**	**70.96**
Workforce employment	7.85	10.06	9.84	8.20	8.20	8.20
Consumables	25.20	27.05	30.46	25.40	25.40	25.40
Fuel, electricity, water and other services	58.77	57.44	38.83	32.37	32.37	32.37
Safety Production	0.00	5.56	0.00	0.00	0.00	0.00
Environmental protection and monitoring	7.70	4.71	0.00	0.00	0.00	0.00
On-site administration	8.61	8.16	5.21	4.66	4.99	4.99
Off-site administration (Unit concentrate)	**97.97**	**69.57**	**27.10**	**27.09**	**27.12**	**27.12**
Workforce employment	48.50	33.22	16.39	12.27	9.57	9.57
Safety Production	3.21	3.23	2.00	2.00	2.00	2.00
Other administration	46.25	33.12	8.71	12.82	15.55	15.55
Product marketing and sales (Unit concentrate)	**0.00**	**0.02**	**1.72**	**1.72**	**1.70**	**1.70**
Non-income taxes, royalties and other governmental charges (Unit concentrate)	**39.12**	**38.27**	**45.60**	**46.02**	**45.08**	**45.08**
Total Cash Operating Cost (Unit Concentrate)	**499.07**	**435.41**	**402.16**	**389.31**	**437.37**	**437.37**

Notes:

1 Consumables costs contain the mining contact fees and transportation of ore from 2014 to 2017.

2 Consumables costs contain the transportation of preliminary concentrate fees from 2014 to 2017.

Table 11–13: Forecast on Operating Costs for Open Pit Operation – Jingyuancheng Mining

Cash Operating Costs	2H2013	2013	2014	2015	2016	2017
Mining (Unit Ore)	**10.89**	**10.60**	**10.68**	**10.68**	**14.75**	**14.75**
Mining contracting	4.94	4.58	0.00	0.00	0.00	0.00
Workforce employment	0.37	0.35	0.45	0.45	0.64	0.64
Consumables[1]	2.73	2.51	7.50	7.50	10.70	10.70
Fuel, electricity, water and other services	0.12	0.15	1.59	1.59	2.27	2.27
Transportation of ore	2.62	2.54	0.00	0.00	0.00	0.00
Safety Production	0.12	0.10	1.14	1.14	1.14	1.14
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.36	0.00	0.00	0.00	0.00
Dry Processing (Unit pre concentrate)	**18.04**	**18.54**	**19.23**	**22.99**	**23.86**	**23.86**
Workforce employment	2.98	3.50	4.36	5.23	5.23	5.23
Consumables[2]	4.53	4.18	11.09	13.28	13.28	13.28
Fuel, electricity, water and other services	6.39	6.46	2.82	3.38	3.38	3.38
Transportation of preliminary concentrate	4.14	4.39	0.00	0.00	0.00	0.00
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	0.96	1.10	1.97	1.97
Wet Processing (Unit concentrate)	**95.29**	**95.86**	**73.13**	**61.36**	**64.08**	**64.08**
Workforce employment	6.70	7.89	8.03	6.69	6.69	6.69
Consumables	27.47	26.85	31.18	25.97	25.97	25.97
Fuel, electricity, water and other services	50.40	50.44	30.31	25.25	25.25	25.25
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	10.73	10.68	0.00	0.00	0.00	0.00
On-site administration	0.00	0.00	3.61	3.46	6.18	6.18
Off-site administration (Unit concentrate)	**41.95**	**49.47**	**27.15**	**27.04**	**27.06**	**27.06**
Workforce employment	20.31	21.58	8.49	6.18	5.50	5.50
Safety Production	3.38	3.95	2.00	2.00	2.00	2.00
Other administration	18.27	23.94	16.66	18.86	19.56	19.56
Product marketing and sales (Unit concentrate)	0.00	0.00	1.72	1.71	1.71	1.71
Non-income taxes, royalties and other governmental charges (Unit concentrate)	**36.99**	**37.06**	**38.81**	**38.79**	**38.45**	**38.45**
Total Cash Operating Cost (Unit Concentrate)	**384.72**	**405.57**	**345.39**	**332.93**	**388.28**	**388.28**

Notes:

1 Consumables costs contain the mining contact fees and transportation of ore from 2014 to 2017.

2 Consumables costs contain the transportation of preliminary concentrate fees from 2014 to 2017.

Table 11–14: Forecast on Operating Costs for Open Pit Operation – Jiheng Mining

Cash Operating Costs	2H2013	2013	2014	2015	2016	2017
Mining (Unit Ore)	**15.95**	**15.45**	**23.97**	**23.97**	**23.97**	**23.97**
Mining contracting	3.71	2.24	0.00	0.00	0.00	0.00
Workforce employment	1.65	0.97	3.45	3.45	3.45	3.45
Consumables[1]	2.17	2.42	17.04	17.04	17.04	17.04
Fuel, electricity, water and other services	0.63	0.74	2.44	2.44	2.44	2.44
Transportation of ore	5.13	8.32	0.00	0.00	0.00	0.00
Safety Production	2.65	0.74	1.04	1.04	1.04	1.04
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	0.00	0.02	0.00	0.00	0.00	0.00
Dry Processing (Unit pre concentrate)	**20.04**	**18.46**	**11.18**	**11.17**	**11.68**	**11.68**
Workforce employment	4.32	3.58	2.70	2.70	2.70	2.70
Consumables[2]	3.09	2.68	6.31	6.31	6.31	6.31
Fuel, electricity, water and other services	6.16	5.37	1.70	1.70	1.70	1.70
Transportation of preliminary concentrate	0.66	4.13	0.00	0.00	0.00	0.00
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	5.80	2.70	0.46	0.46	0.96	0.96
Wet Processing (Unit concentrate)	**186.29**	**187.27**	**30.94**	**30.94**	**31.74**	**31.74**
Workforce employment	13.49	13.46	4.26	4.26	4.26	4.26
Consumables	21.96	24.22	13.20	13.20	13.20	13.20
Fuel, electricity, water and other services	70.49	69.97	12.75	12.75	12.75	12.75
Safety Production	0.00	0.00	0.00	0.00	0.00	0.00
Environmental protection and monitoring	0.00	0.00	0.00	0.00	0.00	0.00
On-site administration	80.34	79.61	0.73	0.73	1.53	1.53
Off-site administration (Unit concentrate)	**25.66**	**26.25**	**26.23**	**26.24**	**26.24**	**26.24**
Workforce employment	10.97	8.52	5.28	5.06	5.06	5.06
Safety Production	0.60	3.48	2.53	2.53	2.53	2.53
Other administration	14.08	14.25	18.43	18.65	18.65	18.65
Product marketing and sales (Unit concentrate)	**0.00**	**0.00**	**1.63**	**1.62**	**1.62**	**1.62**
Non-income taxes, royalties and other governmental charges (Unit concentrate)	**41.81**	**40.84**	**17.75**	**17.87**	**17.46**	**17.46**
Total Cash Operating Cost (Unit Concentrate)	**496.64**	**457.49**	**154.93**	**155.03**	**156.24**	**156.24**

Notes:

1 Consumables costs contain the mining contact fees and transportation of ore from 2014 to 2017.

2 Consumables costs contain the transportation of preliminary concentrate fees from 2014 to 2017.

Table 11–15: Forecast on Operating Costs for Underground Mining

Item	Xinxin Mining (RMB/t)		Jingyuancheng (RMB/t)	
	Raw ore	Concentrate	Raw ore	Concentrate
Workforce employment	17.72	134.50	17.70	136.67
Consumables	17.22	130.62	17.39	134.24
Fuel, electricity, water & other services	17.85	135.40	17.95	138.52
On and off-site administration	7.93	60.17	6.90	53.25
Environmental protection & monitoring				
Transportation of workforce				
Product marketing and transport	0.50	3.79	0.50	3.86
Non-income taxes, royalties and other governmental charges	5.95	45.16	5.92	45.70
Contingency allowance	1.91	14.47	1.85	14.26
Total Cash Cost	**69.08**	**524.11**	**68.21**	**526.50**

12 INFRASTRUCTURE

12.1 Access

All four iron mines owned by Aowei Mining are located in Laiyuan County, Hebei Province. The roads from Laiyuan County town to the mines are in good condition, and the mine products and materials are transported by road or railway.

12.1.1 Xinxin Mining

Gufen Mine, operated by Xinxin Mining, is located 23 km southwest of Laiyuan County urban centre. It is part of the Dushancheng mining area, and is under the administration of Shuibao Town, Laiyuan County. The geographic coordinates of the mine centre are 114°30'28" East and 39°12'26" North. The mine is accessible by a provincial highway (Tianzhen – Zoumayi) which passes across the western edge of the mine.

12.1.2 Jingyuancheng Mining

Jingyuancheng Mining operates two mines, Shuanmazhuang Mine and Wang'ergou Mine. These two mines are adjacent to each other and are located in the southwestern part of the Dushancheng mining area. The geographic coordinates of the mine centre are 114°27°00" East and 39°10°50" North. The mine is 6 km from the Tianzhen–Zoumayi highway and 28 km from the Laiyuan urban centre.

12.1.3 Jiheng Mining

Zhijiazhuang Iron Mine, operated by Jiheng Mining, is located in the township of Yangjiazhuang, 25 km southeast of Laiyuan County. It has road access to Gaobeidian City and Laiyuan County. The Jingyuan railway (from Beijing to Yuanping, Shanxi Province) runs by the mining area. There is a 3 km special rail spur from Futuyu railway station on the Jingyuan railway to Laiganggongren station, from where a 9 km highway leads to Zhijiazhuang mine.

It is SRK's opinion that the three mines mentioned above are easily accessible.

12.2 Power Supply

The power supply is adequate to satisfy the need for production and domestic usage. Detailed information is as follows:

12.2.1 Xinxin Mining

Gufen Mine is powered by a 10 kilovolt ("kV") overhead line from the Dushancheng 110 kV substation by the (Dushancheng – Xiyaoyu), through which a T connector from pole No. 032 is connected to the mine. Dushancheng 110 kV substation is 3 km away from pole No. 032 which is 1 km from the mine. The line is overheaded in the mine area and transmits electricity to all facilities and plants.

The electricity is transmitted to two transformers (one 800 kilovolt-ampere ("kVA") and one 500 kVA), located at the east and west boundaries respectively, by a 10 kV electricity line after a T connection. Electricity is sent from the transformers to the low-voltage distributor to supply electricity consumers such as down-the-hole drills.

