

**Minera IRL Limited**



**ANNUAL INFORMATION FORM**

**For the 12 months ended 31 December 2012**

**27 March 2013**

## TABLE OF CONTENTS

|     | <b>Page</b>  |
|-----|--|
| 1   | CORPORATE STRUCTURE.....2  |
| 2   | GENERAL DEVELOPMENT OF THE BUSINESS .....4                             |
| 3   | DESCRIPTION OF BUSINESS.....6  |
| 4   | PROJECTS.....7   |
| 4.1 | Corihuarmi.....7   |
| 4.2 | Ollachea.....25  |
| 4.3 | Don Nicolás.....81   |
| 4.4 | Other Projects.....118   |
| 5   | RISK FACTORS.....127   |
| 6   | DIVIDENDS .....132   |
| 7   | DESCRIPTION OF CAPITAL STRUCTURE .....133                              |
| 8   | MARKET FOR SECURITIES.....133  |
| 9   | ESCROWED SECURITIES.....136  |
| 10  | DIRECTORS AND OFFICERS .....136  |
| 11  | CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES AND SANCTIONS.....141      |
| 12  | LEGAL PROCEEDINGS.....142  |
| 13  | INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL<br>TRANSACTIONS .....143 |
| 14  | TRANSFER AGENTS AND REGISTRARS.....143                                 |
| 15  | MATERIAL CONTRACTS.....143   |
| 16  | INTERESTS OF EXPERTS .....145  |
| 17  | AUDITORS.....146   |
| 18  | ADDITIONAL INFORMATION .....147  |
|     | APPENDIX 1 - AUDIT COMMITTEE CHARTER .....148                          |

## **GENERAL**

All reference in this Annual Information Form ("AIF") to the Company (or Minera IRL) also includes references to all subsidiaries of the Company as applicable, unless the context requires otherwise.

## **CAUTIONARY STATEMENT REGARDING FORWARD LOOKING INFORMATION**

Certain of the information contained in this AIF and documents incorporated herein by reference constitutes "forward-looking statements" within the meaning of applicable Canadian securities legislation. Such forward-looking statements and information include statements regarding: the future price of gold; targets for gold production; the estimation of mineral resources and reserves; cash operating costs and certain significant expenses; success of exploration activities; the timing and scope of future commencement of mining or production; anticipated grades and recovery rates; asset retirement obligation estimates; the ability to secure financing; title disputes or claims; and potential acquisitions or increases in property interests. Often, but not always, forward-looking statements or information can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate" or "believes" or variations (including grammatical variations) of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will" be taken, occur or be achieved.

Forward-looking statements and information by their nature are based on assumptions and involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements or information. These risks, uncertainties or other factors include, but are not limited to, inherent speculative nature and hazards associated with exploration and development activities; uncertainties related to fluctuation in gold and silver prices; uncertainties related to actual capital costs, operating costs and expenditures, production schedules and economic returns; risks that the Company's title to its properties could be challenged; risks related to environmental regulations; risks related to legal proceedings; risks related to increased competition; the uncertainties related to surface rights in the countries in which the Company's material mineral projects are located; uncertainties related to the Company's resource and reserve estimates, which are based on detailed estimates and assumptions; assumptions regarding the need for financing and uncertainties related to the availability of such financing; uncertainties in government policies and regulations; and risks that the Company's directors and officers may have conflicts of interest.

Although the Company has attempted to identify factors that would cause actual actions, events or results to differ materially from those disclosed in the forward-looking statements or information, there may be other factors that cause actions, events or results not to be as

anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Also, many of the factors are beyond the control of the Company. Accordingly, readers should not place undue reliance on forward-looking statements or information. All forward-looking statements and information herein are qualified by this cautionary statement.

## **1 CORPORATE STRUCTURE**

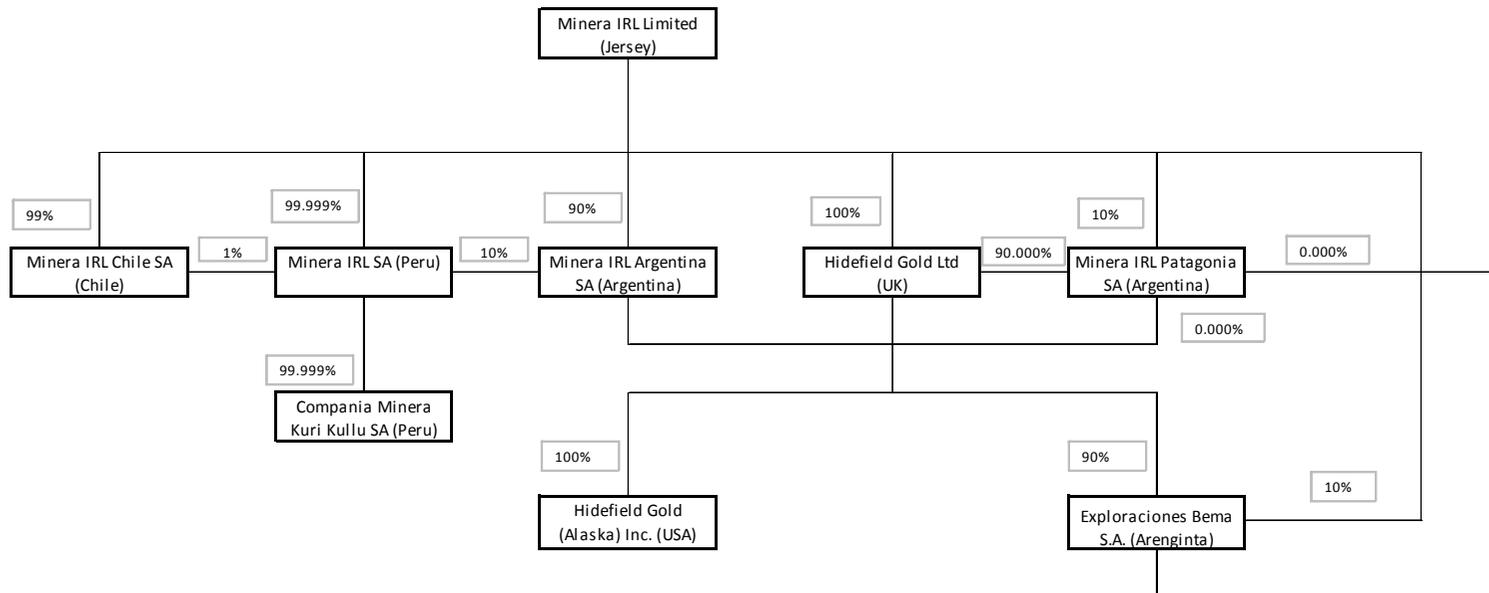
### **Name, Address and Incorporation**

Minera IRL Limited (“Minera IRL”, or the “Company”) was incorporated in the Cayman Islands on 27 August 2003 as “Goldmin Holdings” under the Cayman Islands Companies Law (2003 Revision) as an exempted company.

On 20 October 2006, the Company applied pursuant to the Jersey Companies Law to the Jersey Registrar of Companies (the “Jersey Registrar”) for continuance as a company incorporated under the Jersey Companies Law. On 25 October 2006, the Company applied, pursuant to the Cayman Islands Companies Law (2004 Revision), to the Cayman Islands Registrar of Companies (the “Cayman Registrar”) to be de-registered as a Cayman Islands exempted company and to be registered by way of continuation as a company incorporated under the laws of Jersey. On 25 October 2006, the Cayman Registrar issued a certificate that the Company had been de-registered as an exempted company, as a result the Company ceased to be a “company” for all purposes under the Cayman Islands Companies Law (2004 Revision). On 25 October 2006, the Jersey Registrar issued a certificate of continuance as a result of which the Company became a public company incorporated under the Jersey Companies Law, under the name “Minera IRL Limited” registration number 94923.

The Company’s registered office is located at Ordnance House, 31 Pier Road, St. Helier, Jersey, JE4 8PW. The Company’s corporate head office is located at Av Santa Cruz 830, Piso 4, Miraflores, Lima 18, Peru.

**Minera IRL Limited Corporate Structure**



## 2 GENERAL DEVELOPMENT OF THE BUSINESS

For approximately 10 years, commencing in 1997, a Melbourne, Australia based financial and technical advisory firm known as Investor Resources Limited (“IRL”) provided high level consulting services to the mineral and oil resource industry. In October 2000, IRL began investigating building a portfolio of advanced gold properties in Peru that could form the basis for building a Latin American gold mining company.

As a continuation of the concept, an office was established in Lima in mid-2002 and a Peruvian company named Minera IRL SA was registered in (August) 2002. In October, an option was obtained to acquire 100% of the Corihuarmi tenements which, in 2008, became the group’s first gold mine.

In 2003, the assets were moved into Goldmin Holdings, a Cayman company. In October 2006, the Company transferred its registered office from the Cayman Islands to Jersey, deregistered in the Cayman Islands, became a company incorporated under the laws of Jersey and changed its name to Minera IRL Limited.

Private equity funding was secured in 2003 and Minera IRL was supported by private equity until 2007. During this period, a number of projects were assessed. Corihuarmi was progressively advanced through the exploration, pre-feasibility, feasibility and environmental impact studies culminating in permitting approvals being granted by the Peruvian authorities in early 2007.

With a project ready to be developed, Minera IRL was listed on AIM in April 2007 and, in the process, raised £11.4 million from the issue of approximately 25.3 million ordinary shares of the Company (the “Ordinary Shares”, each an “Ordinary Share”). The Company was subsequently dual listed on the Lima Ventures Exchange in December 2007; admission was granted to the main board of the Lima Stock Exchange in June 2008.

The funds raised in London were applied to the construction of the Corihuarmi Gold Mine, which commenced in June 2007 and the first gold was poured in March 2008 heralding the commencement of strong cash flows and a move into the ranks of a production company.

An option agreement to acquire 100% of the Ollachea Project in southern Peru was obtained from Rio Tinto Mining and Exploration Limited (“Rio Tinto”) in 2006. Following protracted negotiations with the local community, a comprehensive Surface Rights Agreement was signed in November 2007 and exploration commenced in early 2008 with drilling beginning in October 2008. A significant discovery was announced in early 2009 and a positive scoping study was completed in November 2009; at that point the project moved into pre-feasibility status.

In July 2009, the Company completed a placement of 13.6 million Ordinary Shares to raise £9.1 million. The principal use of the proceeds were to advance the Ollachea Project, to continue the Company’s exploration program and for general working capital.

Minera IRL mounted a take-over bid, via a Scheme of Arrangement, of AIM listed Hidefield Gold Plc ("Hidefield") during 2009. This acquisition was completed in December 2009 at which time the Hidefield group of companies became wholly owned subsidiaries of Minera IRL. The acquisition was an all-share transaction which resulted in the issue of approximately 9.8 million Ordinary Shares to shareholders of Hidefield Gold Plc. The principal asset was a large tenement holding in Santa Cruz Province, Argentina, which included the Don Nicolás Project. A scoping study had been completed over this project by Hidefield and, in early 2010, Minera IRL commenced a full feasibility study.

In November 2010, the Company completed an equity offering of 32,641,600 ordinary shares at C\$1.15 per ordinary share to raise approximately C\$37.5 million. The principal use of the net proceeds of the equity offering were to advance the Company's Ollachea and Don Nicolás projects in Peru and Argentina, to assist the Company in funding exploration programs on its portfolio of properties and for working capital and general corporate purposes.

In July 2011, the Company completed a positive prefeasibility study on the Ollachea Project. Using a probable mineral reserve of 1.1 million ounces and a \$1,100 gold price, the report showed robust economics that resulted in a pre-tax net present value ("NPV") of \$226 million and an internal rate of return ("IRR") of 28.1%.

In February 2012, the Company completed a feasibility study ("FS") on the Don Nicolás Project. Using a proven and probable mineral reserve of 197,000 ounces of gold at a price of \$1,250 and 401,100 ounces of silver, the report showed excellent economics that resulted in a pre-tax NPV of \$44.7 million and an internal rate of return ("IRR") of 34.6%.

In March 2012, the Company completed an equity offering of 29,260,000 ordinary shares at C\$1.13 per ordinary share to raise approximately C\$33.1 million. The principal use of the net proceeds of the equity offering were to advance the Company's Ollachea and Don Nicolás projects in Peru and Argentina, to assist the Company in funding exploration programs on its portfolio of properties and for working capital and general corporate purposes. In addition, the Company filed a shelf prospectus in July 2012 which will allow the Company to raise up to \$80,000,000 over the following 25 months.

In October 2012, the Company upgraded its resource at Don Nicolás and also received approval of its environmental impact assessment. With the granting of the Development Permit, the Company can move forward toward project financing and mine construction.

The Company completed a positive FS on Ollachea and announced the initiation of the permitting process in December 2012. Further, the Company commenced underground drilling in January 2012 via the 1.2 kilometer ("km") production sized exploration tunnel at Ollachea. The 1.2 km Ollachea exploration tunnel was completed in January 2013.

In February 2013, the Company completed an equity offering of 21,775,000 ordinary shares at C\$0.71 per ordinary share to raise approximately gross proceeds of C\$15.5 million. The net proceeds from the Offering will largely be directed toward funding early development costs of the Ollachea Project.

### **3 DESCRIPTION OF BUSINESS**

The Company is a fully integrated Latin American, publicly listed gold mining company based in Lima, Peru. The Corihuarmi Gold Mine located in the high Andes, has produced 177,812 ounces between March 2008 and the end of December 2012 at a cash operating cost of US\$344 per ounce. Corihuarmi is expected operate until at least 2015 and provides a cash flow stream that is expected to help underpin the implementation of the Company's business plan.

There are two pre-development projects in the Company's portfolio, namely the Ollachea Project in Peru and the Don Nicolás Project in Patagonia. Feasibility Studies (FS) have been completed on both projects and have demonstrated robust project economics. Don Nicolas has been permitted and Ollachea is in the process of permitting. Arrangement of financing is being pursued on both projects.

Minera IRL also carries out exploration in an attempt to discover new, high quality projects. Currently the Company has active exploration projects in Peru and Argentina. Targets are expected to have a minimum of 500,000 ounces of gold, preferably larger.

The Company maintains a very active community management program, which is an extremely important aspect of a successful mining company in Peru. The Company's community policy places priority on building relationships with local stakeholders through well-developed programs of community involvement, benefits and long term sustainability.

The Minera IRL head office is located in Lima, Peru and houses the executive team and support services. As at 31 December 2012, the Company had 651 employees, which excludes people on full time contracted services.

The Company's business requires specialized skills and knowledge in the areas of geology, drilling, planning, implementation of exploration programs, project development and operating of mines. To date, the Company has been able to locate and retain such professionals in Peru and Argentina, and believes it will be able to continue to do so.

The Company operates in a very competitive industry and competes with other companies, many of which have greater technical and financial facilities for the acquisition and development of mineral properties, as well as for the recruitment and retention of qualified employees. However, the Company also believes that it has capabilities to compete with its competitors.

## **4 PROJECTS**

### **4.1 Corihuarmi**

The following summary is derived from the technical report entitled “Corihuarmi Gold Project, Technical Report” (the “Corihuarmi Report”) dated 6 April 2010. This summary is not complete and the full Corihuarmi Report can be accessed on the Company’s SEDAR profile at [www.sedar.com](http://www.sedar.com).

This section has also been updated by the Company to the date of this AIF by its Executive Chairman, Courtney Chamberlain, a “qualified person” under NI 43-101.

#### **Project Description, Logistics, Infrastructure and Climate**

The Corihuarmi Gold Mine is located in the high Andes of central Peru, approximately 160km southeast of the capital city of Lima (-75.57 longitude and -12.57° latitude). Access to the project is via 330km on the sealed main highway east from Lima, over the Andean divide to Yauli, then southeast to the city of Huancayo, the regional capital of Junin Department. From Huancayo, access is gained via the Andean plateau by travelling southwest on formed gravel roads for a further 115km through the villages of Chupuro and Vista Alegre to the mine.

The Corihuarmi Project lies at elevations between 4,500m and 5,050m above sea level, straddling the main Andean divide. Despite the elevation, the topography is relatively subdued, comprising a series of hills and ranges that rise approximately 500m above an undulating alpine plateau.

*Figure 1 Location Plan of Corihuarmi Gold Mine*



The Corihuarmi Project experiences a high mountain dry tundra climatic regime. Precipitation is markedly seasonal and total annual precipitation averages 730mm. The vegetation is solely comprised of alpine tussock grassland across the plateau, with the adjacent hills and ridges essentially barren of vegetation, particularly in areas of argillic alteration. Agricultural activities are confined to extensive livestock grazing, principally sheep, cattle and camelids (alpaca and llama).

A camp to accommodate approximately 140 employees has been constructed to the east of the plant facilities. Additional accommodation of approximately the same size is available from the construction camp. Existing buildings include the offices, warehouse, messing facilities, a soccer field and other buildings. Power is provided by a 44km power line, constructed by Minera IRL as part of the development, from the national grid. Water is abundantly available from a large lake. The principal mining related infrastructure comprise the waste dump, haul roads, mining contractor workshop and related infrastructure, fuel farm and explosives storage facility.

### **History and Tenure**

Minera IRL SA acquired the project from Minera Andina de Exploraciones (“Minandex”) in 2002. Between 2003 and 2005, the Company completed a programme, primarily concentrating on the Susan and Diana zones, comprising geological mapping, extensive horizontal and

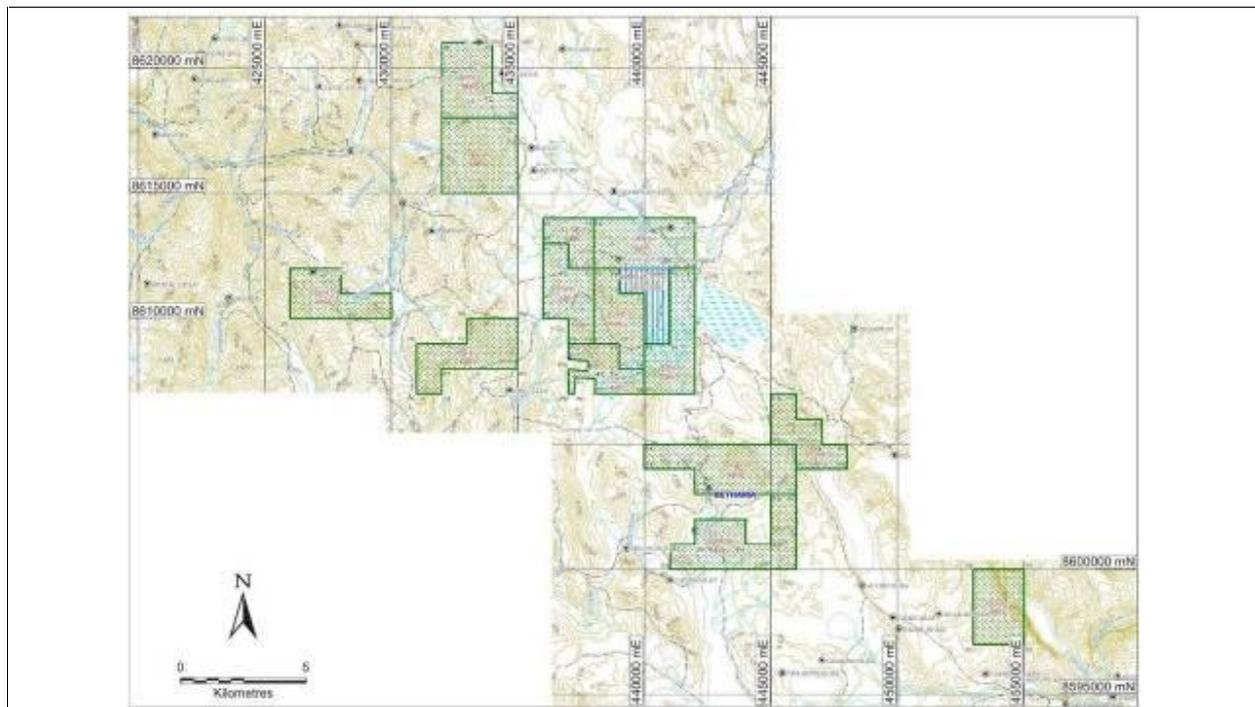
vertical chip-channel sampling, three phases of diamond core drilling (53 holes; 3,551.95m), metallurgical testwork, geotechnical studies, internal and independent resource estimates and an internal pre-feasibility study. An external bankable feasibility study was subsequently commissioned and completed by Kappes Cassiday and Associates (KCA) in April 2006.

Minera IRL also completed investigations into the potential for additional low grade mineralization comprising a veneer of scree on the slopes directly beneath the Diana and Susan deposits. The mineralization was delineated in 2 programs of reverse circulation (“RC”) drilling and an inferred resource estimated. It is planned that this will be treated on the heap leach pads.

The Corihuarmi property consists of 14 concessions totalling 9,315.83ha. These consist of 6 mining concessions totalling approximately 3,418.65ha and 8 exploration concessions or petitorios (application stage for mining concession), totalling 5,897.18ha.

The mining concessions are in good standing. No litigation or legal issues related to the project are pending.

*Figure 2 Plan Showing Corihuarmi Project Tenements*



The 14 mining and exploration concessions that comprise the property are held 100% by Minera IRL. In October, 2005 the Company fulfilled the terms of an option agreement with Minandex to acquire 100% interest in the Tupe 2, 3 and 4 mining concessions. The terms of the agreement called for Minera IRL to make a series of quarterly cash payments (totalling US\$903,309) over a three year period which Minera IRL completed in 2007. Minandex retains a sliding scale net smelter royalty based on the price of gold as follows:

- Gold price less than US\$300/oz, a sales royalty of 1.5%;
- Gold price from US\$300/oz to US\$350/oz, a sales royalty rate of 2.0%; or
- Gold price over US\$350/oz, a sales royalty rate of 3.0%.

The Corihuarmi Gold Mine is subject to the permitting and environmental laws of Peru. This includes an approved mine closure plan. There are no other environmental liabilities at the date hereof.

Minera IRL has in place a mining exploitation contract with the community of Atcas for a surface area of 1,900 hectares and an expiration date of 2014, which attracts an annual payment of US\$40,000. This is renewable for a further 5 years.

There is also a surface rights agreement in place with the community of Huantan for a total area of 1,400 hectares and an expiry date of 2014. The annual payment is US\$38,500. In addition, sustainable development projects in the two communities total US\$667,000 per year.

If the surface rights agreements expire, their extension can be renegotiated.

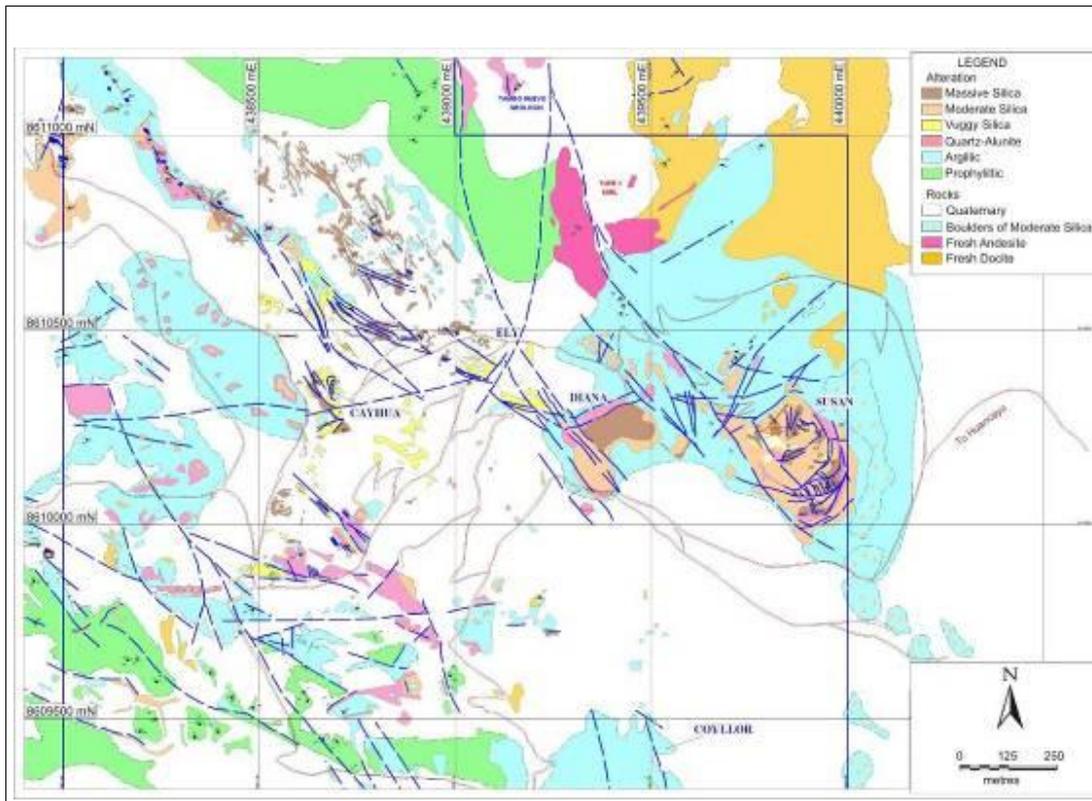
### **Geological Setting and Mineralization**

The Corihuarmi Project is situated within the Andean Cordillera, which lies between the Peru-Chile oceanic trench to the west and the Brazilian Craton to the east. The Andes Range formed as a result of the convergence between the oceanic Nazca Plate (of the Pacific Basin) and the South American continent. The denser lower portion of the Nazca Plate was subducted beneath the South American continent along the Peru-Chile Trench, resulting in crustal melting and magmatic (volcanic) activity, while the lighter marine sediments of the upper Nazca Plate were obducted onto the continental landmass, resulting in collision and compression.

The Andean Cordillera consists of two parallel ranges, with the younger Western Cordillera corresponding to a Cenozoic magmatic arc, while the Eastern Cordillera represents a zone of progressive uplift since Permian times. The intervening zone is occupied by the Altiplano, a high plateau of relatively subdued relief where inter-montaine basins were developed during the Cenozoic period. The Western Cordillera and Altiplano host the majority of Peru's economically significant precious and base metal deposits, occurring in a series of metallogenically distinct belts or domains as shown in Figure 3.



Figure 4 Corihuarmi Project - Geology



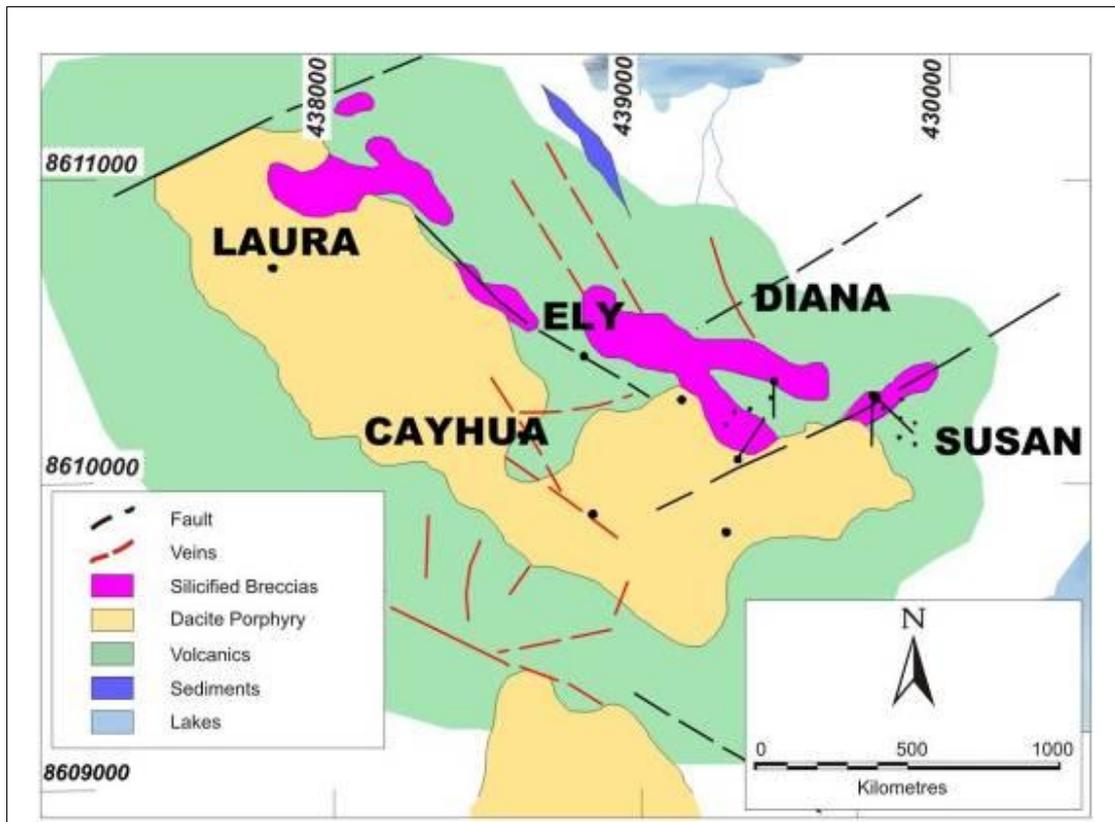
Mineralization identified to date within the Corihuarmi Project comprises a high sulphidation epithermal precious metal system that formed at relatively shallow depth. Gold and silver mineralization is essentially confined to remnant zones of silicification and brecciation that dominantly lie along the northeast margin of the volcanic complex. Horizontal metallogenic zonation provides evidence that this siliceous layer was once continuous, effectively capping the hydrothermal system.

The most significant mineralization is associated with the Susan and Diana zones, which has been mined since the beginning of 2008 and comprises resistant remnant mineralized silicified bluffs separated by some 180m. The Susan deposit measures approximately 200m by 350m in size, being confined at the margins by cliffs. The smaller Diana deposit is approximately 150m by 250m in area, and to some extent remains open to the northwest and southeast along the ridge-line. The siliceous layer is shallow dipping to sub-horizontally disposed, ranging in thickness from 10m to 75m, and averaging approximately 45m.

Drilling before 2008 defined a zone of higher relative grade (>1g/t Au) near the top of the Diana deposit and immediately below a barren siliceous cap at the Susan deposit. These zones ranged from 5m to 50m in thickness and their attitude is consistent with the sub-horizontal morphology of the exposures. The tenor of mineralization diminishes rapidly below these higher grade zones, the exception being isolated intersections of higher grade that are interpreted to

represent a series of northwest and northeast trending faults that acted as feeder structures for multiple hydrothermal mineralizing events.

*Figure 5 Corihuarmi Project - Main Block Geology*



Figures 6 and 7 are photos of the Susan and Diana orebodies; the former figure shows these outcrops before mining started in January 2008 and the second photo illustrates the open pits 2 years into the mine life.

Figures 8 and 9 illustrate a pre-mining cross section of Susan and Diana. This shows the drill intersections and mineralized zones destined for mining.

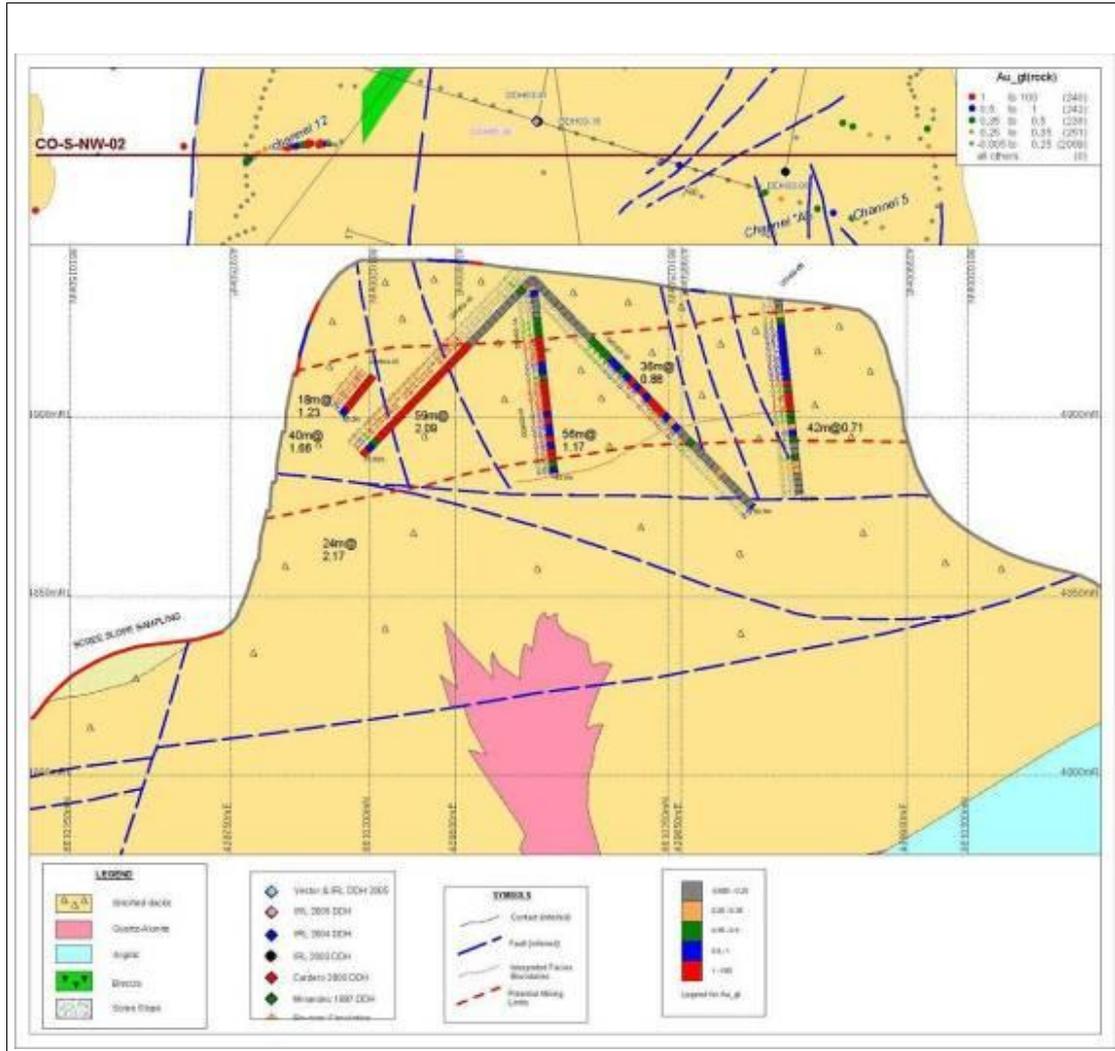
*Figure 6 Corihuarmi Project – Susan (right) and Diana (left) Zones (pre-mining)*



*Figure 7 Corihuarmi Project – Susan (right) and Diana (left) Zones in November 2012*

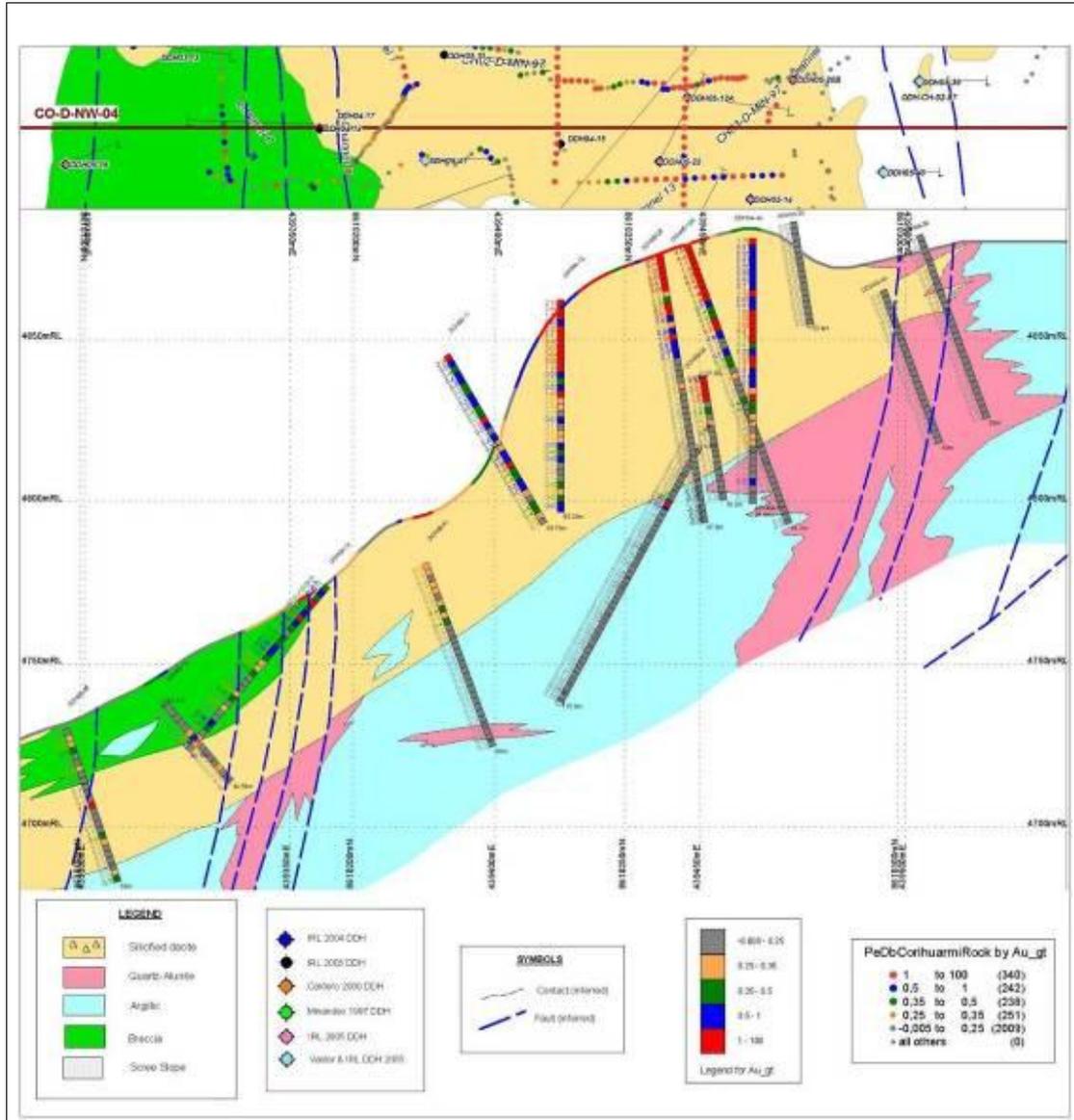


Figure 8 Corihuarmi Project - Susan Deposit - Representative Drill Section



The mineralized material is almost exclusively comprised of amorphous vuggy silica with the dacite protore generally being modified beyond textural or mineralogical recognition. Subordinate interstitial alunite increases in abundance towards the base of the mineralized zones, while zones of annealed breccias and quartz veining attest to multiple episodes of hydrothermal activity. The massive siliceous material grades laterally downwards into a zone of intense silica-alunite alteration.

Figure 9 Corihuarmi Project - Diana Deposit – Representative Drill Section



While the project resources and reserves are confined to the Susan and Diana zones, a series of other siliceous exposures have been recognised elsewhere within the main block tenements. These include the prospective Ely, Cayhua, Laura, Coyllor and Elena areas.

## Drilling

All diamond drilling was completed by the drilling contractor, MDH SAC. Most diamond core holes were drilled HQ diameter (63.5mm diameter).

Based upon inspection of various core trays available on site and review of the available reports, Coffey Mining Pty Ltd ("Coffey") considered that diamond core drilling has been carried out to expected industry standards. Sample recoveries were not recorded by Minera IRL although were reportedly high.

Blasthole drilling is used for blasting and also for grade control sampling, as standard industry practice. The holes are all vertical to approximately 5m depth and are rotary air blast samples which effectively result in wall contamination.

Drillhole collars were surveyed by Minera IRL surveyors using total station. Survey accuracy is reported as +/-0.5m. Coffey reports that accuracy of the survey measurements meets acceptable industry standards. No downhole surveys have been undertaken. The deviation is however expected to be limited as the holes are generally less than 100m.

### **Sampling & Assaying**

HQ (63.5mm diameter) and NQ (47.6mm diameter) diamond core was sampled at lengths on average of 2m. Samples were numbered and collected in individual plastic bags with sample tags inserted inside.

RC samples were collected at 5m intervals and quartered in riffle splitters. Sub-samples weighed approximately 1kg and were collected in cloth-lined sample bags. The samples for the scree RC drilling were collected on 1m and 2m intervals.

Diamond core was logged in detail for geological, structural and geotechnical information, including rock quality designation ("RQD") and core recovery. Whole core was routinely photographed. Review by Coffey of selected geological logs against actual core showed no significant discrepancies or inconsistencies. Diamond core and RC chip logging have been conventional and appropriate.

### **Sample Preparation, Analysis and Security**

Reference material is retained and stored in Lima, including half-core and photographs generated by diamond drilling, duplicate pulps and residues of all submitted samples. All pulps are stored in Lima at the Minera IRL storage base.

The CIMM laboratory in Lima was responsible for the preparation and analysis of the resource holes. Samples were digitally weighed, dried to a maximum of 120°C (for wet samples), crushed to 70% < 2mm (10 mesh), riffle split to 250g, and pulverised to 85% < 75µm (200 mesh). 50g pulps were submitted for chemical analysis. Chemical analysis consisted of fire assay (FA) with atomic absorption spectrometry (AAS) finish, using 50g sub-samples. Those samples that analysed  $\geq 5$  g/t Au were analysed using gravimetric methods.

The mine operates a modern laboratory where 100 fire assays per day are carried out for grade control purposes.

## Mineral Resource and Mineral Reserve Estimates

The resource and reserve drilling for the feasibility study was all HQ diamond core. Subsequent drilling has been a combination of diamond and reverse circulation drilling.

The grade estimates for the Diana and Susan deposits have been classified by Coffey as a combination of Measured and Indicated Mineral Resources in accordance with the criteria laid out in the Canadian National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“NI 43-101”) guidelines. No material has been classified as Inferred.

The feasibility study upon which the Corihuarmi Gold Mine was predicated (before mining commenced in 2008) upon a Proven and Probable Reserve (as defined in NI 43-101) totalled 4 million tonnes grading 1.1g/t Au containing 144,000 ounces.

Using cutoff grades of 0.3g/t Au cut-off at the Susan deposit and a 0.25g/t Au cut-off at the Diana deposit, a total of 5.3Mt at an average gold grade 0.6g/t Au for 103 koz Au are reported from the combined deposits, remaining in-situ as of December 31, 2009, as estimated by independent consultants Coffey.

| Cut off (g/t) | Deposit | Mineral Reserves |        |            |          |        |            |        |        |            |
|---------------|---------|------------------|--------|------------|----------|--------|------------|--------|--------|------------|
|               |         | Proven           |        |            | Probable |        |            | Total  |        |            |
|               |         | Tonnes           | Grade  | In-situ Au | Tonnes   | Grade  | In-situ Au | Tonnes | Grade  | In-situ Au |
|               |         | Mt               | g/t Au | koz        | Mt       | g/t Au | koz        | Mt     | g/t Au | koz        |
| 0.30          | Diana   | 0.7              | 0.54   | 11.9       | -        | -      | -          | 0.7    | 0.54   | 11.9       |
| 0.25          | Susan   | 4.4              | 0.67   | 93.9       | -        | -      | -          | 4.4    | 0.67   | 93.9       |
|               | Total   | 5.1              | 0.65   | 105.9      | -        | -      | -          | 5.1    | 0.65   | 105.9      |

A total Inferred Mineral Resource for the scree mineralization has been estimated by Coffey at 3.765Mt at 0.45 g/t Au containing 54,600 ounces with no lower grade cutoff applied (as at 28 February 2010). Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability. However, heap leach treatment of this material successfully commenced during 2011.

A comparison of the mining figures against the current resource model on a bench by bench basis, for the period January 1, 2009 to June 30, 2009 has been analysed by Coffey. The Diana deposit has consistently returned higher grades and more contained metal from mining blocks than shown from the current resource model for the corresponding volumes. Globally, the current mining at Diana has reported 154% of the gold ounces, delineated by the resource model.

The Susan deposit is performing well on the comparison of current mining against resource model figures. Globally, the mining at Susan is reporting 106% of the gold ounces delineated by the resource model.

## Operations

The environmental conditions at the Corihuarmi Gold Mine, located at up to 5,000 meters in elevation, is surrounding peaks generally barren of vegetation with open grassland meadows and wetlands. There is snow and rain in the summer months, October to April, and is generally dry the remainder of the year. The Company policy is to comply with World Bank Standard environmental practices. Figure 10 illustrates the pristine wetland in close proximity with the operation.

*Figure 10 Plant and heap leach, January 2010, showing wetlands in the foreground*



Corihuarmi was fully permitted to mine and treat up to 4,500 tonnes per day; a new permit allows for the current mining and treatment of 6,000 tonnes per day. There is a 50% allowance on the latter allowing treatment to 9,000 tonnes per day.

The operation comprises a conventional open pit benching mine and treatment by a single stage crush, heap leach operation.

Conversion to Owner mining commenced at the beginning of 2011 which resulted in significant operating cost savings. Previously the mining was carried out under contract to CyM Contratistas Generales SAC ("CyM").

The geotechnical evaluation was completed by Vector in 2005. The evaluation was based on existing geological data, field structural and geotechnical mapping and drill hole core logging.

In summary, the evaluation resulted in the recommendation of 70° batters and 8.5m berms for every 20m in vertical wall height.

The life of mine (“LOM”) pit design was completed by AMC to conventional industry standards during the feasibility study.

