Technical Report Expansion Feasibilty Study for the Chang Shan Hao (CSH) Gold Project Inner Mongolia, People's Republic of China

Prepared for

China Gold International Resources Corp. Ltd.

Suite 1030, One Bentall Centre, 505 Burrard Street

Vancouver, British Columbia

Canada V7X 1M8

Report by

John Nilsson P.Eng.
Nilsson Mine Services Ltd.
20263 Mountain Place
Pitt Meadows, British Columbia, V3Y 2T9
Canada

Mario Rossi MSc. Min. Eng.
Geosystems International Inc.
2385 Executive Center Drive
Suite 100
Boca Raton, Florida
33431
U.S.A.

Ken Major P.Eng.
KWM Consulting Inc.
12576 - 206 Street
Maple Ridge B.C.
V2X 3M2
Canada

William McKenzie, P.Eng
Global Project Management Corporation
21160 – 18th Avenue
Langley, British Columbia, V2Z 2G2
Canada

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Qualified Persons:

John Nilsson, P.Eng., President of Nilsson Mine Services Ltd, was responsible for preparation of portions of Section 1 through 6, Section 15 through 16 and Section 22 through 27 of the report. For information concerning legal, environmental, social, political, product market and metal prices the authors have relied on without verification information provided by China Gold International Resources Corp. Ltd. and their qualified persons who have intimate knowledge and responsibility for those aspects of the information.

Signed: Date: 21 October 2012
"John. Nilsson"

Mario Rossi, President of Geosystems International, was responsible for preparation of portions of Section 1, Section 7 through 12 and Section 14, 25 and 26 of the report including the resource estimate.

Signed: Date: 21 October 2012
"Mario Rossi"

Ken Major, P.Eng., President of KWM Consulting Inc. was responsible for ther preparation of Section 13 and Section 17.

Signed: Date: 21 October 2012
"Ken Major"

William McKenzie P.Eng., President of Global Project Management Ltd, was responsible for preparation of portions of Section 1, Section 18 through 21 and contributed to Section 22 and Section 26 of the report.

Signed: Date: 21 October 2012
"William McKenzie"

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

Glossary

Centimeter	cm
Cubic centimeter	cm^3
Cubic meter	m^3
Day	d
Days per week	d/wk
Days per year (annum)	d/a
Degree	°
Degrees Celsius	°C
Gram	g
Grams per tonne	g/t
Greater than	>
Hectare (10,000 m^2)	ha
Hour	h
Hours per day	h/d
Kilogram	kg
Kilograms per cubic meter	kg/m^3
Kilograms per hour	kg/h
Kilograms per square meter	kg/m^2
Kilograms per tonne	kg/t
Kilometer	km
Kilometers per hour	km/h
Less than	<
Liter	L
Meter	m
Meters above sea level	masl

Meters per minute	m/min
Meters per second	m/s
Metric ton (tonne)	t
Micrometer (micron)	µm
Millimeter	mm
Million	M
Million tonnes	Mt
Minute (plane angle)	'
Minute (time)	min
Ounce	oz
Percent	%
Pound(s)	lb
Second (plane angle)	"
Second (time)	s
Square centimeter	cm^2
Square kilometer	km^2
Tonnes per day	t/d
Tonnes per hour	t/h
Tonnes per year	t/a
Year (annum)	a

1 SUMMARY

1.1 PROPERTY DESCRIPTION

The CSH Gold Project covers an area of 35.93 kilometers in the Inner Mongolia Autonomous Region of northern China, and is covered by a single Exploration Permit (No. 0100000220028). Formerly known as the 217 property, the Exploration Permit is centered at latitude 41° 40' North, longitude 109° 14' East. The present permit issued to the Ningxia Pacific Minerals Co. Ltd. in Yinchuan, was valid until 3 August 2008 and was renewed by payment of bi-annual rental fees thereafter.

The Ministry of Land and Resources of China in Beijing issued a Mining Permit (No. 1000000610103) to Ningxia Pacific Mineral Co. Ltd, in August 2006. The permit is valid until August 2013 and can be renewed thereafter.

Jinshan Gold Mines Inc., now China Gold International Resources Corp. Ltd. completed a 20,000 t/d gold recovery facility, heap leaching, carbon-in-column (CIC) gold absorption, carbon stripping, carbon regeneration and acid washing, bullion refining, and reagent systems along with the necessary ancillaries such as plant site electrical systems, water system, shops, camp facilities and access roads. A 30,000 t/d crushing facility was commissioned in September 2009 and has been in operations since that time.

A fully licensed joint venture company - Ningxia Pacific Mining Co. Ltd., now Inner Mongolia Pacific Mining Co. Ltd was formed with Brigade 217 and all property work is being carried out through this entity.

1.2 GEOLOGICAL SETTING AND MINERALIZATION

The CSH217 Gold Project is located within the North China Gold Belt extending along the northern margin of the North China Craton. Miller et al. (1998), Wang and Mo (1995), and Sengör et al. (1993) have described the tectonic setting and evolution of the North China Craton.

Proterozoic carbonaceous metasedimentary rocks host the CSH217 gold mineralization in the south limb of the CSH syncline. The syncline is one of the most prominent structural features in a major east-west trending fold belt that is characterized by complex fold interference patterns. Caledonian and Hercynian age composite granitoid batholiths occur to the north and south of the property. The host rocks to the gold mineralization on the CSH217 property are mainly carbonaceous phyllite, schist, and slate within the lower members of the Bilute Formation.

The gold mineralization is composed of thin (1 to 10 mm) sulphide and quartz-sulphide seams/veinlets, stringers, and boudinaged lenses, which are concordant with the bedding and foliation and trend along the shear zone. Much quartz vein material has been logged in the drill holes associated with the higher-grade gold sections. The higher-grade gold zones are parallel or sub-parallel the regional metamorphic foliation texture. In most cross-sections connecting of the higher-grade intervals shows relatively consistent dip angles of the mineralization zones ranging from 82-85^{o} in the Northeast Zone, and 87-89^{o} and dipping opposite in the Southwest Zone.

Petrographic work indicates that gold is associated mostly with arsenopyrite and pyrrhotite (approximately 22% of total mass) or free (aproxiamtely 77% of total mass). Gold has also been observed as free flecks up to 2 mm in size directly associated with the sulphides in both the stringers and in the quartz “vein” material. Trace amounts of gold have been seen as inclusions within some arsenopyrite crystals. The pyrrhotite is nickeliferous and frequently shows strong pentlandite flame structures within the individual crystals.

1.3 Deposit Type

The CSH217 deposit is a large bulk tonnage low-grade style of gold mineralization hosted within a ductile-brittle shear zone in Proterozoic sediments. Earlier property work and recent drilling data suggest that the gold mineralization was emplaced along the major southwesterly trending ductile-brittle shear zone. The ductile-brittle shear zone, which crosscuts the original bedding structure at about 10º, controlled the mineralization.

The shear zone is parallel to the foliation of the regional metamorphism, which is also parallel to the synclinal fold axis and deformation style typical of many greenstone and slate-belt terranes. Folding continued beyond the point of rupture, with the strain taken up in the developing shear zone. The quartz-sulphide veinlets are boudinaged within the foliation and were clearly deposited early in the deformational history and are perhaps related to basin dewatering during regional folding, typical of “Slate Belt” gold districts.

1.4 Exploration

In 2002, Jinshan (previously Pacific Minerals) completed geophysical surveys along the length of the known mineralization (magnetics and TEM). A total of 2,997 meters in 23 diamond drill holes was completed, with most of this drilling concentrated on the Northeast Zone. Wide, low grade intervals were delineated and supported the potential for a low grade, bulk tonnage gold deposit. These results justified a further campaign in 2003.

In 2007, Jinshan drilled a total of 11,432 meters at the CSH property, including 3073 meters in Southwest Zone, 8147 meters in Northeast Zone, and two short prospecting holes drilled further west along the mineralization trend. In 2007, the 14 holes were drilled in the Southwest Zone, 5 holes as in-fills, to bring drilled sections in the east part of the zone to 50 meter spacing, and the rest as step-out holes in the west end. The in-fill holes further confirmed the continuity of the gold mineralization.

The main purposes of drilling in 2008 was to in-fill gaps in the mineralization model in both the Northeast and Southwest zones, to upgrade Inferred Resources to Indicated status, and to delineate gold mineralization at depths below the previous exploration efforts.

In total, 4972.88 meters were drilled in 23 holes, 1639.29 meters were drilled in Southwest Zone and 2583.89 meters in Northeast Zone. Three prospect holes, totaling 749.70 meters were drilled in the western extension of the Southwest Zone.

Little drilling was done during 2009 and 2010, with only three additional drill holes completed. The most significant drilling campaing to date at the CSH Mine was completed by the end of October, 2011, comprising of 108 holes for a total over 59,000 metres.

1.5 Drilling

Details about the drill holes completed in 2007 and 2008 have been described in the prior Technical Reports mentioned elsewhere. Recovery has been good at CSH, and is not considered an issue. All drill holes were surveyed down-the-hole using a Sperry-Sun type single-shot survey instrument providing a photographic record of the hole angle and direction at 50 meter intervals. The magnetic effect of the pyrrhotite content of the mineralization on the borehole directional survey is not considered significant, as generally less than 1 percent pyrrhotite observed in the mineralization intercepts, and the incremental surveys down the hole are consistent. The collar locations were surveyed using a laser total station and tied to survey control points established with differential GPS, coordinates are recorded using the Beijing 54 coordinate system. All the core was logged by geologists and sampled at the site.

1.6 Sample Preparation, Analysis and Security

All samples were analyzed by fire assay with AA finish by Tianjin Lab, SGS China, from crushed minus 10 mesh samples prepared by Baogang Laboratory in Baotou, Inner Mongolia. The entire drill core was logged and then split in half by saw with one half then being submitted for assay and the balance being retained on site for reference. The cut half-cores are stored in a secure warehouse in the XinHuRe (CSH 217) base camp.

Sampling is mostly 2.0 meters long unless obvious geological breaks dictated otherwise (maximum 3.90 meters, minimum 0.30 meter). The HQ series cores (63.5 millimeters) provide adequate sample weights for this type of deposits. The average weight of a half core sample for a 2 meter interval is 7.0 kilograms.

Two laboratories were chosen to perform the assays: SGSs Tianjin Laboratory and ALS Chemex Guangzhou laboratory, both in the People's Republic of China. The Tianjin laboratory has been the main laboratory for CSH samples for no less than 8 years.

Gold content was determined using the standard 30-gram fire assay followed by Atomic Absorption techniques. About 10% of the samples that were assayed above 0.2 ppm Au were checked by a third lab, the ITS Shanghai Lab.

As part of the data quality assurance and quality control procedures (QA/QC), several sample preparation and assaying checks were implemented for the 2011 drilling program. This was in addition to the QA/QC programs from various campaigns that have been previously reported on. The 2011 QA/QC consisted of 489 blanks; 454 pulp duplicate samples; and 426 samples of reference material of 16 different known grades.

1.7 Data Verification

The authors have verified the gold mineralization by observing the mineralized drill cores and exposures in the open pits, ores loaded on the leach pads, and gold doré bars produced by the CSH Mine.

It is the opinion of the authors that the data used in the preparation of the Technical Report is adequate and meets the standards required by CIM Guidelines and NI 43-101.

1.8 Mineral Resources

The database used to estimate the resources of the NE and SW zones consists of a total of 298 inclined surface drill holes, covering both zones, and including its latest extensions to the SW and somewhat to the NE. There are 111 new holes added since the last resource update, 108 of those drilled in the 2011 campaign, for a total of almost 61,000 additional meters. The holes dip between about 75º to 45º with most holes to the south and the southeast and six holes to the northwest. The drill holes have been surveyed on the Beijing 54/Yellow Sea 58 system using a total station tied to control points previously established with differential GPS system.

The overall integrity of the database is deemed excellent. The 2011 drill holes have been checked for internal consistency, looking for obvious errors in the assay, geologic, down-the-hole surveys, and collar locations data.

All drill holes have been surveyed down-the-hole using an Eastman-Kodak single shot camera, made in Germany. The camera has a magnetic angle unit that measures azimuth and dip. The value is recorded inside the camera, and the measured values can be read after the film is developed. The stated measuring accuracy is 0.1 degrees, and reading accuracy is 0.5 degrees, which is adequate for resource estimation.

The topography surface used in this resource model update was a survey completed in the summer of 2005, as well as an additional patch to the SW of the ore zones, to cover the latest extension of the model. Additional lateral topography was derived from an IKONOS satellite image, with nominal spatial resolution of 2m horizontal, and the DEM accuracy is ±1m, geo-referenced to the Yellow Sea 58 datum, on Beijing 54 map projection.

The current topographic surface was surveyed with Total Station, representing the “as-mined” surface as of December 31st, 2011. The resources reported later in this Section correspond to material below the pit surface, and all comparisons with current production are done above the end of December 2011 topographic surface.

The same 0.20 g/t Au grade envelope used in previous modeling efforts was updated. The grade threshold is a reasonable footwall and hanging wall contact for the gold mineralization. The resource model assumes that there is no mineralization of interest outside the 0.20 g/t envelope. The envelope was refined by China Gold’s geologist and checked.

Mineralized material is defined by samples that are greater or equal than 0.20 g/t gold grade over a minimum 6m-horizontal width (thickness of the steep dipping zones), considered a minimum mining width to selectively remove waste.

The mineralized intervals on sections show good continuity, both section to section and down dip. It demonstrates that the dip of the mineralization is steeply south-southeast at almost 90^{o}.

In 2011, an additional 64 samples were obtained and sent to testing. There are no changes introduced or additional density samples considered for this 2012 resource model. These new 64 samples are all in the non-weathered zone, and average 2.79, which is the same average density used previously. The average for the 81 weathered samples is 2.72.

Two-meter long composites were obtained from the original assay data, and coded using the modeled geology as inside or outside the 0.20 g/t envelope. All resulting composites less than 1 m were discarded from the database.

The impact of high grades has been shown to be limited. An analysis was performed on the cumulative probability curve and a quantity of metal graph by gold cutoff grades. Similar to prior models, for the NE zone, it was decided to restrict the influence of gold composite grades higher than 7.0 g/t at the time of resource estimation. In the case of the SW zone, the limit was set at 6.5 g/t.

The updated variography confirms the main conclusions and observations obtained from prior exercises. The anisotropies and ellipses of continuity for each variogram were checked against known geology and its expected behaviour. As previously, along-strike and down dip (70º or steeper to the North) continuities are the two main directions in each zone.

The block size chosen was 12.5 x 12.5 x 6 m, but uses percentages of block within the envelope to more accurately reflect the geometry of the 0.20 g/t envelope. Grade was estimated on the 12.5 x 12.5 x 6 m parent blocks, although the block may have as little as 1% of its volume within the envelope. This percentage defines the proportion of the block within the envelope, which is taken into consideration when tabulating resources and for mine planning.

An Indicator-modified ordinary kriging method was used to estimate gold grades for the CSH deposit. The grade was estimated into blocks defined within the 0.20 g/t envelope by choosing data according to the grade cut-off. The composites used to estimate within the 0.20 g/t envelope were chosen from within the envelope only.

Three estimation passes were used to estimate the resource model. Each pass is done using varying degrees of conditions before any given block can be estimated. Data selection was done using anisotropic octant searches it helps to avoid over-influence of individual drill holes in areas with redundant information.

The strategy of the ordinary kriging plans was similar to that used in prior models, although some of the specific searches and search anisotropies defined were slightly modified based on the updated correlogram models.

No resources were considered outside the 0.20 g/t envelope. The final gold grade then is the estimated grade of each block above 0.20 g/t gold weighted by the proportion of the material above 0.20 g/t, which is in effect a dilution factor.

The resources were classified using the CIM guidelines and definitions (CIM Standards on Mineral Resources and Reserves Definitions and Guidelines, November 27, 2010). The classification is based on the estimation kriging passes which are based on the amount of information used to estimate the grade for each block. Additionally, the categories were smoothed manually to avoid isolated islands and the “spotted dog” effect. In this smoothing process, the data quality and geologic continuity have again been considered. Additional restrictions were applied mostly restricting the measured, indicated, and inferred categories to specific depths.

The resource estimate was completed by Mr. Mario E. Rossi, Qualified Person according to the definition set out in NI 43-101 by reason of education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience. Also, Mr. Rossi is independent of China Gold International Resources Corp. Ltd applying all of the tests in section 1.5 of NI 43-101. The resources have been classified using the CIM definitions (CIM Standards on Mineral Resources and Reserves Definitions and Guidelines, December 2005).

Table 1.1 shows the overall estimated gold resources for the CSH 217 project[1]. The resources are reported below the topography corresponding to December 31st, 2011.

The estimated grades of the resources include some geologic dilution, but no operational or mining dilution or ore loss. The model can only be considered fully diluted (save for mining dilution) if the assumed SMU is actually achieved at the time of mining. Given the degree of selectivity assumed in this resource model, an effective grade control system is required to achieve such degree of selectivity and grades.

The resources are reported within a “resource pit”, which was developed using a U.S. $1,800/oz Au price and a 60% recovery. This resource pit represents what it is reasonable to expect may be recoverable in the near future from CSH.

There are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues that may materially affect the resource estimates. Other relevant factors that may materially affect the resources, including mining, metallurgical, and infrastructure are well understood according to the assumptions presented in this Report.

Comparisons with blast hole data indicate that the resource model is performing well. As expected, the resource model is generally predicting more tonnage and lesser grade for low cutoffs, due to the smoothing effect of the kriging estimator. This is seen as allowance for operational dilution and ore loss.

[1] All Figures in the Resource Tables presented in this Report may show apparent inconsistencies due to rounding errors.

Table 1-1 Resource Summary

All CSH Resources by category below pit surface to December 31st, 2011, within Resource Pit, 2012 Resource Model.										
	Measured		Indicated		Measured+Indicated			Inferred	
Cutoff (g/t)	MTonnes	Au Grade (g/t)	MTonnes	Au Grade (g/t)	MTonnes	Au Grade (g/t)	Million Ounces Au	MTonnes	Au Grade (g/t)
0.25	95.3	0.61	192.7	0.55	288.0	0.57	5.26	155.7	0.46
0.28	**90.4**	**0.63**	**172.2**	**0.58**	**262.6**	**0.60**	**5.05**	**132.8**	**0.49**
0.30	86.9	0.65	160.2	0.60	247.1	0.62	4.91	118.9	0.52
0.35	78.2	0.68	134.5	0.65	212.8	0.66	4.55	91.5	0.57
0.40	69.9	0.72	113.8	0.71	183.7	0.71	4.20	71.1	0.63
0.45	61.7	0.76	97.0	0.75	158.7	0.76	3.86	56.1	0.69
0.50	53.9	0.80	83.0	0.80	136.9	0.80	3.52	44.8	0.74
0.55	47.2	0.84	71.2	0.85	118.4	0.84	3.21	36.1	0.80
0.60	40.7	0.88	61.0	0.89	101.7	0.89	2.90	29.1	0.85
0.65	34.8	0.93	52.2	0.94	87.0	0.93	2.61	23.5	0.90
0.70	29.5	0.97	44.1	0.99	73.6	0.98	2.32	19.1	0.95
0.75	24.9	1.02	37.3	1.03	62.3	1.03	2.06	15.7	1.00

**Gold Price assumptions (in USD$) used to calculate the cut off grade for the "Resource Pit" is: Au=$1800/oz;*

**Gold recovery used to calculate the cut off grade for the "Resource Pit" is: 60%;*

1.9 Mining and Reserves

China Gold International Resources Corp. Ltd. (CGIR) is now planning to expand the crushing facilities at CSH from 30,000 t/d to 60,000 t/d capacity. An expansion plan has been prepared by the Changchun Gold Design Institute (CGDI). In support of this study a new mine development plan has been completed using the current resource model and an increased gold price of U.S. $1380/ounce of gold. Pit optimization and design was undertaken by CGDI using Micromine software. The pit limits and reserves were validated by Nilsson Mine Services Ltd. (NMS). Mining is carried out by the contractor China Railway 19th Bureau.

Mineable reserves reported using the 2011 year end topographic surface and a cutoff grade of 0.28 g/t have increased to 213.5 million tonnes with an average diluted grade of 0.59 g/t Au. The strip ratio is 3.31 with a total of 707.4 million tonnes of waste mined. Total material moved from the pit will be 920.9 million tonnes. Mineral reserves are summarized in Table 1-2.

Table 1-2 Reserves

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t	Contained Gold ounces x 1000
Proven	32,020.0	89,090.0	0.64	0.62	1,767.3
Probable	44,639.0	124,428.0	0.60	0.58	2,315.3
Total	**76,659.0**	**213,518.0**	**0.61**	**0.59**	4,082.6

1.10 LEACH PAD & PONDS

Ore will continue to be placed on the existing heap leach pad for another 2 years after which all remaining ore will be placed on a second heap leach pad which will be located to the east of the existing pad. The second heap leach pile will cover an area of 133 ha, reach an elevation of 116 m and have a capacity of 75 million m^3. The remaining ore is estimated at 106 million m^3. Once the second pad has reached its final height, the plan is to merge the two pads by placing the balance of ore in the valley between the two pads. The valley capacity is estimated at 40 million m^3.

The existing pregnant solution pond, downstream of heap leach pad, has a capacity of 20,000 m^3. The expansion project will require a second 56,000 m^3 pregnant solution pond.

Downstream of the existing pregnant solution pond, there are 2 existing event ponds with a total capacity of 80,000 m^3. A third 120,000 m^3 event pond is currently under construction with completion expected by mid 2012, for a total event pond capacity of 200,000 m^3. The event ponds have double HDPE liners as well as a 30 cm clay liner. The three event ponds will provide 62 hours of retention time. The expansion project will build an additional 180,000 m^3 event pond downstream of the second pregnant solution pond.

1.11 METALLURGY AND MINERAL PROCESSING

Heap leach operations for China Gold International's CSH project were commissioned in April 2007 with the first gold poured in July 2007. Initially the heap leach targeted run-of-mine oxide ore and the ore had been classified in to oxide ore and sulphide ore regimes. The initial approach to defining the ore was that if there was oxide present in the ore it was considered suitable for the ROM leach. In 2008 there was a significant decline in gold recovery noted and it was determined that the partially oxidized ore (transition ore) leach properties were very similar to the sulphide ores. A metallurgical program was completed at this time with the recommendation for the addition of a 3 stage crushing plant to generate -9mm ore to feed the leach pads. The crushing plant commissioning began in the 4th quarter 2009 with the plant fully operational in April 2010.

Brigade 217 China National Nuclear Corporation began exploration activities at the CSH site in 1995. Three test heaps of run-of-mine ore were constructed and leached for 32 days. Gold extraction averaged approximately 65 percent. In 2001 Brigade 217 expanded the test program to include agitation leach and column tests. During this same time period International Metallurgical and Environmental Inc. (IME) completed a test program that included mineralogical examination, gravity concentration and bottle roll cyanidation studies. In 2003 SGS Lakefield initiated a program on drill samples that included Bond Work Index determination, gravity concentration, cyanidation and a leaching test to determine potential gold losses due to preg-robbing. In 2003 and 2004, SGS completed additional tests on oxide and sulphide composite samples. In 2004 Jinshan Gold Mines conducted two pilot heap leach tests each containing approximately 50,000 tonnes of oxide. One sample was run-of-mine and the second was crushed through 125mm. In 2005 and 2006 oxide and sulphide column leach studies were conducted at the Baogang Technical Institute in Baotou, Inner Mongolia supervised by METCON Research.

The column test results reported in July 2005 completed at Lakefield and at Yinchuan indicated improved recovery experienced by crushing the ore prior to leaching.

In February 2006 KD Engineering submitted a review of the metallurgical testwork that included the analysis of test columns that contained a sulphide composite having a size distribution of 80% passing 6mm. The trend analysis indicated that the gold extraction would average about 72.6%. On the same composite the trend analysis of test column data indicated an extraction of 60% at P80=25mm and 47% at P80=75mm.

KD Engineering concluded that the results of the various column test programs indicated that the gold extractions from the oxide and sulphide ores were dependent on whether the ore was crushed prior to placement on the leach pads. The estimated extractions provided by KD are:

- ROM oxide 80%
- Tertiary crushed oxide 85%
- ROM sulphide 40%
- Tertiary crushed sulphide 70%

In 2009 Metcon issued a report for "On-site Open Cycle Column leach Tests" for the recent test program that was supervised by Joseph Keane. In this program samples from the Northeast (NE) and Southwest (SW) ore zones were tested. Samples were crushed to P80=9mm and P80=6mm.

The average gold extraction for the NE ore zone was 77.8%. For the SW ore zone the average gold extraction was 73.5%. The lower extractions for the SW ore zone may be attributed to the lower feed grades and range of grades tested for the zone.

Consistent with earlier testing the results of this testwork also indicated that there could be the potential to improve extraction at the finer target crusher size P80=6mm. For the NE Zone the average test extractions for these same samples was about 6.3% higher. For the SW Zone the increase was about 2.6%.

The data for the NE and SW on-site column tests was analysed together and generated the recovery relationship. Using the results from this test program the Au extraction model for the P80=9mm tests have been determined to be:

Au Extraction = 26.345 x (Au Feed Grade, g/t) + 57.603

To extrapolate the data from the on-site column tests to the heap leach it was recommended that a 5% adjustment be included to the recovery model. The adjustment provides allowance for a number of operating variables including the influence of external temperature on leaching rate and the number of lifts in the heap leach pad.

The adjusted extraction model recommended for prediction of the gold extraction is:

Au Extraction = 26.345 x (Au Feed Grade, g/t) + 52.603

KD Engineering proposed the accumulated extraction model presented in Table 1-3 based on the estimated extractions for the various ore feeds.

Table 1-3 Accumulated Extraction

Ore Type	Accumulated Extraction, %				
year	1	2	3	4	5
Run-of-mine oxide	65.6	74.7	78.0	79.0	80.0
Run-of-mine sulphide	25.6	34.7	38.0	39.0	40.0
Crushed oxide	70.6	79.7	83.0	84.0	85.0
Crushed Sulphide	55.6	64.7	68.0	69.0	70.0

The proposed accumulated extractions have been used to complete an analysis of the operating data since heap leach operations at CSH commenced. From the operating reports the metallurgical review assumes that oxide ore was placed on the pad from April 2007 through January 2008. In February 2008 the ore supply changed to transition ore that responded similar to sulphide ore and this initiated the evaluation of 3-stage crushing. The commissioning of the 3-stage crushing circuit was completed in April 2010.

Since heap leach operations began based an estimated 30,120 kg of Au have been placed on the heap leach. This estimate has been based on the monthly feed tons delivered to the heap and monthly grade. Based on the pregnant solution flows to the carbon columns the theoretical (monthly) gold recovery is estimated at 14,550 kg, 49.4% of gold delivered to the heaps. Using the staged model in Table 1-3 the estimated extraction from the start of leaching through April 2012 is 14,450kg of gold. From the gold poured records the cumulative gold production through April 2012 for the CSH mine is 14,110kg.

Based on the comparison of the estimated extraction to the recorded poured gold the models proposed by KD Engineering appear to represent the operating performance for the heap leach.

For the purpose of estimating the gold extraction for future production from the sulphide ore it is recommended that the model generated from the on-site column tests be used capping the Au extraction rate at 75% (predicted extraction at 0.85g/t).

Au Extraction = 26.345 x (Au Feed Grade, g/t) + 52.603

1.12 CAPITAL COST ESTIMATE

In April 2010 CSH successfully completed the installation of a crushing plant and the modifications to the gold recovery circuit to process the sulphide ore which added an additional 10,000 t/d capacity for a total of 30,000 t/d. The modifications to the original solution facility for the expansion included the installation of new pregnant and barren solution pumps to handle the incremental flow. Due the incremental increase in capacity the expansion also included a new set of carbon columns followed by new carbon wash and stripping facilities for the loaded carbon and an associated pressurized electrowinning cell to complete the independent circuit.

To continue operations for the long term a new heap leach pad is required. Simultaneously there is a planned expansion to increase the plant capacity from 30,000 t/d to 60,000 t/d. The plan for the expansion is to duplicate the existing crushing circuit with minor modifications to improve plant safety, equipment availability and operating efficiency. Solution handling facilities will be expanded, as required and the gold recovery circuit will include 4 parallel trains of carbon columns each followed by acid wash, stripping and electrowinning.

The capital cost was compiled by the Changchun Gold Design Institute from equipment quotes, current market knowledge, historical data from the initial crushing and screening installation and experience. Although there is a high degree of detail supporting the capital cost estimate, the level of supporting design work is considered preliminary. Factors were applied to the equipment quotes of 8% for transportation, between 8% to 12% for mechanical equipment and 40% for electrical installation, including cable and 2% for spare parts.

Earthworks, concrete and building were estimated using unit rates from similar recent projects in the region.

A summary of the Expansion Capital Costs is shown in Table 1-4.

Table 1-4 Captial Cost Summary

Item	million RMB	million RMB	million USD	%
Mining		12.9	2.0	1.23
Mineral Processing		675.3	107.00	64.51
Crushing System	486.56			
Heap Leaching	73.07			
Gold Recovery	115.62			
Utilities		110.8	17.6	10.58
Accommodation & Rec. Facilities		14.5	2.3	1.38
Other Costs		155.8	24.7	14.90
Subtotal		969.3	153.6	92.60
Contingency – 8% of subtotal		77.5	12.3	7.40
Total		**1,046.8**	**165.9**	**100.00**

Other Costs include allowances for land acquisition, resettlement, engineering fees, construction management, government submittals, Environmental Impact Assessment, test work, training, tools and environmental fees.

The Expansion Project is planned for completion by August 1, 2013 which is an ambitious schedule and requires the Project to be executed on a significant number of multiple work fronts.

The capital cost estimate for the planned expansion process facilities has increased about 6% from the Phase 1 installation completed in early 2010 which is not significant. However, with the low level of engineering detail and the magnitude of potential change, the capital cost estimate with an 8% contingency is understated. The capital cost estimate should be considered as a Class 4 estimate, as determined by the Association of American Cost Engineers (AACE) Process Industry Matrix. An AACE Class 4 estimate typically has a contingency between 10% to 25% and an accuracy of between --15%-30% on the low side and +20%-50% on the high side.

For the purposes of the NI 43-101 review the 8% contingency has been increased to 20% (193.9M RMB; $30.7M U.S.) for a revised capital cost of 1.163 Billion RMB ($184.3 Million U.S.).

The Capital Cost for the Expansion Phase Project will be self funded.

The following table shows an estimate of annual capital spending during the life of mine. This estimate includes the Expansion Phase capital in addition to sustaining capital items, including mine closure costs.

Table 1-5 Life of Mine Capital

Period		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Capital	$ x million	$18.4	$165.9	$0.0	$4.8	$10.5	$0.0	$0.0	$6.2	$0.0	$0.0	$0.0

Period		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Capital	$ x million	$0.0	$1.8	$1.8	$1.8	$1.8	$0.0	$0.0	$0.0	$0.0	$0.0	$212.9

1.13 OPERATING COST ESTIMATE

The operating costs estimates are based on the existing operations. The operating plan for the Expansion Phase will be the same as the existing operation, with mining and stockpiling on the heap leach pad undertaken by the contractor China Railway 19th Bureau, on a per cubic meter basis with an adjustment for haulage over 2.5 km. With the Expansion Phase process facilities, essentially operating as a standalone plant, coupled with the contract mining and heap leach stockpiling on a per cubic meter basis, there is virtually no reduction in operating costs on a per tonne basis due to doubling the output.

Operating costs are based on the existing operation and contract agreements. The current mining contact will expire at the end of 2014, at which time there will be a cost of fuel adjustment. There is an agreement in principle to pay the government a water usage fee for the new fresh water reservoir construction. The fee has not yet been determined but is expected to be 0.4 RMB per cubic meter of water.

The predicted annual onsite operating costs by major category per tonne processed excluding royalties, taxes and other fees are shown in Table 1-6.

Table 1-6 Operating Costs

Item	RMB/tonne ore	U.S. $/tonne ore
Mining Ore	￥9.60	$ 1.52
Mining Waste	￥32.78	$ 5.19
Processing	￥15.16	$ 2.40
General Administration	￥4.52	$ 0.72
Total	￥62.06	$ 9.83

1.14 Economic Analysis

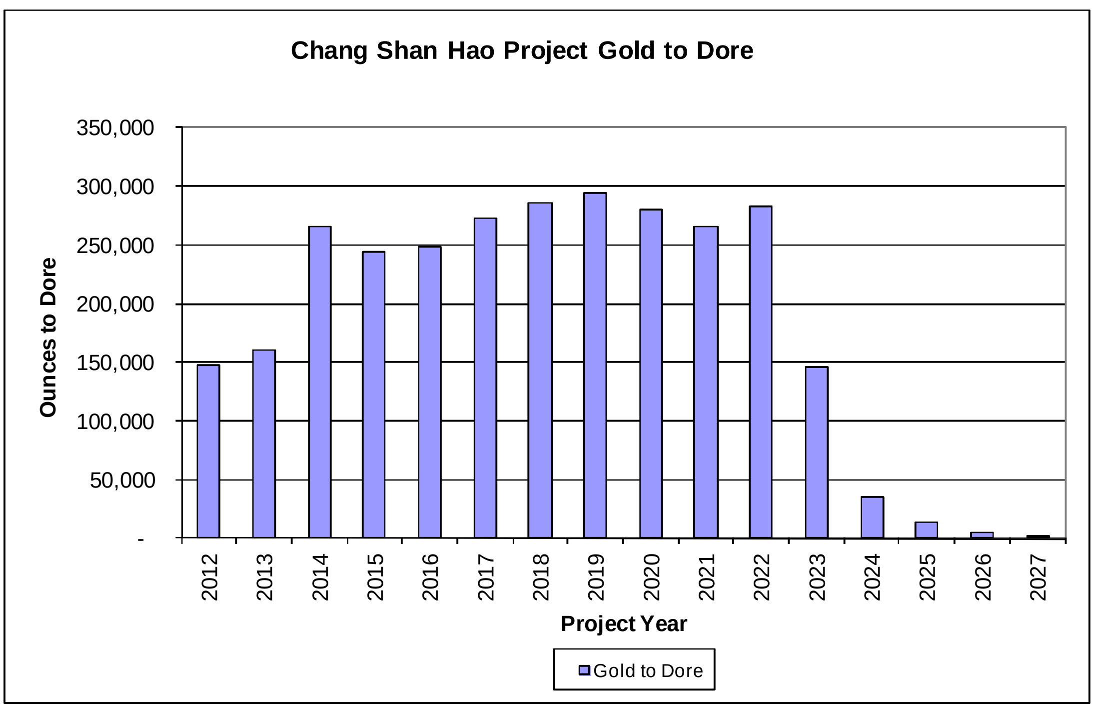
The CSH mine is currently operating at 30,000 t/d crushing and heap leaching gold ore. An updated resource model has been used by CGIR and CGDI to develop a mine plan and cost estimates for an expanded operation to 60,000 t/d by the end of 2013.

The economic analysis of the project prepared by the authors of this report is based on the life of mine cashflows starting January 2012 for proven and probable reserves that are included in the expansion plan.

CSH Expansion Project is expected to generate additional value by accelerating metal production and shortening the mine life from 16 years to 11 years.

Project cashflows are based upon the mine expansion plan and gold production schedule shown in Figure 1-1.

Figure 1-1 Expansion Phase Production Schedule



The cashflow has been been calculated using U.S. $1600/ounce in 2012 and 2013, then U.S. $1585/ounce in 2014, U.S. $1440/ounce in 2015 and U.S. $1380/ounce of gold for the remainder of the mine life. A refining charge of U.S. $4.68/ounce has been applied based upon the current sales contract terms. The actual terms of the contract states that gold dore will be sold at the average price of the Au9995 gold ingot at Shanghai Gold Exchange on Notification Date, less RMB0.95/gram. Exchange rate used for all cost estimates in the study has been 6.3115 RMB/U.S. $. A summary of the expected project cashflow is shown Table 1-7.

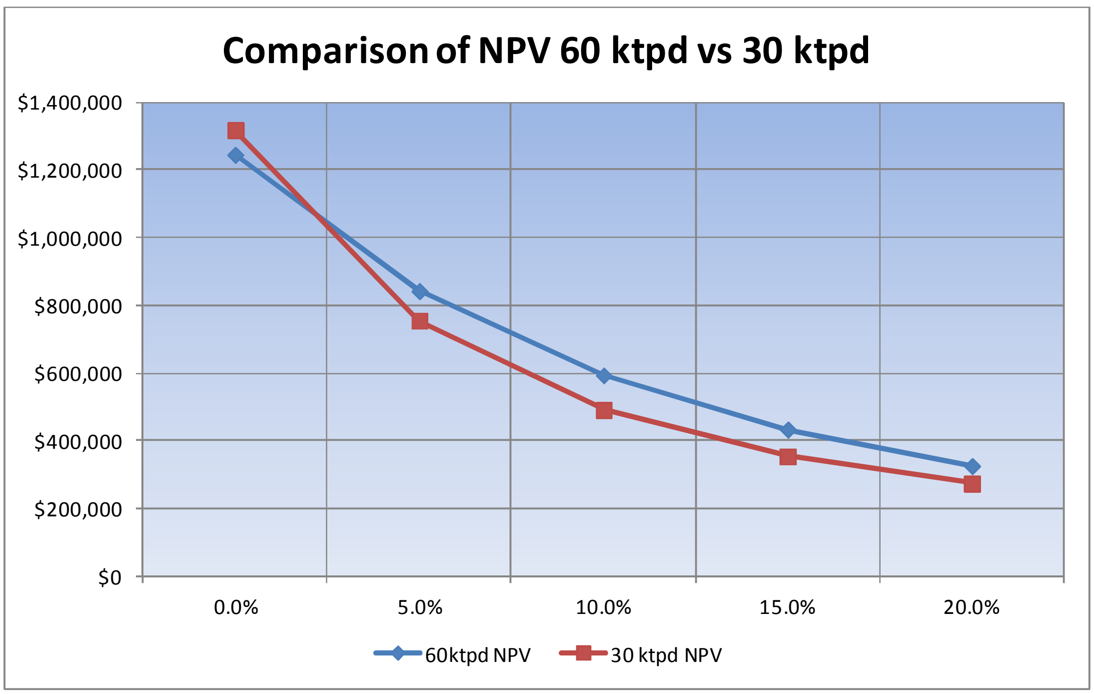
Table 1-7 Project Cashflow Summary

Period		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Cashflow	$ x million	$54.0	($89.3)	$154.0	$94.0	$70.1	$102.3	$108.8	$126.9	$120.6	$152.1	$196.7

Period		2023	2024	2025	2026	Total
Cashflow	$ x million	$122.3	$32.0	$7.8	$0.2	$1,253.8

The net present value of the cashflows from operations is U.S. $642.3 million when calculated with a 9% discount rate. The incremental net present value of the project is U.S. $92.5 million. The internal rate of return of the incremental cashflows is 30.5%. A comparison of the cumulative cashflow is shown Figure 1-2.

Figure 1-2 Comparison of Net Present Value After Expansion



A compensation fee has been applied at a rate of 1.8% of the sales revenue.