The mine is divided into a mining area and a processing area, which are supplied respectively by the Dushancheng 110 kV substation and the Shuibao 35 kV substation. In addition, Gaojiatai 35 kV substation serves as a standby power supply for the mine.

12.2.2 Jingyuancheng Mining

Power for Jingyuancheng Mining is supplied by a new 35 kV substation at Gemengou. A 16 km 10 kV special line (Gaojiatai–Jingyuancheng) between the Gaojiatai 35 kV substation and Shuanmazhuang Mine, which had supplied power for Jingyuancheng Mining before the Gemengou substation was constructed, serves as a standby power supply. Currently two 10 kV overhead lines are sourced from the Jingyuancheng 35 kV substation. One line leads to the wet processing plants and dry discharging facilities and the other one leads to the mine and dry processing facilities. Either the Gemengou substation or the back-up substation would provide sufficient power supply for Jingyuancheng Mining's current and future operations.

A dual power supply is for the mining area and wet processing plant. One supply is planned from Dushancheng 110 kV substation as the main power source and the other would come from the Gaojiatai 35 kV substation as standby. The newly built 35 kV Gemengou substation is shown in Figure 12–1.

Figure 12–1: Newly Built 35 KV Gemengou Substation

12.2.3 Jiheng Mining

Previously, electrical power for Jiheng Mining was transmitted from Yangjiazhuang 35 kV substation to the 35 kV substation in the mine. A new 35/10 kV substation has been built in the mine, with two main transformers of 3,150 kVA and 2,000 kVA capacities.

A total of three (3) lines are sourced from the 10 kV substation. One leads to the new 2.5 Mtpa dry processing plant, the other two lead to the mine from the south and north respectively, forming a loop circuit.

The 10 kV substation mainly supplies the two box-type 800 kVA substations and is used for the low-voltage electricity consumers such as the down-the-hole drill rigs.

SRK notes that the power supply is sufficient to meet the requirement of normal production. SRK is informed by Company management that total annual blackout times caused by line repair and maintenance activities comes to less than three days and additional power supplies for capacity expansion have been approved by the local power supply bureau. A new substation at Jingyuancheng was completed and put into use in March 2013.

12.3 Water Supply

SRK notes that water supplies at the three mines mentioned above are sufficient for normal production, as described below.

12.3.1 Xinxin Mining

According to the water quality monitor report, the Tanghe River, located near the mining area, fails to meet the requirements for mine production water quality. Therefore, the water is sent to filtration galleries and cleaned. The cleaned water is pumped to the processing plant's 1,000 m^3 elevated water tank, which is used to store water for processing production.

Fresh water for processing is provided by the water tank with an initial input of 475 cubic metres per hour ("m^3/h"). Once normal production starts, the water is recycled with a circulating volume of 450 m^3/h. The water is pumped to the water tank at a rate of 25 m^3/h.

A total of six (6) water pumps are used to pump water at the beginning of production, four in operation and two on standby. Once the production is into normal operation when most of the water is recycled, two operating pumps are expected to be sufficient.

A domestic water system has been constructed and is sourced from groundwater. The water quality meets the requirements set out in China's Domestic Water Standards. Based on a quota of 120 L per person per day, the total water consumption is 39.6 m^3/d.

12.3.2 Jingyuancheng Mining

Jingyuancheng Mining also uses the Tanghe River as a primary water source. The cleaned water is pumped to a 3,000 m^3 elevated water tank.

Fresh water for the processing plant is pumped from the water tank with an initial input of 1,379 m^3/h. Once normal production starts, the water is recycled with a circulating volume of 1,293 m^3/h. The water is pumped to the water tank at a rate of 86 m^3/h.

A domestic water system has been constructed and its water quality meets the Chinese Domestic Water Standard requirements. Based on a quota of 120 L per person per day, the total water consumption is 39.6 m^3/d.

12.3.3 Jiheng Mining

Production water for Jiheng Mining is supplied from the drainage water of the open-pit, which is pumped to a 500 m^3 elevated water tank near the processing plant. Currently the water supply is adequate for the dry processing plant.

Water consumption for dust removal in the primary crushing facilities is 15 m^3/h at most, averaging 5 m^3/h. The annual water consumption is 30,000 m^3. The domestic water comes from a well, with an hourly consumption of 0.5 m^3 and annual consumption of 3,000 m^3.

SRK notes that the water supplies for both Xinxin Mining and Jingyuancheng Mining are sourced from the Tanghe River, which is generally able to meet the requirement of mine production. For Jiheng Mining, the drainage water from the open-pit is used to supply water for mining production and crushing. Since the water demand is low, SRK opines that the available water supply is sufficient for mine production.

12.4 Mechanical Maintenance

All the mines have their own maintenance workshop to handle daily maintenance work. There are also some maintenance plants in the nearby towns and counties capable of providing such services. For complicated overhauling work, professional maintenance companies are available in Laiyuan County or Baoding City.

SRK opines that the available mechanical maintenance service is sufficient for the mines' daily production needs.

12.5 Office Buildings and Accommodation

A full range of occupational and domestic facilities have been built at all the mines, including office buildings, materials storage facilities, dormitories, cafeterias and associated facilities. It is SRK's opinion that the working and domestic situations meet the needs of daily operation and living activities. A picture of the office building of Jingyuancheng Mining is shown in Figure 12–2.

Figure 12–2: The Office Building of Jingyuancheng Mining

It is SRK's opinion that the conditions of the occupational and domestic facilities at the mines owned by Aowei Mining are superior to those at most mines in China, which is a reflection of company's culture.

13 ENVIRONMENTAL AND SOCIAL ASSESSMENT

13.1 Environmental and Social Review Objective

The objective of this preliminary environmental due diligence review is to identify any existing and potential environmental liabilities and risks, and to assess and comment on any associated proposed remediation measures for the Aowei Project, comprising Xinxin Mining, Jingyuancheng Mining, and Jiheng Mining. SRK conducted two site visits in these three sites in Laiyuan County, Hebei Province, in late August 2012 and mid-July 2013 respectively. Historically, small mining companies have been operating the mining and processing activities in the Project areas, but under the guidance of the Hebei Provincial Government, all small mining companies are being consolidated into larger mining companies.

13.2 Environmental and Social 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 (Appendix 3);
- World Bank/International Finance Corporation (IFC) environmental and social standards and guidelines (Appendix 4); and
- Internationally recognised environmental management practices (Appendix 4).

13.3 Status of Environmental Approvals

The details of the Environmental Impact Assessment ("EIA") reports and approvals for each project site are presented in Table 13–1.

Table 13–1: EIA Reports and Approvals

Project	Produced By	Production date	Approved By	Approval date
Xinxin Mining				
Gufen Mine Production Capacity Upgrading (3Mtpa)	Hebei Zhonglian Energy and Environment Technology Inc.	December 2012	Hebei Environmental Protection Bureau	December 28, 2012

Project	Produced By	Production date	Approved By	Approval date
Phase I Wet Processing Plant and Taohuazui TSF.	Ministry of Metallurgical Industry Exploration Research Academy Environmental Quality Research Institute	June 2004	Baoding Environmental Protection Bureau	July 23, 2004
Phase II Wet Processing plant, 3 Dry Processing Plants and Xiaomazong TSF.	Hebei Zhonglian Energy and Environment Technology Inc.	April 2013	Hebei Environmental Protection Bureau	May 28, 2013
Jingyuancheng				
Shuanmazhuang Mine Production capacity Upgrading (4 Mtpa)	Hebei Zhonglian Energy and Environment Technology Inc.	December 2012	Hebei Environmental Protection Bureau	December 26, 2012
Wang'ergou Mine Production capacity Upgrading (2.4 Mtpa).	Hebei Zhonglian Energy and Environment Technology Inc.	December 2012	Hebei Environmental Protection Bureau	December 25, 2012
2 New Dry Processing Plants and 1 Wet Processing Plant and Chengzigou TSF.	Hebei Zhonglian Energy and Environment Technology Inc.	April 2013	Hebei Environmental Protection Bureau	May 28, 2013
2 New Dry Processing Plants and 1 Wet Processing Plant and Dabugou TSF	Hebei Zhonglian Energy and Environment Technology Inc.	April 2013	Hebei Environmental Protection Bureau	May 28, 2013
Jiheng Mining				
Zhijiazhuang Mine Production Capacity Upgrading (1 Mtpa).	Hebei Zhonglian Energy and Environment Technology Inc.	July 2011	Hebei Environmental Protection Bureau	September 2, 2011
Iron Ore Dry Processing Plant (2.5Mtpa)	Zhongkan Smelting and Exploration Design and Research Institute	October 2012	Baoding Environmental Protection Bureau	November 16, 2012

The details of the Water and Soil Conservation ("WSCP") reports and approvals for each project site are presented in Table 13–2.

Table 13–2: WSCP Reports and Approvals

Project	Produced By	Production date	Approved By	Approval date
Xinxin Mining				
Gufen Mine Production Capacity Upgrading (3 Mtpa)	Hebei Water Conservancy and Hydropower No. 2 Survey, Design and Research Institute	October 2012	Hebei Water Resources Bureau	November 6, 2012
Phase I Wet Processing Plant and Taohuazui TSF	Laiyuan Hydraulic Engineering Service Station	May 13, 2004	Laiyuan Water Resources Bureau	May 17, 2004
Phase II Wet Processing plant, 3 Dry Processing Plants, and Xiaomazong TSF	Hebei Water Conservancy and Hydropower No. 2 Survey, Design and Research Institute	January 2013	Hebei Water Resources Bureau	January 28, 2013
Jingyuancheng Mining				
Shuanmazhuang Mine Production Capacity Upgrading (4Mtpa)	Hebei Water Conservancy and Hydropower No. 2 Survey, Design and Research Institute	October 2012	Hebei Water Resources Bureau	November 6, 2012
Wang'ergou Iron Mine Production Capacity Upgrading (2.4 Mtpa)	Hebei Water Conservancy and Hydropower No. 2 Survey, Design and Research Institute	October 2012	Hebei Water Resources Bureau	November 6, 2012
2 New Dry Processing Plants and 1 Wet Processing Plant and Chengzigou TSF	Hebei Water Conservancy and Hydropower No. 2 Survey, Design and Research Institute	January 2013	Hebei Water Resources Bureau	January 28, 2013
2 New Dry Processing Plants and 1 Wet Processing Plant and Dabugou TSF.	Hebei Water Conservancy and Hydropower No. 2 Survey, Design and Research Institute	January 2013	Hebei Water Resources Bureau	January 28, 2013

Project	Produced By	Production date	Approved By	Approval date
Jiheng Mining				
Zhijiazhuang Mine production capacity upgrading (1 Mtpa)	Hebei Water Conservancy and Hydropower Design and Research Institute	June 2011	Hebei Water Resources Bureau	July 7, 2011
Iron Ore Dry Processing Plant (2.5 Mtpa)	Langfang Transportation and Exploration Design Institute	August 2012	Baoding Water Resources Bureau	September 3, 2012

The details of the Final Check and Acceptance ("FCA") reports and approvals for each project site are presented in Table 13–3.

