

# **Minera IRL Limited**



## **ANNUAL INFORMATION FORM**

**For the 12 months ended 31 December 2013**

**31 March 2014**

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## 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. All figures are in United States ("US") dollars unless otherwise noted. References to "C\$" are to Canadian dollars and to "£" are to British pound sterling.

## 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.

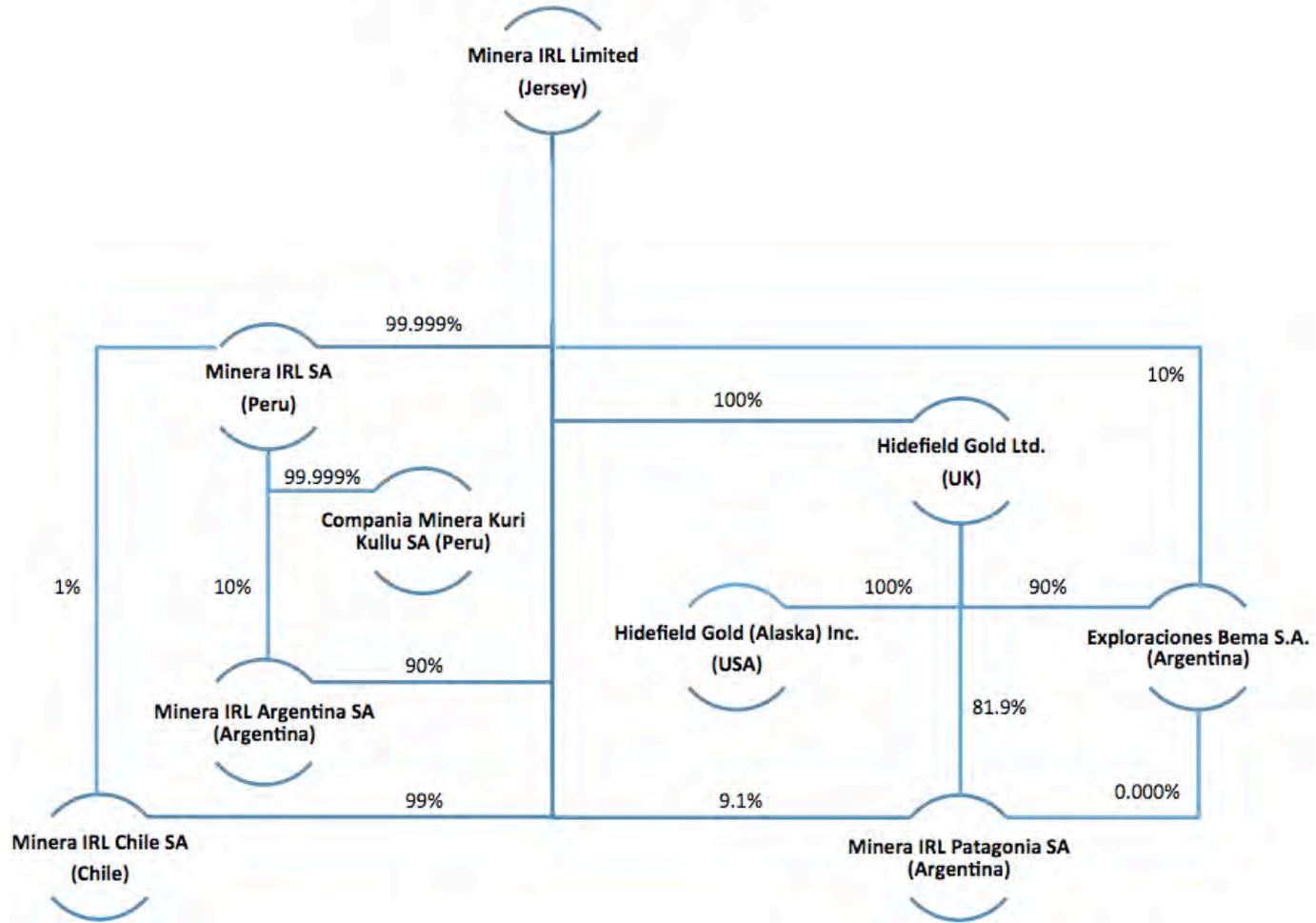
On 20 October 2006, the Company applied pursuant to the Jersey Companies Law to the Jersey Registrar of Companies (the “Jersey Registrar”) for continuance as a company incorporated under the Jersey Companies Law. On 25 October 2006, the Company applied, pursuant to the Cayman Islands Companies Law (2004 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.

### **Intercorporate Relationships**

In this AIF, unless the context otherwise requires, the terms “we”, “us”, “our”, and similar terms as well as references to “Minera IRL” or the “Company” refer to Minera IRL Limited together with its subsidiaries. As at 31 March 2014, the following diagram sets forth the Company's intercorporate relationships with its active subsidiaries including the jurisdiction of incorporation or organization and the Company's respective percentage ownership of each subsidiary.

# Minera IRL Limited Corporate Structure



## 2 GENERAL DEVELOPMENT OF THE BUSINESS

Minera IRL is a mining company engaged in the business of mining, extracting, and exploring for precious metals in Latin America, primarily in the countries of Peru and Argentina.

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 2002, an option was obtained to acquire 100% of the Corihuarmi tenements that, in 2008, became the Company’s first gold mine.

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 2009, Minera IRL mounted a take-over bid, via a Scheme of Arrangement, of AIM listed Hidefield Gold Plc (“Hidefield”) that was completed in December 2009. 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.

A summary of the key developments for Minera IRL over the trailing three-years is as follows:

### **2011 Developments**

On 21 January 2011, Minera IRL reported total gold production of 32,533 ounces at a site cash operating cost of \$383 per ounce for the year ending 31 December 2010.

On 22 February 2011, the Company reported drill results from 27 holes at its Pan de Azucar prospect, located within the Chispas Vein Field project, in Patagonia, Argentina. Highlights from the drill program included PDA-D10-005 with 3.25 metres grading 5.81g/t gold and 5.55g/t silver, including 0.7 metres of 15.5g/t gold and 21.4g/t silver, PDA-D10-021 with 5.0 metres grading 3.48g/t gold and 7.98g/t silver, and PDA-10-019 with 1.98 metres grading 3.51g/t gold and 8.28g/t silver.

On 3 March 2011, the Company provided an exploration update on its Escondido Project in Patagonia, Argentina that was discovered in 2010 and contiguous with the bulk-tonnage mineralization of Mariana Resources Las Calandrias Project. The update reported drill results from nine widely spaced drill holes; notable intersections included E-D10-020 with 33.5 metres

grading 0.89g/t gold and 2.83g/t silver, including 10.2 metres of 1.83g/t gold and 4.45 g/t silver and E-D10-24 with 17.0 metres grading 1.13g/t gold and 8.23g/t silver.

On 31 March 2011, the Company reported its financial results for the year ended 31 December 2010. The Company sold a total of 33,240 ounces at an average realised price of \$1,232 per ounce for sales revenue of \$41.1 million. The Company achieved annual after tax profit of \$2.2 million (\$0.03 per ordinary share).

On 11 April 2011, the Company provided an update on an in-fill drilling program at the Minapampa East Zone on its Ollachea Project in Peru. Highlights from drill program included DDH11-142 (15 metres grading 4.02g/t gold), DDH11-146 (15 metres grading 4.04g/t gold and 11 metres at 10.45g/t gold) and DDH11-148 (7 metres grading 20.7g/t gold).