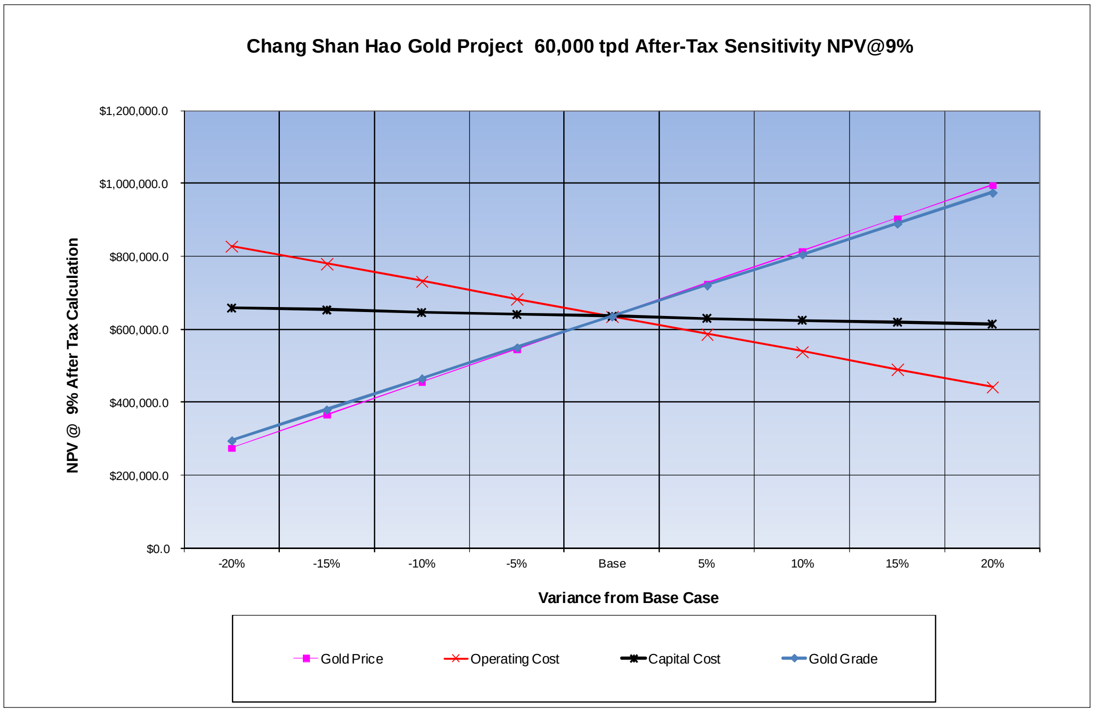
A resource tax of 3.00 yuan/t of ore has been applied.

Income taxes have been applied at a rate of 25.0%. The depreciation carried forward from the earlier investments total $98.2 million. The allocation of the Project capital for the purposes of depreciation was 15.9% for the Crusher Building, 18.0% for other Permanent Buildings and Structures, 29.2% for Intangible

Assets, 1.3% for Electronic Equipment and 35.6% for Machinery. Depreciation rates that have been applied are Crusher Building 14%, Other Buildings 10%, Intangibles - 10%, Electronics – 20% and Machinery - 10%.

Life of Mine NPV sensitivity analysis has been conducted on the financial model at the 100% project level for variations in metal price, project capital and operating expenses. The relative effects on CSH project NPV based on the project cash flows for these scenarios are indicated in Figure 1-3.

Figure 1-3 Sensitivity Analysis



1.15 Conclusions and Recommendations

The 2011 drilling campaign added significant tonnages above cutoff at a slightly lower grade, partly due to the confirmation of grades and upgrade in resource classification down-dip and laterally. The CSH deposit in the SW area is now well delineated, and still significant potential exists for down-dip extensions to the mineralization. Mineralization at depth in the NE has been confirmed, with increases in both tonnages and confidence.

The SW zone has been interpreted as three main segments, with the easternmost striking further to the East (into the so-called central zone), while the 0.20 g/t envelopes defining the other two segments are wider. The extension of the SW zone towards the West has resulted in additional tonnage at about the same grade, included mostly in the indicated category, and for an extension of about 250 m laterally.

It is important to note that the estimated grades assume that the mine can operate a small Selective Mining Unit (SMU), that is, relatively little dilution is incorporated into the model. As such, the operation needs to run smoothly and tightly to achieve the predicted resource grades and avoid unplanned dilution.

The selectivity and dilution assumptions made in this resource model require that a diligent and efficient grade control process be implemented at the time of mining to achieve the predicted grades and tonnages.

Comparisons with blast hole data indicate that the resource model is performing well. As expected, the resource model is generally predicting more tonnage and lesser grade for low cutoffs, due to the smoothing effect of the kriging estimator. This is seen as allowance for operational dilution and ore loss.

It is important to China Gold Internationl (CGI) that mine operations validate the grade control (blast hole) information, adding to the QA/QC effort, as well as checking the quality of the ore/waste selection prediction. The resource model cannot be modified to account for this additional grade and less tonnages until the blast hole data and grade control model data are fully validated.

The Changchun Gold Design Institute (CGDI) developed mine plans and CSH developed the production schedules using the resource model described in the Section 14. The mineral reserves forming a part of this plan have been validated by NMS. The mineral reserves reported are based upon the smoothed pit designs and measured and indicated resources using a gold price of U.S. $1380/ounce. Proven and Probable reserves reported by NMS using the designs of the CGDI have been summarized. These vary slightly from those scheduled in the mine plan. The differences are not considered significant as they represent less than 1% variance and may be due to differences in software applications.

The production schedule developed for the Feasibility Study was based upon a September 2013 completion date for the crushing plant. Ore production in 2013 assumes the equivalent of 112 days of full production at 60,000 t/d to year end. There may be some schedule risk in the mine plan in terms of ore production if the construction schedule is extended.

The Feasibility Expansion Study has demonstrated that additional value is added to the CSH Project when plant capacity is expanded. This additional value is created by moving production forward and reducing the mine life.

The following are the main resource related recommendations suggested for China Gold International (CGI) to implement:

- CGI should implement a reconciliation system that would allow keeping track of planned and unplanned dilution observed in the pits; these include as accurate as possible measurements of volumes and tonnages extracted from the mine, as well as improved grade estimation from grade control data. The resource model grades assume that the mine can operate a small Selective Mining Unit (SMU), which requires significant operational control and careful follow up to diagnose if too much dilution is being sent to the plant.

- A more proactive and reactive QA/QC program should contribute to more confidence in the database and the resource model overall. Significant effort should be placed in responding within the QA/QC program and while drilling is on-going to correct any issues detected. The QA/QC data from the laboratory should be processed and reacted to more dynamically.

- A conditional simulation study should be completed to validate the SMU assumption, and to allow for a full assessment of recoverable resources.

- The grade control process should also be geared towards achieving as little dilution and ore loss as possible, as well as maximizing in-pit resource (ounces) recovery. A loss function-based, using conditional simulations, is probably the better grade control method for the mine.

- Comparisons with blast hole data should continue, and be part of the overall reconciliation process. Not only for material accounting purposes, but also to evaluate the performance of the resource model.

- It is important to CGI to validate the grade control (blast hole) information, adding to the QA/QC effort, as well as checking the quality of the ore/waste selection prediction. The resource model cannot be modified to account for this additional grade and less tonnages until the blast hole data and grade control model data are fully validated.

Once detailed engineering is 60 to 70% complete, a capital cost control estimate should be prepared which is based on designed quantities for all the major commodities, purchase order values, transportation costs, installation costs based on confirmed unit rates, indirect costs and a contingency evaluation to confirm the capital cost to a high degree of accuracy, in the order of plus-minus 10-15%.

It is recommended that detailed execution plan be developed for a transition from 30,000 t/d to 60,000 t/d and development of the next heap leach pad.

The following recommendations are offered for the mine development plan.

- Increase ramp width to 30 m for 220 t class trucks
- Move ramp to south side of Southwest Pit
- Reduce wall slopes in Southwest Pit
- Future resource modelling should be based upon a 12 m bench height if operations are modified from the current 6 m bench height.

2 INTRODUCTION AND TERMS OF REFERENCE

China Gold International Resources Corp. Ltd. (CGIR) commissioned Changshun Gold Design Institute (CGDI) to carry out an expansion study for the Chang Shan Hao (CSH) Gold Project - Inner Mongolia, Peoples Republic of China. The report was entitled Feasibility Study Report for Chang Shan Hao Gold Mine, Inner Mongolia Pacific Mining Co. Ltd., July 2012. The CGDI report on the expansion from 30,000 t/d to 60,000 t/d has been based upon an updated resource estimate provided by Mr. Mario E. Rossi, MSc. Min. Eng. of Geosystems International, Inc.(GSI) in Delray Beach, Florida. Mr. Rossi was responsible for Sections 7 through 12 and Section 14 of this report.

The mining engineering aspects of the CGDI report were reviewed by Mr. John W. Nilsson, P. Eng. of Nilsson Mine Services Limited (NMS) of Pitt Meadows, British Columbia, Canada. Mr. Nilsson provided Section 1 through 6, 15 and 16 and input to Section 22 through 24 of this report.

The metallurgy and testwork aspects of the CGDI report were reviewed by Mr. Ken Major of KWM Consulting Inc. (KWM) of Maple Ridge, British Columbia, Canada. Mr. Major provided Section 13 and 17 of this report.

The project infrastructure, environmental, permitting, community impact, capital and operating costs as well as economic aspects of the report were reviewed by Mr. William McKenzie of Global Project Management Consulting (GPMC) of Langley, British Columbia, Canada. Mr Mckenzie provided Sections 18, 19, 20, 21 and contributed to Section 22.

Additional important contributions to the report were provided by CGIR operational and management personnel.

3 RELIANCE ON OTHER EXPERTS

In preparing this Report, the GSI, NMS, KWM and GPMC have relied on assistance and information from various parties and sources. Sources of information are acknowledged throughout the Report, where the information is relied upon.

GSI, NMS, KWM and GPMC have followed standard procedures in preparing this Report that is based in part on details, information, and assumptions provided by others. Neither GSI, NMS, KWM and GPMC can guarantee the correctness of all information but to the extent of this investigation and within the scope of the assignment, assumptions, conditions, and qualifications, it is believed that this Report is substantially correct.

Mineral Reserve and Mineral Resource estimates for the Chang Shan Hao Mine are forward looking statements and may differ from the actual amount of saleable minerals recovered in mining operations. Principle deviation may result from grade variations within the deposit, metallurgical response of the mineralization, market prices and operating cost levels achieved by the operator.

The Report contains information relating to mineral titles, permitting, regulatory matters and legal agreements. The information in the Report concerning these matters is required by NI Form 43-101F1. The Authors are generally knowledgeable concerning these issues in the context of the mineral industry but neither are legal or regulatory professionals. GSI, NMS, KWM and GPMC have not conducted a detailed land status evaluation, and have relied upon information and representations supplied by China Gold International Resources Corporation Ltd. on land ownership and permitting.

4 PROPERTY DESCRIPTION AND LOCATION

Property description and location information is described in the throughput expansion technical report dated 28 March 2008 and is repeated below for completeness.

The CSH Gold Project covers an area of 35.93 kilometers in the Inner Mongolia Autonomous Region of northern China, and is covered by a single Exploration Permit (No. 0100000220028). Formerly known as the 217 property, the Exploration Permit is centered at latitude 41° 40' North, longitude 109° 14' East. The present permit issued to the Ningxia Pacific Minerals Co. Ltd. in Yinchuan, was valid until 3 August 2008 and has been renewed by payment of bi-annual rental fees thereafter.

The Ministry of Land and Resources of China in Beijing issued a Mining Permit (No. 1000000610103) to Ningxia Pacific Mineral Co. Ltd, in August 2006. The permit is valid until August 2013 and can be renewed thereafter.

Jinshan Gold Mines Inc., now China Gold International Resources Corp. Ltd. initially completed a 20,000 t/d gold recovery facility, run of mine heap leaching, carbon-in-column (CIC) gold absorption, carbon stripping, carbon regeneration and acid washing, bullion refining, and reagent systems along with the necessary ancillaries such as plant site electrical systems, water system, shops, camp facilities and access roads. A 30,000 t/d crushing plant was commisioned in September 2009 and has been in operation since that time.

By agreement dated 5 April 2002, Jinshan Gold Mines could acquire a 96.5 percent interest in the Exploration Permit by paying to Brigade 217 a total of U.S. $ 750,000 in staged payments over a three-year period. These payments were completed. Additional payments were also made to Brigade 217 as follows:

- One million U.S. dollars in 2005 after 30 days the decision to commence construction and installation of a commercial mining operation within the Permit area; and,
- One million U.S. dollars in February 2008 after the commencement of commercial mining within the Permit area.

A fully licensed joint venture company - Ningxia Pacific Minerals Co. Ltd., was formed with Brigade 217 and all property work is being carried out through this entity.

Unlicensed mining by Brigade 208 of the CNNC had been conducted on an on-and-off basis since 1997 and has been undertaken with the apparent knowledge and tacit agreement of various local government and provincial agencies. This mining activity has largely been confined to the Southwest Zone of the CSH Project and occurred in two distinct periods: 1997-1999 and 2002-early 2004. It is estimated that approximately 360,000 tonnes have been mined from shallow open pits and leached on pads at three different facilities, and it is estimated that about 6,000 oz of gold may have been recovered from these operations. Although these operations are significant in terms of the scale of operations relative to typical artisanal mining operations, the effect on the CSH Project as currently outlined is not material.

There are no recognized environmental problems that might preclude or inhibit mining operations in this area, although given the past mining activities environmental baseline studies are underway to clearly identify potential environmental issues. The potential consequences of the four types of previous mining activity described in greater detail in Section 6 - History are:

- Alluvial mining of alluvial sediments in the Chang Shan Hao and Molenghe River resulted in limited disturbance of the natural flow of the ephemeral rivers, increased water loss through increased evaporation, and possibly metals and salt pollution of groundwater by disturbance of the sediments. This is currently being evaluated.

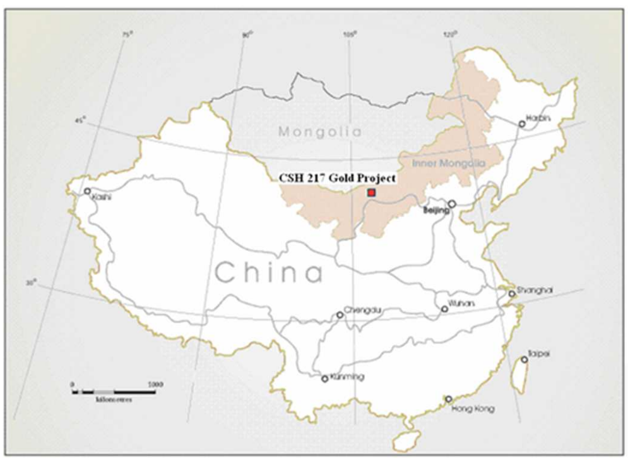
- Artisanal mining activity on the outcrop of the Northeast Zone was limited to shallow (<10 meters depth) excavations by hand to mine free gold in weathered ore, which would have created limited disturbance of soil and vegetation within the planned pit excavation. Thus, its environmental impact is negligible.

- Large scale mining and heap leaching by Brigade 208 on the Southwest Zone may have a significant environmental impact as the mining practices may not have met even Chinese regulations. Mining by Brigade 208 is illegal according to the Mines Act 1988 but was permitted by the local county Government. Although Jinshan will inherit liability for the Brigade 208 mining baseline groundwater monitoring has not indicated any heavy metals or cyanide concentration above regulatory limits.

- Test mining by Brigade 217 on the Northeast Zone constructed five small test heap leach pads for a total of approximately 30,000 tonnes of mined ore. Leach pads were constructed according to applicable Chinese regulations for the time period (1995 - 1997) including an HDPE membrane and surrounding drainage catchment ditches. These test leach pads are within the expected excavation area for the Northeast Zone so there will be no long-term environmental impact.

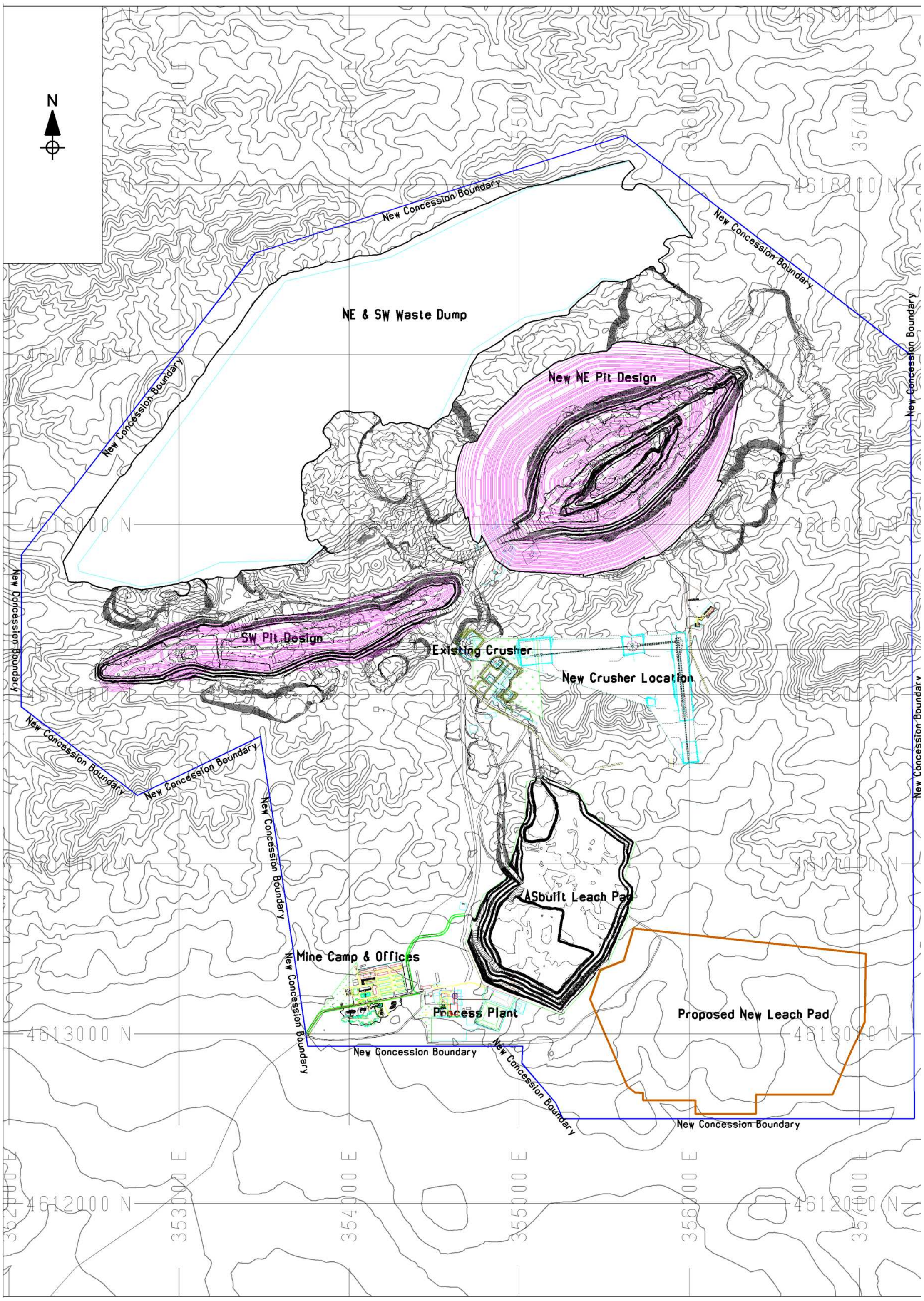
The following Figure 4-1 shows the property location within Inner Mongolia.

Figure 4-1 CSH Property Location within Inner Mongolia



The following Figure 4-2 depicts the location of the open pit mine, leach pads, process facilities, and infrastructure items as well as the proposed new crushing facility.

Figure 4-2 CSH Site Plan



5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The CSH Gold Project is located some 650 km northwest of Beijing and 126 km north-westerly from the city of Baotou (population of 1.5 million), which is the most important industrial city in the Inner Mongolia Autonomous Region of northern China. Baotou is serviced by daily scheduled airline flights from Beijing. The project area is readily accessed via 200 km of paved and gravel roads northward from Baotou, with driving time about 3 hours.

The Exploration Permit covers an area of gently rolling hills with elevations ranging from 1550 to 1750 m above sea level. The climate is semi-desert with average annual precipitation of 230 mm. The summers are dry and comfortable with temperatures rarely exceeding 30°C. The winters are cold and windy with cold spells down to minus 25°C. Winter conditions prevail from early October through mid-March but snowfall is minimal.

The project is located on the Inner Mongolian Plateau at an average elevation of 1,550 to 1,750 m above sea level and has a typical continental interior climate in semi-desert conditions. Annual rainfall averages 212.5 mm which is far exceeded by the estimated evapotranspiration of 2,500 mm per year. Most of the rainfall (greater than 70 percent) occurs in the brief period between July and September.

Baotou, a major steel-making centre, is the central service and supply point for the general area. Most equipment and skilled labour would probably be available in this centre for any major mine development. For current purposes, a year-round exploration camp has been established in the town of XinHuRe located 10 km southwest of the property.

Vegetation consists of sparse desert grasses with scrub bushes with outcrop exposure generally being abundant. There are few inhabitants within the general area with most of the land being used only for low intensity sheep and goats grazing.

With the open rolling terrain, there is an abundance of land available for mine infrastructure purposes including waste disposal areas, heap leach pad areas, and processing plant sites.

Although the project is located in a semi-arid climatic zone, there are sufficient water resources available locally which can be abstracted on a sustainable basis with minimal environmental impact. The main water source is the XinHuRe lacustrine aquifer (XHR) and the Molenghe River alluvial aquifer (MRA), located approximately 9 km southwest of the project area. The detailed water resource estimation indicates the annual water flux through these aquifers is 1.2 million m^3 per annum, which is an excess of approximately 20 percent over the required water demand for the planned mining, leaching, processing and domestic uses (Golder Associates, 2006).

Water flowing through the alluvium in the Molenghe river has been dammed with a buried weir constructed in the narrows of the Molenghe river, to capture the drainage along the river and from the XHR aquifer. Water will be abstracted from wells in the river alluvium and pumped in a 12 km pipeline to the process plant area.

In addition to the water resource in the XHR and MRA, there is an additional water resource in the mining area (CSH) which must be extracted to keep the pit excavation from flooding. Detailed calculation of the water resource was conducted by Baogang.

Jinshan built four water wells and water supply facilities to serve the 20,000 t/d gold recovery facilities in 2006. The water consumption demand and supply for the project expansion had been evaluated in 2007 by KD Engineering and Golder Associates. Additional evaluation was undertaken by CGDI in 2012 to support the expansion of the current plant capicity from 30,000 t/d to 60,000 t/d.

In September 2006, 35kV power lines were connected to the job site. Also a 35/6 KV substation was built and put in service at the job site.

Mining of run-of-mine (ROM) oxidized (weathered) ore commenced in April 2007. Solution irrigation commenced in July 2007 with the first bullion being produced that month. The 30,000 t/d crushing plant was completed in September 2009. Additional information regarding the operations is provided in subsequent sections of this report.

6 HISTORY

The history of CSH Gold project prior 2005 was described in detail in Section 4.0, History, in the report: "Jinshan Gold Mines Inc. Chang Shan Hao (CSH) Gold Project, Inner Mongolia, PRC, Final Feasibility Study", published on SEDAR, dated May 15th, 2006.

In July 2007, Jinshan completed the construction of the 20,000 T/D gold recovery facility consisting of run-of-mine heap leaching, carbon-in-column (CIC) gold absorption, carbon stripping, carbon regeneration and acid washing, bullion refining, and reagent systems along with the necessary ancillaries such as plant site electrical systems, water system, shops, camp facilities and access roads. By the end of July 2007, Jinshan successfully produced its first 500 oz gold dore bar.

As previously mentioned, the stacking of run-of-mine commenced in April of 2007 with the first gold production realized in July of that year. Gold production slowly increased during 2007 with December's production being approximately 4,900 ounces of gold with an associated 2,200 ounces of silver in sold dore bullion.

In February 2008 an updated resource estimate for the northeast and southwest zones was produced. This resource estimate included previous drill data and the 11,432 meters of drilling that was completed in 2007. This resource estimate is presented in the following Table 6.1.

Table 6.1

CSH 217 Resources by Category

Northeast and Southwest Zones

	Measured		Indicated		Measured+Indicated			Inferred		
Cutoff (g/t)	Million Tonnes	Gold Grade (g/t)	Million Tonnes	Gold Grade (g/t)	Million Tonnes	Gold Grade (g/t)	Million Ounces Gold	Million Tonnes	Gold Grade (g/t)	Million Ounces Gold
0.25	47.3	0.71	143.9	0.66	191.3	0.67	4.116	81.2	0.58	1.501
0.30	45.7	0.72	137.4	0.68	183.0	0.69	4.043	73.9	0.60	1.436
0.35	**43.4**	**0.74**	**127.9**	**0.70**	**171.3**	**0.71**	**3.919**	**64.2**	**0.65**	**1.334**
0.40	40.5	0.77	116.4	0.73	156.9	0.74	3.747	54.7	0.69	1.220
0.45	37.1	0.80	104.3	0.77	141.4	0.78	3.534	46.2	0.74	1.104
0.50	33.7	0.83	92.3	0.81	126.0	0.82	3.299	38.6	0.80	0.989

At a cutoff grade of 0.35 grams per tonne the measured+indicated resource is 173.3 million tonnes at 0.71 grams gold per tonne giving a measured+indicated gold quantity of 3.92 million ounces. The inferred resource at the same cutoff grade is 64.2 million tonnes at a gold grade of 0.65 grams per tonne that contain 1.33 million ounces of gold.

The March 2008 technical report assumed that a crushing plant would be available to handle both weathered (oxidized) and fresh (sulphide) ore types in the second operating year. Unfortunately, the engineering design and construction of the crushing plant was delayed for a number of reasons. The crushing facility was redesigned to 30,000 tonnes and was commissioned in September 2009 which ws 32 months after the initiation of mining. Testing indicated that the fresh (sulphide) ore types from both the northeast and the southwest deposits require crushing in order to yield acceptable gold extraction levels.

It is likely that substantial quantities of fresh (sulphide ore) was trucked to the leach heap as uncrushed material. This circumstance contributed to the shortfall in anticipated gold production at that time.

7 GEOLOGICAL SETTING

7.1 REGIONAL GEOLOGY

The CSH217 Gold Project is located within the North China Gold Belt extending along the northern margin of the North China Craton. Miller et al. (1998), Wang and Mo (1995), and Sengör et al. (1993) have described the tectonic setting and evolution of the North China Craton.

7.1.1 TECTONIC SETTING

Archean and Early Proterozoic gneisses, schists, amphibolites and banded iron formations outcrop over about one-third of the area between North Korea and Baotou City, Inner Mongolia. The Archean rocks were deformed and metamorphosed to amphibolites and granulite facies during the Zhongtiao Orogeny around 1.8 Ga.

Low grade metamorphosed Proterozoic quartzites, shales and limestones plus unmetamorphosed Paleozoic rocks occur as accretionary complexes surrounding the Early Proterozoic and older basement rocks. These complexes extend northward into Mongolia and make up part of the broader Mongolian-Great Hinggan Fold Belt located between the North China and Siberian Cratons. Continental basinal sediments – commonly coal-bearing and sub aerial volcanic rocks of Permian through Cretaceous age unconformably overlie the Proterozoic sequences in valleys adjacent to uplifted Precambrian basement.

Emplacement of 1.7 to 1.4 Ga alkalic intrusions north of Baotou City including syenites and carbonatite sills during a rifting event may have generated the world-class rare earth-iron deposits at Bayan Obo some 50 kilometres northeast of the CSH217 Project. Widespread calc-alkaline to alkalic granitoid plutons were emplaced through the region in multiple orogenies (from Caledonian to Hercynian to Yanshanian).

The North China Craton has undergone Proterozoic and Phanerozoic accretion and collision along both its northern and southern boundaries and has been exposed to a subduction related strike-slip fault regime along its eastern edge. In addition, Indian Plate collision with the Eurasia Supercontinent was probably responsible for widespread normal faulting. Deformation is characterized by major east-striking reverse fault zones within the cratonic margin, such as the Gaoletu Fault within the immediate CSH217 Gold Project area.

Late Jurassic and Early Cretaceous Yanshanian deformation is recognized in the eastern portion of the North China Craton. This deformation is related to subduction of the Izanagi Ocean Plate beneath the North China Craton. The resulting magmatic arc now lies beneath the North China sea between China and Japan (Sengör et al., 1996). Back arc magmatism extended for another 1,000 kilometres inland and is recorded by the widely distributed Yanshanian granitoids.

7.1.2 STRATIGRAPHY

Gold mineralization within the CSH217 Gold Project area is hosted by Middle to Upper Proterozoic metasedimentary rocks of the Bayan Obo Group. A type section for the Bayan Obo Group was established in the vicinity of the Bayan Obo rare earth-iron mine. The Bayan Obo Group is dominated by clastic sedimentary formations intercalated with carbonate rich rocks and includes quartz sandstone, greywacke, siltstone and shale with dolomite and limestone.

Table 7-1 Stratigraphic Sequence of the Bayan Obo Group, Nei Mongol, China.

Erathem	Group	Formation	Member	Mapping Code	Lithology	
Middle-Upper Proterozoic	Bayan Obo	Hujirtu	$Pt_{2-3\ hj4}$	hu4	Grey thick metamorphic quartzose sandstone intercalated with siltstone and limestone	
			$Pt_{2-3\ hj3}$	hu3	Dark grey silty slate	
			$Pt_{2-3\ hj2}$	hu2	Upper grey green zoisite hornfels and actinolite hornfels; Lower light grey garnet skarn and dark grey zoisite hornfels	
			$Pt_{2-3\ hj1}$	hu1	Dark grey algal-mat lamellar limestone and sandstone lens	
		Baiyinbaolage	$Pt_{2-3\ by3}$	by3	Grey metamorphic quartzose sandstone intercalated with sericite slate	
			$Pt_{2-3\ by2}$	by2	Calcareous and phosphoric slate, silty slate and metasiltstone	
			$Pt_{2-3\ by1}$	by1	Grey meta-quartzose sandstone	
		Bilute	$Pt_{2-3\ b4}$	b4	Carbonaceous and siliceous slate intercalated with metasiltstone	
			$Pt_{2-3\ b3}$	b3	Dark grey meta-quartzose sandstone intercalated with slate; dark grey contemporaneous breccia and conglomerate	
			$Pt_{2-3\ b2}$	b2	Dark grey sericite slate intercalated with silty slate and metasiltstone;Carbonaceous slate	
			$Pt_{2-3\ b1}$	b1	Dark grey meta-quartzose sandstone intercalated with metasiltstone; Dark grey sericite slate intercalated with metasiltstone	
		Halahougete	$Pt_{2-3\ h3}$	h3	Dolomite and limestone intercalated with calcareous or cherty slate	
			$Pt_{2-3\ h2}$	h2	Sandstone and limestone intercalated with algal-mat lamellar limestone	
			$Pt_{2-3\ h1}$	h1	Light grey calcareous feldspathic quartzose sandstone	
		Jianshan	$Pt_{2-3\ j3}$	j3	Dark grey sericite slate intercalated with feldspathic wacke and limestone	
			$Pt_{2-3\ j2}$	j2	Meta-feldspathic quartzose sandstone	
			$Pt_{2-3\ j1}$	j1	Silty slate and carbonaceous slate intercalated with ferriferrous silty slate and sericite slate	
		Duhala	$Pt_{2-3\ d2}$	d2	Light grey meta-quartzose sandstone	
			$Pt_{2-3\ d1}$	d1	Upper meta-feldspathic wacke intercalated with sericite slate; Lower dark grey meta-conglomerate and feldspathic quartzose sandstone	

Revised from Regional Geology of Nei Mongol (BGMR of Nei Mongol, 1991)

7.1.3 Relationship between North China and Tien Shan Gold Belts

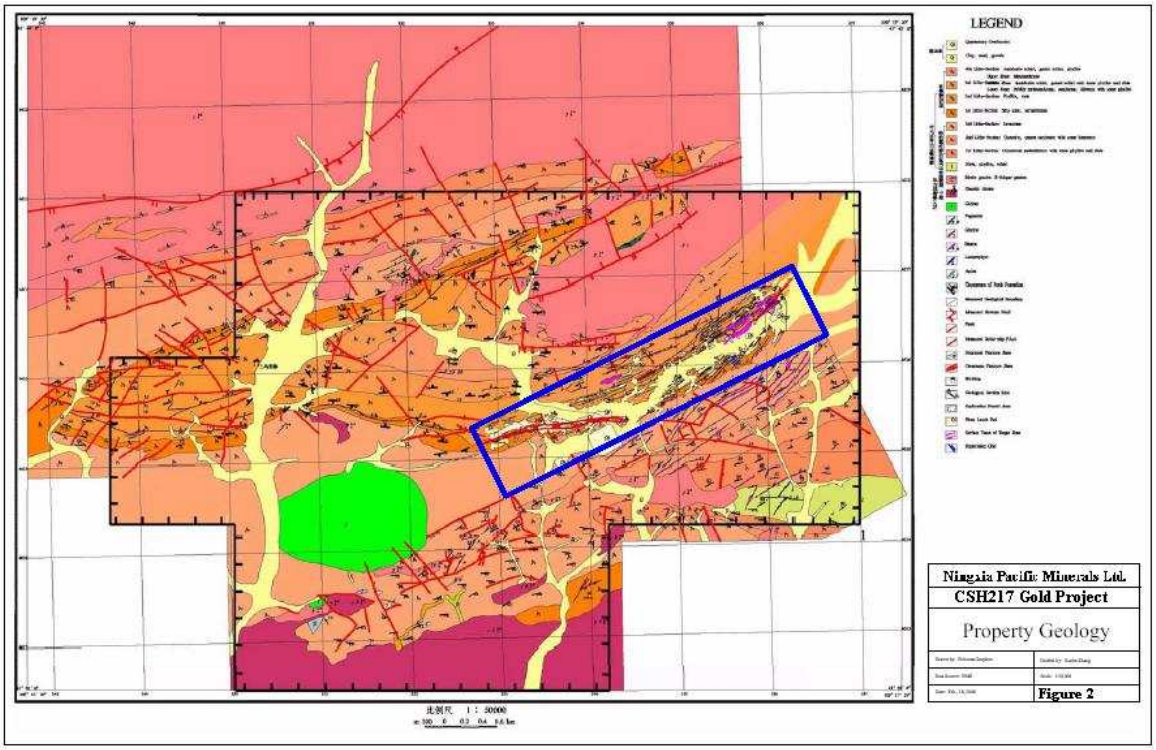
The southern edge of the Altaid Orogenic Zone contains a remarkable 1,000 km long curvilinear belt of large world-class (Muruntau, Kumtor) gold deposits in the Tien Shan Mountains extending into Northwestern Xinjiang Autonomous Region. These deposits are located within a Hercynian orogenic belt, which formed during the latter stages of the closure of the Turkestan Paleo-ocean. The Tien Shan Gold Belt may be considered the western part of an even longer belt of Caledonian, Hercynian and associated gold deposits, which extend eastward to link the North China Gold Belt (Miller et al., 1998).

This combined gold belt is unique in the world in terms of its strike extent. The belt is considered to be the product of a prolonged history of interaction between cratonic blocks and oceanic arc terranes to the north. In the North China Gold Belt, there is evidence that gold mineralization occurred during several orogenic events in the Early/Late Paleozoic and Mesozoic. This history of repeated tectonism facilitates formation of gold deposits by producing slip planes and zones of weakness, which facilitate fluid flow during later events. This is believed to be instrumental at Muruntau, for example, where Carboniferous hydrothermal fluid flow produced zones of sheeted quartz veins focused by permeability contrasts along pre-existing (Caledonian) thrust planes.

7.2 Property Geology

Proterozoic carbonaceous metasedimentary rocks host the CSH217 gold mineralization in the south limb of the CSH syncline as shown in Figure 7-1. The syncline is one of the most prominent structural features in a major east-west trending fold belt that is characterized by complex fold interference patterns. Caledonian and Hercynian age composite granitoid batholiths occur to the north and south of the property.

Figure 7-1 Property Geology



7.2.1 STRATIGRAPHY

Within the project area, only the middle portion of the Bayan Obo Group is represented. Stratigraphic units outcropping on the CSH217 Gold Project from oldest to youngest include the Jianshan, Halahougete and Bilute Formations.

The Jianshan Formation is comprised of black carbonaceous slate, silty slate, andalusite hornfels, metasiltstone and quartzose wacke. It mainly outcrops in the western, northern and southern portions of the CSH217 property. The contact with overlying calcareous clastic rocks is gradational. High-grade gold veins hosted in this unit have been mined in the vicinity of the CSH217 property.

The Halahougete Formation is dominated by carbonate lithologies and is comprised of thin to medium bedded dolomitic limestone intercalated with cherty slate and siliceous calcareous clastic units including sandstone, siltstone and slate. The Formation outcrops extensively on the property and underlies in sharp contact the Bilute Formation, which hosts the majority of the known gold mineralization.

The Bilute Formation can be subdivided into four lithological members as outline below from youngest to oldest.

- b_4 calcareous and carbonatized black phyllite and schist metasiltstone, metasandstone and sedimentary breccia

- b_2 carbonaceous phyllite, and andalusite – garnet schist with minor metasiltstone and metawacke
- b_1 carbonaceous metasiltstone

All of the significant gold mineralization on the property occurs within the b_2 unit of the Bilute Formation. Drilling has defined this target stratigraphy as an intercalated sequence of sediments with no internal distinctive marker horizons. This sequence dips quite uniformly to the north at 82°±10° but noticeably steepens and even slightly overturned in the western part of the property.

7.2.2 INTRUSIVE ROCKS

Intrusive rocks within the CSH217 property area were emplaced during the Late Caledonian, Hercynian and Indosianian (413 to 205 Ma). These major composite granitoid batholiths outcrop to the north and south of the CSH217 gold mineralization. The granitoids are interpreted to be syn-kinematic on the basis of deformation fabrics (Coughlin, 1997).

Within the area of mineralization, numerous igneous bodies, traditionally described as dykes of various compositions are present within the metasedimentary sequence. These bodies include diabase, lamprophyre, diorite, aplite and pegmatite. The pegmatite and some diorite bodies cross cut original bedding planes, however the lamprophyre and some other diorite bodies are concordant with the bedding as indicated in the drill cores. All of these bodies are barren of gold values, but elevated gold values may occur near their contacts to the host phyllite rocks.

In the Northeast zone, drilling has identified an abundance of lamprophyre bodies in the hangingwall rocks above the mineralized zone. The quantity of lamprophyre material gradually decreases down stratigraphy through the gold bearing sections. The lamprophyres in the lower footwall mineralized sections are relatively sparse and less consistent.

The lamprophyre “dykes” can be followed on surface over hundreds of metres. Drill hole data suggest that the lamprophyre bodies are rather flat lenses in shape. Most are concordant with the original bedding. The texture of these dykes is quite variable – some are quite fresh and massive, most are moderately to strongly foliated, and some show remnant porphyritic and amygdaloidal textures. A petrography report prepared by R.N. England (May 13, 2003) has indicated these “dykes” are quite variable with their composition ranging from ultramafic to felsic. All of the lamprophyres lie conformably within the sedimentary sequence. The orientation of the lamprophyre bodies, and bedding where preserved, is slightly different from the mineralization trend, with about 10º differences in both strike and dip directions. Most of the contacts are knife sharp with no evidence of any alteration selvage within the host sediments.

It is suggested that most, if not all, of these lamprophyres are actually representative of discontinuous volcanic flows and tuffs, which were emplaced periodically during the original sedimentary cycle.

7.2.3 MINERALIZATION

The host rocks to the gold mineralization on the CSH217 property are mainly carbonaceous phyllite, schist, and slate within the lower members of the Bilute Formation.

The gold mineralization is composed of thin (1 to 10 mm) sulphide and quartz-sulphide seams/veinlets, stringers, and boudinaged lenses, which are concordant with the bedding and foliation and trend along the shear zone. Much quartz vein material has been logged in the drill holes associated with the higher-grade gold sections. Most of these “veins” are probably derived from remobilization of siliceous exhalative layers in the hydrothermal process, perhaps related to basin dewatering during regional deformation and metamorphism. The higher-grade gold zones are parallel or sub-parallel the regional metamorphic foliation texture. In most cross-sections connecting of the higher-grade intervals shows relatively consistent dip angles of the mineralization zones ranging from 82-85^o in the Northeast Zone, and 87-89^o and dipping opposite in the Southwest Zone.

Three distinctive styles of mineralization are noted within the target stratigraphy:

- In the upper third of the sequence, the mineralization is dominantly quartz rich with only minor sulphide seams.
- In the lower third of the sequence, the mineralization is dominantly of the sulphide seam type with only rare scattered quartz material.
- In the middle of the sequence, the mineralization is an even mixture of the above two types.