Table 13–3: Final Check and Acceptance Reports and Approvals

Project	Report	Approval
Xinxin Mining		
Gufen Mine Production Capacity Upgrading (3Mtpa)	Y	Y
Phase I Wet Processing Plant and Taohuazui TSF	Y	Y
Phase II Wet Processing plant, 3 Dry Processing Plants, and Xiaomazong TSF	NYR	NYR
Jingyuancheng Mining		
Shuanmazhuang Mine Production Capacity Upgrading (4 Mtpa)	Y	Y
Wang'ergou Mine Production Capacity Upgrading (2.4 Mtpa)	Y	Y
2 New Dry Processing Plants and 1 Wet Processing Plant and Chengzigou TSF	NYR	NYR
2 New Dry Processing Plants and 1 Wet Processing Plant and Dabugou TSF	NYR	NYR
Jiheng Mining		
Zhijiazhuang Mine production capacity upgrading (1 Mtpa)	Y	Y
Iron Ore Dry Processing Plant (2.5Mtpa)	Y	Y

Note:

"Y" denotes the licence/permit is granted and has been sighted by SRK; "NS" denotes that the licence/permit has not been sighted; and "NYR" denotes that the licence/permit has not yet required.

13.4 Environmental Compliance and Conformance

SRK notes that these sighted EIA reports have been compiled in accordance with relevant Chinese laws and regulations. SRK has reviewed these EIA reports and approvals and conducted two environmental site visits in late August 2012 and mid-July 2013 respectively against recognized international industry environmental management standards, guidelines, and practices. At the time of the site visits, SRK noted the Project sites were in the stage of production capacity and technique upgrading, and they were generally being developed and/or operated in accordance with the project environmental management and approval conditions.

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

13.5 Land Disturbance

The main impact on the surrounding ecological environment is due to disturbance and contamination caused by surface stripping, waste rock and tailings storage, processing plant drainage, processing wastewater, explosions, transportation, and associated buildings that are erected. If effective measures are not taken to manage and rehabilitate the disturbed areas, the surrounding land can become polluted, and the land utilization function will be changed, causing an increase in land degradation, water loss and soil erosion. Given the size and scale of the areas impact by the open mining activities and based on the site visits, SRK opines that the environmental risk is medium.

The project's EIAs provide initial estimates of areas of disturbances for main surface facilities for the projects. No other documented, estimated, and/or currently surveyed areas of land disturbance or rehabilitated areas for any of the Project's mines have been sighted as part of this review.

SRK has not sighted any land disturbance or rehabilitation registry that record areas and extents of disturbances and remediation work that has been conducted or track areas yet to be remediated. This information could feed into the projects' operational Mine Closure Planning procedure. The Company plans to regularly conduct surveys to record areas disturbed by the mining and processing activities, as required by the newly released regulation in March 2013. In light of the above, SRK considers that this medium environmental risk is under control.

13.6 Flora and Fauna

The development of mining and mineral processing projects may also result in impacts to or loss of flora and fauna habitat. The project development EIA should determine the extent and significance of any potential impacts to flora and fauna habitat. Where these potential impacts to flora and fauna habitat are determined to be significant, the EIA should also propose effective measures to reduce and manage these potential impacts.

The project EIA's covering the projects include the following:

- This project sites are located in the Taihang mountain area in Hebei Province and the major vegetations are common species, such as bush and grass;

- No protected animal species, protected flora, or protected natural area are identified within the project area;

- The ecological environment is fairly fragile due to the mining activities in these areas and therefore, measures to protect the ecological system are very critical for this project; and

- Potential measures to protect the ecological environment may include: topsoil protection and reuse, limitations on the area to be disturbed by this project and revegetation on industrial area.

13.7 Waste Rock and Tailings Management

13.7.1 Waste Rock Management (WRD)

The project's waste rock generation rates and the waste rock dump have been previously discussed with the Mining Assessment section. SRK observed significant waste rock generated by the stripping and mining activities during the site visits, which occupied quite amount of surface areas. Depending on the components in the waste rock, the waste rock may release hazardous leach into the environment. It is SRK's opinion that the environmental risk caused by the waste rock is medium.

According to the EIA reports, some of the waste rocks will be backfilled into the mined out open-pit area or reused as construction material for roadways, retaining walls, and swales, which can reduce the waste rock volume. The rest will be sent to waste rock dump areas in each mine site. During the site visit, SRK observed multiple waste rock dumping areas on site, and the condition of vegetation in the waste rock dumping areas was poor. Some of the waste rock dump areas have retaining walls with a height of 2 m installed at the toe. Aowei Mining plans to continue to conduct high frequent inspections at the waste rock dump areas during raining season.

The EIA reports also states that two extracted leachate sampling tests were conducted with sample taken, one from the Gufen open-pit and one from the waste rock areas near the Zhijiazhuang open-pit. The samples were for comparison with Chinese identification standards for hazardous wastes and identification for extraction toxicity (GB5085.3-2007). The analysis results of the two leachate samples extracted from the samples showed that all the waste rocks in the two areas were not hazardous wastes and are considered general industrial waste. No extracted leachate sampling test was conducted in Shuanmazhuang open-pit area or Wang'ergou open-pit area to analyse the waste rock and the related EIA reports only refer to the results from Xinxin Mining since the waste rocks from both sites are similar.

The EIA approvals require monitoring of leachate from waste rock dump areas and monitoring of groundwater in surrounding villages to monitor heavy metals pollution. The EIA reports propose a 2 m by 2 m leachate monitoring pond with depth of 1 m to be installed 50 m downgradient from each waste rock dump area and propose that the leachate be analysed on a monthly basis. In addition, groundwater monitoring wells will be installed in the villages to be impacted by the waste rock leachate, and the groundwater will be sampled and analysed three times a year. During SRK's site visits, these leachate sample ponds and groundwater monitoring wells were not sighted. Aowei Mining is taking preparation to implement these measures at the moment this report is written.

Sulphur and metals presented in the waste rock may have the potential to generate acid, although the average sulphur content is below 1%. According to the results of geological analysis on the iron ores, the sulphur content ranges from 0.12% to 0.2% and pyrite, pyrrhotite, and chalcopyrite contents are fairly low, less than 1%. Therefore, the potential to release acid rock drainage ("ARD") to pollute environment is low. In addition, SRK did not observe any evidence of ARD from waste rock dump area during the site visits. In light of the above, SRK considers that this medium environmental risk is under control.

13.7.2 Tailings Management

The project tailings generation rates and engineering descriptions of the TSFs (designs and storage capacities) have been previously discussed within the Metallurgical and Processing Assessment section.

During the site visits, SRK noted that Xinxin Mining and Jingyuancheng Mining had multiple TSFs on each site, but there was no existing TSF facility in Jiheng Mining where no tailings were generated. SRK also noted that in Jingyuancheng mine site, some tailings were dried by vacuums in the wet processing plants and these dried tailings were sent to the TSFs, which is a method of saving space in the TSF. In addition, the Company stated that some TSFs in Jingyuancheng were closed and would be rehabilitated.

The TSFs for the Project were constructed with water return systems for the reuse of tailings water within the processing plants. Water is returned via pump stations from either seepage collection pools or decant collection pools at the base of the TSF dams. The Company states that no discharge of water from the TSFs takes place and all tailings water is recycled for processing. However, SRK observed that overflows from the seepage and decant collection pools were allowed to discharge down the natural gullies. Seepage to groundwater is likely also occurring which does not appear to be accounted for. SRK has not been provided any monitoring of water quality for review. SRK recommends monitoring wells be installed near the toe of TSFs and regular groundwater sampling program be developed to monitor ground water conditions.

The Company states that no geochemical characterization of tails or ARD assessment has been carried out for the Project operations. However, according to the results of geological analysis on the iron ores, the sulphur content ranges from 0.12% to 0.2% and pyrite, pyrrhotite, and chalcopyrite contents are fairly low, less than 1%. Therefore, the potential to release ARD to pollute environment is low. In addition, SRK did not observe any evidence of ARD from TSFs area during the site visits.

13.8 Water Aspects

The main water protection objective (as stated in the EIA reports) for this project is to protect surface water resources and groundwater resources, and to maximize water conservation and recycling. The Tanghe River is located near the Xinxin Mining site, and is a main water resource for Xinxin Mining's processing and operations. Baidao'an Creek is located near Jingyuancheng Mining, and Xiaodonghe Creek is located near Jiheng Mining. Jingyuancheng Mining and Jiheng Mining source water for operation from mine water pumped out of the open-pits. The open pit mining method by its nature could damage the ground water aquifers, and iron ore processing activities may pollute the ground water and surface water by chemicals, lubricants and waste oils. In addition, SRK notes that previous small mining companies may have caused some environmental impacts to the water bodies due to improper environmental management. SRK opines that the environmental risk for the water aspects is medium, and the Company put significant efforts to control and manage this risk.

Based on SRK's site visits, no sedimentation tanks were installed in the wet processing plants in this Project. According to the EIA reports, all processing water on this Project is sent to the TSFs. The Company states that all domestic wastewater on site is treated biologically with belowground sewage treatment facilities and the treated wastewater is sent to the TSFs as well.

SRK noted that the stormwater management for this Project overall is poor due to a lack of site-wide operational designs for open-pit areas and waste rock dumping areas, except in Zhijiazhuang Mine. The Company states that site-wide designs for the open-pit areas are under consideration, and stormwater swales and sedimentation ponds will be installed accordingly. All stormwater is eventually discharged into the surface water bodies nearby, including Tanghe River, Baidao'angou Creek, and Xiaodonghe Creek. The EIA reports state that all mine water and stormwater will be treated by sedimentation ponds and the treated water will be reused as operating water or dust suppression water for the Project and the rest will be discharged into the surface water bodies nearby. The Company states that these sedimentation ponds near open-pit areas will be constructed to meet the requirements of EIA reports, by which all stormwater and mine water will be treated before they are discharged into the environment and SRK considers that the water pollution from the mining areas can be avoided.