On 11 July 2011, the Company announced the discovery of a bonanza-grade precious metals mineralization on its Escondido Project in Patagonia, Argentina. As part of this announcement, the Company reported high-grade intersections including E-D10-026 (0.70 metres grading 136 g/t gold and 157 g/t silver) and E-D11-037 (4.20 metres grading 1.6 g/t gold and 663 g/t silver, including 0.55 metres with 4.2 g/t gold and 1,250 g/t silver). The Company also reported drilling results from a new, potential bulk tonnage target, which included E-D11-052 (16.20 metres grading 2.05 g/t gold and 7.4 g/t silver, including 1.95 metres grading 10.0 g/t gold and 14.4 g/t silver) and E-D11-053 (19.65 metres grading 2.43 g/t gold and 10.4 g/t silver, including 2.55 metres with 9.55 g/t gold and 51.6 g/t silver).

On 18 July 2011, the Company announced results from a positive Preliminary Feasibility Study ("PFS") on the Ollachea Project for an underground mining operation (the "Ollachea PFS"). It was also announced that the Ollachea Project was being advanced to the Bankable Feasibility Stage. Utilizing a probable mineral reserve of 1.1 million ounces and a \$1,100 gold price, the report showed robust economics that resulted in an after-tax net present value ("NPV") of \$133 million at a 7% discount rate. The internal rate of return ("IRR") was reported as 20.5%. The NI 43-101 compliant technical report detailing the findings of the Ollachea PFS was filed on SEDAR on 1 September 2011.

On 21 July 2011, the Company announced that an Ollachea general assembly meeting had fully endorsed the progression of the Ollachea Project and that the Company had received a Letter of Endorsement for the Ollachea Project from the Community of Ollachea. Minera IRL also announced that it had completed negotiations with the community of Ollachea whereby the community would become a 5% equity participant in the subsidiary of Minera IRL that owns the Ollachea Gold Project upon achieving commercial production.

On 17 August 2011, the Company announced a significant resource increase at the Don Nicolás Project in Argentina. Total Measured and Indicated Resources increased to 381,400 ounces of gold (5.6 million tonnes grading 2.1g/t Au) representing an 89% increase in these categories compared to the resource published in 2009. An additional inferred resource of 144,800 ounces (3.1 million tonnes grading 1.5g/t Au) was also announced.

On 22 August 2011, the Company announced that it had commenced a 4,000-metre exploration diamond drilling program at the Michelle Prospect on the Don Nicolás Project.

On 31 August 2011, the Company announced that the Board of Directors had approved a \$14.9 million expenditure for the development of a 1.2-kilometre long exploration drive at the Ollachea Gold Project in Peru. The exploration drive was expected to take 15 months to complete and had been previously permitted by the Peruvian authorities.

On 7 September 2011, the Company announced a maiden mineral resource estimate at the Concurayoc Zone on the Ollachea Gold Project in Peru. The Company reported Inferred Mineral Resource at the Concurayoc Zone of approximately 0.9 million ounces (10.4 million tonnes grading 2.8 g/t Au at a 2g/t Au bottom cut-off grade).

On 22 September 2011, Peru's Parliament approved new laws that increased mining taxes to fund anti-poverty infrastructure in the country. The rules, which made fundamental changes to the taxation of the mining industry in Peru, were published in the Official Gazette on 29 September 2011 and have applied since 1 October 2011. Supplementary regulations were published on 29 September 2011 and 1 October 2011 to facilitate compliance. As a result, 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%.

On 29 November 2011, the Company announced that it had paid Rio Tinto Mining and Exploration S.A.C. \$2 million as part of a series of staged payments that totalled \$6.25 million over a four-year period for the purchase of the Ollachea Gold Project. The Company also announced that it had retained AMEC Peru S.A. ("AMEC") and Coffey Mining Pty Ltd. ("Coffee Mining") to complete a Definitive Feasibility Study ("DFS") for the Ollachea Gold Project (the "Ollachea DFS").

## **2012 Developments**

On 14 February 2012, the Company announced the results of a DFS for an open-pit milling operation for the Don Nicolás Project (the "Don Nicolás DFS"). Utilizing proven and probable mineral reserves of 197,000 ounces of gold and a price of \$1,250 per ounce, the results of the study report showed excellent economics that resulted in an after-tax NPV of \$25.1 million and an IRR of 22.8%. The pre-production capital cost to build the mine was reported as \$55.5 million. The NI 43-101 compliant technical report detailing the findings of the Don Nicolás DFS was filed on SEDAR on 16 February 2012.

On 5 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 that will allow the Company to raise up to C\$80,000,000 over the following 25 months.

On 30 March 2012, the Company reported its financial results for the year ended 31 December 2011. The Company produced a total of 33,255 ounces in 2011 at a site cast operating cost of \$410 per ounce of gold produced. The Company achieved an annual after tax profit of \$9.8 million (\$0.08 per ordinary share).

On 16 May 2012, the Company announced that it had completed the Environmental Impact Assessment (“EIA”) for the Don Nicolás Project in Argentina. The Company also announced that it had presented the EIA to the Secretary of Mining, Santa Cruz Province, Argentina to commence the mine permitting process, which was expected to take six months.

On 7 June 2012, the Company announced that the Community of Ollachea had agreed to extend the Surface Rights Agreement for the Ollachea Gold Project for a period of 30 years. As part of the agreement, Compania Minera Kuri Kulla S.A. (“MKK”) committed to continue certain community programs and confirmed that it would grant the community a 5% equity stake in MKK upon the commencement of commercial production at Ollachea.

On 10 July 2012, the Company announced that it signed a Social License Agreement for a period of 10 years with the communities of Jaramillo and Fitz Roy relating to the development of the Don Nicolás Project in Argentina.

On 16 October 2012, the Santa Cruz provincial authorities approved the EIA and granted the Development Permit for the Don Nicolás Gold Project. With the granting of the Development Permit, the Company was able to move forward toward project financing and mine construction. The Company also announced plans to commence development in 2013 with a goal of commissioning near the end of 2013, subject to project financing.

On 11 November 2012, the Company reported a new resource estimate for its Don Nicolás Gold Project. Total Measured and Indicated Resources increased by 23% to 468,600 ounces of gold (8.6 million tonnes grading 1.7 g/t Au), compared to the resource published in 2011. The Company also reported that total Inferred Resource had increased 14% to 164,500 ounces (4.0 million tonnes grading 1.3 g/t Au), compared to the resource published in 2011.

On 29 November 2012, the Company completed a positive DFS on Ollachea (the “Ollachea DFS”) reporting robust economics for an underground mining operation. Utilizing a probable mineral reserve of 9.3 million tonnes grading 3.4 g/t containing 1.0 million ounces, the study reported robust economics using a gold price of \$1,300 per ounce, reporting an after-tax NPV of \$155 million at a 7% discount rate and an IRR of 22.1%. The Company also announced that it planned to submit an EIA for the Ollachea Project before the end of 2012. The Company also announced its intentions to begin investigating financing alternative and the early commencement of detailed engineering. Subject to adequate financing and permitting, the Company forecast that production would commence near the beginning of 2015.

On 21 December 2012, the Company announced that the EIA for Ollachea and the Ollachea DFS had been submitted to the Peruvian authorities on 20 December 2012 thus officially commencing the mine permitting process. The Company also announced that it had received unanimous approval of the EIA by the Community of Ollachea’s General Assembly on 29

November 2012, a prerequisite to submitting the EIA to the Peruvian authorities. The Company anticipated being granted the necessary permits to develop Ollachea in mid-2013.

### **2013 Developments**

On 7 February 2013, the Company announced that it had 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 use of proceeds from the offering was for development costs associated with Ollachea Project.

On 13 February 2013, the Company announced that the 1,234-metre long exploration drive at its Ollachea Project had been completed ahead of schedule at a cost of \$13.8 million, approximately \$1.1 million below budget. The speed and reduced cost associated with the completion of the tunnel, as well as the practical experience gained, indicates that certain technical considerations utilized in the DFS are conservative. Specifically, the tunnel exhibits significantly better ground conditions, a much higher advance rate and minimal water infiltration, which are likely to have positive implications for the project economics outlined in the Ollachea DFS.