The principal type of mineralization is native gold occurring directly with the sulphides in the seams and in association with the quartz "vein" material. Mineralogical work by SGS-Lakefield in Canada on composite weathered and fresh mineralization samples found 77% of gold was free in the sulphide composite and 100% of the gold was free in the weathered sample (SGS Lakefield Research Limited, January 22, 2003). Pyrite and phyrrotite are the most abundant sulphides with their total content generally ranging between 1 and 2 percent. The mineragraphic investigations by Jinshan identified the "pyrite" as melnikovite pyrite or zwischen-product, a disequilibrium mixture of pyrite, iron oxides, secondary magnetite commonly intergrown with marcasite that can be distinctively aligned in lamellar fashion. This texture was shown to develop along the 0001 cleavage of adjacent pyrrhotite. This "low temperature" pyrite has been documented in many studies of the weathering zones above nickel sulphides in Australia (Page, personal communication, February 2005) and above base metal deposits in southern Africa (Andrew, 1980). This supports the interpretation that the pyrite is of supergene origin derived from original hypogene pyrrhotite, therefore explaining the commonly observed change with depth from pyrite to pyrrhotite and the mineralized zones. Trace amounts of arsenopyrite, chalcopyrite, sphalerite and galena have been reported. Microscopic gold was also observed to be associated with chalcopyrite and galena within arsenopyrite grains (Page, 2005).

The quartz vein and sulphide seam contacts are all knife sharp with no alteration selvage in the host rocks. The hydrothermal alterations of the host rocks are rather weak, with only chlorite and silica alterations noticed in the drill logs. The host sediments are moderately to strongly metamorphosed to phyllite and schist with abundant sericite. Andalusite crystals up to 3 cm in length are prominently developed in the schists. The andalusite schist interface is parallel to original bedding. Development of andalusite is likely to be related to original alumina content and regional metamorphism. In the Northeast Zone a major andalusite schist unit with intercalated slate-phyllite layers occurs in the footwall side, and about one-fourth of the gold mineralization hosted in this unit. In the Southwest Zone, about one-third of the gold mineralization is within the andalusite schist, which occurs in the hangingwall side only.

Surface work and diamond drilling has tested the mineralized zone and stratigraphy over a continuous strike length of 4.8 kilometers trending southwesterly across the CSH217 property with drilling to a maximum vertical depth of 260 metres. The mineralized sections are variable in width achieving a maximum width of 150 metres in the eastern part of the property.

In addition to the F3 and the F4 faults, a few shallow dipping, southwesterly trending small-scaled faults were observed in the Southwest Zone as well. Displacement of these smaller faults is rather insignificant, which may have locally dislocated the near-surface mineralization longitudinally.

7.2.4 MINERALOGY

General petrographic work has been completed by England (2003) and by SGS-Lakefield (2002), which is considered the most representative since it processed composite samples of weathered and sulphide material. Using heavy liquid separation, polished sections were prepared for quantitative image analysis that produced the following data:

Table 7-2 Gold Association Weight Percent

Association summary		Sulphide comp		Oxide comp	
Type of association		# of grains	% mass[1]	# of grains	% mass
1	Association with non-opaque	1	0.3	0	0
2	Association with arsenopyrite	16	19.8	4	0.0
3	Association with pyrrhotite	1	2.7	0	0
4	No association (free)	2	77.2	2	100.0

1 = Combined estimated mass of grains.

Gold has also been observed as free flecks up to 2 mm in size directly associated with the sulphides in both the stringers and in the quartz “vein” material. Trace amounts of gold have been seen as inclusions within some arsenopyrite crystals.

The pyrrhotite is nickeliferous and frequently shows strong pentlandite flame structures within the individual crystals.

8 DEPOSIT TYPES

The CSH217 deposit is a large bulk tonnage low-grade style of gold mineralization hosted within a ductile-brittle shear zone in Proterozoic sediments. Earlier property work and recent drilling data suggest that the gold mineralization was emplaced along the major southwesterly trending ductile-brittle shear zone. The ductile-brittle shear zone, which crosscuts the original bedding structure at about 10º, controlled the mineralization. The shear zone is parallel to the foliation of the regional metamorphism, which is also parallel to the synclinal fold axis and deformation style typical of many greenstone and slate-belt terranes. Folding continued beyond the point of rupture, with the strain taken up in the developing shear zone. These features argue strongly against the syngenetic origin for the mineralization as proposed by Westervelt (2004). The quartz-sulphide veinlets are boudinaged within the foliation and were clearly deposited early in the deformational history and are perhaps related to basin dewatering during regional folding, typical of “Slate Belt” gold districts.

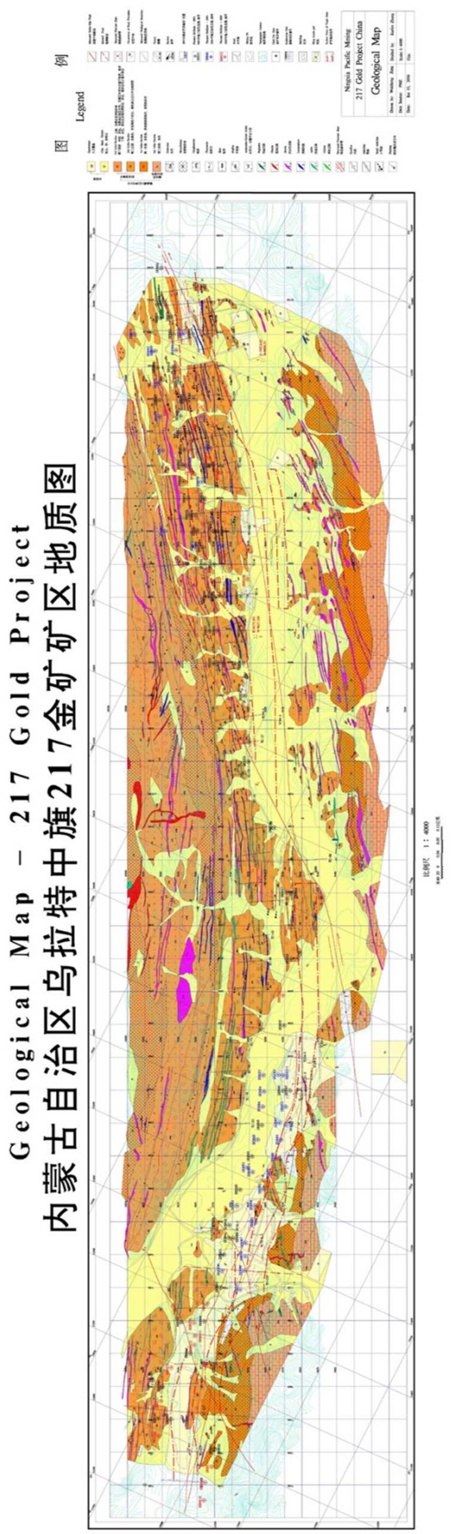
In the Northeastern zone the dip of the mineralization is steeply north at 82-87^{o}, in the central area the dip may be vertical, and in the Southwestern zone the dip is overturned to the south at 85-88^{o}.

Within the southwesterly trending ductile-brittle shear zone, a major fault zone (F1) and a associated parallel fault (F1a) with several discrete breaks parallels the mineralization longitudinally. This major F1 fault zone indicates the evolving brittle nature of the mineralized shear zone during its development. Surface expression of these structures is obscured by overburden, but faults or fracture zones are noted in drill logs at most of the projected locations. The post-mineralization displacements occurred, with the F2 fault separating the Northeast and Southwest Zones, and the F3 fault and F4 fault cross-cutting the Southwest Zone.

The F2 fault trends west-southwesterly, dips south-southeast with uncertain relative vertical displacement, crosses the mineralized zone in the central area and bends to the west of the intersection with F1 fault zone and the mineralized zone. The presence of the structure is suggested from topography, from dislocation of stratigraphy, from a mapped breccia zone, from the dragging to the north of the east end of the Southwest zone, and from the notation of a fault to the north of the Northeast zone. Interpolation from the projected locations of the mineralized zones on opposite sides of the fault suggests a horizontal displacement of about 300 m. There is a hint that the relative movement may be rotational in the Southwest Zone around a pivot situated on the fault plane to the west-southwest, with the effect of steepening and overturning foliation and mineralization.

The F3 and F4 faults are similar to the F2 fault in nature, but in much smaller scale in term of displacement. They both are right-lateral strike-slip faults, northeasterly trending and dipping southeasterly at 60-70^{o}. These two faults occur at the middle of the Southwest Zone, and separate the Zone into three sections. The 2005 drilling data suggest that the mineralization zone has been horizontally displaced 80 and 150 meters, respectively.

Figure 8-1 Geology Plan Map



9 EXPLORATION

The exploration work completed by or on behalf of Jinshan prior to 2007 was described in greater detail in Section 6, History, in "Jinshan Gold Mines Inc. Chang Shan Hao (CSH) Gold Project, Inner Mongolia, PRC, Final Feasibility Study" published on SEDAR, dated May 15th, 2006. A brief summary of the exploration works completed in 2002 through 2005 is given below.

9.1 2002 -2005 PROGRAMS

In 2002, Jinshan (previously Pacific Minerals) completed geophysical surveys along the length of the known mineralization (magnetics and TEM). A total of 2,997 meters in 23 diamond drill holes was completed, with most of this drilling concentrated on the Northeast Zone. Wide, low grade intervals were delineated and supported the potential for a low grade, bulk tonnage gold deposit. These results justified a further campaign in 2003.

In 2003, Jinshan (previously Pacific Minerals) drilled an additional 33 diamond drill holes totaling 6,056 meters. Some of these holes in-filled the previous drilling in the Northeast Zone but most were drilled on sections at 200 meter intervals to test the zone along strike to the southwest. Additional holes were completed on 100 meter sections in the Southwest Zone. Good drill recoveries and reliable assay results again confirmed the presence of extensive low-grade gold mineralization that justified more detailed drilling in 2004.

In 2004, Jinshan completed 35 diamond drill holes for a 6,598 meter program of infill and confirmation drilling in the Northeast Zone. This drilling program further confirmed the continuity of the gold mineralization. Part of the Southwest Zone has also been drilled to 50 meter sections.

In 2005, 20 holes totaling 4,630 meters were drilled as 25 meter spaced in-fill drilling in the Northeast Zone and 50 meter spaced in-fill drilling in the Southwest Zone. A western extension to Southwest Zone mineralization was indicated by three 50 meter spaced step-out holes, expanding the open-ended zone to the west beyond previously determined boundaries.

9.2 2007 PROGRAM

In 2007, Jinshan drilled a total of 11,432 meters at the CSH property, including 3073 meters in Southwest Zone, 8147 meters in Northeast Zone, and two short prospecting holes drilled further west along the mineralization trend. In 2007, the 14 holes were drilled in the Southwest Zone, 5 holes as in-fills, to bring drilled sections in the east part of the zone to 50 meter spacing, and the rest as step-out holes in the west end. The in-fill holes further confirmed the continuity of the gold mineralization.

The step-out drilling extended the Southwest Zone 250 meter further along strike to the west, with five 50 meter spaced sections consistently showing significant gold mineralization. In 2007, 25 holes were drilled in the Northeast Zone, with most of them drilled from the south to provide data at depth in the north side of the zone. Previous drilling results had indicated a smaller 20 meter wide zone occurring just south of the main zone. Four 500 meter deep holes were drilled through the whole mineralization zone, including the main zone and the smaller south zone. The results confirmed the existence of the smaller south zone, a 40 meter wide zone located 30 to 50 meters south of the main zone. Seven 100 meter deep holes have followed to bring the drilled sections in the south zone to 100 meter spacing. All the other drill holes have targeted the gold mineralization at depth. In the Northeast Zone the previous drilling only reached 250 meter deep vertically, and the 2007 drilling added another 125 meters gold mineralization at depth. The inferred resource at depth was up-graded with the 2007 drilling results.

9.3 2008 Program

The main purposes of drilling in 2008 was to in-fill gaps in the mineralization model in both the Northeast and Southwest zones, to upgrade Inferred Resources to Indicated status, and to delineate gold mineralization at depths below the previous exploration efforts.

In total, 4972.88 meters were drilled in 23 holes, 1639.29 meters were drilled in Southwest Zone and 2583.89 meters in Northeast Zone. Three prospect holes, totaling 749.70 meters were drilled in the western extension of the Southwest Zone.

In 2008, ten holes, all in-fill, were drilled in the Southwest Zone. Nine of them were in the southwest side of ore body and drilled towards the northeast. The results showed good continuity of mineralization in the Southwest Zone. Due to the impact from southwest-trending fault structures, the ore body was shown to be somewhat narrower in it's upper, oxidized portions than shown in previous models.

Ten in-fill holes were drilled in the Northeast Zone, three of which targeted a smaller ore body which is located 20 to 50 meters to the south of the main zone. This secondary mineralization zone was shown to be from 5 to 20 meters in width.

Four drill holes targeted gold mineralization deeper levels than had been previously been tested in the Northeast Zone. Based on this work the known mineralization was extended to 375 meters depth.

Three prospecting drill holes targeted an interpreted extension to mineralization to the southwest of the Southwest Zone. These holes delineated weak gold mineralization, this area merits future follow-up work to delineate possible ore-grade mineralization.

9.4 2009-2011 Program

Little drilling was done during 2009 and 2010, with only three additional drill holes completed. The most significant drilling campaing to date at the CSH Mine was completed by the end of October, 2011, comprising of 108 holes for a total over 59,000 metres.

The drilling campaign commenced on May, 2011, focusing on resource delineation at depth, with the expectation to further expand the current mining capacity. The drill program is also required under Chinese regulation in order to renew the CSH mining permit, which will expire on August 13th, 2013.

Exploration outside of the mining permit area continued at the CSH Mine during the 2011 field season within the company's licensed area. The 2011 program included about 17 square kilometers of soil geochemical survey, 54 square kilometers of gravity survey and 33 line kilometers of IP (Induced Polarization) survey. Various anomalies were found on the property and further drilling is planned for the 2012 field season.

10 DRILLING

The drilling at the CSH project prior to 2008 is summarized in several technical reports published on SEDAR.

The details of the drill hole information for holes completed prior to 2006 can be found in a NI 43-101 report titled "Chang Shan Hao (CSH) Gold Project, Inner Mongolia, PRC, Final Feasibility Study" by KDE for Jinshan in 2006; the details of the drill hole information for drill holes completed in 2007 can be found in a NI 43-101 report titled "Chang Shan Hao (CSH) Gold Project, Inner Mongolia, PRC, Throughput Expansion Technical Report" by KDE for Jinshan in 2008; and the details of the drill hole information for drill holes completed in 2008 are summarized in the report entitled "Independent Technical Report on the Changshanhao Gold mine in Inner Mongolia Autonomous Region, PRC", dated March 30, 2010.

Table 10-1 Total Drilling Data is a brief summary of the drilling done on the CSH Property. The 2007 drilling campaign includes the Southwest Zone step-out and in-fill drilling, and the Northeast Zone resource up-grade drilling. All of the drilling to date has been completed with the equivalent of HQ core equipment producing cores approximately 63 millimeters in diameter. Including the 2008 program, 103 drill holes have been completed in the Northeast Zone, Seventy seven (77) drill holes have been completed in the Southwest Zone, and five (5) prospecting drill holes have been completed elsewhere within the exploration permit area. The following table is a summary of the drilling done on the CSH Property from 2002 through 2011.

Table 10-1 Total Drilling Data

Total Drilling Data		
	No. of Holes	**Meters**
1999 - Southwestern Gold	10	2,797
2002 - Pacific Minerals	23	4,997
2003 - Pacific Minerals	33	6,056
2004 - Jinshan Gold Mines	35	6,598
2005 - Jinshan Gold Mines	20	4,630
2007 – Jinshan Gold Mines	41	11,432
2008 – Jinshan Gold Mines	23	4,973
2009-2011 – China Gold Corporation	111	60,678
Totals	**296**	**102,161**

Details about the drill holes completed in 2007 and 2008 have been described in the prior Technical Reports mentioned above, while the most recent holes (2009-2011) are listed in Tables 10.2 and 10.3. These tables show the collar co-ordinates, elevations, collar dips, azimuth, and final depths. Recovery has been good at CSH, and is not considered an issue. All drill holes were surveyed down-the-hole using a Sperry-Sun type single-shot survey instrument providing a photographic record of the hole angle and direction at 50 meter intervals. The magnetic effect of the pyrrhotite content of the mineralization on the borehole directional survey is not considered significant, as generally less than 1 percent pyrrhotite observed in the mineralization intercepts, and the incremental surveys down the hole are consistent. The collar locations were surveyed using a laser total station and tied to survey control points established with differential GPS, coordinates are recorded using the Beijing 54 coordinate system.

All the cores were logged by geologists and sampled at the site. The procedure of core logging and sampling involved:

(1) Fitting the core together in trays, then measuring core recovery and RQD of each run; meanwhile, exchanging a small aluminum piece for the wood one and nailing it on the clapboard on the box which is containing cores.
(2) Describing major lithology, minerals, gangue rocks, fractures, folds, and mineralization. Estimating percentage of quartz veinlets and sulphide or oxide content, and identifying the interface between weathered rock and fresh rock.
(3) When samples have been logged and sampling intervals have been made, marked them up by geologist, and then cut the whole core into pieces with 2 meters space. All samples are marked by arrowhead and number. Sample number and starting depth are all written on a small aluminums piece and then nailed it on the clapboard; meanwhile, write the number down on a label and put the label under core. When sampling this part core, put the label into sample bag.
(4) Take shot for the cores: one picture for one box. Write “project name”, “drilling hole number”, “core box number”, and “starting and ending depth” on the picture, then nail the picture on the starting side of the box.
(5) After shot, send cores to the lab and cut them into halves, and then put the two parts back to the box as the original shape.
(6) Sampled by geologists or samplers. Before doing this, labels and numbers should be checked and confirmed so that no mistake will be made. Every sample bag (made from calico) is marked and numbered by permanent mark pen. Put the sample into the bag with a ribbon writing the number and tie it up.
(7) Drilling starting and completing: before drilling work start, geologist should show up to confirm the drilling hole location and azimuth, and angle. When drilling completed, geologist should check the work then report to chief geologist and get the approval of the drilling depth. Then fill in the advice notes to constructor to end this program and then start the new one.
(8) Core Storing: After cutting and sampling, store all the cores in the warehouse in the base camp, number sequence is from top to bottom, from left to right. Mark the drilling number on eye-catching board at the first box for every drilling hole.
(9) Computerized data: all of the original information is input in computer database and is backed up.
(10) Original information filing: include geological catalogue, structure catalogue, recovery of core and RQD table; core sampling and delivering table; drilling angle measurement table, notice for mobilization and demobilization; films of drilling angle; drilling shift list.

Figure 10-1 Drill Hole Locations, CSH Mine

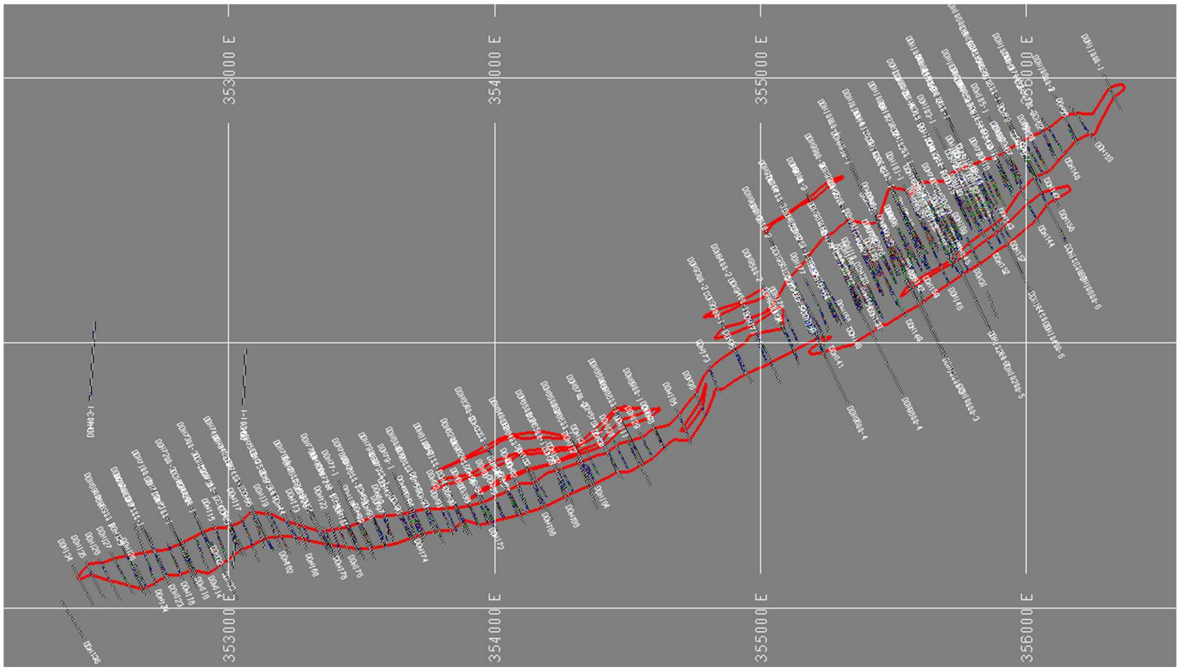


Table 10-2 2011 Drill Holes

2011 Drill holes CSH Mine (in Beijing 54 coordinates)						
Hole ID	**Easting**	**Northing**	**Elevation**	**Dip**	**Az**	**Depth (m)**
DDH201-1	355850.1	4616194	1674.79	0	-49	310.27
DDH403-1	353410.6	4615482	1622	0	-50	449.01
DDH6900-1	353619.3	4615509	1623	154	-50	376.89
DDH6900-2	355537.4	4616597	1648	154	-52	452.7
DDH7000-1	355657	4616811	1692	154	-53	380.6
DDH7000-2	355858.5	4616853	1682.748	154	-50	448.67
DDH7000-3	353055	4615769	1629.46	154	-58	527.13
DDH7100-1	352479	4615783	1611.45	154	-52	364.89
DDH7100-2	352569.4	4615289	1624.353	154	-53	426.9
DDH7100-3	352530.6	4615370	1621.723	154	-56	616.64
DDH7200-1	352677.3	4615294	1628.448	154	-55.5	343.3
DDH7200-2	352642.2	4615368	1626.627	154	-62	494.34
DDH7200-3	352630.5	4615392	1631.368	154	-59	616.22
DDH7300-1	352785	4615301	1628.81	154	-56	382.1
DDH7300-2	352757.1	4615358	1632.717	154	-62	516.94
DDH7300-3	352709.2	4615459	1665.46	154	-56	622.67

2011 Drill holes CSH Mine (in Beijing 54 coordinates)						
Hole ID	Easting	Northing	Elevation	Dip	Az	Depth (m)
DDH7400-1	352875.3	4615345	1641.109	154	-56	407.4
DDH7400-2	352857.1	4615382	1638.748	154	-57	506.2
DDH7400-3	352799.5	4615501	1665.702	154	-56	644.87
DDH7500-1	352960.4	4615399	1646.908	154	-54	265.65
DDH7500-2	352939.3	4615444	1647.519	154	-59	385.65
DDH7500-3	352881.2	4615563	1667.306	154	-60	555.72
DDH7600-1	353054.4	4615434	1645.794	154	-51	395.9
DDH7600-2	353013.2	4615519	1651.131	154	-56	567
DDH7700-1	352980.4	4615587	1660.975	154	-53	386.44
DDH7700-2	353188.1	4615384	1623.092	154	-56.5	456.2
DDH7700-3	353152.9	4615459	1641.561	154	-56	544.42
DDH7800-1	353118.2	4615531	1653.079	154	-54.5	361.35
DDH7800-2	353273.8	4615433	1623.175	154	-56	423.84
DDH7900-1	353244.7	4615498	1618.809	154	-56	367.31
DDH7900-2	353402	4615402	1630.734	154	-55	502.47
DDH8000-1	353375.7	4615456	1626.623	154	-55	410.4
DDH8000-2	353344.5	4615521	1618.628	154	-57.5	492.45
DDH8100-1	353495.9	4615437	1622.513	154	-56	380.02
DDH8100-2	353463.4	4615505	1623.371	154	-55	499.59
DDH8200-1	353601.3	4615448	1624.169	154	-56	372.07
DDH8200-2	353564.1	4615526	1629.081	154	-55	451.18
DDH8300-1	353701.3	4615469	1623.455	153	-53	462.2
DDH8300-2	353664.8	4615548	1630.902	154	-57	571.51
DDH8400-1	353801.1	4615493	1627.164	154	-52	426.77
DDH8400-2	353768.7	4615562	1633.409	154	-55	504.6
DDH8500-1	353909.2	4615500	1628.987	154	-51	348.76
DDH8500-2	353871.2	4615578	1640.447	154	-52	418.76
DDH8600-1	353978.1	4615589	1642.529	154	-56	355.65
DDH8600-2	353926.9	4615695	1665.241	154	-55.5	461.75
DDH8700-1	354095.5	4615573	1638.706	154	-55	288.85
DDH8700-2	354055	4615659	1647.229	154	-55	434.76
DDH8800-1	354193.2	4615600	1639.892	154	-50	302.12
DDH8800-2	354152.8	4615686	1642.911	154	-54	454.23
DDH8900-1	354287.9	4615635	1643.616	154	-65	411.28
DDH9300-1	354248.2	4615718	1643.017	154	-52	300.95
DDH9300-2	354402.7	4615640	1633.836	154	-53	535.09

2011 Drill holes CSH Mine (in Beijing 54 coordinates)						
Hole ID	Easting	Northing	Elevation	Dip	Az	Depth (m)
DDH9400-1	354346.7	4615743	1651.862	154	-52	436.43
DDH9400-2	354468.1	4615721	1649.813	154	-53	457.18
DDH9500-1	354428.5	4615804	1660.169	154	-65	320.92
DDH9500-2	354557.8	4615766	1657.921	154	-58	547.08
DDH9600-1	354861.1	4616056	1663.46	154	-60	505.96
DDH9600-2	354801.1	4616185	1701.933	154	-57	711.4
DDH9600-3	354955	4616108	1662.336	154	-60.5	754.73
DDH9600-4	354888.6	4616234	1697.187	334	-57	426.72
DDH9700-1	355080.1	4616069	1631.492	154	-57	421.13
DDH9700-2	355006.7	4616217	1674.441	154	-60	560.44
DDH9700-3	355114.5	4616225	1630.007	154	-62	711.25
DDH9700-4	355038.4	4616383	1695.02	154	-65	800.9
DDH9800-1	355007	4616450	1682.458	154	-64	577.9
DDH9800-2	355329.1	4615774	1665.1	154	-65	823.99
DDH9800-3	355182.6	4616314	1630.078	154	-65	783.21
DDH9800-4	355157.1	4616371	1630.02	334	-68	672.36
DDH9900-1	355096	4616495	1690.508	154	-65	517.7
DDH9900-2	355068.1	4616553	1669.183	154	-67	740.17
DDH9900-3	355253.2	4616396	1630.724	154	-70	904.48
DDH9950-1	355175.1	4616563	1686.301	155	-60	783.6
DDH10000-1	355175.3	4616562	1686.564	154	-65	987.68
DDH10000-2	355533.9	4615807	1674.318	334	-66.5	620.52
DDH10000-3	355325.9	4616478	1635.985	334	-68	782.86
DDH10100-1	355295.3	4616542	1629.975	154	-61	476.56
DDH10100-2	355242.4	4616653	1683.59	154	-63	714.34
DDH10100-3	355340.6	4616661	1680	154	-66	909.95
DDH10100-4	355299.1	4616767	1688.671	154	-66	974.47
DDH10200-1	355687.1	4615956	1680.21	154	-65	573.93
DDH10200-2	355741.4	4615857	1685.585	154	-65	757.92
DDH10200-3	355502.9	4616571	1635.689	154	-70	886.75
DDH10200-4	355474.6	4616628	1635.982	334	-66	634.3
DDH10200-5	355425.7	4616734	1700.042	334	-66.5	863.29
DDH10300-1	355390.5	4616805	1692.662	154	-64	389.28
DDH10300-2	355571.8	4616660	1636.761	154	-66	487.19
DDH10300-3	355520.4	4616767	1700.208	154	-67	701.72
DDH10300-4	355487.8	4616835	1694.036	154	-69	790.08

2011 Drill holes CSH Mine (in Beijing 54 coordinates)						
Hole ID	**Easting**	**Northing**	**Elevation**	**Dip**	**Az**	**Depth (m)**
DDH10300-5	355857.8	4616058	1692.969	154	-72	859.24
DDH10400-1	355913.3	4615943	1694.92	154	-58	581.51
DDH10400-2	355698.8	4616625	1634.649	154	-65	654.13
DDH10400-3	355672.8	4616677	1636.207	155	-68	723.15
DDH10400-4	355615.7	4616800	1699.775	154	-68.5	864.8
DDH10400-5	355580.1	4616873	1694.818	334	-60	548.93
DDH10400-6	355557.6	4616920	1693.279	334	-64.5	773.08
DDH10500-1	355711.4	4616831	1691.919	154	-65	411.11
DDH10500-2	355684	4616888	1694.526	154	-66	590.9
DDH10500-3	355661.2	4616936	1694.465	154	-70	688.94
DDH10500-4	355627.7	4617006	1697.394	154	-72	821.62
DDH10600-1	356009.7	4616206	1684.105	154	-51	471.93
DDH10600-2	356063.1	4616093	1697.607	154	-53	583.47
DDH10600-3	355858.6	4616755	1642.861	154	-65	700.54
DDH10600-4	355811.1	4616850	1683.771	154	-66	841.2
DDH10600-5	355791.4	4616896	1694.29	334	-60	457.31
DDH10600-6	355763.1	4616954	1694.744	334	-65	720.39
DDH10700-1	355902.2	4616897	1688.368	154	-60	322.66
DDH10700-2	355857.8	4616989	1694.167	154	-64	447.8
DDH10700-3	355833	4617040	1694.06	154	-63	569.68
DDH10800-1	355783.3	4617144	1693.094	154	-63	406.63
DDH10800-2	356145.2	4616384	1667.254	154	-53	322.01
DDH11000-1	356198.9	4616277	1680.399	154	-64.5	326.18
TOTAL						60678.28

Table 10-3 Main Mineralized Intercepts

Main Mineralized Intercepts, 2011 Drill holes CSH Mine (in Beijing 54 coordinates)					
Hole ID	From	To	Intercept Length (m)	Grade (g/t Au)	Estimated True Thickness (m)
6900-1	240.90	243.60	2.70	0.57	2.30
	259.55	264.05	4.50	0.61	3.84
7000-1	192.90	210.60	17.70	0.64	14.41
	253.85	258.35	4.50	1.74	3.77
7000-2	263.26	270.29	7.03	0.58	5.50
	306.29	314.29	8.00	0.72	6.38
	321.49	325.49	4.00	0.53	3.19
7100-1	141.85	151.85	10.00	0.51	7.97

Main Mineralized Intercepts, 2011 Drill holes CSH Mine (in Beijing 54 coordinates)					
Hole ID	From	To	Intercept Length (m)	Grade (g/t Au)	Estimated True Thickness (m)
	177.25	212.57	35.32	0.61	28.87
	226.20	240.20	14.00	1.29	11.59
7100-2	221.83	248.30	26.47	0.60	20.93
	271.55	303.55	32.00	0.72	25.66
	315.00	331.00	16.00	1.07	12.92
7100-3	401.55	430.10	28.55	0.53	21.43
	459.65	479.65	20.00	0.52	15.23
	500.84	508.64	7.80	0.60	5.97
	514.65	518.65	4.00	1.11	3.05
7200-1	185.35	200.75	15.40	0.51	11.16
	210.75	216.75	6.00	1.37	4.35
	224.75	256.00	31.25	0.82	23.21
	262.80	282.20	19.40	1.24	14.59
7200-2	239.07	251.07	12.00	0.52	8.03
	262.10	364.50	102.40	0.57	69.87
7200-3	469.37	523.82	54.45	0.71	41.00
	531.82	535.87	4.05	2.74	3.10
7300-1	220.70	227.00	6.30	0.53	4.59
	257.50	316.40	58.90	0.57	44.80
7300-2	368.05	396.87	28.82	0.77	19.72
	406.83	435.75	28.92	0.76	19.81
7300-3	448.22	511.23	63.01	0.63	49.78
7400-1	373.65	407.40	33.75	0.52	27.27
7400-2	444.95	452.35	7.40	0.50	6.13
	463.20	506.20	43.00	0.52	36.10
7500-1	169.90	208.60	38.70	0.76	29.99
	239.65	258.45	18.80	0.55	14.81
7500-2	346.95	367.45	20.50	0.90	16.15
7500-3	456.90	468.90	12.00	0.51	9.19
	482.49	540.65	58.16	0.71	45.75
7600-1	272.51	314.49	41.98	0.87	34.55
	322.67	330.05	7.38	0.59	6.15
7600-2	476.90	482.34	5.44	0.55	4.48
	488.64	504.64	16.00	0.52	13.18
7700-1	203.60	250.45	46.85	0.53	36.80
	258.55	315.07	56.52	0.79	45.24
	327.10	330.95	3.85	1.49	3.12
7700-2	374.20	388.18	13.98	0.62	11.36
7700-3	438.80	446.36	7.56	0.59	5.87
7800-1	187.52	211.13	23.61	0.66	18.30
	230.83	309.43	78.60	0.55	63.04
7800-2	288.76	307.01	18.25	0.50	11.44
	334.87	379.96	45.09	0.65	37.81
	391.81	403.36	11.55	0.73	9.93
7900-1	226.44	238.18	11.74	1.01	9.43
	280.04	295.28	15.24	0.65	11.88
	301.77	340.41	38.64	0.97	30.27
7900-2	341.41	352.41	11.00	0.52	8.75
	362.91	368.41	5.50	0.52	4.38
	378.03	384.41	6.38	0.77	5.22
	391.35	408.61	17.26	0.97	14.34
	423.21	465.87	42.66	0.52	36.26
8000-1	199.83	203.75	3.92	0.60	3.00
	270.52	274.60	4.08	0.70	3.07
	299.13	303.13	4.00	0.59	3.10

Main Mineralized Intercepts, 2011 Drill holes CSH Mine (in Beijing 54 coordinates)					
Hole ID	From	To	Intercept Length (m)	Grade (g/t Au)	Estimated True Thickness (m)
	335.45	360.70	25.25	0.53	19.70
8000-2	377.55	383.55	6.00	0.69	4.81
	398.75	404.75	6.00	0.53	4.84
	423.20	444.52	21.32	0.51	17.32
8100-1	254.00	261.38	7.38	0.53	5.80
	272.87	295.26	22.39	0.63	18.37
8100-2	366.20	390.85	24.65	0.54	19.65
	398.85	457.10	58.25	0.77	46.34
8200-1	212.94	310.27	97.33	0.82	77.05
8200-2	374.38	384.39	10.01	0.51	8.52
	394.39	425.60	31.21	0.62	26.70
8300-1	275.96	287.02	11.06	0.55	8.84
	295.58	324.46	28.88	2.19	23.10
	331.96	353.33	21.37	0.76	17.48
	372.17	376.16	3.99	0.73	3.26
8300-2	513.97	526.99	13.02	0.57	11.33
	534.82	555.35	20.53	0.57	18.23
8400-1	251.35	317.72	66.37	0.70	50.26
8400-2	32.10	35.10	3.00	0.57	2.16
	346.90	377.50	30.60	0.99	24.24
8500-1	208.14	215.72	7.58	0.57	6.16
	221.45	233.10	11.65	0.56	9.69
8500-2	325.75	380.45	54.70	0.60	45.11
8600-1	217.50	225.50	8.00	1.32	6.19
	244.10	283.60	39.50	0.69	32.45
8600-2	316.00	328.00	12.00	0.56	9.47
	340.40	357.51	17.11	0.50	13.74
	363.50	376.85	13.35	0.50	10.75
8700-1	35.49	39.29	3.80	0.63	2.70
	143.44	160.69	17.25	0.67	12.80
	170.20	184.40	14.20	0.53	10.88
8700-2	119.40	123.20	3.80	0.56	2.80
	353.90	359.90	6.00	0.52	5.00
8800-1	200.60	217.10	16.50	0.53	13.26
8800-2	321.50	329.50	8.00	0.59	6.66
8900-1	92.44	102.00	9.56	0.64	5.57
9300-1	173.72	185.05	11.33	0.62	8.93
	213.15	221.15	8.00	0.57	6.34
9300-2	238.49	246.99	8.50	0.81	6.79
	331.54	339.54	8.00	0.60	7.00
	380.09	390.79	10.70	0.54	9.41
9400-1	197.15	237.75	40.60	0.56	31.49
9400-2	357.20	361.00	3.80	0.67	3.07
	382.50	435.43	52.93	0.56	43.46
9500-1	62.43	184.28	121.85	0.55	75.05
9500-2	40.30	45.45	5.15	0.62	3.44
	174.80	178.80	4.00	0.77	2.87
	314.00	376.26	62.26	1.12	48.96
9600-1	184.23	197.25	13.02	0.73	9.03
	285.67	342.93	57.26	0.54	42.53
	395.29	419.29	24.00	1.06	18.25
9600-2	235.26	242.77	7.51	0.73	5.22
	265.26	270.26	5.00	0.65	2.44
	404.76	417.84	13.08	0.58	10.14
	442.97	454.42	11.45	0.67	9.00

Main Mineralized Intercepts, 2011 Drill holes CSH Mine (in Beijing 54 coordinates)					
Hole ID	From	To	Intercept Length (m)	Grade (g/t Au)	Estimated True Thickness (m)
	462.26	528.86	66.60	0.51	51.87
9600-3	44.70	62.20	17.50	0.51	11.30
	354.50	368.50	14.00	0.52	10.53
	415.35	419.35	4.00	0.60	3.10
	458.15	507.60	49.45	0.55	38.96
	514.04	613.22	99.18	0.90	80.52
9700-1	36.88	74.20	37.32	0.56	25.45
	206.64	222.20	15.56	0.59	11.56
	252.20	255.81	3.61	0.73	2.76
	267.85	359.16	91.31	0.59	71.03
9700-2	184.07	190.00	5.93	0.55	4.08
	338.75	346.77	8.02	0.72	6.27
	354.77	469.17	114.40	0.61	92.77
	509.57	522.33	12.76	0.52	11.05
9700-3	26.35	35.56	9.21	0.52	5.64
	376.36	384.15	7.79	0.65	5.82
	463.01	512.26	49.25	0.90	39.08
	518.26	537.46	19.20	0.72	15.42
	543.86	591.16	47.30	0.78	38.27
	670.66	674.36	3.70	0.52	3.08
9700-4	582.41	606.57	24.16	0.52	16.73
	617.21	680.60	63.39	1.05	46.22
	688.74	700.55	11.81	1.20	9.04
	745.40	749.40	4.00	0.57	3.06
	757.50	782.95	25.45	0.50	19.71
9800-1	192.20	196.79	4.59	0.51	3.07
	209.75	301.20	91.45	0.80	62.10
	308.30	358.80	50.50	1.18	34.40
	426.97	512.28	85.31	0.67	63.70
9800-2	375.15	379.15	4.00	0.52	2.68
	501.75	612.76	111.01	0.91	80.47
	621.80	628.41	6.61	0.74	4.86
	636.55	714.29	77.74	0.99	57.95
9800-3	66.46	70.46	4.00	0.52	2.35
	398.06	402.06	4.00	0.57	3.06
	472.20	686.08	213.88	0.93	185.58
9900-1	223.10	229.00	5.90	0.72	3.68
	267.74	517.70	249.96	0.77	177.32
9900-2	283.22	307.50	24.28	0.58	15.60
	314.38	319.25	4.87	1.63	3.13
	335.30	356.30	21.00	0.57	13.77
	376.40	381.70	5.30	0.99	3.61
	387.70	421.70	34.00	0.53	23.18
	440.20	484.00	43.80	0.77	30.65
	490.00	505.65	15.65	0.77	11.25
	519.68	588.70	69.02	1.10	50.67
	596.70	600.70	4.00	0.59	3.01
	614.20	732.64	118.44	0.70	93.23
9900-3	538.95	552.95	14.00	0.69	9.00
	560.92	571.18	10.26	1.02	6.59
	661.33	678.23	16.90	0.52	12.18
	704.28	750.61	46.33	0.56	34.47
	760.61	834.65	74.04	0.50	57.24
10000-1	700.36	723.80	23.44	1.21	18.70
	729.80	756.40	26.60	0.54	21.50

Main Mineralized Intercepts, 2011 Drill holes CSH Mine (in Beijing 54 coordinates)					
Hole ID	From	To	Intercept Length (m)	Grade (g/t Au)	Estimated True Thickness (m)
	765.60	768.53	2.93	0.51	2.37
	801.24	902.40	101.16	0.50	82.29
10100-1	143.86	149.86	6.00	0.55	3.93
	184.11	253.83	69.72	0.70	47.61
	272.11	394.12	122.01	0.80	89.85
	409.56	437.87	28.31	0.57	21.57
10100-2	222.71	226.71	4.00	0.59	2.52
	314.66	318.66	4.00	0.70	2.62
	326.66	337.54	10.88	0.52	7.28
	345.12	450.70	105.58	0.63	72.59
	497.50	511.72	14.22	0.64	10.38
	529.15	535.61	6.46	0.56	4.80
	543.72	555.72	12.00	0.67	8.91
	562.08	568.08	6.00	0.52	4.46
	575.76	579.76	4.00	0.71	3.02
	587.82	619.65	31.83	0.56	24.02
	637.61	671.18	33.57	0.51	25.64
	683.18	701.94	18.76	0.52	14.34
10100-3	464.52	477.07	12.55	0.50	8.71
	510.65	527.03	16.38	0.50	11.40
	541.03	571.75	30.72	0.93	21.70
	587.75	599.75	12.00	8.63	0.59
	614.09	617.54	3.45	1.62	2.48
	623.54	654.51	30.97	0.55	22.61
	679.86	745.03	65.17	0.98	48.67
	762.95	770.69	7.74	0.52	5.90
10100-4	781.00	785.00	4.00	0.55	3.19
	920.63	924.52	3.89	0.71	3.15
	942.52	956.04	13.52	0.55	10.93
10200-1	140.17	161.87	21.70	0.79	12.87
	228.18	232.18	4.00	1.22	2.55
	268.40	347.64	79.24	0.84	56.01
	371.52	445.86	74.34	0.63	61.88
	454.66	486.80	32.14	0.50	27.56
	492.56	511.06	18.50	0.79	15.99
	517.06	545.44	28.38	0.52	24.63
10200-2	420.77	440.77	20.00	0.54	15.17
	466.31	602.84	136.53	0.57	106.72
	696.28	701.20	4.92	0.55	3.88
10300-1	107.84	125.52	17.68	0.59	11.05
	171.48	355.27	183.79	0.66	122.61
	366.62	389.28	22.66	1.01	14.92
10300-2	257.91	265.91	8.00	0.52	5.43
	274.21	294.00	19.79	0.51	14.69
	308.00	325.74	17.74	0.57	13.17
	335.63	459.92	124.29	0.76	91.16
10300-3	423.64	426.93	3.29	0.66	2.25
	508.06	535.15	27.09	0.50	19.79
	580.07	616.46	36.39	0.50	28.01
	638.47	644.68	6.21	0.54	4.82
10300-4	734.47	740.47	6.00	0.57	4.16
	760.88	782.12	21.24	0.51	14.80
10300-5	766.76	815.44	48.68	0.73	36.44
10400-1	372.90	486.35	113.45	0.63	91.76
10400-3	549.29	557.29	8.00	0.52	6.61

Main Mineralized Intercepts, 2011 Drill holes CSH Mine (in Beijing 54 coordinates)					
Hole ID	From	To	Intercept Length (m)	Grade (g/t Au)	Estimated True Thickness (m)
	591.43	640.16	48.73	0.51	38.33
10400-4	785.89	789.89	4.00	0.57	3.19
10500-1	188.68	257.51	68.83	0.63	44.35
	271.04	340.95	69.91	0.59	48.20
10500-2	565.07	575.07	10.00	0.57	7.24
	585.03	588.34	3.31	0.77	2.41
10500-3	564.12	568.12	4.00	0.62	2.95
	621.47	626.28	4.81	0.53	3.62
	642.34	648.34	6.00	0.68	4.54
10600-1	280.25	353.77	73.52	0.55	59.16
10600-2	359.91	443.94	84.03	0.60	69.86
10600-3	615.30	621.32	6.02	0.51	5.14
10600-4	798.31	802.32	4.01	0.68	3.34
10700-1	139.84	157.42	17.58	0.71	11.90
	170.46	173.96	3.50	0.55	2.37
	199.96	226.46	26.50	0.51	18.11
10700-2	369.15	382.00	12.85	0.72	11.13
10800-1	241.88	259.61	17.73	0.56	11.41
10800-2	213.67	217.70	4.03	0.59	3.14
11000-1	147.80	159.62	11.82	0.66	7.24
9600-4	306.21	314.70	8.49	1.38	4.14
	323.40	331.40	8.00	0.75	4.09
	339.40	389.50	50.10	0.73	26.57
10200-4	461.66	468.33	6.67	0.51	2.71
	590.91	632.91	42.00	0.87	22.33
10400-5	402.65	412.65	10.00	0.51	4.97
10600-5	322.20	343.63	21.43	0.53	9.96

Notes:

- *All grades reported are sample length weighted averages (LWA), where the individual samples range from 0.5 to 2 meters lengths with most being 2m intervals.*
- *The intervals listed above include both drill intercept widths and estimated true widths based on measured down-hole surveys.*

11 SAMPLE PREPARATION ANALYSIS AND SECURITY

11.1 GENERAL

All samples were analyzed by fire assay with AA finish by Tianjin Lab, SGS China, from crushed minus 10 mesh samples prepared by Baogang Laboratory in Baotou, Inner Mongolia. The entire drill core was meticulously logged and then split in half by saw with one half then being submitted for assay and the balance being retained on site for reference. The cut half-cores are stored in a secure warehouse in the XinHuRe (CSH 217) base camp.