The EIA approvals require this Project to protect groundwater resources from heavy metals pollution with anti-infiltration measures and groundwater monitoring wells. SRK opines that these requirements should be fully implemented to protect ground water.

In mid-June 2012, a third party took two groundwater samples each at the following five places: Dushancheng Village, Northern Sanhe Village, Southern Sanhe Village, Northern Shaguoyuan Village and Southern Shaguoyuan Village. The purpose was to check the groundwater quality for pH, heavy metals, cyanide, ammonia nitrogen, halide salts, sulphide, and other contaminants. The analysis results showed that the groundwater quality from these samples met the related groundwater standards.

Surface runoff from the Xinxin Mining area as well as mine water from the open-pit area are discharged into the Tanghe River, which is approximately 400 m away from the open-pit area. In mid-June 2012, two surface water samples were taken from the Tanghe River at 500 m upstream

and 2 km downstream from the project area. These samples were tested for the same chemical parameters as the groundwater taken from the nearby villages and petroleum hydrocarbon levels were also analysed. The sampling results showed that no exceedance was identified.

At the same time, the same third party took two groundwater samples each at the following five places: Shuanmazhuang Village, Wang'ergou Village, Shangkouer Village, Northern Baidao'an Village, and Gemengou Village. The purpose was still to check the groundwater quality for pH, heavy metals, cyanide, ammonia nitrogen, halide salts, sulphide, and other pollutants. The analysis results showed that the groundwater quality from these samples satisfied the related groundwater standards, except the samples from Shangkouer Village, which showed a slight nitrite exceedance. According to the EIA report, the nitrite exceedance may be caused by fertilizing in the farmland nearby. The Company also plans to conduct follow-up sampling to continuously monitor the ground water qualities.

Surface runoff from the Jingyuancheng Mining area as well as mine water from the open-pit area are discharged into the Baidao'an Creek, which is approximately 1,300 m away from the two open-pit areas. In mid-June of 2012, two surface water samples were taken in the Baidao'an Creek at 500 m upstream and at 2 km downstream from the open-pit areas respectively. These were tested for the same chemical parameters as the groundwater, and included an analysis of petroleum hydrocarbon levels. The sampling results showed that no exceedance was identified, but iron concentrations were relatively high.

Two groundwater sampling events were conducted in mid-April 2011 and mid-June 2011 for the chemical analysis of pH, heavy metals, cyanide, ammonia nitrogen, halide salts, sulphide, and other pollutants. In mid-April 2011, groundwater samples were taken from 3 m below the ground surface in the groundwater wells in Shanjiawan Village and Zhijiazhuang Village and from the mining water in the Zhijiazhuang open-pit area. In mid-June 2011, groundwater samples were taken in the groundwater well in Zhijiazhuang Village only. According to the analysis results from these two reports, no exceedances were identified.

The mine water from the open-pit of Jiheng Mining is discharged into the Xiaodonghe Creek. Since this creek has been generally dry since 2000, only the mine water was sampled for petroleum hydrocarbon analysis as well as for the chemicals tested for in the groundwater mentioned above (the sampling date is not available). The analysis results satisfied the discharge criteria.

Based on these analytical results above, the groundwater and surface water qualities are generally managed well, except few slight exceedances. SRK recommends that water quality be monitored regularly and clean water access be provided to the local residents if the water is further polluted. In light of the above, SRK considers that this medium environmental risk is under control.

13.9 Air Emissions

13.9.1 Dust and Gas Emissions

The dust emission sources for the project are from the boilers for heating and from the open-pit area, the waste rock dump area, and the processing plant during operation under dry

and windy weather conditions. Open pit mining method is always criticized by the significant dust emission, comparing with underground mining method, and therefore SRK opines that dust impact to the environment is medium. The Company states that the boilers are equipped with dust collection equipment. SRK observed comprehensive dust collection systems installed in crushing and screening rooms and transfer points in the processing plants, such as wet dust collectors and bag dust collectors. The Company also states that the open-pit areas are provided with several water trucks to depress the dust, and SRK observed water trucks in Zhijiazhuang open-pit area. During the site visit, SRK did not observe significant site dust emissions impacting the air in these areas, and in light of the above, SRK considers that this medium risk is controlled and managed properly..

The gas emission sources for the project are predominantly from boilers for heating, other fixed and mobile plants at use in the mine site, and blasting emissions. The Company states that sulphide removal equipment is installed in boilers to control sulphide emissions. In addition, SRK noted that the onsite heavy equipment was maintained properly and did not observe severe exhaust gas particulate emissions.

13.10 Noise Emissions

The main noise emission sources for this project are from the operation of the processing plant (crushers, compressors, and pumps) and mobile equipment (mainly drilling, blasting, and haulage activities). SRK notes that the potential for significant offsite noise impacts is low due to the sites being remote and the sparse local population. In addition, SRK notes that all noise generating fixed equipment are in enclosed areas.

13.11 Hazardous Substances Management

The use of reagents is not required for iron processing at this Project as magnetic separation is the method of mineral separation. The Company states that all blasting jobs are subcontracted to certified contractors and no explosives are stored on site. As such, the hazardous substances used at the sites will mainly constitute fuels and lubricants, waste oils, and other hydrocarbons. SRK noticed some surface staining from the abandoned processing plants, and the land contamination is caused by the previous small mining companies.

The projects' EIA reports do not discuss any practices in relation to environmental control and management of the above hazardous materials. Oil (diesel and motor) stored on site was seen to have no secondary containment at the time of the site investigation. Diesel oil was stored in aboveground tanks at the processing plants, though according to the Company, underground storages shall be built in the future. Motor oil and lubricants were stocked in an ad-hoc manner about the processing plants on bare ground. Surface staining was observed in maintenance warehouses in Jingyuancheng Mining mainly due to spills and leakage of waste oils and lubricants.

The Company will develop upgraded procedures for hazardous materials management and use along with appropriate storage facilities and conditions to comply with national regulations. SRK recommends that all fuels and lubricants storage and handling facilities for the Project be constructed with secondary containment (i.e., lined and bunded areas) and waste oils be collected and recycled. At the time this report was written, SRK was provided with waste oil recycling plans defining procedures to collect waste oils in processing plants and maintenance warehouses. In light of the above, SRK considers that this medium environmental risk is under control.

13.12 General Waste Management

The Company states that burnt coal from boilers is recycled as construction material and the municipal solid waste is collected in designated areas and disposed of offsite. SRK noted during the site visits that Xinxin Mining and Jiheng Mining had good housekeeping and SRK did not observe any littering, but observed poor housekeeping in old camps near the old dry processing plants in Jingyuancheng Mining, especially kitchen garbage causing smelly odours. The Company states that this old camps will be demolished soon. Aowei Mining states that all garbage will be collected regularly and disposed of offsite in an approved manner.

13.13 Environmental Protection and Management Plan

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

No such a plan has been developed for the Project operations that cover the above mentioned components. However, the project EIA reports reviewed by SRK describe the various components of a comprehensive operational EPMP for each of the respective sites, such as environmental protection objective, control strategies, environmental administration, regular air/water/noise monitoring to be conducted by the local environmental protection bureau monitoring stations, environmental inspection during site construction, and site environmental management.

13.14 Site Closure Planning and Rehabilitation

The open pit mining method itself can cause ecological damage without proper site closure and rehabilitation, and no proper site closure plans and rehabilitation plans generated by previous mining companies were provided to SRK for review, and SRK considers that this is a medium environmental risk. The Chinese national requirements for mine closure are covered under *Article 21 of the Mineral Resources Law of People's Republic of China (1996)*, the *Rules for Implementation of the Mineral Resources Law of the People's Republic of China (2006)*, *Mine Site Geological Environment Protection Regulations (May 1, 2009)*, and *the Land Rehabilitation Regulation (2011)* issued by the State Council. 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.

The recognised international industry practice for managing site closure is to develop and implement an operational site closure planning process and document this through an operational Closure Plan. While this site closure planning process is not specified within the Chinese national requirements for mine closure, the implementation of this process for a Chinese mining project will:

- Facilitate achieving compliance with these Chinese national legislative requirements; and

- Demonstrates conformance to a recognised international industry management practice.

SRK was provided with four mine site geological environment protection and rehabilitation plans for the four mining license areas, which were Gufen, Shuanmazhuang, Wang'ergou, and Zhijiazhuang. The plan for Zhijiazhuang was produced by China University of Geosciences at Wuhan in August 2010, the plan for Wang'ergou were prepared by Hebei Hydrology Engineering Geological Exploration Institute in September 2012, and the plans for the rest two mines were prepared by Hebei Province Baoding Geology Engineering Exploration Institute in September 2012. These plans generally provide the following in respect to the proposed site closure and rehabilitation measures:

- Site rehabilitation objective – The rehabilitation program is aimed at rehabilitating land disturbed with mining operations to control soil loss and improve ecological environment.

- Progressive rehabilitation – The rehabilitation will be conducted progressively with mining.

- Top soil stripping – Top soil will be stripped from the mine sites, waste dumps, TSFs, and infrastructure areas, and then stockpiled for reuse in rehabilitation.

- Replanting – Where required, seeding will be undertaken and seedlings will be planted. The species to be used will be local perennials that are capable of growing in the cold, dry conditions obtaining at the mine sites.

- The open-pit areas, waste dump areas, and TSF areas – At the time of the project completion, the associated land will be rehabilitated by being covered with 0.3 m top soil and seeds to allow for revegetation.

- Rehabilitation monitoring – Monitoring will be carried out throughout the project lifetime and for three years after closure.

- A cost estimate and financial accrual process for site closure is established, and the total environmental rehabilitation cost is estimated to be RMB11,404,000, RMB20,035,700, RMB15,072,600, and RMB9,957,200 for Zhijiazhuang Mine, Gufen Mine, Shuanmazhuang Mine, and Wang'ergou Mine, respectively. In accordance with related regulations, the Company must deposit the abovementioned amounts into a designated account setup by the local government. SRK sighted 100% payment receipts from the local government for Zhijiazhuang and 50% payment receipts for the rest three mines. According to the Company, the payments for the remaining 50% of the three mining license areas will be made next year.

SRK notes that the above proposed approach to the site rehabilitation is generally in line with the relevant recognised Chinese industry practices. In light of the above, SRK considers that this medium environmental risk is under control.

13.15 Social Aspects

The Project's Xinxin Mining, Jingyuancheng Mining and Jiheng Mining sites are located in the northern branch of Taihang Mountain in Hebei Province, approximately 25 km away from Laiyuan County town.