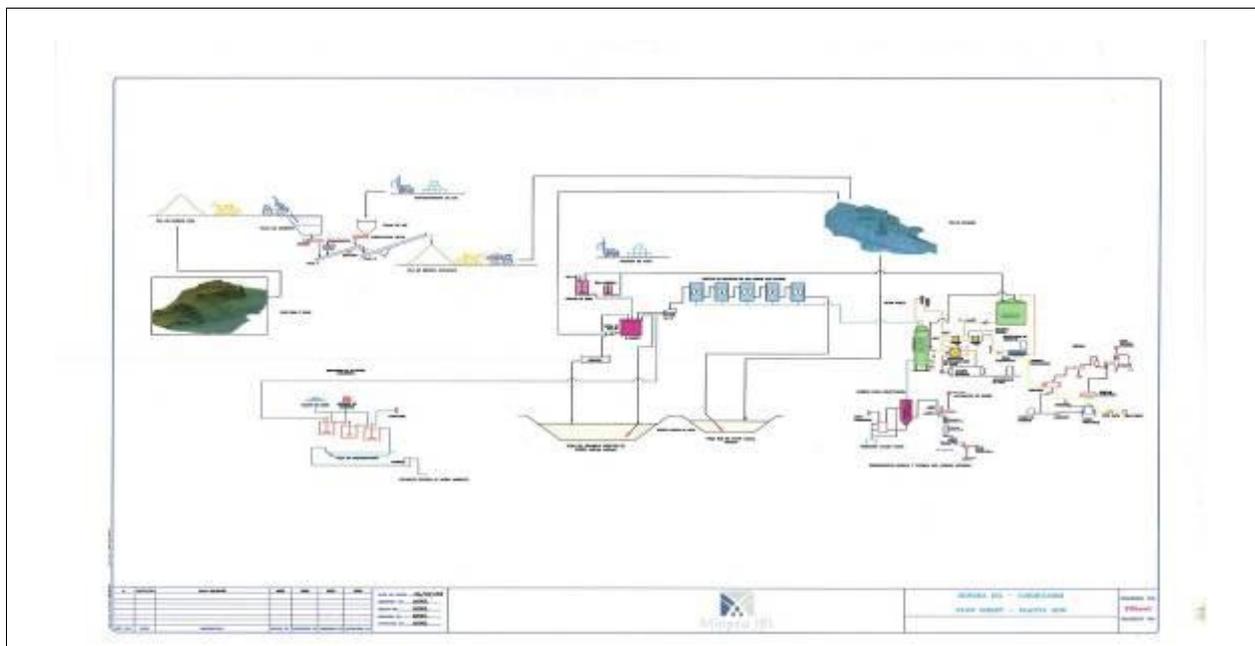
Both the Diana and Susan pits require blasting prior to loading.

For grade control purposes a representative sample of the drill cuttings produced from blast holes is used for grade determination (blast hole sampling).

The Corihuarmi Project process is a heap leach operation utilizing a multiple-lift, single-use leach pad. Prior to placing the ore onto the leach pad the ore is primary crushed. Processing of ore began on the Corihuarmi heap leach project in January 2008 when irrigation of the heaps was started.

A current flowsheet for the Corihuarmi heap leach project is illustrated in Figure 11 below.

**Figure 11 Corihuarmi Project - Current Flow sheet for Heap Leach Processing**



Ore from the mine is transported by trucks to the run of mine (“ROM”) pad. The ore is then either dumped directly into the coarse ore bin (“COB”) or can be placed on the ROM pad and fed into the COB by front end loader.

Ore is crushed in open circuit to minus 100mm through a primary jaw crusher. As the ore travels along the conveyor it is weighed and lime is added. From this conveyor the ore is discharged onto a stacking conveyor and is stockpiled. The crushed material is reclaimed using

a front end loader and trucks and transported to the heap leach pad where it is stacked on 8 meter high lifts and levelled.

Heap leaching with dilute cyanide solution is carried out in a single stage system. Pregnant leach solution is delivered to activated carbon contactors to remove the gold after which the solution is pumped back to the heap leach pad. The activated carbon in the contactors is stripped from the carbon in the elution plant and the gold is electrowon onto cathodes. The cathodes are then direct smelted to recover the gold into dore bars ready for shipment to the refinery.

Recoveries are shown in the table below.

| <b>Table 2 Corihuarmi - Feasibility Study Recovery Estimates</b> |                               |                                |
|--|-------------------------------|--------------------------------|
| <b>Outcrop</b>   | <b>Average Field Recovery</b> | <b>Expected Recovery Range</b> |
| Diana  | 87                            | 83 to 92                       |
| Susan  | 70                            | 61 to 85                       |
| Overall  | 76.8                          |                                |

### **Production, Cost history and Life-of-Mine Plan**

Crushing and stacking of the heap at Corihuarmi commenced in January 2008 with the first gold pour on 15 March 2008. Production for 2008 was largely from the higher grade Diana outcrop whereas production for 2009 and subsequent years was mostly from the larger but lower grade Susan outcrop.

**Table 3 Corihuarmi - Historical Production and Costs**

| <b>Parameter</b>                       | <b>2008<br/>Year</b> | <b>2009<br/>Year</b> | <b>2010<br/>Year</b> | <b>2011<br/>Year</b> | <b>2012<br/>Year</b> |
|--|----------------------|----------------------|----------------------|----------------------|----------------------|
| Ore mined and stacked on heap - tonnes | 1,076,033            | 1,216,844            | 1,455,500            | 2,000,733            | 2,064,382            |
| Ore grade, mined and stacked - g/t Au  | 1.99                 | 1.13                 | 0.87                 | 0.68                 | 0.50                 |
| Production - Gold, ounces              | 51,691               | 33,012               | 32,533               | 33,255               | 27,321               |
| Shipments - Gold, fine ounces          | 50,347               | 32,147               | 33,240               | 33,718               | 27,462               |
| Sale price received - Gold, US\$/ounce | 869                  | 988                  | 1,232                | 1,570                | 1,673                |
| Cash operating cost - US\$/ounce       | 161                  | 341                  | 383                  | 410                  | 581                  |

A LOM design was completed by AMC to conventional industry standards during the feasibility study. The current LOM plan uses this same design but a lower cut-off grade of 0.18g/t Au for the Susan pit and 0.16g/t Au for the Diana pit was applied. The pit inventory comprises 2.4Mt of mill feed at 0.35g/t Au with 0.5Mt of waste for a waste to ore strip ratio of 0.2: 1. The mining schedule is summarised in Table 4.

| Year  | Tonnes Ore | Grade Au (g/t) | Ounces  | Tonnes waste | Ratio (SR) | Rec Au Ounces |
|-------|------------|----------------|---------|--------------|------------|---------------|
| 2013  | 1.53Mt     | 0.4            | 19.2koz | 0.43Mt       | 0.28       | 15.3koz       |
| 2014  | 0.91Mt     | 0.3            | 8.6koz  | 0.70kt       | 0.08       | 6.5           |
| Total | 2.44Mt     | 0.35           | 27.8koz | 0.54kt       | 0.21       | 21.8          |

However, the above does not take into account the broken scree material that is classified as Inferred Resource and therefore not eligible for including in a reported production plan. In fact, this material is being mined and treated and internal projections extend the mine life until approximately 2<sup>nd</sup> quarter 2015. Furthermore, the Company is proposing to undertake in 2013 a study of a prospect known as Cayhua, identified from the Company's exploration program. A positive study could extend the mine life to 2016.

In the second half of 2011, the royalty payable to the government of Peru was amended from a sliding scale of 1% to 3% on sales to royalties based on operating profits. A mining royalty and a special mining tax ("SMT") is payable by the Corihuarmi Project on a quarterly basis, which is structured using a marginal tax rate scale applied to operational profit at different percentages depending on different levels of operating margin (operating margin = operating income to mining operating revenue). For the mining royalty marginal rates range from 1% for operating profit margins between 0% and 10% to 12% for operating profit margins greater than 80% with a minimum royalty of 1% of sales payable regardless of profitability. For the SMT, marginal rates range from 2% for operating profit margins between 0% and 10% to 8.4% for operating profit margins above 85%. The Corihuarmi Project is also subject to the Peru corporate income tax at a rate of 30%.

### **Exploration**

Bedrock sampling, particularly chip channel sampling in conjunction with diamond core ("DC") and RC drilling have been the dominant exploration tools of Minera IRL for defining mineral resources at the Diana and Susan zones. In addition, they have utilised geological mapping, and geochemistry sampling, along with CSAMT geophysical surveys.

In addition to the main Susan and Diana current mine areas, the property includes the Laura, Ely and Cayhua prospects that have been defined by a combination of soil geochemistry and exploration diamond drilling (Figures 12 and 13).

Figure 12 Corihuarmi Project - Main Block Alteration

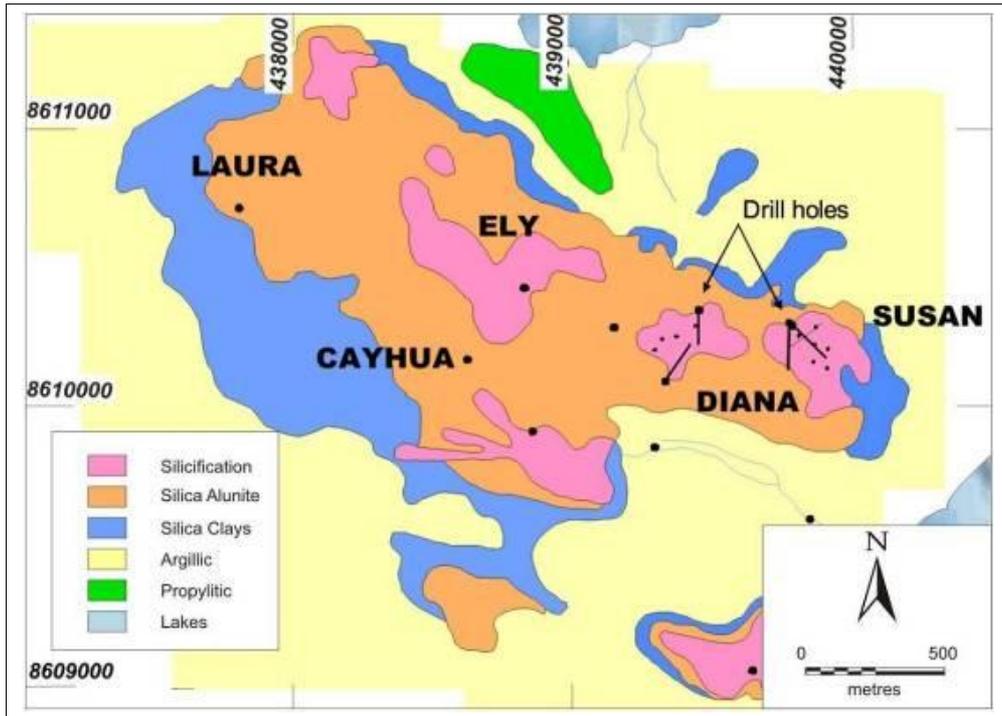
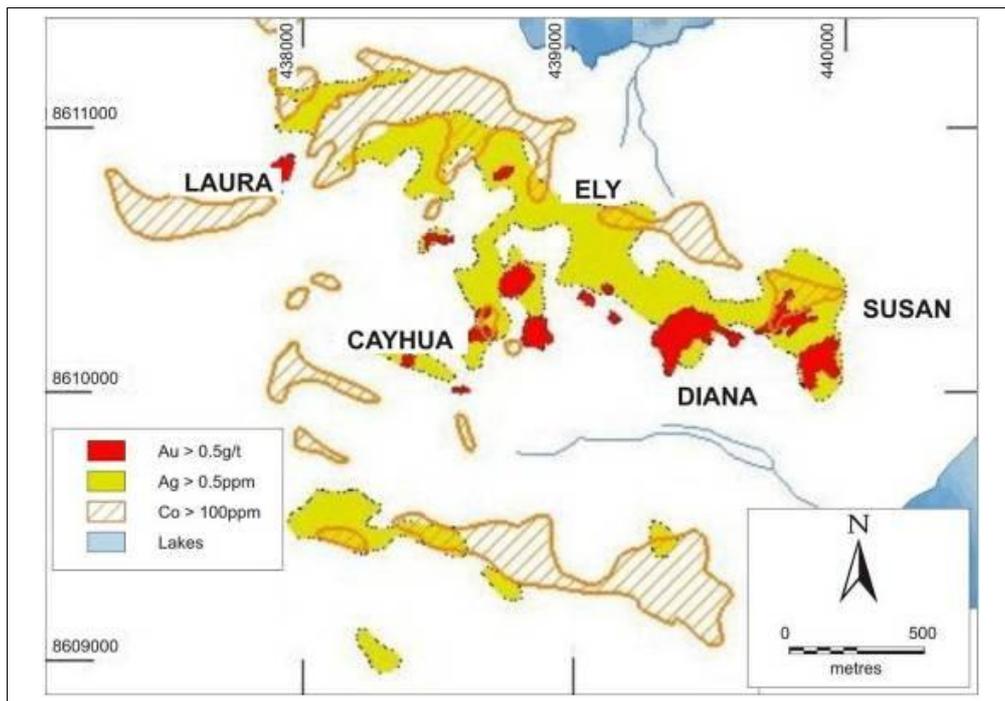


Figure 13 Corihuarmi Project - Main Block Metallogenic Zonation



Results from the drilling at the Cayhua prospect have been positive and as such the undertaking of a study has been proposed by Minera IRL to assess the viability of including this prospect in the mine plan.

Exploration surveys and interpretations completed to date within the Corihuarmi Project have largely been planned, executed and supervised by Minera IRL personnel, supplemented by consultants and contractors for more specialised or technical roles. The data was considered by Coffey to be of good quality.

Coffey considers there are other exploration targets that justify further exploration as drilling of these epithermal targets to date is minimal and there is potential to identify additional mineralization in the Minera IRL permits. The Company has plans to continue exploration over these relatively untested targets.

## 4.2 Ollachea

The following summary is derived from the technical report entitled “Ollachea Gold Project, Peru, NI43-101 Technical Report on Feasibility Study” dated 29 November 2012. This summary is not complete and the full Ollachea Report can be accessed on the Company’s website or its SEDAR profile at [www.sedar.com](http://www.sedar.com).

This section has also been updated by the Company to the date of this AIF by its Executive Chairman, Courtney Chamberlain, a “qualified person” under NI 43-101.

### Location, Accessibility, Climate and Physiography

The Ollachea Property is located in the Puno Region of southern Peru. Minera Kuri Kullu S.A. (MKK), a wholly-owned subsidiary of Minera IRL S.A., (MIRLSA) owns the Property and retained AMEC Peru S.A. (AMEC) and Coffey Mining Pty Ltd (Coffey Mining) to conduct a Feasibility Study (“FS”) on the viability of mining the deposit from underground and processing ore in a 1.1 million t/a facility on the property to produce gold doré. Process plant design and project estimating were carried out by AMEC in Brisbane, Australia.

**Figure 14 Ollachea Project Location**



Road access to the Ollachea Project is by the new Interoceanic Highway which runs 200 m east of the proposed plant site for the Project. The Project is located at between 2,500 m and 3,500 m elevation on the eastern flank of the Cordillera Oriental of the Peruvian Andes. The Interoceanic Highway is a two-lane asphalt-paved road connecting the Brazilian highway system with the south of Peru and the Port of Matarani at the City of Ilo on the Pacific Coast of Peru. A series of un-paved roads connect the Town of Ollachea to the Minapampa area and the Oscco Cachi valley and are used to support exploration drilling on the Project. The Project can be reached by driving approximately four hours north from the airport at Juliaca, or five hours southwest from the airport at Puerto Maldonado. Both airports have daily commercial flights one to two hours from Jorge Chavez International Airport in the District of Callao, immediately north of the National Capital City of Lima.

The Project is located immediately adjacent to the town of Ollachea which can provide basic commercial and labour support for exploration and development activities.

The Project has a temperate sub-alpine climate with a pronounced rainy winter season and dry summer season. The rainy season extends from December to April, the dry season from June to September and the remaining months of October, November and May are transition months. Based on historic data average precipitation in the study area ranges from 20.9 mm (June) to 228.7 mm (January) with an average of 1,235.4 mm. The maximum average monthly temperatures range from 12.8 °C to 14.6 °C from November to January. The minimum average monthly temperatures range from 10.6 °C to 12.3 °C between June and August.

## **History**

The earliest evidence of mining on the Ollachea Project is attributed to Spanish colonial activity during the 18th century. Informal mining activity has been pursued in the area since at least the 1970's and probably considerably earlier.

Between 1998 and 1999, Peruvian Gold Ltd., a publicly-traded Canadian exploration company, drilled five diamond drill holes on the Project and encountered low-grade gold mineralization but did not do any further work. In May 2003, Rio Tinto re-discovered the area while following-up on a regional stream sediment sampling program. Between 2003 and 2004, Rio Tinto carried out surface sampling, encountering encouraging surface sample gold assays but in 2006 elected to farm out the project.

IRL started negotiations with Rio Tinto in 2006, which were followed by the negotiation of an Agreement of Use of Surface Lands and another related to Artisanal Mining Exploitation with the Community of Ollachea, signed in November 2007, after which exploration works started over the property.

In 2007, the Community of Ollachea and MKK worked to formalize mining at Minapampa under the national Act of Formalization and Promotion of the Little and Artisanal Mining industry and its regulations (Tong, 2010b). MKK granted the Community of Ollachea right to exploit near surface mineralization at a part of the Minapampa area for five years in exchange

for surface rights to carry out exploration activities on a portion of the property (Tong, 2010b). On 30 May, 2012, this surface rights agreement was extended for a period of 30 years. Small-scale artisanal mining continues on the Project (Figure 6-1).

Beginning with field activities in early 2008, MKK carried out bedrock sampling, geochemical sampling, mapping and structural geology based on aster image interpretation (Telluris, 2009). By the end of September 2009, 71 diamond drill holes totaling 26,026 m had been drilled, and a Mineral Resource estimate and Preliminary Assessment was carried out for the Project by Coffey Mining (Coffey, 2010).

MKK continued diamond drilling and, in mid-2010, contracted AMEC to assist with a Prefeasibility Study for the Project. By November 2010, an additional 60 drill holes for a total of 131 drill holes totaling 51,062 m had been drilled and the Mineral Resource estimate for the Property was updated (Coffey, 2011a).

Between October 2010 and May 2011, MKK completed 26 more core drill holes totalling 11,143 m. At this stage, a Prefeasibility Study Mineral Resource estimate for the Minapampa Zone, based on 120 drill holes totalling 46,404 m, was completed. The results of the Ollachea Prefeasibility Study were announced in an IRL Press release dated 18 July, 2011.

An extended period of exploration drilling from May 2011 was followed by another infill drill campaign by MKK on the Minapampa Zones to end of March 2012, which added another 49 core drill holes totalling 17,904 m. By this time, 206 drill holes totalling 80,109 m had been completed on the Ollachea Project. The database provided to Coffey Mining for the Feasibility Study resource update included information taken from this drill hole database. Subsequent to the provision of the resource data to Coffey Mining, 2 additional drill holes were completed for a project total of 208 diamond drill holes totalling 81,073 m in length.

This Feasibility Study Report includes an updated Mineral Resource estimate for the Minapampa Zones (effective date 6 July, 2012) based on the Minapampa Mineral Resource database to end-April 2012 (151 drill holes for 59,509 m). The results of the Ollachea Resource Upgrade to be used for the Minapampa Feasibility Study were announced in an IRL Press release dated 18 July, 2012.

*Figure 15 Artisanal Mine Workings at Minapampa - October, 2010*



### **Exploration and Mining Concession Tenure**

The Ollachea Project consists of 12 concessions covering an area of 8,698.98 ha (Table 4). A map of the Ollachea Property is shown in Figure 16. The concessions are map-staked and defined and registered spatially by the location of their vertices.

Tong (2012b) concludes that the Ollachea Property is in good standing, valid and in full force and effect, therefore giving MKK the right to explore and exploit the minerals existing in the titled area. As at the date of Tong (2012), the validity fees of the Ollachea concessions have been paid with respect to all the years elapsed as from their filing, with the exception of the 2012 validity fees.

The mineralization included in the Mineral Resource and Mineral Reserves discussed in this report occur within the Oyaechea 3 concession. The proposed plant site location will be located on the Oyaechea 2 concession. The portal location for the exploration access adit (currently being developed), which also serves as the main mine portal is located on the Oyaechea 2 concession. The Tailings Storage Facility is located approximately 2.5 km north of the mine portal and within the Oyaechea 9 concession.

A gap measuring approximately 3,000 m long by 130 m wide exists between the Oyaechea 2 and Oyaechea 3 concessions (Figure 17). This concession is not held by MKK. The exploration drive and other mine infrastructure discussed in this report have been located to avoid this gap.

MKK has signed a 30 year surface rights agreement in June 2012 with the Community of Ollachea allowing MKK to use the property covering the area of interest of the Project. The

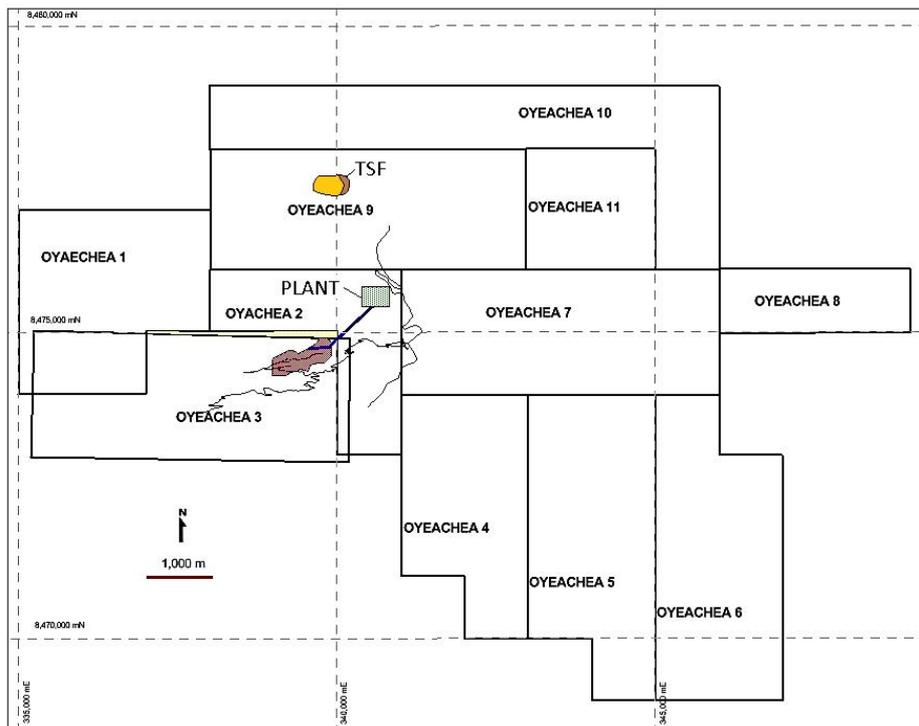
agreement allows the Community of Ollachea to carry out artisanal mining activities on the property until MKK commences production.

MKK currently holds permits which allow it to continue exploration activities and to develop an exploration access drive as part of their exploration program.

**Table 5 Ollachea Concessions**

| Concession Name | Concession Number | Concession Holder             | Area (ha) | Application Date |
|-----------------|-------------------|-------------------------------|-----------|------------------|
| OYAEACHEA 1     | 10215003          | Compañía Minera Kuri Kullu SA | 800       | 22/05/2007       |
| OYAEACHEA 2     | 10215103          | Compañía Minera Kuri Kullu SA | 500       | 22/05/2007       |
| OYAEACHEA 3     | 10218103          | Compañía Minera Kuri Kullu SA | 998.98    | 22/05/2007       |
| OYAEACHEA 4     | 10215203          | Compañía Minera Kuri Kullu SA | 700       | 22/05/2007       |
| OYAEACHEA 5     | 10215303          | Compañía Minera Kuri Kullu SA | 900       | 22/05/2007       |
| OYAEACHEA 6     | 10215403          | Compañía Minera Kuri Kullu SA | 900       | 22/05/2007       |
| OYAEACHEA 7     | 10389907          | Compañía Minera Kuri Kullu SA | 1000      | 14/05/2009       |
| OYAEACHEA 8     | 10389807          | Compañía Minera Kuri Kullu SA | 300       | 07/05/2009       |
| OYAEACHEA 9     | 10139909          | Compañía Minera Kuri Kullu SA | 1000      | 18/02/2010       |
| OYAEACHEA 10    | 10140009          | Compañía Minera Kuri Kullu SA | 1000      | 11/02/2010       |
| OYAEACHEA 11    | 10140109          | Compañía Minera Kuri Kullu SA | 400       | 11/02/2010       |
| OYAEACHEA 12    | 10167809          | Compañía Minera Kuri Kullu SA | 200       | 08/04/2010       |

**Figure 16 Ollachea Exploration Concession Map**



Note: The red polygon is the surface projection of Indicated Mineral Resources in the Minapampa Zone. The green polygon is footprint of the mineral processing plant proposed in this FS. The yellow polygon between the Oyeachea 2 and Oyeachea 3 concessions is a wedge-shaped gap in the MKK tenure holdings, and is owned by third-parties. The proposed exploration access drive is marked as a blue line and roads are marked as thin black lines. The proposed TSF is marked as an orange area in the Oyeachea 9 concession.

The Oyaechea 1 to Oyaechea 6 concessions were originally registered by Rio Tinto Mining and Exploration Limited Sucursal del Peru (Rio Tinto) during its exploration activities at Ollachea beginning in 2006. On 1 September 2006, Minera IRL signed an agreement with Rio Tinto to acquire the original Ollachea concessions. On 23 February, 2007 the agreement was ratified and the Rio Tinto concessions were transferred to MKK (Tong, 2012).

## **Agreements**

In September 2006, MIRLSA was granted an option to acquire the property rights and a 100% interest in the Oyaechea 1 to Oyaechea 6 concessions from Rio Tinto for an initial payment of US\$250,000, progressive payments totaling US\$6,000,000 over four years, together with two additional payments in the event that Rio Tinto's clawback right under the agreement was not exercised. The option was conditional on MIRLSA successfully negotiating a surface rights agreement with the local community within 120 days.

On 23 February 2007, Rio Tinto entered an agreement with MKK that assigned in favour of MKK the tenements comprising the Ollachea Project.

Rio Tinto's clawback right entitled Rio Tinto a one-time right to acquire up to a 60% participating interest in the Ollachea property or a 60% equity interest in Kuri Kullu. Rio Tinto's clawback right lapsed in 2009 and on 15 December 2009, Rio Tinto was notified by MKK that MKK was to make the first additional payment reducing the Rio Tinto royalty from 3% to a 1% net smelter return (NSR) in exchange for payment of approximately US\$3.81 million. This payment was made in mid-2010.

For the second additional payment to Rio Tinto, MKK has committed to making an additional cash payment, of which 80% can be settled in common shares of the Company, of 30% of the net present value of the Ollachea Project (at a 7% discount rate) based on the results of a feasibility study, less 30% of the sunk costs determined after the exercise of this option. The second additional payment may be paid in three installments. The first installment is 34% of the second additional payment and is due 90 days after reception of notice from independent appraisers on the valuation of the FS. The second installment is 33% of the second additional payment and is due 12 months after reception of notice from independent appraisers. The third installment is 33% of the second additional payment and is due 24 months after reception of notice from independent appraisers. The second additional payment must be paid with a minimum of 20% cash with the balance in ordinary shares of MIRL. The second and third installment shall accrue an annual interest rate of 7%.

MKK negotiated a surface rights agreement with the Community of Ollachea covering an area of 5,998.9848 ha of the Oyaechea 3 concession, which was signed on 25 November 2007. The agreement will be in force for a maximum of five years, and will automatically revert to a development contract at the time a development decision is made. MKK will make payments for surface rights access totaling US\$213,333 over the five-year period. In addition, MKK agreed to make contributions to sustainability projects and commit to social responsibility programs for the community totaling US\$416,666 and a contribution for technical support to artisan miners of US\$300,000 over the life of the agreement. As a part of the agreement, upon the commencement of commercial production, the MKK will transfer a participation of 5% of the share capital of

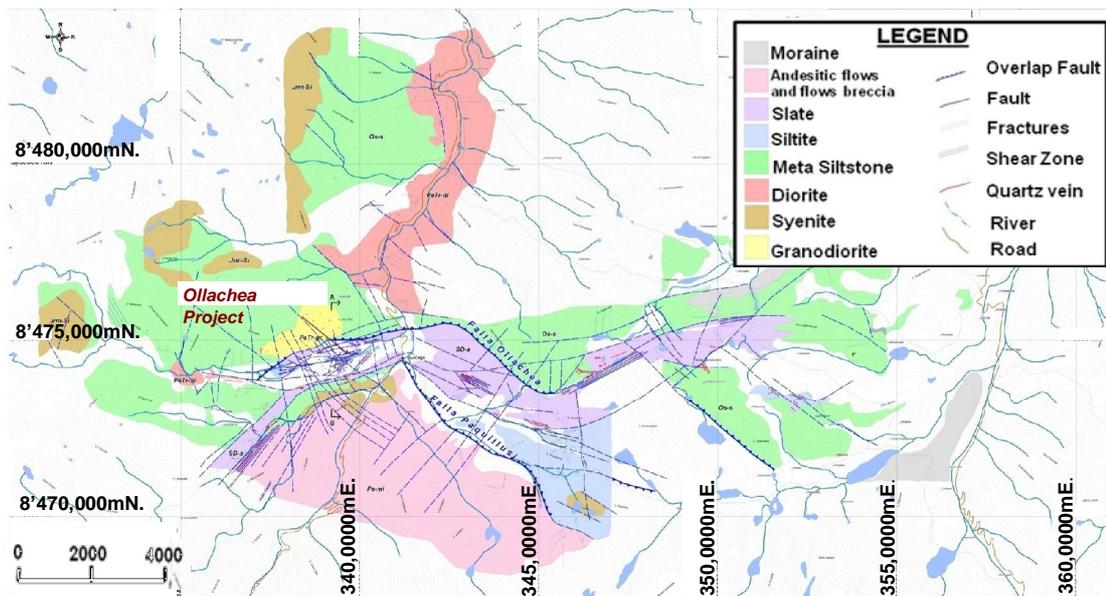
MKK to the Community of Ollachea, giving them a participating interest in the project. Additionally, in June 2012 MKK signed an extension to the surface agreement for a period of 30 years with the Community of Ollachea allowing MKK to use the property covering the area of interest of the Project.

### Geological Setting and Mineralization

The regional setting of the Ollachea Project is characterized by a significant change in the strike of the Andean range, whereby the stratigraphy is locally aligned approximately east-west, as opposed to the dominant northwest Andean trend. This deflection is postulated to have resulted from significant compression and thrusting to accommodate a prominent portion of the adjacent Brazilian Shield located to the east.

On a regional scale, high-grade gold deposits occur almost exclusively in slates/phyllites, (usually carbonaceous), and rarely in more arenaceous sediments but only when they lie adjacent to mineralized phyllites. This suggests that there may be a regional control on pre D1 syngenetic gold in sulphides that has been upgraded in areas of strong overprinting D1 deformation. Figure 17 shows the regional setting with respects to the Ollachea Project.

*Figure 17 Regional Geology of the Ollachea Project*

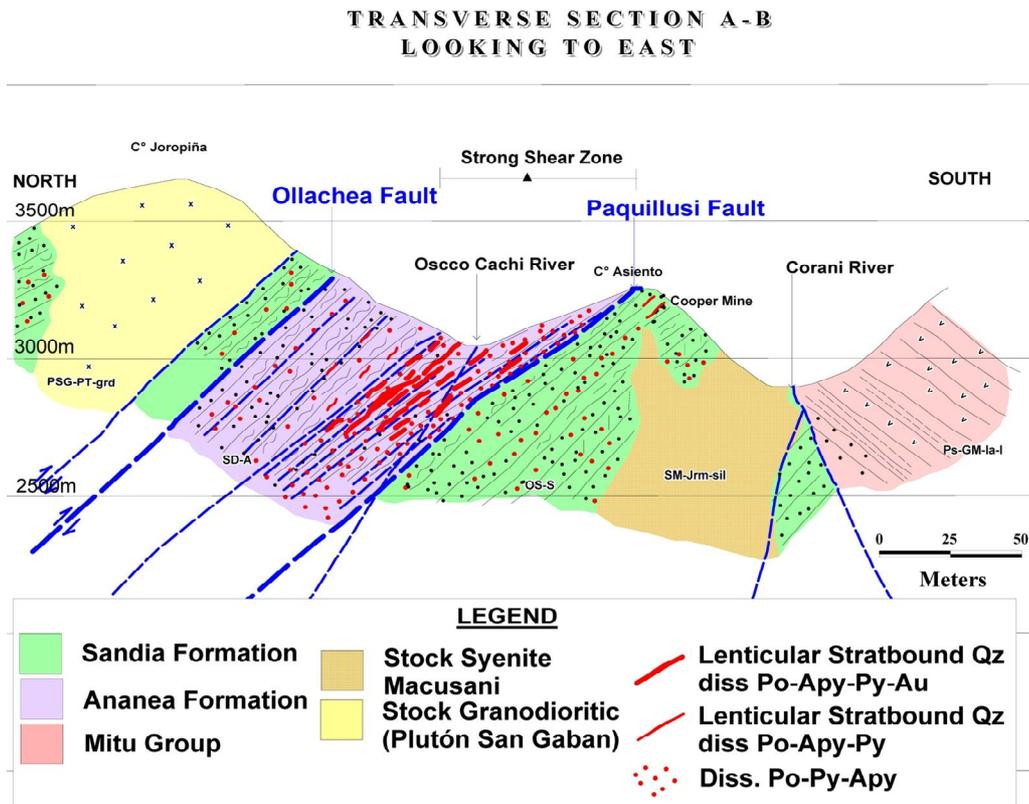


(after Ing. Valdivieso, Y., MKK, 2008. Regional Map of the Ollachea Project. 1:50,000 scale)

The geology of the Ollachea Project is dominated by phyllites of the Devonian Sandia Formation, and variably bedded graphitic slates and shales of the Siluro-Devonian Ananean Formation. Andesitic volcanic rocks crop out south of the sedimentary units and both the sedimentary and volcanic rocks are intruded by nepheline syenite to the south and granodiorite to the north. Intra-formational contacts and a strong penetrative cleavage in the sedimentary package of rocks are oriented approximately east-west and are parallel to two regional-scale thrust faults that bound the phyllitic slates which play host to the gold mineralization at Ollachea (Figure 18).

The gold mineralization at Ollachea is broadly strata-bound within northeast to east-west-trending, north-dipping carbonaceous phyllites.

Figure 18 Schematic Cross Section of the Ollachea Deposit



Delineated gold mineralization occurs within seven discrete east-striking, north-dipping structures below Minapampa and on the north side of the Oscoco Cachi River. Mineralization has been traced continuously for 900 m along strike from the Minapampa zone eastwards into the contiguous Minapampa East Zone. Gold mineralization has also been encountered to the west of the Minapampa Zone in a zone on the south side of the Oscoco Cachi River that is referred to as Concurayoc, located some 400 m west of Minapampa. The known mineralized zone is approximately 1,900 m long, up to 200 m thick and has been traced in places to over 400 m below surface and remains open along strike as well as at depth.

An extensive shear zone hosts the gold mineralized horizons. The shear zone is characterized by a well-developed slaty cleavage, with quartz-sulphide veins and veinlets, broadly concordant with the slaty cleavage. Quartz-sulphide veins and veinlets vary from a few millimetres to centimetres wide, up to a maximum of 40 cm, but do not always contain gold mineralization. The gold mineralization is hosted in the quartz -sulphide veins and veinlets. The veins can be strongly boundinaged, resulting in the development of packages of irregularly mineralized veins and veinlets within discrete mineralized horizons, incumbent to the sheared slate package.

The phyllitic carbonaceous slate rocks hosting the Ollachea gold mineralization had previously (Prefeasibility Study) been categorized as a series of discrete lithological horizons (Pz1-Pz6), on the basis of the presence and nature of quartz and sulphide content. Current re-evaluation of the Ollachea core recognizes that the slate lithology is a constant and thus sulphidic and quartz content is now included as a variant within appropriate columns on the relevant logging sheets.

As a consequence of this refinement, the slate horizons previously classified as Pz1 - Pz6 (Ollachea Prefeasibility Study), are now grouped into only one horizon. A three-dimensional array of erratically occurring, generally narrow, discontinuous lenticular horizons of more carbonaceous or graphitic content are hosted within the metamorphosed package of fine-grained slates.

Gold mineralization is associated with a sulphide assemblage consisting predominantly of pyrrhotite with minor pyrite, arsenopyrite and traces of chalcopyrite. Coarsely crystalline arsenopyrite and free gold are frequently observed in close association with one another within the central Minapampa and Minapampa East zones. The occurrence of coarse pyrite without other sulphides is often a counter-indicator of gold mineralization.

The deposit model guiding exploration targeting is mesothermal quartz vein style gold mineralization. The Ollachea deposit has also been described as a member of the class of orogenic gold deposits, with the possibility of local syngenetic gold enrichment playing a role in the location of the mineral deposit. This variety of gold deposit can also go by the name slate belt gold deposit and can be both very large and very rich.

### **Drilling and Exploration Techniques**

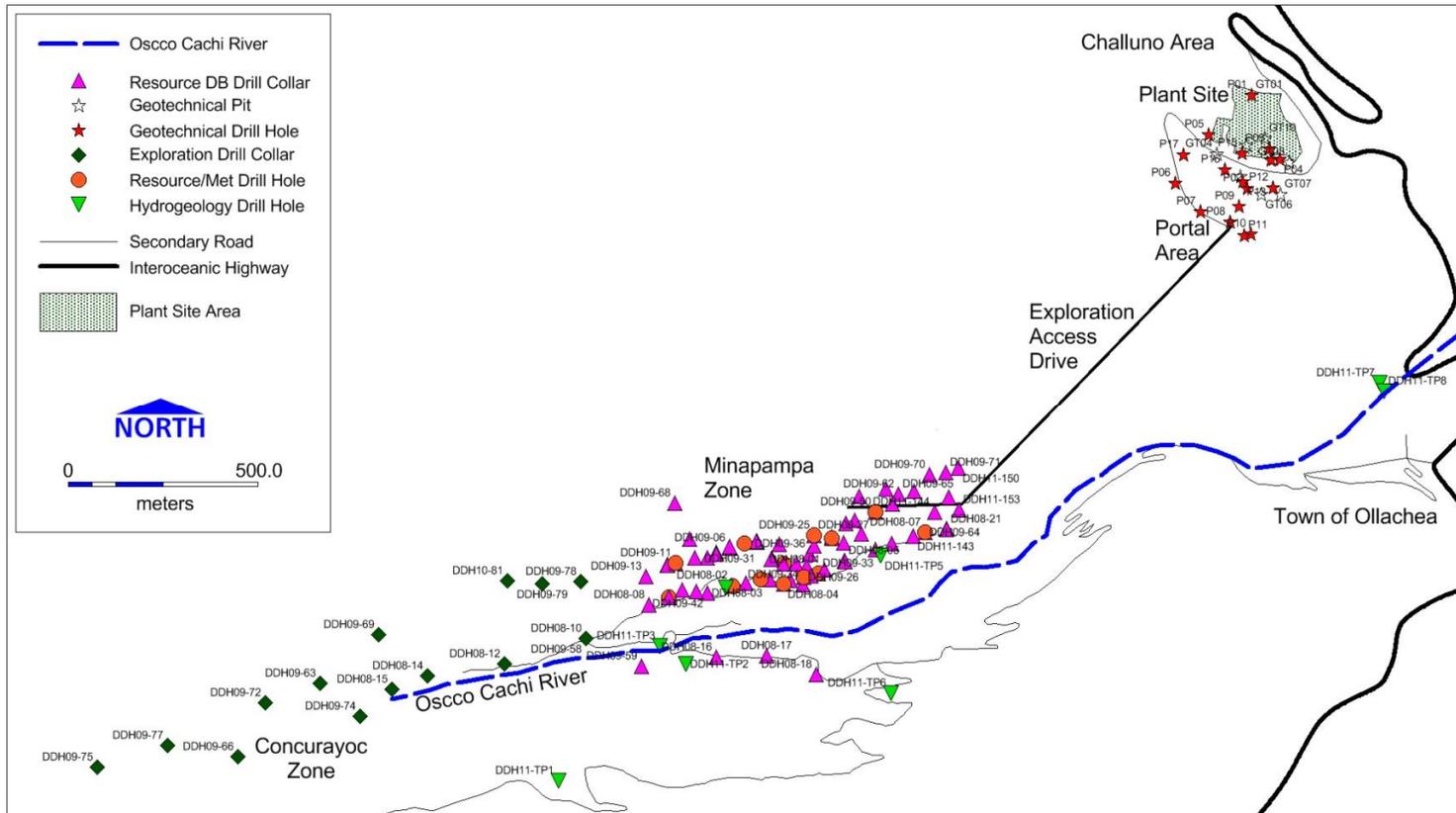
Diamond drilling with two rigs commenced in October 2008 and as at 23 April, 2012, 73,934 meters have been completed in 193 holes. A total of 155 drill holes totalling 60,306 meters are adjacent to the Minapampa zone and were used to construct the Mineral Resource Model used in the Feasibility Study.

The principal methods used for exploration drilling at Ollachea have been diamond core drilling (DC) by MDH SAC (drilling company), using standard wireline diamond drilling of HQ diameter then reducing to NQ as ground conditions dictate. Core recovery was very good (greater than 99%); except in large fracture zones where recovered core is noticeably fractured, but these zones are not expected to have a material impact on the accuracy and reliability of the results.

All surveying, plotting and mineral resource modelling, utilises the UTM grid in the WGS 84 coordinate system (Zone 19S).

Figure 19 shows drill hole collar locations for exploration, resource database, resource and metallurgical sample drill holes, geotechnical drill holes and pits and drill holes for hydrogeology. Table 10-1 summarizes pertinent drilling statistics. The Minapampa zone has been drilled at a nominal spacing of 30 m by 30 m.

Figure 19 Drill Hole Location Map



Drill hole collars were surveyed by MKK surveyors using total station instruments. Survey accuracy is reported as +/-0.5 m.

Down-hole surveys have been undertaken by the contract drilling company utilising both a Reflex single shot and a multi-shot survey tool, with readings taken on average at 20m downhole depth.

Assay samples for the mineral resource database have been taken at 0.3 m to 5 m lengths within the known mineralized zones (samples of 2 m to 5 m lengths have been taken in the surrounding non-mineralized areas) and have an average length of 1.33 m (the median length is 1 m).

Exploration drill holes used in the mineral resource estimate were generally drilled to the south at between 40 degrees to 90 degrees dip. At different depths below the surface, holes were targeted to perpendicularly intersect the main trend of mineralization. Given the access from surface to deeper sections of mineralization, several of the deeper intersections are oblique to mineralization. The deeper sections of Ollachea will need to be targeted from underground or via >1 km surface directional drilling.

Drill holes typically intersect mineralization orthogonally, and the mineralized intercepts are typically 60% to 100% of the true mineralized thickness.

In 2012, eight geotechnical drill holes were drilled to depths of 30 to 40 m and nine test pits were excavated in the proposed plant site and lower portal waste dump areas. Additionally, six test pits were excavated around the proposed paste plant and upper portal area.

### **Sample Preparation, Analysis and Security**

The present procedure requires that half-core samples of 1.0 m length be taken in mineralized zones recognized during the logging process. Core outside the 1.0 m sampling intervals but transitional to the visually identified mineralized zones, is half-core sampled on a 2.0 m sample length. Core interpreted to represent zones sterile of gold mineralization are quarter-sawn and sampled at 5.0 m lengths. If any assayed intercepts with greater than 0.5 g/t Au are encountered in the 5.0 m sampling intervals, these intervals are re-sampled taking half-core samples at 1.0 m lengths, thus leaving quarter-core remaining.

Drill core is split using a diamond core saw. Samples are numbered and collected in individual plastic bags with sample tags inserted inside as well as being stapled to the outside of the bag. Remaining core from mineralized intervals is currently stored at temperatures that are maintained at below -5°C in refrigerated containers, to preserve their metallurgical integrity, at MKK's Juliaca core storage facility.

The sampling is of industry standard and is considered adequate for use in the mineral resource estimate.

MKK has used the independent Certimin (previously known as CIMM) Peru laboratories as its primary laboratory for preparation and assaying of drill core samples from Ollachea since the MKK 2008 drill campaign. Certimin Peru has the System of Quality Management ISO 9001:2008

certification "System Management Quality" and is accredited with NTP-ISO/IEC 17025:2006 certification "General Requirements for the Competence of Testing and Calibration Laboratories", for the preparation and assay of geochemical and metallurgical samples.

The Certimin sample preparation laboratory in Juliaca prepared the drill core samples for the Ollachea Project. Chemical analysis is conducted at the Certimin Lima laboratory and consists of fire assay (FA) with atomic absorption spectrometry (AAS) finish on the 50 g pulp aliquot. A 32-element suite was also analysed by ion-coupled plasma optical emission spectroscopy (ICP-OES) until the end of 2009 but was discontinued once sufficient analyses had been obtained from the initial nominal 100 m grid pattern.

Coffey Mining considers that the sample preparation and security are adequate and appropriate for use in Mineral Resource estimation.

QA/QC programs have been in place since the beginning of exploration work. All of the MKK samples in the Mineral Resource database have been submitted with standard reference materials to control assay accuracy, and depending on the program, has included field duplicate samples, coarse crush duplicates, pulp duplicates to control sampling, sub-sampling and analytical precision. Not all programs have included preparation duplicates.

A check assaying program has also been used to demonstrate the reproducibility of the assaying carried out in the primary laboratory, and to help establish assaying accuracy.

Early in the 2008 MKK drilling program it was noted that the pyrrhotite present in the ore was reactive. Given the anticipated gold associations with the mineral as well as the potential influence oxidation could have on metallurgical test results, it was decided the core should be stored in freezers. Refrigerated sea containers were purchased and core stored at sub-zero temperatures.

Metallurgical sampling and compositing took place in each of 2009, 2010 and 2011 from representative diamond drill core that had been frozen to keep the samples from oxidizing. Samples were packed for shipment to the metallurgical laboratory in a non-oxidizing environment.

The Ollachea database contains 726 bulk density determinations. A total of 111 of these determinations are within the mineralized zones.

Coffey Mining has reviewed the entire sample chain of custody at Ollachea, from the drilling of the samples to the receiving of final analytical results, and is of the opinion that the systems in place are of industry standard, and are adequate and appropriate for use in Mineral Resource estimation.

### **Data Verification**

Verification of sampling and assay procedures have been carried out by Barry Smee and Coffey Mining on several occasions.