On 28 February 2013, the Company announced that Mr Brad Boland was to be appointed Chief Financial Officer of the Company on 1 April 2013, replacing Mr Tim Miller.

On 28 March 2013, the Company reported its financial results for year ended 31 December 2012. The Company produced a total of 27,321 ounces in 2012 at a site cast operating cost of \$581 per ounce of gold produced. The Company achieved an annual after tax profit of \$3.3 million (\$0.02 per ordinary share).

On 2 April 2013, the Company announced results from a small drill underground drill program that had commenced in January 2013. The Company reported assay results from three completed diamond drill holes, all of which intersected potentially ore grade gold mineralization:

- DDH13-T01 intersected 20m grading 4.48g/t gold,
- DDH13-T03 intersected 11m grading 5.47g/t gold, and
- DDH13-T04 intersected 9m grading 5.45g/t gold.

The eastern-most intersection (DDH13-T03) is located approximately 320m east of the eastern limits of the Minapampa mineral resources upon which the Ollachea DFS is based upon. These drilling results confirmed the presence of a significant extension to the strike length of the mineralized trend, which remains open-ended to the east. In addition, the average grade of these underground drill intercepts is substantially higher than the average grade of the Minapampa and Concurayoc mineral resources, further increasing the prospectively of this zone of mineralization.

In June 2013, the Province of Santa Cruz in Argentina passed amendments to the Provincial Tax Code and Provincial Tax Law that imposed a new tax on mining reserves. The law came into effect on 5 July 2013. The tax will amount to 1% of the value of mine reserves reported in feasibility studies and financial statements inclusive of variations resulting from ongoing operations. Regulations require that the tax be calculated on "measured" reserves, and Minera IRL's legal counsel has interpreted this to mean "proven" reserves. The Province has disputed

this interpretation but has not provided further clarification on the definition of "measured" reserves, and the effect of this new mining tax is not clear at this time. The Company continues to monitor the situation closely.

On 11 July 2013, the Company announced that Mr Kenneth Judge had withdrawn his consent for nomination for re-election to act as a director of Minera IRL at the Company's 2013 Annual and Special Meeting of Shareholders.

On 14 August 2013, the Company announced that it had entered into an agreement with Macquarie Bank Limited ("Macquarie Bank") to increase the amount available under the Company's debt facility with them by \$10 million, in two separate \$5 million tranches, increasing the amount under the debt facility to a total of \$30 million. Most terms of the agreement were unchanged; however, as a condition of drawing down on each additional \$5 million tranche a 0.5% gross revenue royalty on gold production from the Company's Ollachea gold project for the life of mine would be granted to Macquarie Bank (the "Macquarie Royalty"). Once granted, the Company would have the right to buyback and cancel each tranche of the Macquarie Royalty by paying a buyback fee at a cost of \$2.5 million for each 0.5% gross revenue royalty. An additional condition precedent to the second \$5 million tranche being made available was the government approval of the Environmental and Social Impact Assessment ("ESIA") required for the development of the Ollachea gold project, which was received by the Company in September 2013.

On 16 August 2013, the Company entered into a definitive agreement with Compañía Inversora en Minas ("CIMINAS"), whereby CIMINAS would make a \$45,000,000 investment in Minera IRL Patagonia S.A. ("Minera IRL Patagonia") to become up to a 45% equity owner of Minera IRL Patagonia. The equity investment, in addition to a \$35,000,000 credit facility CIMINAS made available to Minera IRL Patagonia, is expected to provide the financing required to develop Minera IRL Patagonia's Don Nicolás Gold Project in Santa Cruz Project, Argentina. In addition, Minera IRL entered into an agreement with Argenwolf S.A. ("Argenwolf") to provide Argenwolf a 4% equity stake in Minera IRL Patagonia as compensation for arranging the investment by CIMINAS. As part of the agreement, CIMINAS also agreed to subscribe for 9,146,341 ordinary shares of Minera IRL Limited in exchange for \$3,000,000, in equivalent Argentine Pesos, being invested in Minera IRL Patagonia. The 9,146,341 ordinary shares were issued on 9 October 2013. In the joint arrangement with CIMINAS, the Company will retain at least a 51% interest in Minera IRL Patagonia, down from 100%. For more information, see Section 15 - Material Contracts.

On 14 November 2013, the Company announced that the first \$5 million tranche under the amended facility was drawn by the Company, bringing the total amount outstanding under the facility to \$25 million. The corresponding 0.5% gross revenue royalty was registered against the Ollachea property in favour of Macquarie Bank.

On 24 December 2013, the Company announced that it had entered into an amended agreement with Rio Tinto that allowed the Company to pay up to 100% of the first instalment of the \$21.5 million due to Rio Tinto in ordinary shares of Minera IRL in the first quarter of 2014 (from up to 80% in ordinary shares). The first instalment represented 34% of the total amount due to Rio Tinto in respect of the final Ollachea payment, or \$7.3 million. The remaining 66% of the total

amount payable, \$14.2 million, is due by July 2016. The agreement was subject to other conditions that are presented in Section 15 – Material Contracts.

### **Events Subsequent to 2013 Year End**

On 28 January 2014, the Company announced that it had issued 44,126,780 ordinary shares of the Company at a price of C\$0.179 (equivalent to \$0.169) to Rio Tinto to settle the first instalment of the final Ollachea payment (\$7.31 million) and interest due (\$0.128 million) as detailed in the Company's announcement dated 24 December 2013. The Company also confirmed that the final instalment of \$14.19 million, representing the remaining 66% of the total amount payable, is not due until July 2016 with interest accruing at 7% per annum and is payable annually in July. As a result of this issue, Rio Tinto became the Company's largest single shareholder, owning approximately 19% of the issued capital in the Company.

On 31 January 2014, the Company announced that it has issued 1,917,600 ordinary shares at a price of C\$0.179 per share to settle certain accounts payable of the Company in the aggregate amount of C\$343,250.

On 10 February 2014, the Company announced that Mr. Graeme David Ross had resigned as a director of the Company and that Mr Daryl Hodges had been appointed as a Non-Executive Director of the Company. The Company also announced that Mr Brad Boland, also Chief Financial Officer of the Company, had been appointed Company Secretary, replacing Mr Tim Miller. It was also reported that Ms Trish Kent, Vice President Corporate Affairs, had retired.

On 17 February 2014, the Company reported preliminary 2013 operating results, its outlook for 2014, and provided an update on its recent activities. The Company reported that it had produced 25,223 ounces in 2013, above its guidance of 24,000 ounces, at site cash operating costs that were expected to be well below the full year budgeted rate of \$760 per ounce of gold produced. The Company also reported that it had ended 2013 with approximately \$3 million in cash, plus undrawn debt facilities of \$5 million. The Company forecasted that the Corihuarmi Gold Mine would produce approximately 21,000 ounces in 2014 at an expected site cash operating cost of \$885 per ounce of gold produced. The Company also announced its intentions to initiate a 26-hole, 1,600-metre exploratory drill program at Corihuarmi, focusing on the Ely and Cayhua Ridge prospects. At Ollachea, the Company reported that the Construction Permit and negotiations for a senior project debt financing were expected to be concluded in second quarter of 2014 (from the first quarter of 2014). The Company also reported that the Don Nicolás project was under development and that commission was expected to commence in the first quarter of 2015 (from the fourth quarter of 2014).

On 31 March 2014, the Company reported its financial results for the fourth quarter and 2013 full year. The Company produced a total of 25,223 ounces in 2013 at a site cast operating cost of \$677 per ounce of gold produced. The Company reported an annual after tax loss of \$33.8 million (\$0.20 per ordinary share). The after tax loss included a \$13.7 million non-cash impairment to the Corihuarmi Gold Mine and a \$12.5 million non-cash loss on the deconsolidation of the Don Nicolás Project following the CIMINAS joint venture transaction. The Company also announced that the final \$5 million tranche under the amended facility was drawn by the Company, bringing the total amount outstanding under the facility to \$30 million. The corresponding 0.5% gross revenue royalty was registered against the Ollachea property in favour of Macquarie Bank.