The primary land use for the general surrounding area of the project sites is agricultural with a number of other mining activities. The local economy mainly relies on agriculture. The Company states that it has obtained all proper land use access permits to carry out the mining and processing. SRK was provided with a summary of land compensation agreements with key information, such as land owner names, locations, areas, and costs. SRK was also provided with scanned land use agreements with the local residents and maps showing their locations. In addition, according to the EIA reports, there are no significant cultural heritage sites within or surrounding any of the Project sites.

Public participation projects were undertaken as part of the project's EIA reports. The survey results showed that a majority of local residents support the Project, and presented a predominant view that the development of the project will contribute to improvements in the local economy and will increase the local employment rate. However, local residents did raise some concerns regarding the local ecological system and safety of the local environment for this project, which shows that the local people are very concerned about environmental protection measures to be implemented. The Company states that all requirements in the environmental approvals will be fully implemented to prevent these environmental impacts.

As part of this review, SRK has not sighted any documentation in relation to any actual or potential impacts of non-governmental organizations on the sustainability of the Project.

13.16 Evaluation of Environmental and Social Risks

At the time of the most recent site visit (mid July 2013), the Project was under stripping and construction phase for a planned technical and production capacity upgrade, and it was generally being developed and/or operated in accordance with the Project's environmental management and approval conditions.

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

- Land disturbance, rehabilitation and site closure;
- Water management (i.e., tailings and mine water);
- Waste rock management;
- Dust management; and
- Land contamination (hazardous substances storage and handling).

It is SRK's opinion that the above environmental risks are categorised as moderate/tolerable risks (i.e., requiring risk management measures) and they are generally manageable. Since various environmental protection measures have been planned or conducted by the Company to solve these environmental issues and the Company determines to put more efforts to incorporate responsible environmental protection policies and practices into their operations, SRK considers that these environmental risks are controlled properly and not to develop into higher grade risks.

14 PROJECT RISK ASSESSMENT

Mining is a relatively high risk industry. In general, the risk may decrease as a project moves from exploration to development and through to the production stage. The Aowei Project is a production project. Risks exist in different areas. SRK considers various technical aspects which may affect the feasibility and future cash flow of the project and conducted a qualitative risk analysis which has been summarised in Table 14–1. In this risk analysis, various risk sources/issues have been assessed for Likelihood and Consequence and then a Risk Rating has been assigned. The qualitative risk analysis uses the following definitions for likelihood and consequence:

- Likelihood:
  - Certain: The event is expected to occur in most circumstances.
  - Likely: The event probably will occur in most circumstances (or could occur on a regular basis such as weekly or monthly).
  - Possible: The event should occur at some time (i.e., once in a while).
  - Unlikely: The event could occur at some time.
  - Rarely: The event may occur only in exceptional circumstances.
- Consequence:
  - Catastrophic: Disaster with potential to lead to business failure.
  - Major: Critical event/impact which, if uncorrected, will have a material effect on the project cash flow and performance and could lead a project failure; but with proper remedial management, will be endured.
  - Moderate: Significant event/impact which, if uncorrected, will have a significant effect on the project cash flow and performance, but may be managed under normal procedures.
  - Minor: Consequences/impacts that may be readily absorbed and will have little or no effect on the project cash flow and performance, but some remedial management effort is still required.
  - Insignificant: No additional/remedial management required.

The subsequent risk ratings are defined as:

- **Extreme/high risks** – unacceptable risks to the project, which if uncorrected, may result in business failure or critical impacts to business.

- **Medium risks** – tolerable risks to the project, which require the application of specific risk management measures so as to not develop into high risks.

- **Low/negligible risks** – acceptable risks to the project, which generally comprise low probability/low impact events that do not require additional specific risk management measures.

The full qualitative risk analysis process is described in Appendix 5.

Table 14–1: Project Risk Assessment of the Aowei Iron Mine

Risk Issue	Likelihood	Consequence	Overall
Geology and Resource			
Lack of Significant Resource	Unlikely	Minor	Low
Lack of Significant Reserve	Unlikely	Minor	Low
Significant Unexpected Geological Faulting	Unlikely	Moderate	Low
Unexpected Groundwater Ingress	Unlikely	Moderate	Low
Mining			
Production Shortfalls	Possible	Minor	Low
Excessive Surface Subsidence	Possible	Minor	Low
Poor Mine Plan	Unlikely	Moderate	Low
Poor Road Transportation/safety	Unlikely	Moderate	Low
Ore Processing			
Lower Processing Plant Yields	Possible	Minor	Low
Unsuitable Processing Flow Sheet	Unlikely	Moderate	Low
Poor Plant Reliability	Unlikely	Moderate	Low
Environmental			
Land disturbance, rehabilitation and site closure	Certain	Moderate	Medium
Water management (i.e. tailings and mine water)	Possible	Moderate	Medium
Waste rock management	Possible	Moderate	Medium
Tailings storage (i.e. TSF design, construction and operation)	Possible	Minor	Low
Dust management	Likely	Moderate	Medium
Land contamination (hazardous substances storage and handling)	Likely	Moderate	Medium
Capital and Operating Costs			
Mine Management Plan	Possible	Minor	Low
Capital Costs – Ongoing	Unlikely	Minor	Low
Operating Cost Underestimated	Possible	Moderate	Medium

The environmental measures and practices to manage environmental risk of the land disturbance, rehabilitation and site closure include proposed progressive rehabilitation, proposed topsoil stripping, proposed replanting, proposed rehabilitation monitoring and a geological rehabilitation fund deposit of RMB34.0 million; the storm-water and mine water treatment facilities and the water reuse systems in TSFs are the measures to control the risk of water pollution; reuse of waste rock as construction materials to reduce waste rock volume, low concentrations of hazardous components in the waste rock, and no evidence of on-site acid rock drainage indicate that the environmental risk of waste rock is manageable; dust management measures such as regular watering in the mining area and comprehensive dust collection system in the processing plants show that the risk of dust pollution is controlled; and the comprehensive hazardous materials management system and the waste oil recycling system can make the risk of land contamination under control. Therefore, it is SRK's opinion that the medium environmental risks identified above are generally under control and not to develop into higher grade risks due to various environmental measures conducted and more efforts the Company has determined to make to improve environment management.

A few factors may lead potential risks in increase of operating costs; they include: 1) decrease in the grade of mined ore; 2) worsening in the quality of production management; 3) significant increase in tax level in China; 4) increase in raw materials, power, fuel and labour costs as a result of inflation; and 5) mandatory interruption in production required by the authorities. SRK is of the review that of the above five situations, 2 is extremely unlikely scenarios, whereas there is a possibility that the other three situations may occur. As a result, SRK opines that increase of operating costs is a medium risk.

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Jiheng Mining

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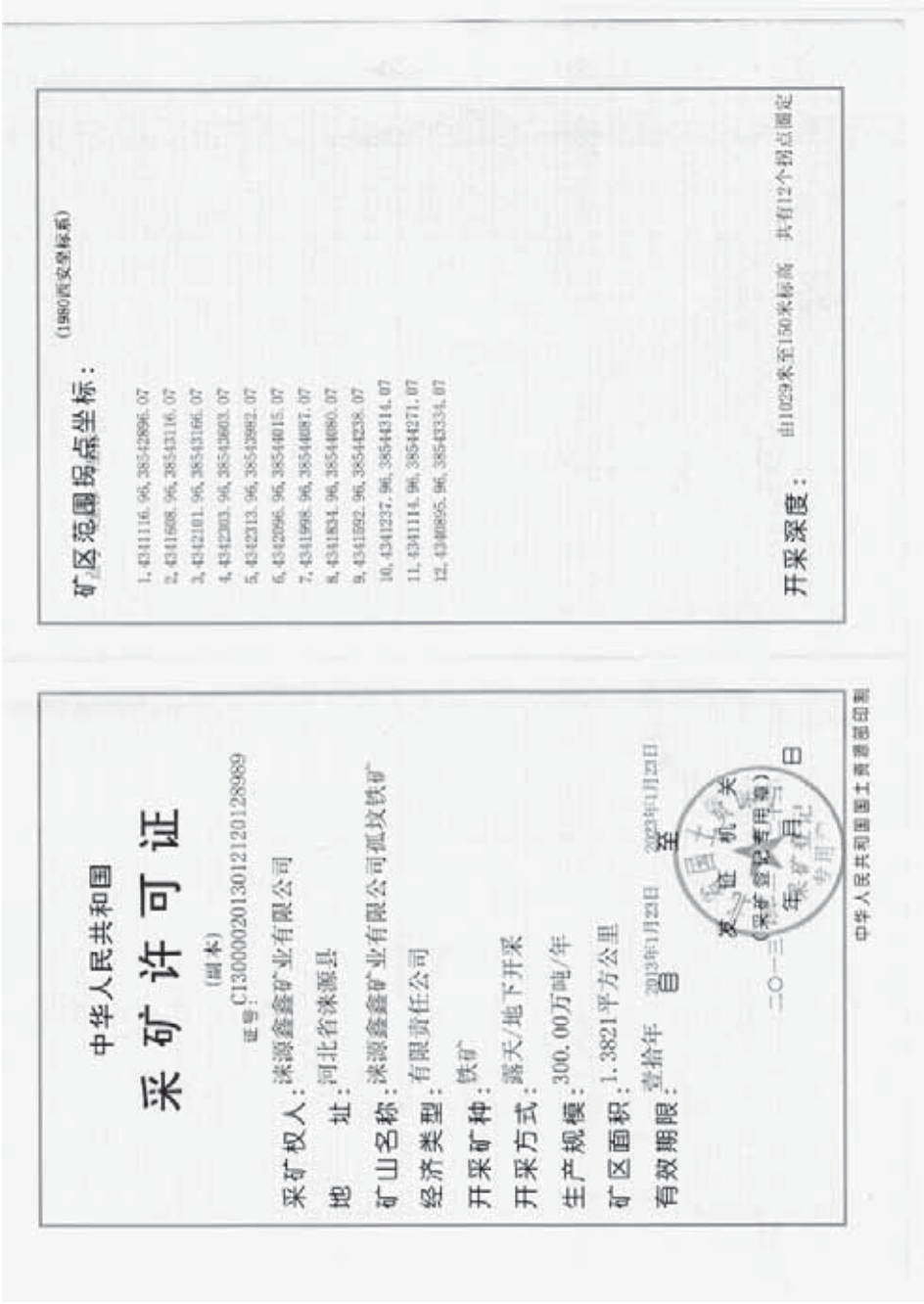
7. Baoding Geology and Engineering Exploration Institute, *Resource/Reserve Audit Report of Zhijiazhuang Iron Mine Qiaomaididong Block,* March 2010.