Being a bulk tonnage, low-grade deposit, sampling is generally uniform with a nominal sample length of 2.0 meters unless obvious geological breaks dictated otherwise (maximum 3.90 meters, minimum 0.30 meter). Given that most holes are holes drilled at -45 and -65 degree angles, the true thickness for a 2 meter long core sample is 1.4 meters and 0.85 meters, respectively.

The core samples from the Northeast Zone cover an area of near 1500 meters long and 280 meters wide, while the Southwest Zone covers an area of about 1400 meters long and 150 meters wide. The HQ series cores (63.5 millimeters) provide adequate sample weights for this type of deposits. The average weight of a half core sample for a 2 meter interval is 7.0 kilograms.

The following information was recorded by the field geologist for all geological samples collected for analysis and for reference samples: field sample numbers; laboratory sample numbers where samples, standards and duplicates were numbered in the same consecutive numbering system; drill hole numbers and sampled intervals; date of sample collection.

All samples were taken and handled by staff of China Gold International Resources Corporation (CGC) in a manner acceptable by current professional practice.

The sampled intervals were recorded in the written geological log and a field sample number was assigned to each sample. Aluminum sample tags were stapled on the core boxes, showing the sample number and the interval to be sampled. A sample form was used to convert the field sample numbers into the laboratory sample numbers where standards and duplicates were merged into the same numbering system. A piece of flagging tape marked with laboratory sample numbers was enclosed in the sample bag, and the number was also written on the outside of the bag with indelible marker. Samples were packed in cloth bags and sealed in the field in large plastic bags. Prior to shipment, the samples were stored in a safe locked area at the base camp. According to the authors' observations, there was no evidence or suggestion at any time that any of these samples had been tampered with in any manner.

All of the samples were trucked directly to the Baogang Laboratory in Baotou, a three-hour drive from the base camp. This is a laboratory fully certified by the Chinese Government. Samples were delivered to the laboratory directly by China Gold's personnel. At no time during the shipping from the field to the laboratory were the samples out of the direct supervision of China Gold's personnel. CGC personnel periodically visited and supervised the sample preparation process.

Two well known laboratories were chosen to perform the assays. The first is SGSs Tianjin Laboratory; the other ALS Chemex Guangzhou laboratory, both in the People's Republic of China. The Tianjin laboratory has been the main laboratory for CSH samples for no less than 8 years.

The entire sample as received at the laboratories was crushed to minus 10 mesh and the Jones splitter was used to separate two 500 gram sized samples. One sample was for shipment to Tianjin Lab of SGS China for assaying, and the other sample was shipped back to base camp.

At both laboratories samples were dried and then pulverized to approximately 95%-pass 200 mesh (75um).

Gold content was determined using the standard 30-gram fire assay followed by Atomic Absorption techniques. About 10% of the samples that were assayed above 0.2 ppm Au were checked by a third lab, the ITS Shanghai Lab, which is also an internationally recognized laboratory. China Gold, SGS and ALS all maintain comprehensive and independent Quality Control and Quality Assurance programs.

At Tianjin Lab of SGS China, the samples were dried, pulverized to approximately 95 percent -200# (75um), sieved at 200#, recorded weights of +/- fractions. The gold content was determined using the standard screened metallic fire assay techniques. Two fire assay gold determinations were done on the minus fractions and single fusion on plus fraction. Taking the respective weights into account, the gold values are then back calculated to give the original gold content.

11.2 Laboratory Quality Control and Quality Assurance

As part of the data quality assurance and quality control procedures (QA/QC), several sample preparation and assaying checks were implemented for the 2011 drilling program. This was in addition to the QA/QC programs from various campaigns that have been previously reported on, including the 2003-2005, the 2007, and the 2008 drilling campaigns. The QA/QC results from these prior campaigns are not repeated here, but can be found in several technical reports published on SEDAR, including the report entitled "Independent Technical Report on the ChangShanHao (CSH) Gold Mine, in Inner Mongolia Autonomous Region, PRC", dated March 30th, 2010.

The 2007 and the 2008 QA/QC consisted of 196 blanks; 393 pulp duplicate samples; and 276 reference material of three different known grades, which are commercial standards purchased by Jinshan.

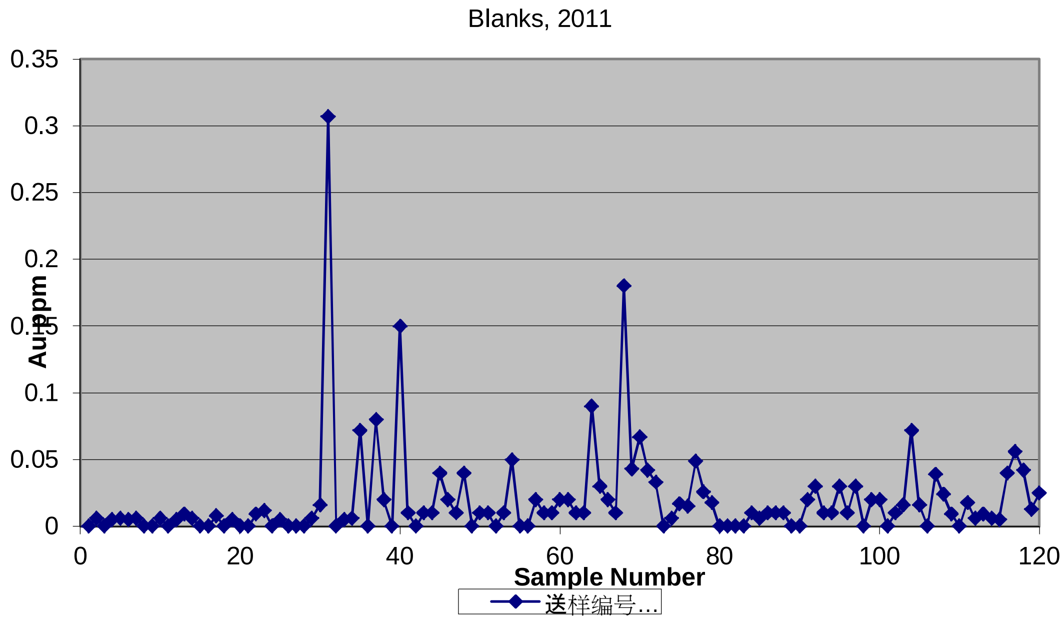
The 2011 QA/QC consisted of 489 blanks; 454 pulp duplicate samples; and 426 samples of reference material of 16 different known grades, some of which are commercial standards purchased by China Gold International.

11.2.1 Blanks 2011

Blank sample material is collected from barren or almost barren material within and from some of the formations that are wall rock to the orebody.

Of the 489 blanks sent to the SGS laboratory, only 115 returned values at or lower than the detection limit, which corresponds to about 24 percent of the total assayed blanks, which is in line with what historically the mine has observed through the years. Of the remaining samples, the highest was a 1.87g/t assay, with 26 samples (5% of total blanks) above 0.1g/t; these 26 samples have an average grade of 0.457g/t, see Figure 11-1 "Blank" Material Assays, 2011 QA/QC Program. This is a less-than-optimal result in terms of potential contamination, although the most likely problem is bag or tag swaps. The results from the laboratory were returned long after the drilling campaign had finished, so there was little opportunity to re-assay the values. Because these samples are spread over a wide area (not consecutive in a single batch) the potential precision problems are attenuated. However, these authors recommend a more proactive program in future drilling campaigns. In the current resource estimate, this issue has been partially handled by lowering the resource classification criteria, that is, the overall confidence on the resource estimate, see Section 14.

Figure 11-1 "Blank" Material Assays, 2011 QA/QC Program.

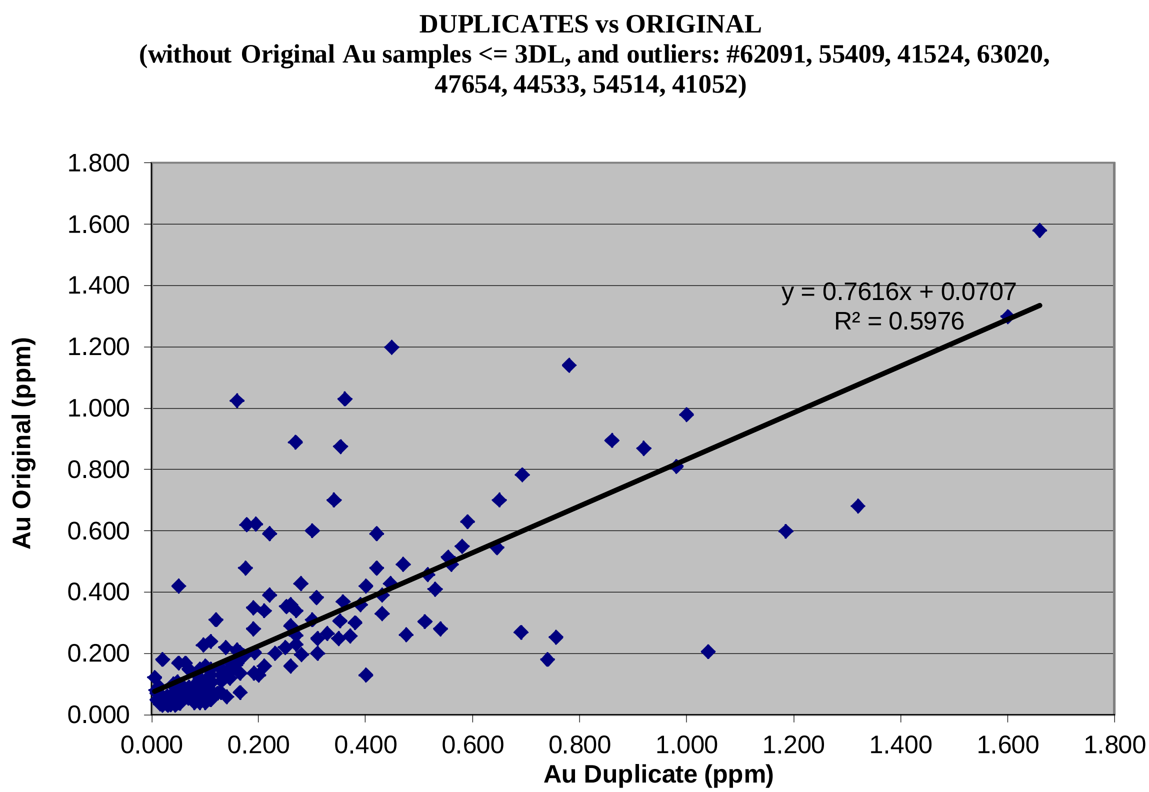


11.2.2 DUPLICATES 2011

Statistical analysis of the QA/QC data from prior campaigns and a heterogeneity test indicated a confidence level for individual samples above 0.20 g/t at ±25 percent. This result is again confirmed by the 2011 duplicates. As noted in the past, this poor precision has an impact on the expected accuracy of the individual estimated grades on a block-by-block basis, but it is not considered significant when larger volumes are considered. A few suspected bag swaps are also noticeable.

The differences between the original and the duplicate value indicate an unbiased set, with an average error of -0.0044. Figure 11.2 shows the scatterplot of the original vs. the duplicates gold values. The correlation coefficient observed is 0.78, which is significantly affected by a couple of outlier pairs. The graph also shows the linear regression line and equation. In the case of the NE zone (Figure 11.2) the average of the errors is also globally unbiased, at -0.003 g/t.

Figure 11-2 Scatterplot of Pulp Duplicates 2011 Drilling

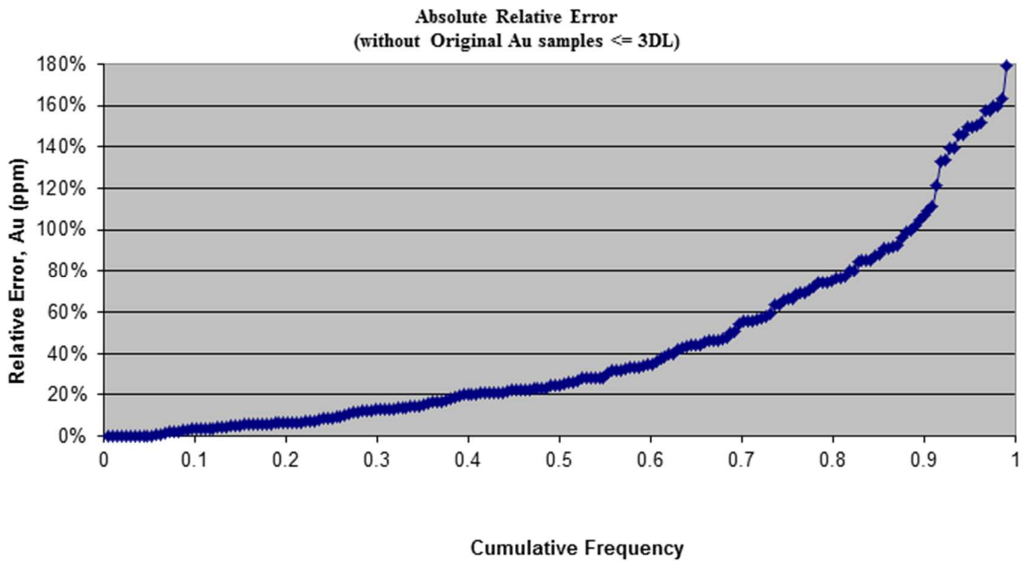


The cumulative frequency plot of the absolute relative deviation (ARD) of the 2011 duplicate samples for the SW zone is shown in Figure 11-3. If *"a"* represents the original sample and *"b"* the duplicate value, the ARD is calculated as:

$$ARD = \left| \frac{[a-b]}{[(a+b)/2]} \right|$$

The cumulative frequency plot shows that almost 40% of the data has an absolute relative error of 40% or more, which is considered very high. The average of all the ARD data where the original sample is greater or equal to 0.20 g/t is approximately 35%, worse than prior QA/QC campaigns.

Figure 11-3 Absolute Relative Deviation 2011 Duplicate Data



11.2.3 STANDARDS - 2011

Three reference commercial standards were inserted, originally prepared and certified by Rocklabs, Ltd., a well known laboratory based in New Zealand. The certified values for these standards have been fully documented, including sample preparation and round robin analyses, and are available as backup documentation. The standards used were:

- OXA89, expected Au=0.084 g/t;
- OXC72, expected Au=0.205 g/t;
- OXC88, expected Au=0.203 g/t;
- OXD73, expected Au=0.416 g/t;
- OXD87, expected Au=0.417 g/t;
- OXE74, expected Au=0.615 g/t;
- OXF65, expected Au=0.805 g/t;
- OXH66, expected Au=1.285 g/t;
- OXH82, expected Au=1.278 g/t;
- OXI67, expected Au= 1.817 g/t;
- OXI81, expected Au= 1.807 g/t;
- SE44, expected Au=0.606 g/t;
- SF45, expected Au=0.848 g/t;
- SF57, expected Au=0.848 g/t;
- SH41, expected Au=1.344 g/t.

Figure 11-4 through Figure 11-6 show the graphs for three different standards; note that most of the re-assays are close to or slightly lower than the expected value, with a few notable but isolated exceptions.

Figure 11-4 Re-assays for SE44, Au=0.606 g/t, CSH 2011 Data

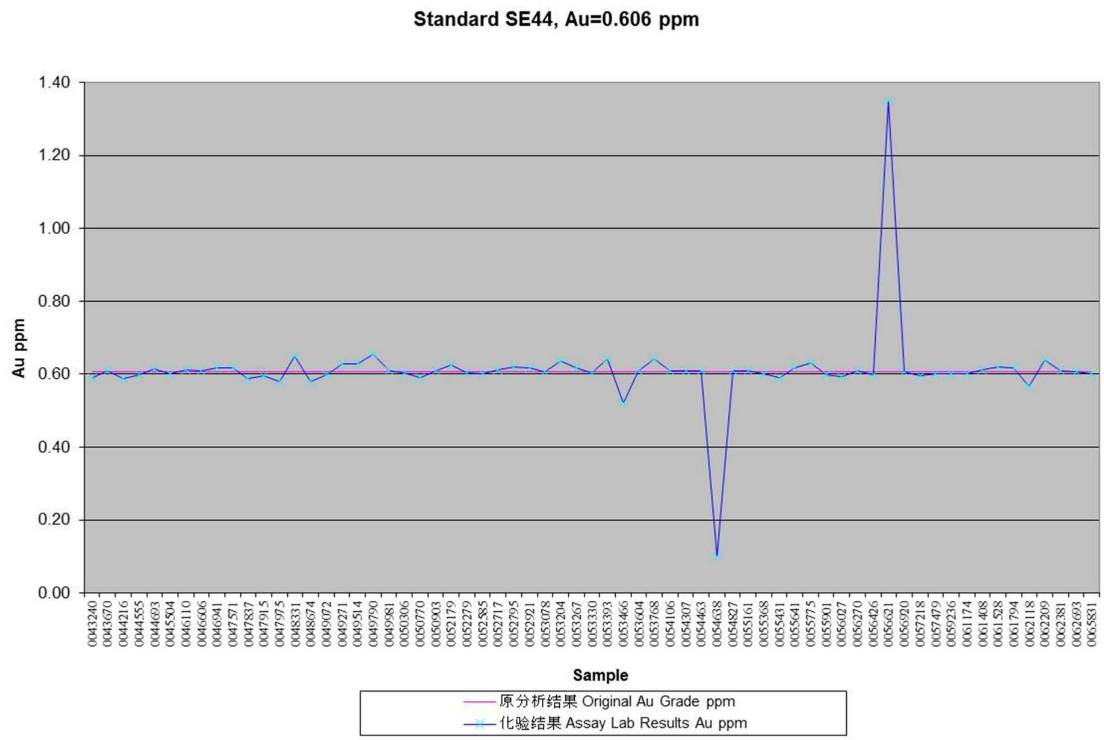


Figure 11-5 Re-assays for OXC72, Au=0.205 g/t, CSH 2011 Data

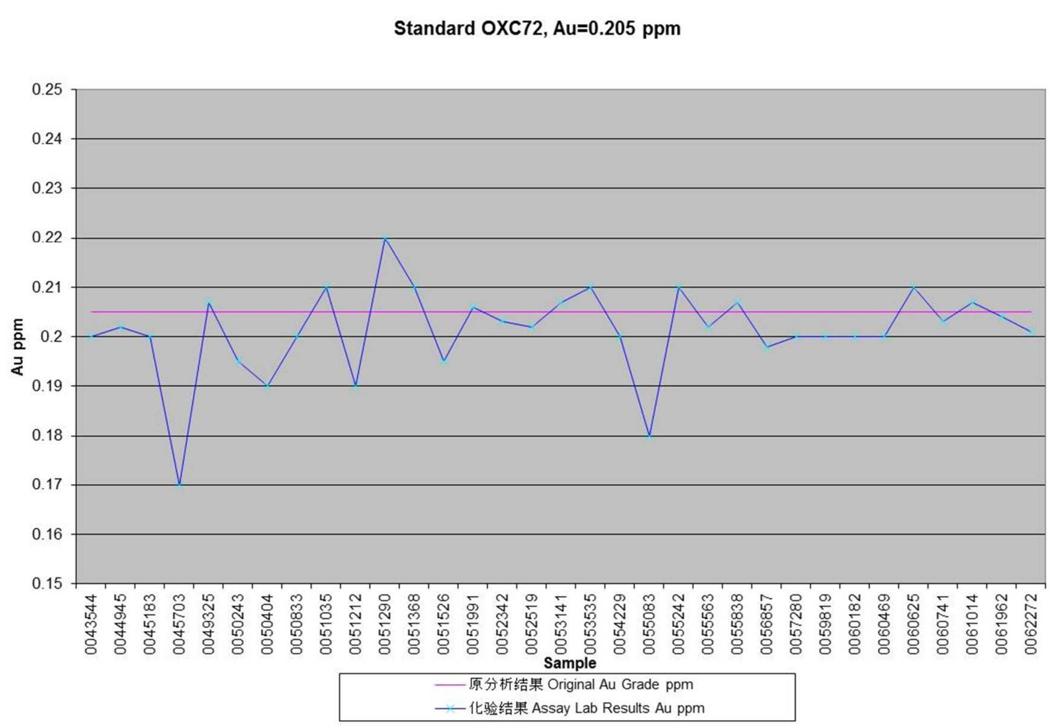
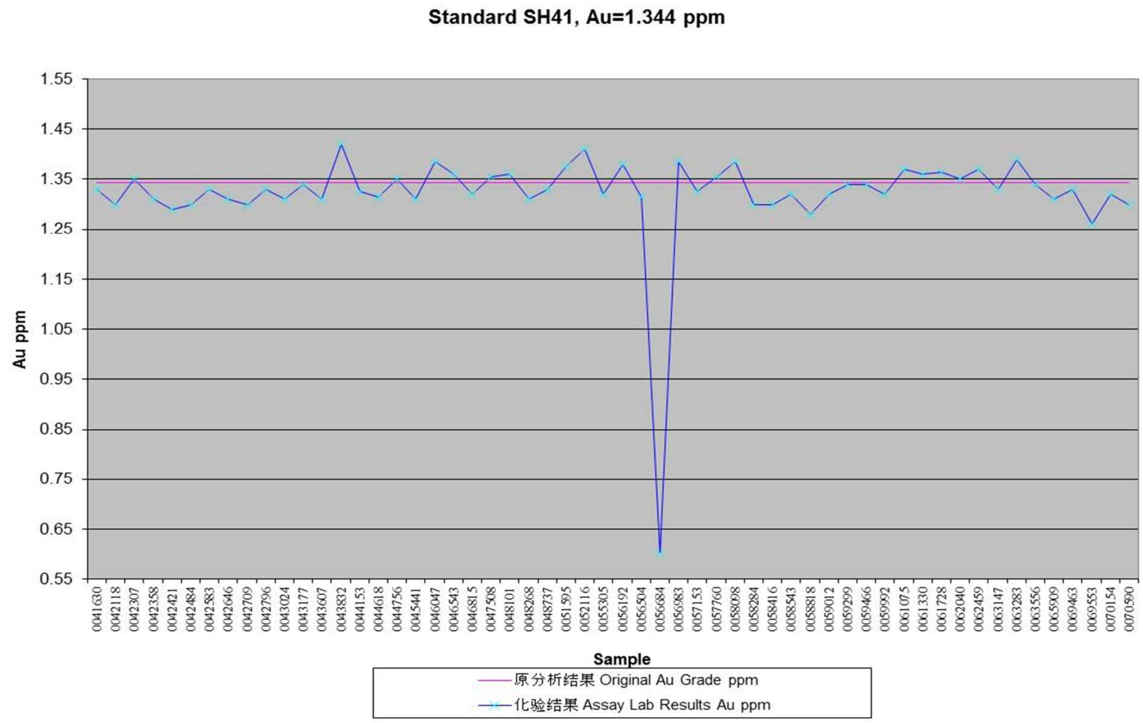


Figure 11-6 Re-assays for SH41, Au=1.344 g/t, CSH 2011 Data



It is the opinion of the authors that sample preparation, security, analytical procedures, and quality control are adequate for the estimation of Mineral Resources and Reserves and the purpose of this Technical Report.

It is important that China Gold International implement a more proactive QA/QC program in future drilling campaigns. This resource model has taken into account the poor precision by downgrading the resource category in certain areas of the model. Also, this item is mentioned as an important recommendation in the corresponding Section.

12 DATA VERIFICATION

The authors have verified the gold mineralization by observing the mineralized drill cores and exposures in the open pits, ores loaded on the leach pads, and gold doré bars produced by the CSH Mine.

It is the opinion of the authors that the data used in the preparation of the Technical Report is adequate and meets the standards required by CIM Guidelines and NI 43-101.

13 Mineral Processing and Metallurgical Testing

To complete the analysis of the existing metallurgical data KWM has referred to the following reports and to the operations review during the April 2012 site visit:

- Expansion Project of Inner Mongolia Pacific Mining Co., Ltd, Feasibility Study (draft report), August 2012, Changchun Gold Design Institute (CGDI)
- Jinshan Gold Mines Inc., Throughput Expansion Update Technical Report, K D Engineering, Tucson

There has not been any recent testwork completed for the project and the reports referenced review the historical metallurgical test programs in detail.

Heap leach operations for China Gold International's CSH project were commissioned in April 2007 with the first gold poured in July 2007. Initially the heap leach targeted run-of-mine oxide ore and the ore had been classified in to oxide ore and sulphide ore regimes. The initial approach to defining the ore was that if there was oxide present in the ore it was considered suitable for the ROM leach. In 2008 there was a significant decline in gold recovery noted and it was determined that the partially oxidized ore (transition ore) leach properties were very similar to the sulphide ores. A metallurgical program was completed at this time with the recommendation for the addition of a 3 stage crushing plant to generate -9mm ore to feed the leach pads. The crushing plant commissioning began in the 4th quarter 2009 with the plant fully operational in April 2010.

13.1 Metallurgical Testing

The metallurgical testwork that has been completed for the CSH Gold Project was summarized in the Throughput Expansion Technical Report that was issued in February 2010. This included the details of the work concluded by METCON Research in November 2009.

The following review of the metallurgical testwork focuses on the heap leach test programs on which basis the design of the processing facility has been based.

Brigade 217 China National Nuclear Corporation began exploration activities at the CSH site in 1995. Three test heaps of run-of-mine ore were constructed and leached for 32 days. Gold extraction averaged approximately 65 percent. In 2001 Brigade 217 expanded the test program to include agitation leach and column tests. During this same time period International Metallurgical and Environmental Inc. (IME) completed a test program that included mineralogical examination, gravity concentration and bottle roll cyanidation studies. In 2003 SGS Lakefield initiated a program on drill samples that included Bond Work Index determination, gravity concentration, cyanidation and a leaching test to determine potential gold losses due to preg-robbing. In 2003 and 2004, SGS completed additional tests on oxide and sulphide composite samples. In 2004 Jinshan Gold Mines conducted two pilot heap leach tests each containing approximately 50,000 tonnes of oxide. One sample was run-of-mine and the second was crushed through 125mm. In 2005 and 2006 oxide and sulphide column leach studies were conducted at the Baogang Technical Institute in Baotou, Inner Mongolia supervised by METCON Research.

The following Table 13-1 and Table 13-2 provide the results from the column test results reported in July 2005 completed at Lakefield and at Yinchuan. Both sets of tests indicated the improved recovery experienced by crushing the ore prior to leaching.

Table 13-1 Lakefield Column Test Results

Comp	Time Day	Particle Size	Reagent Consumption kg/t of CN Feed		Total % Au Extraction	Residue Au, g/t	Head Calc. Au, g/t
			NaCN	CaO			
Oxide	83	-1 inch	1.27	1.55	**47.0**	0.62	1.17
	75	-1/4 inch	1.52	3.59	**84.2**	0.17	1.08
Sulphide	83	-1 inch	1.04	1.20	**45.1**	0.58	1.05
	83	-1/4 inch	0.99	1.32	**73.1**	0.25	0.94

Table 13-2 Yinchuan Column Test Results

Comp	Time Day	Particle Size	Reagent Consumption kg/t of CN Feed		Total % Au Extraction	Residue Au, g/t	Head Calc. Au, g/t
			NaCN	CaO			
Oxide	93	- 50mm	0.85	1.18	**65.6**	0.250	0.726
	93	- 25mm	1.11	1.19	**75.1**	0.185	0.741
	93	- 10mm	0.80	1.34	**79.9**	0.146	0.726
Sulphide	93	- 25mm	0.82	1.04	**67.6**	0.273	0.840
	93	- 10mm	0.40	1.30	**74.4**	0.219	0.842

In February 2006 KD Engineering submitted a review of the metallurgical testwork that included the analysis of test columns that contained a sulphide composite having a size distribution of 80% passing 6mm. The trend analysis indicated that the gold extraction would average about 72.6%. On the same composite the trend analysis of test column data indicated an extraction of 60% at P80=25mm and 47% at P80=75mm.

KD Engineering concluded that the results of the various column test programs indicated that the gold extractions from the oxide and sulphide ores were dependent on whether the ore was crushed prior to placement on the leach pads. The estimated extractions provided by KD are:

- ROM oxide 80%
- Tertiary crushed oxide 85%
- ROM sulphide 40%
- Tertiary crushed sulphide 70%

In 2009 Metcon issued a report for "On-site Open Cycle Column leach Tests" for the recent test program that was supervised by Joseph Keane. In this program samples from the Northeast (NE) and Southwest (SW) ore zones were tested. Samples were crushed to P80=9mm and P80=6mm. The results of the P80=9mm tests are provided in Table 13-3.

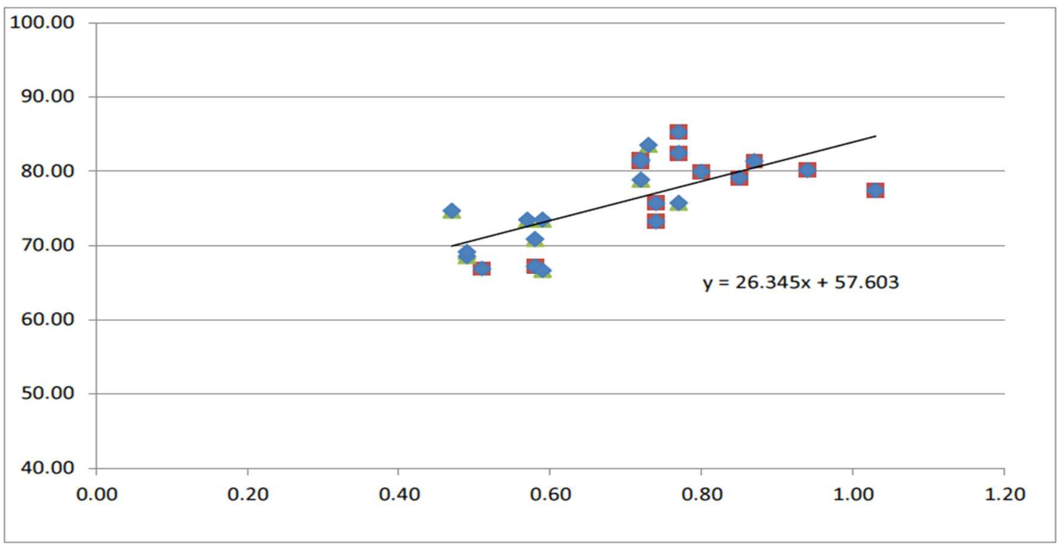
The average gold extraction for the NE ore zone was 77.8%. For the SW ore zone the average gold extraction was 73.5%. The lower extractions for the SW ore zone may be attributed to the lower feed grades and range of grades tested for the zone.

Consistent with earlier testing the results of this testwork also indicated that there could be the potential to improve extraction at the finer target crusher size P80=6mm. For the NE Zone the average test extractions for these same samples was about 6.3% higher. For the SW Zone the increase was about 2.6%.

The data for the NE and SW on-site column tests was analysed together and generated the recovery relationship that has been shown in Figure 13-1. Using the results from this test program the Au extraction model for the P80=9mm tests have been determined to be:

Au Extraction = 26.345 x (Au Feed Grade, g/t) + 57.603

Figure 13-1 On-Site Column Tests Recovery Analysis



To extrapolate the data from the on-site column tests to the heap leach it was recommended that a 5% adjustment be included to the recovery model. The adjustment provides allowance for a number of operating variables including the influence of external temperature on leaching rate and the number of lifts in the heap leach pad.

The adjusted extraction model recommended for prediction of the gold extraction is:

Au Extraction = 26.345 x (Au Feed Grade, g/t) + 52.603

Table 13-3 Open Cycle Leach Tests

Test #	Sample ID	Crush Size mm	Leach days	Head Assay Au Screen	Head Assay Au Calc	Extraction %
1	NE09-A	9	122	0.52	0.58	67.22
2	NE09-B	9	122	0.68	0.72	81.37
3	NE09-B	9	122	0.68	0.77	82.49
4	NE09-C	9	122	0.68	0.77	85.29
5	NE09-C	9	122	0.68	0.72	81.60
6	NE09-D	9	122	0.86	0.94	80.17
7	NE09-D	9	122	0.86	0.87	81.40
8	NE09-E	9	121	0.75	0.74	73.27
9	NE09-E	9	121	0.75	0.74	75.75
10	NE09-F	9	121	0.83	0.80	79.98
11	NE09-G	9	121	0.77	0.85	79.16
12	NE09-H	9	121	0.55	0.51	66.92
13	NE09-I	9	121	1.04	1.03	77.46
14	SW09-J	9	122	0.45	0.47	74.72
15	SW09-K	9	122	0.71	0.77	75.79
16	SW09-L	9	122	0.46	0.49	68.60
17	SW09-L	9	122	0.46	0.49	69.18
18	SW09-M	9	120	0.58	0.57	73.51
19	SW09-M	9	118	0.58	0.59	73.51
20	SW09-N	9	120	0.67	0.73	83.56
21	SW09-N	9	120	0.67	0.72	78.89
22	SW09-O	9	120	0.65	0.59	66.70
23	SW09-O	9	120	0.65	0.58	70.91

13.2 METALLURGICAL RECOVERY

KD Engineering proposed the accumulated extraction model presented in Table 13-4 based on the estimated extractions for the various ore feeds.

Table 13-4 Accumulated Extraction

Ore Type	Accumulated Extraction, %				
year	1	2	3	4	5
Run-of-mine oxide	65.6	74.7	78.0	79.0	80.0
Run-of-mine sulphide	25.6	34.7	38.0	39.0	40.0
Crushed oxide	70.6	79.7	83.0	84.0	85.0
Crushed Sulphide	55.6	64.7	68.0	69.0	70.0

The proposed accumulated extractions have been used to complete an analysis of the operating data since heap leach operations at CSH commenced. From the operating reports the metallurgical review assumes that oxide ore was placed on the pad from April 2007 through January 2008. In February 2008 the ore supply changed to transition ore that responded similar to sulphide ore and this initiated the evaluation of 3-stage crushing. The commissioning of the 3-stage crushing circuit was completed in April 2010.

Since heap leach operations began based an estimated 30,120 kg of Au have been placed on the heap leach. This estimate has been based on the monthly feed tons delivered to the heap and monthly grade.

Based on the pregnant solution flows to the carbon columns the theoretical (monthly) gold recovery is estimated at 14,550 kg, 49.4% of gold delivered to the heaps. Using the staged model in Table 13.4 the estimated extraction from the start of leaching through April 2012 is 14,450kg of gold. From the gold poured records the cumulative gold production through April 2012 for the CSH mine is 14,110kg.

Based on the comparison of the estimated extraction to the recorded poured gold the models proposed by KD Engineering appear to represent the operating performance for the heap leach.

For the purpose of estimating the gold extraction for future production from the sulphide ore it is recommended that the model generated from the on-site column tests be used capping the Au extraction rate at 75% (predicted extraction at 0.85g/t).

Au Extraction = 26.345 x (Au Feed Grade, g/t) + 52.603

14 MINERAL RESOURCE ESTIMATES

14.1 DATABASE AND GEOLOGIC MODEL

The database used to estimate the resources of the NE and SW zones consists of a total of 298 inclined surface drill holes, covering both zones, and including its latest extensions to the SW and somewhat to the NE. There are 111 new holes added since the last resource update, 108 of those drilled in the 2011 campaign, for a total of almost 61,000 additional meters. The holes dip between about 75º to 45º with most holes to the south and the southeast and six holes to the northwest. The drill holes have been surveyed on the Beijing 54/Yellow Sea 58 system using a total station tied to control points previously established with differential GPS system.