A field duplicate is collected after every 30 samples by MKK. Initially in the project, the field duplicates compared  $\frac{1}{2}$  core with  $\frac{1}{4}$  core. Coffey Mining has compared the results of the  $\frac{1}{2}$  core versus  $\frac{1}{4}$  core,  $\frac{1}{2}$  core versus  $\frac{1}{2}$  core and  $\frac{1}{4}$  core versus  $\frac{1}{4}$  core using the QC Assure software

package. After examining the field duplicates, there does not appear to be much difference in the relative sample precision.

Coffey Mining compared the preparation duplicate data (289 samples) using the QC Assure software. The results of these data show that the preparation duplicate has over 86% precision at 20% Rank HARD and 74% precision at 10% Rank HARD. Coffey Mining considers this is a good result for this style of gold mineralization.

A total of 80 umpire pulp samples were sent to ALS Chemex laboratories in Santiago, Chile from the 2010 drilling campaign. The pulps were analysed using the same method as used by Certimin and showed high precision levels.

Table 6 lists screen fire assay results for samples in six grade ranges.

**Table 6 Ollachea Screen Fire Assay Results**

| Original Assay Au Grade (g/t) | Samples | Average Screen Fire Assay Au (g/t) | Fine Fraction Assay Au Grade AAS (0) (g/t) | Original Assay Au Grade AAS (1) (g/t) | Difference (AAS (1) -SFA) |
|-------------------------------|---------|------------------------------------|--|---------------------------------------|---------------------------|
| > 10 g/t Au                   | 3       | 21.8                               | 13.71                                      | 18.32                                 | 81%                       |
| 5 - 10 g/t Au                 | 21      | 6.75                               | 5.56                                       | 6.58                                  | 97%                       |
| 2 - 5 g/t Au                  | 57      | 3.15                               | 2.73                                       | 3.2                                   | 100%                      |
| 1 - 2 g/t Au                  | 55      | 1.48                               | 1.33                                       | 1.43                                  | 96%                       |
| 0.5 - 1.0 g/t Au              | 42      | 0.81                               | 0.75                                       | 0.74                                  | 91%                       |
| < 0.5 g/t Au                  | 43      | 0.47                               | 0.41                                       | 0.32                                  | 69%                       |

### Metallurgical Testing

As part of the FS, metallurgical testwork was conducted on samples from the Ollachea deposit to investigate the ore's metallurgical response and to generate process design data. The FS testwork program was conducted between March and September 2012 at ALS Ammtec Limited (Ammtec).

The analysis<sup>1</sup> indicated a benefit in net revenue for all twelve composites, ranging from US\$3/t to US\$50/t. The reduced cyanide consumption identified by the variability testing increases the benefit attributed to the alternate flowsheet compared to the initial evaluation tests.

### Mill Plan and Mill Feed

An extensive testwork program was conducted at ALS Ammtec (Perth) on Ollachea samples for the Definitive Feasibility Study. The results obtained from this program are considered sufficient for FS level testwork with adequate data generated to understand the ore's metallurgical characteristics, be able to derive parameters required for design and to support the operating and capital estimates and financial analysis.

<sup>1</sup> Using US\$1250/oz gold price and US\$3.6/kg sodium cyanide cost

Testwork has indicated that the metallurgical response of the Ollachea ore zones will be characterized by:

- A significant component of gravity recoverable gold (GRG);
- Partial preg-robbing given the presence of carbonaceous material; and
- Moderate double refractory component, with some gold locked in silicates and sulphides (minor arsenopyrite and dominant pyrrhotite).

Ollachea ore will be mined from Ore Zones 1, 2, 3, 4, 5 and 6. The process plant will treat Ollachea ore (high grade), as well as low grade development ore from these zones. Due to the variable mine production rate, stockpiling of material during months of peak mine production is required, as well as the reclaim of stockpiled material during months of low mine production.

Yearly mining tonnage, head grade and residue grade for the various sources of mill feed is presented in Table 7.

**Table 7 Summary of Yearly Extractions**

|                              | 2015           | 2016           | 2017             | 2018             | 2019             | 2020             | 2021             | 2022             | 2023           | 2024           | LOM              |
|------------------------------|----------------|----------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|----------------|------------------|
| <b>HG Tonnage</b>            | 571,134        | 802,983        | 1,089,432        | 1,087,515        | 1,088,856        | 1,099,181        | 1,092,996        | 862,304          | 720,833        | 203,175        | 8,618,408        |
| <b>HG Grade</b>              | 3.43           | 3.07           | 3.48             | 3.67             | 3.64             | 3.82             | 3.59             | 3.25             | 3.51           | 2.91           | 3.50             |
| <b>HG Residue</b>            | 0.32           | 0.33           | 0.33             | 0.32             | 0.32             | 0.30             | 0.30             | 0.27             | 0.28           | 0.20           | 0.31             |
| <b>HG Recovery</b>           | 90.8           | 89.3           | 90.4             | 91.3             | 91.2             | 92.1             | 91.7             | 91.7             | 92.0           | 93.1           | 91.3             |
| <b>HG Stockpile Tonnage</b>  | 35,308         | 21,570         | 7,650            | 7,042            | 8,191            | 8,870            | 5,990            | 0                | 17,271         | 0              | 111,893          |
| <b>HG Stockpile Grade</b>    | 3.15           | 4.33           | 2.97             | 2.85             | 2.79             | 3.10             | 2.93             | 0.00             | 3.16           | 0.00           | 3.31             |
| <b>HG Stockpile Residue</b>  | 0.37           | 0.48           | 0.43             | 0.43             | 0.42             | 0.44             | 0.43             | 0.00             | 0.44           | 0.00           | 0.42             |
| <b>HG Stockpile Recovery</b> | 88.3           | 88.8           | 85.5             | 85.0             | 84.8             | 85.9             | 85.3             | 0.0              | 86.1           | 0.0            | 87.2             |
| <b>LG Tonnage</b>            | 44,886         | 48,139         | 12,356           | 27,218           | 17,084           | 20,519           | 3,824            | 0                | 0              | 0              | 174,026          |
| <b>LG Grade</b>              | 1.49           | 1.56           | 1.48             | 1.37             | 1.38             | 1.46             | 1.68             | 0.00             | 0.00           | 0.00           | 1.48             |
| <b>LG Residue</b>            | 0.29           | 0.29           | 0.27             | 0.17             | 0.13             | 0.13             | 0.20             | 0.00             | 0.00           | 0.00           | 0.23             |
| <b>LG Recovery</b>           | 80.6           | 81.5           | 81.9             | 87.9             | 90.5             | 90.9             | 88.1             | 0.0              | 0.0            | 0.0            | 84.3             |
| <b>LG Stockpile Tonnage</b>  | 29,014         | 65,667         | 7,894            | 4,891            | 6,121            | 3,392            | 34,019           | 265,272          | 0              | 0              | 416,271          |
| <b>LG Stockpile Grade</b>    | 1.57           | 1.52           | 1.48             | 1.47             | 1.48             | 1.49             | 1.49             | 1.49             | 0.00           | 0.00           | 1.50             |
| <b>LG Stockpile Residue</b>  | 0.23           | 0.26           | 0.27             | 0.25             | 0.21             | 0.19             | 0.20             | 0.20             | 0.00           | 0.00           | 0.21             |
| <b>LG Stockpile Recovery</b> | 85.4           | 83.0           | 81.6             | 82.8             | 86.0             | 87.2             | 86.8             | 86.8             | 0.0            | 0.0            | 85.9             |
| <b>Total Tonnage</b>         | <b>680,342</b> | <b>938,359</b> | <b>1,117,333</b> | <b>1,126,666</b> | <b>1,120,252</b> | <b>1,131,962</b> | <b>1,136,829</b> | <b>1,127,576</b> | <b>738,104</b> | <b>203,175</b> | <b>9,320,599</b> |
| <b>Total Grade</b>           | <b>3.21</b>    | <b>2.91</b>    | <b>3.45</b>      | <b>3.60</b>      | <b>3.59</b>      | <b>3.76</b>      | <b>3.51</b>      | <b>2.83</b>      | <b>3.50</b>    | <b>2.91</b>    | <b>3.38</b>      |
| <b>Total Residue</b>         | <b>0.31</b>    | <b>0.32</b>    | <b>0.33</b>      | <b>0.32</b>      | <b>0.32</b>      | <b>0.30</b>      | <b>0.30</b>      | <b>0.25</b>      | <b>0.29</b>    | <b>0.20</b>    | <b>0.30</b>      |
| <b>Total Recovery</b>        | <b>90.2</b>    | <b>88.9</b>    | <b>90.3</b>      | <b>91.2</b>      | <b>91.2</b>      | <b>92.0</b>      | <b>91.6</b>      | <b>91.1</b>      | <b>91.8</b>    | <b>93.1</b>    | <b>91.0</b>      |

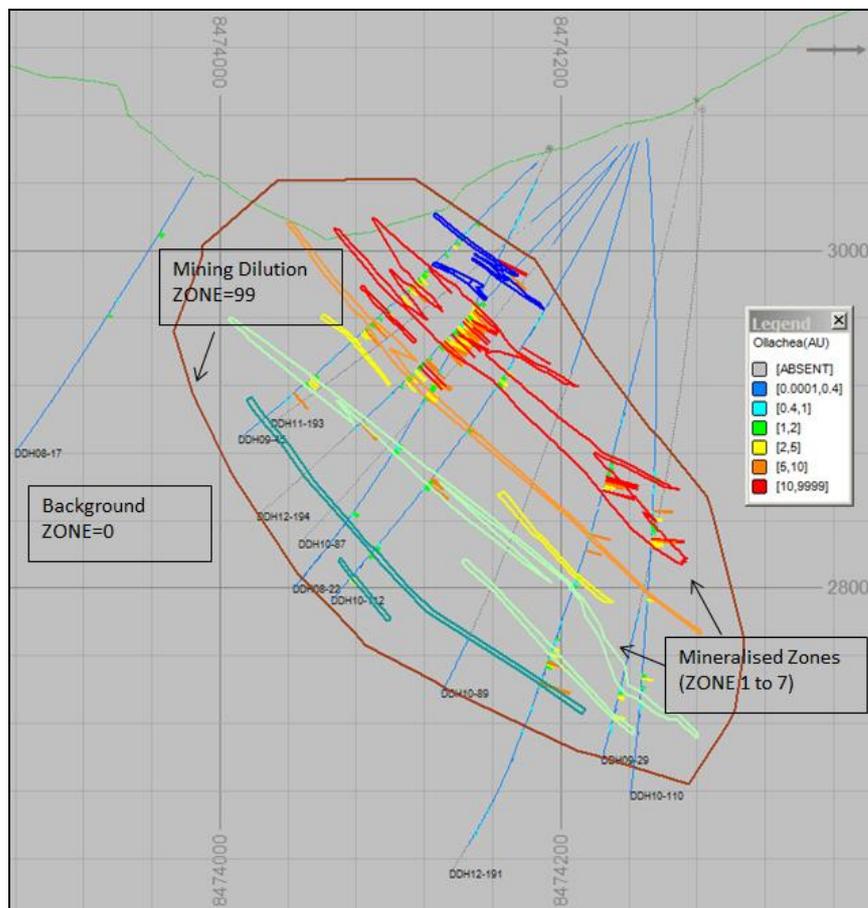
## Mineral Resource Estimates

Coffey Mining has estimated an Indicated and Inferred Mineral Resource for the Minapampa Zone of the Project as at 6<sup>th</sup> July 2012. All grade estimation was completed using Ordinary Kriging (OK) for gold.

For the purpose of Mineral Resource estimation, seven main high-grade mineralized domains were interpreted and modelled on a lower threshold of 1.0 g/t Au corresponding to the lower limit of mineralization having reasonable spatial continuity.

The Ollachea interpretation was restricted to the high-grade, relatively continuous zones (ZONE 1 to 7). A low-grade envelope (Zone 99) was also modelled around the main mineralized zones to account for mining dilution. Background mineralization (Zone 0) was also modelled. The modelled domains are shown in Figure 20.

*Figure 20 Cross Section of Geological Model - 339,200 mE*



Interpretation and digitizing of all constraining boundaries was undertaken on cross sections orthogonal to the drill line orientation. The generated wireframes were all snapped to the available drill core data.

The resultant digitized boundaries have been used to construct wireframe defining the three-dimensional geometry of each interpreted feature. The interpretation and wireframe models were developed using the commercially-available Datamine (Studio 3) mining software package.

The Ollachea database contains 777 bulk density measurements. Table 8 summarises bulk density determinations by ZONE.

**Table 8 Summary Statistics of Density Determinations by Zone**

| Zone       | Count | Min   | Max   | Mean         | Median | Std. Dev. | Variance | CV    |
|------------|-------|-------|-------|--------------|--------|-----------|----------|-------|
| 0          | 376   | 2.626 | 3.12  | <b>2.818</b> | 2.82   | 0.059     | 0.003    | 0.021 |
| 99         | 298   | 2.595 | 2.988 | <b>2.794</b> | 2.805  | 0.069     | 0.005    | 0.025 |
| Total 0,99 | 674   | 2.595 | 3.12  | <b>2.808</b> | 2.815  | 0.065     | 0.004    | 0.023 |
| 1          | 10    | 2.71  | 2.887 | <b>2.823</b> | 2.832  | 0.052     | 0.003    | 0.018 |
| 2          | 31    | 2.605 | 2.92  | <b>2.814</b> | 2.821  | 0.081     | 0.007    | 0.029 |
| 3          | 22    | 2.719 | 3.11  | <b>2.836</b> | 2.821  | 0.079     | 0.006    | 0.028 |
| 4          | 2     | 2.663 | 2.831 | <b>2.747</b> | 2.663  | 0.118     | 0.014    | 0.043 |
| 5          | 28    | 2.747 | 2.96  | <b>2.858</b> | 2.87   | 0.052     | 0.003    | 0.018 |
| 6          | 5     | 2.662 | 2.856 | <b>2.761</b> | 2.733  | 0.085     | 0.007    | 0.031 |
| 7          | 5     | 2.656 | 2.868 | <b>2.745</b> | 2.679  | 0.102     | 0.01     | 0.037 |
| Total 1-7  | 103   | 2.605 | 3.11  | <b>2.824</b> | 2.834  | 0.077     | 0.006    | 0.027 |

High-grade capping (cutting) was determined for each zone. The composite data for each of the mineralized zones generally had a positively skewed grade distribution characterised by differences between mean and median grades, and moderate to high coefficients of variation (CV, standard deviation/mean).

The summary statistics for the 2 m composite data, calculated for uncut and cut values for each element, are presented in Table 9.

**Table 9 Cut and Un-cut Composite Statistics**

| ZONE | Element | Uncut       |      |           |       | Cut       |      |           |      | % Change in     |       |
|------|---------|-------------|------|-----------|-------|-----------|------|-----------|------|-----------------|-------|
|      |         | Number Data | Mean | Std. Dev. | CV    | Upper Cut | Mean | Std. Dev. | CV   | Number Data Cut | Mean  |
| 1    |         | 178         | 3.12 | 3.92      | 1.26  | 20        | 3.00 | 2.87      | 0.96 | 1               | -4.1  |
| 2    |         | 633         | 5.06 | 9.03      | 1.78  | 40        | 4.80 | 6.24      | 1.30 | 3               | -5.3  |
| 3    |         | 304         | 3.87 | 5.57      | 1.44  | 22        | 3.62 | 3.78      | 1.04 | 4               | -6.5  |
| 4    |         | 63          | 3.10 | 3.43      | 1.11  | 18        | 3.00 | 2.91      | 0.97 | 1               | -3.0  |
| 5    | Au(g/t) | 410         | 3.26 | 4.92      | 1.51  | 25        | 3.12 | 3.66      | 1.17 | 3               | -4.3  |
| 6    |         | 142         | 3.52 | 7.48      | 2.13  | 20        | 2.85 | 3.92      | 1.38 | 6               | -19.0 |
| 7    |         | 57          | 2.67 | 2.49      | 0.93  | NC        | 2.67 | 2.49      | 0.93 | 0               | 0.0   |
| 99   |         | 12156       | 0.20 | 0.72      | 3.66  | 0.9       | 0.16 | 0.21      | 1.34 | 321             | -19.8 |
| 0    |         | 16521       | 0.08 | 0.85      | 11.19 | 0.9       | 0.05 | 0.11      | 2.29 | 136             | -35.6 |

A three dimensional block model was generated to enable grade estimation and mine planning and mine design. A parent block size of 20 mE x 20 mN x 4 mRL was selected with sub-blocking to a 2 mE x 2 mN x 0.4 mRL cell size to improve volume representation of the interpreted wireframe models.

A detailed validation of the OK estimate was completed for each zone and included both an interactive 3D and statistical review.

An Inferred Mineral Resource confidence category was assigned for blocks:

- Having an estimated Au grade
- Within the mineralized zones (Zone 1 to 7)

The Indicated Mineral Resource confidence category was assigned to blocks:

- Located in a portion of the deposit with a density of drilling of approximately 40 m x 40 m or better, and an estimated grade greater than 2 g/t Au.
- With a slope of regression for the Au OK estimate is greater than 0.47
- Where the distance to the nearest sample used in the Au OK block estimate is within 0.3 (30%) of the first pass search ellipse radius.

Mineral Resources are reported above a cut-off grade of 2.0 g/t Au and within three-dimensional geological wireframes constructed to constrain the gold mineralization in the Mineral Resource estimate to zones defined by mineralized diamond drill core intersections. Mineral Resources above a 2.0 g/t Au cut-off grade have reasonable prospects for economic extraction, based on mineralization continuity, shape and distribution and as demonstrated in this study.

Mineral Resources for the Ollachea property (Minapampa) above a 2.0 g/t Au cut off consist of 10.6 Mt of Indicated Mineral Resources with an average grade of 4.0 g/t Au and 3.3 Mt of Inferred Mineral Resources with an average grade of 3.3 g/t Au. Mineral Resources were estimated by Doug Corley, MAIG, of Coffey Mining Perth, a Qualified Person under National Instrument 43-101, and have an effective date of 6 July, 2012 (Table 10).

**Table 10 Mineral Resources for the Ollachea Project**

| <b>Mineral Resources above a 2.0 g/t Au Cut-off Grade</b> | <b>Tonnage<br/>(Mt)</b> | <b>Au Grade<br/>(g/t)</b> | <b>Contained Au<br/>(Moz)</b> |
|---|-------------------------|---------------------------|-------------------------------|
| <b>Minapampa</b>  |                         |                           |                               |
| Indicated   | 10.6                    | 4.0                       | 1.4                           |
| Inferred  | 3.3                     | 3.3                       | 0.3                           |

Note:

Mineral Resources are inclusive of Mineral Reserves.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

Mineral Resources are reported above a cut-off grade of 2.0 g/t Au and within three-dimensional geological wireframes constructed to constrain the gold mineralization in the Mineral Resource estimate to zones defined by mineralized diamond drill core intersections. Tonnages are metric tonnes and ounces of contained gold are troy ounces. Mineral Resources above a 2.0 g/t Au cut-off grade have reasonable prospects for economic extraction, based on mineralization continuity, shape and distribution and as demonstrated in this study. Mineral Resources are estimated by Doug Corley, MAIG, R.P. Geo, QP, of Coffey Mining and have an effective date of 6 July, 2012.

## Mineral Reserve Estimate

The in situ ounces of gold per vertical and lateral step (15 m) using a 2.0 g/t Au cut-off grade for the Indicated Mineral Resource are shown in Figure 21 and Figure 22.

Points related to Figure 21 are:

- The planned exploration incline is to be located around 2775 mRL. Approximately 85% of the in situ ounces are located above this RL.
- Zone 2 contains approximately 46% of the in situ ounces over approximately 315 vertical metres. This zone contains mineralised lodes that have the greatest width.
- Zone 5 contains approximately 24% of the in situ ounces however this is over approximately 450 vertical metres. This zone has mineralised lodes that are of significantly lesser width than the mineralised lodes in Zone 2.
- Zone 3 contains approximately 18% of the in situ ounces and this is over a similar vertical distance to that of Zone 2. Zone 3 mineralised lodes are of a similar width to those of Zone 5.
- The remaining 12% of in situ ounces are contained in Zone 1, Zone 4 and Zone 6.

Figure 21 Ounces per 15m Vertical Step (Indicated Category Only)

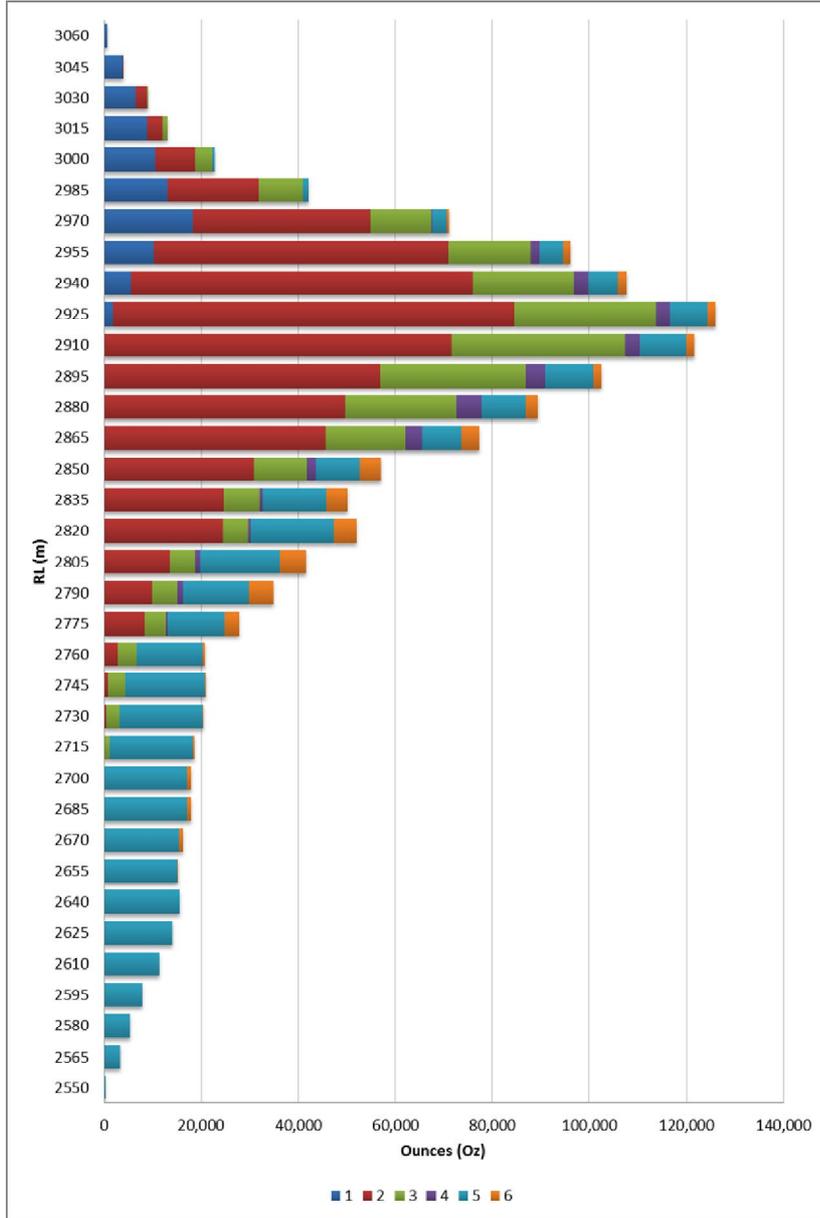
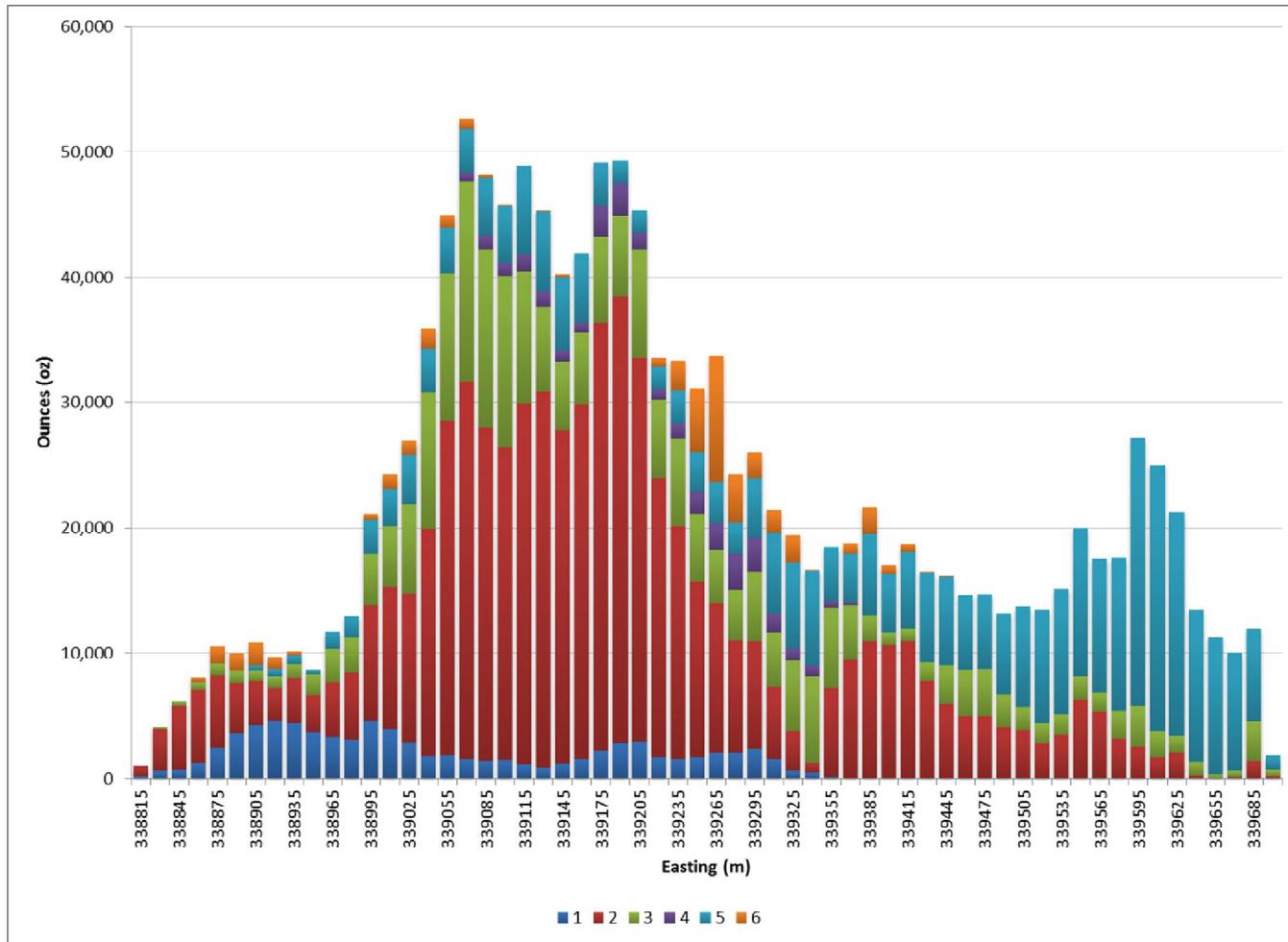


Figure 22 Ounces per 15 m Easting Step (Indicated Category Only)



Points related to Figure 21 are:

- The majority of the *in situ* ounces are located towards the west where multiple stacked zones are located. Approximately 74% of the *in situ* ounces are located west of Easting 339370m.

A three-dimensional structural model was created as part of the FS. Included in this model is an interpreted shear zone that cuts through the mineralised zones at an oblique angle. An area of very poor rock quality was identified within this zone. The mine design process took cognisance of this area. The location of this shear zone in relation to the interpreted mineralised zones is shown in Figure 23.

**Figure 23 FS 3D Structural Model Shear Zone**



A mine design cut-off grade of 2.0 g/t Au was used for the FS. The financial outcome of the FS and company strategic objectives were key considerations in the selection process. The Project Mineral Resource is also reported above a 2.0 g/t Au COG.

The initial mineable limits of the study were identified by using the Datamine process, MSO.

Key criteria or data used in the MSO process were:

- geological resource wireframes that represent the location of the lode mineralization;
- dilution: 0.3 m on each wall for a total of 0.6 m;
- minimum mining width: 2.0 m (2.6 m with dilution);
- minimum waste pillar width: 7.5 m lode true width;

- minimum mining unit dimensions of 15 m high by 15 m along strike by lode thickness (a 7.5 m half stope option for the strike direction was used in MSO to account for lode pinch out or changes in mineralisation grade).

The selection of a 15 m by 15 m mining unit dimension limit is based on Project geotechnical information, mining practicalities (drilling and support installation), lode geometry and the nature of the MSO process and economic considerations.

Stope shape COG sensitivity analysis was also completed as part of the process. This showed in lower-grade areas that small increases in the stope shape COG above 2.0 g/t Au impacted on the continuity of adjacent stopes located in the same lode. Essentially, as the stope shape COG is increased, less ore is defined and more isolated stopes or groups of isolated stopes are created. This outcome would result in the cost effectiveness of stope access development being reduced.

Table 11 shows the Mineral Reserve estimate for the Project, based on a cut-off grade of 2.0g/t Au. The Mineral Reserves are included within the declared Indicated Mineral Resource and is declared inclusive of mining dilution. The low grade development ore is sourced from development drives that traverse through Indicated Mineral Resources but has been diluted below the Project COG of 2.0 g/t Au. As the mining cost for this material will have already been expensed, it is economic to treat through the plant. A mill cut-off grade of 1.0 g/t Au has been applied to this material.

**Table 11 Mineral Reserve Estimate (November 29, 2012)**

| <b>Classification</b>                          | <b>Tonnes (Mt)</b> | <b>Au Grade (g/t)</b> | <b>Contained Gold (koz)</b> |
|--|--------------------|-----------------------|-----------------------------|
| Ore (+ 2 g/t Au)                               | 8.7                | 3.5                   | 983                         |
| Low Grade Development Ore (+1 g/t to 2 g/t Au) | 0.6                | 1.5                   | 28                          |
| <b>Probable Mineral Reserves</b>               | <b>9.3</b>         | <b>3.4</b>            | <b>1,011</b>                |

Notes:  
 Probable Mineral Reserves are included within Indicated Minerals Resources and are declared inclusive of mining dilution with an effective date of 29 November, 2012.  
 Tonnages are metric tonnes and ounces of contained gold are troy ounces.  
 Probable Mineral Reserves are declared based on a base case gold price of US\$1300 / oz, a project COG of 2.0g/t, LOM project operating costs of US\$49.2 / t ore and a mill recovery of 91.04%.  
 Low Grade Development Ore is sourced from development drives that traverse through Indicated Mineral Resources but has been diluted below the project COG of 2.0 g/t Au. As the mining cost for this material will have already been expensed, it is economic to treat through the plant. A mill cut-off grade of 1.0 g/t Au has been applied to this material.  
 Mineral Reserves were estimated under the supervision of John Hearne, BEng(Mining), MBA, FAusIMM, CP(Mining), of Coffey Mining, and who is recognized as a Qualified Person for the purposes of National Instrument 43-101.

The Mineral Reserve estimate has been determined and reported in accordance with the CIM Definition Standards (2010).

A summary of the main parameters used in estimating the Mineral Reserve are shown in Table 12.

**Table 12 Main Parameters used for the Mineral Reserve Estimate (November 29, 2012)**

| Description   | Units       | Value |
|---|-------------|-------|
| Gold Price  | US\$/oz     | 1,300 |
| Mine Design Au Cut-off Grade                          | g/t         | 2.0   |
| Mill Au Cut-off Grade                                 | g/t         | 1.0   |
| Mining Method   |             | LHOS  |
| Minimum Mining Width (excluding dilution)             | m           | 2.0   |
| Annual Production Rate                                | Mt/a        | 1.1   |
| Mining Operating Cost                                 | US\$/ t ore | 23.4  |
| Milling Operating Cost                                | US\$/ t ore | 21.5  |
| G&A Operating Cost                                    | US\$/ t ore | 4.3   |
| Mining Dilution - Development.                        | %           | 21    |
| Mining Dilution - Stopes.                             | %           | 19    |
| Mining Recovery (within mine design shape)            | %           | 100   |
| Mill Recovery   | %           | 91.04 |
| Project Capital Cost                                  | US\$M       | 177.5 |
| Sustaining Capital Cost                               | US\$M       | 41.5  |
| Closure Cost  | US\$M       | 4.2   |
| Royalties   | %           | 3.3   |
| Special Mining Tax (SMT) or Especial de Minería (IEM) | %           | 3.1   |
| Workers Profit Share                                  | %           | 7.3   |
| Corporate Income Tax                                  | %           | 25.1  |

A reconciliation of Indicated Mineral Resources contained within the Probable Mineral Reserve is shown in Table 13.

**Table 13 Indicated Mineral Resources to Probable Mineral Reserves Ounces Reconciliation (November 29, 2012)**

| Description   | Contained Gold (Moz) |
|---|----------------------|
| <b>Indicated Mineral Resources</b>  | <b>1.4</b>           |
| <i>MSO Stope Design Process Exclusions</i>                                    | 0.28                 |
| <i>Crown Pillar Exclusions</i>  | 0.05                 |
| <i>Shear Zone Exclusions</i>  | 0.02                 |
| <i>Raise bore Exclusions</i>  | 0.01                 |
| <i>Western Sill Pillar Exclusions</i>   | 0.03                 |
| <i>Production Tail Exclusions</i>   | 0.002                |
| <b>Indicated Mineral Resources contained within Probable Mineral Reserves</b> | <b>0.99</b>          |

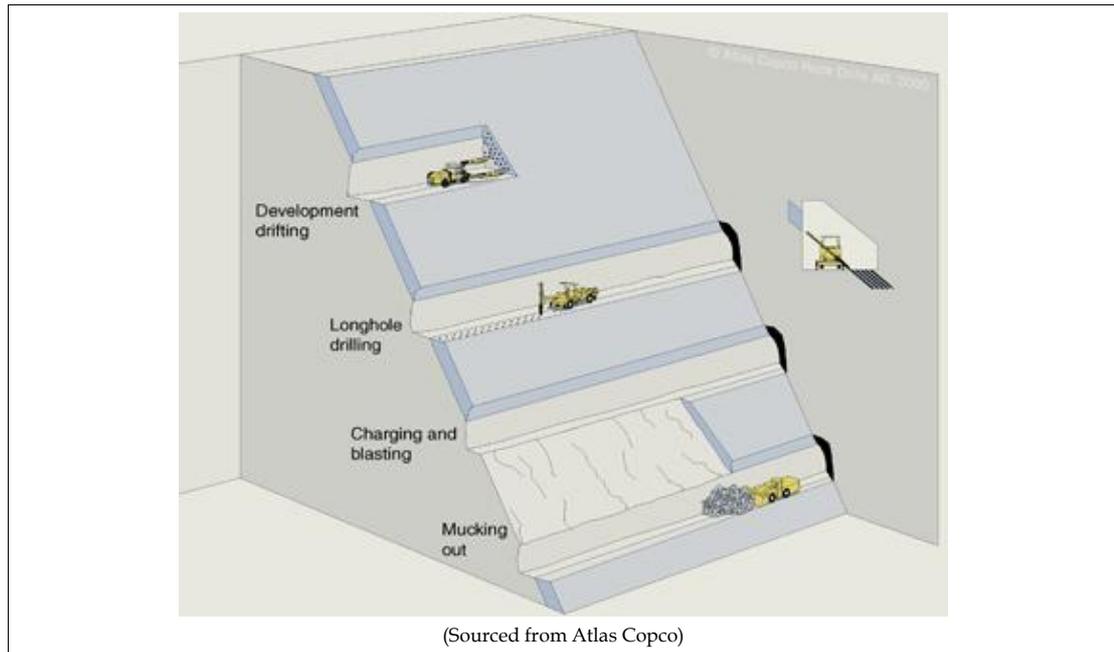
*Totals may not sum due to rounding*

## Mining Methods

The mining method selected for the FS was long hole open stoping (LHOS) with paste backfill, which can also be referred to as bench stoping with paste backfill. Extraction occurs along the orebody strike direction on a retreat basis.

Stopes will be accessed longitudinally (along strike) on each level by, one, two or three strike ore drives dependent on lode thickness. Figure 24 shows a generic interpretation of the main components of the LHOS mining method excluding the paste backfilling, which occurs after mucking out. Open stope strike length is dictated by geotechnical considerations and varies with lode width.

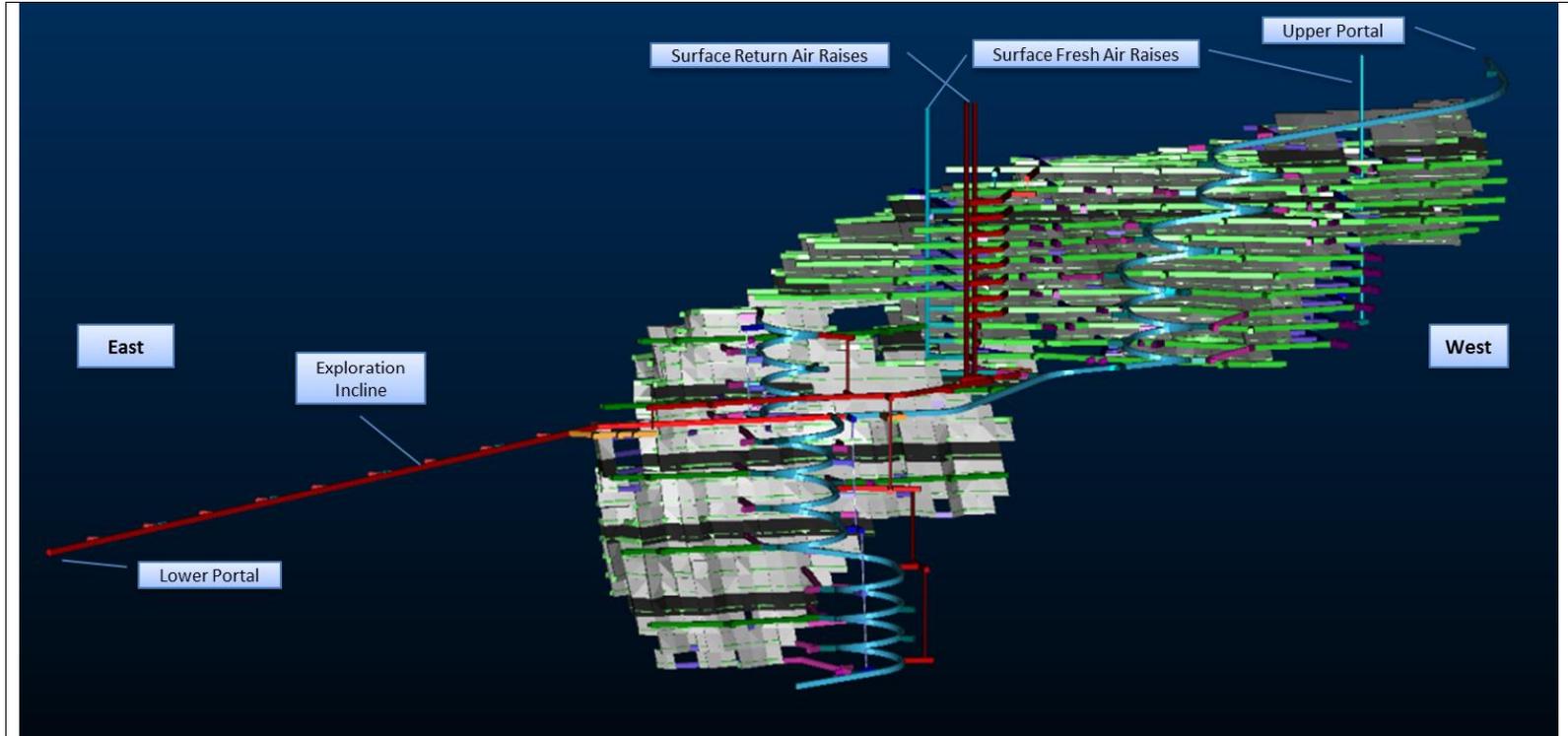
*Figure 24 Typical View of the Selected Longitudinal Mining Method*



The direction of mining for the deposit will be from the bottom up. As each mining level is completed, the next level will start using the backfilled stope void as the mining platform. The general direction of mining for the deposit will be from the bottom up. As a mining level is completed, the next level will start using the backfilled stope void as the mining platform.

The final FS mine layout is shown in Figure 25.

Figure 25 Isometric Mine Layout Looking South



The main access to the mineralisation will be via a 1.2 km-long exploration access incline (1.5%) which has its portal in a valley on the north-eastern side of Cerro Joropiña and the Oscco Cachi River valley. The drive is currently being excavated and will be used for exploration drilling as well as providing the primary access and haulage drive for the planned mine. This portal (lower) will be the main mine access portal and is located above the process plant area at 2765 mRL.

An incline drive and a decline drive will be excavated at a grade of one in seven from the main exploration incline, located at approximately 2782 mRL, to access the eastern part of the mine. The decline drive will extend to 2550 mRL to service the deepest planned mining level at 2565 mRL. The incline drive will extend to a mining level at 2865 mRL.

The main exploration incline will be extended as an incline drive at a grade of one in seven and will be developed to meet a decline drive that will be developed simultaneously from a second (upper) portal at 3060 mRL. These drives when connected will provide a second means of egress, access to all the mineralisation in the western part of the mine, and early establishment of the primary ventilation system.

The mine is split into two main production areas, east and west, with the western part of the mine providing approximately 71% of the life of mine production tonnage. All mining is completed using a bottom up mining direction.

To maximise mine extraction, the eastern part of the mine will be split into multiple mining panels consisting of four levels that can be mined simultaneously. The lowest level of each of these mining panels requires an artificial sill pillar to be created using high strength paste backfill to allow the mineralisation located directly below to be completely extracted. The western part of the mine has also been split to minimise the impact from the life of mine production tail. A sill pillar level has been located on 2940 mRL.

Due to the non-visual nature of the orebody, grade control diamond drilling is planned on a minimum of a 15 m by 15 m grid. In the eastern part of the mine, this will be completed from dedicated hanging wall drives that will provide coverage for four production levels. The western part of the mine will be grade control drilled on each level from the main hanging wall access drive. Mineralised zones will be re-interpreted from the grade control program; ore drives will then be driven primarily on survey control and backed by face and wall channel sampling. An onsite laboratory is planned and is this has been designed to provide a 24 hour turnaround of samples.

Production from the eastern part of the mine will start on 2790 mRL and 2805 mRL for the western part of the mine. The primary ventilation system will be fully established prior to the start of stope production.

Stope size will be controlled by the nature of the lodes (dip and width variability) and interpreted geotechnical conditions. Stope sublevel spacing will be 15 m vertically floor to floor. Planned stope strike length is based on geotechnical interpretation and varies between 13 m and 23 m dependent on lode width. To control the stability of the longitudinal stopes and minimise dilution, the length of open voids can be altered based on local ground conditions.

Production drilling will be medium diameter (76 mm or 89 mm) down holes with some requirement for up-holes when mining below an artificial sill pillar. Up-holes will also be used where lodes pinch out and there is no requirement for development above. Stope blast initiation (void) will be via the use of drop raise slots as the distance from the floor of the top cut to the back of the bottom cut will be approximately 10 m vertically or 14 m on dip.

To minimise dilution, maintain stability and maximise open stope strike length, cable bolts will be installed in the hanging wall of the stopes. A dedicated cable-bolter (drill and install) is planned to complete this activity. Development ground support installation will be completed by development jumbos.

Stopes will be backfilled using paste derived from mine tailings to maximise the resource extraction, provide long term mine stability and reduce the surface area required for waste and tailings disposal. Small quantities of waste rock will be used as a capping for tramming purposes on all paste filled stopes.

The primary ventilation system consists of the exploration incline, other incline and decline drives, four surface raises (two return air raises and two fresh air raises), and an internal return air system and connecting drive that services the eastern part of the mine. Primary fans will be located on the two surface return air raises.

AMEC developed a hydrogeological numerical model to understand the behavior of the groundwater system in the Ollachea project area. It is estimated that the water flow rate from the underground mine will be up to 80 m<sup>3</sup>/h during the exploration tunnel excavation, and will reach a flow rate of approximately 120 m<sup>3</sup>/h during the production period. Due to the nature of the planned mine development mine dewatering will be predominately gravity assisted. The water volumes estimated are not considered sufficiently large to present mine dewatering problems.

Ground support recommendations for the capital and ore drive development are based on the Q index. The analysis indicates that 2.4 m long rock bolts installed on a systematic pattern with nominal spacing of 1.3 m to 1.7 m, depending on the type of surface support, will provide safe ground conditions. In capital development, fibre reinforced shotcrete (FRS) is recommended as surface support at a nominal thickness of 50 mm.

Based on the calculated hydraulic radii of the different surfaces, the dimensions for stable stopes are given in Table 14.

**Table 14 Stable Slope Dimensions**

| Stope Face          | HR  | Stope Dimension (m) |           |                     |                    |                     |                    |                     |           |            |           |        |
|---------------------|-----|---------------------|-----------|---------------------|--------------------|---------------------|--------------------|---------------------|-----------|------------|-----------|--------|
|                     |     | Length (L)          | Width (W) | Inclined Height (H) | Inclined Length(L) | Inclined Height (H) | Inclined Length(L) | Inclined Height (H) | Width (W) | Length (L) | Width (W) |        |
| Back                | 5.7 | Length (L)          | 12.00     | 15.00               | 20.00              | 25.00               | 30.00              | 35.00               | 40.00     | 45.00      | 50.00     | 100.00 |
|                     |     | Width (W)           | 247.00    | 48.26               | 26.75              | 21.10               | 18.50              | 17.00               | 16.03     | 15.35      | 14.48     | 12.92  |
| Hangingwall         | 5.5 | Inclined Height (H) | 21.2      |                     |                    |                     |                    |                     |           |            |           |        |
|                     |     | Inclined Length(L)  | 23.0      |                     |                    |                     |                    |                     |           |            |           |        |
| Footwall            | 6.4 | Inclined Height (H) | 21.2      |                     |                    |                     |                    |                     |           |            |           |        |
|                     |     | Inclined Length(L)  | 32.0      |                     |                    |                     |                    |                     |           |            |           |        |
| End                 | 7.1 | Inclined Height (H) | 21.2      |                     |                    |                     |                    |                     |           |            |           |        |
|                     |     | Width (W)           | 334.0     |                     |                    |                     |                    |                     |           |            |           |        |
| Back (Crown pillar) | 5.0 | Length (L)          | 12.00     | 15.00               | 20.00              | 25.00               | 30.00              | 35.00               | 40.00     | 45.00      | 50.00     | 100.00 |
|                     |     | Width (W)           | 60.48     | 30.12               | 20.05              | 16.70               | 15.03              | 14.03               | 13.36     | 12.88      | 12.52     | 11.13  |

The location of the main mine accesses are in the orebody hanging wall. This was selected primarily based on the location of the planned exploration incline, which is currently being developed, and because there is no discernible difference in the rockmass between hanging wall and footwall.