### **3 DESCRIPTION OF BUSINESS**

The Company is a fully integrated Latin American, publicly listed gold mining company based in Lima, Peru. Minera IRL currently has one mine that is in production, the Corihuarmi Gold Mine, which is located in the high Andes and has produced 203,035 ounces between March 2008 and the end of December 2013. In addition to large exploration portfolio, Minera IRL has two key development projects: Ollachea and Don Nicolás.

The Company's flagship asset within its exploration and development portfolio is the Ollachea Project in Peru. A DFS for Ollachea was completed in November 2012 and all environmental and social permits have been granted. The Company is currently seeking project financing and the Construction Permit to build the Ollachea Gold Mine.

The Company also has a significant interest in the Don Nicolás joint venture in Argentina. Financing to construct the Don Nicolás Mine was secured in the third quarter of 2013 from the joint venture partners. The project is fully permitted and is currently under construction.

### **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).

#### **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),

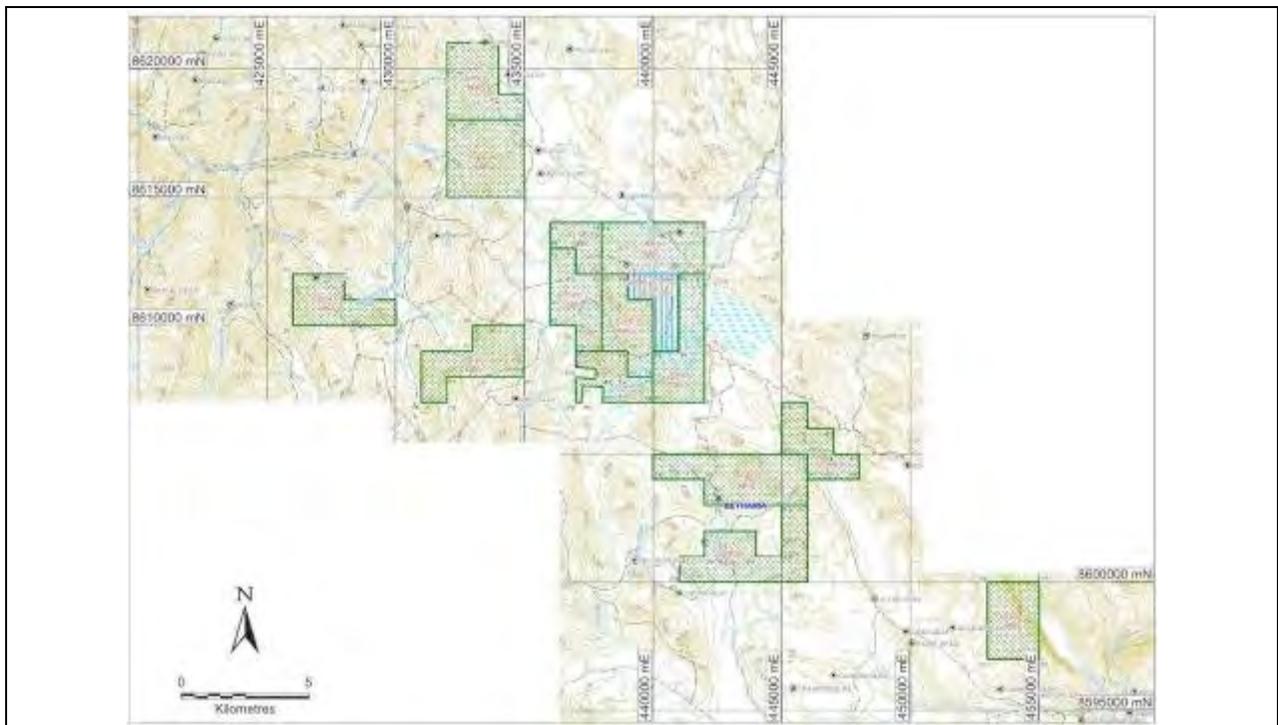
metallurgical testwork, geotechnical studies, internal and independent resource estimates and an internal pre-feasibility study. An external bankable feasibility study was subsequently commissioned and completed by Kappes Cassiday and Associates (KCA) in April 2006.

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. The scree material is currently being 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 \$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 \$300/oz, a sales royalty of 1.5%;
- Gold price from \$300/oz to \$350/oz, a sales royalty rate of 2.0%; or
- Gold price over \$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.

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 \$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 \$38,500. In addition, sustainable development projects in the two communities total \$667,000 per year.

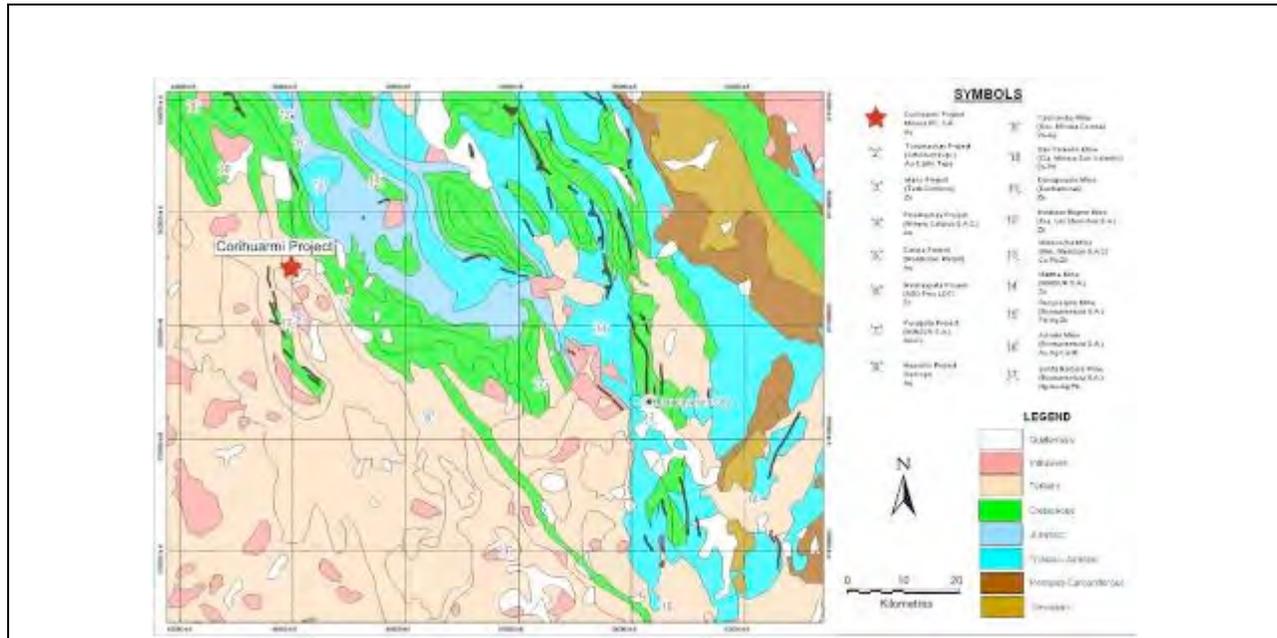
If the surface rights agreements expire, their extension can be renegotiated.