Sampling interval is mostly 2 meters down the hole, although there are some exceptions to this. Sample recovery averages close to 99 percent. There are a total of 52,464 gold values in the current assay database. As discussed in previous reports, the gold distribution is relatively well behaved, if compared to other hydrothermal gold deposits. Additional descriptions of the database can be found in Jinshan's published Technical Reports mentioned before.

The main control used in grade estimation is an updated 0.20 g/t Au envelope, which defines the boundary between mineralized and un-mineralized zones. In this resource update, no higher-grade mineralization boundary was used. For simplicity, and to ensure consistency of the geologic controls used, after finalizing the geologic model (the 0.20 g/t envelope and the weathered-unweathered surface), the database was flagged with codes describing whether the assay was within any of the envelopes.

14.1.1 DATABASE INTEGRITY

The overall integrity of the database is deemed excellent. In late 2003, in June 2004, in late 2005, and again in 2006 the computerized database was spot-checked against the original information including gold assays certificates and geologic logs. The 2007 and 2008 drill holes have also been checked line by line, with no errors found. The 2011 drill holes have been checked for internal consistency, looking for obvious errors in the assay, geologic, down-the-hole surveys, and collar locations data. The few questions that were raised were successfully resolved by China Gold's geologists.

All drill holes have been surveyed down-the-hole using an Eastman-Kodak single shot camera, made in Germany. The camera has a magnetic angle unit that measures azimuth and dip. The value is recorded inside the camera, and the measured values can be read after the film is developed. The stated measuring accuracy is 0.1 degrees, and reading accuracy is 0.5 degrees, which is adequate for resource estimation.

14.1.2 TOPOGRAPHY

The topography surface used in this resource model update was a survey completed in the summer of 2005, as well as an additional patch to the SW of the ore zones, to cover the latest extension of the model. The survey was completed by the Baogang team, and thus covered most of the mine areas. Additional lateral topography was derived from an IKONOS satellite image, with nominal spatial resolution of 2 m horizontal, and the DEM accuracy is ±1 m, geo-referenced to the Yellow Sea 58 datum, on Beijing 54 map projection.

There is also a new surface that was surveyed with Total Station, which represents the "as-mined" surface as of December 31st, 2011. The resources reported later in this Section correspond to material below the pit surface, and all comparisons with current production are done above the end of December 2011 topographic surface.

14.1.3 In situ Bulk Density

In 2003 two different sampling campaigns were completed, one consisting of 31 core samples sent to the CSH217 laboratory in Yinchuan, and another 30 samples sent to Lakefield Research for density determinations. In 2011, an additional 64 samples were obtained and sent to testing. There are no changes introduced or additional density samples considered for this 2012 resource model. These new 64 samples are all in the non-weathered zone, and average 2.79.

The samples were tested using the hot wax coating method with the summary statistics being presented in Table 14-1. Given that only two values fall outside the probability interval of [Mean±3*σ], the arithmetic averages of each type of mineralization was used in the block model. The average for the 81 weathered samples is 2.72, while the 344 non-weathered samples average 2.79.

Table 14-1 Statistics of Density Values

Statistics of Density Values, CSH217 Project				
	Number of Samples	**Mean**	**Standard Deviation**	**Interval [Mean±3*σ]**
Weathered	**81**	**2.72**	**0.12**	**{2.37 ≤ 2.72 ≤ 3.07}**
Non-Weathered	**344**	**2.79**	**0.09**	**{2.51 ≤ 2.79 ≤ 3.06}**

14.1.4 Ore Controls and Estimation Domains.

The geology and main ore controls for the CSH217 deposit have been well understood for a few years and confirmed as the operation advanced and the mineralization has been exposed. The same 0.20 g/t used in previous modeling efforts was updated. The grade threshold is a reasonable footwall and hanging wall contact for the gold mineralization. The resource model assumes that there is no mineralization of interest outside the 0.20 g/t envelope.

The envelope was refined by China Gold's geologist and checked by this author. Another important feature to consider is the weathered/fresh interface, although as the operation progresses and the mine deepens, it becomes less relevant. Finally, the main interpreted faults that cut the orebody have also been updated. All of these have been updated and considered when modeling the 0.20 g/t envelope, and have been discussed in detail in previous reports.

14.1.5 Weathered/Non-weathered Boundary

The weathered/non-weathered interface is an irregular surface ranging from 30 to 50 meters below ground level. This was defined by logging the point in each drill hole below which all the sulphides are fresh and above which most of the sulphides have been converted to rusty limonite. In most holes this is seen as a very sharp, well-defined line.

The sulphides (Py) above the interface have been mostly converted to oxides. In the SW zone, the oxidation process has been more limited, compared to the NE zones. In few holes scattered sulphides remain within the oxide section. These sections are generally short and irregular with little continuity.

The boundary between weathered and fresh rock was defined on each of the geologic cross sections as individual polylines. The drill holes assays and composites were tagged as oxide or sulphide depending whether they were above or below the surface, respectively. The weathered/fresh interface line was drawn on each section by connecting between drill holes, then extending the line horizontally to either side. The resulting DTM surface is shown in green in Figure 14-1, with the SW zone in the foreground. The 2011 drill hole did not change this surface significantly, except that it had to be extended laterally to the SW and to NE.

This surface was not used to control grade estimation, since it was shown previously and confirmed in the updated database that there is little difference in grade between the two zones. The weathered zone has slightly lower grades, but there is a smooth transition in grade from one to the other zone, with very little gradient. The lower limit of the fresh mineralization solid was the interpreted 0.20 g/t envelope.

14.1.6 Grade Envelope at Au=0.20 g/t

Mineralized material is defined by samples that are greater or equal than 0.20 g/t gold grade over a minimum 6m-horizontal width (thickness of the steep dipping zones), considered a minimum mining width to selectively remove waste.

The mineralization zone boundaries were updated incorporating the new drill hole data by China Gold geologists. Polygons were drawn on each drilled section to outline the 0.20 g/t gold mineralization envelopes. Sections are every 50 m. The basic criterion for defining the envelopes was based on assays being greater than 0.20 g/t. However, if part of a drill hole within this envelope had an interval that was less than the minimum mining width (defined above), whose weighted average grade was less than 0.20 g/t, that interval was included as internal dilution using its individual assay values.

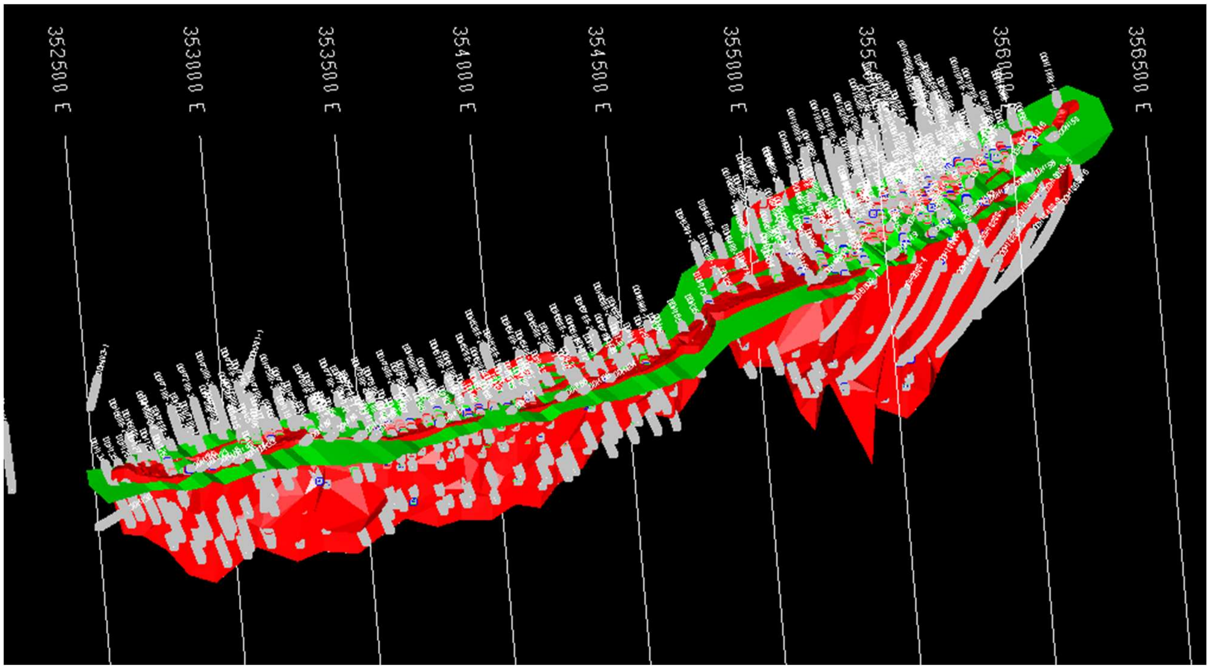
The 0.20 g/t gold mineralization envelopes can be traced from section to section as a consistent zones, 150 to 200 m wide in the NE, and 60 to 100 m wide in the Southwest Zone. Mineralized blocks have been defined outside of the hanging wall and footwall of this zone, under the condition that they had a thickness greater than the minimum mining width at a weighted average grade ≥ 0.20 g/t Au. These narrower splays appear to be continuous over a few sections where they exist. Further, faulting has caused some displacement that incorporates a degree of thinning of the interpreted mineralised zone in the area where the faults cuts the orebody.

The mineralized intervals on sections show good continuity, both section to section and down dip. It demonstrates that the dip of the mineralization is steeply south-southeast at almost 90^{o}.

The existing 0.20 g/t gold envelope polygons were modified as required where new drill hole information exists for the both the NE and SW zones, but also additional sections were created to include the extension of the zone to the SW and the NE. At either end of the mineralization zones along strike, the polygons were copied and moved to extend 50 m in the strike direction, and then wireframed. In some cases, the polygons on the 50 m spaced drilling sections were copied and moved 25 m, which is half the distance to its neighbour sections, for ease of wireframing. The polygons from each section were connected to create a first-pass gold envelope. Then, polygons on 10 m spaced sections were created to smooth out the envelope and were adjusted to topography; at the same time the drill holes were checked section by section to make sure the gold mineralization fell within the new polygons. The smoothed out polygons were then wireframed to produce the gold mineralization solids for resource estimation.

The Southwest Zone has been divided by the F3 and F4 faults into three sectors, as described in previous reports. The SW and the NE (and Central) zones are separated by the F2 fault, also mentioned in previous reports. The sectional polygons were projected well over the other side of the faults, and the polygons on 10 m spaced sections were adjusted to the fault surfaces. Each faulted segment was wireframed separately, and then the stretched-over part was cut by the faults with a Boolean operation.

Figure 14-1 Solids of 0.20 g/t Mineralized Envelopes



Three-dimensional view of the solids representing the 0.20 g/t mineralized envelopes in red and the weathered zone surface in green. Drill holes are also plotted.

14.2 STATISTICAL ANALYSIS AND VARIOGRAPHY

14.2.1 COMPOSITING

Two-meter long composites were obtained from the original assay data, and coded using the modeled geology as inside or outside the 0.20 g/t envelope. Several studies on composite lengths were completed earlier in 2004-2006, comparing the impact of dilution and grade variability according to composite length. In those studies, the 2.0 m composite was accepted as the best compromise between the number of composites available for estimation, an adequate degree of dilution and regularization given the mining selectivity considerations and estimation quality, and the overall low variability of the gold distribution. All resulting composites less than 1.0 m were discarded from the database. The choice to retain a minimum composite length of 1.0 m in the final estimation database was due partly to common practice in industry, justified also by the poor correlation observed between the gold grades and the original sample interval length.

Basic statistics for the composites used in the estimation process that is, after discarding all composites outside the 0.2 g /t envelope and the composites that are less than 1.0 m in length are shown in Table 14-2

Table 14-2 Composite Statistics

Basic statistics, 2m composites used in resource estimation							
Zone	**Number**	**Min**	**Max**	**Average**	**Median**	**Std. Deviation**	**CV**
NE	20,380	0.002	15.632	0.437	0.270	0.563	1.288
SW	8,545	0.001	9.936	0.375	0.205	0.534	1.425

14.2.2 HIGH GRADE ASSAYS STUDY

The impact of high grades for both the NE and the SW zones is expected to be limited, as has been demonstrated in the past. The only exception was the one high grade sample (nugget) already mentioned. An analysis was performed on the cumulative probability curve and a quantity of metal graph by gold cutoff grades.

For a detailed description of the high grade analysis in the past the reader is referred to previous reports. In summary, similar conclusions were reached after adding the 2011 drill holes to the database, and thus, for the NE zone, it was decided to restrict the influence of gold composite grades higher than 7.0 g/t at the time of resource estimation. In the case of the SW zone, the limit was set at 6.5 g/t. T he limitations (grade capping) were applied to the second and third kriging passes (see below).

14.2.3 SPATIAL CLUSTERING

Spatial clustering occurs when drilling and sampling is done preferentially within the deposit. The potential effect of clustering the drill hole information is to bias the global statistics and the expected gold grades that may be encountered at the time of mining, potentially biasing the resource estimate. Therefore, clustering has an impact on the degree of confidence in the resource estimate.

In the case of the CSH217 project, since drilling has been done on mostly 25 m and 50 m-spaced cross sections, it is not expected that spatial clustering is an issue. It is important to verify whether this assumption is correct, because if some clustering does occur, it is likely to be placed in the higher-grade zones of the deposit, thus biasing high the reported average grade.

The cell-declustering technique was used (Deustch, 1989) to assess whether the drill hole data was spatially clustered. The conclusion is still that the current drilling is not significantly clustered.

14.2.4 VARIOGRAPHY

As was done in prior modeling exercises, the spatial continuity estimator chosen was the correlogram. Correlograms were run using 2.0 m composites, and as required by the grade estimation method chosen. These include correlograms for the gold grade above 0.20 g/t in the NE zone and in the SW zone, corresponding correlogram models for the lower grade ("unmineralized") distribution, Au < 0.20 g/t.

Also, a correlogram model for the overall gold distribution within the 0.20 g/t was also obtained for both the NE and SW zones, as a tool to aid in the later classification of the resources, and also to provide a model for the internal dilution study as described below.

Additionally, an indicator variogram model for the 0.20 g/t threshold was obtained, which provides an indication of mineralization continuity. The indicator variogram confirms that the correlation of the 0.20 g/t envelope is at least 4 to 6 25 m-spaced cross sections, between 100 m to and 150 m. This is a statistical confirmation of the geologic continuity of the mineralized zone.

The updated variography confirms the main conclusions and observations obtained from prior exercises. The anisotropies and ellipses of continuity for each variogram were checked against known geology and its expected behaviour. As previously, along-strike and down dip (70º or steeper to the north) continuities are the two main directions in each zone.

14.2.5 Internal Dilution

Consideration of the volume-variance correction is necessary because mineralization will be mined on volumes different than the volume of the composites used in grade estimation, and it may also be different than the volume of each block in the resource model. This is internal dilution, or the mixing of mineralization and waste within a block.

The block size that represents the minimum volume that could be mined is called the Selective Mining Unit (SMU). In the case of the CSH217 project, it has been assumed that 6 m benches are likely to be used. In this Preliminary Evaluation, the loading equipment considered for the mine operation indicates that a minimum mining width of 6 m by 6 m can be assumed. Therefore, the SMU assumed in this resource model update is 6.25 x 6.25 x 6 m (234.375 m^3).

The Discrete Gaussian Method (DG) is a method that can be applied to obtain the theoretical dispersion variance. The method is described in detail in Journel and Huijbregts (1978), and it uses a *Variance Correction Factor* (VCF) to derive a predicted SMU distribution based on composites, therefore allowing construction of grade-tonnage curves using the corrected distribution.

Using the appropriate correlogram model, global corrected distributions were found for the assumed 12.5 x 12.5 x 6 m SMU. Consistent with prior resource models, variance reduction factors of 0.5 to 0.6 were observed, which is consistent with what has been found in the past. The exercise is used both as a check of the estimated grades with respect to the expected SMU distribution, and also to assess the degree of internal dilution to be expected at the time of mining. No significant differences were found with respect to the previous model.

14.3 Resource Block Model

14.3.1 Block Model Definition.

The updated resource block model was defined according to the following limits, referred to the southwest, lower corner of the block, and including both the SW and the NE zones into one defintion:

Minimum Easting: 351,000E;

Maximum Easting: 356,500E;

Minimum Northing: 4,614,800N;

Maximum Northing: 4,617,200N;

Minimum Elevation: 778m;

Maximum Elevation: 1,720m.

The block size chosen was 12.5 x 12.5 x 6 m, but uses percentages of block within the envelope to more accurately reflect the geometry of the 0.20 g/t envelope. Grade was estimated on the 12.5 x 12.5 x 6 m parent blocks, although the block may have as little as 1% of its volume within the envelope. This percentage defines the proportion of the block within the envelope, which is taken into consideration when tabulating resources and for mine planning.

Not all blocks inside the 0.20 g/t envelope have been estimated, and they are assumed to have a 0.0 g/t grade. This is due to the limitation imposed by the search ellipsoids, which generally do not fill completely the volume defined by both envelopes.

14.3.2 Grade Estimation

The Indicator-modified ordinary kriging method was used to estimate gold grades for the CSH deposit. The grade was estimated into blocks defined within the 0.20 g/t envelope by choosing data according to the grade cut-off. The composites used to estimate within the 0.20 g/t envelope were chosen from within the envelope only.

In this method, an estimate of the proportion of each block above 0.20 g/t is obtained. This is done by estimating the indicator variable for all blocks within the 0.20 g/t envelope in a single pass with parameters shown in Table 14-3. This is to explicitly take into account the internal dilution (defined as material with less than 0.20 g/t) that exists within the envelope. Then, for each block, the grades of the proportion above the 0.20 g/t threshold are estimated only using surrounding 2.0 m composites above 0.20 g/t gold. Conversely, the material within the envelope that is below 0.2 g/t (dilution) was estimated using all composites below 0.20 g/t. The overall Au grade for the block is the average of both estimates, weighted by the proportion of material above and below 0.20 g/t, respectively.

Table 14-3 Kriging Plan

Kriging plan, 0.20 g/t Indicator inside envelope.					
Zone	**Search in Y, X, and Z**	**Search Angles Rotation, MEDS convention**	**Min No. of Comps**	**Max No. of Comps**	**Max. No. of Comps/Octant)**
NE	150x60x105m	45/0/-20	5	8	2
SW	175x87.5x175m	70/0/-20	5	10	2

Three estimation passes were used to estimate the resource model. Each pass is done using varying degrees of conditions before any given block can be estimated. The reason for using this methodology is twofold:

1. Better block-by-block estimation is achieved by using more restrictions on those blocks that are closer to drill holes, and thus better informed. This is particularly important when the block size is small with respect to drill hole spacing in some areas of the deposit.
2. The three passes are based on decreasing levels of information used to estimate blocks, which are defined by geologic and geostatistical considerations, including grade continuity from section to section and correlogram models. Knowing which block was estimated with what level of information (on which pass) provides the information that can be used for resource classification.

Data selection was done using anisotropic octant searches it helps to avoid over-influence of individual drill holes in areas with redundant information. A maximum of 2 composites per octant was used for the first and second passes, and 3 composites maximum for the third pass.

The main parameters of the kriging plans used for the portions of the blocks above and below 0.20 g/t are presented for the NE and SW zones in Table 14-4 through Table 14-7. In all cases, Ordinary Block Kriging was performed with a 3 x 3 x 3 block discretization points within each block. The general criteria used to define these parameters was similar to that used in prior models, although some of the specific searches and search anisotropies defined were slightly modified based on the updated correlogram models.

Table 14-4 Kriging Plan NE Zone Au>0.20 g/t

Kriging plan, OK grade estimation inside 0.20 g/t envelope, Au≥0.2 g/t, NE zone.							
Pass	Search in Y, X, and Z	Search Rotation, MEDS convention	Min No. of Comps	Max No. of Comps	Max. Comps per Octant	Au Outlier cutoff/3D Search	Composites from Inside Envelope
1	45x20x30m	45/0/-20	5	8	2	N/A	Yes
2	80x40x60m	45/0/-20	5	8	2	7.0g.t/15m	Yes
3	150x60x80	45/0/-20	4	10	3	7.0g.t/15m	Yes

Table 14-5 Kriging Plan NE Zone Au<0.20 g/t

Kriging plan, OK grade estimation inside 0.20 g/t envelope, Au<0.2 g/t, NE zone.						
Pass	Search in Y, X, and Z	Search Rotation, MEDS convention	Min No. of Comps	Max No. of Comps	Max. Comps per Octant	Composites from Inside Envelope
1	45x20x30m	45/0/-20	5	8	2	Yes
2	80x40x60m	45/0/-20	5	8	2	Yes
3	150x60x105	45/0/-20	4	10	3	Yes

Table 14-6 Kriging Plan SW Zone Au>0.20 g/t

Kriging plan, OK grade estimation inside 0.20 g/t envelope, Au≥0.2 g/t, SW zone.								
Pass	Search in Y, X, and Z	Search Rotation, MEDS convention	Min No. of Comps	Max No. of Comps	Max. Comps per Octant	Max. Comps per Hole	Au Outlier cutoff/3D Search	Composites from Inside Envelope
1	45x20x30m	70/0/-20	5	8	2	3	N/A	Yes
2	70x40x70m	70/0/-20	4	8	2	2	6.50g.t/15m	Yes
3	175x90x140	70/0/-20	3	10	3	3	6.50g.t/15m	Yes

Table 14-7 Kriging Plan SW Zone Au<0.20 g/t

Kriging plan, OK grade estimation inside 0.20 g/t envelope, Au<0.2 g/t, NE zone.							
Pass	Search in Y, X, and Z	Search Rotation, MEDS convention	Min No. of Comps	Max No. of Comps	Max. Comps per Octant	Max. Comps per Hole	Composites from Inside Envelope
1	45x20x30m	70/0/-20	5	8	2	3	Yes
2	70x40x70m	70/0/-20	4	8	2	2	Yes
3	175x90x140	70/0/-20	3	10	3	3	Yes

No resources were considered outside the 0.20 g/t envelope. The final gold grade then is the estimated grade of each block above 0.20 g/t gold weighted by the proportion of the material above 0.20 g/t, which is in effect a dilution factor.

14.3.3 RESOURCE CLASSIFICATION.

Under the CIM definitions (CIM Standards on Mineral Resources and Reserves Definitions and Guidelines, November 27, 2010), *measured resources* require that "quantity, grade, density, shape, and physical characteristics need to be established with confidence sufficient to allow the appropriate application of technical and economic parameters" such that production planning and the evaluation of the economic viability of the deposit is possible. In the case of *indicated resources*, the level of confidence should be sufficient to allow for the application of appropriate technical and economic parameters, mine planning, and economic evaluation.

There were three basic steps used to classify the resources for the CSH deposit:

1. The estimation kriging passes provide an initial categorization, based on the amount of information used to estimate the grade for each block. In the definition of the estimation kriging passes, the data quality and the geologic continuity have been taken into consideration.
2. A smoothing algorithm was applied to the categories from the kriging passes, which were then further smoothed through manual interpretation. This was to avoid isolated islands and the "spotted dog" effect that is generally undesirable. In this smoothing process, the data quality and geologic continuity have again been considered.
3. Additional restrictions were applied, as detailed below, mostly restricting the measured, indicated, and inferred categories to specific depths.

The most important factors that determine the resource classification scheme at both the NE and the SW zones are:

- Geologic Continuity: this has been observed by the principal author to be significant. The lateral limits of the mineralized envelope constructed to constrain the grade estimation can be interpreted confidently for no less than 3 cross sections at a time, or the equivalent of 150 m. The continuity evidenced by the correlogram of the 0.20 g/t gold grade indicator confirms this, as its total range is just below 200 m in the along-strike direction.
- The correlogram models developed confirm the gold grade continuity. The gold grade for both zones evidence continuity of up to a distance equivalent to several cross sections, 25 m apart.
- The most recent infill drilling continued to confirm, and also provided confidence in the increased continuity. The anticipated grade ranges for the new drilling were found in the general areas and at levels as expected. Also, the comparison against blast hole data is reasonable, see below.
- The characteristic of the mineralization at CSH217 is such that it can be considered a low-grade, bulk-minable deposit. Given the database's low CV, the current drill spacing is of good density and compares well with other operating gold mines.

Specifics of the criteria sued to classify the resources are shown in Table 14-8 and Table 14-9 below, and include:

a) For measured, the resources must be estimated during the first grade estimation pass. This implies that:
    a. For the NE zone, blocks must have been estimated within an ellipsoid that is 45 m x 20 x 30 m (along-strike, across-strike, and dipping at -20º), with a minimum of 5 composites, and with the additional restriction of 2 composites maximum per octant defined.
    b. For the SW zone, blocks must have been estimated within an ellipsoid that 45 m x 20 x 30 m (along-strike, across-strike, and dipping at -20º), with a minimum of 5 composites, and with the additional restriction of 2 composites maximum per octant defined.
b) For indicated, the resources must be estimated during the second estimation pass, that is:

a. Blocks in the NE zone must have been estimated within an ellipsoid that is 80 m x 40 x 60 m (along-strike, across-strike, and dipping at -20º), with a minimum of 5 composites and with the additional restriction of 2 composites maximum per octant defined.
b. Blocks in the SW zone must have been estimated within an ellipsoid that is 70 m x 40 x 70 m (along-strike, across-strike, and dipping at -20º), with a minimum of 4 composites and with the additional restriction of 3 composites maximum per octant defined.

c) For inferred, the resources must be estimated according to the following criteria:
a. In the NE zone the estimation must have occurred using an ellipsoid that is 150 m x 60 x 105 m (along-strike, across-strike, and dipping at -70º); they need to have been estimated with a minimum of 4 composites and the additional restriction of 3 composites maximum per octant defined.
b. In the SW zone the estimation must have occurred using an ellipsoid that is 175 m x 90 x 140 m (along-strike, across-strike, and dipping at -20º); they need to have been estimated with a minimum of 3 composites and the additional restriction of 3 composites maximum per octant defined.

In addition, the anisotropies of the search ellipsoids follow the general geometry of the mineralization as modeled in the 0.20 g/t envelope. The basis for resource classification was thus the defined kriging passes, themselves based on the overall correlation model, as well as providing a robust measure of the quantity and quality of information used to estimate each block.

Table 14-8 Resource Classiification Parameters NE Zone

Resource classification parameters, NE zone				
Category	**Search in X, Y, and Z**	**Orientation Ellipsoid, GSLib convention**	**Min No. of Comps**	**Max. Comps per Octant**
Measured	45x20x30m	45/0/-20	5	2
Indicated	80x40x60m	45/0/-20	5	2
Inferred	150x60x80	45/0/-20	4	3

Table 14-9 Resource Classification Parameters SW Zone

Resource classification parameters, SW zone				
Category	**Search in X, Y, and Z**	**Orientation Ellipsoid, GSLib convention**	**Min No. of Comps**	**Max. Comps per Octant**
Measured	45x20x30m	70/0/-20	5	2
Indicated	70x40x70m	70/0/-20	4	2
Inferred	175x90x140	70/0/-20	3	3

The second important step in resource classification was to smooth out the categories resulting from the kriging passes, to avoid isolated areas of inferred within measured, and viceversa.

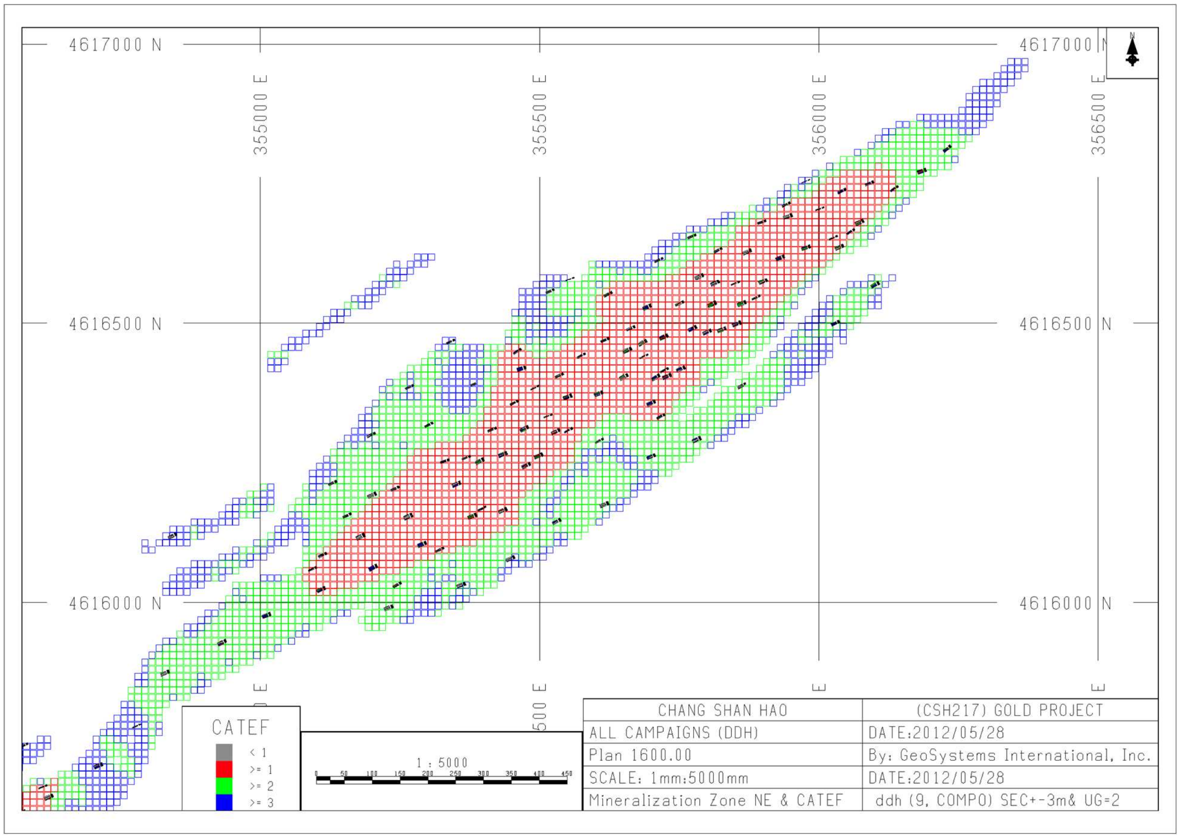
The third and final step was to define elevations below which certain categories cannot be defined. Specifically:

1. For the NE zone, all measured blocks below 1,366 m elevation are recategorized to indicated; all measured and indicated blocks below elevation 1,084 m are recategorized to inferred.

For the SW zone, all measured and indicated are recategorized to inferred below the 1,462 m elevation.

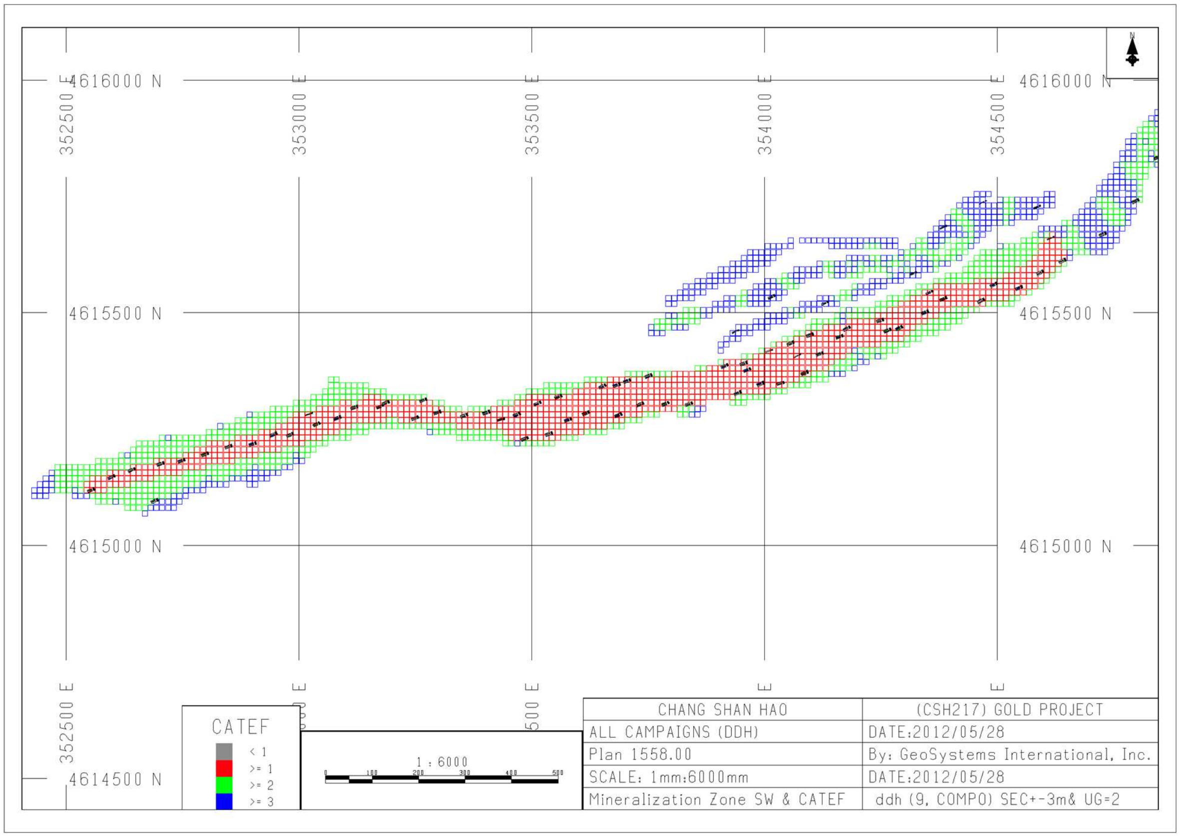
Figure 14-2 shows the measured, indicated and inferred blocks level 1600, NE zone, while Figure 14-3 shows the corresponding blocks for Level 1558, SW zone.

Figure 14-2 Resource Classification NE Zone Bench 1600



Resource Classification, NE Zone, Level 1600m. Measured, Indicated, and Inferred are represented by red, green, and blue respectively.

Figure 14-3 Resource Classification SW Zone Bench 1558



Resource Classification, SW Zone, Level 1558m. Measured, Indicated and Inferred are represented by red, green and blue respectively.

14.3.4 GEOLOGIC RESOURCES AND GRADE-TONNAGE CURVES

The resource estimate was completed by Mr. Mario E. Rossi, Qualified Person according to the definition set out in NI 43-101 by reason of education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience. Also, Mr. Rossi is independent of China Gold International Resources Corp. Ltd. applying all of the tests in Section 1.5 of NI 43-101.

Table 14-10 shows the overall estimated gold resources for the CSH 217 project[2].

[2] All Figures in the Resource Tables presented in this Report may show apparent inconsistencies due to rounding errors.

Table 14-11 shows the gold resources in the Northeast zone, while Table 14-12 shows the corresponding resources for the SW zone. The resources are reported below the topography corresponding to December 31st, 2011.

Some of the most important observations are:

- There has been a significant increase in the measured and indicated resources in both the NE and the SW zones compared to the 2009 resource model, due to the increased volume as delineated by the 2011 drilling campaign. In general, there is a more significant increase of resources at depth.
- The estimated grades of the resources include some geologic dilution, but no operational or mining dilution or ore loss. The model can only be considered fully diluted (save for mining dilution) if the assumed SMU is actually achieved at the time of mining. Given the degree of selectivity assumed in this resource model, an effective grade control system is required to achieve such degree of selectivity and grades.
- The resources are reported within a "resource pit", which was developed using a U.S. $1,800/oz Au price, and a 60% recovery. This resource pit represents what is reasonable to expect may be recoverable in the near future from CSH.

There are no known environmental, permitting, legal, title, taxation, socio-economic, marketing, and political or other relevant issues that may materially affect the resource estimates. Other relevant factors that may materially affect the resources, including mining, metallurgical, and infrastructure are well understood according to the assumptions presented in this report.

Table 14-10 Resource Summary

All CSH Resources below pit surface to December 31st, 2011 within Resource Pit, 2012 Resource Model									
	Measured		Indicated		Measured+Indicated			Inferred	
Cutoff (g/t)	MTonnes	Au Grade (g/t)	MTonnes	Au Grade (g/t)	MTonnes	Au Grade (g/t)	Million Ounces Au	MTonnes	Au Grade (g/t)
0.25	95.3	0.61	192.7	0.55	288.0	0.57	5.26	155.7	0.46
0.28	**90.4**	**0.63**	**172.2**	**0.58**	**262.6**	**0.60**	**5.05**	**132.8**	**0.49**
0.30	86.9	0.65	160.2	0.60	247.1	0.62	4.91	118.9	0.52
0.35	78.2	0.68	134.5	0.65	212.8	0.66	4.55	91.5	0.57
0.40	69.9	0.72	113.8	0.71	183.7	0.71	4.20	71.1	0.63
0.45	61.7	0.76	97.0	0.75	158.7	0.76	3.86	56.1	0.69
0.50	53.9	0.80	83.0	0.80	136.9	0.80	3.52	44.8	0.74
0.55	47.2	0.84	71.2	0.85	118.4	0.84	3.21	36.1	0.80
0.60	40.7	0.88	61.0	0.89	101.7	0.89	2.90	29.1	0.85
0.65	34.8	0.93	52.2	0.94	87.0	0.93	2.61	23.5	0.90
0.70	29.5	0.97	44.1	0.99	73.6	0.98	2.32	19.1	0.95
0.75	24.9	1.02	37.3	1.03	62.3	1.03	2.06	15.7	1.00

**Gold Price assumptions (in USD$) used to calculate the cut off grade for the "Resource Pit" is: Au=$1800/oz;*

**Gold recovery used to calculate the cut off grade for the "Resource Pit" is: 60%;*

Table 14-11 Resources Northeast Zone

Resources below pit surface to December 31st, 2011 within Resource Pit, NE Zone, 2012 Resource Model										
	Measured		Indicated		Measured+Indicated			Inferred		
Cutoff (g/t)	MTonnes	Au Grade (g/t)	MTonnes	Au Grade (g/t)	MTonnes	Au Grade (g/t)	Million Ounces Au	MTonnes	Au Grade (g/t)
0.25	71.0	0.63	168.1	0.55	239.0	0.58	4.43	77.0	0.45
0.28	67.9	0.65	150.6	0.59	218.5	0.61	4.25	64.8	0.49
0.30	65.8	0.66	140.5	0.61	206.3	0.62	4.14	57.6	0.51
0.35	60.1	0.69	118.9	0.66	179.0	0.67	3.86	44.0	0.57
0.40	54.3	0.72	101.3	0.71	155.6	0.71	3.58	34.3	0.63
0.45	48.5	0.76	86.8	0.76	135.3	0.76	3.30	27.3	0.68
0.50	42.7	0.80	74.7	0.80	117.4	0.80	3.03	21.9	0.73
0.55	37.6	0.83	64.4	0.85	101.9	0.84	2.77	17.7	0.78
0.60	32.4	0.87	55.4	0.89	87.8	0.89	2.50	14.1	0.83
0.65	27.7	0.92	47.6	0.94	75.3	0.93	2.25	11.4	0.88
0.70	23.4	0.96	40.3	0.99	63.7	0.98	2.00	9.2	0.93
0.75	19.8	1.01	34.2	1.03	54.0	1.02	1.78	7.6	0.98

**Gold Price assumptions (in USD$) used to calculate the cut off grade for the "Resource Pit" is: Au=$1800/oz;*

**Gold recovery used to calculate the cut off grade for the "Resource Pit" is: 60%;*

Table 14-12 Resources Southwest Zone

Resources below pit surface to December 31st, 2011 within Resource Pit, SW Zone, 2012 Resource Model.									
	Measured		Indicated		Measured+Indicated			Inferred	
Cutoff (g/t)	MTonnes	Au Grade (g/t)	MTonnes	Au Grade (g/t)	MTonnes	Au Grade (g/t)	Million Ounces Au	MTonnes	Au Grade (g/t)
0.25	24.4	0.57	24.6	0.49	49.0	0.53	0.84	78.7	0.47
0.28	22.4	0.60	21.6	0.52	44.0	0.56	0.79	68.0	0.50
0.30	21.1	0.62	19.8	0.54	40.9	0.58	0.76	61.3	0.52
0.35	18.1	0.66	15.6	0.60	33.8	0.64	0.69	47.6	0.58
0.40	15.5	0.71	12.6	0.66	28.1	0.69	0.62	36.8	0.64
0.45	13.2	0.76	10.2	0.71	23.4	0.74	0.56	28.8	0.70
0.50	11.2	0.82	8.3	0.77	19.5	0.80	0.50	22.9	0.75
0.55	9.6	0.86	6.8	0.82	16.4	0.85	0.45	18.4	0.81
0.60	8.2	0.91	5.7	0.87	13.9	0.90	0.40	15.0	0.86
0.65	7.1	0.96	4.6	0.93	11.7	0.95	0.36	12.1	0.92
0.70	6.0	1.01	3.8	0.98	9.9	1.00	0.32	9.9	0.98
0.75	5.1	1.06	3.1	1.03	8.3	1.05	0.28	8.1	1.03

**Gold Price assumptions (in USD$) used to calculate the cut off grade for the "Resource Pit" is: Au=$1800/oz;*

**Gold recovery used to calculate the cut off grade for the "Resource Pit" is: 60%;*

Figure 14-4 through Figure 14-7 show plans and longitudinal sections of the block model and the drill hole collars, as well as the current topographic surface, for the NE and the SW zones. A plan map at level 1600 (NE zone, Figure 14-4); a longitudinal section along strike through the center of the NE zone (

Figure 14-5); a plan map at the 1504 m level (SW zone, Figure 14-6)

), and a longitudinal section through the central and eastern portion of the SW zone are included to illustrate the spatial distribution of the mineralization. The grid and the blocks can be used for scale, and the blocks are color-coded by gold grade according to the legend shown.