Key design parameters for lateral development are shown in Table 15. Other parameters are:

- maximum grade for access development is 1 in 7.
- minimum grade is zero (flat).
- minimum turning radius is 30m.
- lateral development overbreak is 15%.

All production levels have been designed with no grade (flat), including level access crosscut development. This is required due to the complexity of the orebody, the strike extent of the orebody, small inter-level spacing and bottom-up mining direction. Drain holes for water will be drilled as required to remove water to lower, mined-out levels. Water from mining areas located above the main access incline will gravity drain. Water from mining areas located below the main access incline will gravity drain before being pumped to the main access level.

**Table 15 Lateral Development Design Parameters**

| Description                    | Design Criteria       | Units          | Value      |
|--------------------------------|-----------------------|----------------|------------|
| DD_HW_Drive_Load               | Height                | m              | 6.0        |
| Level_Access_Load_SP           | Width                 | m              | 5.0        |
|                                | Profile type (Radius) | m              | Arch (4.0) |
|                                | Profile area          | m <sup>2</sup> | 28.56      |
|                                |                       |                |            |
| Incl_Decl                      | Height                | m              | 5.5        |
| Incl_Decl_SP                   | Width                 | m              | 5.0        |
| Level_HW_Drive                 | Profile type (Radius) | m              | Arch (4.0) |
|                                | Profile area          | m <sup>2</sup> | 26.06      |
| Infra_Crib                     | Height                | m              | 5.3        |
| Infra_Magazine                 | Width                 | m              | 5.0        |
| Infra_Maint_Fuel               | Profile type (Radius) | m              | Arch (4.0) |
| Level_Access_Load_XC           | Profile area          | m <sup>2</sup> | 25.06      |
| Level_Access_XC                |                       |                |            |
| Level_Main_XC                  |                       |                |            |
| Infra_Crib                     |                       |                |            |
| Clean_Water_Sump               | Height                | m              | 5.0        |
| DD_HW_Drive                    | Width                 | m              | 5.0        |
| DD_HW_Drive_SP                 | Profile type (Radius) | m              | Arch (4.0) |
| Dirty_Water_Sump               | Profile area          | m <sup>2</sup> | 23.56      |
| Escape_Access                  |                       |                |            |
| Escape_Main_Access             |                       |                |            |
| FAW_Drive                      |                       |                |            |
| Level_HW_Drive_SP              |                       |                |            |
| Level_HW_Load_SP               |                       |                |            |
| Level_ToOre_Drive              |                       |                |            |
| Level_ToOre_Drive_LE           |                       |                |            |
| Level_ToOre_Drive_LW           |                       |                |            |
| Ore_Drive_LE                   |                       |                |            |
| Ore_Drive_LW                   |                       |                |            |
| RAW_Drive                      |                       |                |            |
| RAW_Drive_SP                   |                       |                |            |
| Stope_Slot_Drive               |                       |                |            |
| DD_Cuddies                     | Height                | m              | 4.0        |
|                                | Width                 | m              | 4.0        |
|                                | Profile type (Radius) | m              | Square     |
|                                | Profile area          | m <sup>2</sup> | 16.00      |
| Incl_Decl_Pass_Bay (stripping) | Height                | m              | 5.5        |
|                                | Width                 | m              | 3.0        |
|                                | Profile type (Radius) | m              | Arch (4.0) |
|                                | Profile area          | m <sup>2</sup> | 16.20      |

Key design parameters for vertical development are shown in Table 16. The profile for vertical development is circular. All vertical development will be excavated by raise boring machines.

**Table 16 Vertical Development Design Parameters**

| Description                | Design Criteria  | Units          | Value  |
|----------------------------|------------------|----------------|--------|
| Fresh Air Raise Primary    | Height           | m              |        |
|                            | Width (Diameter) | m              | 4.0    |
|                            | Profile type     | m              | Circle |
|                            | Profile area     | m <sup>2</sup> | 12.57  |
| Return Air Raise Primary   | Height           | m              |        |
|                            | Width (Diameter) | m              | 4.5    |
|                            | Profile type     | m              | Circle |
|                            | Profile area     | m <sup>2</sup> | 15.9   |
| Return Air Raise Secondary | Height           | m              |        |
|                            | Width (Diameter) | m              | 3.0    |
|                            | Profile type     | m              | Circle |
|                            | Profile area     | m <sup>2</sup> | 7.07   |
| Fresh Air Raise Secondary  | Height           | m              |        |
| Return Air Raise Tertiary  | Width (Diameter) | m              | 1.5    |
| Escape Raise               | Profile type     | m              | Circle |
|                            | Profile area     | m <sup>2</sup> | 1.77   |

Each level of development is separated vertically by 15 m floor-to-floor. The top level drive is a drill drive for the bottom stope and becomes an extraction drive for the stope above. The stopes are drilled using down-holes except for stopes located at the top of a lode. These will use up holes to eliminate the requirement for specific drill drive development or because of extraction sequence practicalities.

Due to the variable lode width and geotechnical recommendation, three main stope configurations are required to employ longitudinal extraction. Stopes will be accessed longitudinally (along strike) on each level by, one, two or three strike ore drives dependent on lode thickness. Orebody lode thickness varies orthogonally between 2.0 m (minimum mining width) to 48.0 m. In general, one ore drive is planned when lode thickness is less than 18.6 m. Two ore drives are planned when lode thickness is between 18.6 m and 33.6 m, and three ore drives are planned when lode thickness is greater than 33.6 m. Ore drive spacing is based on a 15 m square grid.

A summary of three stope design configurations are shown in Table 17.

**Table 17 Stope Design Sizes**

| Stope Configuration                    | Designation | Criteria                                  |
|--|-------------|---|
| Two ore drives (2x top and 2x bottom)  | S1S2        | 15m H x 23m L (strike) x 2.0m to 18.6m W  |
| Four ore drives (4x top and 4x bottom) | S3S4        | 15m H x 15m L (strike) x 18.6m to 33.6m W |
| Six ore drives (6x top and 6x bottom)  | S5S6        | 15m H x 13m L (strike) x >33.6m W         |

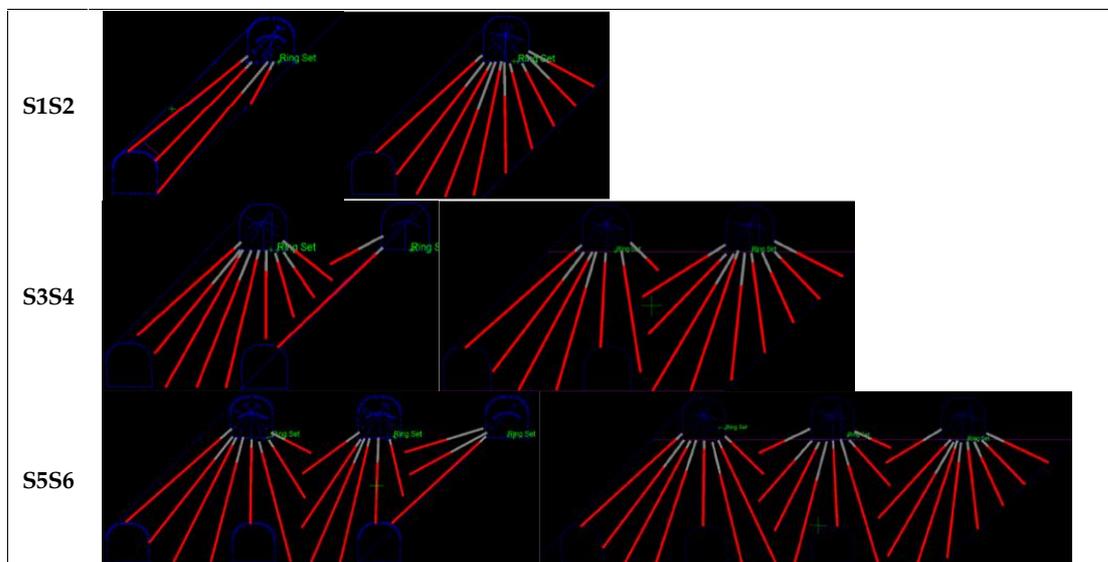
All stope slot raises will be drilled and blasted using a drop raise technique. This requires holes to be drilled in a similar pattern to a development drive drill pattern. A stope slot drive is required on the lower level to provide void for opening the stope slot. This is developed post-filling, with length varying with stope width.

Stope drill and blast parameters for the FS are:

- Recommended drill hole size is 76 mm for narrower stopes and 89 mm for wider stopes.
- Drill factor for narrower stopes is approximately 10 tonnes per drill metre, including slot raise metres; for wider stopes it is approximately 13 tonnes per drill metre, including slot raise metres.
- To assist in the control of dilution and minimize the number of stope blasts, Ammonium Nitrate Emulsion (ANE) type explosives and electronic detonators are recommended for all stopes, with ANE loaded using a specific charging vehicle.
- The average overall stope powder factor, inclusive of the slots and slot raises, for all stope configurations is approximately 0.44 kg/t.

Schematics of typical drill patterns for various stope configurations are shown in Figure 26.

*Figure 26 Schematic of Stope Production Ring Drill Layout*



The LHOS mining method and extraction sequence adopted for the Project is reliant on the use of paste fill. Process plant total tailings will be used to produce the paste fill. Approximately 42% of the process plant tailings will be used as paste fill. Waste rock will be used as a floor cap to paste-filled stopes, for loading and tramming requirements.

The overall backfill volume requirement, split between low strength and high strength paste fill, is 84% and 16% respectively.

The strategy adopted for the FS is for all ore and waste material to be loaded using 14 t-capacity load-haul-dumps (LHDs) and transported to dumping areas located outside the two mine portals or internally as waste rock capping for paste filled stopes by dedicated 26.4 t-capacity on-highway tipper trucks.

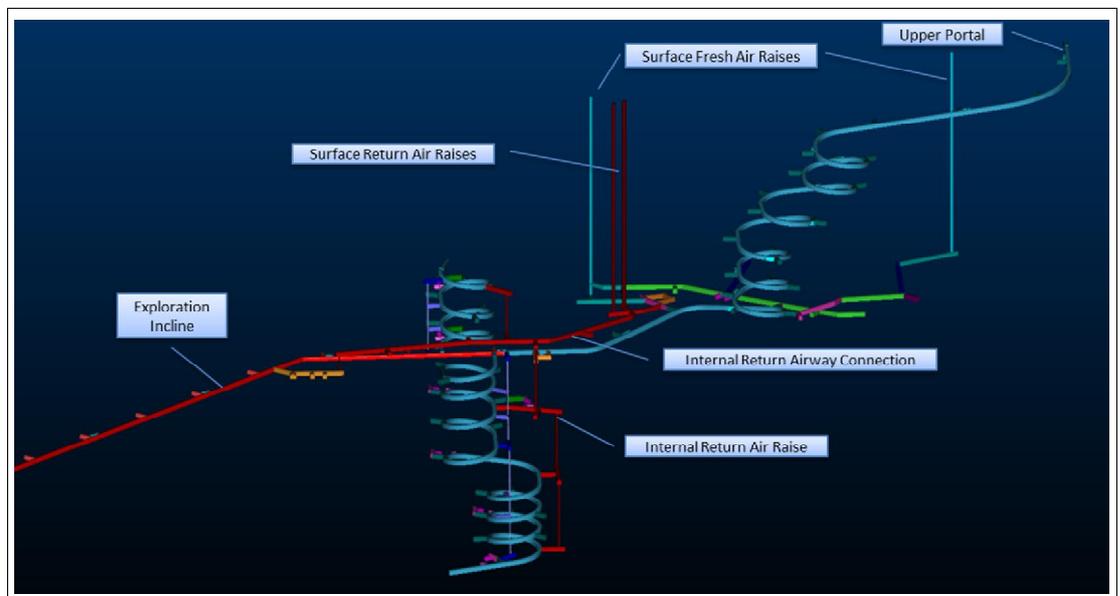
The planned primary ventilation system consists of:

- Two surface intake shafts.
- Two surface return air shafts that will have a single primary fan with a duty of 350 m<sup>3</sup>/s.
- Two intake ramps and connected internal ramps.
- An internal return air way system connected to the surface return airway system.

The expected peak flow at full production will be 700 m<sup>3</sup>/s at a prevailing air density of 0.8kg/m<sup>3</sup> (equivalent of 470 m<sup>3</sup>/s at 1.2kg / m<sup>3</sup>).

Figure 27 shows an isometric view of the major components of the Project primary ventilation system.

*Figure 27 Primary Ventilation System*



Ventilation milestone analysis was used to determine the staged primary ventilation requirements for the Project. Maximum ventilation demand for each milestone was estimated by analysing the mine development and production schedule to determine the number of active stopes and development headings in each month. Each milestone was modelled using a mine ventilation simulation software package named VentSim Visual™. Table 18 briefly describes each milestone that was identified.

**Table 18 Primary Ventilation Milestones**

| Milestone Date | Description of Milestone   |
|----------------|--|
| April 2014     | Maximum development before first surface FAR operational.<br>Lower ramp $Q_{TOTAL}=54m^3/s$ . Upper ramp $Q_{TOTAL}=54m^3/s$ .   |
| July 2014      | First surface FAR commissioned.<br>Lower ramp $Q_{TOTAL}=100$ to $180m^3/s$ . Upper ramp $Q_{TOTAL}=54m^3/s$ .   |
| October 2014   | Both surface RAR's commissioned and main access ramps joined up.<br>$Q_{TOTAL}=250m^3/s$ .   |
| March 2016     | Eastern lower exhaust connected up; Second surface FAR operational (for some time); first internal RAR leg above and below ramp in the eastern part of the mine operational. Eastern lower ramp in progress.<br>$Q_{TOTAL}=700m^3/s$ . |
| May 2020       | Mining is at its extremities and at maximum production rate<br>$Q_{TOTAL}=700m^3/s$ .  |

The mine has three general layouts for secondary ventilation circuits during planned operations:

- A long-range configuration for development designed to establish or extend the primary ventilation circuit.
- The levels of the eastern part of the mine where the secondary fan is located in the fresh air decline and ducting is run into the level with branches to each heading or stoping area.
- The levels of the western part of the mine where secondary fans are located in walls in drives that connect directly to the two primary surface fresh air raises. Ducting is run from these fans branching off where required into drives and stoping areas.

Access to the mine will be via two portals. The two portals will be connected via a single primary incline/decline. This will form the main egress system. The lower portal is located close to the processing plant and administration buildings and will be the main access to and from the planned underground mine. The upper portal will be used to provide access to the paste plant and shotcrete batch plant located at Minapampa.

The eastern part of the mine will be serviced by dedicated escape raises located off the main incline and decline. The majority of the western part of the mine will also be serviced by dedicated escape raises. These are located on each level at the extremities of each of the stope access crosscuts (two per level). These will join as the mine is developed to form two independent escape routes down the footwall of the western part of the mine.

In addition, self-contained refuge chambers of suitable size will be used and placed in locations where a second means of egress has not been established or where a second means of egress is available but not supplied with fresh (safe) air. This will ensure no person working underground will be at risk from rock fall entrapment or fire.

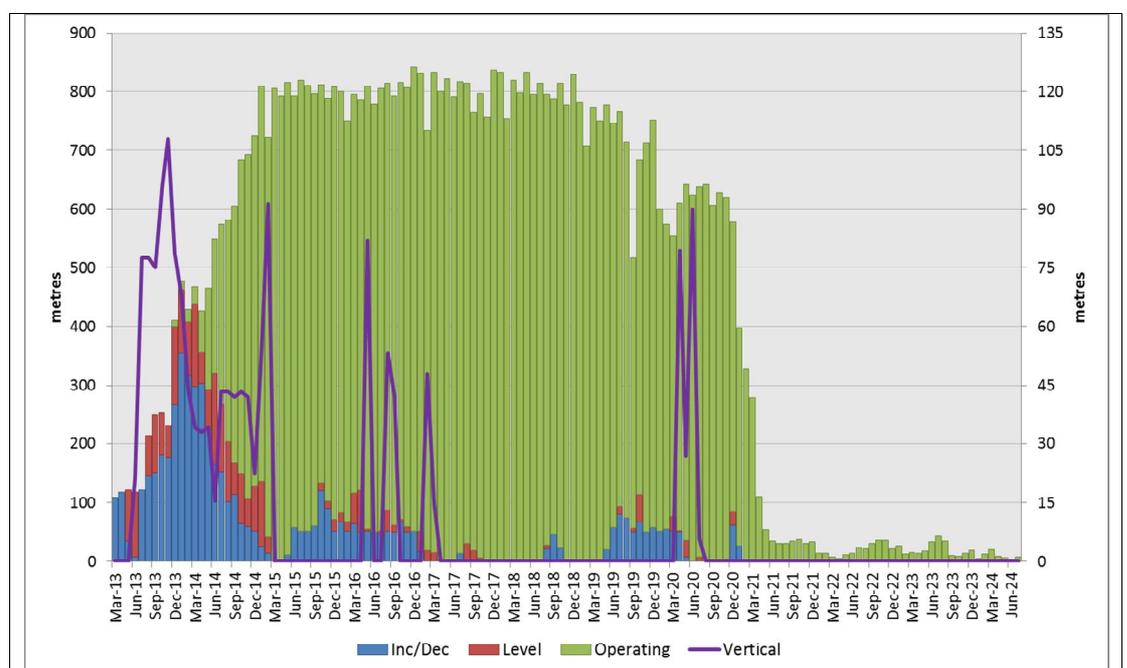
The mine development strategy employed for the FS is as follows:

- Contract to complete the exploration incline is extended for approximately ten months. The strategy assumes development is continuous and the necessary permits are granted in a timely manner.

- Expedite the development of the primary mine accesses, grade control diamond drilling platforms and primary ventilation system to minimize the production ramp up period and provide a second means of egress.
- Production will start on 2775 mRL in the eastern part of the mine based on the location of diamond drilling platforms. In the western part of the mine, production will start on 2805 mRL to establish the bottom-up mining method and maximize ore extraction from the area.

Figure 28 shows the average lateral development metres per month split by development type. The number of metres per month is approximately 800, which is equivalent to requiring four jumbo crews per shift for a period of four and half years.

*Figure 28 Lateral Development Metres per Month*



The vast majority of mine development is scheduled to be completed by the end of 2020 with production scheduled to extend until 2024. Mine development is completed early due to the requirement to split the western part of the mine into two producing areas towards the end of the mine life. This requirement reduces the impact of the life of mine production tail. FS LOM underground mining physicals are summarised in Table 19 and Figure 29 shows LOM percentage tonnage splits.

Figure 29 LOM Percentage Tonnage Split

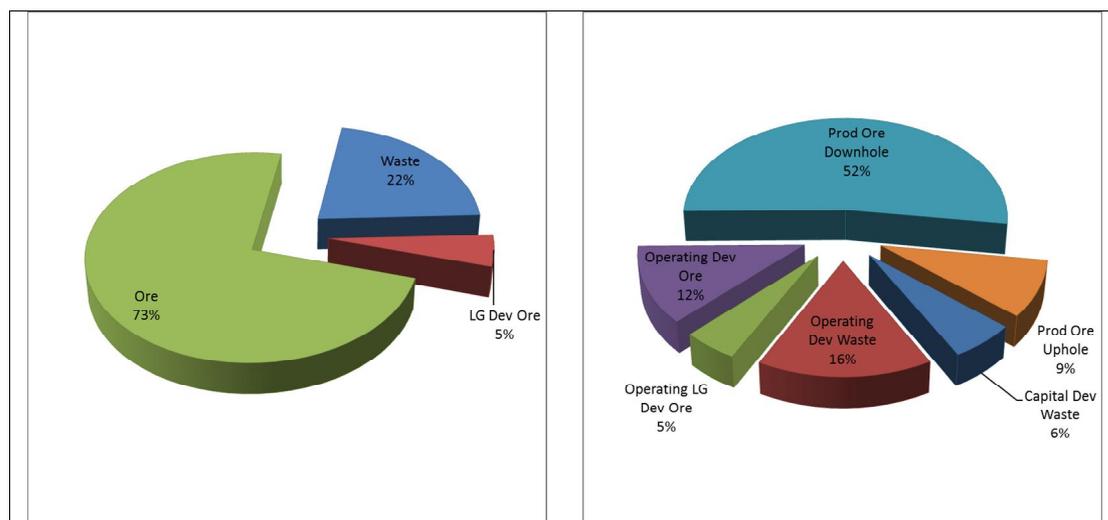


Table 19 Mining Physicals Summary

| Physical              | Units              | LOM   | 2013   | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022  | 2023  | 2024 |     |
|-----------------------|--------------------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-----|
| Lateral Dev.          | Capital dev.       | m     | 8,019  | 1,939 | 3,308 | 718   | 875   | 163   | 97    | 524   | 367   | 28    |       |      |     |
|                       | Operating dev.     | m     | 56,987 | 10    | 3,374 | 8,851 | 8,723 | 9,435 | 9,551 | 8,160 | 6,953 | 1,372 | 240   | 252  | 66  |
| Vertical Dev.         | Capital dev.       | m     | 1,586  | 533   | 465   | 145   | 178   | 63    |       |       | 202   |       | 1,586 | 533  |     |
|                       | Operating dev.     | m     | 220    |       |       | 30    | 20    | 50    | 30    | 40    | 50    |       | 220   |      |     |
| Production            | Total Mined        | Mt    | 11.9   | 0.2   | 0.5   | 1.0   | 1.3   | 1.5   | 1.5   | 1.5   | 1.4   | 1.1   | 0.9   | 0.7  | 0.2 |
|                       | Waste              | Mt    | 2.6    | 0.2   | 0.5   | 0.3   | 0.4   | 0.4   | 0.3   | 0.3   | 0.2   | 0.0   |       |      |     |
|                       | Ore                | Mt    | 8.7    |       | 0.0   | 0.6   | 0.8   | 1.1   | 1.1   | 1.1   | 1.1   | 1.1   | 0.9   | 0.7  | 0.2 |
|                       | Contained Gold     | koz   | 983    |       | 3     | 65    | 80    | 123   | 129   | 128   | 136   | 127   | 90    | 83   | 19  |
|                       | Gold Grade         | g/t   | 3.5    |       | 3.1   | 3.5   | 3.1   | 3.5   | 3.7   | 3.6   | 3.8   | 3.6   | 3.2   | 3.5  | 2.9 |
|                       | Low Grade Dev. Ore | Mt    | 0.6    |       | 0.0   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.1   | 0.0   |       |      |     |
|                       | Contained Gold     | koz   | 28     |       | 1     | 5     | 4     | 3     | 5     | 4     | 6     | 1     |       |      |     |
|                       | Gold Grade         | g/t   | 1.5    |       | 1.6   | 1.5   | 1.5   | 1.5   | 1.4   | 1.5   | 1.5   | 1.5   |       |      |     |
|                       | Cable drill        | kdm   | 662    | 2     | 7     | 35    | 55    | 78    | 77    | 81    | 74    | 89    | 73    | 69   | 22  |
|                       | Production drill   | kdm   | 697    |       |       | 32    | 58    | 83    | 80    | 88    | 84    | 101   | 81    | 70   | 19  |
| Haulage               | Mtkm               | 30.1  | 0.2    | 0.9   | 1.8   | 2.7   | 3.6   | 3.8   | 4.1   | 4.0   | 3.4   | 2.7   | 2.3   | 0.6  |     |
| Backfill Void (Paste) | km <sup>3</sup>    | 3,012 |        |       | 136   | 246   | 349   | 346   | 377   | 371   | 442   | 356   | 306   | 84   |     |

Totals may not sum due to rounding

The Project will require a standard, medium scale, underground mobile production fleet of jumbos, LHDs, trucks and drills. The primary, direct and indirect equipment used as a part of the basis to design the underground mine is shown in Table 20.

**Table 20 Primary, Direct and Indirect Underground Mobile Equipment**

| <b>Generic Description</b>     | <b>Type or Size</b>                                      |
|--------------------------------|--|
| <b>Primary</b>                 |  |
| Development jumbo              | Twin boom electro-hydraulic                              |
| Underground loaders            | 14 t for development and production (tele-remote)        |
| Underground trucks             | 25 t (6x4) on-highway tipper trucks (ore and waste)      |
| Underground trucks             | 34 t (8x4) on-highway tipper trucks (tailings)           |
| Production drill rig           | Top hammer (76mm and 89mm)                               |
| Cablebolt rig                  | Dedicated cablebolt rig (drill (64mm) and install)       |
| <b>Direct</b>                  |  |
| Scissor Lift                   | 4wd UG specification                                     |
| Charge-up vehicle              | 4wd dedicated UG charge up vehicle (dev. and production) |
| Shotcrete sprayer              | 4wd UG specification                                     |
| Shotcrete transmixer (carrier) | 4wd UG specification                                     |
| <b>Indirect</b>                |  |
| Grader                         | 6wd UG specification                                     |
| Maintenance/fuel truck         | 4wd UG specification                                     |
| Backfill services loader/TT    | 4wd UG specification                                     |
| Flat bed truck (materials)     | 2wd UG specification                                     |
| Light vehicles                 | 4wd UG specification                                     |

All mobile and fixed plant equipment will be purchased, operated and maintained by MKK.

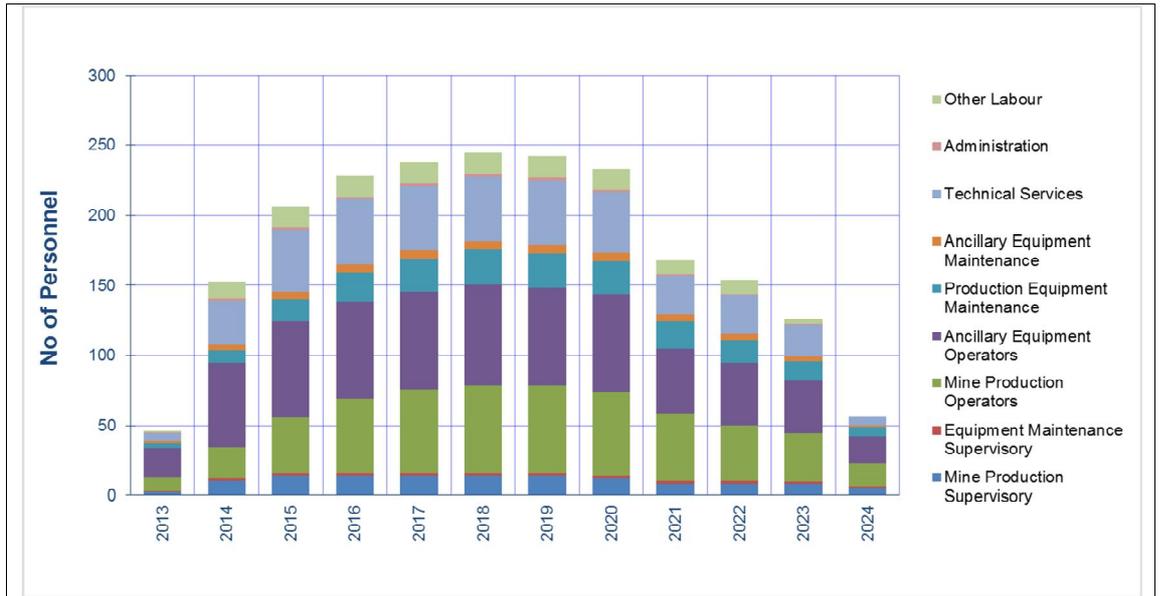
Project sustaining capital for equipment replacement has been estimated based on industry standards and original equipment manufacturers (OEM) recommendations.

The mine is planned to be owner operated. Specialist contractors would be used for specialised activities such as raise boring.

The mine is planned to operate 24 hours per day, 365 days per year and mine operators will work a 14 days on, 7 days off roster. Shifts will be of 12 hours duration.

Figure 30 shows the estimated mine workforce complement for the life of mine. This includes operators, supervisors, technical and mining management.

Figure 30 LOM Mining Workforce Complement



MKK will install, operate and maintain all underground infrastructure and services.

The majority of the Ollachea mine will utilise a gravity-fed dewatering system, while dewatering of the eastern part of the mine, located below the primary incline access, will be undertaken by a combination of submersible and progressing cavity pumps.

### Recovery Methods

The Ollachea mineral processing plant will include circuits for crushing, grinding and classification, batch gravity concentration of cyclone underflow for gravity recoverable gold and continuous gravity concentration of cyclone overflow. Continuous gravity concentrates will be leached in a dedicated CIL circuit. Tailings will recombine with concentrate and be processed in a separate CIL circuit. Gold recovery from CIL solutions will be by carbon elution, electrowinning and refining to produce doré on site. Tailings will be treated by the Air/SO<sub>2</sub> process for cyanide detoxification, followed by iron precipitation by zinc sulphate addition, then thickened and filtered to produce a filter cake for disposal at a dry-stack tailings storage facility (TSF) or for use as a paste backfill. The plant will further incorporate water treatment, carbon regeneration, reagent preparation, oxygen generation and supply, compressed air and water services.

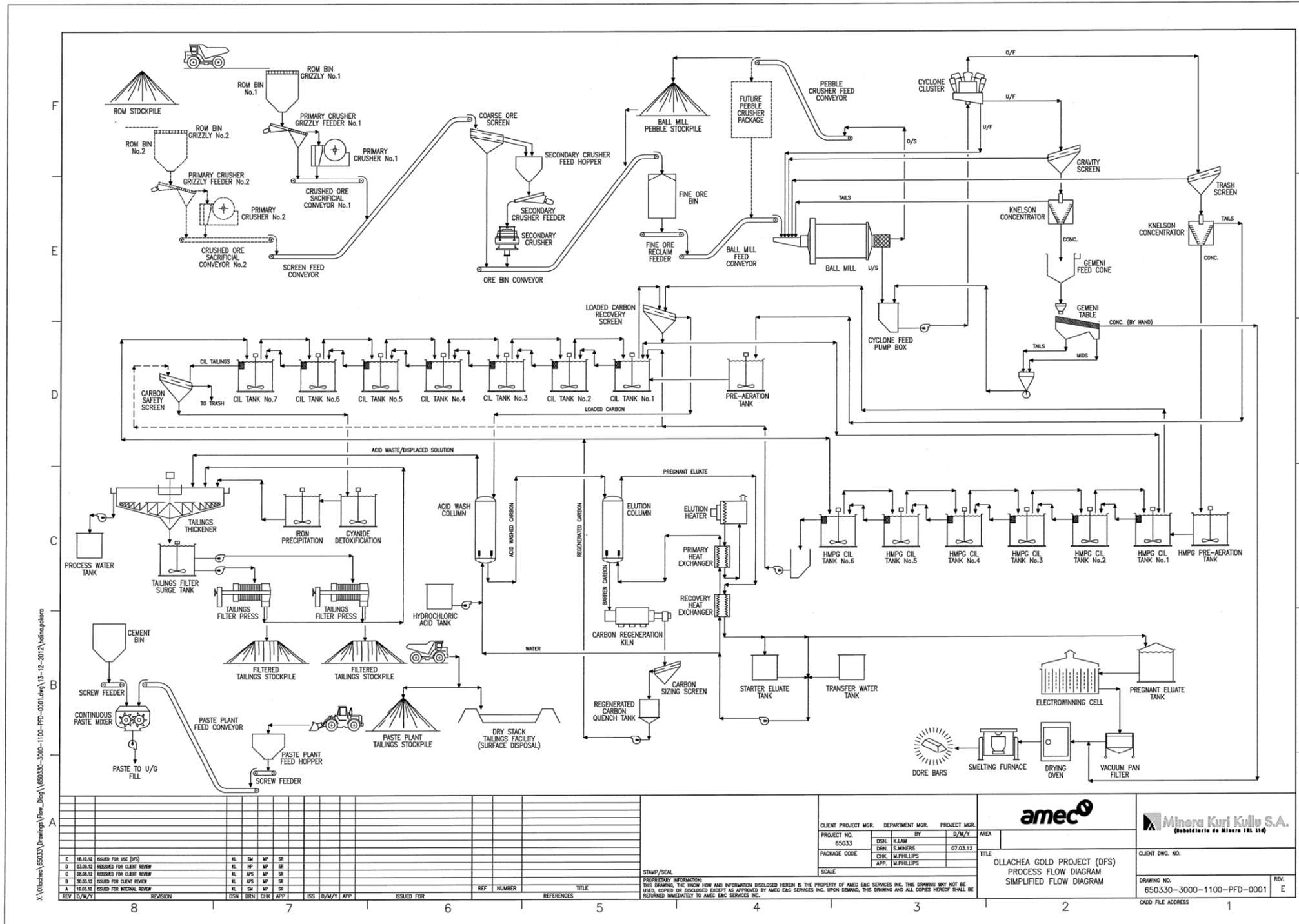
The design parameters of the processing plant are:

- Plant throughput: 1.1 Mt/y, or 137.5 t/h
- Plant availability: 91.3% or 8,000 hours per year

- ROM feed size: F100 600 mm, F80 270 mm
- Final product grind: P80 of 106  $\mu\text{m}$
- Design head grade: 3.65 g/t Au
- Head grade (LOM Average): 3.37 g/t Au
- Residue grade (LOM Average): 0.30 g/t Au
- Overall recovery (LOM Average): 91.1%
- HMPG CIL residence time: 24 h
- CIL residence time: 36 h
- Final tailing cyanide destruction:  $\text{SO}_2/\text{Air}/\text{Cu}^{2+}$  Catalyst +  $\text{ZnSO}_4$

A simplified process flow diagram is provided in Figure 31.

Figure 31 Simplified Process Flow Diagram



A single stage ball mill (5.3 x 7.3 m, drive 3.45 MW), operating in closed circuit with a cyclone cluster (10 duty/2 standby x 250 mm), will be utilised to grind the ore from a feed  $F_{80}$  of 10 mm ( $F_{100}$  of 15 mm) to a  $P_{80}$  of 106  $\mu$ m. The mill will be run at a fixed speed

The HMPG CIL circuit will comprise six tanks, with a total leach capacity of 480 m<sup>3</sup>, equating to a total residence time of 24 hours at a nominal mass pull to concentrate of 7 tph solids. The HMPG CIL circuit will be fed from the HMPG pre-aeration tank overflow

The CIL circuit will comprise seven tanks, with a total leach capacity of 9,450 m<sup>3</sup>, equating to a total residence time of 36 hours at 137.5 tph solids. The CIL circuit will be fed from the CIL pre-aeration tank overflow.

The HMPG CIL and CIL circuits will share the elution and regeneration facilities.

The desorption circuit will be shared by the HMPG CIL and CIL circuits. It will consist of separate acid wash and elution columns. A cold acid wash will be utilized. Following acid wash, gold will be eluted from the carbon, utilizing a split Anglo American Research Laboratory (AARL) elution process. The desorption circuit will be designed to operate for a single cycle per 24 hour period. An average carbon loading (gold + silver) of approximately 2,000 g/t will be achieved, based upon the completed test work program. This corresponds to a required carbon movement of 6 tonnes per day.

CIL tailings will gravitate directly to the cyanide detoxification tank where sodium metabisulfite, air, copper sulphate and milk of lime will be added to complex the residual cyanide or oxidise it to cyanates.

The paste backfill plant will be serviced by a 1,000 t filtered tails stockpile. Tails will be reclaimed from the filtered tails stockpile, by front end loader, to a reclaim hopper.

The doré bars produced at Ollachea will be transported by a security vehicle to Puerto Maldonado. From Puerto Maldonado, the shipment will be air freighted to Lima airport for transfer to the refining company. The refining company takes responsibility at this point and transfers the doré to the selected refinery's location via international air freight.

## **Infrastructure**

Road access for continued exploration activities, mine development and operation, plant access and project infrastructure including construction and operations camp sites and tailings storage facility is from the Interoceanic Highway. Access to the Ollachea Project is relatively straightforward, although road construction to provide access to the mine, plant, camp and TSF will be required.

The proposed Ollachea Project process plant site is immediately to the west of the Interoceanic Highway. A road of approximately 1.3 km long was built to the exploration access portal in late 2011. This road will also be used to build and access the plant site.

According to the feasibility study mine waste schedule, the Ollachea project will require permanent disposal of 2.45 Mt of waste rock and temporary storage of 0.6 Mt of low-grade ore.

The Tailings Storage Facility (TSF) has been designed to store 5.85 Mt of tailings corresponding to 11 years of mine operations, as taken from the FS mine plan. Tailings management for the project will include both surface storage, as filtered tailings, and underground paste backfill. Surface tailings storage will account for approximately 61% of the LOM tailings, while paste backfill will account for the remaining 39% of the LOM tailings stream. Considering LOM tailings production of 9.34 Mt, the TSF requires storage for 5.70 Mt of filtered tailings. The Cuncurchaca site was selected as the preferred site for the TSF.

Water management for the mine, plant and TSF sites and water treatment facilities are considered in the mineral processing plant design through the use of a Goldsim model. The results of this model have demonstrated that the Ollachea project water balance is a positive water balance with excess water requiring discharge into the environment. The total water usage required by the Project is estimated to be 84 m<sup>3</sup>/h. The total water inflow into the project area is estimated to be approximately 388 m<sup>3</sup>/h, exceeding the Project requirement significantly. The estimated excess water of 304 m<sup>3</sup>/h, most of which is groundwater seepage, is likely to require treatment before being discharged into the environment. The total water outflow from the project is estimated to be 391 m<sup>3</sup>/h.

A permanent operations camp facility has been designed and will be located south of the Challuno area, in the vicinity of the lower portal and within 500 m of the Interoceanic Highway. The camp will have catering and accommodation capacity for approximately 275 persons.

The Project will connect to the 138 kV transmission lines from San Gaban to Azangaro that passes over the Ollachea project. The San Gaban II hydroelectric generating station is located on the Ollachea River approximately 10 km from the Project. A 138 kV supply line will be installed from the main transmission to the plant site, and will have a length of approximately 1.2 km. This line will feed a substation that will distribute power to the plant site, the underground mine, the camp site and other auxiliary buildings.

Diesel fuel will be required for underground and surface mobile equipment and onsite emergency power generation equipment. A fuel storage facility will be located at the plant site and fuel trucks will be used to distribute fuel underground.

Water for underground mine operations will be re-circulated from sumps within the mine where possible. Mine drainage will be diverted to a water treatment plant at the plant site where it will be combined and treated with water discharged from the mineral processing facility. Plant make-up water and all other water supply for the plant and other surface infrastructure can be supplied from the water treatment plan and drawn from the Oscoco Cachi and Ollachea Rivers as required.

## **Environmental**

A physical, biological and socio-economic baseline has been established on the basis of ongoing social, environmental and archaeological, baseline surveys carried out by MKK since 2007.

The study area is located in the Ollachea river sub-watershed located in the Inambari river watershed, which pertain to the Atlantic Ocean basin. Results of water quality monitoring in the study area indicate that water quality generally meets the national water quality standards. Air quality meets Peruvian environmental regulations for lead, arsenic, PM10, PM2,5 SO<sub>2</sub>, CO, NO<sub>2</sub>, H<sub>2</sub>S and O<sub>3</sub> concentrations. Baseline noise levels registered in the industrial areas of the study area were below the daytime and nighttime national environmental noise standards. Noise levels recorded in the town of Ollachea were above daytime and night time standards, mainly due to Interocean Highway traffic.

Current land use in the study area consists of natural grassland, artificial or plantation of woodlands and unused or unproductive lands. The land use potential has been identified as land suitable for forest production, grazing, permanent farming and protection land.

Vegetation in the study area consists of subtropical montane rainforest, subtropical lower montane rainforest and subtropical lower montane humid rainforest.

A total of 72 plant species were identified in the study area, grouped in 34 families of vascular and non-vascular plants. The only species of flora identified is considered 'vulnerable' according to the list of Peruvian protected species is the *Escallonia resinosa*.

Eleven species of birds pertaining to 10 families have been identified in the study area, one categorized as 'endangered', the *Vultur griffus*. Additionally, 5 species of wild animals have been observed in the study area. Of those 5 species, two are protected species, the *Tremarctos ornatus* is endangered and the *Puma concolor* is near threatened.

The water bodies observed contained 11 species of macrozoobenthos, 54 species of phytoplankton and 16 species of zooplankton. A low density of the *Oncorhynchus mykiss* trout was also observed.

A reconnaissance of archaeological sites has been carried out on the Project area. A few archaeological sites have been identified in the Challuno process plant site and Cuncurchaca TSF. These sites have now been cleared of archaeological remains.

The socioeconomic study area consists of the Ollachea district which comprises the Ollachea settlement, located near the Project area.

The population of the study area amounts to 4,919 inhabitants, with decreasing population trend from 2005 to 2007. More than half of the population consists of men, while the median age of the population is 25 years old. The majority of the population is Quechua speakers (83.96%) and the most important religion is Catholic.

Current liabilities for the project are limited to the re-vegetation of drill platforms that are currently in use and closure of artisanal mine workings shown in Figure 16. Previously used drill platforms have been formally closed and reclaimed.

The artisanal mine workings are restricted to an area measuring approximately 500 m x 100 m on the north flank of the Oscoco Cachi River.

As part of the current surface rights agreement with the Community of Ollachea, MKK is monitoring the artisanal miners and taking actions to mitigate further environmental liability associated with the small-scale mining activities. This monitoring includes regular water quality determinations both up- and down-stream of the mine to monitor for possible contamination related to mining activities.

A formal closure plan has been developed as part of the feasibility work plan for the Project.

The extent of closure plans for Ollachea is restricted to the mine portal and mineral processing plant areas and are quite limited considering the mine is an underground mine and the TSF will be progressively closed as it is developed. A budget of US\$3.1 M for closure activities has been estimated as part of the capital cost estimate for the Project.

MKK currently holds permits allowing them to carry out exploration activities on the property including the development of the exploration adit which was in progress at the time of writing this report.

- Authorization by the National Water Authority or Autoridad Nacional de Agua (ANA) to discharge residual water from the Ollachea Project to the Corani River and Oscco Cachi stream.
- Authorization by ANA for MKK to use water resources from the Oscco Chachi River and Maticuyoc Cucho spring for the purpose of mining exploration studies until 31 December, 2012.
- Authorization from the Community of Ollachea to use the land covered by the Ollachea Concessions for exploration activities for a term of five years from 25 November, 2007. However, on 30 May 2012, it was extended for a period of 30 years.
- Authorization from the MEM to carry out exploration activities outlined in MKK's Semi Detailed Environmental Assessment (SEA) of the Ollachea Project approved in 2008 with subsequent modifications approved in 2010 and June 2011.

These permits provide MKK with all necessary rights to conduct their current and all planned operations and exploration activities.

For construction and operation of the mine, plant and other surface infrastructure MKK will require an approved EIA (currently underway), a mine closure plan, an approved mine plan, a beneficiation concession, permits for water use, process and drainage water discharge, use of explosives and powder magazines, chemical reagents, hydrocarbons (diesel, kerosene), and construction permits for the facilities.

MKK has conducted continuous community awareness workshops and communications and worked closely with the Community of Ollachea since it entered into agreement to acquire the property from Rio Tinto in 2006. The Company's cooperation in formalizing illegal mining on the property and its surface rights agreement with the Community of Ollachea are part of a plan to incorporate to the maximum possible the community in the advancement and future operation of the Project.

### **Capital and Operating Costs**

The Ollachea FS capital cost estimate consists of estimates of direct and indirect capital costs for the underground mine and paste backfill system, the mineral process plant, auxiliary buildings and surface infrastructure, including electrical power supply, camp site and TSF.

Capital costs for the underground mine, including the portion of the paste fill system installed underground, were estimated by Coffey Mining. Capital cost estimates for the remaining items, including all surface infrastructure, TSF and process plant, were estimated by AMEC. Estimates have been combined for the purpose of developing an integrated project capital cost estimate. The accuracy of this estimate is within -10/+15%.

The total estimated cost of the overall project as detailed in this document is US\$223.3 million. The estimate base date is Q3 2012. This total has been compiled as shown in Table 21.

**Table 21 Capital Cost Estimate Summary**

| <b>INITIAL CAPEX</b>                                    | <b>US\$(M)</b> |
|---|----------------|
| Mine  | 55.1           |
| Process Plant   | 72.0           |
| EPCM  | 18.6           |
| Other Indirects (incl Contingency & Owners costs)       | 31.8           |
| <b>Total Capital Cost Estimate</b>                      | <b>177.5</b>   |
| <b>SUSTAINING CAPITAL</b>                               |                |
| Mining Sustaining                                       | 38.3           |
| Waste Dump Closure                                      | 2.0            |
| TSF Closure   | 2.2            |
| Process Plant Sustaining                                | 3.2            |
| <b>Total Sustaining Capital Estimate (Life of Mine)</b> | <b>45.7</b>    |
| <b>Project Total</b>                                    | <b>223.3</b>   |

The estimate was developed in Q3 2012 price levels, in United States dollars. Foreign currencies are expressed in American dollars, based on foreign exchange rates provided by MKK as nominated in Table 22.

**Table 22 Foreign Exchange Rates**

| <b>Currency</b> | <b>Rate</b> |
|-----------------|-------------|
| US\$/EUR        | 0.760       |
| US\$/CAD        | 0.990       |
| US\$/CHF        | 0.950       |
| US\$/AUD        | 0.970       |
| US\$/GBP        | 0.620       |

The value of 12% for contingency was calculated from a thorough risk and opportunity analysis. This contingency factor has been applied to the mining, process plant and infrastructure capital estimates.