### **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 3 Corihuarmi Project – Regional Setting



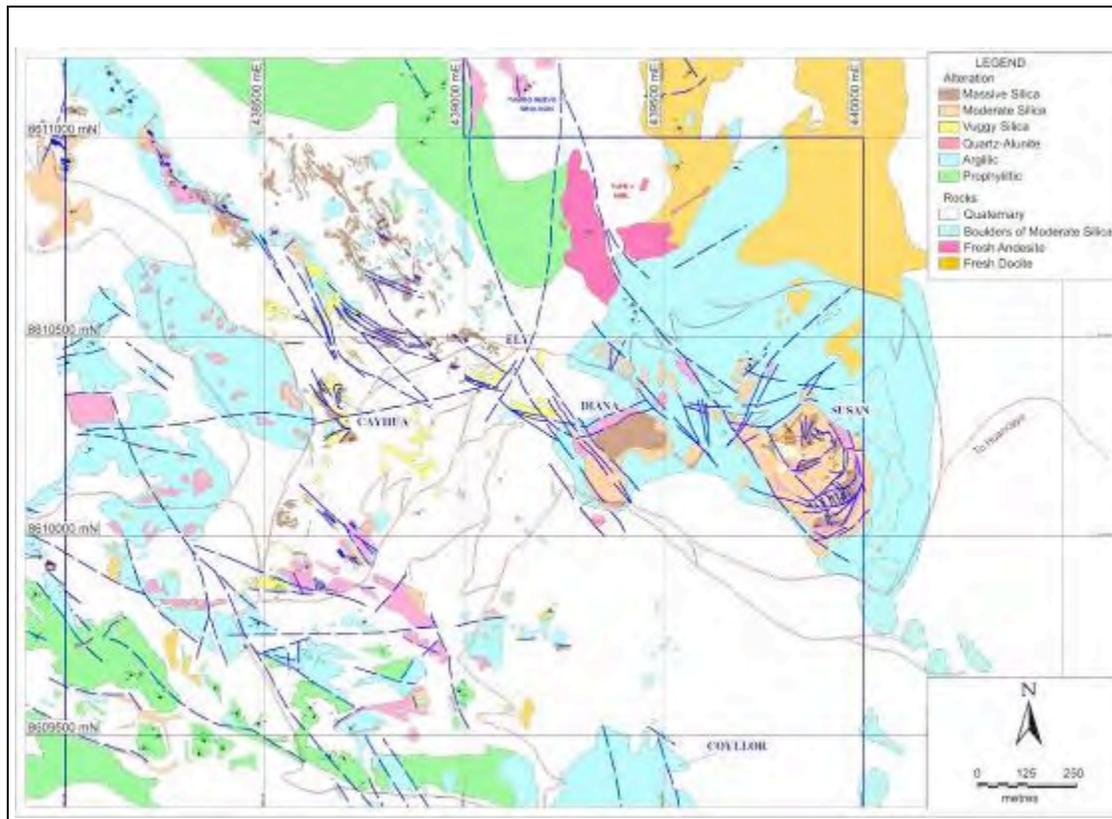
The Corihuarmi property is located at the northern extremity of the Southern Peru Epithermal Au-Ag Belt, associated with middle to upper Tertiary volcanics and intrusives of the Western Cordillera. These are separated from deformed Mesozoic sediments of the Altiplano immediately east of the project area by a major northwest trending thrust.

The geological understanding of the Corihuarmi Project is essentially confined to the central group of tenements, referred to as the Main Block, which host all known resources and reserves, and the majority of significant prospects.

The geology of the Main Block is dominated by a significant volcanic centre of Miocene to Pliocene age, comprising a series of dacite and rhyodacite domes of the Caudalosa Formation and broadly coeval volcanics of the overlying Astobamba Formation (Figure 4). The dacite domes broadly define the margins of a collapsed caldera structure, measuring some 4.5km by 3.5km and elongate in a north-northwest orientation. The overlying volcanics variously comprise dacitic and andesitic flows, ignimbrites and pyroclastic tuffs that conform to the dome margins.

The general structural orientation within the Corihuarmi area is consistent with the northwest Andean trend, mimicked by fold axes within Mesozoic sediments to the east, the major thrust separating these sediments from the younger volcanics, and the general orientation of the alteration system and associated caldera structure within the volcanics themselves. A series of east-west and northeast trending tensional structures appear to provide the focus for breccia development, alteration and mineralization within the vicinity of dacite domes. These high angle faults are variously characterised by either normal vertical or dextral horizontal displacements.

Figure 4 Corihuarmi Project - Geology

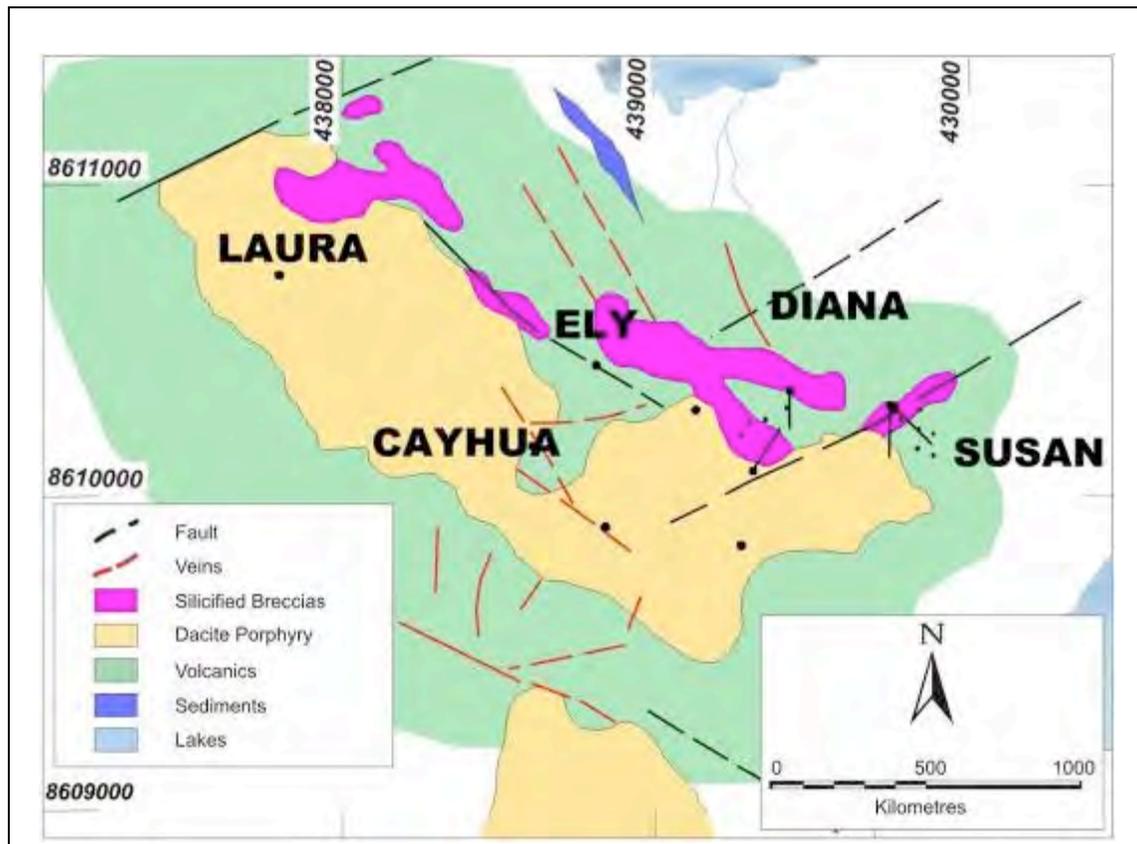


Mineralization identified to date within the Corihuarmi Project comprises a high sulphidation epithermal precious metal system that formed at relatively shallow depth. Gold and silver mineralization is essentially confined to remnant zones of silicification and brecciation that dominantly lie along the 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 ( $>1\text{g/t Au}$ ) 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 ore bodies; 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.