Figure 14-4 Estimated Gold Grades Bench 1600 NE Zone

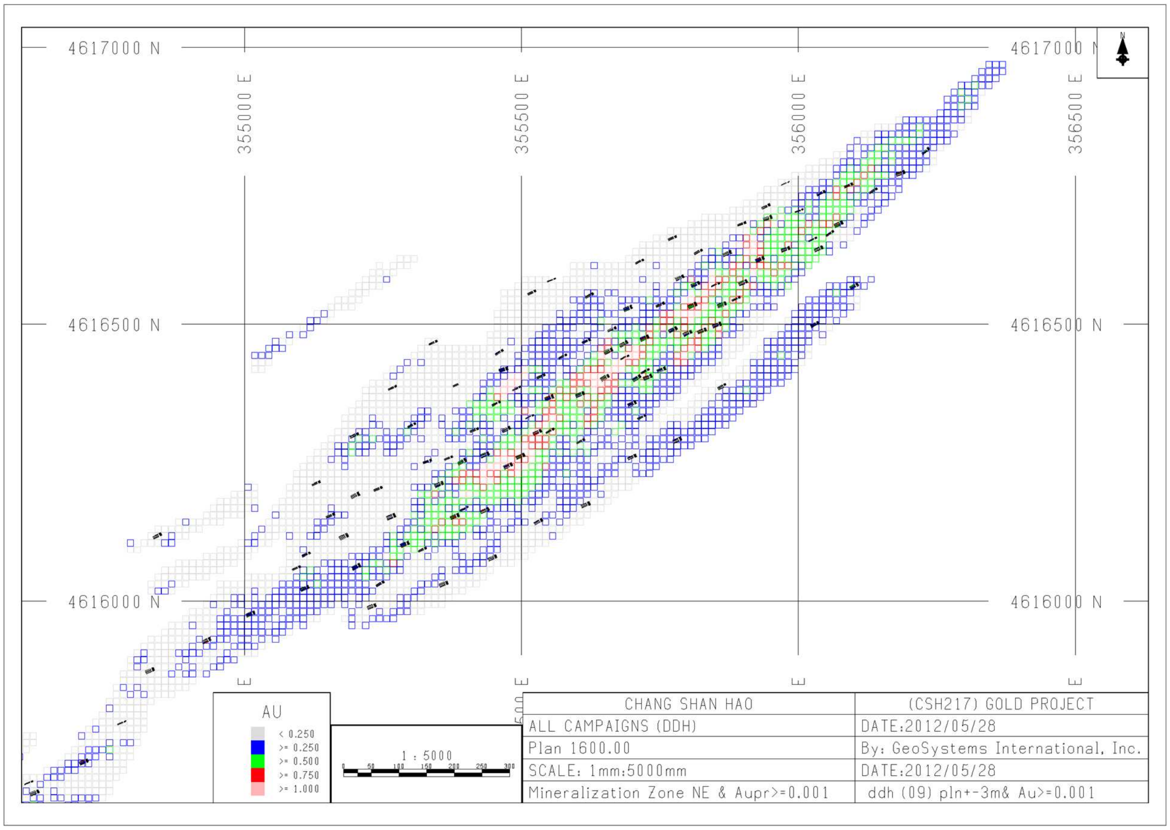


Figure 14-5 Estimated Gold Grades Longitudinal Section NE Zone

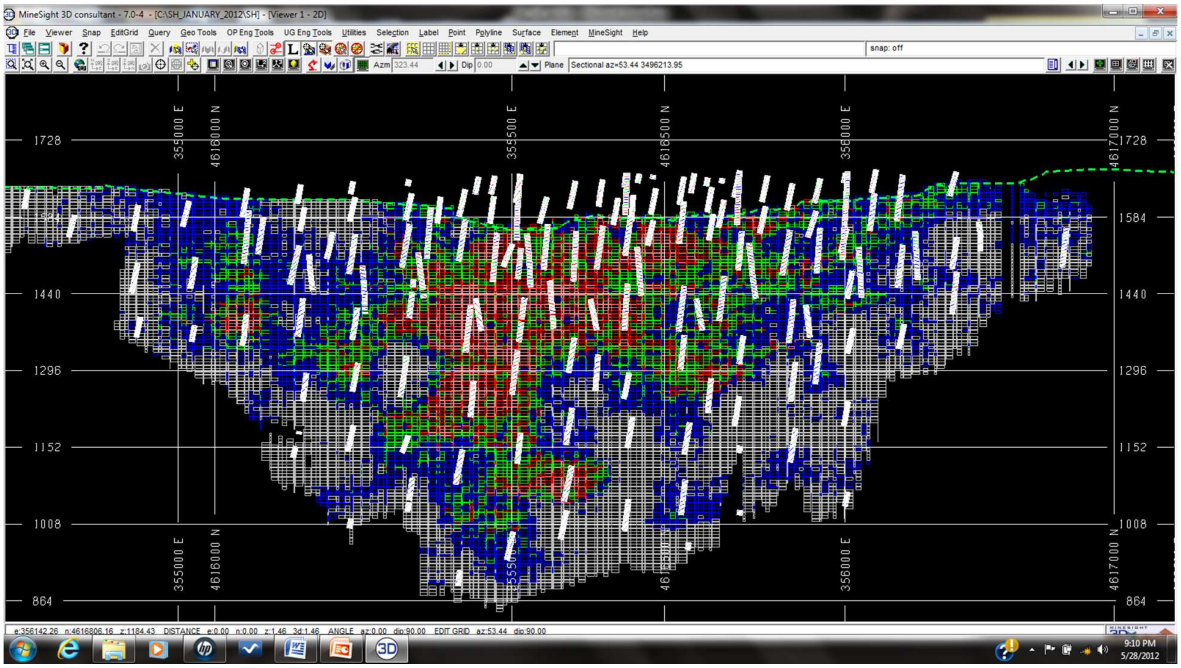


Figure 14-6 Estimated Gold Grades Bench 1588 SW Zone

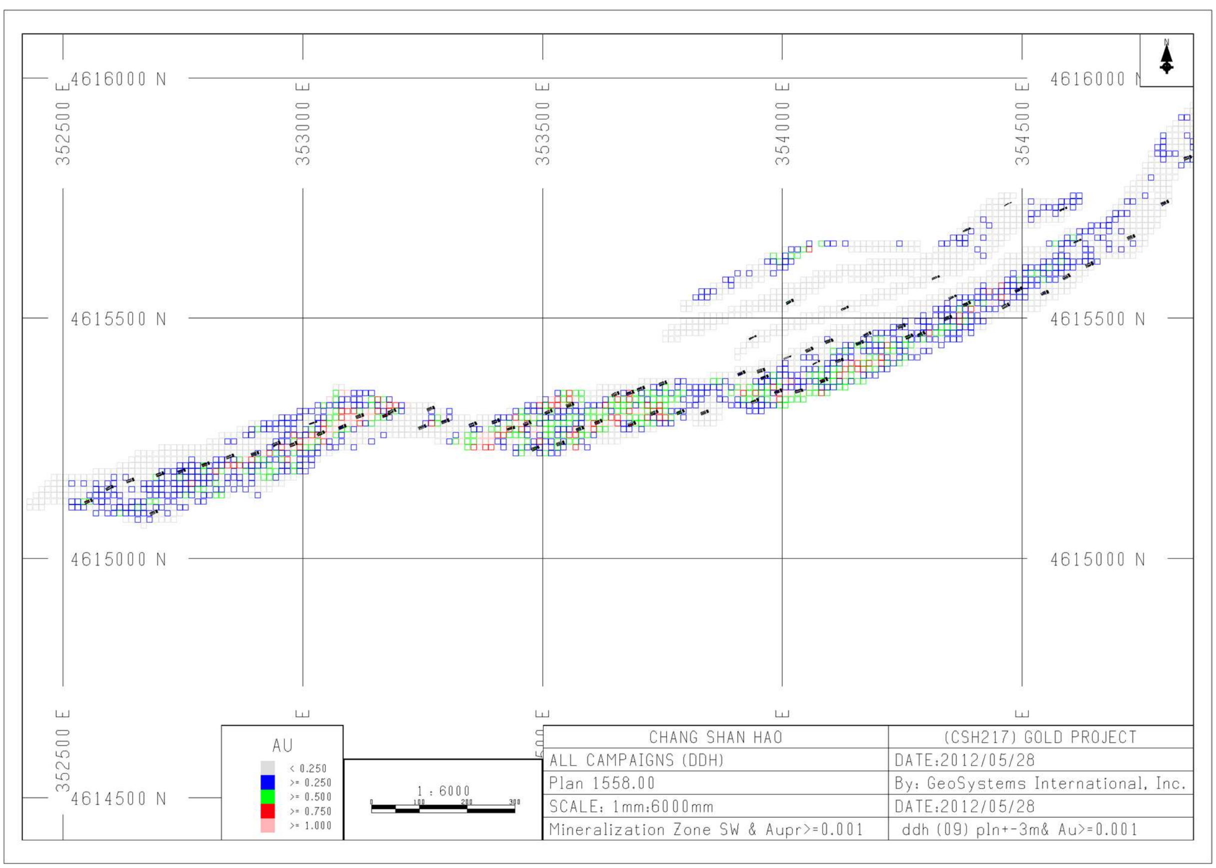
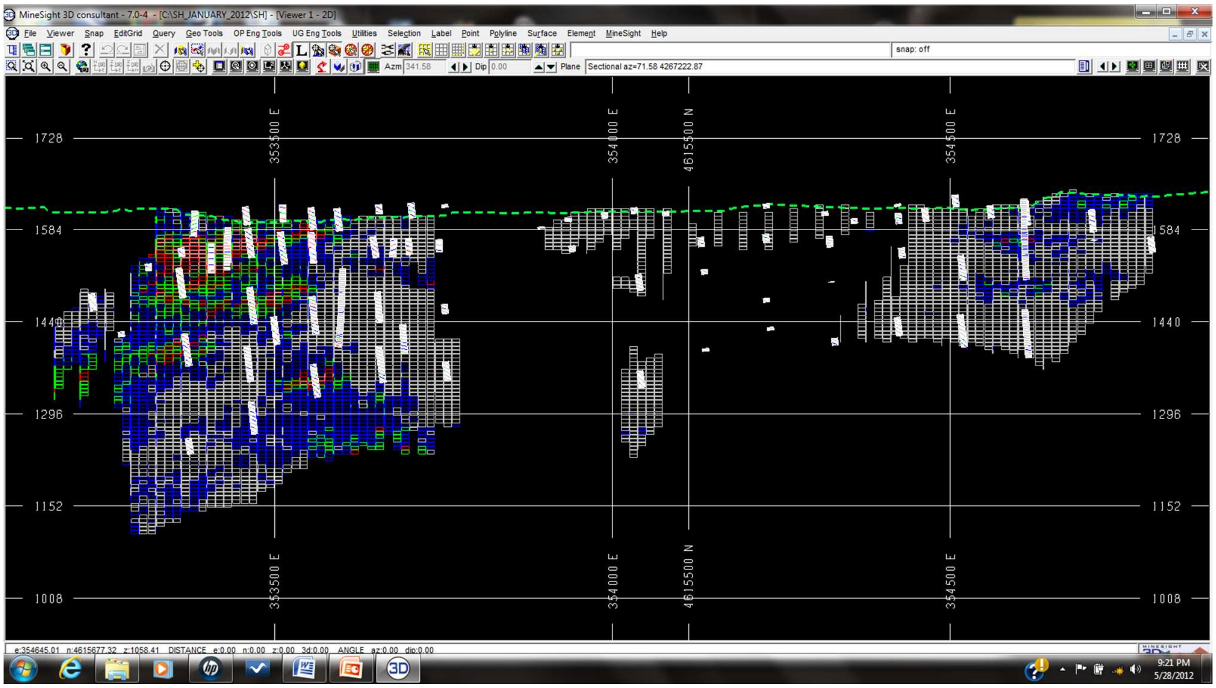


Figure 14-7 Estimated Gold Grades SW Zone



14.3.5 Statistical and Graphical Validation of the Block Model.

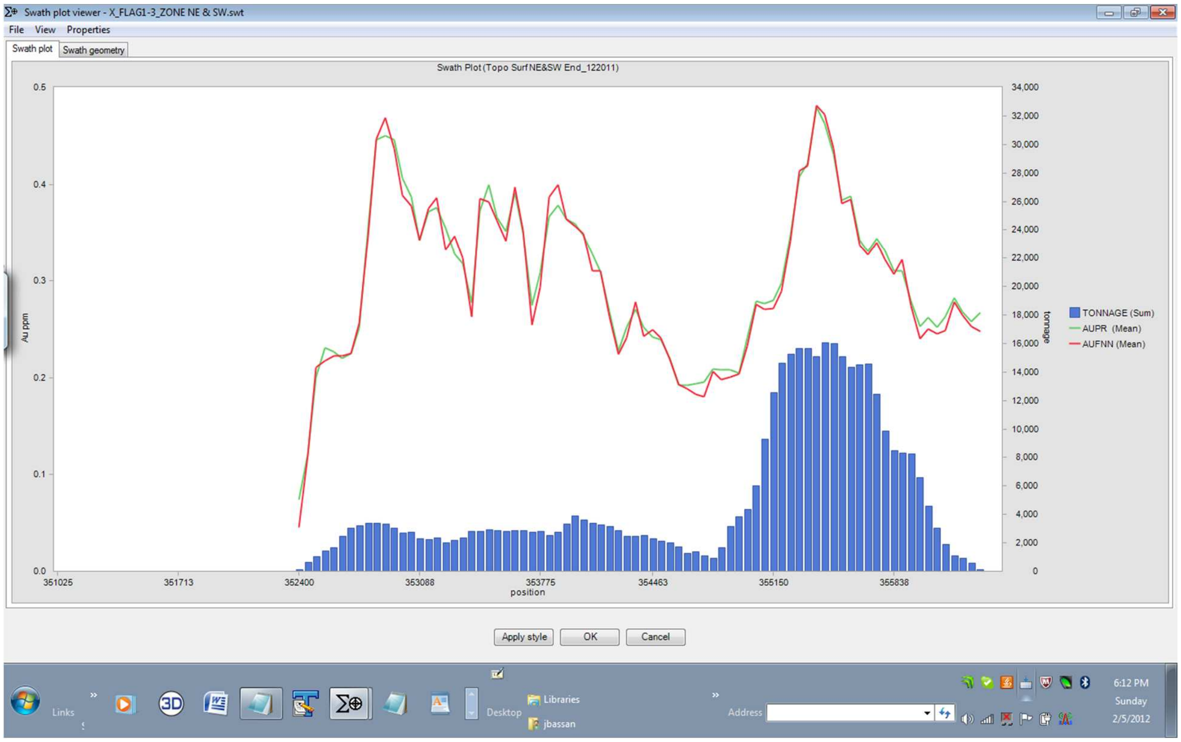
Extensive graphical validation was completed on the 2012 resource block model for both the NE and the SW zones. These included checking cross sections and plans of the block model on screen; checking the block grades in relation to the nearby composites; the composite data itself and their spatial grade distribution; the oxide/sulphide surface; the topographic surface and the December 2011 pit position; and the 0.20 g/t envelope used to define the volume within which the interpolation took place. No evidence of any block being wrongly estimated was found. Every block grade can be explained as a function of the surrounding composites, the correlogram models used, and the kriging plan applied.

Several statistical analyses were also used to validate the 2012 model, of which a few examples are shown in this report; the remaining validation work is available as background information.

The plots of gold grade trends of the original 2 m declustered composites vs. estimated block grades show that the estimated block grades closely reproduce the grade trends observed in the original 2 m composite grades. Figure 14-8 shows an example for Eastings.

These and other statistical checks indicate that the block model grades behave as expected, with an adequate degree of smoothing, and without obvious anomalous values. It is globally unbiased, and internally consistent with the composites and correlogram models used to create it.

Figure 14-8 Drift Plot NE and SW Zone



Drift Plot, Eastings, both zones combined. Au grades are shown, Resource Model (in green) and Nearest Neighbor estimate (in red). Histogram respresents amount of information available.

14.3.6 Resource Block and Blast Block Model Comparison

The blast holes obtained through July 31st, 2009 were provided in two ASCII files, "bhsw.dat" and "bhne.dat" for the SW and NE zones respectively. There were 352 duplicate values in the SW blast hole data, and 1,176 duplicates in the NE blast hole file. These duplicates were cleaned up and processed for comparison.

The blast hole data were averaged within the 12.5 x 12.5 x 6 m resource model blocks for both the NE and SW zones. The minimum number of composites required was 2, and the averaging was done using a 6.25 x 6.25 x 3 m "search" from the block centroids. This blasthole block model was used as the basis for comparison against the resource model.

Table 1-1 shows the result of the comparison and includes all blocks whose centroids lie in between the original topography and the mined out surface corresponding to Decemeber 31, 2011. The comparison combines tonnages from both the NE and SW zones, although the vast majority of production has come to date from the NE zone. The comparison is shown by bench; globally, when combining all the benches and both zones, the differences are 3%, with the resource model being higher.

Table 14-13 Resource Model - Blasthole Model Comparison

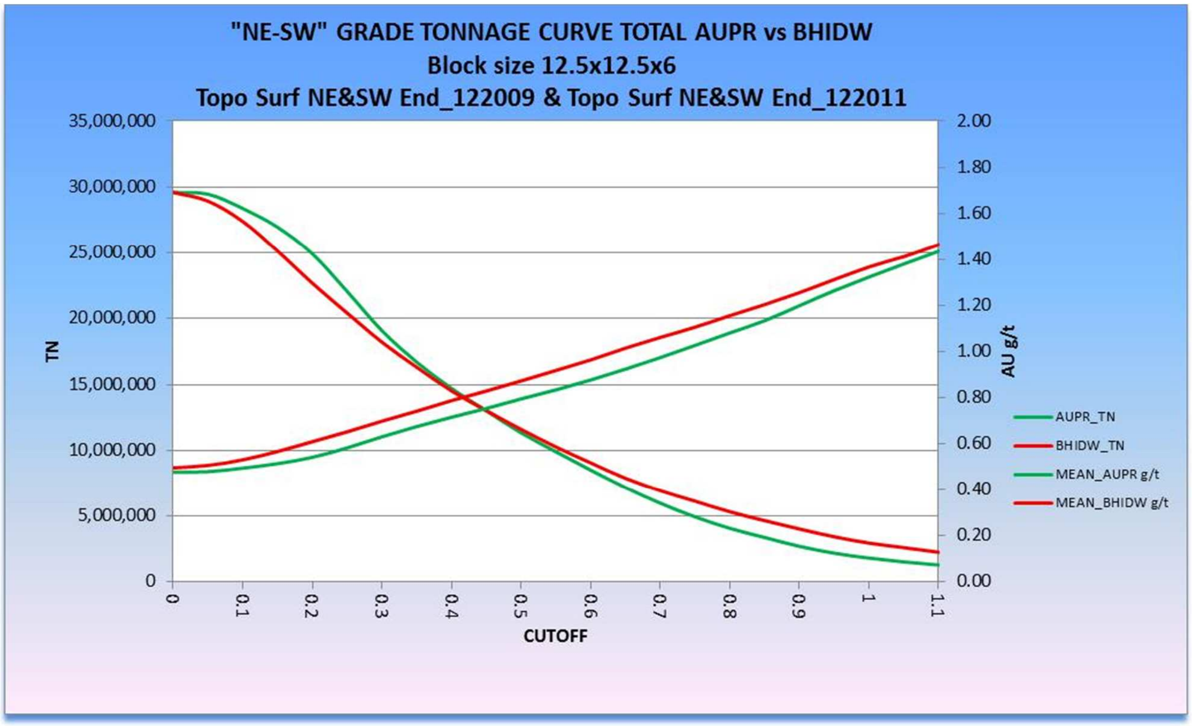
BENCH	Tonnes Model	Mean Model	Tonnes Blast Blocks	Mean Blast Blocks	Metal Model	Metal Blast Blocks	Diff. % Metal (Model-Blast Blocks)
1648	766,220	0.15	830,272	0.16	3,636	4,188	-13%
1642	1598,488	0.17	1,643,051	0.19	8,762	10,169	-14%
1636	2,688,870	0.20	2,431,154	0.19	17,160	15,093	14%
1630	3,310,150	0.23	4,327,027	0.18	24,265	24,568	-1%
1624	3,727,840	0.27	4,421,094	0.20	32,037	28,116	14%
1618	4,165,807	0.41	4,172,905	0.32	54,511	43,267	26%
1612	4,362,509	0.47	4,055,718	0.47	65,234	61,924	5%
1606	4,299,839	0.49	4,113,361	0.53	67,532	69,853	-3%
1600	3,587,002	0.51	3,641,882	0.55	59,092	63,860	-7%
1594	2,380,945	0.55	2,421,159	0.56	42,102	43,350	-3%
1588	1,962,675	0.59	1,984,850	0.56	37,261	35,570	5%
1582	1,771,644	0.60	1,794,338	0.55	34,176	31,931	7%
1576	1,600,452	0.61	1,618,380	0.56	31,141	28,977	7%
1570	1,439,312	0.60	1,447,945	0.57	27,982	26,433	6%
1564	1,137,044	0.62	1,137,190	0.62	22,775	22,822	0%
1558	694,981	0.66	694,937	0.66	14,647	14,717	0%

Comparison Between the 2012 Resource Model and Blast Blocks to December 31, 2011.

The grade-tonnage curves comparing both resource and blast block models globally (i.e., for the NE and SW zones, all benches) are shown in Figure 14-9. The resource model grade-tonnage curve is in green, while the corresponding curve for the blast blocks is in red. Note that the curves are similar, but in general the Resource Model tends to be slightly smoother than the blast blocks. In the 0.35 g/t through 0.6 g/t Au grade cutoffs, the tonnages above cutoff are very similar, with the resource model having between 5 and 10% lower grade.

At a 0.30 g/t cutoff, there are about 5% more tonnes and 10% less grade in the resource model, compared to the blast blocks. This is considered acceptable, since the blast blocks respresent in situ material, and further dilution and ore loss ocurrs at the time of mining. This discrepancy between the two models is in effect an allowance for operational dilution and ore loss.

Figure 14-9 Grade Tonnage Curves NE and SW Zones Combined



Grade-Tonnage Curve, All Benches Combined, NE+SW zones combined. Resource model in green, blast blocks in red.

15 MINERAL RESERVE ESTIMATES

The purpose of this Technical Report is to provide a summary of the Expansion Feasibility Study. The Changchun Gold Design Institute (CGDI) developed mine plans and CSH developed the production schedules using the resource model described in the Section 14. The mineral reserves forming a part of this plan have been validated by NMS. The criteria used to define and validate the reserves are described in this section.

Mineral resources used to develop the Expansion Feasibility Study mine plan were those reported using Micromine. The reserves were reported using solids cut in Minesight® to the as-built topographic surface of January 2011. The mineral reserves reported below are based upon the smoothed pit designs and measured and indicated resources using a gold price of U.S. $1380/ounce. Proven and Probable reserves reported by NMS using the designs of the CGDI are summarized in in Table 15-1. These vary slightly from those scheduled in the mine plan. The differences are not consided significant as they represent less than 1% variance and may be due to differences in software applications.

Table 15-1 Mineral Reserves Summary

NORTHEAST PIT

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	24,293.0	67,585.0	0.65	0.63
Probable	39,664.0	110,608.0	0.60	0.58
Total	**63,957.0**	**178,193.0**	**0.62**	**0.60**

SOUTHWEST PIT

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	7,725.0	21,501.0	0.61	0.59
Probable	4,963.0	13,786.0	0.56	0.54
Total	**12,688.0**	**35,287.0**	**0.59**	**0.57**

TOTAL

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	32,018.0	89,086.0	0.64	0.62
Probable	44,627.0	124,394.0	0.60	0.58
Total	**76,645.0**	**213,480.0**	**0.61**	**0.59**

15.1 General Design Criteria

15.1.1.1 Production Rate

The production rate at CSH Gold Project is currently 30,000 t/d of ore crushed and stacked on the heap leach pad. The Feasibility Study contemplates an increase in throughput to 60,000 t/d.

15.1.1.2 Block Model

The resource block model has been developed for 12.5 m x 12.5 m x 6.0 m blocks. The current mining bench height is 6 m corresponding to the vertical block dimension. With an increase in production rate, CGDI have increased the bench height to 12 m and added 3% dilution and 3% losses.

15.1.2 Pit Optimization

15.1.2.1 General

Pit optimization at the CSH Gold Project has been undertaken by Changchun Gold Design Institute (CGDI) using Micromine software and validated by NMS using Minesight® software. A Lerchs Grossman algorithm has been used by NMS to develop un-smoothed ultimate pit limits used as a guide to develop alternative mine designs and to validate the CGDI designs. This section describes the economic input parameters to pit optimization and the resulting pit design configuration.

The pit optimization input parameters used by CGDI are summarized in the table below.

Table 15-2 CGDI Optimization Parameters

No.	Index	Unit	Opencast
1	Geological grade	g/t	0.61
2	Rock specific gravity	t/m^3	2.7
3	Mining cost	Yuan/t	9.20
4	Stripping cost	$Yuan/m^3$	24.71
5	Mining loss rate	%	3.0
6	Ore dilution rate	%	3.0
7	Beneficiation recovery	%	65
8	Operation cost and tax	Yuan/t	28.65
9	Operation cost for beneficiation	Yuan/t	15.98
10	Operation cost for management and others	Yuan/t	9.67
11	Sales tax	Yuan/t	3.0
12	Economic stripping ratio	m^3/m^3	5.67

The pit optimization input parameters used by NMS to validate the final design limits are summarized in the table below.

Table 15-3 NMS Pit Optimization Parameters

Pit Optimization Input Parameters		
Item	**Units**	
Ore Production Per Annum	t x 1000	20,400
Operating Cost and Fee Estimate		
Mine Waste Contracting	RMB/t waste	9.50
Mine Engineering	RMB/t ore	0.59
Mine Ore Contracting	RMB/t ore	9.50
Mine Ore Subtotal	RMB/t ore	**10.09**
Processing Cost	RMB/t ore	15.98
Pad Construction	RMB/t ore	2.52
G&A Expense	RMB/t ore	4.07
Total Royalties and Compensation	RMB/t ore	5.60
Plant, Pad, G&A & Compensation	RMB/t ore	**28.17**
All Onsite Costs Excluding Waste	RMB/t ore	**38.26**
Operating Cost and Fee Estimate		
Mine Waste Contracting	$US/t Waste	1.505
Mine Engineering	$US/t ore	0.093
Mine Ore Contracting	$US/t ore	1.505
Mine Ore Subtotal	$US/t ore	1.599
Processing Cost	$US/t ore	2.532
Pad Construction	$US/t ore	0.399
G&A Expense	$US/t ore	0.645
Total Royalties and Compensation	$US/t ore	0.887
Plant, Pad, G&A & Compensation	$US/t ore	4.463
All Onsite Costs Excluding Waste	$US/t ore	6.062
Other Parameters		
Recovery		65.0%
Gold Price	RMB/gram	280.03
Gold Price	U.S. $/ounce	1380.00
Refining/off-site costs	U.S. $/ounce	4.68
Net Gold Price	U.S. $/ounce	1375.32
Net Gold Price	U.S. $/gram	44.22
Optimization Cutoff Grade - Fixed Recovery	Au g/t	0.155
Optimization Cutoff Grade - Variable Recovery	Au g/t	0.175
Exchange	**RMB/$US**	**6.3115**

15.1.2.2 Block Models

The resource block models used for the purposes of pit optimization and mine planning have been prepared by Geosystems International Inc. and are described in the resource section. Measured and Indicated resources only have been used for pit optimization by both CGDI and NMS.

15.1.2.3 Wall Slopes

The Changsha Institute of Mining Research (CIMR) completed a geotechnical site investigation and pit slope stability study for the CSH open pit expansion project in 2011. A slope stability report was issued in March 2012 entitled *"Research Report of Stope Slope Stability of Opencast Extension Project of Haoyaoerhudong Gold Deposit in Urat Middle Banner of Inner Mongolia"*

Slope design recommendations were made based on field engineering geological logging, investigation and analysis, field point load test and indoor rock test, such techniques as the limiting equilibrium analysis and finite element analysis. Sope angles were provided for different excavation depths. These recommended slope angles are shown in Table 15-4.

Table 15-4 CIMR Slope Recommendations

Section	Excavation elevation	Slope angle	Section	Excavation elevation	Slope angle
Northern slope of eastern pit	1000m	42º	Northern slope of western pit	1204m	44º
	1096m	42º		1396m	47º
	1204m	44º			
Southern slope of east pit	1000m	42º	Southern slope of western pit	1204m	46º
	1096m	44º		1396m	49～50º
	1204m	44º			

Final slopes of the Northeast Pit north wall is 42 degrees, the Northeast Pit south wall is 44 degrees and the Southwest Pit north wall is 47 degrees and Southwest Pit South wall is 50 degrees

Knight Piésold Ltd. (KP) was requested by CGIR to conduct a high level technical review of the pit slope stability report prepared by CIMR. The main objective was to provide a check on the pit slope recommendations presented in the CIMR report. KP reviewed the English version of the pit slope stability report submitted in April 2012. Additional geotechnical characterization and slope stability analyses were performed to check the stability of the proposed pit walls in compliance with the corresponding North American standards. The recommended pit slope configurations were adjusted as appropriate.

Recommended slope configurations for the proposed expansion pits were adjusted in accordance with the results of the information review, further geotechnical characterization, and additional stability analyses conducted by KP. The recommended bench configurations and inter-ramp angles were defined for the ultimate pit walls. The recommended overall slope angles for the ultimate pit walls have also been calibrated to other large open pit mines of similar size in the world. KP preliminary recommendations for bench geometries and pit slope angles are summarized in Table 15-5.

Table 15-5 Recommended Pit Slope Angles

Pit	Design Sector	Nominal Pit Wall Dip Direction (°)	Max. Wall Height (m)	Sub Sector	Final Wall Geology	Bench Height (m)	Bench Width (m)	Bench Face Angle (°)	Inter-ramp Angle (°)	Max. Inter-ramp Slope Height (m)	Overall Slope Angle (°)
East Pit (Floor at El. 1000 m)	North (Hanging Wall)	145	690	Upper (above El. 1606 m)	Weathered Rocks	18	12	55	**36**	-	40 to 40.5
				Lower (below El. 1606 m)	Granite, Siltstone, Schist		11	65	**43**	200	
	South (Foot Wall)	325	700	Upper (above El. 1660 m)	Weathered Rocks		12	55	**36**	-	43 to 43.5
				Lower (below El. 1660 m)	Limestone, Siltstone, Schist		9	65	**46**	300	
West Pit (Floor at El. 1204 m)	North (Hanging Wall)	165	460	Upper (above El. 1600 m)	Weathered Rocks	18	12	55	**36**	-	40 to 41
				Lower (below El. 1600 m)	Siltstone, Schist		11	65	**43**	200	
	South (Foot Wall)	345	440	Upper (above El. 1618 m)	Weathered Rocks		12	55	**36**	-	46 to 47
				Lower (below El. 1618 m)	Limestone, Siltstone		9	70	**49**	300	

Bench Geometries

Bench geometries were selected to reduce the potential of small-scale discontinuities from forming unstable wedges, blocks, etc., which can affect bench face integrity and reduce the effectiveness of the benches. Given the nature of the sub-vertical structure, the potential failure mode will be toppling in most of the pit walls.

An 18 m high single bench was assumed based on the current mining practices at the CSH Mine. A steep bench face angle of 70° is expected to be achievable for the Footwall Sector of the Southwest Pit. A slightly flatter bench face angle of 65° has been selected for the Footwall Sector of the Northeast Pit considering the significant height of the pit. The 65° bench face angle has also been selected for the Hanging Wall Sectors for both pits, where a potential toppling feature was identified. A flatter bench face angle of 55° is considered to be suitable for slopes in the Weathered Zone.

Inter-ramp Slope Angles

The inter-ramp slope angle is typically determined by the bench geometry and is controlled by large-scale structural features present in the pit walls. The potential for multiple bench instability due to large-scale structural features in the ultimate pit walls is deemed to be unlikely based on the currently available information. The selection of inter-ramp slope angles was largely based on bench geometry. Sufficient bench widths were selected to contain possible raveling and rockfall materials due to toppling features and/or weaker rock mass.

Conclusion

The Northeast pit overall slope recommendations for the Northeast pit are similar for KP and CIMR. However, the CIMR pit slope recommendations for the Southwest pit are significantly more aggressive for the Southwest pit. The Southwest pit ramp location has been placed on the north side of the pit where there have been some slope stability issues. Operations personnel have expressed that the preferred ramp location is on the south side.

15.1.2.4 Metal Price

The metal price used for pit optimization was U.S. $1380/ounce or 280 RMB/gram. Offsite costs were estimated to be US4.68/ounce or 0.95 RMB/gram.

15.1.2.5 Operating Costs

Operating costs are summarized below by NMS for the pit limit validation of the CGDI designs. These costs have been obtained from communication with personnel at the minesite.

Mining

Mine operating costs used for pit optimization were based upon contract mining at U.S. $1.51 per tonne for waste and U.S. $1.60 per tonne for ore. An additional allowance was made for mine engineering. Also, a bench increment of U.S. $ 0.007 per tonne per bench was applied to adjust operating costs with depth in the mine.

Processing

The costs of crushing, trucking to the heap and processing were estimated to be U.S. $2.53 per tonne processed.

General and Administration

General and Administration expenses were estimated to be U.S. $0.65 per tonne processed.

Pad Construction

For the pit optimization studies, an allowance of U.S. $0.40 per tonne processed was made to provide incremental pad capacity based upon an earlier experience for new pad construction.

Exchange Rate

Operating costs were for the most part developed in Chinese currency and converted to a U.S. $ basis using an exchange rate of 6.3115 RMB/U.S. $.

Sustaining Capital

Sustaining capital was assumed to be negligible on a unit cost basis as mining equipment will be contractor owned, the heap leach pads will be a capitalized operating expense allowed for above and the crushing spread capital was considered a standalone investment item.

Local Taxes and Fees

A preliminary allowance of U.S. $ 0.887 per tonne of ore was made for Royalties and Compensation Fees including Mineral Resource Taxes, Water Usage Charges, Reclamation & Soil Fund and Government Fees & Donations. These values are subject to adjustment in the final cash flow analyses.

The 217 Brigade retains a 3.5 percent Net Profits Interest in the project. This interest is not reflected in the optimization cost basis.

15.1.2.6 Process Recovery

Process metallurgical recoveries were provided by KWM Consulting Inc. The P80 crushing size is forecast to be 9 mm. Recovery is expected to vary with grade. The recovery relationship used for the pit optimization is shown below. Recoveries were capped at 75.0% in the block model calculations.

Au Extraction = 26.345 x (Au Feed Grade, g/t) + 52.603

15.1.2.7 Cutoff Grade

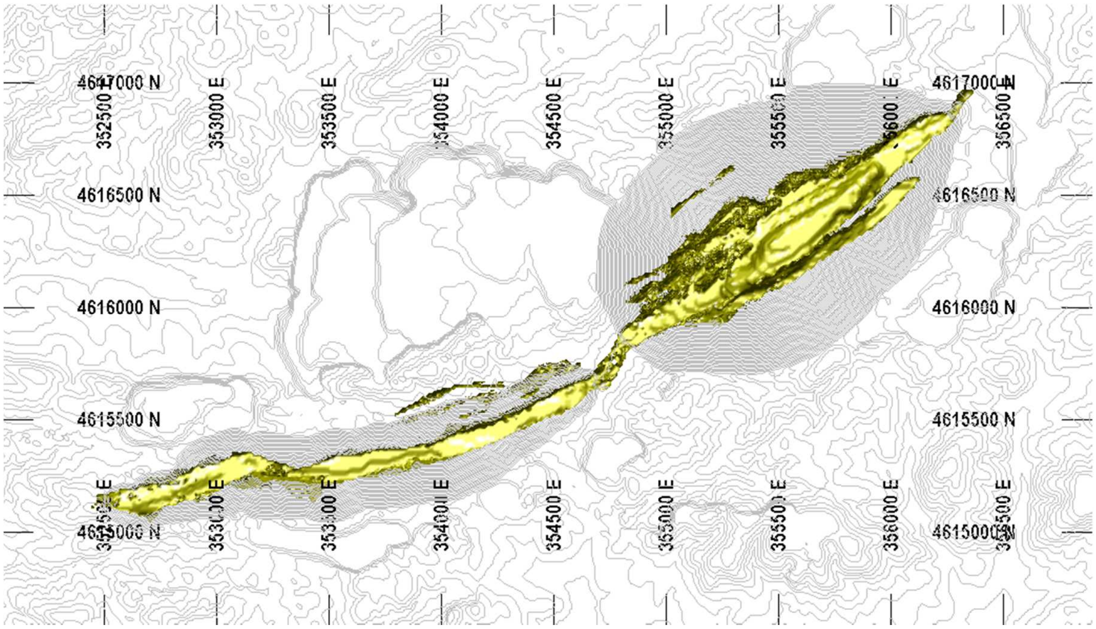
Metallurgical recovery is a function of the ore grade. As grade declines so does the recovery of gold. The onsite costs of Plant, Pad, G&A and Compensation fees excluding mining costs total $4.46/t processed. This ore value corresponds with a 0.175 g/t Au grade at 57.2% recovery.

The Cangchun Gold Design Institute (CGDI) has selected a cutoff grade of 0.28 g/t for scheduling. Pit limits have been developed using Minesight to reflect both a $4.46/t NSR cutoff and a 0.28 g/t cutoff grade.

15.1.2.8 Pit Limits

The ultimate pit limits were generated using a Lerchs Grossman graph theory based algorithm. All material was assumed to be processed by crushing followed by leaching. Economic parameters are summarized in the sections above. In addition, block values were discounted to reflect the impact of the time value of pit development. The discount rate applied was 8% with a sinking rate of 10 benches per year. The pit limits were defined for measured and indicated resources. A series of 20 nested pits were generated for both cases using revenue factors between 0.20 and 1.00. The Ultimate pit limit is shown in Figure **15-1.**

Figure 15-1 Unsmoothed Pit Limit



The unsmoothed in-pit resources are summarized in Table 15-6 and Table 15-7 for the 20 nested pits generated for Case 1 - U.S. $4.46 NSR Model and Case 2 - 0.28 g/t Cutoff Restricted Model.