The operating cost estimate includes operating costs of the underground mine, the minerals processing plant, the TSF and general & administrative (G&A) costs for the integrated operation.

Operating costs for the underground mine, including the portion of the paste fill system installed underground, were estimated by Coffey Mining. Operating cost estimates for the remaining items, including all surface infrastructure, TSF and process plant, were estimated by AMEC.

Table 23 shows a summary of the mine operating cost split into four categories.

**Table 23 Mine Operating Cost Summary**

| <b>Description</b>               | <b>US\$M</b> | <b>%</b>   | <b>US\$/t ore</b> |
|----------------------------------|--------------|------------|-------------------|
| Development Direct               | 62.9         | 28.8       | 6.74              |
| Development Indirect             | 17.2         | 7.9        | 1.85              |
| Production Direct                | 105.5        | 48.4       | 11.32             |
| Production Indirect              | 32.6         | 14.9       | 3.49              |
| <b>Total Mine Operating Cost</b> | <b>218.2</b> | <b>100</b> | <b>23.41</b>      |

The LOM operating cost for the mine is estimated to be US\$23.41/t ore.

A consolidated operating cost schedule for the Project is shown in Table 24. Mine operating costs average US\$23.4/t ore processed (includes backfill). Plant operating costs total US\$21.5/t ore processed (include tailings disposal), and G&A costs average US\$4.3/t ore processed. Total site operating costs are US\$49.2/t ore or US\$499/oz of gold.

**Table 24 Mine Operating Costs - Average**

| Operating Cost                 |              | 2013 | 2014 | 2015        | 2016        | 2017        | 2018        | 2019        | 2020        | 2021        | 2022        | 2023        | 2024        | Total LOM    |
|--------------------------------|--------------|------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|
| <b>Process Plant</b>           |              |      |      |             |             |             |             |             |             |             |             |             |             |              |
| Supplies                       | US\$M        |      |      | 11.8        | 15.5        | 18.4        | 18.5        | 18.4        | 18.6        | 18.7        | 18.5        | 12.2        | 3.6         | 153.6        |
| Labour                         | US\$M        |      |      | 1.0         | 1.2         | 1.3         | 1.3         | 1.3         | 1.3         | 1.3         | 1.3         | 1.0         | 0.6         | 11.3         |
| Maintenance supplies and Misc. | US\$M        |      |      | 1.0         | 1.2         | 1.3         | 1.3         | 1.3         | 1.3         | 1.3         | 1.3         | 1.0         | 0.7         | 11.8         |
| <b>Total Process Plant</b>     | <b>US\$M</b> |      |      | <b>13.3</b> | <b>17.9</b> | <b>21.0</b> | <b>21.1</b> | <b>21.0</b> | <b>21.2</b> | <b>21.3</b> | <b>21.1</b> | <b>14.2</b> | <b>4.8</b>  | <b>176.7</b> |
| <b>TSF</b>                     | <b>US\$M</b> |      |      | <b>1.9</b>  | <b>2.4</b>  | <b>2.7</b>  | <b>2.7</b>  | <b>2.7</b>  | <b>2.7</b>  | <b>2.7</b>  | <b>2.7</b>  | <b>2.0</b>  | <b>1.0</b>  | <b>23.3</b>  |
| <b>G&amp;A</b>                 | <b>US\$M</b> |      |      | <b>4.1</b>  | <b>4.3</b>  | <b>4.5</b>  | <b>4.5</b>  | <b>4.5</b>  | <b>4.4</b>  | <b>4.3</b>  | <b>4.0</b>  | <b>3.8</b>  | <b>2.1</b>  | <b>40.5</b>  |
| <b>Mining</b>                  | <b>US\$M</b> |      |      |             |             |             |             |             |             |             |             |             |             |              |
| Fuel                           | US\$M        |      |      | 1.6         | 1.9         | 2.4         | 2.4         | 2.4         | 2.3         | 2.2         | 1.9         | 1.6         | 0.5         | 19.2         |
| Explosives                     | US\$M        |      |      | 2.3         | 2.6         | 3.0         | 3.0         | 2.8         | 2.5         | 1.5         | 1.0         | 0.9         | 0.2         | 19.8         |
| Maintenance Supplies           | US\$M        |      |      | 3.2         | 3.9         | 5.0         | 5.1         | 5.0         | 4.4         | 3.9         | 3.5         | 2.8         | 1.0         | 37.9         |
| Labour                         | US\$M        |      |      | 4.7         | 5.0         | 5.6         | 5.7         | 5.5         | 5.3         | 4.1         | 3.9         | 3.1         | 1.1         | 44.0         |
| Power                          | US\$M        |      |      | 2.1         | 2.3         | 2.5         | 2.5         | 2.5         | 2.4         | 1.8         | 1.4         | 1.2         | 0.5         | 19.2         |
| Consumables                    | US\$M        |      |      | 6.1         | 7.5         | 9.5         | 8.7         | 8.8         | 8.9         | 8.3         | 5.4         | 4.3         | 1.2         | 68.7         |
| Other                          | US\$M        |      |      | 1.1         | 1.1         | 1.2         | 1.3         | 1.2         | 1.2         | 0.9         | 0.7         | 0.5         | 0.2         | 9.4          |
| <b>Total Mining</b>            | <b>US\$M</b> |      |      | <b>21.1</b> | <b>24.4</b> | <b>29.1</b> | <b>28.7</b> | <b>28.3</b> | <b>26.9</b> | <b>22.7</b> | <b>17.8</b> | <b>14.4</b> | <b>4.6</b>  | <b>218.2</b> |
| <b>TOTAL</b>                   | <b>US\$M</b> |      |      | <b>40.4</b> | <b>49</b>   | <b>57.3</b> | <b>57</b>   | <b>56.5</b> | <b>55.2</b> | <b>51</b>   | <b>45.6</b> | <b>34.4</b> | <b>12.5</b> | <b>458.7</b> |

## Economic Analysis

A financial evaluation of the Project was undertaken using the discounted cash flow analysis approach. Cash flows were projected for the life of mine (LOM), which includes construction, operation and closure phases. The cash inflows were based on projected revenues for the LOM. The projected cash outflows, such as capital costs, operating costs and taxes, were subtracted from the cash inflows to estimate the net cash flows (NCF). A financial model was constructed on a quarterly basis to estimate the NCF over the LOM. The NCF were summarized on an annual basis. The cash inflows and outflows are assumed to be in constant third quarter 2012 US dollar basis.

The Project was evaluated on a project stand-alone, 100% equity-financed basis. The financial results, including net present value (NPV) and internal rate of return (IRR) do not take past expenditures into account; these were considered to be sunk costs. The analysis was done on a forward-looking basis from commencement of production commencing in January 2013, with the exception of the sunk costs to date, which were taken into account for tax calculations as an allowable deduction. Any other expenditure after 31 December 2012 not related to the Project construction has not been included.

The inputs and assumptions that form the basis of the financial model include metal prices, mining schedule, mining inventory, processing throughputs, and realisation, operating, and capital costs, royalties and taxation parameters. Some of the primary inputs are as follows:

- The base case gold price used in the financial evaluation was US\$1,300/oz.
- Mineral Resources for the Ollachea FS total 10.6 Mt of Indicated Mineral Resources grading 4.0 g/t Au and containing 1.4 Moz of gold. Mineral Resources are inclusive of Mineral Reserves. Mineral Reserves for the Project total 9.3 Mt of Probable Mineral Reserves at an average grade of 3.4 g/t Au containing 1.0 Moz of gold. The Mineral Reserves are split between ore (+2 g/t Au) and low grade development ore (+1 g/t to 2 g/t Au)
- Stope ore production will commence in January 2015 and commissioning of the process plant will commence in the same month. The mine production rate will ramp-up over a period of approximately 18 months. The life of mine is estimated to be approximately 9.6 years, with a ramp-down in mine production rate in the final approximately 2.5 years of the mine life
- The average LOM metallurgical gold recovery is 91.0%.
- The gold content of the doré produced at Ollachea is estimated to be 85%. Refinery charge of US\$1.10/oz and payable gold of 99.9%.
- The total capital costs estimated over the LOM from commencement of construction is US\$223.3 M
- The total operating costs estimated over the LOM are US\$458.7 M

The model also includes Peru government royalty and special mining tax, a third party royalty, financial transaction tax, working capital, income tax, value-added tax and workers' profit participation. The Peruvian taxation system IGV (sales tax) was assumed to be incurred on the initial project capital cost and to be recovered once in production. Once in production, IGV was

excluded from the operating assumptions. Since the Project involves export of goods, IGV is assumed to be immediately recoverable, consistent with Peruvian established practice.

Neither inflation nor Costs associated with Project financing have not been considered in the Model.

A summary of the annual cash flows is presented in Table 25.

**Table 25 Annual Cash Flows**

| <b>Cash Flows</b>                 |              | <b>2013</b>   | <b>2014</b>    | <b>2015</b>   | <b>2016</b>   | <b>2017</b>   | <b>2018</b>   | <b>2019</b>   | <b>2020</b>   | <b>2021</b>   | <b>2022</b>   | <b>2023</b>   | <b>2024</b>   | <b>2025</b>  | <b>Total LOM</b> |
|-----------------------------------|--------------|---------------|----------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|------------------|
| <b>Inflows</b>                    |              |               |                |               |               |               |               |               |               |               |               |               |               |              |                  |
| Net Revenue                       | US\$M        | -             | -              | 82.0          | 101.0         | 144.7         | 154.0         | 152.6         | 163.2         | 152.2         | 121.2         | 98.8          | 22.9          | -            | 1,192.6          |
| <b>Outflows - Operating</b>       |              |               |                |               |               |               |               |               |               |               |               |               |               |              |                  |
| Operating Costs                   | US\$M        | -             | -              | (40.3)        | (49.0)        | (57.2)        | (57.0)        | (56.4)        | (55.2)        | (50.9)        | (45.7)        | (34.3)        | (12.5)        | -            | (458.7)          |
| Royalties & Mining tax            | US\$M        | -             | -              | (1.6)         | (2.1)         | (3.2)         | (3.7)         | (3.6)         | (4.1)         | (3.6)         | (2.5)         | (2.1)         | (0.5)         | -            | (27.0)           |
| Other taxes                       | US\$M        | -             | -              | (0.7)         | (0.8)         | (1.8)         | (2.1)         | (2.0)         | (2.4)         | (2.1)         | (1.1)         | (1.2)         | (0.0)         | -            | (14.2)           |
| Workers' Profit Participation     | US\$M        | -             | -              | -             | (1.6)         | (2.1)         | (4.3)         | (4.8)         | (4.7)         | (5.4)         | (4.8)         | (2.9)         | (2.8)         | -            | (33.5)           |
|                                   |              |               |                |               |               |               |               |               |               |               |               | (11.0)        |               |              |                  |
| Income Tax                        | US\$M        | -             | -              | (3.8)         | (4.8)         | (12.8)        | (17.7)        | (17.2)        | (19.9)        | (17.4)        | (10.5)        |               | (0.7)         | -            | (115.7)          |
| <b>Total Outflows - Operating</b> | <b>US\$M</b> | <b>-</b>      | <b>-</b>       | <b>(46.4)</b> | <b>(58.3)</b> | <b>(77.1)</b> | <b>(84.8)</b> | <b>(84.1)</b> | <b>(86.4)</b> | <b>(79.5)</b> | <b>(64.6)</b> | <b>(51.5)</b> | <b>(16.5)</b> | <b>-</b>     | <b>(649.0)</b>   |
| <b>Cash Flow from Operations</b>  | <b>US\$M</b> | <b>-</b>      | <b>-</b>       | <b>35.6</b>   | <b>42.7</b>   | <b>67.7</b>   | <b>69.3</b>   | <b>68.5</b>   | <b>76.8</b>   | <b>72.8</b>   | <b>56.7</b>   | <b>47.3</b>   | <b>6.4</b>    | <b>-</b>     | <b>543.6</b>     |
| <b>Outflows - Investing</b>       |              |               |                |               |               |               |               |               |               |               |               |               |               |              |                  |
| Initial Capital Costs             | US\$M        | (67.8)        | (109.8)        | -             | -             | -             | -             | -             | -             | -             | -             | -             | -             | -            | (177.5)          |
| Initial Capital Costs – IGTV      | US\$M        | (7.3)         | (4.1)          | 16.4          | -             | -             | -             | -             | -             | -             | -             | -             | -             | -            | 5.0              |
| Sustaining Capital Costs          | US\$M        | -             | -              | (9.2)         | (7.4)         | (2.9)         | (5.0)         | (6.8)         | (6.3)         | (2.5)         | (1.4)         | (0.1)         | -             | -            | (41.5)           |
| Closure Costs                     | US\$M        | -             | -              | -             | -             | -             | -             | -             | -             | -             | -             | -             | (3.8)         | (0.4)        | (4.2)            |
| Movement in Working Capital       | US\$M        | -             | -              | (0.3)         | (0.3)         | (0.1)         | 0.0           | 0.0           | (0.0)         | (0.1)         | 0.4           | (0.0)         | 0.4           | -            | -                |
| Total Outflows – Investing        | US\$M        | (75.1)        | (113.9)        | 6.9           | (7.7)         | (3.1)         | (4.9)         | (6.8)         | (6.4)         | (2.6)         | (1.0)         | (0.1)         | (3.4)         | (0.4)        | (218.3)          |
| <b>Net Cash Flow</b>              | <b>US\$M</b> | <b>(75.1)</b> | <b>(113.9)</b> | <b>42.5</b>   | <b>35.0</b>   | <b>64.6</b>   | <b>64.3</b>   | <b>61.7</b>   | <b>70.5</b>   | <b>70.2</b>   | <b>55.7</b>   | <b>47.1</b>   | <b>3.0</b>    | <b>(0.4)</b> | <b>325.3</b>     |
| <b>Net Cash Flow before Tax</b>   | <b>US\$M</b> | <b>(75.1)</b> | <b>(113.9)</b> | <b>47.0</b>   | <b>42.2</b>   | <b>81.2</b>   | <b>88.4</b>   | <b>85.8</b>   | <b>97.5</b>   | <b>95.1</b>   | <b>72.1</b>   | <b>62.2</b>   | <b>6.5</b>    | <b>(0.4)</b> | <b>488.7</b>     |

Note:

Costs are estimated in 3Q 2012 US dollars.

Net Revenue is gross revenue less realization costs (transport and refinery charges).

Net Cash Flow before tax is before Special Mining Tax, Worker's Profit Participation of 8% and Corporate Income Tax of 30%.

The Project was evaluated on a project stand-alone, 100% equity-financed basis. The base case gold price used in the financial analysis was US\$1,300/oz. The base case gold price used is significantly lower than the current spot gold price of approximately US\$1,700/oz and as such the financial evaluation was also undertaken using a gold price of US\$1,600/oz to show the impact of a gold price closer to the current spot gold price. The NPV, IRR and payback period are presented in Table 26. The Project financial returns at a base case of NPV of 7% demonstrate that the Project is financially robust under the assumptions set out in this report.

**Table 26 Summary of Ollachea Financial Results**

| Parameter                   | Unit   | Base Gold Price | Upside Gold Price |
|-----------------------------|--------|-----------------|-------------------|
|                             |        | US\$1,300/oz    | US\$1,600/oz      |
| Net Cash Flow before tax    | US\$ M | 489             | 749               |
| NPV @ 5% real (before tax)  | US\$ M | 309             | 497               |
| NPV @ 7% real (before tax)  | US\$ M | 256             | 422               |
| NPV @ 10% real (before tax) | US\$ M | 192             | 331               |
| IRR (before tax)            | %      | 29.2            | 40.2              |
| Payback (before tax)        | Years  | 3.2             | 2.5               |
| Net Cash Flow (after tax)   | US\$ M | 325             | 486               |
| NPV @ 5% real (after tax)   | US\$ M | 194             | 310               |
| NPV @ 7% real (after tax)   | US\$ M | 155             | 258               |
| NPV @ 10% real (after tax)  | US\$ M | 108             | 194               |
| IRR (after tax)             | %      | 22.1            | 30.2              |
| Payback (after tax)         | Years  | 3.7             | 3.0               |

Note:

NPVs as at commencement of construction.

NPVs are based on mid-period discounting.

Before tax is before Special Mining Tax, Workers' Participation Profit of 8% and Income Taxes of 30%.

Payback starts from the commencement of production.

The financial results are on 100% Project basis and exclude the agreement with the community for a 5% participation in MKK on commencement of production and Second Additional Payment payable by MKK and due to Rio Tinto in accordance with Mining Claim Transfer Agreement dated 23 February 2007.

A summary of the analysis of the LOM average unit cost of production on a per ounce basis is provided in Table 27.

**Table 27 LOM average Unit of Production**

| Parameter                              | Unit           | Cost       |
|--|----------------|------------|
| Mining                                 | US\$/oz        | 237        |
| Processing                             | US\$/oz        | 217        |
| G&A                                    | US\$/oz        | 44         |
| <b>Total Site Cash Operating Costs</b> | <b>US\$/oz</b> | <b>499</b> |
| Realisation Costs                      | US\$/oz        | 4          |
| Royalties                              | US\$/oz        | 46         |
| <b>Total Operating Costs</b>           | <b>US\$/oz</b> | <b>549</b> |

Note:  
 Costs are estimated in 3Q 2012 US dollars.  
 Per ounce based on payable gold.

A sensitivity analysis was performed on the Base Case NPV, using a 7% discount rate, and IRR (Figure 32 and Figure 33). Positive and negative variations up to 15% in either direction were applied independently to each parameter: gold price, capital cost, operating cost and gold grade. The results demonstrated that the Project is most sensitive to variation in gold grade and gold price. Initial capital cost has the least impact on the sensitivity of the NPV @ 7%.

**Figure 32 NPV at 7% real (post-tax) Sensitivity Chart**

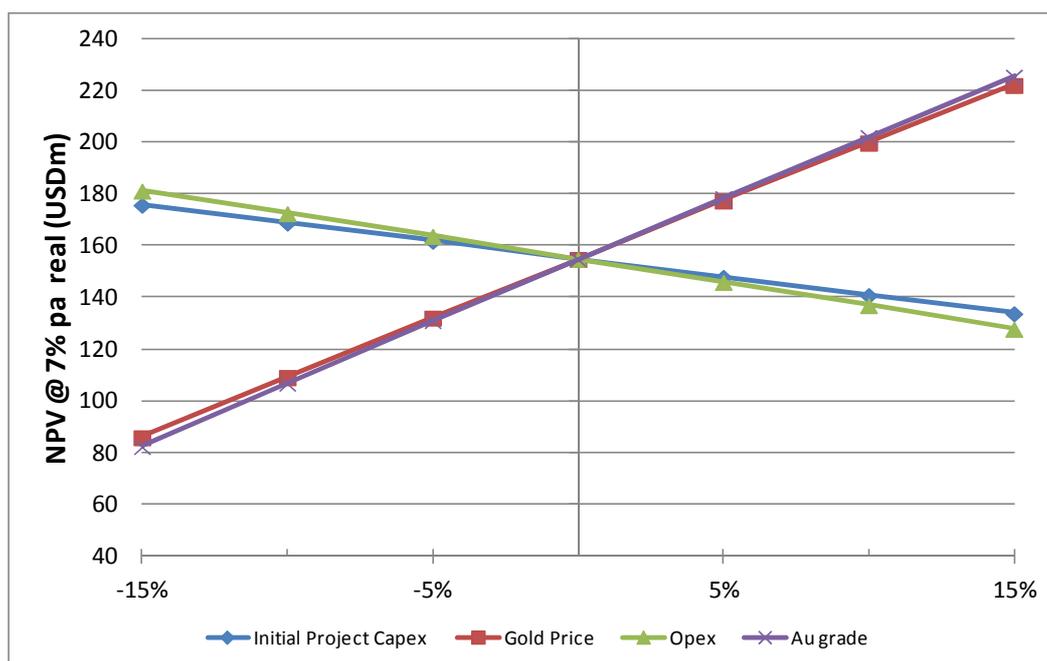
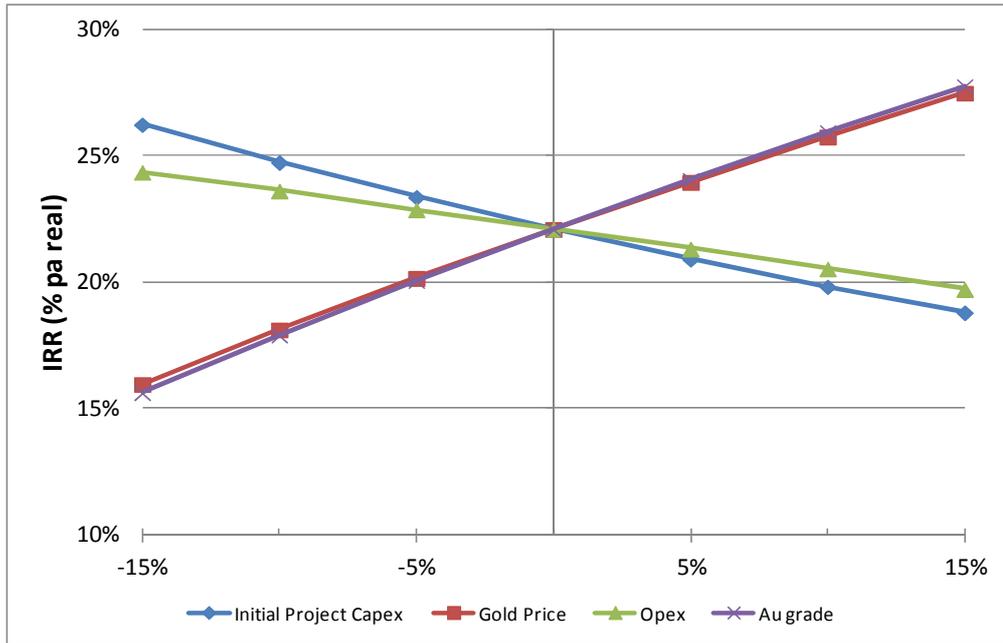


Figure 33 IRR real (post-tax) Sensitivity Chart



## **Project Implementation**

An Owner's team will be formed to deliver the project through the engagement of an EPCM contractor and specialist engineering consultants, suppliers and Peruvian construction contractors.

The project will be delivered through an incentivised contracting strategy, thereby reducing interface management and minimising duplication of roles. The team will have integrated systems and procedures. A specialist EPCM provider will be responsible for the delivery of the Process Plant and Associated Infrastructure area and will provide the underlying framework for all project systems and procedures.

The Owner's team will deliver the mining development work covering all aspects, including areas such as mine design, mine fleet selection and procurement, assembly of the mining fleet, and operations etc. Ultimately, this part of the team will transfer through to the operations team.

The overall philosophy will be to source personnel from Peru. If there are insufficient trained and experienced people available in Peru then personnel will be sourced from elsewhere within South America. It is anticipated that senior management will mainly be made up of expatriate persons with extensive experience in project delivery.

A project implementation schedule shows a total project duration of approximately 24 months (includes detail design, procurement, construction) to the start of commissioning.

Key milestone dates for the project are as follows:

- Project Execution commencement - 14 January 2013
- Permit approval for the extension of the exploration decline development - 1 March 2013
- Environmental approval - 1 April 2013
- Construction permit - 1 July 2013
- Commencement of construction - 1 July 2013
- Commencement of commissioning of process plant (first feed) - 31 December 2014
- Completion of Process Plant commissioning - 1 March 2015
- The approximate duration of the project phases are as follows:
- Process Plant Detailed Engineering Design - 7 months

- Long Lead Procurement - 14 months
- Process Plant Construction - 18 months
- Commissioning of Process Plant - 3 months.

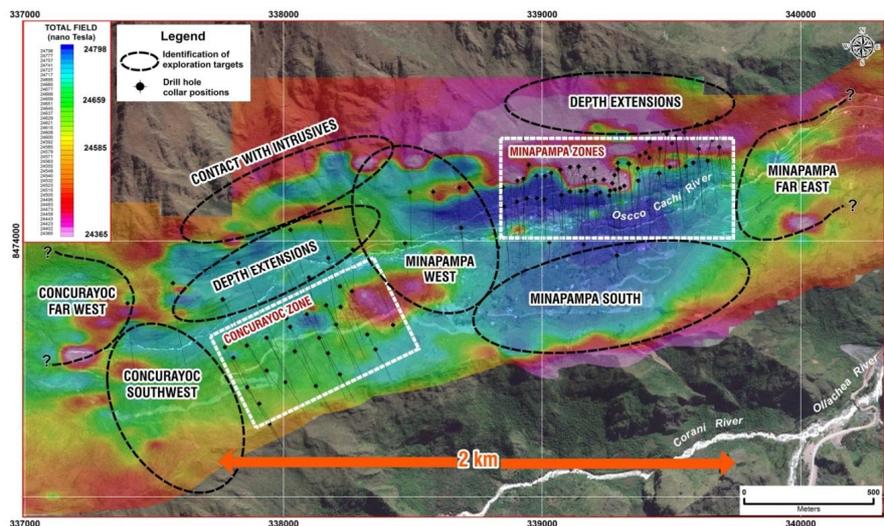
The schedule is constrained by a number of critical approvals, as follows:

- EIA Approval - 1 April 2013
- Construction Permit - 1 July 2013, no site works associated with the process plant can commence prior to this date.
- Procurement and delivery of Ball Mill - 62 weeks from placement of purchase order
- Procurement and delivery of Transformer - 62 weeks from placement of purchase order
- Procurement and delivery of Mining Fleet - 44 weeks from placement of purchase order

### Exploration Potential

It is considered that the exploration targets identified to date (see figure below), including extension, step-out and conceptual targets, justify further follow-up. The deeper, down-dip potential of Ollachea and the eastern extension of Minapampa will be better targeted from the underground exploration drive, as diamond drilling from surface will require >1 km holes due to the elevated topography north of the main northward-dipping mineralization..

**Figure 34** *Ollachea exploration targets including extension, step-out and conceptual targets located nearby the Minapampa and Concurayoc Zones*



New discoveries such as the Concurayoc Zone, displaced by some 400 m from the main Minapampa Zone, have additional exploration potential. All mineralization discovered to date at Ollachea remains open-ended along strike as well as down-dip.

In September 2011, the Company released the maiden Inferred Mineral Resource at the Concurayoc Zone, approximately 400 metres west of the Minapampa Zone, based on infill drilling completed during the second quarter of 2011.

**Table 28 Concurayoc Inferred Mineral Resource (applying a 2.0g/t gold cut-off)**

| Mineral Resources above a 2.0 g/t Au Cut-off Grade | Tonnage<br>(Mt) | Au Grade<br>(g/t) | Contained Au<br>(Moz) |
|--|-----------------|-------------------|-----------------------|
| <b>Concurayoc</b>                                  |                 |                   |                       |
| Inferred   | 10.4            | 2.8               | 0.9                   |

Note:

Mineral Resources are inclusive of Mineral Reserves.

Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.

This mineral resource estimate was carried out by consultancy Coffey Mining Pty Ltd. The estimate at the Concurayoc Zone, which covers a strike length of 700 metres, was based upon 45 diamond drill holes on approximately an 80 metres grid for 16,943 metres.

The dip and spatial orientation of the mineralized zones at Concurayoc are broadly similar to the mineralized zones hosted within the Minapampa zones. Within the six horizons identified at Concurayoc, mineral resource modelling has additionally identified seven discrete higher grade lenses. Examples of higher grade intersections include drill hole DDH10-130 which intersected 33 metres grading 4.57g/t gold including 12 metres grading 8.66g/t gold, DDH10-135 with 7 metres at 4.03g/t gold plus 4 metres at 8.68g/t gold, DDH11-168 with 9 metres grading 3.38g/t gold plus 4 metres at 22.0g/t gold and DDH11-171 with 7 metres at 17.6g/t gold. The effective true width of mineralized intersections is expected to range between 67% to 98% of the width reported, with the majority of the drill holes reporting around 92% true width. The true width is dependent upon the variation of the angle of incidence between the trace of the Concurayoc exploration drill-hole(s) and the dip of the targeted mineralized horizon(s).

### 4.3 Don Nicolás

The following summary is taken from the technical report entitled “Technical Report Don Nicolás Gold Project, Santa Cruz, Argentina” (the “Don Nicolás Report”) dated February 14, 2012, which technical report is incorporated by reference herein.

This summary is not complete and the full Don Nicolás Report can be accessed on the Company’s SEDAR profile at [www.sedar.com](http://www.sedar.com).

#### Project Description and Location

Minera IRL acquired, through a Scheme of Arrangement, Hidefield, an AIM listed company, in December 2009. The principal asset of Hidefield was a large exploration holding in the Deseado Massif in Patagonia. The Don Nicolás Project (100% owned) consists of two vein fields known as La Paloma and Martinetas approximately 40km apart. A feasibility study on the Don Nicolás Project was complete in February 2012.

*Figure 35 Martinetas project site*



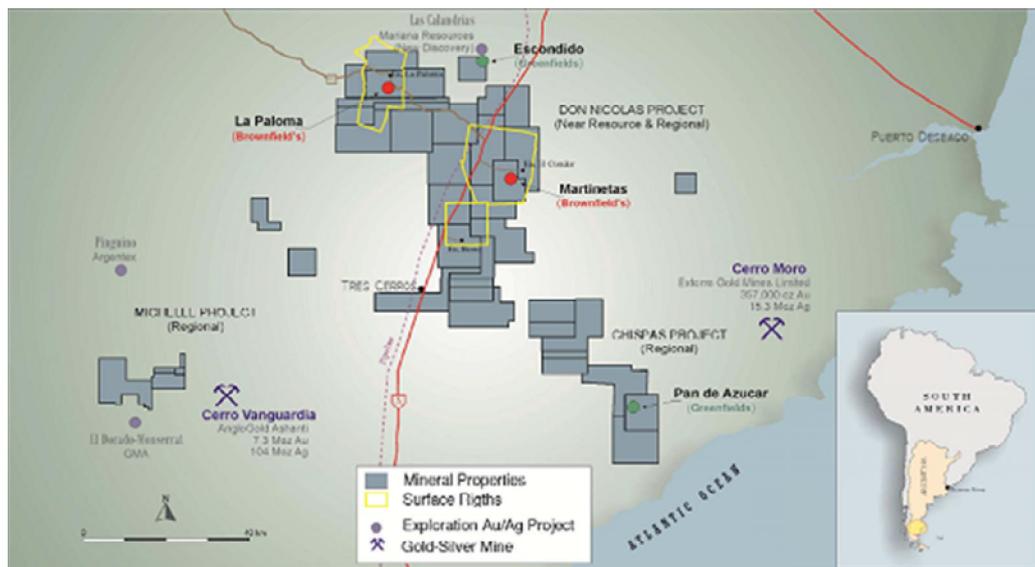
The Project area consists of over 47,000 ha of mineral rights located in Santa Cruz Province approximately 100 km inland from the South Atlantic Ocean as shown in Figure 36. The key data related to the Project's location are listed as follows:

**Table 29** Location Data for the Don Nicolás Project

|                      | La Paloma   | Martinetas  |
|----------------------|-------------|-------------|
| Latitude             | 47°42'30" S | 47°54'23" S |
| Longitude            | 67°46'23" W | 67°22'44" W |
| Elevation, m         | ~120        | ~160        |
| Distance in km to:   |             |             |
| • Comodoro Rivadavia | 275         | 270         |
| • Rio Gallegos       | 565         | 530         |
| • San Julian         | 212         | 180         |
| • Puerto Deseado     | 230         | 225         |

The La Paloma area hosts a number of vein systems, the principal economic target being the Sulfuro structure; Martinetas, the mineralized structures at Cerro Oro, Coyote, and Armadillo are the economic targets of principal interest.

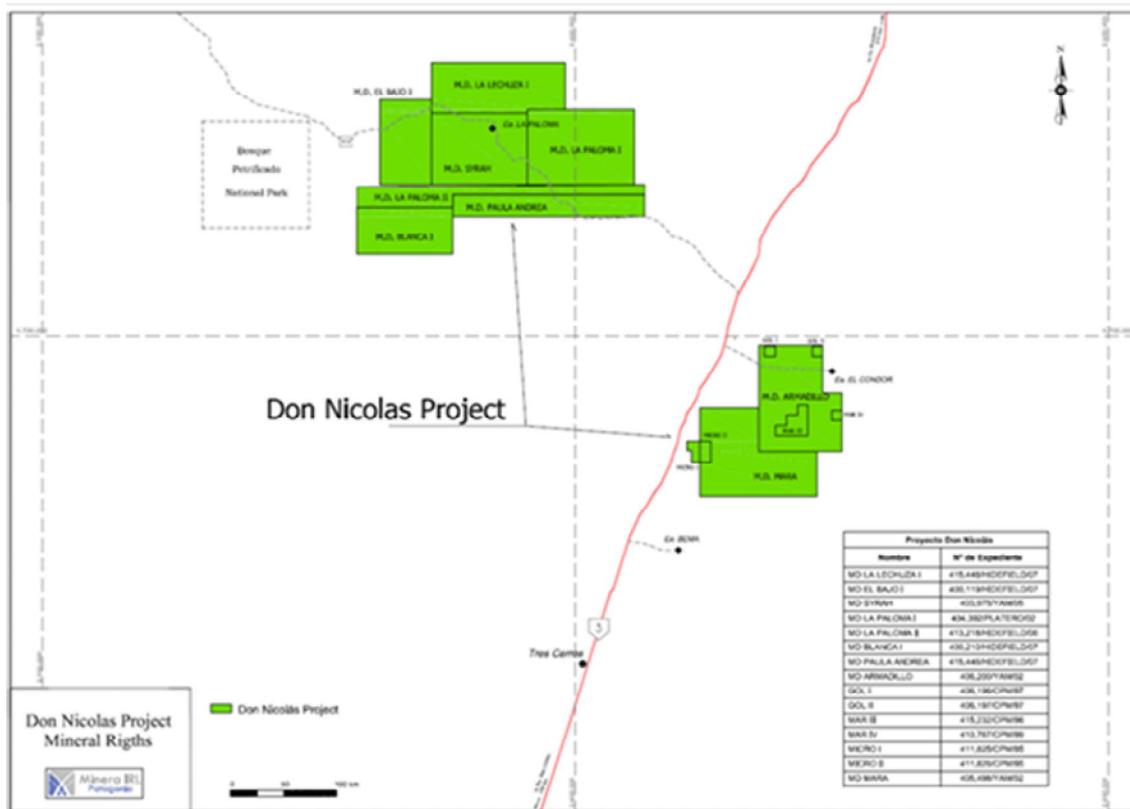
**Figure 36** General Location of the Don Nicolás Gold Project



## Mineral Tenure

Legal title to the Don Nicolás Project area is held as a series of “cateos” and “manifestaciones de descubrimiento” having a total area of 33,798 ha as shown in Figure 37.

Figure 37 Property Claim Map, Don Nicolás Project



The Company’s total Santa Cruz land package covers 270,000 ha (includes the Don Nicolás Project claims) and, in addition, the Company holds surface rights of 70,000 ha within the project area.

All permits necessary to carry out exploration work on the Don Nicolás Project area have been obtained by MIRLP. Table 30 provides details of the mineral titles:

**Table 30 MIRLP Mineral Titles**

| <b>Claim Name</b> | <b>Title Holder</b> | <b>Area, ha</b> |
|-------------------|---------------------|-----------------|
| La Lechuza I      | MIRLP               | 5,902           |
| EL Bajo I         | MIRLP               | 3,863           |
| Syrah             | MIRLP               | 5,994           |
| La Paloma I       | MIRLP               | 600             |
| La Paloma II      | MIRLP               | 3,780           |
| Blanca I          | MIRLP               | 3,960           |
| Paula Andrea      | MIRLP               | 3,699           |
| Aramdillo         | MIRLP               | 3,500           |
| GOL I             | MIRLP               | 100             |
| GOL II            | MIRLP               | 100             |
| MAR III           | MIRLP               | 600             |
| MAR IV            | MIRLP               | 100             |
| Micro I           | MIRLP               | 200             |
| Micro II          | MIRLP               | 200             |
| Mara              | MIRLP               | 1,200           |
| <b>Total ha</b>   |                     | <b>33,798</b>   |

### **Royalties, Rights and Encumbrances**

Three royalties apply to all or part of the Don Nicolás Project. These are:

- 1) An ad valorem provincial royalty of up to 3% of mine mouth value will be payable. Such mine head value is defined as the price for the sale of the corresponding mineral deducting certain costs and expenses.
- 2) A two percent net smelter royalty reserved to Royal Gold Inc., pursuant to agreements dated February 1, 2000 (Polimet Royalty Agreement) and January 1, 2002, with Yamana and associate companies (La Paloma Royalty Agreement). The first agreement includes the following MIRL mineral rights: Gol I, Gol II, Mar III, Mar IV, Micro I and Micro II along with other mining rights that are not included in the Don Nicolás Project or that do not even belong to MIRL. The latter covers the Syrah declaration of discovery.

- 3) A US\$3.00/oz gold royalty to a cap of US\$2 M payable to Yamana. This is applicable to all of the current resource areas and, effectively, those key licenses covered by the Royal Gold agreement.

### **Location, Access, Climate, Local Resources and Physiography**

The Project area is located on the eastern Patagonian plains and is generally characterized by flat to gently undulating landforms dissected occasionally by incised valleys. Some prospect areas exhibit hilly terrain, but this does not impede easy access to the entire project area. Elevation ranges from 130 to 220 m above sea level. Vegetation is sparse and dominated by grasses and low shrubs. Some cattle and sheep grazing activities persist. However these are limited in extent as the pastoral industry has not recovered from the effects of the ash blanket from the Mount Hudson. Logistics in the region have also been affected by the more recent (2011) Puyuehue volcano. In summary, the area is now largely uninhabited.

Don Nicolás is located in a climatically rigorous region of southern Argentina known as the Argentine Patagonia. This region is marked particularly by its strong westerly or south westerly winds that persist throughout much of the year both in the warm summer months but also in the cold southern winter from June to September or October when snow and rain are common.

Annual precipitation is from 180 to 300 mm, with occasional heavy snow falls in the winter.

The Project is easily accessible from major centres in the region by paved public highways and secondary gravel roads. The larger population centres in the area include the coastal port city of Comodoro Rivadavia (actually in Chubut province) which is serviced daily by commercial jet flights from Buenos Aires approximately 1,750 km to the north. Comodoro Rivadavia is a regional centre of approximately 140,000 inhabitants servicing the Argentine oil and gas industry, a major employer in this region of Argentina. From Comodoro Rivadavia, the Project is accessed by driving south along paved National Route No.3 for approximately 280 km. This section of Route No. 3 is part of the principal north-south road link traversing the length of the country, and is therefore well maintained by the provincial and national road authorities.

From Route No. 3, the La Paloma estancia is accessed by turning west onto the unpaved Route No. 49. Access to the Martinetas mineral deposits on the El Cóndor estancia is found approximately 7 km further south turning east off Route No. 3. Average driving time between Comodoro Rivadavia and the property is about four hours.

Don Nicolás is located in a very sparsely populated region of Argentina where the original settlers were dedicated to sheep ranching from scattered ranches each covering large areas, typically measured in square kilometres. These “estancias” and related rural activities have now largely been abandoned as the result of the 1991 volcanic eruption of Cerro Hudson which led to the near extinction of the sheep industry.

Oil is a significant industry in Santa Cruz province (and neighbouring Chubut to the north) principally from onshore production and exploration. Oil service centres with port facilities are located at Caleta Olivos (Chubut) and Rio Gallegos (the provincial capital of Santa Cruz). Nearby settlements to Don Nicolás include Puerto Deseado towards the east and Puerto San Julian towards the south where basic services and supplies are readily available.

### **Geological Setting and Mineralization**

The Don Nicolás Project is located in the Patagonia region of Argentina within an uplifted fault block area known as the Deseado Massif of Santa Cruz province. Covering a surface area of approximately 60,000 km<sup>2</sup>, the Deseado Massif is predominantly underlain by volcanic rocks of Jurassic age and is host to several epithermal Au-Ag deposits such as Don Nicolás.

The Deseado Massif is dominated by rhyolitic and andesitic volcanic and tuffaceous volcanoclastic lithologies of Middle to Upper Jurassic age (130 to 170 ma). It is criss-crossed by numerous extensive fault and fracture zones which served as conduits for hydrothermal activity during periods of Jurassic volcanism. The result of this activity is a widespread network of shallow level mineralized “epithermal” fissure veins, breccias, and stock-work systems, many of which carry potentially economic Au and Ag mineralization.

Broad similarities exist between the two main Don Nicolás project areas of La Paloma and Martinetas. Each are hosted within rhyolitic to andesitic volcanoclastic lithologies which are interpreted to be flat to shallow dipping. Gold and silver deposits occur as low sulphidation, epithermal mineralization within sub-vertically oriented quartz-breccia veins.

The Sulfuro vein is the principal deposit at La Paloma of economic interest and is represented by a single, well developed quartz vein typically 2 to 4 m in thickness and has a primarily northwest-south southeast orientation with a steep southwestwardly dip.

The La Paloma veins remain open-ended at depth. Geological interpretation of the results of recent geophysical studies strongly suggests that the main Sulfuro vein is additionally open-ended towards the south.

*Figure 38 La Paloma area, Sulfuro Vein*



At Martinetas, multiple mineralized structures occurring as “vein swarms” with minor intervening stockwork development occur. Five resource areas have been delineated. The main resource is at the Coyote and Cerro Oro deposits comprising a series of narrow, sub-parallel, anastomosing quartz veins varying in width from tens of centimetres to several metres, and typically averaging one metre or less in thickness. Au/Ag mineralization is variable within the veins with some minor stockwork mineralization extending into the host volcanic lithology. Conceptually, near-surface oxidized stockwork precious metal mineralization might provide a low-grade, conventional, heap-leachable resource.

Other resource areas at Martinetas include the Lucia, Calafate and Armadillo deposits. Precious metal mineralization associated with these deposits is also hosted by narrow to moderately thick, steep dipping quartz veins of variable tenor.

The La Paloma and Martinetas epithermal systems are classic “low sulphidation” type deposits consisting mainly of quartz with adularia and free Au, minor amounts of sulphides (except at Sulfuro where a relatively high sulphide content occurs), and weak alteration haloes. Classic low sulphidation textures like lattice textures, crustiform-colloform banding, comb quartz, etc.,

are common. They may also be associated with anomalous amounts of arsenic (As), mercury (Hg), or antimony (Sb).

## **Exploration**

The Don Nicolás Project areas were acquired from Hidefield who in turn had acquired them from Yamana Resources Inc. (Yamana). Yamana identified the areas as having potential for Au-Ag mineralization and commenced exploration work in the region in the early 1990s.

On the Martinetas prospect, the discovery of Au mineralization at surface led to the commencement of drilling in 1996. Since that time, extensive surface trenching, as well as various campaigns of reverse circulation (RC) and/or diamond drilling have been completed. The majority of drilling was completed by Yamana between 1996 and 1999. An additional program was carried out in 2003. Between 2006 and 2009, Hidefield completed drilling and trenching at the project. From 2010, after the late-2009 acquisition of Hidefield, MIRL invested significant funding into an extended campaign of infill drilling with some minor extension drilling of the known resources.

Several zones of satellite Au-Ag mineralization have been identified on the Martinetas project area. Systematic exploration of these areas commenced under the management of MIRL and is described in more detail below.

At the La Paloma Project, initial drilling was carried out in 1996 by Newcrest Minera Argentina SA (Newcrest). No further drilling was carried out until Yamana resumed exploration in 2003 and drilled a series of holes in that year. Hidefield then purchased the project and completed drilling between 2006 and 2009. MIRL continued a program of infill DDH at Sulfuro and Arco Iris during 2010 and into 2011.

Additional to the resource infill drilling and surface trenching described above, MIRL's brownfield exploration work in the Martinetas area also focused on targeting shallow, oxidized satellite pit resources (potentially amenable to heap leaching), located peripheral to the central Martinetas deposits. Approximately 11,000 m of RC drilling was completed in the central Martinetas area. This program resulted in the discovery of a significant mineralized system at Choique, approximately one kilometre from the Martinetas Vein Field. Results from 35 holes totalling 2,386 meters of drilling have demonstrated substantial gold and silver intersections in a new mineralized rhyolite dome host within 50 metres of surface. Key high grade intersections include drill holes CH-D12-015 with 6.70 meters at 10.5 g/t gold and 19.8 g/t silver, CH-D12-018 with 6.10 meters at 5.43 g/t gold and 27.6 g/t silver and CH-D12-021 with 11.10 meters grading 5.38 g/t gold and 5.26 g/t silver.

## **Drilling**

Drilling at the Don Nicolás Project has been carried out by several companies over the period October 1996 to June 2011 and summarized as follows:

1996: Yamana begins drilling in the Martinetas Region.

1996: Newcrest begins an initial program at the Arco Iris deposit (La Paloma area).

1996 to 1999: Yamana completes drilling (DDH and RC) and trenching in the Martinetas area.

2003: RYSA (a joint venture between Yamana and Compañía Minera Buenaventura) completes drilling (DDH) at Martinetas.

2006 to 2009: Hidefield Gold Plc (Hidefield) continues drilling (DDH) and trench sampling in the La Paloma and Martinetas regions.

2010 to 2011: Since the acquisition of the project in 2009, MIRLP has continued infill drilling (DDH and RC) and trench sampling at all the deposits within the Don Nicolás Project area.

2012 to Present: The Company completed an upgraded resource estimate following step-out, extension and infill drilling at the Martinetas Vein Field.

The Figure 39 to Figure 41 show the extent of drilling and trenching at the Paloma (Sulfuro), Martinetas Central Area, and Armadillo deposits respectively.