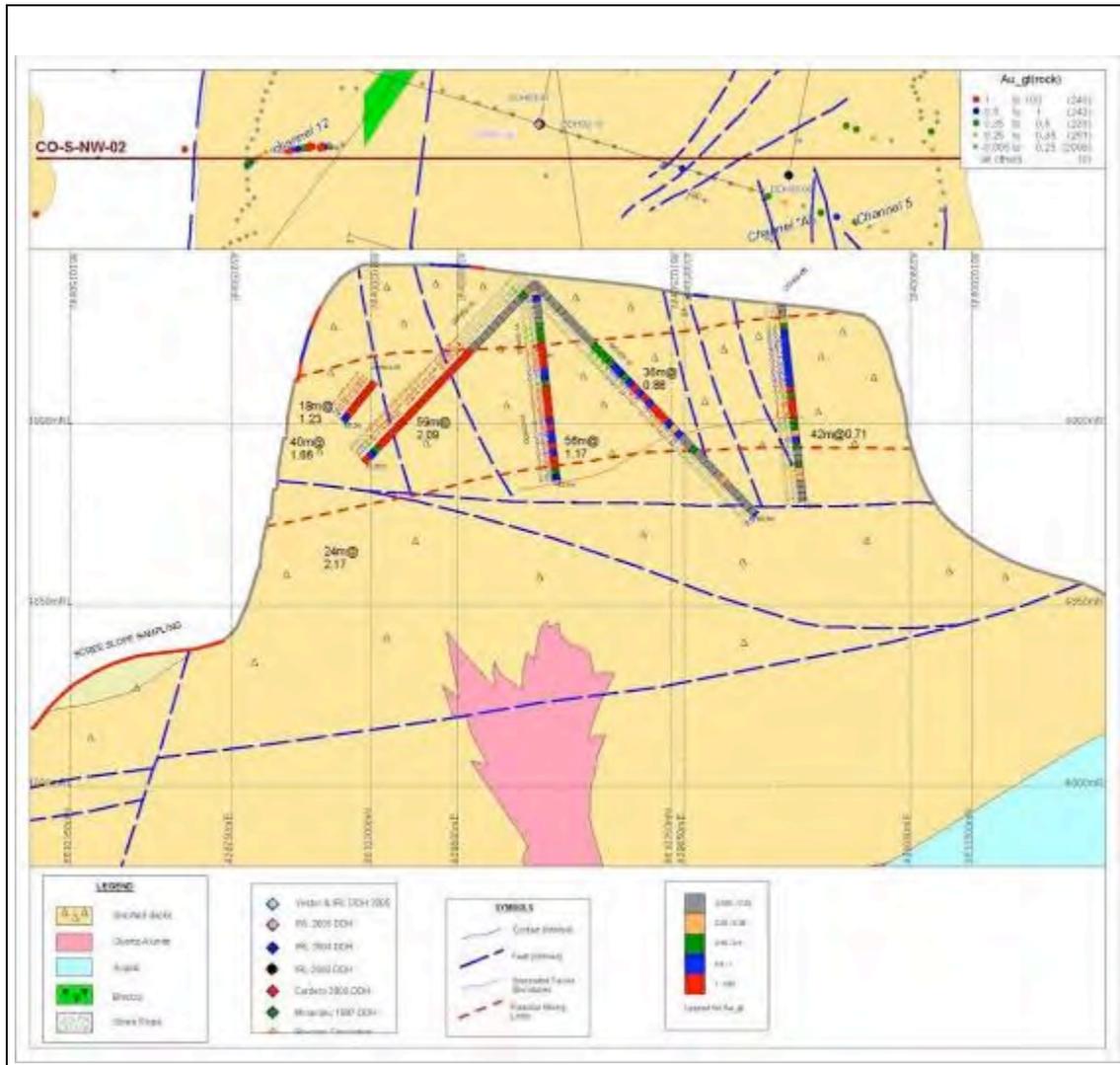
*Figure 6 Corihuarmi Project – Susan (right) and Diana (left) Zones (pre-mining)*



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

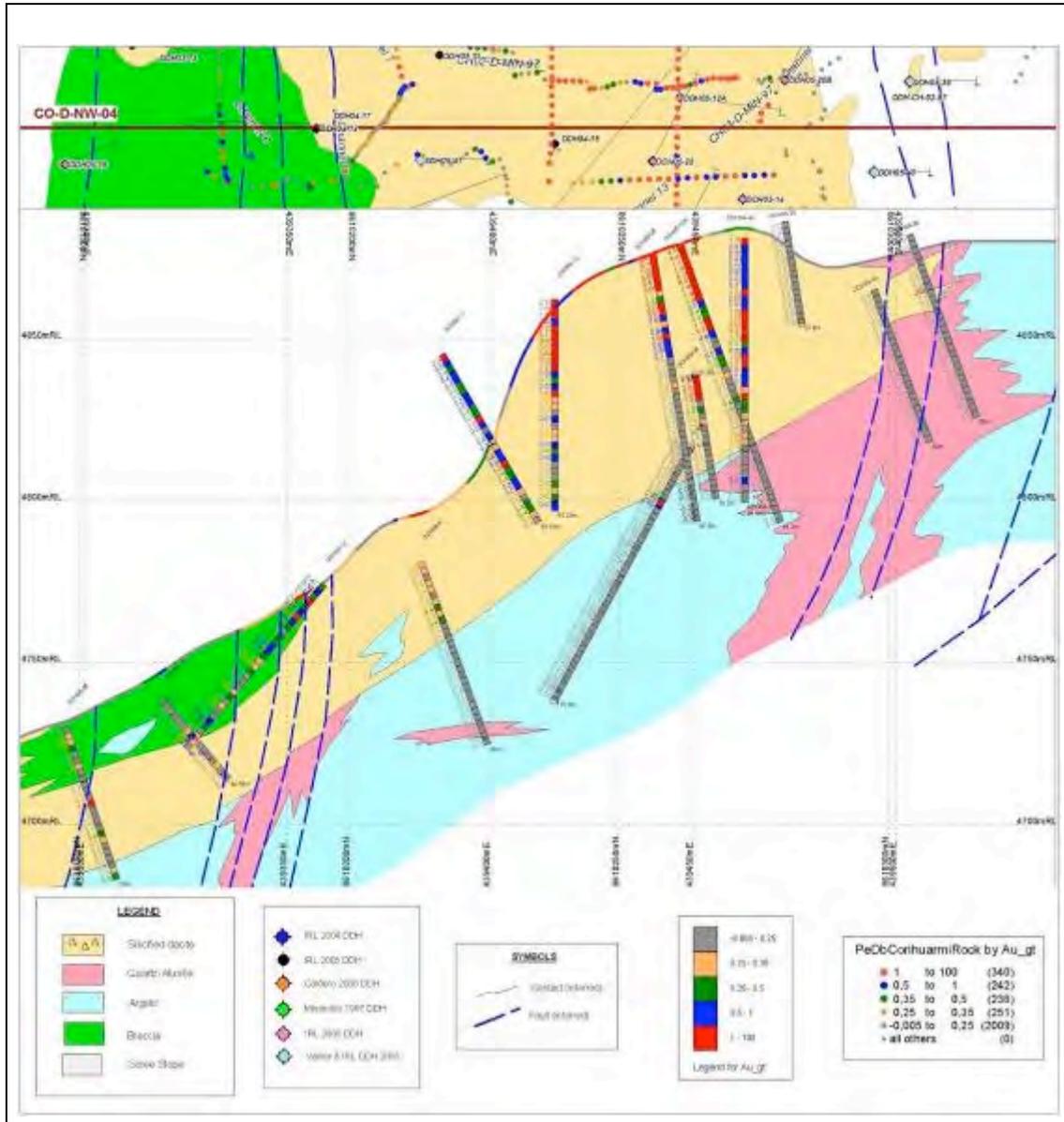


Figure 8 Corihuarmi Project - Susan Deposit – Representative Drill Section



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



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. Only Cayhua has been subjected to drilling and a feasibility study is expected to be completed during 2014 on this prospect.

## 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 ≥ 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 31 December 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 was 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.