Table 15-6 In-Pit Resources Case 1

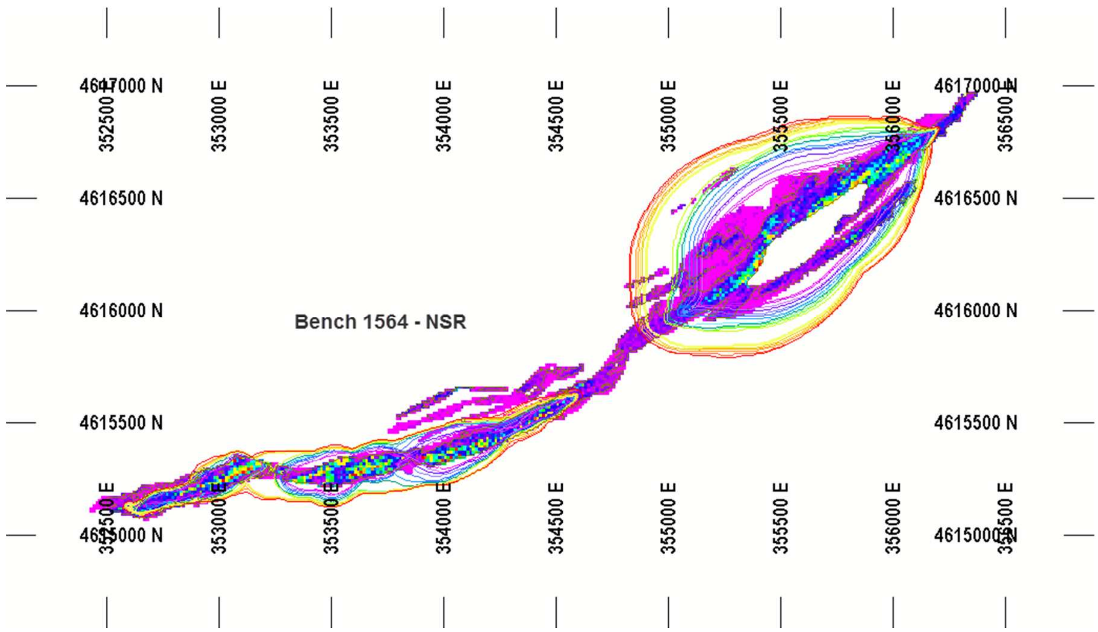
Pit	Factor	Ore	Waste	Total	Incremental	SR	Grade	NET	Years
		t x 1000	t x 1000	t x 1000	SR		Au g/t	$/tonne	
1	0.200	110,715	61,168	171,883		0.55	0.560	17.13	5.4
2	0.242	118,199	71,705	189,904	1.41	0.61	0.556	17.02	5.8
3	0.284	132,986	98,783	231,769	1.83	0.74	0.554	16.95	6.5
4	0.326	142,577	118,381	260,958	2.04	0.83	0.552	16.88	7.0
5	0.368	155,118	150,779	305,897	2.58	0.97	0.552	16.87	7.6
6	0.411	161,212	167,036	328,248	2.67	1.04	0.551	16.83	7.9
7	0.453	169,991	191,016	361,007	2.73	1.12	0.549	16.75	8.3
8	0.495	182,614	225,195	407,809	2.71	1.23	0.544	16.59	9.0
9	0.537	185,970	235,659	421,629	3.12	1.27	0.543	16.56	9.1
10	0.579	194,329	263,079	457,408	3.28	1.35	0.541	16.48	9.5
11	0.621	198,335	276,740	475,075	3.41	1.40	0.540	16.43	9.7
12	0.663	205,210	302,994	508,204	3.82	1.48	0.538	16.39	10.1
13	0.705	227,990	389,317	617,307	3.79	1.71	0.533	16.22	11.2
14	0.747	241,366	444,098	685,464	4.10	1.84	0.531	16.16	11.8
15	0.789	248,738	476,038	724,776	4.33	1.91	0.531	16.13	12.2
16	0.832	253,072	494,308	747,380	4.22	1.95	0.530	16.10	12.4
17	0.874	256,745	511,132	767,877	4.58	1.99	0.529	16.07	12.6
18	0.916	262,115	536,644	798,759	4.75	2.05	0.528	16.05	12.8
19	0.958	268,146	566,010	834,156	4.87	2.11	0.527	16.02	13.1
20	1.000	271,674	584,304	855,978	5.19	2.15	0.527	16.00	13.3
Check Reserves at 0.175 COG									
20	1.000	272,880	583,098	855,978		2.14	0.525	15.95	13.4
Check Reserves at 0.28 COG									
20	1.000	209,769	646,210	855,979		3.08	0.616	18.99	10.3
Check Incremental Reserves at 0.175 to 0.280 COG									
20	1.000	63,111	(63,112)				0.226	5.855	3.1

Table 15-7 In-Pit Resources Case 2

Pit	Factor	Ore	Waste	Total	Incremental	SR	Grade	NET	Years
		t x 1000	t x 1000	t x 1000	SR		Au g/t	$/tonne	
1	0.200	87,719	77,741	165,460		0.89	0.638	19.79	4.3
2	0.242	93,755	89,646	183,401	1.97	0.96	0.634	19.67	4.6
3	0.284	103,541	115,308	218,849	2.62	1.11	0.635	19.69	5.1
4	0.326	113,063	141,564	254,627	2.76	1.25	0.632	19.59	5.5
5	0.368	123,173	176,116	299,289	3.42	1.43	0.632	19.58	6.0
6	0.411	127,498	192,031	319,529	3.68	1.51	0.631	19.55	6.2
7	0.453	133,537	216,215	349,752	4.00	1.62	0.631	19.53	6.5
8	0.495	141,888	249,796	391,684	4.02	1.76	0.628	19.42	7.0
9	0.537	146,206	266,945	413,151	3.97	1.83	0.625	19.34	7.2
10	0.579	152,341	295,246	447,587	4.61	1.94	0.623	19.27	7.5
11	0.621	155,572	311,138	466,710	4.92	2.00	0.622	19.23	7.6
12	0.663	158,685	326,474	485,159	4.93	2.06	0.621	19.19	7.8
13	0.705	164,449	360,183	524,632	5.85	2.19	0.621	19.18	8.1
14	0.747	185,494	486,160	671,654	5.99	2.62	0.619	19.12	9.1
15	0.789	189,910	512,377	702,287	5.94	2.70	0.619	19.10	9.3
16	0.832	193,068	532,914	725,982	6.50	2.76	0.619	19.09	9.5
17	0.874	197,517	561,671	759,188	6.46	2.84	0.618	19.07	9.7
18	0.916	200,443	581,466	781,909	6.77	2.90	0.618	19.05	9.8
19	0.958	204,915	612,884	817,799	7.03	2.99	0.617	19.04	10.0
20	1.000	207,916	634,279	842,195	7.13	3.05	0.616	19.02	10.2

The overall inpit tonnage is very similar in both Case 1 and Case 2 indicating that the marginal material between 0.175 and 0.28 g/t has little impact on the pit limit. The final pit limits and nested pits for Case 1 are shown in plan view in Figure 15-2.

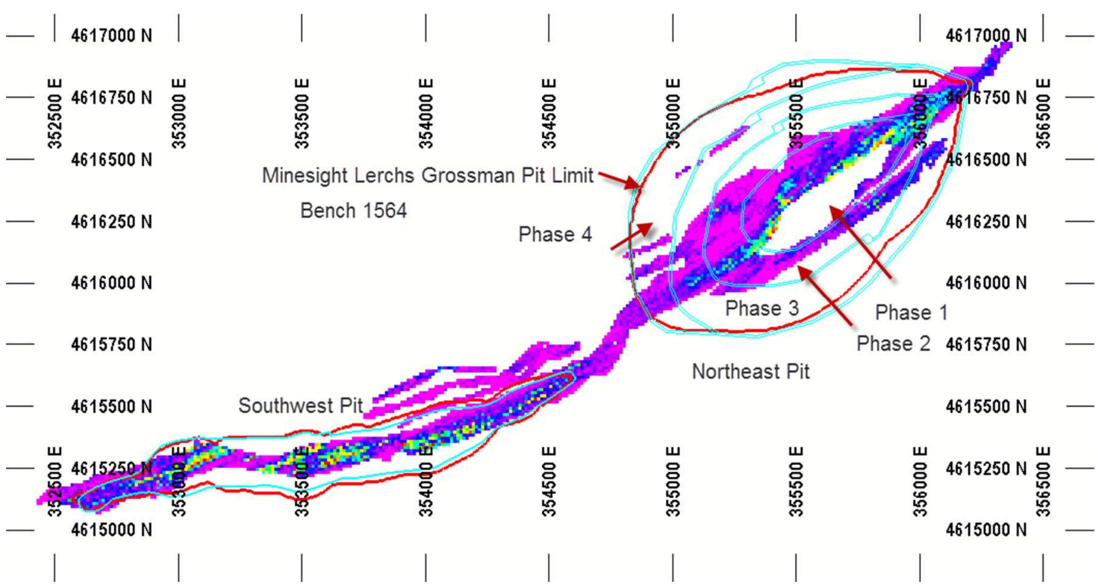
Figure 15-2 Bench Plan 1564 Nested Pits



15.1.3 MINE DESIGN

The mine design developed by CGDI incorporates 4 phases of pit expansion at the Northeast Pit and 1 phase in the Southwest Pit. These phases are shown superimposed on the unsmoothed validation pit generated by NMS for the 0.28 cutoff grade on Bench 1564.

Table 15-8 Bench 1564 Pit Phases



Mineable reserves by phase are summarized in Table 15-9. These reserves have been reported by NMS using solids generated from pit phase designs provided by CGDI. Minor variances from the mine plan are noted and are believed to be due to software issues and the quality of the design solids.

Table 15-9 Mineable Reserves by Phase

NORTHEAST PHASE 1 PIT

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	10,504.0	29,115.0	0.68	0.66
Probable	2,007.0	5,584.0	0.52	0.50
Total	**12,511.0**	**34,699.0**	**0.66**	**0.64**
Inferred	168.0	468.0	0.47	0.45

NORTHEAST PHASE 2 PIT

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	8,986.0	25,067.0	0.66	0.64
Probable	7,773.0	21,661.0	0.57	0.55
Total	**16,759.0**	**46,728.0**	**0.62**	**0.60**
Inferred	979.0	2,722.0	0.38	0.37

NORTHEAST PHASE 3 PIT

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	4,114.0	11,479.0	0.55	0.53
Probable	13,820.0	38,549.0	0.62	0.60
Total	**17,934.0**	**50,028.0**	**0.60**	**0.58**
Inferred	4,691.0	13,086.0	0.45	0.43

NORTHEAST PHASE 4 PIT

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	691.0	1,928.0	0.53	0.51
Probable	16,076.0	44,848.0	0.62	0.60
Total	**16,767.0**	**46,776.0**	**0.61**	**0.59**
Inferred	1,485.0	4,141.0	0.53	0.52

NORTHEAST TOTAL

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	24,295.0	67,589.0	0.65	0.63
Probable	39,676.0	110,642.0	0.60	0.58
Total	**63,971.0**	**178,231.0**	**0.62**	**0.60**
Inferred	7,323.0	20,417.0	0.45	0.44

SOUTHWEST PIT

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	7,725.0	21,501.0	0.61	0.59
Probable	4,963.0	13,786.0	0.56	0.54
Total	**12,688.0**	**35,287.0**	**0.59**	**0.57**
Inferred	382.0	1,045.0	0.47	0.46

TOTAL

Class	bcm x 1000	t x 1000	Insitu Au g/t	Diluted Au g/t
Proven	32,020.0	89,090.0	0.64	0.62
Probable	44,639.0	124,428.0	0.60	0.58
Total	**76,659.0**	**213,518.0**	**0.61**	**0.59**
Inferred	7,705.0	21,462.0	0.46	0.44

16 Mining Methods

16.1 Background

The CSH open pit mine is currently mined by a contractor, China Railway 19th Bureau. Mining takes place on 6 m benches using percussion drills, excavators, wheel loaders, and offroad trucks of the 40 t class that are currently being increased to 100 t class trucks.

With the proposed expansion of the processing facilities to 60,000 t/d the CGDI have proposed that the mine will operate on 12 m benches using rotary blasthole drills, 26 m^3 and 16 m^3 hydraulic excavators and 220 t haulage trucks. CGDI have proposed that ore will be mined on a 6 m bench at the contact of the waste on the hanging wall and footwall.

Current mine operations are shown in Figure 16-1.

Figure 16-1 Mine Operations

16.2 MINE DEVELOPMENT PHASES

The Northeast pit will be mined in 4 phases as shown in the bench plan and section below. Phase 1 through 3 are radial expansions of the pit. Phase 4 willexpand the pit to the northwest and to depth. A single spiral ramp will be used to access the pit bottom linking to the Phase 3 ramp on the south side of the pit. The Southwest Pit will be mined in 1 phase.

Figure 16-2 Development Phases Bench Plan 1612

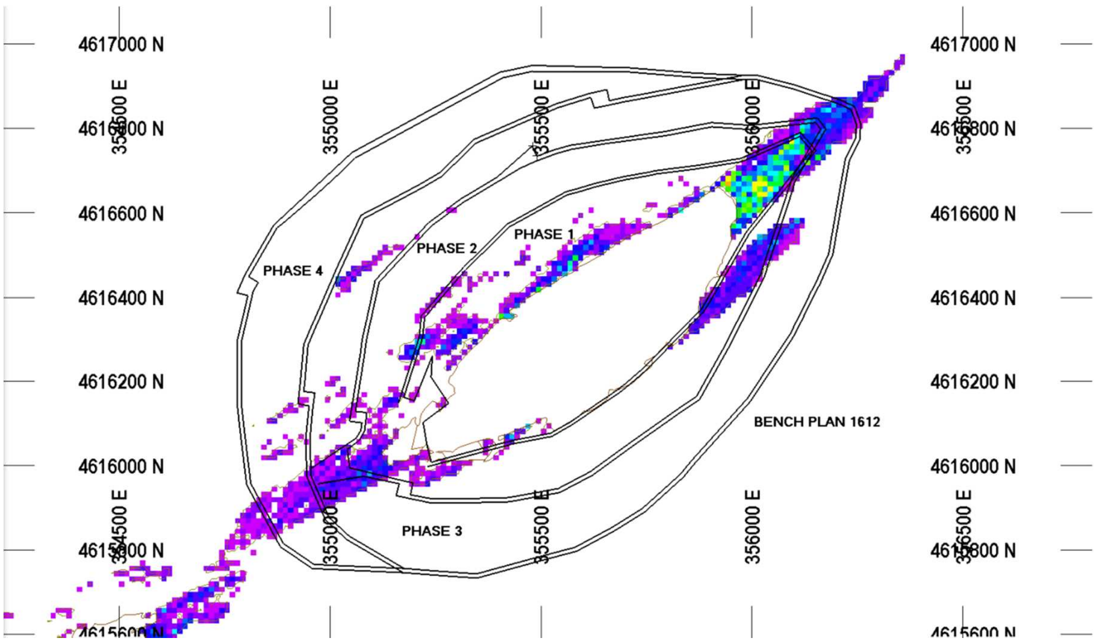
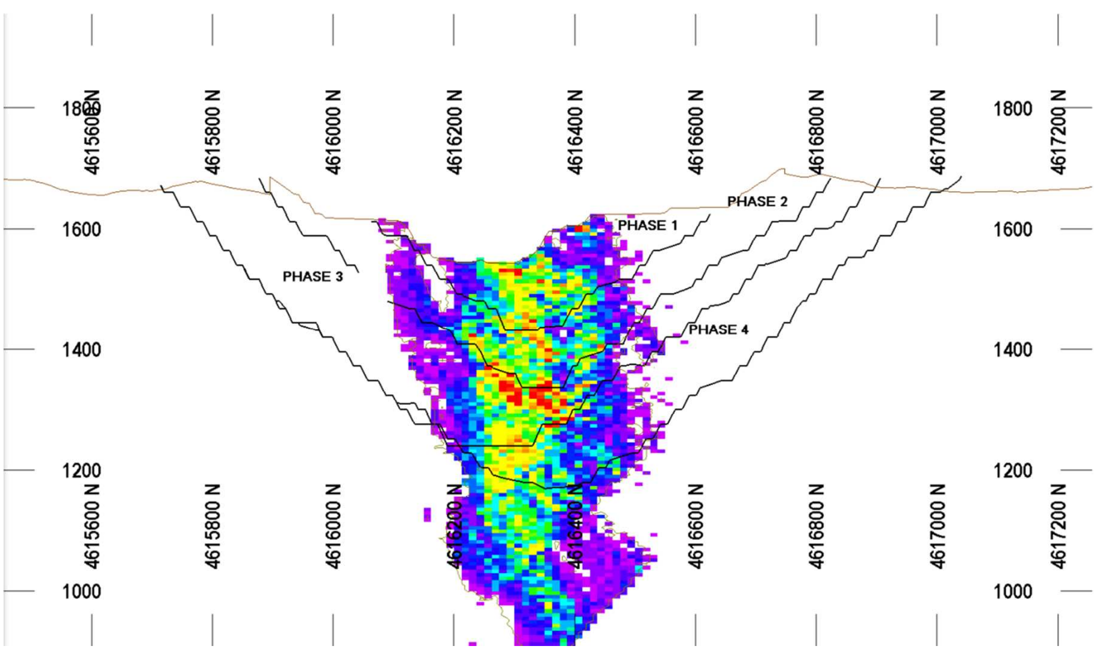


Figure 16-3 Development Phases Section 355500



16.3 Production Schedule

Mine production will be increased from 60 million t/a in 2012 to 105 million t/a in 2016. Mining operations will be completed in 2023 and leaching will continue until 2027.

The mine production schedule is summarized in Figure 16-4, Figure 16-5 and Table 16-1.

Figure 16-4 Material Movement Schedule

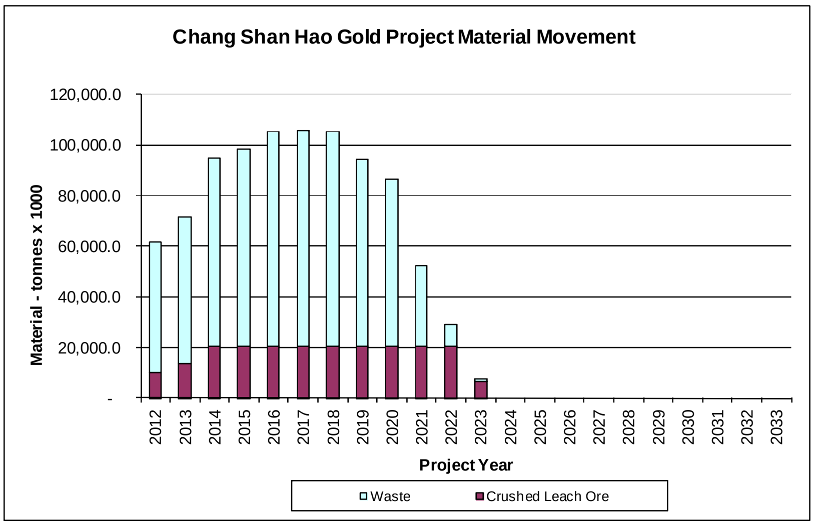


Figure 16-5 Metal to Dore

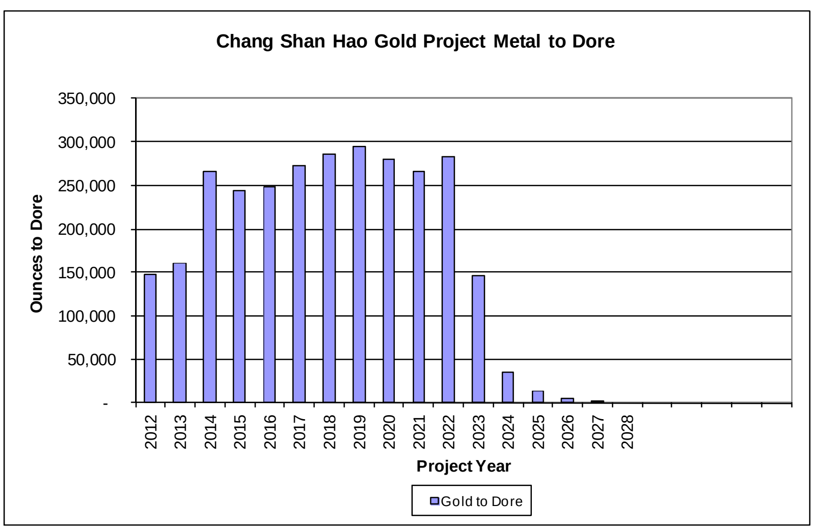
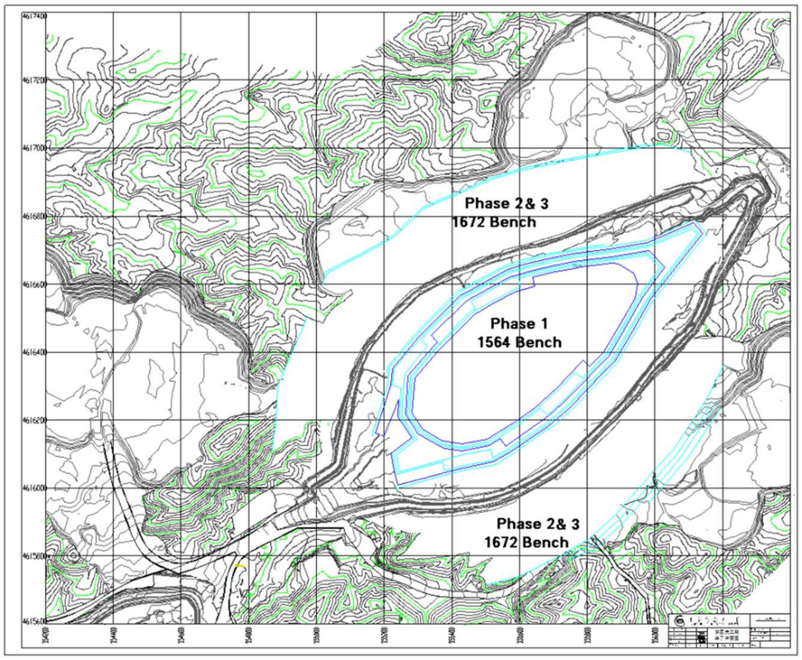


Table 16-1 Mine Production Schedule

Period		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	Total
TOTAL																		
Ore Production	t x 1000	10,217	13,582	20,396	20,433	20,377	20,380	20,378	20,430	20,380	20,453	20,446	6,776					**214,249.5**
Gold Grade	g/t	0.501	0.572	0.603	0.518	0.541	0.607	0.633	0.648	0.604	0.568	0.623	0.731					**0.592**
Gold Grade	g/t	0.501	0.572	0.603	0.518	0.541	0.607	0.633	0.648	0.604	0.568	0.623	0.731	-	-	-	-	**0.592**
Waste	t x 1000	51,397	58,129	74,482	78,082	85,200	85,730	84,873	74,107	65,957	31,661	8,570	901					**699,089.1**
Total Material	t x 1000	**61,613.7**	**71,711.2**	**94,878.5**	**98,515.6**	**105,577.4**	**106,109.5**	**105,251.6**	**94,537.0**	**86,336.5**	**52,114.4**	**29,016.3**	**7,677.0**	**-**	**-**	**-**	**-**	**913,338.6**
Strip Ratio		5.03	4.28	3.65	3.82	4.18	4.21	4.16	3.63	3.24	1.55	0.42	0.13	-	-	-	-	3.26
Ounces to Process	Ounces	164,532	249,818	395,281	340,338	354,553	397,975	414,639	425,655	395,866	373,619	409,363	159,284	-	-	-	-	**4,080,924**
Ounces Recoverable	Ounces	115,172	174,873	276,697	238,237	248,187	278,583	290,247	297,958	277,107	261,533	286,554	111,499	-	-	-	-	**2,856,647**
Production from Existing Heap	Ounces	**56,492**	**6,837**	**17,453**	**9,492**	**3,318**	**1,911**											**95,503.8**
Ounces New Production	Ounces	91,480	153,871	247,939	235,088	245,290	271,221	285,812	294,478	280,045	265,929	283,072	146,359	35,699	13,086	5,686	1,593	**2,856,647**
Ounces Produced	Ounces	147,972	160,709	265,393	244,580	248,609	273,132	285,812	294,478	280,045	265,929	283,072	146,359	35,699	13,086	5,686	1,593	**2,952,151**

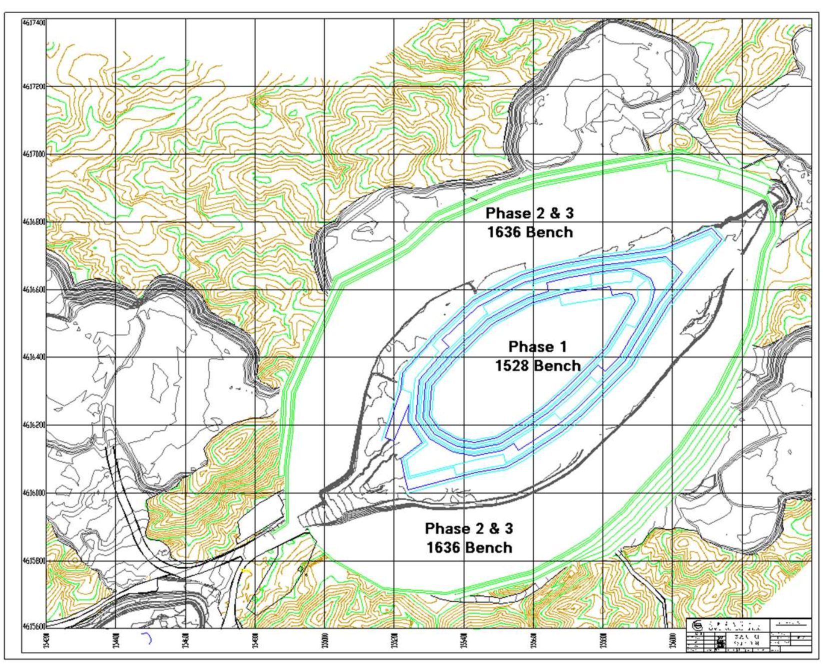
The Northeast Pit mine development to 2012 is shown in Figure 16-6. A reduced Phase 1 Pit is developed while Phase 2 & 3 stripping is initiated on the north and south side of the open pit.

Figure 16-6 Northeast Pit Development 2012



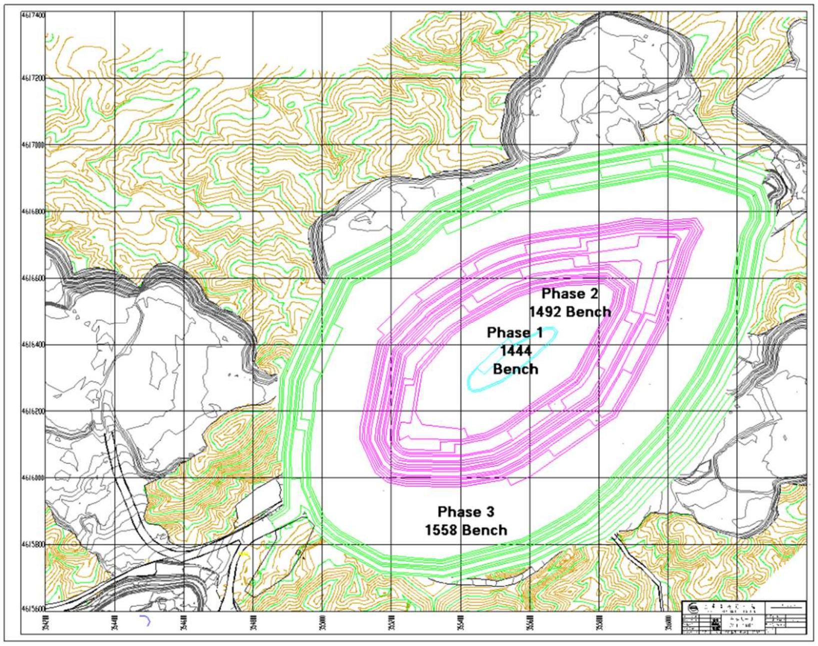
The Northeast Pit mine development to 2013 is shown in Figure 16-7. A reduced Phase 1 Pit is deepened while Phase 2 & 3 stripping continues on the north and south side of the open pit.

Figure 16-7 Northeast Pit Development 2013



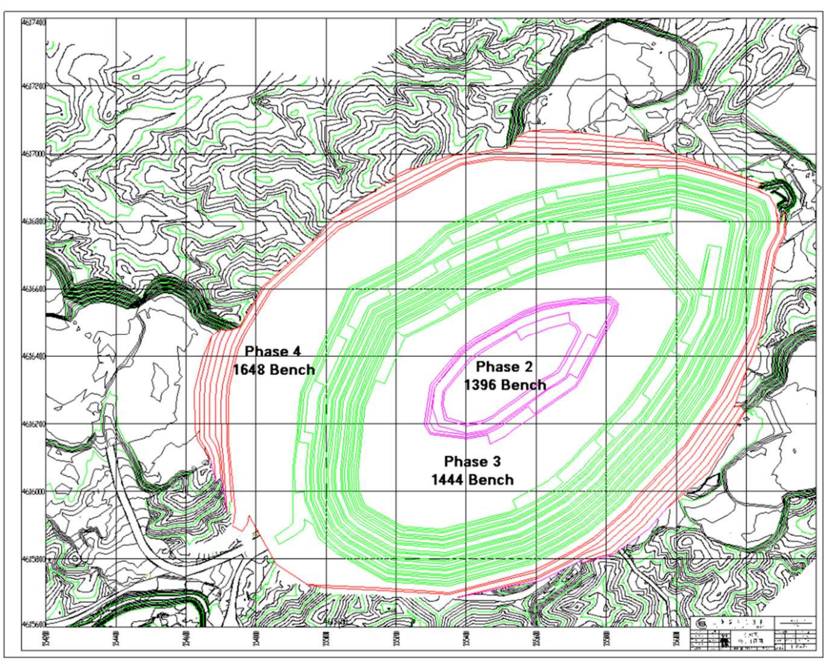
The Northeast Pit mine development to 2015 is shown in Figure 16-8. Phase 1 Pit has nearly been completed while Phase 2 developent accelerated to depth and Phase 3 stripping continues on the north and south side of the open pit.

Figure 16-8 Northeast Pit Development 2015



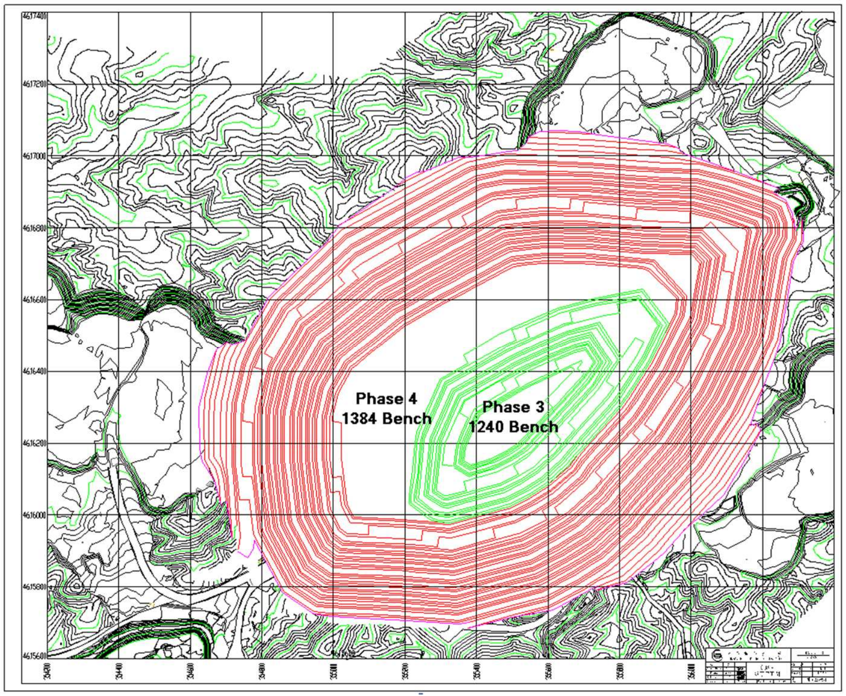
The Northeast Pit mine development to 2017 is shown in Figure 16-9. Phase 2 Pit has nearly been completed while Phase 3 is the primary source of ore and waste is stripped in Phase 4.

Figure 16-9 Northeast Pit Develpment 2017



The Northeast Pit mine development to 2020 is shown in Figure 16-10. Phase 3 has been completed and Phase 4 becomes the primary source of ore.

Figure 16-10 Northeast Pit Development 2020

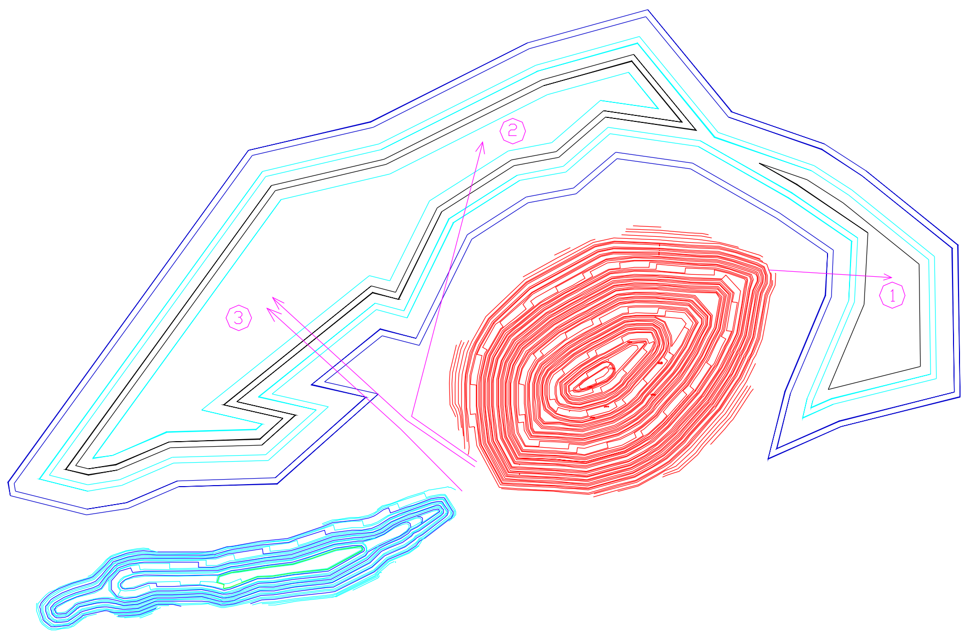


The southwest pit is mined at a relatively constant rate from 2012 through 2023 providing supplemental ore feed and providing an alternative mining area.

16.4 WASTE DUMPS

The waste dump will be expanded to the east, north and west of the open pits as shown in Figure 16-11. The overall length of the dump will be 6.2 km. Area 1 will have an elevation of 1740. Area 2 will have a final elevation of 1780 and Area 3 will be filled to 1820 m elevation.

Figure 16-11 Waste Dump Location



16.5 MINE OPERATION AND EQUIPMENT

16.5.1 MINING METHOD

Open pit mining will be employeed using large scale drills, excavators and offroad trucks. The mining will continue with contractor forces providing equipment and employees to operate and maintain the mining equipment. The equipment fleet described in the following section has been proposed by CGDI. No capital costs have been estimated for this fleet.

16.5.2 EQUIPMENT SELECTION

16.5.2.1 Mining Fleet

The equipment fleet requirement proposed by CGDI is summarized in Table 16-2

Table 16-2 : Expansion Plan Major Mining Equipment

Name	Maximum number
YZ-55 rotary drill	10
25 m^3 electric hydraulic excavator	3
16 m^3 electric hydraulic excavator	3
220 t dump truck	37
100 t dump truck	32
320 Hp bulldozer	4
165 mm hydraulic drill	2
Hydraulic rock breaker	2
50 t water truck & sprinkler	4
Grader	4
ZL90 front loader	4

16.5.2.2 Drilling

Rotary 311 mm blasthole drills have been proposed for production blasting of ore and waste. The proposed 8 m x 9 m drill patterns with 2 m of subgrade and 3% re-drill rate will result in 60.0 m^3/m of drilling. Initially 6 production drills will be required. The maximum fleet size will be 10 drills by the year 2016.

Smaller 165 mm drills will be used for wall control patterns and narrow mining areas such as haulage road development. Hydraulic MB1700 breakers will be mounted in PC300 hydraulic excavator for oversize reduction. Two hydraulic breakers will be required with a combined capacity of 450 t/shift.

The production drill proposed by CGDI is the YZ55 Blasthole Drill shown inFigure 16-12.

Figure 16-12 Blasthole Drill

YZ-55 Blast Hole Drill

16.5.2.3 Blasting

Blasting will be carried out using emulsion type explosives initiated using non-electric methods. Explosives will be delivered to the borehole using 15 tonne trucks. It has been estimated that 6 units will be required.

Additional magazine and bulk explosives storage facilities will be required.

16.5.2.4 Loading

The primary loading fleet will consist of 25 m^3 electric hydraulic and 16 m^3 diesel hydraulic front shovels. The 25 m^3 shovels will be loading 240 t class trucks and the 16 m^3 shovels will be loading 100 t trucks. It is expected that the annual capacity of the 25 m^3 shovels will be 22 million tonnes each and the 16 m^3 shovels will be 14 million tonnes each. The peak shovel requirement will be 3 - 25 m^3 units and 3 - 16 m^3 units.

16.5.2.5 Hauling

The haulage fleet will include 220 t and 100 t trucks. The larger trucks will be matched with the 25 m^3 shovels in waste and the smaller trucks will be matched with the 16 m^3 shovels in ore. The truck fleet will peak in 2018 at 37 - 220 t units and 32 - 100 t units.

16.5.2.6 Support Equipment

Support equipment will include front end loaders and excavators for slope maintenance, shovel cleanup and miscellaneous clean-up activies. Track dozers will be used on the dumps and in the pit pushing backbreak and maintaining bench grade. It has been assumed that 4 - 320 hp units will be required.

Road maintenance will be carried out using 4 - 50 t water trucks, 3 - vibrating compactors and 4 - graders.

17 RECOVERY METHODS

Operations at the CSH mine commissioned with run-of-mine oxide ore placed on the leach pad in April 2007 with the first gold poured in July 2007. As the mine developed into the transition and fresh ore (sulphide) zones there was a noticeable drop in gold recovery and in 2008 metallurgical testing (Report Section 13) was initiated that led to the installation of a 3-stage ore crushing circuit to crush the ore to -9mm before feeding to the heap leach pad. The crushing circuit was fully operational in April 2010 with the capacity of the leaching and gold recovery facilities increased from a nominal 20,000 t/d to 30,000 t/d.

China Gold International has completed a feasibility study to evaluate the potential to increase the mining rate at the CSH mine to 60,000 t/d. For the expansion the plans are, for the most part, to duplicate the existing facilities. Some of the flowsheet designs and equipment selections will be modified based on the performance of the existing facilities.

A review of the expansion project including a visit to the CSH mine site was completed from May 20, 2012 to May 24, 2012. The primary purpose of the visit to the mine was to review the existing operations and to get a better understanding of the proposed flowsheet changes.

A review of the operating data confirmed that the crushing and heap leach facility has been operating at the design throughput rate of 30,000 t/d.

17.1 PROCESS FLOWSHEET

The main processes applied to the heap leaching of the ore at the CSH mine are consistent with typical heap leach operations and consist of:

- Mining ore and waste
- 3 stages of crushing to 80%, -9mm
- Ore placement on CN leach pad
- Recovery of pregnant CN solution
- Carbon –in-column (CIC) Au recovery from solution
- Stripping and electrowinning
- Gold smelting to recover doré bar

The proposed expansion incorporates essentially a duplicate processing facility to the existing 30,000 t/d plant. Crushed ore from each crushing plant will be delivered independently to the heap leach pad. The current plans are also to operate independent pregnant solution recovery facilities; carbon columns, strip circuit and electrowinning cells. Sludge from the expansion electrowinning cells will be processed in the same refinery facilities by managing the operating schedule.

17.2 PLANT DESIGN

The preliminary flowsheets and process description that have been completed by the Chinese Design Institute have identified that for the most part the expansion will be a duplicate of the existing processing facilities. There will be some equipment changes in the process flowsheets and equipment selections based on the operations and maintenance experience that has been generated from the existing operations. The main recommendations for changes to be incorporated into the expansion include:

- Primary Crushing*:*
  The existing primary crushing facilities consist of 2 operating jaw crushers. Due to the size and slabby nature of the blasted ore the mine trucks dump the ore across a fixed grizzly. A rock breaker mounted on a tracked excavator is used to maneuver the ore through the grizzly breaking

the ore as required. Ore is reclaimed from the truck dump pocket by an apron feeder that discharges the ore to a vibrating grizzly feeder. The undersize from the vibrating grizzly bypasses the primary jaw crusher while the grizzly oversize drops through the jaw crushers. These products are combined and delivered to the secondary cone crushers.