Figure 39 Paloma (Sulfuro) Drill and Trench Plan

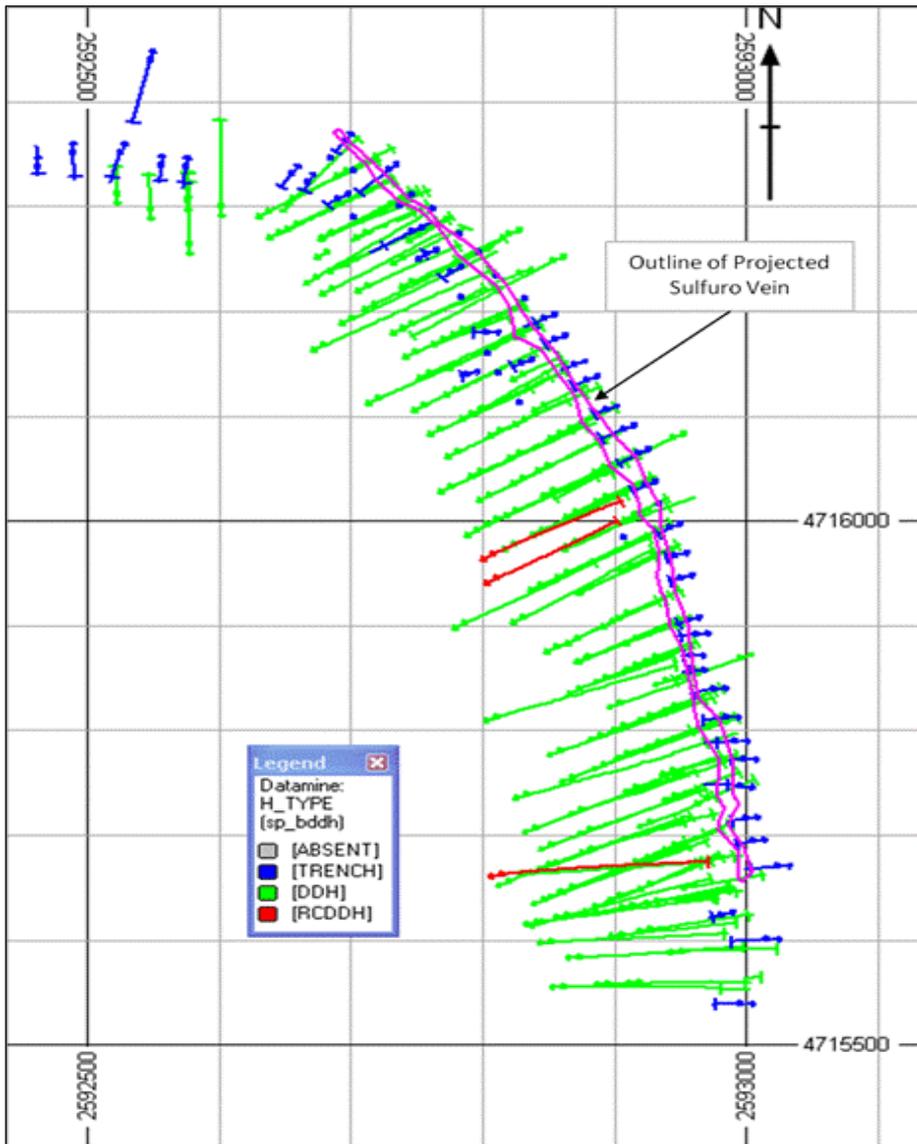
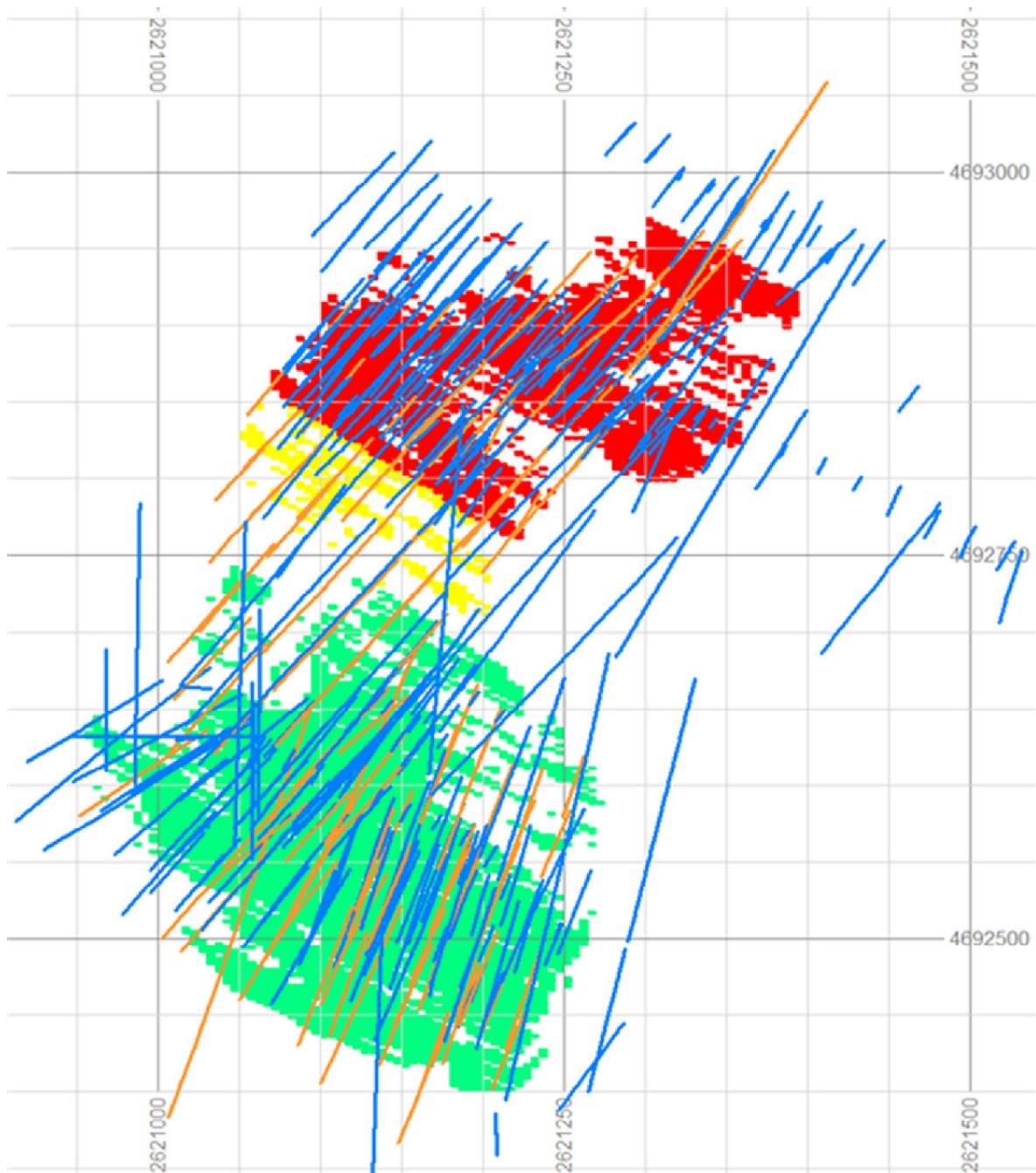
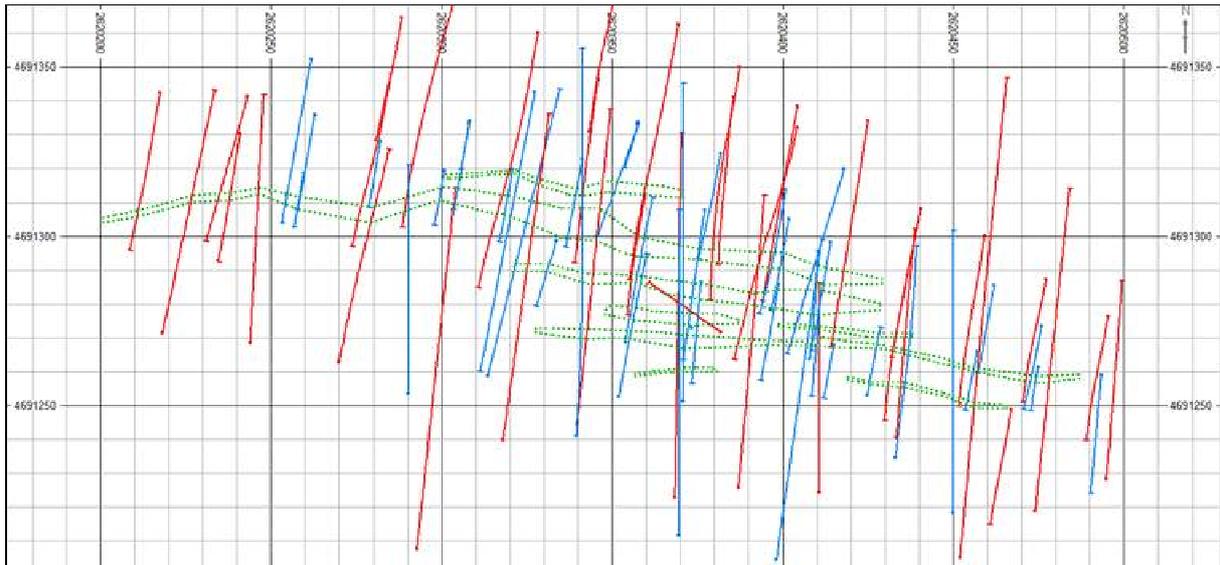


Figure 40 Martinetas Central Area Drill and Trench Plan



**Figure 41 Armadillo Drill and Trench Plan**



Whilst on site in 2010, Coffey Mining chose several drill collars and verified their location using a hand-held GPS unit. All drillholes checked were within +/- 5 m of the reported location (within the accuracy limits of the device).

Survey reports show that the topographic survey was generated by surveyors using DGPS total station. This topography was reported with sub-centimetre accuracy and compares well with the drillhole collar survey data. Coffey Mining considers the topography to be of high confidence.

Within the Don Nicolás Project, drilling has been orientated in order to be perpendicular to the strike of the known vertical to sub-vertical mineralization.

Within the Don Nicolás Project area, generally samples have been taken at 1 to 2 m lengths within the known mineralized zones (some core samples have been taken at a minimum length of 0.4 m based on geological interpretation); average sample length is approximately 1 m.

Drillholes typically intersect mineralization orthogonally, and the true mineralized intercepts are typically 60 to 80% of the intersected mineralization.

## Sample Preparation, Analysis and Security

Trenching took place across all deposits within the Don Nicolás Project from 1997 (Yamana), to as recent as 2010 (MIRL) at Martinetas. Trenches are typically 1.2 m wide, 0.5 to 1.5 m deep and of various lengths. The trenches were channel sampled along one wall in 1 m intervals except where dictated by lithology, where samples could be less than 1 m.

Whilst on site in June 2010 and March 2011, Coffey Mining observed a similar DDH sampling procedure being adopted by MIRL. Coffey Mining considers the procedures meet an acceptable industry standard.

In 2011, MIRL performed an infill RC drill campaign in the Martinetas area, to improve the mineral resource estimate. All sampling was taken at 1-m downhole intervals. Coffey Mining considers that the sampling procedure used by MIRL meets acceptable industry standards.

Recent core drilling at La Paloma by MIRL is collected using a triple-tube system to ensure recovery is as good as possible. Core recovery at Martinetas is considered to be reasonable and satisfactory (with a majority of the core having recoveries of greater than 90%).

The close scrutiny of sample submission procedures by MIRL technical staff, and the rapid submission of samples from drilling for analysis, provides little opportunity for sample tampering. Smee (2010) noted the following; sample bags are placed into rice bags for shipment to the preparation laboratory. A transport truck is used to deliver the samples to the preparation laboratory in Mendoza, Argentina. Each of the rice bags is sealed with a sequential number sample tag.

Reference material is retained and stored at the MIRL exploration camp at El Cóndor Ranch, as well as chips derived from RC drilling, half-core and photographs generated by Diamond drilling, and duplicate pulps and residues of all submitted samples. Assessment of the data indicates that the assay results are generally consistent with the logged alteration and mineralization, and are entirely consistent with the anticipated tenor of mineralization. The ALS-Chemex Argentina S.A. (from 2003 to current), has been used by RYSA, Hidefield and MIRL.

Samples are transported by courier service to the ALS-Chemex laboratory in Mendoza. On arrival, the samples are weighed and assigned a barcode number for tracking through the process.

### Sample Preparation Procedure (Mendoza, Argentina):

- a. The samples are dried in a gas oven, at a temperature of 105°C.
- b. Samples are crushed to a <2-mm (70% passing or better).
- c. Samples are riffle split to approximately 1000 g.
- d. Sample then pulverised to <75 µm (85% passing or better).

Prepared pulp samples are flown to the ALS-Chemex laboratory at La Serena in Chile for analysis where the analytical procedure is as follows:

- a. Au/Ag; 50-g charge fire assay with an AA Finish (Au/Ag-AA24), where Au values greater than 10 ppm Au detected, they were re-analyzed using a gravimetric method (Au-GRA22).
- b. Where Ag returned values greater than 100 ppm Ag, they were re-analyzed using a gravimetric method (Ag-GRA22).
- c. Trace Hg was analyzed by aqua-regia digestion, cold vapour with AAS finish (Hg-CV41).
- d. A further 27 elements were analyzed by 4-acid digest with ICP-AES finish (ME-ICP61) or with AAS finish if greater than upper detection limit for Mo, Pb and Zn.

ALS-Chemex is an independent laboratory and is part of the global group ALS Laboratory Group with ISO 9001:2000 accreditation.

Quality control sampling and assaying used by Hidefield (since 2006), and continued by MIRL is summarized below:

- a. Insertion of a coarse blank sample at a ratio of 1 in 50 samples.
- b. Insertion of reference material at a ratio of 1 in 25 samples.
- c. Routine duplicate assay of pulps as part of the laboratory QAQC program.
- d. Insertion of prepared duplicate samples at a ratio of 1 in 25 samples.
- e. Insertion of a duplicate drill core sample at a ratio of 1 in 25 samples.
- f. MIRL have used their own in-house standards, which have been certified by ACME Analytical Laboratories (Chile) Ltd., as part of a 5-laboratory certification process involving; ACME Analytical Laboratories (Chile) Ltd., Actlabs Skyline Peru S.A.C, ALS Peru S.A., CIMM Peru S.A and SGS Peru S.A.C. Twelve samples from each standard (8006 to 8012) were sent to each laboratory, which used a 30-g Fire Assay analysis, with an Atomic Absorption finish (except for standard 8009, which had a gravimetric finish). The 60 resulting assays for each standard were compiled by ACME Analytical Laboratories (Chile) Ltd., to determine the appropriate confidence intervals.

The Don Nicolás database contains 161 dry in-situ bulk density measurements sampled at various locations at the Sulfuro deposit and Martinetas region. Tables 31 and 32 summarize the location and result of the bulk density samples used for the resource estimate, separated by mineralization/geology and oxidation state.

**Table 31 Bulk Densities - Martinetas**

|              | Mineralized (> 1g/t Au) <sup>1</sup> |                      | Low Grade (0.3 to 1g/t Au) <sup>1</sup> |                      | Background (< 0.3g/t Au) <sup>1</sup> |                      |
|--------------|--------------------------------------|----------------------|---|----------------------|---------------------------------------|----------------------|
|              | No. of Data                          | Mean BD <sup>2</sup> | No. of Data                             | Mean BD <sup>2</sup> | No. of Data                           | Mean BD <sup>2</sup> |
| Oxide        | 18                                   | 2.37                 | 6                                       | 2.32                 | 9                                     | 2.2                  |
| Transitional | 22                                   | 2.52                 | 4                                       | 2.38                 | 3                                     | 2.31                 |
| Fresh        | Assumed                              | 2.56                 | 8                                       | 2.41                 | 5                                     | 2.35                 |

1. Au mineralization threshold used.  
2. Average dry in-situ bulk density units are t/m<sup>3</sup>.

**Table 32 Bulk Densities - Paloma (Sulfuro)**

|              | Wall-Rock   |                      | Stock Work  |                      | LG Vein     |                      | HG Vein     |                      |
|--------------|-------------|----------------------|-------------|----------------------|-------------|----------------------|-------------|----------------------|
|              | No. of Data | Mean BD <sup>1</sup> |
| Oxide        | 8           | 2.2                  | Assumed     | 2.2                  | Assumed     | 2.3                  | Assumed     | 2.4                  |
| Transitional | 8           | 2.3                  | 2           | 2.3                  | Assumed     | 2.4                  | 2           | 2.5                  |
| Fresh        | 50          | 2.4                  | 7           | 2.4                  | 4           | 2.5                  | 5           | 2.6                  |

1. Average dry in-situ bulk density units are t/m<sup>3</sup>

The Sulfuro deposit results were used for all deposits in the La Paloma region. As the current bulk density database is still being improved, there are some areas that do not contain samples and assumed values have been used. All bulk density measurements were completed used the paraffin coated, water-immersion (Archimedean) technique on dried drill core sample billets.

### Mineral Resource Estimates

Coffey Mining has estimated mineral resources for Don Nicolás with data available prior to the 15th of August 2011. The Measured and Indicated mineral resource estimates focus on seven separate vein systems within two separate areas of the Don Nicolás property:

- a. La Paloma area: Sulfuro and Arco Iris deposits.
- b. Martinetas area: Cerro Oro, Lucia, Calafate, Coyote, and Armadillo deposits.

The Don Nicolás FS is based on Measured and Indicated mineral resources for only four of these deposits, as follows:

- a. Sulfuro (La Paloma area).
- b. Cerro Oro, Coyote, and Armadillo (Martinetas area).

- c. Grade estimation of the Don Nicolás mineral resource has been carried out by Coffey Mining using a combination of Ordinary Kriging (OK) and Multiple Indicator Kriging (MIK) as follows:

**Table 33 Summary of Estimation Methods**

| <b>Area</b> | <b>Deposit</b> | <b>Estimation Method</b> | <b>Elements Estimated</b>     |
|-------------|----------------|--------------------------|-------------------------------|
| La Paloma   | Sulfuro        | OK                       | Au, Ag, As, Cu, Sb            |
|             | Arco Iris      | OK                       | Au, Ag                        |
| Martinetas  | Cerro Oro      | MIK/OK                   | Au (MIK), Ag (whole block OK) |
|             | Coyote         | MIK/OK                   | Au (MIK), Ag (whole block OK) |
|             | Lucia          | MIK/OK                   | Au(MIK), Ag (whole block OK)  |
|             | Calafate       | OK (Accumulation)        | Au, Ag                        |
|             | Armadillo      | OK                       | Au, Ag                        |

Geological modelling is based on grade information, geological observations, and oxidation and mineralized domain boundaries. The resource estimation is constrained using wireframes interpreted and constructed by Coffey Mining.

Statistical analysis was carried out on the composited data for each unit to determine the need for appropriate cutting levels for erratic high grade values for gold and silver and the deleterious elements, arsenic, copper and antimony.

A total of 86 dry in-situ bulk density readings were taken from various diamond holes drilled within the Sulfuro deposit. Seventy-five (75) dry in-situ bulk density readings were taken from various diamond holes drilled within the Martinetas central zone.

Table 34 provides a summary of Measured and Indicated mineral resources estimated for all deposits found on the Don Nicolás property.

Note that the FS is based only on four mineral resource areas; Sulfuro, Cerro Oro, Coyote and Armadillo deposits.

Additional mineral resources in the Inferred category are listed in Table 35.

**Table 34 2011 Don Nicolás Measured and Indicated Mineral Resources**

|                    | Deposit   | Cutoff Au,<br>g/t | Measured Mineral Resource |       |       |       |       | Indicated Mineral Resource |       |       |       |       |
|--------------------|-----------|-------------------|---------------------------|-------|-------|-------|-------|----------------------------|-------|-------|-------|-------|
|                    |           |                   | kt                        | Au    |       | Ag    |       | kt                         | Au    |       | Ag    |       |
|                    |           |                   |                           | (g/t) | (kOz) | (g/t) | (kOz) |                            | (g/t) | (kOz) | (g/t) | (kOz) |
| La Paloma          | Sulfuro   | 0.3               | 270.9                     | 7.2   | 62.5  | 24.0  | 208.9 | 921.4                      | 3.7   | 109.3 | 13.8  | 408.4 |
|                    |           | 1.6               | 168.8                     | 10.8  | 58.7  | 33.4  | 181.3 | 329.6                      | 8.4   | 88.6  | 25.4  | 268.8 |
|                    | Arco Iris | 0.3               |                           |       |       |       |       | 36.8                       | 1.7   | 2.1   | 2.2   | 2.6   |
|                    |           | 1.6               |                           |       |       |       |       | 18.0                       | 2.4   | 1.4   | 2.8   | 1.6   |
| Martinetas         | Cerro Oro | 0.3               |                           |       |       |       |       | 2,528.5                    | 1.1   | 85.6  | 3.9   | 316.5 |
|                    |           | 1.6               |                           |       |       |       |       | 378.3                      | 3.3   | 39.9  | 6.1   | 73.8  |
|                    | Lucia     | 0.3               |                           |       |       |       |       | 94.1                       | 1.3   | 4.1   | 0.8   | 2.3   |
|                    |           | 1.6               |                           |       |       |       |       | 18.3                       | 3.9   | 2.3   | 0.7   | 0.4   |
|                    | Coyote    | 0.3               |                           |       |       |       |       | 1,603.4                    | 1.9   | 99.7  | 3.5   | 179.5 |
|                    |           | 1.6               |                           |       |       |       |       | 440.8                      | 5.1   | 72.4  | 5.8   | 82.5  |
|                    | Calafate  | 0.3               |                           |       |       |       |       | 4.0                        | 3.2   | 0.4   | 10.8  | 1.4   |
|                    |           | 1.6               |                           |       |       |       |       | 4.0                        | 3.2   | 0.4   | 10.8  | 1.4   |
|                    | Armadillo | 0.3               |                           |       |       |       |       | 179.0                      | 3.1   | 17.6  | 4.7   | 27.0  |
|                    |           | 1.6               |                           |       |       |       |       | 102.7                      | 4.9   | 16.1  | 6.2   | 20.5  |
| Total All Deposits |           | 0.3               | 270.9                     | 7.2   | 62.5  | 24.0  | 208.9 | 5,367.1                    | 1.8   | 318.9 | 5.4   | 937.5 |
|                    |           | 1.6               | 168.8                     | 10.8  | 58.7  | 33.4  | 181.3 | 1,291.7                    | 5.3   | 221.1 | 10.8  | 449.0 |

**Table 35 2011 Don Nicolás Inferred Mineral Resources**

|           |            |                | Inferred Mineral Resource |       |       |       |       |       |
|-----------|------------|----------------|---------------------------|-------|-------|-------|-------|-------|
|           | Deposit    | Cutoff Au, g/t | kt                        | Au    |       | Ag    |       |       |
|           |            |                |                           | (g/t) | (kOz) | (g/t) | (kOz) |       |
| La Paloma | Sulfuro    | 0.3            | 535.0                     | 1.2   | 20.6  | 5.4   | 92.5  |       |
|           |            | 1.6            | 47.3                      | 7.0   | 10.7  | 18.7  | 28.4  |       |
|           | Ramal      | 0.3            | 134.8                     | 1.9   | 8.3   |       |       |       |
|           |            | 1.6            | 58.5                      | 2.7   | 5.1   |       |       |       |
|           | Rocio      | 0.3            | 89.2                      | 4.1   | 11.9  |       |       |       |
|           |            | 1.6            | 89.2                      | 4.1   | 11.9  |       |       |       |
|           | Arco Iris  | 0.3            | 262.4                     | 2.3   | 19.4  | 2.1   | 17.5  |       |
|           |            | 1.6            | 164.0                     | 3.0   | 15.7  | 2.5   | 13.2  |       |
|           | Martinetas | Cerro Oro      | 0.3                       | 995.8 | 1.0   | 32.9  | 4.1   | 130.7 |
|           |            |                | 1.6                       | 144.4 | 3.4   | 15.9  | 7.0   | 32.7  |
| Lucia     |            | 0.3            | 225.5                     | 1.1   | 7.9   | 2.1   | 15.3  |       |
|           |            | 1.6            | 38.1                      | 3.4   | 4.1   | 4.4   | 5.4   |       |
| Coyote    |            | 0.3            | 612.6                     | 1.6   | 30.5  | 3.1   | 60.9  |       |
|           |            | 1.6            | 132.6                     | 4.7   | 20.2  | 5.6   | 23.8  |       |
| Calafate  |            | 0.3            | 3.4                       | 5.8   | 0.6   | 11.7  | 1.3   |       |
|           |            | 1.6            | 3.4                       | 5.8   | 0.6   | 11.7  | 1.3   |       |
| Armadillo |            | 0.3            | 209.7                     | 1.9   | 12.6  | 4.2   | 28.4  |       |
|           |            | 1.6            | 66.0                      | 5.0   | 10.6  | 6.9   | 14.6  |       |
| Total     |            | 0.3            | 3,068.5                   | 1.5   | 144.8 | 3.5   | 346.6 |       |
|           |            | 1.6            | 743.5                     | 4.0   | 94.9  | 5.0   | 119.4 |       |

In 2012, the Company completed a resource drilling programme at the Martinetas vein field. In November 2012 the Company announced an upgraded resource estimate and supersedes the previous resource estimate release in 2011. The 2012 resource drilling added to the database 173 new drill holes and 16 extension drill holes with a combined total of 18,640 meters. Estimation techniques and parameters have not altered and the same 0.3g/t lower gold cut-off grade has been applied. The 2012 Martinetas drill programme expanded the gold-silver quartz vein envelopes surrounding the three main sub-parallel vein zones, Cerro Oro, Coyote and Lucia demonstrating high potential for mining these zones from one large open pit. These vein systems are open-ended to the south-west and at depth. Also at Martinetas, in September 2012 a new discovery was announced at Choique located only 1.6 km from the proposed Don Nicolás plant site. Whilst the resource, at this stage, is modest the setting along the flanks of a

rhyolite dome indicates excellent potential to expand this resource with further drilling. Measured and Indicated Resources have increased by 23% to 468,000 ounces of gold, an increase of 87,000 ounces compared to the resource published in 2011. Inferred Resource has increased 14% to 165,000 ounces of gold, an increase of 20,000 ounces. The increase in Measured and Indicated Resource is expected to extend the mine life of the Don Nicolás Project. In addition, a substantial increase in the low grade category provides the catalyst for completing a heap leach feasibility study in 2013.

The following table summarizes the 2012 Don Nicolás resource estimate.

**Table 36 2012 Don Nicolás Mineral Resources Update**

| District   | Deposit                               | Lower Au Cutoff (g/t)      | Measured + Indicated Resource |                |            |              |             | Inferred Resource |                |            |              |            |              |
|------------|---------------------------------------|----------------------------|-------------------------------|----------------|------------|--------------|-------------|-------------------|----------------|------------|--------------|------------|--------------|
|            |                                       |                            | Tonnes (kT)                   | Au (g/t)       | Au (kOz)   | Ag (g/t)     | Ag (kOz)    | Tonnes (kT)       | Au (g/t)       | Au (kOz)   | Ag (g/t)     | Ag (kOz)   |              |
| La Paloma  | Sulfuro <sup>1</sup>                  | 0.3                        | 1,192.3                       | 4.5            | 171.9      | 16.1         | 617.3       | 535.0             | 1.2            | 20.6       | 5.4          | 92.5       |              |
|            |                                       | 1.6                        | 498.4                         | 9.2            | 147.2      | 28.1         | 450.2       | 47.3              | 7.0            | 10.7       | 18.7         | 28.4       |              |
|            | Ramal Sulfuro <sup>3</sup>            | 0.3                        |                               |                |            |              |             | 134.8             | 1.9            | 8.3        |              |            |              |
|            |                                       | 1.6                        |                               |                |            |              |             | 58.5              | 2.7            | 5.1        |              |            |              |
|            | Rocio <sup>3</sup>                    | 0.3                        |                               |                |            |              |             | 89.2              | 4.1            | 11.9       |              |            |              |
|            |                                       | 1.6                        |                               |                |            |              |             | 89.2              | 4.1            | 11.9       |              |            |              |
|            | Arco Iris <sup>1</sup>                | 0.3                        | 36.8                          | 1.7            | 2.1        | 2.2          | 2.6         | 262.4             | 2.3            | 19.4       | 2.1          | 17.5       |              |
|            |                                       | 1.6                        | 18.0                          | 2.4            | 1.4        | 2.8          | 1.6         | 164.0             | 3.0            | 15.7       | 2.5          | 13.2       |              |
| Martinetas | Cerro Oro, Coyote, Lucia <sup>2</sup> | 0.3                        | 7,002.0                       | 1.2            | 270.6      | 3.6          | 812.9       | 2,416.8           | 1.1            | 83.4       | 3.8          | 293.1      |              |
|            |                                       | 1.6                        | 1,090.8                       | 3.7            | 131.0      | 5.8          | 201.4       | 308.7             | 3.6            | 35.7       | 6.3          | 62.6       |              |
|            | Armadillo <sup>1</sup>                | 0.3                        | 271.7                         | 2.2            | 19.2       | 3.8          | 33.1        | 186.9             | 1.4            | 8.3        | 3.3          | 19.7       |              |
|            |                                       | 1.6                        | 111.8                         | 4.6            | 16.4       | 5.9          | 21.0        | 45.7              | 4.1            | 6.1        | 5.7          | 8.4        |              |
|            | Choique <sup>1</sup>                  | 0.3                        | 84.3                          | 1.6            | 4.4        | 17.7         | 48.0        | 389.2             | 1.0            | 11.9       | 6.6          | 82.6       |              |
|            |                                       | 1.6                        | 40.5                          | 2.9            | 3.8        | 17.9         | 23.2        | 85.0              | 2.8            | 7.7        | 9.3          | 25.5       |              |
|            | Calafate <sup>1</sup>                 | 0.3                        | 4.0                           | 3.2            | 0.4        | 10.8         | 1.4         | 3.4               | 5.8            | 0.6        | 11.7         | 1.3        |              |
|            |                                       | 1.6                        | 4.0                           | 3.2            | 0.4        | 10.8         | 1.4         | 3.4               | 5.8            | 0.6        | 11.7         | 1.3        |              |
|            | <b>TOTAL</b>                          | <b>All Resource</b>        | <b>0.3</b>                    | <b>8,591.1</b> | <b>1.7</b> | <b>468.6</b> | <b>5.5</b>  | <b>1,515.3</b>    | <b>4,017.8</b> | <b>1.3</b> | <b>164.5</b> | <b>3.9</b> | <b>505.3</b> |
|            |                                       | <b>Plus 1.6g/t Cut-off</b> | <b>1.6</b>                    | <b>1,763.5</b> | <b>5.3</b> | <b>300.2</b> | <b>12.3</b> | <b>698.9</b>      | <b>713.4</b>   | <b>4.2</b> | <b>96.0</b>  | <b>6.8</b> | <b>155.2</b> |

1 – Ordinary Kriged Estimate

2 – Multiple Indicator Kriged Estimate -with a Change of Support to an SMU block (5mE x 2mN x 2.5mRL)

3 - Rocio and Ramal were not estimated by Coffey Mining. This Inferred Resource (gold only) is as previously reported by Hidefield in 2009 as estimated by Runge. Ramal was estimated by Runge but not included in the Hidefield estimate.

The resource estimation was prepared by Coffey Mining. The methodology applied to each vein system was appropriate for the particular mineralized deposit. Ordinary Kriging (OK) was used

for the La Paloma deposits, as well as Armadillo, Choique and Calafate at Martinetas. No mine dilution was included in the resource estimate for these deposits. For Coyote, Cerro Oro and Lucia, the Multiple Indicator Kriging (MIK) method was considered more appropriate. This method includes dilution for an assumed mining scenario and Selective Mining Unit (SMU).

### Mineral Reserve Estimates

Table 37 sets out the Proven and Probable Mineral Reserves for the Don Nicolás Project as of December 2011 based on metal prices of US\$1,100/oz Au and US\$25/oz Ag.

*Table 37 Mineral Reserve Summary, Don Nicolás Project*

| Deposit/Category |          | Tonnes           | Au g/t      | Ag g/t       |
|------------------|----------|------------------|-------------|--------------|
| La Paloma        | Proven   | 137,624          | 10.74       | 33.55        |
|                  | Portable | 257,406          | 4.96        | 14.84        |
|                  | Total    | 395,030          | 6.97        | 21.36        |
| Martinetas       | Proven   | -                | -           | -            |
|                  | Portable | 680,803          | 4.30        | 5.07         |
|                  | Total    | 680,803          | 4.30        | 5.07         |
| Armadillo        | Proven   | -                | -           | -            |
|                  | Portable | 128,275          | 3.34        | 4.60         |
|                  | Total    | 128,275          | 3.34        | 4.60         |
| S/Totals         | Proven   | 137,624          | 10.74       | 33.55        |
|                  | Probable | 1,066,484        | 4.34        | 7.37         |
| <b>Total</b>     |          | <b>1,204,108</b> | <b>5.08</b> | <b>10.36</b> |

Note:

1. Mineral Reserves are associated with an ore/waste strip ratio of 11.9/1. In this ratio, waste includes 2.1 Mt of LG mineralization between 0.3 and 1.5 g/t.
2. Mineral Reserves are included in the Mineral Resources.

### Open Pit Mining

All mining considered in the Feasibility Study will be by open cut methods.

Location of the mining areas is shown in the following figures:

Figure 42 Martinetas Mining Area

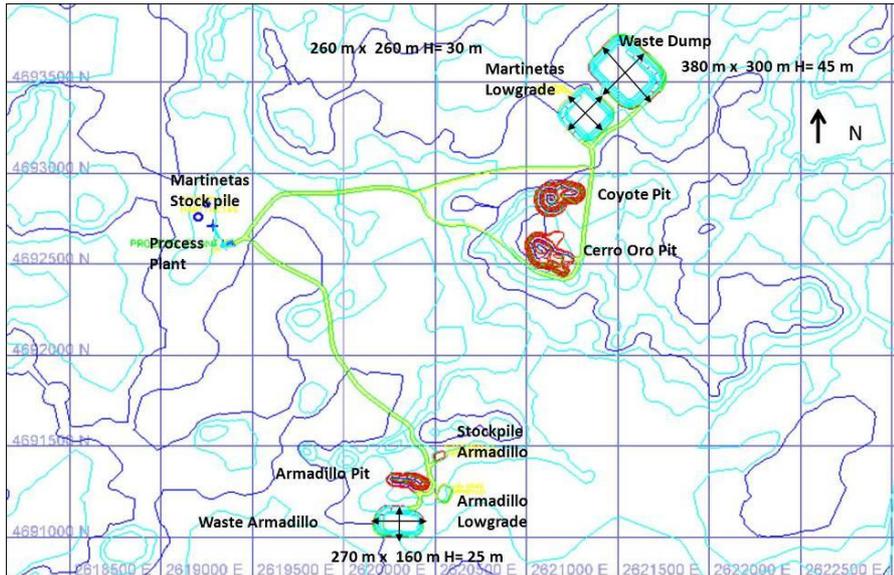
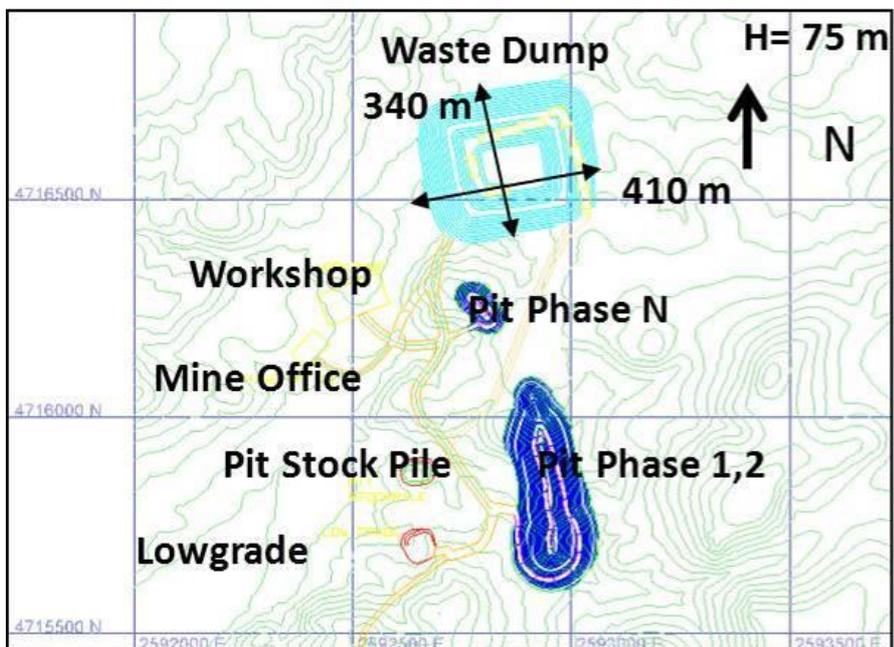


Figure 43 La Paloma Mining Area



Mineable pit phases were designed based on optimized nested pit shell guidance, gold grade, strip ratio and access. Ramps in final walls have a design width of 10 m and a gradient of 12%. A nominal minimum mining width of 30 m was used for phase design.

**Table 38 Overall Slope Recommendations, Golder**

| Zone       | Overall Slope Angle |
|------------|---------------------|
| La Paloma  | 48°                 |
| Martinetas | 53°                 |
| Armadillo  | 45°                 |

**Table 39 Phase Mining Sequence**

| Phase           | Ore             |             |             | Waste           | Contained<br>Equiv.Gold | Stripping<br>Ratio | Total<br>Tonnage/<br>k oz<br>Au eq) |
|-----------------|-----------------|-------------|-------------|-----------------|-------------------------|--------------------|-------------------------------------|
|                 | Tonnage<br>(kt) | Au<br>(g/t) | Ag<br>(g/t) | Tonnage<br>(kt) | Oz'000*                 |                    |                                     |
| La Paloma Sur 1 | 62              | 4.99        | 12.18       | 723             | 10,540                  | 11.6               | 74.5                                |
| La Paloma Sur 2 | 301             | 7.68        | 24.63       | 6,408           | 79,710                  | 21.3               | 84.2                                |
| La Paloma Norte | 32              | 4.17        | 8.40        | 382             | 4,490                   | 11.9               | 92.3                                |
| Coyote          | 422             | 5.04        | 5.61        | 2,176           | 70,110                  | 5.2                | 37.1                                |
| Cerro Oro       | 259             | 3.10        | 4.18        | 1,607           | 26,580                  | 6.2                | 70.2                                |
| Armadillo       | 128             | 3.34        | 4.60        | 702             | 14,190                  | 5.5                | 58.5                                |

\*Ag/Au ratio 41:1

Note: COG for La Paloma was 1.60 g/t Au and for the other sectors was 1.50 g/t Au.

**Table 40 Summary Mine Production Plan by Year**

| Period       | Ore<br>>1.5 g/t Au |              |               | LG<br>0.3-1.5 g/t Au |              |              | Waste<br>Moved | Total Material<br>Moved |
|--------------|--------------------|--------------|---------------|----------------------|--------------|--------------|----------------|-------------------------|
|              | kt                 | Au<br>g/t    | Ag<br>g/t     | kt                   | Au<br>g/t    | Ag<br>g/t    | kt             | Kt                      |
| 1 (PP)       | 42                 | 4.870        | 5.931         | 68                   | 0.735        | 1.886        | 713            | <b>823</b>              |
| 2            | 303                | 5.089        | 7.464         | 524                  | 0.738        | 2.965        | 3,850          | <b>4,677</b>            |
| 3            | 372                | 6.254        | 16.653        | 304                  | 0.812        | 4.031        | 4,511          | <b>5,187</b>            |
| 4            | 348                | 4.501        | 8.782         | 1,132                | 0.683        | 2.862        | 2,279          | <b>3,759</b>            |
| 5            | 140                | 3.406        | 5.176         | 120                  | 0.643        | 4.507        | 643            | <b>903</b>              |
| <b>Total</b> | <b>1,204</b>       | <b>5.076</b> | <b>10.362</b> | <b>2,149</b>         | <b>0.714</b> | <b>3.114</b> | <b>11,997</b>  | <b>15,350</b>           |

The FS has assumed that an owner's fleet of equipment will be used in the Don Nicolás mine operations.

The Don Nicolás mine design specifies 5-m benches and has adequate phase geometry to achieve the required productions. The design calls for annual mill throughput of 350,000 t of ore. Mining will advance simultaneously in two different pits with two to three pit phases generally active at any time. The vertical advance rate of the pits will be relatively low, with a maximum of eleven 5-m benches per phase per year.

The Martinetas deposits (Cerro Oro, Coyote, and Armadillo) lie close to the main process plant while the La Paloma deposit (principally the Sulfuro vein) is located some 50 km to the northwest. Mine equipment units have been estimated on the basis of a common operating fleet shared between the different operating areas. The drilling and loading equipment will therefore combine high productivity, mobility, and flexibility at relatively low cost, and will be sized for efficient mine selectivity.

The required yearly equipment fleet is shown in Table 41.

**Table 41 Mine Equipment Requirements by Year**

| Area            | Unit                          | Y01 | Y02 | Y03 | Y04 | Y05 |
|-----------------|-------------------------------|-----|-----|-----|-----|-----|
| Load Fleet      | FEL CAT 966                   | 1   | 2   | 2   | 2   | 1   |
|                 | Excavator CAT 336DL           | 1   | 2   | 2   | 2   | 1   |
| Hauling Fleet   | Haul Truck M.Benz Actros 3344 | 4   | 8   | 10  | 7   | 3   |
| Drill Fleet     | Diesel Drill Sandvik DX800    | 1   | 2   | 2   | 2   | 1   |
| Auxiliary       |                               |     |     |     |     |     |
|                 | Bulldozer D6                  | -   | 1   | 1   | 1   | 1   |
|                 | Bulldozer D8                  | 1   | 1   | 1   | 1   | 1   |
|                 | Grader 140 M                  | 1   | 1   | 1   | 1   | 1   |
|                 | Water Truck                   | 1   | 1   | 1   | 1   | 1   |
| Auxiliary Fleet |                               | 3   | 4   | 4   | 4   | 4   |
| Support         |                               |     |     |     |     |     |
|                 | Backhoe/Hammer                | 1   | 1   | 1   | 1   | 1   |
|                 | Fuel Truck                    | 1   | 1   | 1   | 1   | 1   |
|                 | Support Truck                 | 1   | 1   | 1   | 1   | 1   |
|                 | Lowboy Truck                  | 1   | 1   | 1   | 1   | 1   |
|                 | Lightning Plant               | 3   | 6   | 6   | 6   | 3   |
| Support Fleet   |                               | 7   | 10  | 10  | 10  | 7   |

### Metallurgical Testing and Mineral Processing

A number of metallurgical testwork programs have been conducted on sample material from the La Paloma and Las Martinetas deposits. The testwork performed from 2007 onwards will be reviewed on the basis that it represents testwork programs conducted on representative sample material from the deposit.

**Table 42**      *Historical Test Work Programs and Reports*

| <b>Document or Test Program</b> | <b>Facility or Laboratory</b> | <b>Test Programs Conducted</b>  | <b>Date of Publication</b> |
|---------------------------------|-------------------------------|---|----------------------------|
| Report A10681                   | Ammtec                        | crushing and grinding parameters, head assays, mineralogy, flotation and leaching tests | June 2007                  |
| Report A10830                   | Ammtec                        | assays  | July 2007                  |
| Report A12879                   | Ammtec                        | gravity concentration and leaching tests  | September 2010             |
| Report A13483-A                 | ALS Ammtec                    | grinding parameters, assays and leaching tests  | August 2011                |
| Report A13483-B                 | ALS Ammtec                    | gravity concentration and leaching tests and cyanide detoxification tests               | September 2011             |
| Report A13097-A                 | ALS Ammtec                    | gravity concentration and leaching tests  | September 2011             |
| Report A13097-B                 | ALS Ammtec                    | gravity concentration and leaching tests  | October 2011               |
| Report A13097-C                 | ALS Ammtec                    | leaching and filtration tests   | October 2011               |
| Report S1828T-B                 | Outotec                       | thickener settling tests  | September 2011             |

The Crushing Work Index (CWi) testing was performed according to the Bond standardized procedures.

The sulphide samples were tested in duplicate and the CWi was found to vary between 7 and 20 kWh/t. The average CWi for sulfide samples was 11.4 kWh/t.

The oxide-sulphide samples were also tested in duplicate. The results from the tests showed discordance between duplicate values. No explanation is given nor were tests repeated. The CWi values ranged from 17.6 to 3.6 kWh/t with an average CWi for the oxide-sulphide samples of 8.0 kWh/t.

The specific gravity was also measured and was found to be 2.72.

The grinding testwork was to determine the BWi conducted on a sulphide sample using a closing screen size of 106 µm. The grinding circuit was designed using the BWi of 17.6 kWh/t.

Gravity concentration followed by leaching of the gravity tailings gravity tests were aimed to report any free gold and silver amenable to recovery by gravity separation. Leaching tests were performed on the gravity tailings.

From the metallurgical testing, the following recovery algorithm was derived that could be applied to each mining block.

**Table 43 Metallurgical Recovery Parameters**

| Deposit                |             | Parameters   |
|------------------------|-------------|--|
| La Paloma              | Oxides      | $\text{Rec Au} = 100 * (1 - (0.00072 \text{ Cu} + 0.0056 \text{ Sb} + 0.0305 \text{ Au} + 0.0066 \text{ Ag} + 0.1 \text{ S} + 0.015)) / \text{Au}$ |
|                        | Traditional | $\text{Rec Ag} = 100 * (1 - (0.0091 \text{ Cu} + 0.374 \text{ Ag} + 0.075)) / \text{Ag}$   |
|                        | Fresh       | $\text{Rec Au} = 100 * (1 - (0.00072 \text{ Cu} + 0.0056 \text{ Sb} + 0.0305 \text{ Au} + 0.0066 \text{ Ag} + 0.1 \text{ S} + 0.015)) / \text{Au}$ |
| Martinetas & Armadillo | Oxides      | $\text{Rec Au} = 100 * (1 - (0.025 \times \text{Au} + 0.075)) / \text{Au}$ . For <0.2 g/t assume a recovery of 40%.                                |
|                        | Traditional | $\text{Rec Ag} = 100 * (1 - (0.49 \times \text{Ag} + 0.115)) / \text{Ag}$ . For <0.3 g/t assume a recovery of 5%.                                  |
|                        | Fresh       | $\text{Rec Au} = 100 * (1 - (0.025 \times \text{Au} + 0.075)) / \text{Au}$ . For <0.2 g/t assume a recovery of 40%.                                |

The Don Nicolás processing facility will consist of the following unit operations:

- a. Two-stage crushing and screening.
- b. Fine Ore Bin Storage and Reclaim for Grinding.
- c. Ball Mill Grinding and Classification.
- d. Gravity Recovery Circuit.
- e. CIL Leaching.
- f. Carbon Handling and Treatment.
- g. Electrowinning and Smelting (gold refining).
- h. Tailings Thickening.
- i. Cyanide Detoxification.
- j. Thickened Tailings Deposition.
- k. Process Water Reclamation.