APPENDICES

Appendix 1: Mining Licences



中华人民共和国

采矿许可证

(副本)

证号：C1300002013012120128988

采矿权人：涞源县京源城矿业有限公司

地　　址：河北省涞源县

矿山名称：涞源县京源城矿业有限公司旺儿沟铁矿

经济类型：有限责任公司

开采矿种：铁矿

开采方式：露天/地下开采

生产规模：240.00万吨/年

矿区面积：1.5287平方公里

有效期限：壹拾年　自2013年1月23日　至2023年1月23日

发证机关（采矿登记专用章）

二〇一　年　月　日

中华人民共和国国土资源部印制

矿区范围拐点坐标：　(1980西安坐标系)

1, 4339285.96, 38539919.07
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4, 4338035.96, 38541076.07
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10, 4337577.96, 38539970.07
11, 4337694.96, 38539714.07

开采深度：由1140米至100米标高　共有11个拐点圈定

中华人民共和国

采矿许可证

(副本)

证号：C1300002013012120128987

采矿权人：涞源县京源城矿业有限公司

地　　址：河北省涞源县

矿山名称：涞源县京源城矿业有限公司栓马桩铁矿

经济类型：有限责任公司

开采矿种：铁矿

开采方式：露天/地下开采

生产规模：400.00万吨/年

矿区面积：2.1871平方公里

有效期限：壹拾年　自2013年1月23日　至2023年1月23日

发证机关

(采矿登记专用章)

二〇一三年　月　日

中华人民共和国国土资源部印制

矿区范围拐点坐标：(1980西安坐标系)

1, 4339721.96, 38538724.07
2, 4339285.96, 38539439.07
3, 4339285.96, 38539879.07
4, 4337712.96, 38539676.07
5, 4338305.96, 38538384.07
6, 4339220.96, 38538159.07

开采深度：由1265米至300米标高　共有6个拐点圈定

中华人民共和国

采矿许可证

（副本）

证号：C1300002011012120105565

采矿权人：涞源县冀恒矿业有限公司

地　　址：河北省涞源县

矿山名称：涞源县冀恒矿业有限公司支家庄铁矿

经济类型：有限责任公司

开采矿种：铁矿

开采方式：露天/地下开采

生产规模：100.00万吨/年

矿区面积：0.3337平方公里

有效期限：壹拾年 自2012年4月12日 至2022年4月12日

发证机关（采矿登记专用章）

二〇一二年 月 日

中华人民共和国国土资源部印制

矿区范围拐点坐标：（1980西安坐标系）

点号 X坐标 Y坐标

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4,4349427.25,38573222.17
5,4349346.25,38573223.17
6,4349265.25,38573216.18
7,4349211.25,38573164.18
8,4349183.25,38573129.18
9,4349118.25,38573074.18
10,4349118.25,38573033.18
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17,4349293.25,38572576.17
18,4349296.24,38572527.17
19,4349304.24,38572439.17
20,4349351.24,38572370.17
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24,4349577.24,38572412.17
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36,4349558.25,38573035.17

开采深度：由1220米至840米标高 共有36个拐点圈定

Appendix 2: Chinese Resource and Reserve Standards

Categorization of Mineral Resources and Ore Reserves

The system for the categorisation of mineral resources and ore reserves in China is in a period of transition which commenced in 1999. The traditional system, which is derived from the former Soviet system, uses five categories based on decreasing levels of geological confidence – Categories A, B, C, D and E. The new system (Rule 66) promulgated by the Ministry of Land and Resources (MLR) in 1999 uses three-dimensional matrices, based on economic, feasibility/mine design and geological degrees of confidence. These are categorised by a three number code of the form "123". This new system is derived from the UN Framework Classification proposed for international use. All new projects in China must comply with the new system, however, estimates and feasibility studies carried out before 1999 will have used the old system.

Wherever possible, the Chinese Resource and Reserve estimates have been reassigned by SRK to categories similar to those used by the JORC Code to standardise categorisation. Although similar terms have been used, SRK does not mean to imply that in their present format they are necessarily classified as 'Mineral Resources' as defined by the Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code").

A broad comparison guide between the Chinese classification scheme and the JORC Code is presented in the following table.

	Chinese Resource Category	
JORC Code Resource Category	**Previous system**	**Current system**
Measured	A, B	111, 111b, 121, 121b, 2M11, 2M21, 2S11, 2S21, 331
Indicated	C	122, 122b, 2M22, 2S22, 332
Inferred	D	333
Non-equivalent	E	334

Definition of the New Chinese Resource and Reserve Category Scheme

Category	Denoted	Comments
Economic	1	Full feasibility study considering economic factors has been conducted
	2	Pre feasibility to scoping study which generally considers economic factors has been conducted
	3	No pre feasibility or scoping study conducted to consider economic analysis
Feasibility	1	Further analysis of data collected in "2" by an external technical department
	2	More detailed feasibility work including more trenches, tunnels, drilling, detailed mapping
	3	Preliminary evaluation of feasibility with some mapping and trenches
Geologically controlled	1	Strong geological control
	2	Moderate geological control via closely-spaced data points (e.g. small scale mapping)
	3	Minor work which is projected throughout the area
	4	Review stage

Relationship between JORC Code and the Chinese Reserves System

In China, the methods used to estimate the resources and reserves are generally prescribed by the relevant Government authority, and are based on the level of knowledge for that particular geological style of deposit. The parameters and computational methods prescribed by the relevant authority include cut-off grades, minimum thickness of mineralisation, maximum thickness of internal waste, and average minimum 'industrial' or 'economic' grades required. The resource classification categories are assigned largely on the basis of the spacing of sampling, trenching, underground tunnels and drill holes.

In the pre-1999 system, Category A generally included the highest level of detail possible, such as grade control information. However, the content of each category B, C and D may vary from deposit to deposit in China, and therefore must be carefully reviewed before assigning to an equivalent "JORC Code type" category. The traditional Categories B, C and D are broadly equivalent to the 'Measured', 'Indicated', and 'Inferred' categories that are provided by the JORC Code and USBM/USGS systems used widely elsewhere in the world. In the JORC Code system the 'Measured Resource' category has the most confidence and the 'Inferred' category has the least confidence, based on the increasing levels of geological knowledge and continuous of mineralisation.

<table>
<tr><td colspan="2">Old Chinese Classification</td><td colspan="2">A & B</td><td colspan="2">C</td><td colspan="2">D</td><td>E & F</td></tr>
<tr><td colspan="9">New Chinese Classification</td></tr>
<tr><td rowspan="2">"E" Economic Evaluation (1XX)</td><td>Designed Mining Loss Accounted</td><td>Recoverable Reserve (111)</td><td>Probable Recoverable Reserve (121)</td><td></td><td>Probable Recoverable Reserve (122)</td><td></td><td></td><td></td></tr>
<tr><td>Designed Mining Loss NOT Accounted (b)</td><td>Basic Reserve (111b)</td><td>Basic Reserve (121b)</td><td></td><td>Basic Reserve (122b)</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Marginal Economic (2MXX)</td><td>Basic Reserve (2M11)</td><td>Basic Reserve (2M21)</td><td></td><td>Basic Reserve (2M22)</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Submarginal Economic (2SXX)</td><td>Resource (2S11)</td><td>Resource (2S21)</td><td></td><td>Resource (2S22)</td><td></td><td></td><td></td></tr>
<tr><td colspan="2">Intrinsic Economic (3XX)</td><td></td><td></td><td>Resource (331)</td><td></td><td>Resource (332)</td><td>Resource (333)</td><td>Resource (334)</td></tr>
<tr><td colspan="2">"F" Feasibility Evaluation</td><td>Feasibility (010)</td><td>Pre-Feasibility (020)</td><td>Scoping (030)</td><td>Pre-Feasibility (020)</td><td>Scoping (030)</td><td>Scoping (030)</td><td>Scoping (030)</td></tr>
<tr><td colspan="2">"G" Geological Evaluation</td><td colspan="3">Measured (001)</td><td colspan="2">Indicated (002)</td><td>Inferred (003)</td><td>Predicted (004)</td></tr>
<tr><td colspan="2" rowspan="4">Comparision to JORC Code</td><td colspan="6"></td><td>Unclassified</td></tr>
<tr><td colspan="7"></td><td>Inferred Resource</td></tr>
<tr><td colspan="4"></td><td colspan="2">Probable Reserve or Indicated Resource</td><td colspan="2"></td></tr>
<tr><td colspan="3">Proved / Probable Reserve or Measured Resource</td><td colspan="5"></td></tr>
</table>

Appendix 3: Chinese Environmental Legislative Background

The *Mineral Resources Law of the People's Republic of China (1996)* and *Environmental Protection Law (1989)* provide the main legislative framework for the regulation and administration of mining projects within China. The *Environmental Protection Law (1989)* provides the main legislative framework for the regulation and administration of mining projects environmental impacts.

The following articles of the *Mineral Resources Law of the People's Republic of China (1996)* summarise the specific provisions in relation to environmental protection:

- ***Article 15 Qualification & Approval*** *– Anyone who wishes to establish a mining enterprise must meet the qualifications prescribed by the State, and the department in charge of examination and approval shall, in accordance with law and relevant State regulations examine the enterprise's mining area, its mining design or mining plan, production and technological conditions and safety and environmental protection measures. Only those that pass the examination shall be granted approval.*

- ***Article 21 Closure Requirements*** *– If a mine is to be closed down, a report must be prepared with information about the mining operations, hidden dangers, land reclamation and utilisation, and environmental protection, and an application for examination and approval must be filed in accordance with relevant State regulations.*

- ***Article 32 Environmental Protection Obligations of Mining License Holders*** *– In mining mineral resources, a mining enterprise or individual must observe the legal provisions on environmental protection to prevent pollution of the environment. In mining mineral resources, a mining enterprise or individual must economise on the use of land. In case cultivated land, grassland or forest land is damaged due to mining, the mining enterprise concerned shall take measures to utilize the land affected, such as by reclamation, tree and grass planting, as appropriate to the local conditions. Anyone who, in mining mineral resources, causes losses to the production and well-being of other persons shall be liable for compensation and shall adopt necessary remedial measures.*

The following articles of the *Environmental Protection Law of the People's Republic of China (1989)* summarise the specific provisions for environmental protection in relation to mining:

- ***Article 13 Environmental Protection*** *– Units constructing projects that cause pollution to the environment must observe the state provisions concerning environmental protection for such construction projects. The environmental impact statement on a construction project must assess the pollution the project is likely to produce and its impact on the environment and stipulate the preventive and curative measures; the statement shall, after initial examination by the authorities in charge of the construction project, be submitted by specified procedure to the competent department of environmental protection administration for approval. The department of planning shall not ratify the design plan descriptions of the construction project until after the environmental impact statement on the construction project is approved.*

- ***Article 19 Statement of Requirement for Environmental Protection*** *– Measures must be taken to protect the ecological environment while natural resources are being developed or utilised.*

- ***Article 24 Responsibility for Environmental Protection*** *– Units that cause environmental pollution and other public hazards shall incorporate the work of environmental protection into their plans and establish a responsibility system for environmental protection, and must adopt effective measures to prevent and control the pollution and harms caused to the environment by waste gas, waste water, waste residues, dust, malodorous gases, radioactive substances, noise, vibration and electromagnetic radiation generated in the course of production, construction or other activities.*

- ***Article 26 Pollution Prevention & Control*** *– Installations for the prevention and control of pollution at a construction project must be designed, built and commissioned together with the principal part of the project. No permission shall be given for a construction project to be commissioned or used, until its installations for the prevention and control of pollution are examined and considered up to the standard by the competent department of environmental protection administration that examined and approved the environmental impact statement.*

- ***Article 27 Report on Pollution Discharge*** *– Enterprises and institutions discharging pollutants must report to and register with the relevant authorities in accordance with the provisions of the competent department of environmental protection administration under the State Council.*

- ***Article 38 Violation Consequences*** *– An enterprise or institution which violates this Law, thereby causing an environmental pollution accident, shall be fined by the competent department of environmental protection administration or another department invested by law with power to conduct environmental supervision and management in accordance with the consequent damage; in a serious case, the persons responsible shall be subject to administrative sanction by the unit to which they belong or by the competent department of the government.*

In addition to the above articles, the following article in the *Environmental Impact Assessment (EIA) Law (2002)* summarises the provisions in relation to the approval of EIA reports of construction projects and the commencement of construction:

- ***Article 25*** *– If the environmental impact assessment documents of construction projects are not examined by the law-stipulated examining and approving department or are not approved after being examined, the examining and approving department of the construction project must not approve its construction and the construction unit must not start construction.*

The following articles of the *Regulations on the Administration of Construction Project Environmental Protection (November 1998)* summarise the specific provisions for undertaking a project's Environmental Final Checking and Acceptance process:

- ***Article 20*** *– The construction unit should, upon completion of a construction project, file an application with the competent department of environmental protection administration that examined and approved the said construction project environmental impact report, environmental impact statement or environmental impact registration form for acceptance checks on completion of matching construction of environmental protection facilities required for the said construction project. Acceptance checks for completion of construction of environmental protection facilities should be conducted simultaneously with the acceptance checks for completion of construction of the main body project. Where trial production is required for the construction project, the construction unit should, within 3 months starting from the date of the said construction project going into trial production, file an application with the competent department of environmental protection administration that examined and approved the said construction project environmental impact report, environmental impact statement or environmental impact registration form for acceptance checks on completion of matching construction of environmental protection facilities required for the said construction project.*

- ***Article 21*** *– For construction projects that are built in phases, go into production or are delivered for use in phases, acceptance checks for their corresponding environmental protection facilities should be conducted in phases.*

- ***Article 22*** *– Competent departments of environmental protection administration should, within 30 days starting from the date of receipt of the application for acceptance checks on completion of construction of the environmental protection facilities, complete the acceptance checks.*

- ***Article 23*** *– The said construction project may only formally go into production or be delivered for use when the matching construction of the environmental protection facilities required for the construction project has passed acceptance checks.*

The following article of the *Water & Soil Conservation Law of the People's Republic of China (2011)* summarises the provisions for the preparation and approval of Water and Soil Conservation Plans:

- ***Article 25 and Article 27*** *– When a construction is carried out in a mountainous, hilly or sandstorm area, a water and soil conservation programme must be prepared by a certified organization and approved by the department of water administration. Water and soil conservation facilities in a construction project must be designed, constructed and put into operation simultaneously with the principal part of the project. When a construction project is completed and checked for acceptance, the water and soi1 conservation facilities shal1 be checked for acceptance at the same time, with personnel from the department of water administration participating.*

The following are other Chinese laws that provide environmental legislative support to the *Minerals Resources Law of the People's Republic of China (1996)* and the *Environmental Protection Law of the People's Republic of China (1989)*:

- *Environmental Impact Assessment (EIA) Law (2002).*

- *Law on Prevention & Control of Atmospheric Pollution (2000).*

- *Law on Prevention & Control of Noise Pollution (1996).*

- *Law on Prevention & Control of Water Pollution (2008).*

- *Law on Prevention & Control Environmental Pollution by Solid Waste (2004).*

- *Forestry Law (1998).*

- *Water Law (2002).*

- *Water Conservancy Industrial Policy (1997).*

- *Land Administration Law (2004).*

- *Protection of Wildlife Law (2004).*
- *Energy Conservation Law (2007).*
- *Electric Power Law (1995).*
- *Management Regulations of Prevention & Cure of Tailings Pollution (1992).*
- *Management Regulations of Dangerous Chemical Materials (2011).*

The relevant environmental protection related Chinese legislation that are required to be utilised for project's design are a combination of the following National design regulations and emissions standards:

- *Environment Protection Design Regulations of Construction Project by Environment Protection Committee of State Council of PRC and State Development Planning Committee (1987).*
- *Regulations on the Administration of Construction Project Environmental Protection (1998).*
- *Regulations for Quality Control of Construction Projects (2000).*
- *Regulations for Environmental Monitoring (2007).*
- *Regulations on Nature Reserves (1994).*
- *Regulations on Administration of Chemicals Subject to Supervision & Control (1995).*
- *Environment Protection Design Regulations of Metallurgical Industry (YB9066-55).*
- *Emission standard of pollutants for mining and mineral processing industry (GB28661-2012)*
- *Emisson standard for industrial enterprises noise at boundary (GB12348-2008)*
- *Emission standard of environment noise for boundary of construction site (GB12523-2011)*
- *Comprehensive Emission Standard of Wastewater (GB8978-1996).*
- *Environmental Quality Standard for Surface Water (GB3838-2002).*
- *Environmental Quality Standard for Groundwater (GB/T14848-1993).*
- *Ambient Air Quality Standard (GB3095-1996).*

- *Comprehensive Emission Standard of Atmospheric Pollutants (GB16297-1996).*
- *Emission Standard of Atmospheric Pollutants from Industrial Kiln (GB9078-1996).*
- *Emission Standard of Atmospheric Pollutants from Boiler (GB13271-2001) – II – stage coal-fired boiler.*
- *Emission Standard for Pollutants from Coal Industry (GB20426-2006)*
- *Environmental Quality Standard for Soils (GB15618-1995).*
- *Standard of Boundary Noise of Industrial Enterprise (GB12348-90).*
- *Emissions Standard for Pollution from Heavy Industry; Non-Ferrous Metals (GB4913-1985).*
- *Control Standard on PCB's for Wastes (GB13015-1991).*
- *Control Standard on Cyanide for Waste Slugs (GB12502-1990).*
- *Standard for Pollution Control on Hazardous Waste Storage (GB18597-2001).*
- *Standards for pollution control on the storage and disposal site for general industrial solid wastes (GB18599-2001)*
- *Identification Standard for Hazardous Wastes-Identification for Extraction Procedure Toxicity (GB5085.3-1996).*
- *Standard of Landfill and Pollution Control of Hazardous Waste (GB18598-2001).*

Appendix 4: Equator Principles and Internationally Recognised Environmental Management Practices

In seeking to obtain project financing or to list on a stock exchange, these institutions require the proponent to comply with such documents as the Equator Principles and the International Finance Corporation (IFC) Performance Standards and Guidelines. This is exemplified by the following preamble from the *Equator Principles (July 2006)*:

Project financing, a method of funding in which the lender looks primarily to the revenues generated by a single project both as the source of repayment and as security for the exposure, plays an important role in financing development throughout the world. Project financiers may encounter social and environmental issues that are both complex and challenging, particularly with respect to projects in emerging markets.

The Equator Principles Financial Institutions (EPFIs) have consequently adopted these Principles in order to ensure that the projects we finance are developed in a manner that is socially responsible and reflect sound environmental management practices. By doing so, negative impacts on project-effected ecosystems and communities should be avoided where possible, and if these impacts are unavoidable, they should be reduced, mitigated and/or compensated for appropriately. We believe that adoption of and adherence to these Principles offers significant benefits to ourselves, our borrowers and local stakeholders through our borrowers' engagement with locally affected communities. We therefore recognise that our role as financiers affords us opportunities to promote responsible environmental stewardship and socially responsible development. As such, EPFIs will consider reviewing these Principles from time-to-time based on implementation experience, and in order to reflect ongoing learning and emerging good practice.

These Principles are intended to serve as a common baseline and framework for the implementation by each EPFI of its own internal social and environmental policies, procedures and standards related to its project financing activities. We will not provide loans to projects where the borrower will not or is unable to comply with our respective social and environmental policies and procedures that implement the Equator Principles.

The following Tables provide a brief summary of the Equator Principles and the IFC Performance Standards respectively. These documents are used by the EPFI's and stock exchanges in their review of the social and environmental performance of proponent companies.

Table A4–1: Equator Principles

Equator Principles	Title	Key Aspects (Summary)
1	Review and Categorisation	Categorise such project based on the magnitude of its potential impact and risks.
2	Social and Environmental Assessment	Conduct a Social and Environmental Assessment ("Assessment"). The Assessment should also propose mitigation and management measures appropriate to the nature and scale of the proposed project.
3	Applicable Social and Environmental Standards	The Assessment will refer to the applicable IFC Performance Standards, and applicable Industry Specific EHS Guidelines ("EHS Guidelines") and overall compliance with same.
4	Action Plan and Management System	Prepare an Action Plan (AP) which addresses the relevant findings of the Assessment. The AP will describe and prioritise the actions, mitigation measures, corrective actions and monitoring to manage the impacts and risks identified in the Assessment. Maintain a Social and Environmental Management System that addresses the management of these impacts, risks, and corrective actions required to comply with host country laws and regulations, and requirements of the applicable Standards and Guidelines, as defined in the AP.
5	Consultation and Disclosure	Consult with project affected communities. Adequately incorporate affected communities' concerns.
6	Grievance Mechanism	Establish a grievance mechanism as part of the management system to receive and resolve concerns about the project by individuals or groups from among project-affected communities. Inform the affected communities about the grievance mechanism in the course of the community engagement process and ensure that the mechanism addresses concerns promptly and transparently, and is readily accessible to all segments of the affected communities.
7	Independent Review	Independent social or environmental expert will review the Assessment, AP and consultation process to assess Equator Principles compliance.
8	Covenants	Covenant in financing documentation: a) to comply with all relevant host country social and environmental laws, regulations and permits; b) to comply with the AP during the construction and operation of the project; c) to provide periodic reports not less than annually, prepared by in-house staff or third party experts, that (i) document compliance with the AP, and (ii) provide compliance with relevant local, state and host country social and environmental laws, regulations and permits; and d) to decommission the facilities, where applicable and appropriate, in accordance with an agreed decommissioning plan.
9	Independent Monitoring and Reporting	Appoint an independent environmental and/or social expert, or require that the borrower retain qualified and experienced external experts to verify its monitoring information.
10	EPFI Reporting	Each EPFI adopting the Equator Principles commits to report publicly at least annually about its Equator Principles implementation processes and experience, taking into account appropriate confidentiality considerations.