The existing primary crusher circuit is very complex and requires multiple equipment components, multiple transfer points and multiple crushers to achieve the design capacity. For the increased throughput the flowsheet has been changed to include a primary gyratory crusher and to add a stockpile storage capacity between the primary crusher and secondary crusher circuits.

With both crushing plants operating independently the jaw crushers will still be required to achieve production in the existing circuit.

- Secondary and Tertiary Crushing:

  The existing plant is designed with 2 open circuit Metso HP800 secondary standard cone crushers and 4 closed circuit Metso HP800 tertiary cone crushers. The operation of the cone crushers has not been a problem in the existing operations so to double the capacity the expansion will use the same number and size for both the secondary and tertiary crushers.

  In the existing plant the Metso vibrating banana screens were a significant problem and eventually the operations and maintenance team sourced replacement screens from within China. The main issues were with the premature failure of the side plates. For the expansion it is understood that the number of screens will be increased and instead of banana screens, conventional screens will be used.

  The conceptual design concepts also includes for the installation of fewer transfer conveyors and for increasing the belt width. With the current belt speed and multiple transfers the maintenance costs are very high.

- CIC Tanks

  The original design of the CIC circuits included 2 trains of 6, 3.8mΦ x 2.9m CIC tanks. When the existing 3 stage crushing circuit was added for the fresh ore a single train of 5, 7.5mΦ x 8m CIC tanks was added. The larger tanks have not provided the same kind of performance as the smaller original tanks in terms gold loading to feed strip or Au solution losses that return to the heap. For the expansion project the intention is to install 4 parallel trains of 6 CIC columns to match the originals.

  Upon review of the existing facilities it was determined that there is insufficient flow to the large carbon columns to operate them with sufficient carbon bed expansion to achieve typical carbon column efficiencies.

  The proposed expansion with 4 parallel trains of smaller carbon columns followed by dedicated stripping and electrowinning is not considered cost effective for capital or operating costs and it is recommended that another look at equipment sizing (carbon columns and strip vessels) and comparing the proposed expansion circuit to industry practice should be considered.

Electrowinning Cells

The initial strip and electrowinning circuit was designed and supplied by Summit Valley (SVL) from Salt Lake City. Apparently there were a number of problems with solutions flashing in the atmospheric electrowinning cells that were supplied by SVL. CSH successfully replaced the atmospheric electrowinning cells with pressurized electrowinning cells to alleviate this problem. In reviewing the performance of the stripping and electrowinning cicuit indications were that the stripping cycle was taking between 15 and 16 hours to complete. Typically the strip cycle should be between 8 and 10 hours. The primary influence in the efficient operation of the strip cycle is the single pass efficiency of the electrowinning cell. A longer cycle increases the operating costs of the circuit. There may be potential cost benefits to reviewing the equipment selection for the expansion flowsheet.

17.3 UTILITIES

To support the expansion of the heap leaching and solution processing facilities upgrades will be required to the process infrastructure and utilities. For the CSH expansion project changes will be required to the water supply system and to the electrical supply.

- Water supply

  The expansion of the local water storage facilities has been completed. For the mine expansion project an additional water pumping station and pipeline will need to be installed. The planned changes to the water pumping system include the addition of a multi-stage pump and the installation of a 7 km pipeline.

- Electrical Power Supply

  The existing power supply to site is via a 35 KV power line from an 110 KV power station located approximately 30 km from the mine site. The equipment installed power following the expansion project will be about 62 MW and the existing electrical system will be insufficient to meet the supply requirements. The expansion plans include the extension of a 110 KV power line from the power station to the mine site. A new substation will be designed for the mine site to effect power distribution to the existing facilities and the expansion facilities.

18 PROJECT INFRASTRUCTURE

The following information was gathered from on site observations and interviews with relevant mine personnel; reference to the Feasibility Study completed by the Changchun Gold Design Institute in September 2012 for the Expansion Phase and where appropriate, cross referenced to the Jinshan Throughput Expansion Update Technical Report February 5, 2010.

18.1 LOGISTICS

The mine site is located approximately 126 kilometers northwest of the city of Baotou, an industrial city in the Inner Mongolia Autonomous Region of northern China. The site is accessed by 210 km of all weather road from Baotou with a driving time of about 3 hours. Baotou is an industrial city, a regional supply centre and has a major steel making industry. Baotou is serviced daily with commercial airline flights from Beijing

The Guyang-Hailiutu Highway passes just south of the mine property. The closest community, Xin-Hu-Re Sumu is about about 10 km from the mine and has an 8 bed clinic.

The Baotou-Lanzhou Railway passes through the regions approximately 30 km from the mine.

The Expansion Project has included for the purchase of 6 hectares of land to improve the access around the community of Xin-Hu-Re Sumu. Operation consumables and product will continue to follow the established road transportation protocols.

The existing road system within the property limits will be expanded to provide access to the new infrastructure and process facilities for the Expansion Phase.

18.2 WATER SUPPLY

The operation currently has 5 – 10 to 40 m deep wells and 1 high pressure secondary pumping station. A new 1 million m^3 reservoir has been built by the government and stocked with fish for recreational use. The reservoir is now managed and maintained by the mine operations. Two additional wells have been prepared within the reservoir containment area for the Expansion Project. Water is pumped to a new 3,000 m^3 head tank through a 7 km pipeline. Approximately 3.9 km of additional pipe line will be required by the expansion project.

An onsite chlorination plant provides potable water.

Total fresh water consumption after the expansion project is estimated at 3,556 m^3 per day and the circulating water within the plant is estimated at 6,873 m^3 per day.

18.3 HEAP LEACH PAD

Ore will continue to be placed on the existing heap leach pad for another 2 years after which all remaining ore will be placed on a second heap leach pad which will be located to the east of the existing pad. The second heap leach pad will cover an area of 133 ha, reach an elevation of 116 m and have a capacity of 75 million m^3. The remaining ore is estimated at 106 million m^3. Once the second pad has reached its final height, the plan is to merge the two pads by placing the balance of ore in the valley between the two pads. The valley capacity is estimated at 40 million m^3.

18.4 Ponds

The existing pregnant solution pond, downstream of heap leach pad, has a capacity of 20,000 m^3. The expansion project will require a second 56,000 m^3 pregnant solution pond.

Downstream of the existing pregnant solution pond there are 2 existing event ponds with a total capacity of 80,000 m^3. A third 120,000 m^3 event pond is currently under construction with completion expected by mid 2012, for a total event pond capacity of 200,000 m^3. The event ponds have double HDPE liners as well as a 30 cm clay liner. The three event ponds will provide 62 hours of retention time. The expansion project will build an additional 180,000 m^3 event pond downstream of the second pregnant solution pond.

18.5 Power Supply

The mine is currently supplied by a 35 KV overhead line from the 110 KV substation at Chulutu, approximately 30 kilometers from the mine. The expansion project will build a new 110 KV line from Wulate County and a 110/35/10 KV step down substation at the mine site. Once the new power supply is commissioned, the existing 35 KV line, at the discretion of the power supply company, will be either decommissioned or left as a standby power supply.

10 KV substations will distribution power for the expansion project, one substation for each pit, primary crushing, secondary crushing/screening and the refinery.

10 KV overhead lines will distribute power around the pits.

A new 6 KV power line will feed the expanded secondary water supply booster pump.

The refinery will have two new 2,400 k Watt, 10 KV diesel generators for emergency power.

18.6 Buildings

Major buildings required for the expansion project include a primary crushing building, secondary crushing and screening building, refinery, laboratory, explosive magazine, security, activities centre, two dormitories, and a second mobile equipment repair shop.

3 – 7MW boilers will heat the new crushing plants and 1-2.8 MW boiler will be added to the existing refinery boiler room.

All new buildings will be of similar construction as the existing buildings.

18.7 Accomodations

The existing 515 bed accommodation will be increased by 2 additional two story dormitories.

Contractor personnel are currently housed in 18 separate dormitories, provided by the contractor. There has been no estimate for the additional contractor dormitories.

18.8 Bulk Fuel Storage

The bulk fuel storage is provided by the Zhongjin Oil Company, who will expand the existing facility for the expansion project.

18.9 PIT DEWATERING

Initial pit dewatering will be accomplished with moveable submersible pumps. As the pits are deepened, stationary pump stations will be added in stages to the dewatering system. Water from the pits is pumped to the process water head tank.

The east pit will have a total of 4 stationary pumping stations at elevations 1540 m, 1394 m, 1252 m and 1132 m. The west open pit will have 2 pumping stations at elevations 1568 m and 1462 m.

18.10 WASTE DUMP

The waste dump will be extended to the north of the two open pits and cover an area of 582 ha. Included in the waste dump will be a designated storage area for low grade ore. The total capacity of the waste dump area is 314.5 million m^3 and the expected waste rock and low grade ore from the pits is estimated at 260 million m^3. The maximum height of the waste dump is expected to be 195 m.

The capital cost estimate has included the purchase of 571.9 hectares of additional land, primarily for the waste dump.

18.11 EMERGENCY RESPONSE AND MEDICAL FACILITIES

On site there is a 3 bed clinic, staffed with a doctor and a nurse, who are on a rotation schedule from Bautou. The closest hospital is approximately 80 kilometers away at Wulate Zhongqi. A new ambulance is on site.

Trained emergency response teams are within each Operations department, as well as the contractors. There is a 150 mm diameter buried fire water main with external hydrants strategically located in close proximity to the major buildings. Also, there is a central emergency call number and on site fire fighting vehicles.

19 Marketing Studies and Contracts

19.1 Market and Contracts

The current product is sold to the China National Gold Company (CNG) for processing at their Henan Zhongyuan Gold Refinery, in accordance with the Dore Sales Purchase Agreement, dated January 27, 2012. The delivery point for transfer of the product is the CSH Mine's gold room vault door. The current agreement is valid until December 31, 2014.

All of the future product will continue to be sold to CNG, under the current sales contract agreement.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

The following information was gathered from on site observations and interviews with relevant mine personnel and where applicable, reference to the CGDI Expansion Feasibility Study.

20.1 ENVIRONMENTAL STUDIES

An Environmental Assessment for the expansion project will be initiated in the next stage of development. Funds have been allocated in the Capital Cost estimate for an Environmental Assessment report in accordance with the State Environmental Protection Administration (2002) no. 125.

20.2 PLANS FOR WASTE DISPOSAL, SITE MONITORING AND WATER MANAGEMENT

The existing Environmental Plan will be modified to suit the outcome of the Environmental Assessment.

Currently garbage is sorted into plastics, wood, metal, batteries, tires etc. There is a non hazardous on site landfill and a burn pit. Recyclables such as metal, batteries and tires are shipped off site to a recycling plant

The operations offices and dorms, as well as 4 of the contractor dorms are connected to a sewage treatment plant. The current sewage plant is undersized and the Capital Cost estimate includes funds for a new sewage treatment plant.

The remaining 14 contractor dorms are only serviced by latrines. Latrine waste is stockpiled for later use during mine reclamation.

There are 5 ground watering monitoring stations, located outside of the property limits, where independent water samples are taken every 3 months. The Operations Environmental department takes weekly ground water samples from 5 locations outside the property perimeter and from 3 locations within the property limits. Ground water monitoring will continue for at least 5 years after the process plant has stopped production and until the leach pile cyanide levels are below the National Standard of 0.02 mg/m^3.

Waste dumps are monitored weekly for sub surface water quality and for slope stability.

Fresh make up water for the process plant and for domestic use comes from the water reservoir. There is an agreement in principle with the Government for the cost of fresh water which is expected to be 1.2 RMB per cubic meter of water.

Process water is in closed circuit with zero discharge.

20.3 PERMITS

No official permit applications can be made until the detailed design has been completed. Informal discussions with the Authorities concerning the expansion project have not raised any permitting issues.

The current operation has posted a 2 million RMB performance bond which may be increased for the expanded production.

The existing operation pays a Waste Disposal fee of 600,000 RMB per year for stack emissions and noise.

The current operation has an Asset Retirement Obligation (ARO) in the form of a Land Reclamation Bond which is paid in installments. The total value of the bond is 45 million RMB, of which to date 13.52 million

RMB has been paid. The next bond installment is due in 2014. The Land Reclamation Bond may be increased due to the expansion project.

The Capital Cost Estimate has included a 10 RMB per m^2 for a Grassland Restoration fee.

20.4 SOCIAL AND COMMUNITY

The current operation employs approximately 500 people of which 1/3 are local. The expansion project is estimated to employ 188 additional operations personnel.

Currently, the operations personnel work 8 hour shifts, 3 per day. Any overtime is paid at time and one half. Administration staff work 5 days per week, with weekends off. Non local operations personnel work 2 to 3 months and then take 1 month of leave.

In addition to the operations personnel, there are approximately 1,000 contractor personnel on site. There is no requirement for the contractor to report the number of locals employed. Contractor personnel are expected to increase by another 500 to 600 persons as a result of the expansion project.

Contractor personnel work 6 hour shifts, 4 shifts per day. Non local contractor personnel, work 2 to 3 months and then take 1 month of leave.

All personnel are required to have an annual medical. Safety statistics are reported monthly to the authorities.

The current operation spends annually approximately 1 million RMB annually on local community initiatives. The programs vary each year depending on the needs of the community; however they usually include contributions to the annual festival, purchasing equipment for the local clinic, funding for education and support for less fortunate families with donations of food and coal. In addition, each year there are specific community programs such as the water supply system last year and the sheep fence building program this year.

The Expansion Project Capital Cost Estimate has included funds for relocation of tombs and settlements to herdsmen.

20.5 MINE CLOSURE

The existing mine closure plan will be followed at the end of the mine life. Accruals are made annually to cover the cost of closure based upon the detailed cost estimates of the mine closure plan. The heap leach pads and waste dumps will be re-vegetated, buildings will be demolished and the final pit berm made safe and abandoned.

21 CAPITAL AND OPERATING COSTS

21.1 EXPANSION PHASE CAPITAL AND LOM CAPITAL COST ESTIMATE

The processing facilities for the CSH Mine have been constructed in stages to match the development of the mine and in particular the changes in the ore characteristics from run-of-mine oxide to 9 mm crushed sulphide.

For the run-of-mine oxide leach the required process facilities were limited and did not include any crushing.

The 20,000 t/d process included the heap leach pad and the ancillaries for delivering barren solution for distribution to the surface of the pad and recovery and delivery of the pregnant solution from the heap to the gold recovery plant.

In April 2010 CSH successfully completed the installation of a crushing plant and the modifications to the gold recovery circuit to process the sulphide ore which added an additional 10,000 t/d capacity for a total of 30,000 t/d.

The modifications to the original solution facility for this expansion included the installation of new pregnant and barren solution pumps to handle the incremental flow. Due to the incremental increase in capacity the expansion also included a new set of carbon columns followed by new carbon wash and stripping facilities for the loaded carbon and an associated pressurized electrowinning cell to complete the independent circuit.

To continue operations for the long term a new heap leach pad is required. Simultaneously there is a planned expansion to increase the plant capacity from 30,000 t/d to 60,000 t/d. The plan for the expansion is to duplicate the existing crushing circuit with minor modifications to improve plant safety, equipment availability and operating efficiency. Solution handling facilities will be expanded, as required and the gold recovery circuit will include 4 parallel trains of carbon columns each followed by acid wash, stripping and electrowinning.

The capital cost for the expansion project was completed by Changchun Gold Design Institute in July, 2012.

The Expansion Project is planned for completion by August 1, 2013 which is an ambitious schedule and requires the Project to be executed on a significant number of multiple work fronts.

The capital cost was compiled from equipment quotes, current market knowledge, historical data from the initial crushing and screening installation and experience. Although there is a high degree of detail supporting the capital cost estimate, the level of supporting design work is considered preliminary. Factors were applied to the equipment quotes of 8% for transportation, between 8% to 12% for mechanical equipment installation and 40% for electrical installation, including cable and 2% for spare parts.

Earthworks, concrete and building were estimated using unit rates from similar recent projects in the region.

A summary of the CGDI Expansion Feasibility Capital Costs is shown in Table 22-1.

Table 21-1 Captial Cost Summary

Item	million RMB	million RMB	million USD	%
Mining		12.9	2.0	1.23
Mineral Processing		675.3	107.00	64.51
Crushing System	486.56			
Heap Leaching	73.07			
Gold Recovery	115.62			
Utilities		110.8	17.6	10.58
Accommodation & Rec. Facilities		14.5	2.3	1.38
Other Costs		155.8	24.7	14.90
Subtotal		969.3	153.6	92.60
Contingency – 8% of subtotal		77.5	12.3	7.40
Total		**1,046.8**	**165.9**	**100.00**

Other Costs include allowances for land acquisition, resettlement, engineering fees, construction management, government submittals, Environmental Impact Assessment, test work, training, tools and environmental fees.

The as installed costs for the existing operation was 809.6 million RMB or 29.3% lower than the expansion capital cost estimate.

With the low level of engineering detail and the magnitude of potential change, the capital cost estimate with an 8% contingency is understated. The capital cost estimate should be considered as a Class 4 estimate, as determined by the Association of American Cost Engineers (AACE) Process Industry Matrix. An AACE Class 4 estimate typically has a contingency between 10% to 25% and an accuracy of between --15%-30% on the low side and +20%-50% on the high side.

A number of considerations that could increase the comparative capital include:

- Schedule – the schedule is very ambitious with multiple work fronts and the potential for construction congestion and resulting inefficiencies. This potentially could lead to a schedule slippage of 4 to 6 months or increased costs for accelerated work to maintain the schedule.

- Inflation – for costs for equipment, construction materials and labour.

- Primary crusher- gyratory crusher instead of 2 jaw crushers, results in fewer unit operations but increased equipment capital, addition concrete for foundations, higher retaining structures resulting in additional structural fill.

- Vibrating screens - banana screens resulted in mechanical failures and have been changed to double deck screens with increased structural requirements.

- Conveyors – belt widths have been increased to reduce belt speeds to improve operating and maintenance with resulting increased capital costs.

- Pregnant and barren solution pumps - it is very likely that both the existing and the new pad will need to operate concurrently for a number of years after the last ore is placed on the existing pad. Once the process implementation plan has been developed there is a risk that more equipment than is currently planned will be required.

- Solution handling - the Phase 1 expansion required a 50% expansion in solution handling. The new Expansion Plan, with double the capacity, will require the current solution handling facilities to double which includes pumping, carbon columns, acid wash, electrowinning and all related ancillaries.

- Carbon kiln - no changes were required for the Phase 1, however a new carbon reactivation kiln will be required for new expansion.

It is recommended the 8% contingency be increased to at least 20% (193.9M RMB; U.S. $30.7M) for a revised capital cost of 1.163 Billion RMB (U.S. $184.3 Million). The revised capital cost of 1.163 Billion RMB has been used in the financial analysis as follows:

Table 21-2 Capital Cost Summary - Increased Contingency

Item	RMB (millions)	RMB (millions)	USD (millions)	%
Mining		12.9	2.0	1.1
Mineral Processing		675.3	107.00	58.1
Crushing System	486.56			
Heap Leaching	73.07			
Gold Recovery	115.62			
Utilities		110.8	17.6	9.5
Accommodation & Rec. Facilities		14.5	2.3	1.2
Other Costs		155.8	24.7	13.4
Subtotal		969.3	153.6	83.3
Contingency – 20% of subtotal		193.9	30.7	16.7
Total		**1,163**	**184.3**	100

The Capital Cost for the Expansion Phase Project will be self funded.

Approximately 248.6 million RMB of the above Capital Cost will be spent in 2012 and 2013, if the Expansion Project does not proceed and the mine continues to operate at 30,000 t/d. Items planned for expenditure regardless of the Expansion include pit monitoring equipment;, heap leach pad and associated pumping systems; water systems and waste water treatment; dormitories and recreation facilities and other costs such as land acquisition; resettlement; grassland restorations fees, research fees etc. In the financial analysis, the 248.6 million RMB has been taken into consideration for calculating the incremental value of continuing to operate at 30,000 t/d to expanding the operation to 60,000 t/d.

21.2 LIFE OF MINE CAPITAL ESTIMATE

The following table shows an estimate of annual capital spending during the life of mine. This estimate includes the Expansion Phase capital in addition to sustaining capital items, including mine closure costs.

Table 21-3 Life of Mine Capital

Period		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Capital	$ x million	$18.4	$165.9	$0.0	$4.8	$10.5	$0.0	$0.0	$6.2	$0.0	$0.0	$0.0

Period		2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Total
Capital	$ x million	$0.0	$1.8	$1.8	$1.8	$1.8	$0.0	$0.0	$0.0	$0.0	$0.0	$212.9

21.3 OPERATING COST ESTIMATES

The operating costs estimates are based on the existing operation and U.S. $1,380/oz gold price which is consistent with determining the reserves. The operating plan for the Expansion Phase will be the same as the existing operation, with mining and stockpiling on the heap leach pad undertaken by the contractor Railroad 19th Bureau, on a per cubic meter basis with an adjustment for haulage over 2.5 km. With the Expansion Phase process facilities, essentially operating as a standalone plant, coupled with the contract mining and heap leach stockpiling on a per cubic meter basis, there is no significant reduction in operating costs on a per tonne, basis due to doubling the output. Typically a reduction in operating costs would be expected with a doubling of the output.

Operating costs are based on the existing operation and contract agreements. The current mining contact will expire at the end of 2014, at which time there will be a cost of fuel adjustment. There is an agreement in principle to pay the government a water usage fee for the new fresh water reservoir construction. The fee has not yet been determined but is expected to be 1.2 RMB per cubic meter of water.

The predicted annual onsite operating costs by major category per tonne processed excluding royalties, taxes and other fees are shown in Table 21-4 Operating Costs.

Table 21-4 Operating Costs

Item	RMB/tonne ore	U.S. $/tonne ore
Mining Ore	¥9.60	$ 1.52
Mining Waste	¥32.78	$ 5.19
Processing	¥15.16	$ 2.40
General Administration	¥4.52	$ 0.72
Total	¥62.06	$ 9.83

22 Economic Analysis

22.1 General

The CSH mine is currently operating at 30,000 t/d crushing and heap leaching gold ore. An updated resource model has been used by CGIR and CGDI to develop a mine plan and cost estimates for an expanded operation to 60,000 t/d by the August of 2013.

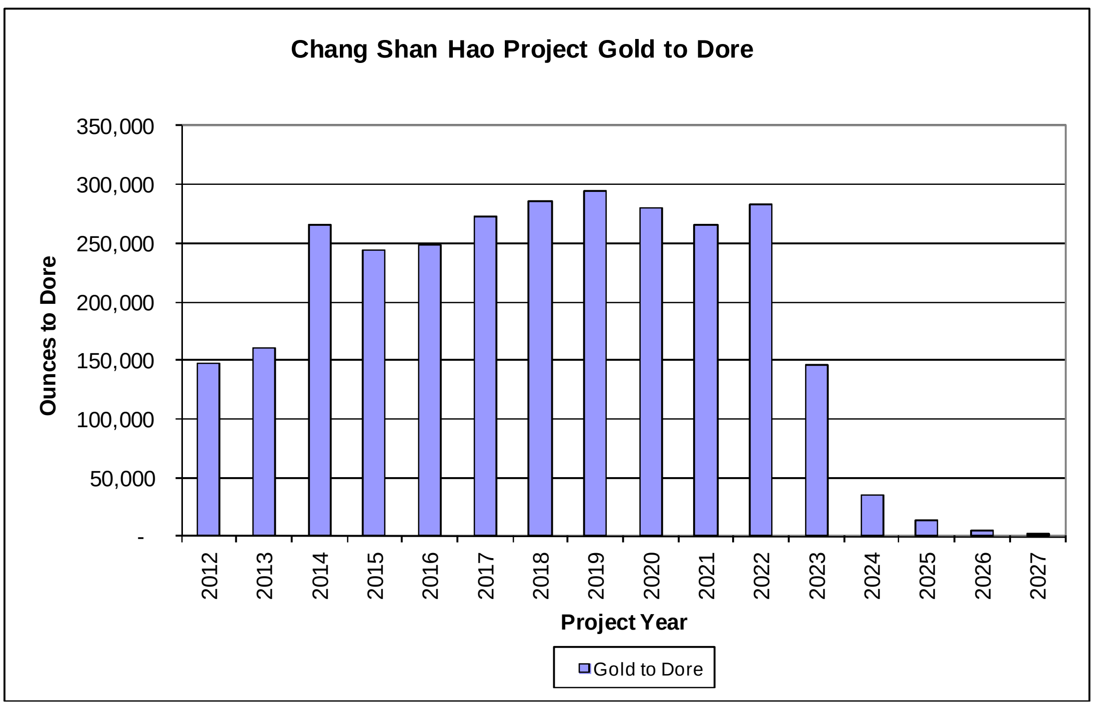
The economic analysis of the project is based on the life of mine cashflows starting January 2012 for proven and probable reserves that are included in the expansion plan. The cashflow model used in this analysis was developed by the authors of this report to compare the economic results of continuing with a 30,000 t/d plan versus a 60,000 t/d expansion plan.

CSH Expansion Project is expected to generate additional value by accelerating metal production and shortening the mine life from 21 years to 11 years.

22.2 Cashflow Forecasts

Project cashflows are based upon the mine expansion plan and gold production schedule shown in Figure 22-1.

Figure 22-1 Expansion Phase Production Schedule



The cashflow has been been calculated using U.S. $1600/ounce in 2012 and 2013, then U.S. $1585/ounce in 2014, U.S. $1440/ounce in 2015 and U.S. $1380/ounce of gold for the remainder of the mine life. A refining charge of U.S. $4.68/ounce has been applied based upon the current sales contract terms. The actual terms of the contract states that gold dore will be sold at the average price of the Au9995 gold ingot at Shanghai Gold Exchange on Notification Date, less RMB0.95/gram. Exchange rate used for all cost estimates in the study has been 6.3115 RMB/U.S. $. A summary of the expected project after tax cashflow is shown in Table 22-1.

Table 22-1 Project After Tax Cashflow Summary

Period		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Cashflow	$ x million	$54.0	($89.3)	$154.0	$94.0	$70.1	$102.3	$108.8	$126.9	$120.6	$152.1	$196.7

Period		2023	2024	2025	2026	Total
Cashflow	$ x million	$122.3	$32.0	$7.8	$0.2	$1,253.8

22.3 NPV AND IRR

The the net present value of the cashflows from operations is U.S. $642.3 million when calculated with a 9% discount rate. The incremental net present value of the project is U.S. $92.5 million. The internal rate of return of the incremental cashflows is 30.5%. A comparison of the cumulative cashflow is shown in Figure 22-2.

Figure 22-2 Cumulative After Tax Cashflow

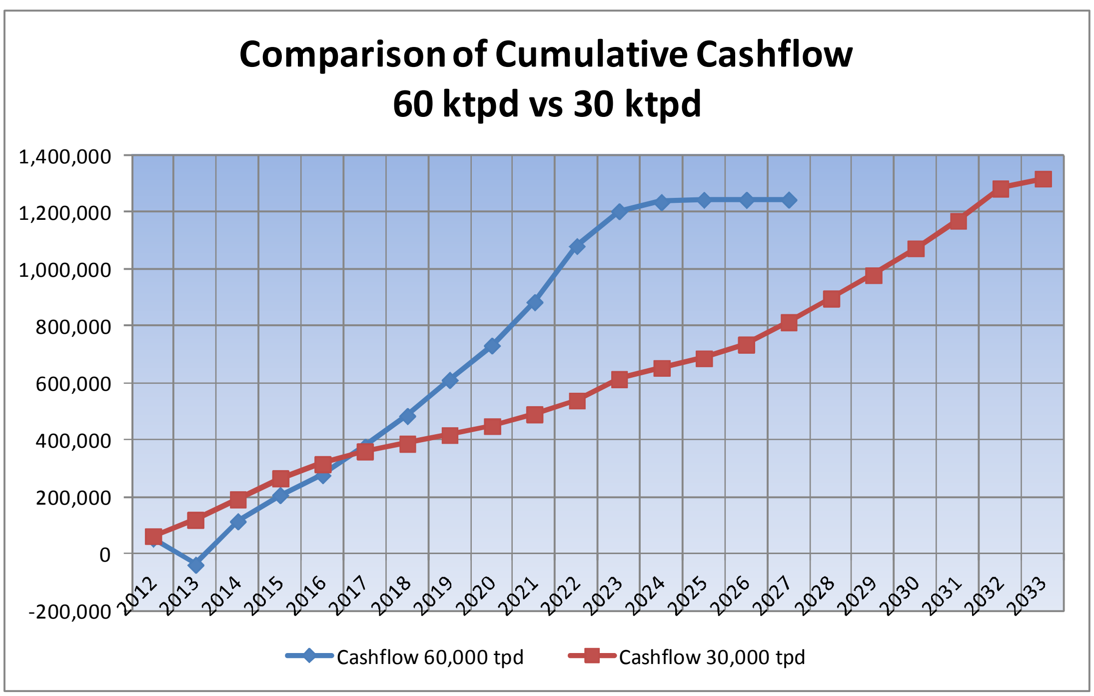
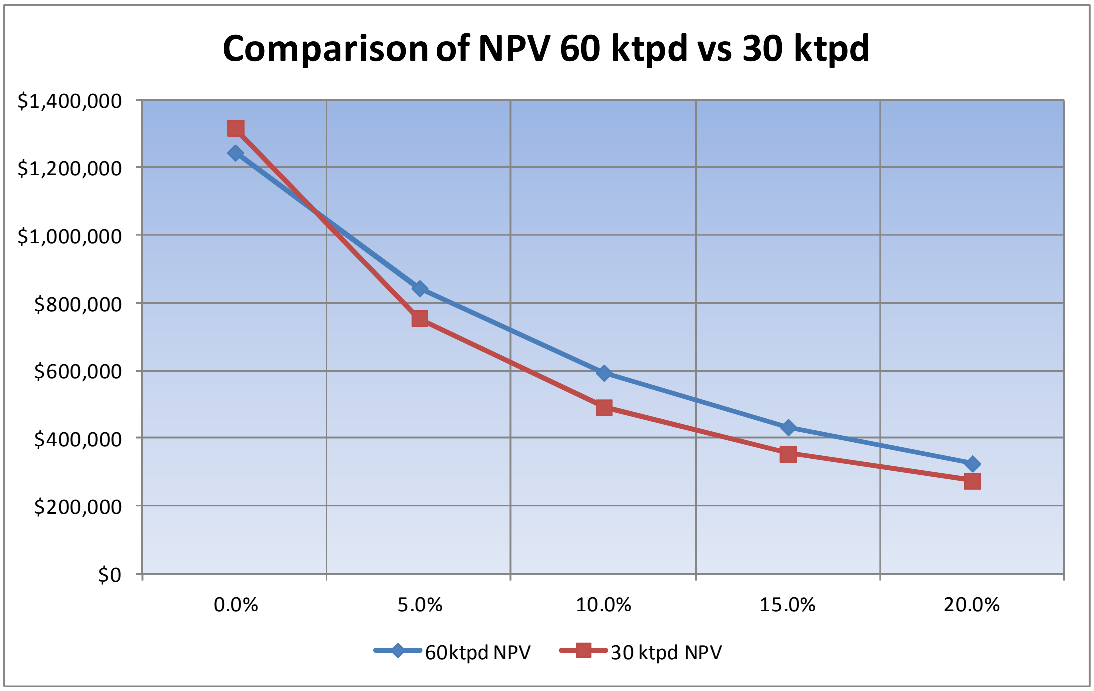


Figure 22-3 Comparison of Net Present Value After Expansion



22.4 Taxes and Royalties

22.4.1 Compensation Fees

A compensation fee has been applied at a rate of 1.8% of the sales revenue.

22.4.2 Resource Tax

A resource tax of 3.00 yuan/t of ore has been applied.

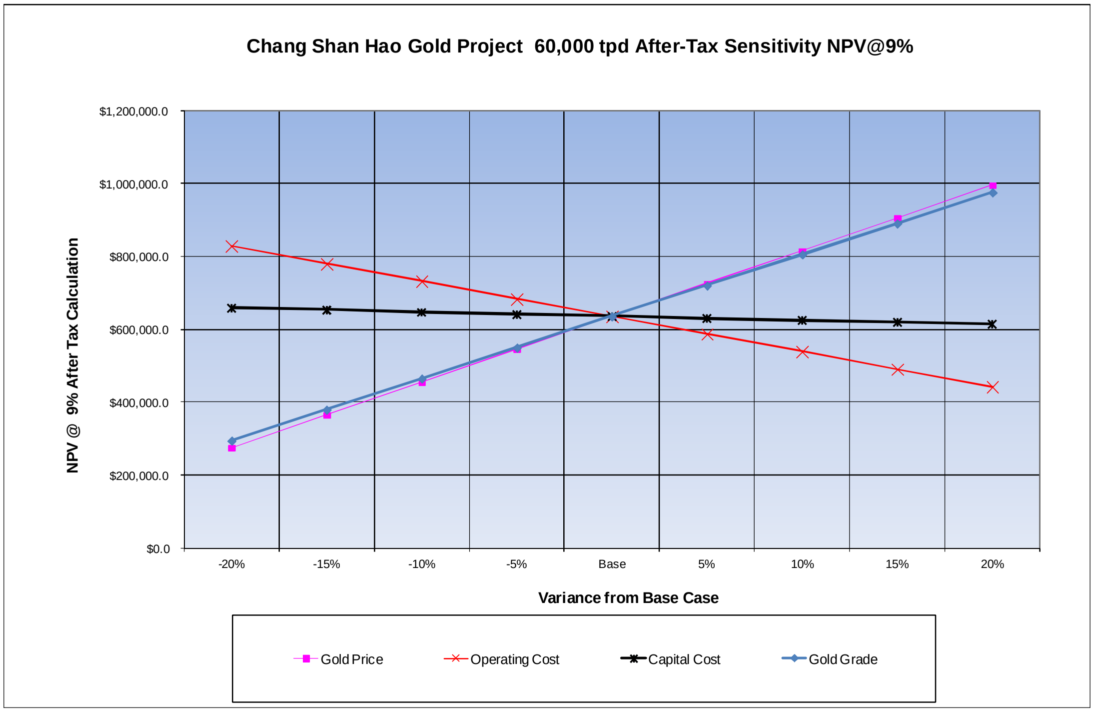
22.4.3 Income Tax

Income taxes have been applied at a rate of 25.0%. The depreciation carried forward from the earlier investments total $98.2 million. The allocation of the Project capital for the purposes of depreciation was 15.9% for the Crusher Building, 18.0% for other Permanent Buildings and Structures, 29.2% for Intangible Assets, 1.3% for Electronic Equipment and 35.6% for Machinery. Depreciation rates that have been applied are Crusher Building 14%, Other Buildings 10%, Intangibles - 10%, Electronics – 20% and Machinery - 10%.

22.5 SENSITIVITY ANALYSIS

Life of Mine NPV sensitivity analysis has been conducted on the financial model at the 100% project level for variations in metal price, project capital and operating expenses. The relative effects on CSH project NPV based on the project cash flows for these scenarios are indicated in Figure 22-4.

Figure 22-4 Sensitivity Analysis



22.6 PAYBACK OF SUSTAINING CAPITAL

Operating cash flows are expected to provide for payback of the expansion project capital in 4.5 years .

23 ADJACENT PROPERTIES

Not Applicable.

24 Other Relevant Data and Information

The authors of this report are not aware of any additional information necessary to make the technical understandable and not misleading.

25 Interpretation and Conclusions

25.1 Conclusions Mineral Resources

The 2011 drilling campaign added significant tonnages above cutoff at a slightly lower grade, partly due to the confirmation of grades and upgrade in resource classification down-dip and laterally. The CSH deposit in the SW area is now well delineated, and still significant potential exists for down-dip extensions to the mineralization. Mineralization at depth in the NE has been confirmed, with increases in both tonnages and confidence.

The SW zone has been interpreted as three main segments, with the easternmost striking further to the East (into the so-called central zone), while the 0.20 g/t envelopes defining the other two segments are wider. The extension of the SW zone towards the West has resulted in additional tonnage at about the same grade, included mostly in the indicated category, and for an extension of about 250 m laterally.

It is important to note that the estimated grades assume that the mine can operate a small Selective Mining Unit (SMU), that is, relatively little dilution is incorporated into the model. As such, the operation needs to run smoothly and tightly to achieve the predicted resource grades and avoid unplanned dilution.

The selectivity and dilution assumptions made in this resource model require that a diligent and efficient grade control process be implemented at the time of mining to achieve the predicted grades and tonnages.

Comparisons with blast hole data indicate that the resource model is performing well. As expected, the resource model is generally predicting more tonnage and lesser grade for low cutoffs, due to the smoothing effect of the kriging estimator. This is seen as allowance for operational dilution and ore loss.

It is important to China Gold Internationl (CGI) that mine operations validate the grade control (blast hole) information, adding to the QA/QC effort, as well as checking the quality of the ore/waste selection prediction. The resource model cannot be modified to account for this additional grade and less tonnages until the blast hole data and grade control model data are fully validated.

25.2 Conclusions Mining

The Changsha Institute of Mining Research (CGDI) developed mine plans and CSH developed the production schedules using the resource model described in the Section 14. The mineral reserves forming a part of this plan have been validated by NMS. The mineral reserves reported are based upon the smoothed pit designs and measured and indicated resources using a gold price of U.S. $1380/ounce. Proven and Probable reserves reported by NMS using the designs of the CGDI have been summarized. These vary slightly from those scheduled in the mine plan. The differences are not considered significant as they represent less than 1% variance and may be due to differences in software applications.

The production schedule developed for the Feasibility Study was based upon a September 2013 completion date for the crushing plant. Ore production in 2013 assumes the equivalent of 112 days of full production at 60,000 t/d to year end. There may be some schedule risk in the mine plan in terms of ore production if the construction schedule is extended.

25.3 CONCLUSIONS ECONOMIC ANALYSIS

The Feasibility Expansion Study has demonstrated that additional value is added to the CSH Project when plant capacity is expanded. This additional value is created by moving production forward and reducing the mine life.

26 RECOMMENDATIONS

26.1 MINERAL RESOURCES

The following are the main recommendations suggested for China Gold International (CGI) to implement:

- CGI should implement a reconciliation system that would allow keeping track of planned and unplanned dilution observed in the pits; these include as accurate as possible measurements of volumes and tonnages extracted from the mine, as well as improved grade estimation from grade control data. The resource model grades assume that the mine can operate a small Selective Mining Unit (SMU), which requires significant operational control and careful follow up to diagnose if too much dilution is being sent to the plant.

- A more proactive and reactive QA/QC program should contribute to more confidence in the database and the resource model overall. Significant effort should be placed in responding within the QA/QC program and while drilling is on-going to correct any issues detected. The QA/QC data from the laboratory should be processed and reacted to more dynamically.

- A conditional simulation study should be completed to validate the SMU assumption, and to allow for a full assessment of recoverable resources.

- The grade control process should also be geared towards achieving as little dilution and ore loss as possible, as well as maximizing in-pit resource (ounces) recovery. A loss function-based, using conditional simulations, is probably the better grade control method for the mine.

- Comparisons with blast hole data should continue, and be part of the overall reconciliation process. Not only for material accounting purposes, but also to evaluate the performance of the resource model.

- It is important to CGI to validate the grade control (blast hole) information, adding to the QA/QC effort, as well as checking the quality of the ore/waste selection prediction. The resource model cannot be modified to account for this additional grade and less tonnages until the blast hole data and grade control model data are fully validated.

26.2 CAPITAL COSTS

Once detailed engineering is 60 to 70% complete, a capital cost control estimate should be prepared which is based on designed quantities for all the major commodities, purchase order values, transportation costs, installation costs based on confirmed unit rates, indirect costs and a contingency evaluation to confirm the capital cost to a high degree of accuracy, in the order of plus-minus 10-15%.

26.3 EXECUTION PLAN

It is recommended that detailed execution plan be developed for a transition from 30,000 t/d to 60,000 t/d and development of th enext heap leach pad.

26.4 MINE DESIGN

The following recommendations are offered for the mine development plan.

- Increase ramp width to 30 m for 220 t class trucks
- Move ramp to south side of Southwest Pit
- Reduce wall slopes in Southwest Pit
- Future resource modelling should be based upon a 12 m bench height if operations are modified from the current 6 m bench height.

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