The simplified flowsheet is shown in Figure 44.



The process plant has been designed to treat gold-bearing material at the rate of 972 t/d, equivalent to 350,000 t/a. The major criteria used in the design are outlined in Table 44.

**Table 44 Major Design Criteria**

| <b>Criteria</b>                               | <b>Unit</b> | <b>Value</b> |
|---|-------------|--------------|
| Operating Year                                | d           | 360          |
| Crushing Circuit Utilization                  | %           | 60           |
| Grinding, CIL and Carbon Circuits Utilization | %           | 92           |
| Crushing Circuit Throughput Rate              | t/h         | 67.5         |
| Grinding and Leaching Process Rate            | t/h         | 44.0         |
| Ball Mill Feed Size, 80% Passing              | µm          | 6,500        |
| Ball Mill Product Size, 80% Passing           | µm          | 75           |
| Ball Mill Circulating Load                    | %           | 300          |
| Bond Ball Mill Work Index, design             | kWh/t       | 17.6         |
| Bond Abrasion Index, design                   | g           | 0.50         |
| Specific Gravity Ore                          |             | 2.70         |
| Moisture Content Ore                          | %           | 2.0          |
| Leach Circuit Retention Time                  | h           | 36           |
| Head Grade, Design                            | Au, g/t     | 6.27         |
| Head Grade, Design                            | Ag, g/t     | 16.7         |
| Anticipated Recovery, Design                  | Au, %       | 94.4         |
| Anticipated Recovery, Design                  | Ag, %       | 48.5         |

The process flowsheet follows conventional crushing and ball mill grinding and cyclone classification. The gravity concentration circuit in the grinding circuit includes the recovery of coarse and liberated gold using a centrifugal concentrator followed by the tabling of the gravity-gold product to up-grade the concentrate prior to smelting. The ball mill cyclone overflow will be treated in an 8-stage CIL circuit to recover gold from the feed material using activated carbon. Loaded carbon will be transferred from the head CIL tank to the elution circuit on a daily basis, while regenerated and/or fresh carbon will be brought from the carbon plant for adding to the CIL circuit. The loaded carbon will initially be acid-washed to remove calcium and other impurities, followed by the elution, or stripping, process. The gold will be recovered by electrowinning. The eluted carbon will be regenerated in a kiln prior to screening for the removal of carbon fines. The regenerated carbon will subsequently be returned to the adsorption circuit. The CIL tailings will be discharged to the tailings thickener. Tailings thickener underflow will be pumped to the cyanide detoxification tank where cyanide levels

will be chemically reduced to acceptable environmental levels prior to disposal to the tailings storage pond. This thickening stage will allow for greater control of water management and enable some of the cyanide present in the water to be re-circulated for re-use in the plant.

Process water will be recycled from the tailings thickener overflow, and this will be supplemented with process water recovered from the tailings dam. Fresh water will be used for gland service, reagent preparation and gravity circuit fluidisation, as well as for water make-up purposes, as required.

The Tailings Storage Facility (TSF) impoundment area will be contained by the construction of four earthwork dams which will be constructed to an initial elevation of 139 m asl (Phase 1). These dams will then be subsequently raised to a final height of 144 m asl during a second construction period (Phase 2).

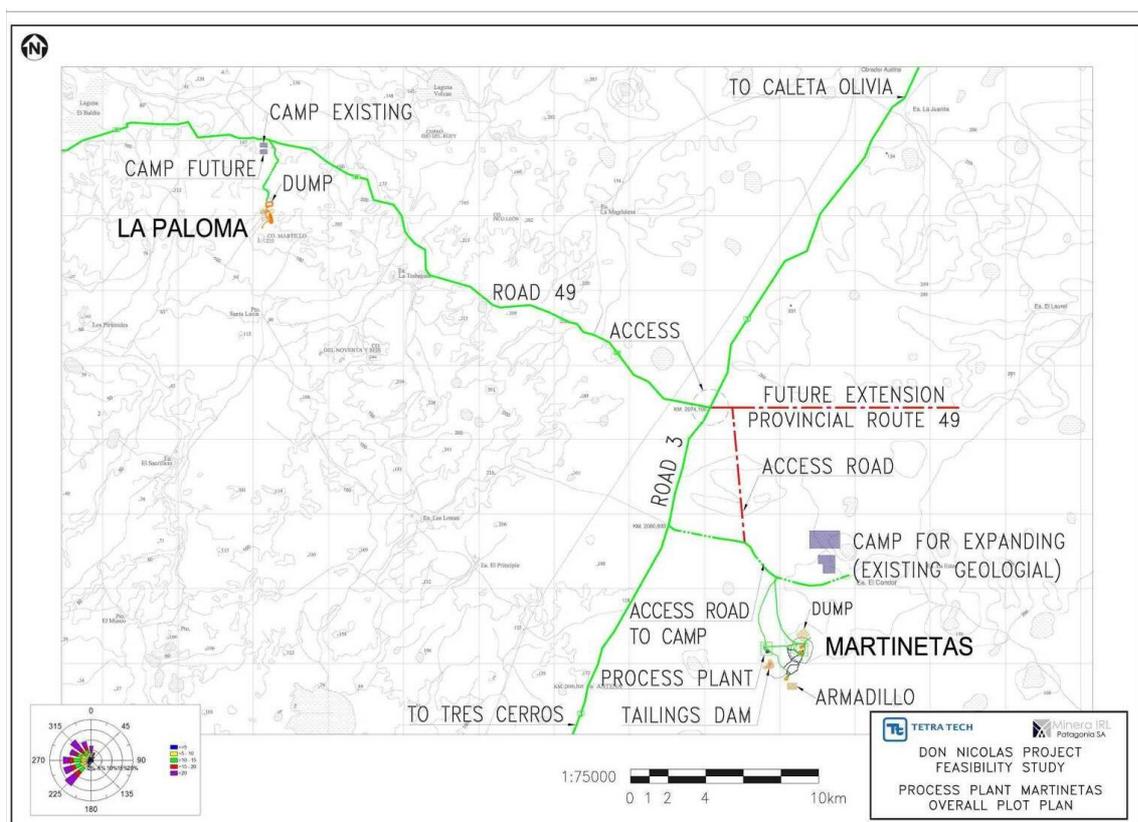
All dams will be constructed of rock fill material obtained from suitable waste rock from the Martinetas pits and will be constructed directly on top of the in-situ superficial deposits. All dams will be built with a slope angle of 1(v):2(h) on both the upstream and downstream sides and have a crest width of 8 m.

A low permeability barrier will be incorporated into the tailings storage basin. This will comprise a 1-mm smooth surface HDPE geomembrane for the majority of the lining works, including the basal area and natural slopes of the TSF basin. The upstream face of the tailings dams will be lined with a 1-mm HDPE geomembrane textured on both sides.

### **Infrastructure**

The following figure illustrates location of the principal infrastructure of the Don Nicolás Project:

**Figure 45 Don Nicolás Infrastructure**



Over the life of the Don Nicolás Project, as currently defined, some 395,000 t of ore will be transported from the La Paloma mining area to the central plant at Martinetas, a distance, by road, of approximately 50 km.

The proposed routing from La Paloma will follow an existing secondary highway (Ruta 49) for some 33 km to the junction with the north-south national highway, Ruta No. 3. At this point, the 27-t trucks carrying the La Paloma ore will cross Ruta No. 3, continue eastwards for approximately 1 km before turning south towards the Martinetas plant area, an additional approximate 16 km distant. The initial section of this final segment will require new construction while other sections of the 50 km distance will only require upgrading of existing roads. Design criteria for the new and upgraded sections will be consistent with a contractor style of construction and the low traffic demand over the limited mine life.

A gas pipeline running parallel to National Route No. 3 transects the Project area and there are proposals to eventual extending power grid access from the main line that currently runs from Puerto Deseado to Caleta Olivia to the north-west. However, in the short term, power requirements for the mining project at Don Nicolás will be provided by diesel generators

operated by a third-party supplier, such as Sullair or Atlas Copco. The power station will consist of four 1.4 MW diesel generators, with one unit on standby. The power distribution system will be at 6.6kV voltage extending to each of the facilities where secondary transformers will be installed as required.

To characterize the groundwater systems in the La Paloma and Martinetas areas, 26 exploratory wells were drilled and evaluated.

Analysis of pumping tests indicates that groundwater is recoverable from the aquifers at the La Paloma and Martinetas areas through strategically located wells. At La Paloma, wells will supply water for mine support, dust control and general usage. At Martinetas, wells will supply raw water for the mill and dust control; some wells will be strategically located to support pit dewatering. Wells at El Cóndor camp will provide water for personal and operational use. Pending final water balance estimates, six wells are anticipated for water supply and/or dewatering support at Martinetas and the camp area, as detailed in the table below:

**Table 45 Initial Water Supply Well Requirements**

| Area       | Wells | Depth (m) | Diameter (mm) | Production (m <sup>3</sup> /h) | Total Production (m <sup>3</sup> /d) |
|------------|-------|-----------|---------------|--------------------------------|--------------------------------------|
| Martinetas | 3     | 150       | 150           | 6                              | 1,150                                |
| Armadillo  | 2     | 150       | 150           | 15                             |                                      |
| Camp       | 1     | 60        | 150           | 1 - 11                         | 90                                   |

The permanent mine buildings will be designed and constructed by local Argentine contractors and construction will be programmed so that these buildings are erected as early as possible to allow their use during construction.

The main operations camp with capacity for 130 people will be located immediately to the north of the existing El Cóndor exploration camp; a smaller 40-man camp will be located at La Paloma mine site for mine operations personnel. The camp facilities will be provided with a kitchen, laundry and a health clinic at both camp sites.

Communication at site is currently provided by satellite link. Accommodation and office facilities with domestic power and water services are available at the El Cóndor estancia which has served as the main Don Nicolás exploration camp for several years.

The Workshop/Warehouse (240 m<sup>2</sup>) will house an electrical workshop, offices and storage space for maintenance items. The owner's Truckshop and adjacent maintenance areas (864 m<sup>2</sup> combined) will have capacity for two truck bays, single light vehicle bay and oil lubricant storage area. The Administration Building (312 m<sup>2</sup>) will be a single storey building and will

include general areas for engineering, geology and administration personnel plus individual offices for management personnel. The combined assay laboratory and change house building (160 m<sup>2</sup>) will house the assay laboratory, assay office, metallurgists' offices, separate washrooms for male and female personnel, and a storage room for laboratory supplies.

### **Environmental**

Vector Argentina S.A. (now Ausenco Vector) carried out the baseline studies for the Project.

The baseline study was carried out during two separate periods: the initial study was done between 2007 and 2008 during which a regional analysis was carried out, and a detailed complementary baseline study has been carried out starting in 2010.

Both campaigns have addressed the following disciplines: Physical Aspects - Geology and Geomorphology, Climate, Air Quality, Soil, Hydrology, Maximum Storm (flooding) Events, Hydrogeology, Water Quality, Soil Usage, Seismology; Biological Aspects - Flora, Fauna, Limnology, Ecosystem Characterization; Socioeconomic and Cultural Aspects - Socioeconomic Report, Archaeology and Paleontology, Protected Natural Areas, Opinion Study, Vehicular Traffic. The following disciplines are still being developed: Particulate Matter Modeling, Cost-Benefit, Landscape, and the characterization of the Acid Rock Drainage (ARD) Potential.

Studies on each discipline were carried out by means of field surveys, laboratory assessments, and office preparation of the corresponding reports and maps according to methodologies appropriate for compliance with Argentine regulations.

An Environmental Impact Assessment (EIA) was submitted in May 2012 to the Santa Cruz, Argentina, provincial authorities. In October 2012, The EIA was approved, and the Development Permit granted for the Don Nicolas Project by the Santa Cruz, Argentina, provincial authorities

### **Capital and Operating Costs**

The following is a summary of the initial and sustaining capital cost estimates for the Don Nicolás Gold Project:

**Table 46 Capital Cost Summary, Life-Of Mine (LOM)**

| Area/WBS                      | Initial<br>Capital Cost<br>US\$k | LOM Sustaining<br>Capital Cost<br>US\$k |
|-------------------------------|----------------------------------|---|
| Direct Costs                  |                                  |   |
| • Mine Equipment & Facilities | \$4,983                          | \$3,056                                 |
| • Process Plant               | \$26,246                         | \$0                                     |
| • Tailings Storage Facility   | \$2,289                          | \$1,239                                 |
| • Water Supply                | \$976                            | \$872                                   |
| • Access Roads                | \$755                            | \$0                                     |
| • Other Infrastructure        | 3291                             | \$846                                   |
| <b>Sub-Total Direct Costs</b> | <b>\$38,540</b>                  | <b>\$6,013</b>                          |
| Indirect Costs                |                                  |   |
| • EPCM                        | \$3,258                          |   |
| • Freight                     | \$1,400                          |   |
| • Other                       | \$1,025                          | \$582                                   |
| <b>Sub-Total Indirects</b>    | <b>\$5,683</b>                   | <b>\$582</b>                            |
| Owner's Cost                  |                                  |   |
| • Owner's Cost                | \$4,521                          |   |
| • Pre-Production Mining       | \$2,359                          |   |
| <b>Sub-Total Owner's Cost</b> | <b>\$6,880</b>                   | <b>\$0</b>                              |
| Contingency, 10%              | \$4,222                          | \$660                                   |
| <b>Total Project Cost</b>     | <b>\$55,526</b>                  | <b>\$7,255</b>                          |

The summary LOM operating cost estimates are as follows:

**Table 47 LOM Operating Cost Summary**

|  | <b>LOM<br/>OPEX Costs<br/>US\$<b>k</b></b> | <b>US\$/t Processed</b> | <b>US\$/ oz.<br/>Au Recovered</b> |
|--|--|-------------------------|-----------------------------------|
| Mining   | \$41,561                                   | \$34.52                 | \$230                             |
| Processing   | \$38,100                                   | \$31.64                 | \$210                             |
| General & Administration                           | \$16,456                                   | \$13.67                 | \$91                              |
| Ore Transportation                                 | \$3,220                                    | \$2.67                  | \$18                              |
| Total Site Operating Cost                          | \$99,337                                   | \$82.50                 | \$549                             |
| Off Site Costs                                     | \$951                                      | \$0.79                  | \$5                               |
| Royalties  | \$9,085                                    | \$7.54                  | \$50                              |
| Total Cash Cost                                    | \$109,373                                  | \$90.83                 | \$604                             |
| Silver Credit                                      | \$4,732                                    | \$3.93                  | \$26                              |
| <b>Total Production Cost<br/>(after Ag Credit)</b> | <b>\$104,641</b>                           | <b>\$86.9</b>           | <b>\$578</b>                      |

The Don Nicolás Project will employ over people 273 people in the first year of production, 302 in the second year, and an average of 240 for the remaining 1.5 years of the mine life.

The operations and maintenance personnel will reside in a site camp facility mainly working on two shifts, 12-h/d, and on a rotation of days on by days off.

Manpower loadings include a 12.5 factor to account for statutory holidays, vacation, sick leave and other time off.

Table 48 summarizes the manpower requirements in the second production year (four crews).

**Table 48**      *Manpower Requirements, Production Year 02*

| <b>Area</b>                    | <b>Manpower<br/>Production Y02</b> |
|--------------------------------|------------------------------------|
| Mine Operations                | 85                                 |
| Mine Support                   | 25                                 |
| Mine Maintenance               | 37                                 |
| Mine Supervision               | 29                                 |
| Process Plant, all departments | 54                                 |
| General & Administration       | 54                                 |
| Ore Transport                  | 18                                 |
| <b>Total Y02</b>               | <b>302</b>                         |

### **Financial Analysis**

A financial analysis of the Don Nicolás Project was undertaken using the discounted cash flow analysis approach. Cash flows were projected for LOM, which includes construction, operation and closure phases. The cash inflows were based on projected revenues for the LOM. The projected cash outflows, such as capital costs, operating costs and taxes; were subtracted from the cash inflows to estimate the net cash flows. A financial model (Model) was constructed on a quarterly basis to estimate the net cash flows over the LOM. The net cash flows were summarized on an annual basis. The cash inflows and outflows were assumed to be in constant fourth quarter 2011 US dollar basis.

The Don Nicolás Project was evaluated on a project stand-alone, 100% equity-financed basis. The financial results, including Net Present Value (NPV) and Internal Rate of Return (IRR) do not take past expenditures into account; these are considered to be sunk costs. The analysis was done on a forward-looking basis, with the exception of the sunk costs to date, which were taken into account for tax calculations.

**Table 49**      **Summary of Don Nicolás Financial Results**

| <b>Parameter</b>           | <b>Units</b> | <b>Base Gold Price<br/>US\$1,250/oz</b> | <b>Upside Gold Price<br/>US\$1,500/oz</b> |
|----------------------------|--------------|---|---|
| Net Cash Flow before tax   | US\$ M       | 58.7                                    | 101.6                                     |
| NPV @ 5% real (before tax) | US\$ M       | 44.7                                    | 82.2                                      |
| NPV @ 7% real (before tax) | US\$ M       | 39.9                                    | 75.6                                      |
| NPV @ 8% real (before tax) | US\$ M       | 37.6                                    | 72.4                                      |
| IRR (before tax)           | %            | 34.6%                                   | 56.3%                                     |
| Payback (before tax)       | Years        | 1.8                                     | 1.5                                       |
| Net Cash Flow (after tax)  | US\$ M       | 36.1                                    | 62.2                                      |
| NPV @ 5% real (after tax)  | US\$ M       | 25.1                                    | 48.0                                      |
| NPV @ 7% real (after tax)  | US\$ M       | 21.6                                    | 43.7                                      |
| NPV @ 10% real (after tax) | US\$ M       | 19.8                                    | 41.4                                      |
| IRR (after tax)            | %            | 22.8%                                   | 38.1%                                     |
| Payback (after tax)        | Years        | 2.0                                     | 1.7                                       |

*Note:*

1. *NPVs as at commencement of construction.*
2. *NPVs are based on mid-period discounting.*
3. *Before tax is before 5% export duty, 0.6% debit & 0.6% credit tax and 35% Income Taxes.*
4. *Post-tax includes tax deduction for prior expenditure and a deduction for allowable prior tax losses.*
5. *Payback starts from the commencement of production.*

Project financial returns demonstrate that the Project is financially robust.

**Table 50**      *Sensitivity of Financial Returns versus Gold Price*

| <b>Gold Price<br/>US\$/oz</b> | <b>Pre-tax<br/>NPV @ 5% real<br/>US\$ M</b> | <b>Pre-tax<br/>IRR (real)<br/>%</b> | <b>Pre-tax<br/>Payback<br/>(years)</b> | <b>Post-tax<br/>NPV @ 5% real<br/>US\$ M</b> | <b>Post-tax<br/>IRR (real)<br/>%</b> | <b>Post-tax<br/>Payback<br/>(years)</b> |
|-------------------------------|---|-------------------------------------|--|--|--------------------------------------|---|
| 900                           | (7.9)                                       | (1.0)%                              | 3.8                                    | (16.9)                                       | (8.3)%                               | 3.8                                     |
| 1,000                         | 7.1   | 10.1%                               | 2.4                                    | (2.9)  | 2.8%                                 | 3.4                                     |
| 1,100                         | 22.2  | 20.4%                               | 2.1                                    | 11.1   | 12.9%                                | 2.3                                     |
| 1,200                         | 37.2  | 30.0%                               | 1.9                                    | 20.5   | 19.6%                                | 2.1                                     |
| 1,300                         | 52.2  | 39.1%                               | 1.7                                    | 29.7   | 26.0%                                | 1.9                                     |
| 1,400                         | 67.2  | 47.9%                               | 1.6                                    | 38.9   | 32.1%                                | 1.8                                     |
| 1,500                         | 82.2  | 56.3%                               | 1.5                                    | 48.0   | 38.1%                                | 1.7                                     |
| 1,600                         | 97.3  | 64.6%                               | 1.3                                    | 57.1   | 43.8%                                | 1.6                                     |
| 1,700                         | 112.3                                       | 72.5%                               | 1.3                                    | 66.2   | 49.3%                                | 1.5                                     |

### **Project Implementation**

The EIA was submitted to the Santa Cruz authorities in May 2012. In October 2012, the Santa Cruz, Argentina, provincial authorities approved the EIA, and granted the Development Permit for the Don Nicolas Project.

The Company is expected to have financing in place during Q2 2013 and development is expected to take approximately 12 months with first production of gold targeted for Q2 2014.

## 4.4 Other Projects

### Patagonia Regional Exploration - Argentina

In addition to the Don Nicolás Project, the Company is advancing a number of exploration projects in Argentina's Patagonia region, including Escondido, Michelle and Chispas. Since Minera IRL's takeover of Hidefield in late 2009, the Company has carried out extensive airborne and ground geophysical surveys. During the second quarter 2011, a second heli-borne magnetic and radiometric geophysical survey totalling 5,374 line kilometres was completed over four project sites. This is in addition to the 4,400 line kilometres completed in 2010. The database generated by these programs is of exceptional quality and resolution and is of marked assistance to the geologists in identifying targets and fine tuning drill site locations.

### Escondido

The Escondido Project is contiguous to the Las Calandrias discovery first announced by Mariana Resources Limited in late 2009. Extension of the Las Calandrias mineralization into the Escondido property was confirmed by mapping and surface sampling conducted by Minera IRL, which identified a breccia zone in excess of 100 meters wide with anomalous gold and silver values over a strike length of some 700 meters. This was followed up by geophysical studies which identified structural and conductivity anomalies in several areas. The first phase of scout drilling was undertaken during the third quarter of 2010. Of the 11 holes drilled, 10 intersected gold mineralization demonstrating that a significant portion of the deposit lies within the Minera IRL Patagonia license.

On 15 September 2010, the results of the scout drilling were announced. Best intersections are:

- E-D10-02      **25.38 meters averaging 1.45 g/t gold and 9.62 g/t silver**, including 13.75 meters grading 2.39 g/t gold and 14.56 g/t silver
- E-D10-03      **100.0 meters averaging 1.19 g/t gold and 7.77 g/t silver**, including 48.00 meters grading 1.71 g/t gold and 9.18 g/t silver
- E-D10-07      **120.40 meters averaging 0.65 g/t gold and 5.70 g/t silver**, including 14.70 meters grading 1.30 g/t gold and 11.86 g/t silver and 8.40 meters grading 2.45 g/t gold and 8.31 g/t silver

In December 2010, the widely spaced second-pass scout drilling program was carried out. On 3 March 2011, results of the drill program were announced, which confirmed that mineralization extends over almost 700 meters of strike from the northern tenement boundary and remains open-ended toward both the east and south-east. Selected intercepts from the second pass Escondido scout drilling are tabulated below.

**Table 51 Escondido drilling results - March 2011**

| Hole Number | Intercept |       |        | Assay - g/t |       | Gold Equivalent - g/t* |
|-------------|-----------|-------|--------|-------------|-------|------------------------|
|             | From      | To    | Meters | Au          | Ag    |                        |
| E-D10-020   | 51.00     | 84.50 | 33.50  | 0.89        | 2.83  | 0.91                   |
| including   | 56.15     | 66.35 | 10.20  | 1.83        | 4.45  | 1.90                   |
| E-D10-022   | 10.00     | 62.45 | 52.45  | 0.64        | 9.51  | 0.80                   |
| including   | 26.00     | 29.45 | 3.45   | 3.53        | 26.37 | 3.97                   |
| E-D10-024   | 15.00     | 32.00 | 17.00  | 1.13        | 8.23  | 1.27                   |
| E-D10-027   | 20.60     | 65.00 | 44.40  | 0.52        | 1.79  | 0.55                   |
| E-D10-033   | 86.25     | 90.70 | 4.45   | 0.82        | 59.02 | 1.80                   |

\*Gold equivalent grade is calculated by dividing the silver value by 60 and adding this to the gold value.

An extended IP Gradient Array geophysical survey carried out in late 2010 showed a wide resistivity anomaly over the remaining 900 meters of untested ground between the current drilling and the eastern boundary of the Escondido tenement block. A substantial, chargeability anomaly coincident with the resistivity was identified. This led to a Phase 3 drilling in which 59 additional drill holes, for a total of 7,104 meters, was completed during the second quarter.

**Figure 46 Exploration drilling at Escondido exploration site**



In July 2011, results from un-reported Phase 2 and the first 20 holes of Phase 3 Escondido drilling were reported. These results continued to confirm the low grade, bulk tonnage potential to the North West but also, for the first time at this project, reported high grade intersections. Selected intercepts are tabulated below.

**Table 52 Escondido drilling results - July 2011**

| Zone | Type | Hole Number | Intercept |        |        | Assay - g/t |       | Gold Equivalent g/t* |
|------|------|-------------|-----------|--------|--------|-------------|-------|----------------------|
|      |      |             | From      | To     | Meters | Au          | Ag    |                      |
| NW   | Vein | E-D10-026   | 89.30     | 90.00  | 0.70   | 136         | 157   | 139                  |
| NW   | Bulk | E-D11-052   | 24.80     | 41.00  | 16.20  | 2.05        | 7.4   | 2.20                 |
|      |      | including   | 38.35     | 40.30  | 1.95   | 10.0        | 14.4  | 10.3                 |
| NW   | Bulk | E-D11-053   | 38.95     | 58.60  | 19.65  | 2.43        | 10.4  | 2.64                 |
|      |      | including   | 38.95     | 41.50  | 2.55   | 9.55        | 51.6  | 10.6                 |
| NW   | Bulk | E-D11-055   | 42.80     | 67.00  | 24.20  | 1.16        | 6.1   | 1.28                 |
|      |      | Including   | 48.80     | 54.10  | 5.30   | 2.48        | 8.1   | 2.64                 |
| NW   | Bulk | E-D11-057   | 28.40     | 72.00  | 43.60  | 0.84        | 6.8   | 0.98                 |
| SE   | Vein | E-D11-036   | 68.70     | 78.90  | 10.20  | 0.17        | 76.1  | 1.69                 |
| SE   | Vein | E-D11-037   | 54.00     | 58.20  | 4.20   | 1.63        | 663   | 14.9                 |
|      |      | Including   | 56.00     | 56.55  | 0.55   | 4.16        | 1,250 | 29.2                 |
| SE   | Vein | E-D11-039   | 37.60     | 41.00  | 3.40   | 0.71        | 193   | 4.57                 |
|      |      | Including   | 40.00     | 41.00  | 1.00   | 1.19        | 509   | 11.4                 |
| SE   | Bulk | E-D11-058   | 130.00    | 146.00 | 16.00  | 0.28        | 63.7  | 1.55                 |

\*Gold equivalent grade is calculated by dividing the silver value by 50 and adding this to the gold value.

### Chispas Vein Field

At Pan de Azucar, part of the Chispas vein field, scout drilling was completed in the fourth quarter of 2010. The assay results were announced on 22 February 2011 from the first pass diamond drilling program at Pan de Azucar. Twenty seven holes were drilled for a total of 3,976 meters. This program probed a 950 meter strike length with staggered holes which targeted the vein structure between 30 and 160 meters below surface. This drilling at the Pan de Azucar prospect is the first step in a much larger program to explore more than 12km of other outcropping epithermal veins within the Chispas Vein Field.

Selected intercepts for the Pan de Azucar drilling are shown in Table 53.

**Table 53 Selected Pan de Azucar drilling results**

| Hole<br>PDA-D10 | Intercept |        |        | Assay - g/t |      | Host            |
|-----------------|-----------|--------|--------|-------------|------|-----------------|
|                 | From      | To     | Meters | Au          | Ag   |                 |
| 001             | 68.4      | 69.5   | 1.1    | 5.10        | 650  | Fault structure |
| 005             | 48.0      | 51.25  | 3.25   | 5.81        | 5.55 | Vein            |
| including       | 49.6      | 50.3   | 0.7    | 15.5        | 21.4 | Vein            |
| 009             | 45.95     | 50.95  | 1.0    | 2.61        | 12.1 | Vein            |
| 011             | 88.47     | 89.08  | 0.61   | 3.00        | 80.2 | Vein            |
| 017             | 47.80     | 49.14  | 1.34   | 2.89        | 7.31 | Splay           |
| 019             | 78.02     | 80.00  | 1.98   | 3.51        | 8.28 | Vein            |
| and             | 114.3     | 129.96 | 15.66  | 3.37        | 11.2 | Fracture zone   |
| 021             | 96.0      | 101.0  | 5.0    | 3.48        | 7.98 | Vein            |
| 022             | 134.42    | 135.33 | 0.91   | 5.68        | 12.1 | Vein            |
| 025             | 131.45    | 131.85 | 0.4    | 21.5        | 2.6  | Splay           |
| and             | 135.0     | 137.0  | 2.0    | 2.67        | 37.1 | Vein            |

This drilling indicated that the Pan de Azucar vein is relatively deeply eroded. However, other veins, with a surface expression of some 11 kilometres, within the Chispas project areas, appear to be largely un-eroded. Of particular interest is the Veta Sur vein which outcrops over a strike length of some 4km. The outcrop of this vein appears to be high in the system and, if this is correct, the vein can be expected to be largely intact. A 3,240 meter, 16 hole diamond drilling program was carried out in late 2011 to test other veins in the area. No significant intersections were recorded.

### **Michelle Vein Field**

Exploration has identified approximately 22km of cumulative vein strike length at its 143km<sup>2</sup> Michelle Project, located immediately adjacent to AngloGold Ashanti Limited's majority owned and operated multimillion-ounce Cerro Vanguardia Gold-Silver Mine in Santa Cruz Province, Argentina. Many of the veins, which can be traced at surface from Cerro Vanguardia into Minera IRL's property, are Au-Ag bearing with classic low sulphidation epithermal textures that indicate significant depth potential. Of the 51 surface rock samples taken from the Michelle and Jackpot veins, 33 returned values above 1 g/t gold, of which 16 were above 5 g/t gold. Eleven samples analyzed also assayed above 30 g/t silver including one sample of 1,460 g/t Ag. A 4,698 meter, 27 hole diamond drilling program was carried out in late 2011. Results were of sufficient encouragement to justify a further diamond drilling program in 2012, where the company completed 16 trenches for a total of 1,404.50m followed by a 3,179.50m, 23 hole diamond drilling program testing targets on 7 vein structures. Four holes returned assay results greater the 1 g/t Au. Best results from the 2012 drill program included:

- MI-D12-038 0.70m @ 1.22 g/t Au, 159 g/t Ag from 36.00m
- MI-D12-040 0.75m @ 0.13 g/t Au, 569 g/t Ag from 72.00m

MI-D12-038 and MI-D12-040 both tested the Paris structure which has surface channel results of >1,000 Ag. Many of the other drill holes intersected significant wide zones of gold anomalism (between 0.1 g/t Au - < 1 g/t Au). Overall the 2012 assay results did not identify economically significant mineralization but many vein targets remain to be tested in future drilling campaigns.

### **Bethania - Peru**

Minera IRL SA has historically held three tenements in the area, namely Filpo I, Vera XI and Very IX totalling 2,400Ha at Bethania. In August 2009, Minera IRL SA entered into an option agreement to purchase 100% of a central, key 942Ha lease (El Alcatraz 12) from Minera Monterrico Peru SAC ("Monterrico").

Under the terms of the agreement, Minera IRL SA had the right to commence immediate exploration. In August 2010, the Company exercised the option pursuant to the agreement by making a US\$100,000 payment. Payment of US\$10 per ounce in Proven and Probable Reserves upon presentation of a feasibility study at any time up to 4 years will secure 100% ownership in the property.

In December 2012, the Company renegotiated the agreement with Monterrico on the El Alcatraz 12 property. The agreement has been extended for five years with the option for an additional 5 year extension in exchange for annual payments of \$1 million. Under the terms of the new agreement, Minera IRL SA will pay \$1 million at the end of year 3, US\$10 per ounce of gold contained in Proven and Probable Mineral Reserves as defined in a Definitive Feasibility Study and in the event that a Definitive Feasibility Study has not been completed by the end of Year 5, then the Company will pay US\$2 per ounce of gold contained in Measured and Indicated Mineral Resource. This payment will be deductible against a future payment for gold in Mineral Reserves as described above. The Company has the right to terminate this agreement at any point without further obligation, and accordingly the El Alcatraz 12 will revert back to Monterrico.

Bethania is located only 10km from the MIRL Corihuarmi Gold Mine in the high Andes of central Peru. The target is a large porphyry gold or gold/copper deposit. An extensive alteration zone, measuring approximately 3.5km by 1.2km, is associated with an Induced Polarization chargeability/resistivity anomaly indicating the presence of extensive disseminated sulphide mineralization.

On 5 July 2010, the Company announced an update on the phase 1 exploration program. The program consisted of a 12 hole, 4,856 metre reverse circulation ("RC") drilling program. The drilling program encountered substantial intersections of low grade gold, copper and molybdenum in a porphyry setting. Six drill holes intersected broad zones of gold copper molybdenum mineralization, characteristic of the targeted porphyry system. The best drill hole results, from RC10-BET10 intersected 276m from surface averaging 0.38g/t gold, 0.09% copper and 30ppm molybdenum including, also from surface, 72m at 0.66g/t gold, 0.13% copper and 40ppm molybdenum. Hole RC10-BET07 averaged 0.32g/t gold, 0.09% copper and 32ppm

molybdenum over the entire 426m of the hole and included a better zone of 124m at 0.39g/t gold, 0.10% copper and 22ppm molybdenum from 260m down hole. Drill hole RC10-BET09 recorded two intersections, 90m from surface at 0.46g/t gold, 0.15% copper and 54ppm molybdenum plus 64m from 216m down hole grading 0.41g/t gold, 0.11% copper and 25ppm molybdenum. Drill hole RC10-BET11 averaged 0.29g/t gold, 0.10% copper and 30ppm molybdenum for 424m from surface.

Based upon the encouraging results from the 2010 Bethania exploration program, the Company believed that the drilling demonstrated significant presence of gold and copper in this large system warranting a next phase of exploration in 2011.

The 2011 Bethania Project drilling program was carried out in two stages. The first stage of exploration drilling included 7 diamond drill holes for a total of 2,099 metres (April to June 2011). The second stage of drilling, completed during October 2011, included 6 drill holes totalling 723 meters. Confirmation drilling in the mineralized zone drilled in 2010 was positive but drilling at other targets failed to intersect significant mineralization. Other targets have yet to be drill tested.

Although this gold-copper system is yet to be fully understood, some results thus far received indicate that potentially economic gold/copper porphyry style mineralization might be present in this large mineralized system.

For example, drill hole DDH11-BET01 obtained an intersection of 72 meters at 0.72g/t Au and 0.14% Cu. This hole was designed to twin hole RC drill hole RC10-BET10 which intersected 72 meters at 0.66g/t Au and 0.13% Cu. This indicated:

- There was a 9% increase in gold grade between the twinned diamond and RC twin drill hole in this instance.
- The mineralization of interest in DDH11-BET01 continues down vertically for 100 meters from surface i.e.: 100 meters at 0.64 g/t Au and 0.13% Cu.
- It has been recognized that gold and copper content is associated with the intensity of quartz-magnetite-sulphide stockwork veinlets within magnetite-feldspar-biotite-silica potassic alteration zones.

The tenor and consistency of grade distribution that has been intersected from surface justifies continued exploration interest in this mineralized gold porphyry system, which has been interpreted to form a minor part of a far larger hydrothermally altered lithocap which is known to extend for more than 15 kilometers along the Central Andean trend.

## **Quilavira - Peru**

Minera IRL announced in late February 2010 that the Company had signed an option to purchase the Quilavira Gold Exploration Project from Ingenieria y Tecnologia Minero-Metalurgica SA ("ITMM").

The 5,100 hectare tenement package is located in the Tacna district of southern Peru. ITMM acquired the property from Newcrest Mining Limited in a competitive tendering process.

Minera IRL SA has entered into an option agreement to purchase 100% of the property from ITMM subject to payment of the sum of US\$50,000 upon the grant of a supreme decree by the Peruvian government. The issue of a supreme decree is required where foreign registered companies seek to acquire exploration licenses within 50km of Peru's international boarder. Prior to commencing exploration on this property, a surface rights agreement will need to be negotiated with the local community.

The main exploration target on Quilavira is an alteration area approximately 1,200m by 300m. Sampling by Newcrest Mining Limited has identified a zone (200 x 200m) of anomalous gold mineralization (+1g/t Au rock chip values) within the western part of the alteration zone.

### **Huaquirca Joint Venture - Peru**

Minera IRL entered into a Letter Agreement in June 2010 with Alturas Minerals Corp ("Alturas") providing the opportunity for the latter to earn up to an 80% interest in the Company's 6,903 hectare Chapi-Chapi project, located in the department of Apurimac in southern Peru. The Chapi-Chapi property block is immediately adjacent to Alturas's 5,276 hectare Utupara property, both which lie within the Huaquirca copper-gold district. Together the two projects now comprise a larger joint venture area designated as the "Huaquirca Joint Venture".

On 13 January 2011, Alturas and Minera IRL entered into an amendment of the Letter Agreement regarding the Huaquirca JV. The amendment modifies an earlier letter agreement announced on 2 June 2010 and grants Alturas an extension within which to execute drilling at Huaquirca.

The Chapi-Chapi property hosts a large copper-gold-molybdenum skarn system (the +3 km long "Chapi Chapi Corridor") within Cretaceous limestone and cut by dioritic and monzonitic stock-work. In addition, the property hosts a large "gold-in-soils" geochemical anomaly located within fractured Cretaceous sandstones. The limestone in the Huaquirca District is part of the same unit that hosts large skarn deposits in the Apurimac-Cusco porphyry-skarn belt, such as the Tintaya and Las Bambas copper-gold skarn projects of Xstrata. The quartzite unit also hosts a significant copper oxide resource at the nearby Antilla project of Panoro Minerals, situated some 15 kilometres to the west.

Alturas had the option to gain an 80% interest in the Huaquirca Joint Venture by starting drilling on the JV property no later than June 30, 2011, completing at least 15,000 meters of drilling on the Chapi-Chapi Property, and completing a scoping study on any potential discovery before December 31, 2012. Once Alturas had fulfilled its obligations and earned an 80% interest in the JV, both parties would contribute pro-rata according to their percentage interests, subject to usual dilution. If Minera IRL were to dilute its interest below 20% it could convert that part of its interest to a 2% NSR. If Minera IRL were to further dilute its interest to

below 10%, it would be entitled to an additional 1% NSR. The NSR is subject to a total buyout for US\$ 5m at Alturas's option. Alturas is the operator of the exploration program on the JV Property and is responsible for all community and environmental issues during the drilling and Scoping Study phases.

Alturas announced on 5 July 2011, it had initiated a first phase of drilling on the 30 June 2011, and that it had signed a new 2-year agreement with the Huaquirca community that gives Alturas access to community land for its planned exploration program and has obtained the permit to conduct its first phase drilling program from the Peruvian mining authority.

On 15 December 2011, Alturas announced encouraging assay results from the first four widely-spaced diamond drill holes completed as part of the first phase 5,000 meter drill program.

Highlights include copper-gold mineralized sections of skarn reporting:

- 22.60 meters (35.50m to 58.10m) grading 0.35% copper, 0.25 g/t gold, 1.30 g/t silver and 0.01% molybdenum, and
- 14.70 meters (80.60m to 95.30m) grading 0.52% copper, 0.27 g/t gold, 1.81 g/t silver and 0.01% molybdenum, both in drillhole CHA-11-03.

Sections with gold-silver mineralized in altered and brecciated sandstones included:

- 28.00 meters (181.00m to 209.00m) grading 0.27 g/t gold and 0.35 g/t silver in drillhole CHA-11-02,
- 30.00 meters (13.20m to 43.20m) grading 0.37 g/t gold and 0.67 g/t silver, and
- 26.70 meters (121.20m to 147.90m) grading 0.39 g/t gold and 1.45 g/t silver, including 10.30 meters grading 0.66 g/t gold and 2.75 g/t silver, both in drillhole CHA-11-02A

On 10 May 2012, Alturas announced encouraging assay results from its first phase diamond drill program. The program was comprised of 16 diamond holes for 5,498 metres drilled over the central part of the 4.5 x 2.5 km mineralized area. The strong metal values intersected have confirmed a large copper-gold-molybdenum system, and highlight the need of a follow-up drilling program to define possible extensions of the intersected mineralized bodies and to explore numerous additional untested drill targets.

On 15 January 2013, it was announced that the Company had granted Alturas extensions of the terms within which to complete its exploration commitments at the Huaquirca property. Under the amended agreement Alturas has the option to earn an 80% interest in the Huaquirca Joint Venture by resuming exploration drilling no later than June 30, 2013 and completing a further 9,502 meters of drilling on the Chapi Chapi Property and completing a scoping study on any potential discovery before 31 December 2013.

## **Frontera Joint Venture - Chile**

The Frontera project is 35/65 joint venture with Teck Cominco which is managed by the latter. The property consists of a 1,200Ha package of tenements located in region I of northern Chile, on the north-western border with Peru and close to the eastern border with Bolivia.

The Pucamarca high sulphidation Au deposit (~1.2 million oz Au resource), owned by Peruvian miner Minsur, is located in Peru only a few metres northwest of the Frontera property boundary. There is some evidence to show that the Pucamarca deposit and Frontera prospect might be part of one large alteration complex.

Limited work conducted by joint venture partner Teck-Cominco in 2006 confirms this complex extends over an area of some 8 x 6 km, similar to that observed around many large HS deposits in Peru and Chile. At the regional scale, the property is located at a major structural intersection. Principal structures include the north-west trending Inca Puquio fault system (said to control mineralization at several large Cu porphyries in southern Peru), and the north-north-west trending West Fisher fault system (known to control mineralization over hundreds of kilometres in northern and central Chile).

Known gold mineralization is mostly restricted to high-sulphidation vuggy silica alteration and locally to silica-alunite zones. Drilling conducted by then joint venture partner Hochschild (MHC) in 2005, indicates that the gold mineralization on the Frontera property is mainly found within hydrothermal breccias characterized by abundant iron oxide cement and to a lesser degree to oxides disseminated in silica and silica alunite alteration.

Another style of mineralization, which consists of small zones of copper enrichment characterized by chalcocite coating pyrite, is recognized on the Frontera property. This mineralization has additionally been recognized in MHC 2005 drill hole intersections. The best sampled drilling interval assayed 0.25% Cu over 18 m. Very strong Mo, up to 565ppm is reported from a surface area extending eastwards from Frontera's Cerro Vuggy (Vuggy Mountain). Combined with the presence of Chalcocite mineralization, this suggests a possible blind Cu-Mo porphyry target could underlie the advanced argillic alteration lithocap observed at surface. In 2006, Teck Cominco drilled 3 holes in this area to test this hypothesis but only intersected argillic to propylitic alteration below advanced argillic alteration. An area extending close to 2 km to the east of the main Mo anomaly remains untested.

## **5 RISK FACTORS**

The following discussion summarises the principal risk factors that apply to the Company's business and that may have a material adverse effect on the Company's business, financial condition and results of operations or the trading price of the Ordinary Shares.

### **Operating Risk**

The operations of the Company may be disrupted by a number of events that are beyond the control of the Company. These include but are not limited to: the availability of transportation capacity, geological, geotechnical and seismic factors, industrial and mechanical accidents, equipment and environmental hazards, power supply failure, unscheduled shut downs or other processing problems.

As is common with all mining operations, there is uncertainty and therefore risk associated with the Company's operating parameters and costs. These can be difficult to predict and are often affected by factors outside the Company's control. If any such risks actually occur, the Company's business, financial condition and/or results of operations could be materially and adversely affected. In such a case, an investor may lose all or part of their investment.

There can be no guarantee that the Company will be able to effectively manage the expansion of its operations or that the Company's current personnel, systems, procedures and controls will be adequate to support the Company's operations. Any failure of management to effectively manage the Company's growth and development could have a material adverse effect on the Company's business, financial condition and results of operations.

### **Land Title**

Title insurance generally is not available, and the Company's ability to ensure that it has obtained secure claim to individual mineral properties or mining concessions from time to time may be severely constrained. In addition, unless the Company conducts surveys of the claims in which it holds direct or indirect interests, the precise area and location of such claims may be in doubt. Accordingly, such mineral properties may be subject to prior unregistered liens, agreements, transfers or claims, and title may be affected by, among other things, undetected defects. In addition, the Company may be unable to operate its properties as permitted or to enforce its rights with respect to its properties.

### **Environmental Regulations**

The Company's operations are subject to environmental regulation in all of the jurisdictions in which the Company operates. Such regulation covers a wide array of matters, including without limitation waste disposal, protection of the environment, worker safety, mine development, land and water use, the protection of endangered and protected species. Existing

and possible future environmental legislation, regulations and actions could cause the Company to incur additional expenses, capital expenditures, restrictions and delays in the activities of the Company, the extent of which cannot be predicted.

Although precautions to minimise risk will be taken, operations are subject to hazards which may result in environmental pollution and consequent liability which could have a material adverse impact on the business, operations and financial performance of the Company. Damages occurring as a result of such risks may give rise to claims against the Company which may not be covered, in whole or part, by any insurance carried. In addition, the occurrence of any of these incidents could result in the Company's current or future operational target dates being delayed or interrupted and increased capital expenditure.

### **Litigation**

The board of directors is not aware of any material legal proceedings which have been threatened or actually commenced against the Company.

Legal proceedings may, however, arise from time to time in the course of the Company's business. Furthermore, litigation may be brought against third parties resulting in an adverse affect on the Company. There have been a number of cases where the rights and privileges of mining and exploration companies have been the subject of litigation. The board of directors cannot preclude that such litigation may be brought against the Company in the future or that litigation against a third party will not have adverse effects on the Company.