Table A4–2: IFC Performance Standards

IFC Performance Standard	Title	Objective (Summary)	Key Aspects (Summary)
1	Social and Environmental Assessment and Management Systems	Social and EIA and improved performance through use of management systems.	Social & Environmental Management System (S&EMS). Social & Environmental Impact Assessment (S&EIA). Risks and impacts. Management Plans. Monitoring. Reporting. Training. Community Consultation.
2	Labour and Working Conditions	EEO. Safety and Health	Implement through the S&EMS. HR policy. Working condition. EEO. Forced & child labour. OH&S.
3	Pollution Prevention and Abatement	Avoid pollution. Reduce Emissions.	Prevent pollution. Conserve resources. Energy efficiency. Reduce waste. Hazardous materials. EPR. Greenhouse Gases.
4	Community Health, Safety and Security	Avoid or minimise risks to community.	Implement through the S&EMS. Do risk assessment. Hazardous materials safety. Community exposure. ERP.
5	Land Acquisition and Involuntary Resettlement	Avoid or minimise resettlement. Mitigate adverse social impacts	Implement through the S&EMS. Consultation. Compensation. Resettlement planning. Economic displacement.
6	Biodiversity Conservation and Sustainable Natural Resource Management	Protect and conserve biodiversity	Implement through the S&EMS. Assessment. Habitat. Protected areas. Invasive species.
7	Indigenous Peoples	Respect. Avoid and minimise impacts. Foster good faith	Avoid adverse impacts. Consultation. Development benefits. Impacts to traditional land use. Relocation.
8	Cultural Heritage	Product cultural heritage	Heritage Survey. Site avoidances. Consultation.

Summary Background Information on Some Key Internationally Recognised Environmental Management Practices.

The following provides background information on some key internationally recognised environmental management practices:

- **Land disturbance** – The main impact on the surrounding ecological environment is due to disturbance and contamination caused by surface stripping, waste rock and tailings storage, processing plant drainage, processing waste water, explosions, transportation and associated buildings that are erected. If effective measures are not taken to manage and rehabilitate the disturbed areas, the surrounding land can become polluted and the land utilization function will be changed, causing an increase in land degradation, water loss and soil erosion.

- **Flora and fauna** – Land disturbance from the development of mining and mineral processing projects may also result in impacts to or loss of flora and fauna habitat. The project development EIA should determine the extent and significance of any potential impacts to flora and fauna habitat. Where these potential impacts to flora and fauna habitat are determined to be significant, the EIA should also propose effective measures to reduce and manage these potential impacts.

- **Contaminated Sites Assessment** – The assessment, recording and management of contaminated sites within mining or mineral processing operations, is a recognised international industry practice (i.e. forms part of the IFC Guidelines) and in some cases a National regulatory requirement (e.g. an Australian environmental regulatory requirement). The purpose of this process is to minimise the level of site contamination that may be generated throughout a project's operation while also minimising the level and extent of site contamination that will need to be addressed at site closure.

  – A contaminated site or area can be defined as; 'An area that has substances present at above background concentrations that presents or has the potential to present a risk of harm to human health, the environment or any environmental value'.

  – Contamination may be present in soil, surface water or groundwater and also may affect air quality through releases of vapours or dust. Examples of typical contaminated areas within a mining/mineral processing project are spillages to soil/water of hydrocarbons and chemicals, and uncontained storage and spillages to soil/water of ores and concentrates. The process to assess and record the level of contamination basically involves a combination of visual (i.e. suspected contamination observed from spillages/releases) and soil/water/air sampling and testing (i.e. to confirm contaminant levels). Once the level of contamination is defined, the area's location and contamination details are then recorded within a site register.

  – Remediation/clean up of contamination areas involves the collection and removal of the contaminated materials for treatment and appropriate disposal, or in some cases the in-situ treatment of the contaminated (e.g. use of bioremediation absorbents on hydrocarbon spillage). The other key component to the management of contaminated areas is to also remove or remedy the source of the contamination (e.g. place hydrocarbon storage and handling within secondary containment).

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

- **Emergency Response Plan** – The IFC describes an emergency as 'an unplanned event when a project operation loses control, or could lose control, of a situation that may result in risks to human health, property, or the environment, either within the facility or in the local community'. Emergencies are of a scale that have operational wide impacts, and do not include small scale localised incidents that are covered under operational area specific management measures. Examples of an emergency for a mining/mineral processing project are events such as pit wall collapse, underground mine explosion, the failure of a TSF or a large scale spillage/discharge of hydrocarbons or chemicals. The recognised international industry practice for managing emergencies is for a project to develop and implement an Emergency Response Plan (ERP). The general elements of an ERP are:

  – Administration – policy, purpose, distribution, definitions of potential site emergencies and organisational resources (including setting of roles and responsibilities).

  – Emergency response areas – command centres, medical stations, muster and evacuation points.

  – Communication systems – both internal and external communications.

  – Emergency response procedures – work area specific procedures (including area specific training).

  – Checking and updating – prepare checklists (role and action list and equipment checklist) and undertake regular reviews of the plan.

  – Business continuity and contingency – options and processes for business recovery from an emergency.

- **Site Closure Planning and Rehabilitation** – The recognised international industry practice for managing site closure is to develop and implement an operational site closure planning process and document this through an operational Closure Plan. This operational closure planning process should include the following components:

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

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

  – Maintain records of stakeholder consultation.

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

– Describe/define the site closure liabilities (i.e. determined against agreed closure criteria).

– Establish site closure management strategies and cost estimates (i.e. to address/reduce site closure liabilities).

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

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

Appendix 5: Project Technical Review – Qualitative Risk Analysis

To ensure the technical integrity of the risk analysis process as applied in the project technical review process, the following Australian Standards for risk analysis and risk management have been utilised for overall guidance:

- *AS/NZS 3931:1998 Risk Analysis of Technological Systems – Application Guide;*
- *AS/NZS 4360:1999 Risk Management; and*
- *HB 203:2004 Environmental Risk Management – Principles and Process.*

These Australian Standards have been developed in line with comparable international standards.

A risk is generally described in terms of the severity/consequence and likelihood of an undesirable occurrence or incident. The greater the potential severity and likelihood of an undesirable occurrence, the higher the level of risk associated with the related activity.

The generic approach for this project technical review qualitative risk analysis has the following three steps:

- Establish the context/define the scope of the analysis – goals/objectives, the analysis strategy and evaluation criteria.
- Identify and analyse the risks in terms of consequence and likelihood.
- Evaluate and rank the risks.

Qualitative Risk Analysis – Scope

The scope definition and context for the qualitative risk analysis can be summarised as follows:

- **Goals/Objectives** – The primary objective is to analyse the qualitative risks associated with the project's development, operational and closure aspects.

- **Strategy** – The strategy employed comprises the application of a qualitative risk analysis where the 'relative magnitude' of risks associated with the project are estimated. Inclusive within this process are also the concepts of inherent and residual risks. Inherent risks being those hazards that are present within the project without any remedial management, and residual risks are defined as those hazards remaining after the application of remedial risk management measures. The risks analysed are those considered as the 'inherent risks' for the project at the time of the technical review.

This qualitative risk analysis strategy has the following key steps:

- **Step 1** – Develop a qualitative risk matrix. This has relative significance rankings for the potential consequences/impacts, levels of event likelihood and the corresponding risk rankings from negligible to extreme.

- **Step 2** – Define the inherent risks (i.e. at the time of the technical review). List the sources of risks and apply the qualitative risk analysis to define the level of risk.

Qualitative Risk Analysis Matrix

The proposed qualitative risk matrix uses the following definitions for consequence and likelihood:

- Likelihood:

  – **Certain**: The event is expected to occur in most circumstances.

  – **Likely**: The event probably will occur in most circumstances (i.e. also could be on a regular basis such as weekly or monthly).

  – **Possible**: The event should occur at some time (i.e. once in a while).

  – **Unlikely**: The event could occur at some time.

  – **Rarely**: The event may occur only in exceptional circumstances.

- Consequence:

  – **Catastrophic**: Disaster with potential to lead to business failure.

  – **Major**: Critical event/impact which, if uncorrected, will have a material effect on the project cash flow and performance and could lead a project failure; but with proper remedial management, will be endured.

  – **Moderate**: Significant event/impact which, if uncorrected, will have a significant effect on the project cash flow and performance, but may be managed under normal procedures.

  – **Minor**: Consequences/impacts that may be readily absorbed and will have little or no effect on the project cash flow and performance, but some remedial management effort is still required.

  – **Insignificant**: No additional/remedial management required.

Based on these definitions the Qualitative Risk Matrix is presented below.

	Consequences				
Likelihood	**Insignificant**	**Minor**	**Moderate**	**Major**	**Catastrophic**
Certain	Low risk	Moderate risk	Moderate risk	High risk	Extreme risk
Likely.	Low risk	Moderate risk	Moderate risk	High risk	High risk
Possible	Negligible risk	Low risk	Moderate risk	Moderate risk	High risk
Unlikely	Negligible risk	Low risk	Low risk	Moderate risk	Moderate risk
Rarely	Negligible risk	Negligible risk	Negligible risk	Low risk	Moderate risk

The subsequent risk ratings are defined as:

- **Extreme/high risks** – unacceptable risks to the project, which if uncorrected, may result in business failure or critical impacts to business.

- **Medium risks** – tolerable risks to the project, which require the application of specific risk management measures so as to not develop into high risks.

- **Low/negligible risks** – acceptable risks to the project, which generally comprise low probability/low impact events that do not require additional specific risk management measures.