Since the 31 December 2009 Reserve Summary was prepared, the Diana and Susan deposits have been largely depleted. Mining operations continue to exploit extensions of the mineralized zones associated with the Diana and Susan deposits. Management estimates that mining operations will cease at Corihuarmi in the third quarter of 2015 without the delineation of additional ore-grade mineralization.

## Operations

The environmental conditions at the Corihuarmi Gold Mine, located at up to 5,000m 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's 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 initially permitted to mine and treat up to 4,500 tonnes per day. Since then, the mine has been re-permitted to allow the mining and treatment of 9,000 tonnes per day. In 2013, the Company mined and stacked approximately 6,500 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.

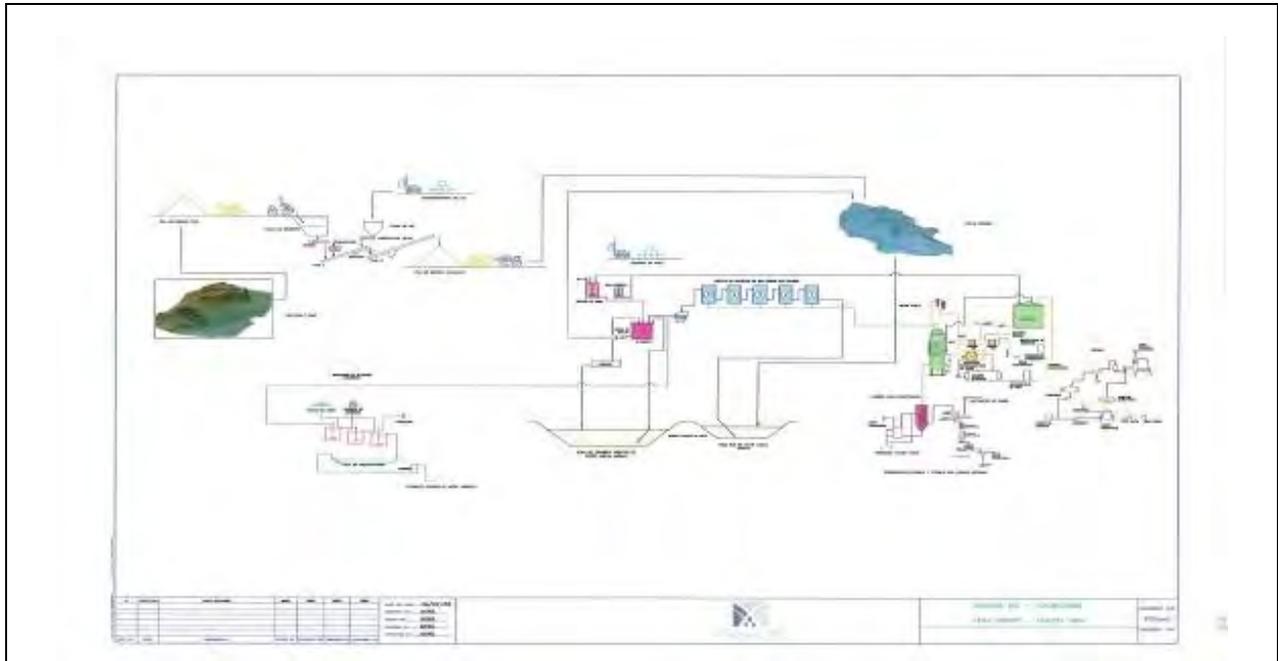
The geotechnical evaluation was completed by Vector in 2005. The evaluation was based on existing geological data, field structural and geotechnical mapping and drill hole core logging. In summary, the evaluation resulted in the recommendation of 70° batters and 8.5m berms for every 20m in vertical wall height. 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 8m 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**

A summary of historical production and key operating costs from Corihuarmi since mining commenced in January 2008 are presented in the following table:

**Table 3 Corihuarmi - Historical Production and Key Operating Statistics**

<b>Parameter</b>	<b>2008 Year</b>	<b>2009 Year</b>	<b>2010 Year</b>	<b>2011 Year</b>	<b>2012 Year</b>	<b>2013 Year</b>
Ore mined and stacked (tonnes)	1,076,033	1,216,844	1,455,500	2,000,733	2,064,382	2,375,630
Ore grade (g/t Au)	1.99	1.13	0.87	0.68	0.50	0.45
Gold Production (oz)	51,691	33,012	32,533	33,255	27,321	25,223
Gold Sales (oz)	50,347	32,147	33,240	33,718	27,462	25,220
Realized Price (\$/oz)	869	988	1,232	1,570	1,673	1,412
Site Cash Operating Cost	161	341	383	410	581	677

Management's current estimate of the remaining mine life at Corihuarmi is summarized in Table 4.

<b>Table 4 Corihuarmi Project - Life of Mine Plan Summary</b>						
<b>Year</b>	<b>Tonnes Ore</b>	<b>Grade Au (g/t)</b>	<b>Ounces</b>	<b>Tonnes waste</b>	<b>Ratio (SR)</b>	<b>Rec Au Ounces</b>
2014	2.5Mt	0.33	26.7koz	0.81kt	0.32	21.3
2015	2.1Mt	0.33	19.0koz	0.33kt	0.15	15.2
Total	4.6Mt	0.33	45.7koz	1.1kt	0.24	36.5

### *Production Taxes and Royalties*

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 utilized 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

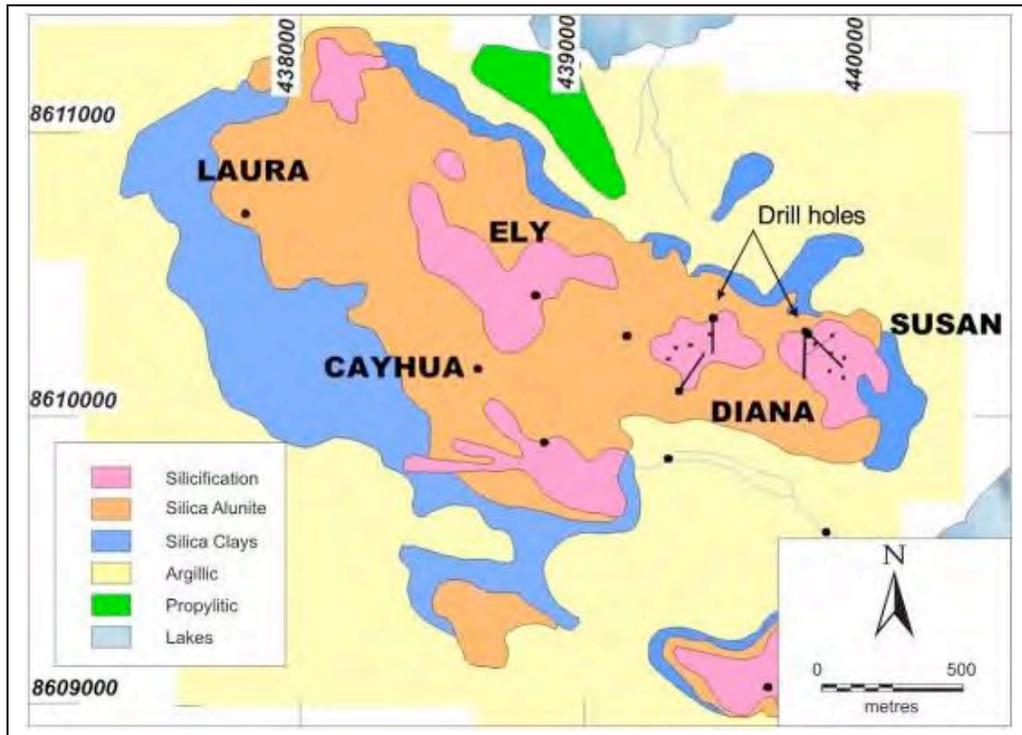
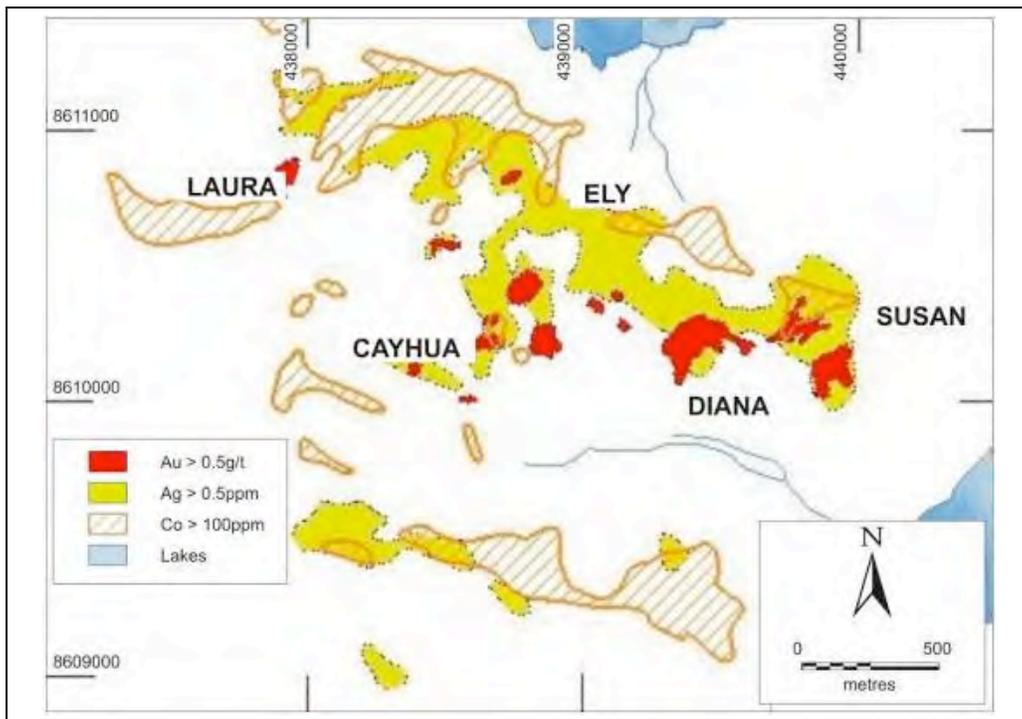