### **Lack of Surface Rights**

In Peru and Argentina, the countries in which the Company's material mineral projects are located, surface rights do not accompany exploration and mining rights. In both countries, the mining law provides for the resolution of conflicts arising between surface rights holders and mining rights holders, but the time within and cost with which such resolutions are reached is not assured. The failure of the Company to successfully negotiate surface rights access and purchase could cause substantial delays in the development of a project.

### **Health and Safety**

The Company's activities are and will continue to be subject to health and safety standards and regulations. Failure to comply with such requirements may result in fines and penalties being assessed against the Company.

### **Additional Requirements for Capital**

Further funds are required by the Company to complete its proposed development and may be required to complete exploration activities as disclosed in this document. Should it subsequently be established that a mining production operation is technically, environmentally and economically viable, substantial additional financing will be required by the Company to permit and establish mining operations and production facilities. No assurances can be given

that the Company will be able to raise the additional finances that may be required for such future activities. Commodity prices, environmental regulations, environmental rehabilitation or restitution obligations, revenues, taxes, transportation costs, capital expenditures, operating expenses and technical aspects are all factors which will impact on the amount of additional capital that may be required.

Any additional equity financing may be dilutive to shareholders and debt financing, if available, may involve restrictions on financing and operating activities. There are no assurances that additional financing will be available on terms acceptable to the Company, or at all. If the Company is unable to obtain additional financing as needed, it may be required to reduce the scope of its operations or anticipated expansion, forfeit its interest in some or all of its tenements, incur financial penalties and reduce or terminate its operations.

### **Gold and Silver Prices**

Gold and silver prices have historically fluctuated widely and are affected by numerous external factors beyond the Company's control. The profitability or viability of the Company's mineral projects is directly related to the price of commodities and, in particular, the price of gold and silver. These fluctuations make this sector particularly volatile from an investment perspective. The price of gold and silver is influenced by factors outside the Company's control, such as global demand and supply, international economic trends, the level of consumer product demand, the level of interest rates and the rate of inflation among others. Declines in the market price of either or both gold and silver may lead to the write down of assets or mineral resources and reserves, negative earnings and profitability and, ultimately, to the loss of resources and reserves and the prospect of development of Company projects.

### **Hedging and Use of Derivatives**

Hedging activities are intended to protect a company from the fluctuations in the price of metals and to minimise the effect of declines in metal prices on results of operations for a period of time. Although hedging activities may protect a company against lower metal prices, they may also limit the price that can be realised on metals (such as gold and silver) that are subject to forward sales and call options where the market price of such metal exceeds its price in a forward sale or call option contract. Moreover, in some derivative structures, the Company could be exposed to margin calls where the price of the metal changes significantly (including upward increases) causing a cash flow crisis for the Company. There is no assurance that the Company will not enter into hedging and derivative products that provide for such exposure.

### **Mineral Reserves and Resources are Estimates Only**

There is no certainty that the mineral resources or any mineral reserve, attributable to the Company will be realised. Until a deposit is actually mined and processed, the quantity of mineral resources and reserves and grades, must be considered as estimates only. In addition, the value of mineral resources and any mineral reserve, will depend upon, among other things, metal prices and currency exchange rates. Any material change in quantity of mineral resources

or any mineral reserve, or grade, may affect the economic viability of any future mines. Any material reductions in the estimates of mineral resources, or mineral reserves, or the Company's ability to extract any ore, could have a material adverse affect on the Company's future results of operation and financial condition.

### **Insurance Coverage**

The mining industry is subject to significant risks that could result in damage to, or destruction of, mineral properties or producing facilities, personal injury or death, environmental damage, delays in mining, and monetary losses and possible legal liability. The Company's insurance coverage is limited and, as a result, there may not be sufficient insurance for any particular loss, including political risks or environmental liabilities.

### **Infrastructure**

Mining, processing, development and exploration activities depend, to one degree or another, on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants which affect capital and operating costs. Unusual or infrequent weather phenomena, sabotage, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's operations, financial condition and results of operations.

### **Key Management and Staff**

The success of the Company is currently largely dependent on the abilities of some of its directors and its senior management. The loss of the services of any of these persons may have a materially adverse effect on the Company's business and prospects. There is no assurance that the Company can retain the services of these persons. Failure to do so could have a materially adverse affect on the Company and its prospects.

While the Company has good relations with its employees, these relations may be impacted by changes in the scheme of labour relations which may be introduced by the relevant governmental authorities in whose jurisdictions the Company may carry on business from time to time. Adverse changes in such legislation may have a material adverse effect on the Company's business, results of operations and financial condition.

### **Legal Climate Considerations**

The Peruvian, Argentinean and Chilean jurisdictions, where the Company will be operating, may have comparatively less developed legal systems than those found in Europe and North America. This could lead to exposure to any of the following risks: lack of guidance on interpretation of the applicable rules and regulations, delays in redress or greater discretion on the part of governmental authorities. In certain jurisdictions, commitment of judicial systems, government representatives, agencies and native businessmen to abide the legal requirements and negotiated agreements may be subject to doubt, creating concern with respect to the

Company's agreements for business and licences. There can be no assurance that joint ventures, licences, licence applications or other legal arrangements will not be adversely affected by the actions of government authorities or others, and the effectiveness and enforcement of such arrangements in these jurisdictions cannot be certain.

### **Changes in Government Policy**

The Company is subject to the rules and regulations of various countries in which it does business, including Peru and, Argentina. Its exploration activities, development projects and any future mining operations are subject to laws and regulations governing, among other things, the acquisition and retention of title to mineral rights, mine development, health and worker safety, employment standards, fiscal matters, waste disposal, protection of the environment, protection of endangered and protected species and other matters. It is possible that future changes in applicable laws, regulations, agreements or changes in their enforcement or interpretation could have a material and adverse impact on the Company's current exploration activities, planned development projects or future mining operations. Moreover, where required, obtaining necessary permits to conduct exploration or mining operations can be a complex and time consuming process and the Company cannot assure whether any necessary permits will be obtainable on acceptable terms, in a timely manner or at all.

### **Geopolitical Climate**

The political climate in Peru and Argentina is currently stable and generally held to offer a favourable outlook for foreign investments. There is no guarantee that it will remain so in the future. Changes in government, regulatory and legislative regimes, potentially leading to expropriation of mining rights cannot be ruled out.

### **Currency Risk**

The Company will be reporting its financial results in US dollars and the gold and silver markets are predominantly denominated in US dollars, while costs will, for the most part, be incurred in local currencies. Subsequent appreciation of the local currencies against the US dollar may have the effect of rendering the exports from Peru and/or Argentina more expensive and less competitive, as well as having a negative impact on the financial statements of the company. Fluctuations in the Pound Sterling or Canadian dollar with respect to financial reporting and/or local operating currencies could have an impact on the Pound Sterling or Canadian dollar denominated share price.

### **Economic Risks**

Emerging markets such as Peru and Argentina are potentially subject to more volatility and greater risks than more mature markets. It should be noted that the emerging markets are frequently subject to rapid change, therefore some of the information set out in this AIF may become outdated. Investors should carefully consider all of the risks associated with investing in an emerging market.

## **Local Community**

To date, the Company has enjoyed strong relationships with the local communities located around their relevant mining assets. The Company's policy is to actively consider, sponsor (through community projects) and work with the local communities and expects to maintain these relationships. However, such relationships cannot be guaranteed, nor can the Company be certain of forming new positive relationships with local populations with which it has not yet negotiated. Such relationships are important and can affect the ability of the Company to secure, amongst other things, surface rights, access, infrastructural support and the necessary labour required to operate a mine.

## **Geological Risks**

The delineation of geological conditions and the definition of mineral resources and ore reserves is a complex process requiring input from many areas of specialisation and a high degree of interpretation of results obtained from exploration programs. While the Company employs best industry practises to develop reliable estimates, there remains a risk that if and when mining commences geological conditions could vary from those projected. In such case, there is a risk that geological conditions could adversely affect ongoing operations and in extreme circumstances, result in the abandonment of a project.

## **Competition**

The Company competes with numerous other mining companies (many of which have greater financial resources, operational experience and technical capabilities than the Company) in connection with the acquisition of mineral properties as well as for the recruitment and retention of qualified employees.

## **General Business Risk**

The activities of the Company are subject to usual commercial risks and such factors as industry competition and economic conditions generally may affect the Company's ability to generate income.

## **6 DIVIDENDS**

The Company does not have a dividend policy in place and has never declared or paid dividends on the Ordinary Shares. Any future dividend payment will be made at the discretion of the Company's board of directors and will depend on its assessment of earnings, capital requirements, the operating and financial condition of the Company and any other factor that the Company's board of directors deems necessary to consider in the circumstances.

## 7 DESCRIPTION OF CAPITAL STRUCTURE

The Company is authorised to issue an unlimited number of Ordinary Shares, of which 173,677,884 are issued as at 27 March 2013. Each share entitles the holder to one vote. All shares of the Company rank equally as to dividends, voting powers and participation in assets upon a dissolution or winding up of the Company.

As at 27 March 2013, the Company also had 28,516,525 options issued and outstanding, of which 9,730,000 options were issued for the benefit of directors, employees and consultants of the Company under the Company's Share Option Plans. Each option entitles the holder to acquire one Ordinary Share at exercise prices detailed below.

| Date of grant                            | Exercisable from           | Exercisable to             | Exercise prices | Number granted | No. at 27 March 2013 | No. at 31 December 2012 |
|--|----------------------------|----------------------------|-----------------|----------------|----------------------|-------------------------|
| <b>Share Option Plans Issued Options</b> |                            |                            |                 |                |                      |                         |
| 18 March 2008                            | 18 March 2009 <sup>1</sup> | 18 March 2013 <sup>2</sup> | £0.62           | 865,000        | 790,000              | 790,000                 |
| 17 November 2009                         | 17 November 2009           | 17 November 2014           | £0.9125         | 2,300,000      | 2,300,000            | 2,300,000               |
| 25 January 2010                          | 25 January 2010            | 25 January 2015            | £0.8875         | 275,000        | 125,000              | 125,000                 |
| 2 July 2010                              | 2 July 2010                | 2 July 2015                | £0.7250         | 50,000         | 50,000               | 50,000                  |
| 17 November 2010                         | 17 November 2010           | 17 November 2015           | £1.08           | 2,680,000      | 2,630,000            | 2,630,000               |
| 03 April 2012                            | 03 April 2012              | 03 April 2017              | £0.8063         | 3,485,000      | 3,485,000            | 3,485,000               |
| 14 May 2012                              | 14 May 2012                | 14 May 2017                | £0.5875         | 200,000        | 200,000              | 200,000                 |
| 03 September 2012                        | 03 September 2012          | 03 September 2017          | £0.525          | 150,000        | 150,000              | 150,000                 |
| <b>Other Issued Options</b>              |                            |                            |                 |                |                      |                         |
| 7 July 2010                              | 7 July 2010                | 31 Dec 2014 <sup>3</sup>   | US\$1.08        | 6,944,444      | 6,944,444            | 6,944,444               |
| 30 September 2010                        | 30 September 2010          | 31 Dec 2014 <sup>3</sup>   | US\$1.08        | 1,633,987      | 1,633,987            | 1,633,987               |
| 6 Nov 2012                               | 6 Nov 2012                 | 31 Dec 2014                | US\$1.08        | 680,828        | 680,828              | 680,828                 |
| 5 Dec 2012                               | 5 Dec 2012                 | 31 Dec 2014                | US\$1.07        | 4,672,897      | 4,672,897            | 4,672,897               |
| 24 Dec 2012                              | 24 Dec 2012                | 31 Dec 2014                | US\$1.03        | 4,854,369      | 4,854,369            | 4,854,369               |
| <b>Total</b>                             |                            |                            |                 |                | <b>28,516,525</b>    | <b>28,516,525</b>       |

1. 50% of the options were exercisable after one year of grant and the remaining 50% after two years.
2. The options granted on 18 March 2008 expiry during a close/black-out period for the Company. Under the Company's Share Option Plans, the expiry date can be extended to 10 business days after the ceasing of the close/black-out period, as such these options have not yet expired.
3. In connection with an amendment to the Macquarie Finance Facility, the expiration date of these options was extended from 28 June 2013 to 31 December 2014. Additionally, the exercise price on the 1,633,987 options issued on 30 September 2010 was changed to US\$1.08 from US\$1.53.

## 8 MARKET FOR SECURITIES

The Ordinary Shares of the Company are listed for trading on the London Stock Exchange AIM and the Lima Stock Exchange (the "BVL") under the trading symbol "MIRL" and the Toronto Stock Exchange (the "TSX") under the trading symbol "IRL". The Company has been listed on AIM since 12 April 2007, BVL since 11 December 2007 and TSX since 28 April 2010.

## Trading Price and Volume

The below table outlines the high and low prices, and volume of Ordinary Shares on AIM on a monthly basis during the financial year ended 31 December 2012.

| Month          | High   | Low    | Volume    |
|----------------|--------|--------|-----------|
| January 2012   | £0.750 | £0.620 | 1,211,162 |
| February 2012  | £0.670 | £0.550 | 1,252,300 |
| March 2012     | £0.575 | £0.419 | 1,298,107 |
| April 2012     | £0.530 | £0.459 | 5,161,974 |
| May 2012       | £0.490 | £0.402 | 971,940   |
| June 2012      | £0.473 | £0.403 | 2,283,409 |
| July 2012      | £0.544 | £0.410 | 3,302,212 |
| August 2012    | £0.620 | £0.460 | 2,504,472 |
| September 2012 | £0.595 | £0.481 | 4,104,930 |
| October 2012   | £0.558 | £0.500 | 3,763,758 |
| November 2012  | £0.750 | £0.620 | 2,443,748 |
| December 2012  | £0.670 | £0.550 | 936,082   |

The below table outlines the high and low prices, and volume of the Ordinary Shares on the BVL on a monthly basis during the financial year ended 31 December 2012.

| Month          | High     | Low      | Volume  |
|----------------|----------|----------|---------|
| January 2012   | US\$1.14 | US\$1.01 | 784,240 |
| February 2012  | US\$1.27 | US\$1.10 | 751,823 |
| March 2012     | US\$1.15 | US\$1.10 | 229,615 |
| April 2012     | US\$1.15 | US\$1.00 | 477,182 |
| May 2012       | US\$0.99 | US\$0.75 | 131,212 |
| June 2012      | US\$0.80 | US\$0.69 | 240,598 |
| July 2012      | US\$0.65 | US\$0.73 | 74,705  |
| August 2012    | US\$0.65 | US\$0.77 | 361,319 |
| September 2012 | US\$0.70 | US\$0.93 | 178,593 |
| October 2012   | US\$0.80 | US\$0.96 | 434,539 |
| November 2012  | US\$0.85 | US\$0.96 | 261,285 |
| December 2012  | US\$0.82 | US\$0.90 | 292,526 |

The below table outlines the high and low prices, and volume of the Ordinary Shares on the TSX on a monthly basis during the financial year ended 31 December 2012.

| <b>Month</b>   | <b>High</b> | <b>Low</b> | <b>Volume</b> |
|----------------|-------------|------------|---------------|
| January 2012   | C\$1.11     | C\$1.00    | 755,780       |
| February 2012  | C\$1.23     | C\$1.07    | 220,400       |
| March 2012     | C\$1.15     | C\$1.00    | 500,373       |
| April 2012     | C\$1.13     | C\$0.90    | 549,624       |
| May 2012       | C\$0.94     | C\$0.67    | 344,950       |
| June 2012      | C\$0.88     | C\$0.74    | 272,300       |
| July 2012      | C\$0.75     | C\$0.64    | 427,900       |
| August 2012    | C\$0.73     | C\$0.63    | 901,100       |
| September 2012 | C\$0.89     | C\$0.64    | 1,299,600     |
| October 2012   | C\$1.03     | C\$0.76    | 882,300       |
| November 2012  | C\$0.97     | C\$0.80    | 1,182,800     |
| December 2012  | C\$0.88     | C\$0.80    | 250,000       |

### **Prior Sales**

During the financial year ended 31 December 2012, the Company issued the following Ordinary Shares:

- 29,260,000 on 5 March 2012 at C\$1.13 per share via an equity offering.
- 2,230,000 on 2 April 2012, at £0.45 per share via the exercise of options; and
- 830,000 on 12 April 2012, at £0.45 per share via the exercise of options.

Subsequent to the financial year ended 31 December 2012, the Company issued 21,775,000 Ordinary Shares on 7 February 2013 at C\$0.71 per share via an equity offering.

The Company issued options during the financial year ended 31 December 2012 as follows:

- 3,485,000 options exercisable at £0.8061 were issued on 3 April 2012 for a term of 5 years.
- 200,000 options exercisable at £0.5875 were issued on 14 May 2012 for a term of 5 years.
- 150,000 options exercisable at £0.5250 were issued on 3 September 2012 for a term of 5 years.
- 680,828 options exercisable at US\$1.08 were issued on 6 November 2012 in connection with a Debt Facility. The options expire on 31 December 2014. In conjunction with this issue, the Company extended and re-priced 8,578,431 options. The options are now exercisable at US\$1.08 until 31 December 2014.
- 4,672,897 options exercisable at US\$1.07 were issued on 5 December 2012 and are exercisable until 31 December 2014.

- 4,854,369 options exercisable at \$1.03 were issued on 24 December 2012 and are exercisable until 31 December 2014

## 9 ESCROWED SECURITIES

As at the date of this AIF there are no securities of the Company under escrow.

## 10 DIRECTORS AND OFFICERS

The names and municipalities of residence, present positions with the Company and principal occupations during the past five years of the directors and executive officers of the Company as at 27 March, 2013 are present in the below table.

At the annual general meeting, one-third of the directors shall retire from office or, if their number is not three or a multiple of three, the number nearest to one-third shall retire from office; but:

- if any one director has at the start of the annual general meeting been in office for more than three years since his last appointment or reappointment, he shall retire; and
- if there is only one director who is subject to retirement by rotation, he shall retire.

| Name and Residence                         | Note | Principal Occupation During the Last Five Years   | Director Since      |
|--|------|---|---------------------|
| <b>Directors</b>                           |      |   |                     |
| Courtney Charles Chamberlain<br>Lima, Peru |      | Executive Chairman<br>Minera IRL Limited  | 28 August 2003      |
| Douglas Alan Jones<br>Perth, Australia     | (2)  | Technical Director<br>Chalice Gold Mines Limited<br><br>Non-Executive Director<br>Minera IRL Limited            | 28 August 2003      |
| Graeme David Ross<br>St Brelade, Jersey    | (1)  | Partner<br>Rawlinson & Hunter<br><br>Non-Executive Director<br>Minera IRL Limited                               | 30 October 2006     |
| Kenneth Peter Judge<br>Monte Carlo, Monaco | (1)  | Consultant and Advisor<br>Hamilton Capital Partners Limited<br><br>Non-Executive Director<br>Minera IRL Limited | 21 December<br>2009 |

| Name and Residence                          | Note       | Principal Occupation During the Last Five Years   | Director Since  |
|---|------------|---|-----------------|
| Napoleon Oscar Valdez Ferrand<br>Lima, Peru | (1)<br>(2) | President<br>Heinz Ferrand Glass S.A.C.<br><br>Non-Executive Director<br>Minera IRL Limited | 3 February 2010 |
| <b>Executive Officers</b>                   |            |   |                 |
| Tim Miller<br>Melbourne, Australia          |            | Chief Financial Officer and<br>Company Secretary<br>Minera IRL Limited                      | NA              |
| Diego Francisco Benavides<br>Lima, Peru     |            | President<br>Minera IRL SA  | NA              |

(1) Member of the Audit Committee.

(2) Member of the Compensation Committee.

(3) Mr Tim Miller will resign as CFO on 1<sup>st</sup> April 2013. Mr Brad Boland will assume the role of CFO from this date.

## Directors' Information

### Mr Courtney Chamberlain

#### Executive Chairman

Mr Chamberlain is a metallurgist by profession with over 40 years' experience in precious and base metals management, operations and development as well as consulting in Australia, Asia, Africa and both North and South America. He is a Fellow of the Australian Institute of Mining and Metallurgy. Mr Chamberlain spent 29 years with Newmont Mining Corporation and Newcrest Mining Ltd ("Newcrest"), including 13 years on the board of directors of Newmont Australia Ltd and Newcrest where he was responsible for operations and development. His responsibilities included key management roles in the development of the Telfer and New Celebration Gold Mines in Western Australia and the Cadia Mine in New South Wales. Mr Chamberlain was a co-founding partner of Investor Resources Limited (IRL), a financial and technical advisor to the international mining industry. He also founded Minera IRL.

### Dr Doug Jones

#### Non-Executive Director

Dr Jones (CP, Geo) is a geologist with 34 years' of international exploration, exploration management and consulting experience in the mining industry. Between 2003 and 2007 he served as Vice President Exploration for Golden Star Resources, responsible for worldwide exploration. Before that he was Chief Geologist, New Business South America at Delta Gold Limited. He is currently the Technical Director of Australian Stock Exchange ("ASX") listed Chalice Gold Mines Limited and a non-executive director of TSX and AIM listed Serabi Gold Limited. Dr Jones is also a former director of TSX, AIM and ASX listed company, Moto Goldmines Limited and ASX listed LioneTown Resources Limited.

**Mr Graeme Ross****Non-Executive Director**

Mr Ross qualified as a Chartered Accountant in 1984 and is now a partner at Rawlinson & Hunter, Jersey which is part of the Rawlinson & Hunter international network. He has worked in Jersey's finance industry since 1986 and has in-depth knowledge and experience of the structuring and ongoing administration requirements of publicly owned Jersey investment vehicles. Mr Ross is a director in R&H Trust Co. (Jersey) Limited.

**Mr Ken Judge****Non-Executive Director**

Mr Judge is a corporate lawyer with extensive business management and corporate development experience, having held numerous public company directorships and having been engaged in the establishment or corporate development of oil and gas, mining and technology companies in the United Kingdom, Middle East, USA, Australia, Europe, Canada, Latin America and South East Asia. He has undergraduate and post-graduate degrees in Commerce, Jurisprudence and Laws from the University of Western Australia and was awarded an Order of Australia Medal in 1984. Mr Judge was the Executive Chairman of AIM listed Hidefield Gold Plc, until its acquisition by Minera IRL in December 2009 and is a senior consultant and advisor to Hamilton Capital Partners and director of London Stock Exchange listed Gulfsands Petroleum Plc.

**Napoleon Valdez****Non-executive Director**

Mr Valdez has extensive business management experience and is the President of the board and major shareholder of Cristalerias Ferrand, a privately owned glass companies. He is also the owner and a director of Inversiones El Carmen, Agricola Topara and Gruval, Peru incorporated companies. Mr Valdez is a Peruvian resident, a well connected and experienced South American businessman and well informed on the Peruvian mining industry in which he has been a long standing investor.

**Executive Officers' Information****Tim Miller****Chief Financial Officer and Company Secretary**

Mr Miller has over 15 years' of corporate finance, mergers & acquisitions and finance experience in the natural resources industry. He holds a BSc (Applied Chemistry) from RMIT, Graduate Diploma of Applied Finance and Investment from the SIA and a Masters in Applied Finance from the University of Melbourne. He has worked for WMC Ltd at their Olympic Dam Operations, in the stockbroking industry as a resources equity analyst and for diversified mining company, North Ltd in their M&A and financial planning & analysis divisions until their takeover in 2000 by Rio Tinto. He worked with Investor Resources Limited (IRL), a corporate advisory group specialising in the mining industry, where he assisted with the founding of Minera IRL Limited. More recently he worked for Australian investment banking group, Babcock & Brown, where he was a member of the resources team involved in advisory work and private equity transactions. He is a Member of Australasian Institute of Mining and

Metallurgy (AusIMM) and a Fellow of Financial Services Institute of Australasia (finsia). In 2009, Mr Miller joined Minera IRL Limited responsible for the corporate finance activities of the Company and on 1 January 2011 he became chief financial officer of the Company.

**Dr. Diego Benavides**  
**President Minera IRL SA**

Responsible for the Company's corporate, legal and community activities, Mr Benavides is a lawyer by training with particular experience in the Latin American mining industry. Mr Benavides' previous experience includes positions with Minera Mount Isa Peru SA, Minera Newcrest Peru SA and as a consultant to Minera Phelps Dodge Del Peru SA.

As of 27 March 2013, the Company's directors and officers, as a group, beneficially own, control or direct (directly or indirectly), an aggregate of 9,157,382 shares, representing approximately 5.3% of the Company's Ordinary Shares.

**Corporate Governance**

Minera IRL has well defined policies that govern the Company. Strict environmental guidelines are followed at all projects and the Corihuarmi Gold Mine has been constructed under stringent environmental controls of an international standard. The Company has a very strong community relations team and a track record of working closely with the local people in all project areas. In addition to local employment and training, programs cover other areas of social importance including health, education and Company sponsored projects are aimed at sustainable development.

The board of directors maintains audit and remuneration committees which further assist in the governance of the Company. Public and investor relations management have been developed coincident with the move into the public arena.

**Audit Committee**

The Audit Committee is appointed by the board of directors of the Company to oversee the accounting and financial reporting process of the Company, management's reporting on internal controls, the system of internal accounting and financial controls and the audit procedures and audit plans. The Audit Committee also reviews and recommends to the board of directors for approval the financial statements, the reports and certain other documents required by regulatory authorities.

**Audit Committee Charter**

The Company's Audit Committee Charter (the "Charter") is attached as Appendix 1 hereto.

## **Composition of the Audit Committee**

As at the date hereof, the Audit Committee is composed of Graeme Ross and Ken Judge, all of whom are “financially literate” and “independent” within the meaning of National Instrument 52-110 – *Audit Committees* (“NI 52-110”).

## **Relevant Education and Experience**

Mr. Ross, Chairman of the Audit Committee and a Chartered Accountant with over 26 years experience, has a clear understanding of the accounting principles used by the Company to prepare its financial statements; has the ability to assess the general application of such accounting principles in connection with the accounting for estimates, accruals and reserves; has experience preparing, auditing, analyzing or evaluating financial statements that present a breadth and level of complexity of accounting issues that are generally comparable to the breadth and complexity of issues that can reasonably be expected to be raised by the Company’s financial statements, and has an understanding of internal controls and procedures for financial reporting.

Mr. Judge’s business management and corporate development experience and public company directorships experience provides him with an understanding of the accounting principles used by the Company to prepare its financial statements, the ability to assess the general application of such accounting principles and analyze or evaluate financial statements, and an understanding of internal controls and procedures for financial reporting.

Mr Valdez’s extensive business experience provides him with an understanding of the accounting principles used by the Company to prepare its financial statements, the ability to assess the general application of such accounting principles and analyze or evaluate financial statements, and an understanding of internal controls and procedures for financial reporting.

## **Reliance on Certain Exemptions**

At no time since the commencement of the Company’s most recently completed financial year has the Company relied on an exemption in Section 2.4 of NI 52-110 (*De Minimis Non-audit Services*), Section 3.2 of NI 52-110 (*Initial Public Offerings*), Section 3.4 of NI 52-110 (*Events Outside Control of Member*), Section 3.5 of NI 52-110 (*Death, Disability or Resignation of Audit Committee Member*), Section 3.3(2) of NI 52-110 (*Controlled Companies*), Section 3.6 of NI 52-110 (*Temporary Exemption for Limited and Exceptional Circumstances*), Section 3.8 (*Acquisition of Financial Literacy*) or an exemption from NI 52-110, in whole or in part, granted under Part 8 thereof.

## **Audit Committee Oversight**

At no time since the commencement of Minera IRL’s most recently completed financial year has the Audit Committee made a recommendation to nominate or compensate an external auditor not adopted by the Board.

## Pre-Approval Policies and Procedures

The Audit Committee is authorized by the Board to review the performance of the Company's external auditors and approve in advance provision of services other than auditing and to consider the independence of the external auditors, including a review of the range of services provided in the context of all consulting services bought by the Company. The Audit Committee is authorized to approve in writing any non-audit services or additional work which the Chairman of the Audit Committee deems to be necessary, and the Chairman will notify the other members of the Audit Committee of such non-audit or additional work and the reasons for such non-audit work for the committee's consideration, and if thought fit, approval in writing.

## External Auditor Service Fees

The following table summarizes the aggregate fees billed by the Company's external auditors (on a consolidated basis) during the two most recent completed financial years:

| Type of Work                      | Year ended<br>31 December 2011 | Year ended<br>31 December 2012 |
|-----------------------------------|--------------------------------|--------------------------------|
| Audit Fees <sup>(1)</sup>         | US\$195,625                    | US\$235,700                    |
| Audit-related Fees <sup>(2)</sup> | US\$23,250                     | US\$20,800                     |
| Tax Fees <sup>(3)</sup>           | US\$6,100                      | US\$44,250                     |
| All Other Fees <sup>(4)</sup>     | US\$17,050                     | US\$18,000                     |

- (1). The aggregate fees billed by the Company's external auditor for audit services.
- (2). The aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's consolidated financial statements and are not reported as "Audit fees".
- (3). The aggregate fees billed for tax compliance, advice, planning and assistance with tax for specific transactions.
- (4). The aggregate fees billed for advisory services.

## Compensation Committee

The Compensation Committee is appointed by the board of directors of the Company to develop the compensation policy for the Company, review remuneration levels and review stock option allocations.

## 11 CEASE TRADE ORDERS, BANKRUPTCIES, PENALTIES AND SANCTIONS

None of the Company's directors or executive officers is, as at the date of this AIF, or has been within the 10 years before the date of this AIF, a director, chief executive officer or chief

financial officer of any company (including Minera IRL) that was subject to one of the following orders, that was in effect for a period of more than 30 consecutive days:

- (a) a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation that was issued while the director, chief executive officer or chief financial officer was acting in the capacity as director, chief executive officer or chief financial officer; or
- (b) a cease trade order, an order similar to a cease trade order or an order that denied the relevant company access to any exemption under securities legislation that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

Except as disclosed below, none of the Company's directors or executive officers, or shareholders holding a sufficient number of our securities to affect materially control of the Company:

- (a) is, as at the date of this AIF, or has been within the 10 years before the date of this AIF, a director or executive officer of any company (including Minera IRL) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets; or
- (b) has, within the 10 years before the date of this AIF, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of the director, executive officer or the shareholder; or
- (c) has been subject to any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority or has been subject to any other penalties or sanctions imposed by a court or a regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

## 12 LEGAL PROCEEDINGS

The Company is not currently involved in any legal proceedings nor was it involved in any legal proceedings in the financial year ended 31 December 2012 and nor to the knowledge of

management, are there any legal proceedings which may materially affect the business and affairs of the Company.

### **13 INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS**

During the Company's current financial year and its three most recently completed financial years, no director, executive officer or person or company that beneficially owns, controls or directs, directly or indirectly, more than 10% of the Ordinary Shares of the Company or any associate or affiliate of such persons or companies had any material interest, direct or indirect, in any transaction which has materially affected or is reasonably expected to materially affect the Company or its subsidiaries.

### **14 TRANSFER AGENTS AND REGISTRARS**

#### **Principal Registrar**

Computershare Investor Services (Jersey) Limited  
Queensway House  
Hilgrove Street  
St Helier  
Jersey JE1 1ES

#### **Canada - Branch Registrar and Transfer Agent**

Computershare Investor Services Inc.  
University Avenue  
Toronto, Ontario  
M5J 2Y1  
Canada

#### **Peru - Transfer Agent**

Registro Central de Valores y Liquidaciones (CAVALI)  
Avenida Santo Toribio 143, oficina 501,  
San Isidro, Lima 27  
Perú.

### **15 MATERIAL CONTRACTS**

The Company has the following material contracts that were entered into by the Company within the most recently completed financial year or were entered into since 27 August 2003 (date of incorporation) and are still in effect:

#### **Feasibility Finance Facility Agreement**

Pursuant to the feasibility finance facility agreement dated 7 July 2010 between Macquarie Bank Limited ("Macquarie"), Minera IRL, Minera IRL SA, Compania Minera Kuri Kulla SA and

Hidefield Argentina SA, Macquarie provided Minera IRL with a US\$20,000,000 facility comprising two tranches of US\$10 million (the "Facility"). Both tranches were committed by Macquarie and have been drawn down by the Company. The purpose of the Facility was to refinance the existing outstanding facility of US\$2.5 million with Macquarie, to assist with funding the working capital requirements in relation to the exploration and development of the Ollachea and Don Nicolás Projects and general working capital requirements. In consideration of providing the Facility, Macquarie was granted options whose aggregate exercise price into Ordinary Shares in the Company was equivalent to the amount of the Facility drawn down. The price of the options was set prior to each drawdown based on a set pricing mechanism. As such, Minera IRL has granted Macquarie 9,259,259 options exercisable at US\$1.08 per share on or before 31 December 2014, 4,672,897 options exercisable at US\$1.07 per share on or before 31 December 2014 and 4,854,369 options exercisable at US\$1.03 per share on or before 31 December 2014. Minera IRL has provided security arrangements typical for such a facility.

In connection with the Agreement certain security arrangements have been granted to Macquarie.

#### **Ollachea Surface Agreement**

MKK entered into a surface contract dated 25 November 2007 with Comunidad Campesina de Ollachea. In June 2012, MKK entered into an extension to the surface contract for a period of 30 years. See "Projects - Ollachea" and "General Development of the Business".

#### **Ollachea - Mineral Rights Assignment Agreement**

Minera IRL and Minera IRL SA entered into an agreement dated 23 February 2007 with Rio Tinto and Felipe Benavides regarding the Ollachea Project. See "Projects - Ollachea" and "General Development of the Business".

#### **Ollachea - Security Agreements**

Mining Mortgage Agreement between Rio Tinto Mining and Exploration Limited, Sucursal del Peru, Rio Tinto Mining and Exploration Limited and Compañía Minera Kuri Kullu S.A. over the Ollachea property and its related assets dated 23 February 2007. See "Projects - Ollachea".

Share pledge agreement between Rio Tinto Mining and Exploration Limited, Rio Tinto Mining and Exploration Limited Sucursal del Peru, Minera IRL S.A and Compañía Minera Kuri Kullu S.A. for Minera IRL SA shareholding in Minera Kuri Kulla SA dated 23 February 2007. See "Projects - Ollachea".

#### **Corihuarmi Surface Rights Agreements**

Minera IRL SA entered into a surface land concession agreement with Comunidad Campesina de Atcas dated 9 November 2004 regarding the Corihuarmi Project. See "Projects - Corihuarmi".

Minera IRL SA entered into a surface land usufruct agreement with Comunidad Campesina de Huantan dated 12 July 2006 regarding the Corihuarmi Project. See “Projects – Corihuarmi”.

### **Corihuarmi Assignment Agreement**

On 21 October 2002, Minera IRL SA and Minera Andina de Exploraciones SAA entered into an assignment agreement regarding the Corihuarmi Project. See “Projects – Corihuarmi” and “General Development of the Business”.

## **16 INTERESTS OF EXPERTS**

The following persons or companies have been named as having prepared or certified a report described or included in a filing, or referred to in a filing made under National Instrument 51-102 – Continuous Disclosure Obligations during or relating to the most recently completed financial year and for the period subsequent to the end of the most recently completed financial year to date the date of this AIF.

Beau Nicholls, BSc (Geo), MAIG, Geology Manager - Brazil; Doug Corley, BAppSc (Geo), BSc(Hons), MAIG, Associate Resource Geologist; Jean-Francois St Onge eng., B.Sc.A. (Mining), MAusIMM, Mining Engineer; Barry Cloutt, BAppSc (Eng Met), MAusIMM, Chief Metallurgist; and Alex Virisheff BSc (Hons) (Geo), MAusIMM, MGSA, Principal Consultant – Resources; of Coffey Mining Pty Ltd are the authors of the Corihuarmi Report dated 6 April 2010. To the Company’s knowledge, each of the aforementioned firms or persons does not have an interest, direct or indirect, in any securities or other property of the Company or of one of its associates or affiliates (an “Interest”).

Callum Grant, P.Eng., Hassan Ghaffari, P.Eng., André DeRuijter, Pr. Eng (RSA), P.Eng., and Steven Osterberg, P.Geo. (USA), of Wardrop (a Tetra Tech Company); Doug Corley, MAIG R.P. Geo. of Coffey Mining Pty Ltd (Australia); Carlos Guzmán, Registered Member Chilean Mining Commission (Chile), of NCL Ingeniería y Construcción Ltda; Alistair Cadden, C.Eng. (UK), of Golder Associates Argentina SA; and Tony Sanford, Pr. Sci. Nat. (South Africa), of Ausenco Vector are the authors of the Don Nicolás Report dated 14 February 2012. To the Company’s knowledge, each of the aforementioned firms or persons does not have an Interest.

Doug Corley, MAIG, John Hearne, FAusIMM, and Vadim Louchnikov, FAusIMM of Coffey Mining Pty Ltd; Tim Miller, MAusIMM, and Donald McIver, FAusIMM, of Minera IRL Limited; Brett Byler, P.E., and Jim McCord, P.Geo. of AMEC (Peru) SA; and Marius Phillips, MAusIMM (CP) and Gragame Binks P.E., of AMEC Australia Pty Ltd are authors of the Ollachea Report dated 19 December 2012. Tim Miller and Don McIver of Minera IRL Limited each have an interest in securities of the Company of less than 1% of the ordinary shares on issue. To the Company’s knowledge, each of the remaining aforementioned firms or persons does not have an Interest.

PKF (UK) LLP is the auditor who prepared the auditor’s report for the Company’s annual financial statements for the financial year ended 31 December 2012 and 2011. PKF (UK) LLP is

independent with respect to the Company within the meaning of the Rules of Professional Conduct of the Institute of Chartered Accountants of British Columbia and the rules of the US Securities and Exchange Commission.

## **17 AUDITORS**

PKF (UK) LLP of Farringdon Place, 20 Farringdon Road, London, EC1M 3AP have been the auditors for the Company from 30 October 2006.

## 18 ADDITIONAL INFORMATION

Additional information relating to the Company may be found on the Company's SEDAR profile at [www.sedar.com](http://www.sedar.com).

Additional information is provided in the Company's financial statements and management's discussion and analysis thereon for its most recently completed financial year.

### **Information Regarding Jersey Law**

The Company's registered office address is Ordnance House, 31 Pier Road, St Helier, Jersey and its public company registration number is 94923.

1. If you are in any doubt as to the content of this document, you should consult your stockbroker, bank manager, solicitor, accountant or other financial adviser.
2. A copy of this document has been delivered to the registrar of companies in accordance with Article 5 of the Companies (General Provisions) (Jersey) Order 2002, and the registrar has given, and has not withdrawn, consent to its circulation.
3. The Jersey Financial Services Commission has given, and has not withdrawn, its consent under Article 2 of the Control of Borrowing (Jersey) Order 1958 to the issue of the Ordinary Shares. The Jersey Financial Services Commission is protected by the Control of Borrowing (Jersey) Law 1947 from any liability arising from the discharge of its functions under that law.
4. It must be distinctly understood that, in giving these consents, neither the registrar of companies nor the Jersey Financial Services Commission takes any responsibility for the financial soundness of the company or for the correctness of any statements made, or opinions expressed, with regard to it.
5. Minera IRL has taken all reasonable care to ensure that the facts stated in this document are true and accurate in all material respects, and that there are no other facts the omission of which would make misleading any statement in the document, whether of facts or of opinion. Minera IRL accepts responsibility accordingly.
6. It should be remembered that the price of Ordinary Shares and the income from them can go down as well as up.

## APPENDIX 1 - AUDIT COMMITTEE CHARTER

### Overview and Purpose

The Audit Committee (the "Committee") is responsible to the Board of Directors (the "Board"). The Committee approves, monitors, evaluates, advises or makes recommendations to the Board, in accordance with these terms of reference, on matters affecting the external audit and the financial reporting and accounting control policies and practices of the Company.

The purpose of the Committee is to assist the Board in its oversight of:

1. the integrity of the Company's financial statements and related information;
2. the Company's compliance with applicable legal and regulatory requirements;
3. the independence, qualifications and appointment of the shareholders' auditor;
4. the performance of the Company's shareholders' auditor; and
5. management responsibility for reporting on internal controls and risk management.

### Membership and Attendance at Meetings

1. The members of the Committee shall consist of the Chief Executive Officer plus a minimum of two independent and financially literate (as defined by securities legislation) Directors, appointed by the Board.
2. The Chair of the Committee shall be designated by the Board.
3. Attendance by invitation at all or a portion of Committee meetings is determined by the Committee Chair or its members and would normally include the Chief Financial Officer of the Company, the auditor, and such other corporate officers, advisors, or support staff as may be deemed appropriate.

### Duties and Responsibilities of the Audit Committee

1. Financial Accountability
  - a. To review, and recommend to the Board for approval, the annual audited financial statements.
  - b. To review, and recommend to the Board for approval, the following public disclosure documents:
    - i. the financial content of the annual report;
    - ii. the annual Management information circular and proxy materials;
    - iii. the annual information form; and
    - iv. Management discussion and analysis section of the annual report.

- c. To review, and recommend to the Board for approval, all financial statements, reports of a financial nature, and the financial content of prospectuses or any other reports which require approval by the Board prior to submission thereof to the shareholders, any regulatory authority, or the public.
- d. To review any report of Management which accompanies published financial statements (to the extent such a report discusses the financial position or operating results) for consistency of disclosure with the financial statements themselves.
- e. To review and assess, in conjunction with Management and the external auditor:
  - i. the appropriateness of accounting policies and financial reporting practices used by the Company;
  - ii. any significant proposed changes in financial reporting and accounting policies and practices to be adopted by the Company;
  - iii. any new or pending developments in accounting and reporting standards that may affect or impact on the Company;
  - iv. identification of the Company's principal financial risks and uncertainties and the systems to manage such risks and uncertainties;
  - v. the integrity (including without limitation, the effectiveness) of the Company's disclosure controls and procedures, internal control and Management information systems; and
  - vi. the key estimates and judgments of Management that may be material to the financial reporting of the Company.
- f. To assess periodically and be satisfied that adequate procedures are in place for the review of the Company's public disclosure of financial information extracted or derived from the Company's financial statements.
- g. To assess the performance and consider the annual appointment of external auditors for the purpose of preparing or issuing an audit report or performing other audit, review or attest services for the Company.
- h. To recommend to the Board the compensation of external auditors.
- i. To review the terms of the annual external audit engagement including, but not limited to, the following:
  - i. staffing;
  - ii. objectives and scope of the external audit work;
  - iii. materiality limits;
  - iv. audit reports required;
  - v. areas of audit risk;
  - vi. timetable; and

- vii. the proposed fees.
- j. To review with the external auditors the results of the annual audit examination including, but not limited to the following:
  - i. any difficulties encountered, or restrictions imposed by Management, during the annual audit;
  - ii. any significant accounting or financial reporting issues;
  - iii. the auditor's evaluation of the Company's system of internal accounting controls, procedures and documentation;
  - iv. the post-audit or Management letter containing any findings or recommendations of the external auditor including Management's response thereto and the subsequent follow-up to any identified internal accounting control weaknesses; and
  - v. any other matters which the external auditors should bring to the attention of the Committee
- k. To obtain reasonable assurance, by discussions with and reports from Management and the external auditors, that the accounting systems are reliable and that the system of internal controls is effectively designed and implemented.
- l. When there is to be a change in auditor, review all issues related to the change, including the information to be included in the notice of change of auditor called for under applicable securities regulations and the rules of applicable exchanges, and the planned steps for an orderly transition.
- m. To review any litigation, claim or other contingency, including tax assessments that could have a material effect upon the financial position or operating results of the Company, and the manner in which these matters have been disclosed in the financial statements.
- n. To review the internal control and approval policies and practices concerning the expenses of the officers of the Company, including the use of the Company's assets.
- o. To review any claims of indemnification pursuant to the Bylaws of the Company.
- p. To review, and recommend to the Board for approval, the Management report to be included in the annual report to shareholders.
- q. To request such information and explanations in regard to the accounts of the Company as the Committee may consider necessary and appropriate to carry out its duties and responsibilities.
- r. To request that the Chief Executive Officer and Chief Financial Officer or persons who perform functions similar to them, report on issues which are the subject of any Certificates to be signed and filed in accordance with applicable securities regulations by the Chief Executive Officer and Chief Financial Officer or persons who perform functions similar to them; and to review such report.

- s. To establish procedures for:
  - i. the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters;
  - ii. the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters; and
  - iii. the confidential, anonymous submission by employees of the Company of concerns regarding questionable practices or complaints raised through the whistle blower policy.
- t. To review and approve the Company's hiring policies regarding employees and former employees of the present and former external auditors of the Company.

## 2. Oversight of the Company's Risk Management

To ensure that Management discharges its responsibility to identify and mitigate financial risks faced by the Company. To review, monitor, report and, where appropriate, provide recommendations to the Board on the following:

- a) the Company's processes for identifying, assessing and managing risk; and
- b) the Company's major financial risk exposures and the steps the Company has taken to monitor and control such exposures.

## General Responsibilities

- 1. To consider any other matters which, in the opinion of the Committee or at the request of the Board, would assist the Directors to meet their responsibilities.
- 2. To review annually the terms of reference for the Committee and to recommend any required changes to the Board.
- 3. To provide reports and minutes of meetings to the Board.

## Meetings

- 4. Regular meetings of the Committee are held at least two times each year.
- 5. Meetings may be called by the Committee chair or by a majority of the Committee members, and usually in consultation with Management.
- 6. Meetings are chaired by the Committee Chair or, in the Chair's absence, by an independent member chosen by the Committee from among themselves.
- 7. A quorum for the transaction of business at any meeting of the Committee is a majority of members.
- 8. Meetings may be conducted with members present, or by telephone or other communications facilities which permit all persons participating in the meeting to hear or communicate with each other.

9. A written resolution signed by all Committee members entitled to vote on that resolution at a meeting of the Committee is as valid as one passed at a Committee meeting.

**Authority of the Committee**

10. The Committee shall have the authority to engage independent counsel and other advisors as it determines necessary to carry out its duties;
11. to set and pay the compensation for any advisors employed by the committee; and,
12. to communicate directly with the internal (if any) and external auditors.