Figure 13 Corihuarmi Project - Main Block Metallogenic Zonation



Results from the drilling at the Cayhua prospect have been positive and Minera IRL is undertaking a study to access the viability of including this prospect in Corhuarmi's 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 specialized or technical roles.

In addition to the areas of known gold mineralization, 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 in the second quarter of 2014 via a small drill program.

## **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).

### **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 Definitive Feasibility Study 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 200m east of the proposed plant site for the Project. The Project is located at between 2,500m and 3,500m 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 20.9mm (June) to 228.7mm (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.

Minera 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 totalling 26,026m 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 totalling 51,062m 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 11,143m. At this stage, a Prefeasibility Study Mineral Resource estimate for the Minapampa Zone, based on 120 drill holes totalling 46,404m, 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 17,904m. By this time, 206 drill holes totalling 80,109m 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 81,073m 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 59,509m). The results of the Ollachea Resource Upgrade to be used for the Minapampa Feasibility Study were announced in a press release dated 18 July 2012.

On 29 August 2011, the Company announced that it had committed to the construction of a 1.2km exploration tunnel into the hanging wall of the Minapampa ore body at the Company's Ollachea Gold Project. In addition to providing access for underground exploration drilling, the tunnel has been designed to later serve as a production tunnel, which is expected to facilitate rapid mine development when project permitting is complete and project financing is in place.

In January 2013, the exploration tunnel reached its planned 1.2km objective, and did so more than a month ahead of schedule and approximately \$1.1 million under budget. The speed and reduced cost associated with the completion of the tunnel, as well as the practical experience gained, indicates that certain technical considerations utilized in the DFS are conservative. Specifically, the tunnel exhibits significantly better ground conditions, a much higher advance rate and minimal water infiltration, which are likely to have positive implications for the project economics outlined in the DFS.

The Company commenced an underground drilling campaign in January 2013. The initial program consisted of three completed diamond drill holes, all of which intersected potentially ore grade gold mineralization:

- DDH13-T01 intersected 20m grading 4.48g/t gold,
- DDH13-T03 intersected 11m grading 5.47g/t gold, and
- DDH13-T04 intersected 9m grading 5.45g/t gold.

The eastern-most intersection (DDH13-T03) is located approximately 320m east of the eastern limits of the Minapampa mineral resources upon which the Ollachea DFS is based upon. These drilling results thereby confirm a significant extension to the strike length of the mineralized trend, which still remains open-ended to the east. In addition, the average grade of these underground drill intercepts is substantially higher than the average grade of the Minapampa and Concurayoc mineral resources, further increasing the prospectively of this zone of mineralization.

*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 8,698.98ha (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 2.5km north of the mine portal and within the Oyaechea 9 concession.

A gap measuring approximately 3,000m long by 130m 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.

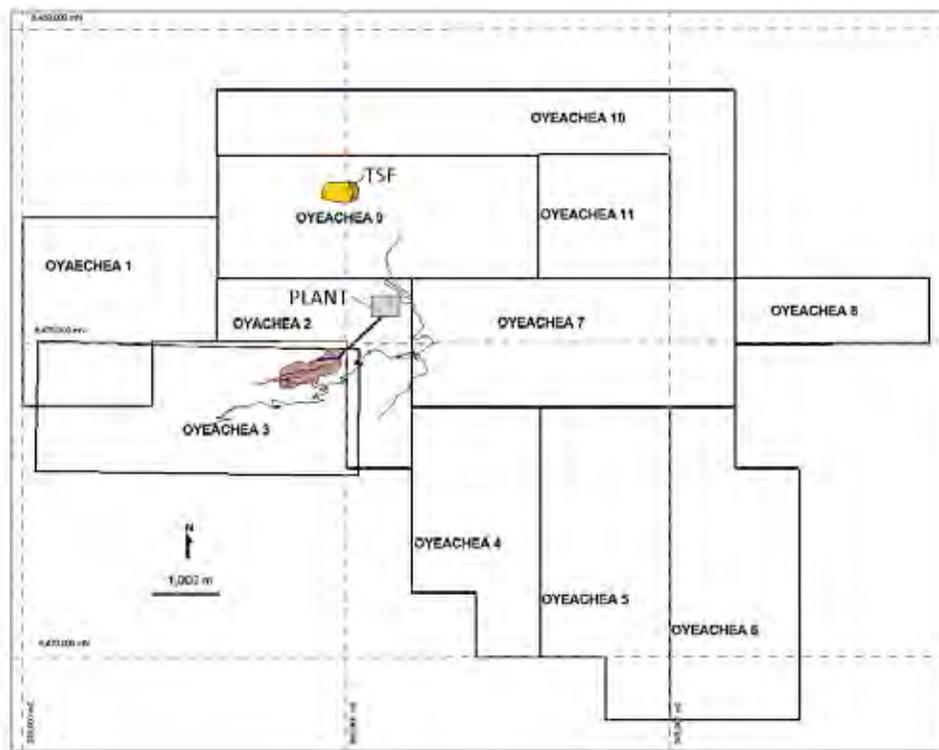
MKK has signed a 30-year surface rights agreement in June 2012 with the Community of Ollachea allowing MKK to use the property covering the area of interest of the Project. The agreement allows the Community of Ollachea to carry out artisanal mining activities on the property until MKK commences production.

MKK currently holds permits that 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 the Ollachea DFS. 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 Oyeachea 1 to Oyeachea 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, the Company 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 \$250,000, progressive payments totaling \$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 the Company 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, which included certain provisions for clawback rights, purchase of a portion of the net smelter return on the project, and payments tied to the delivery of a positive Feasibility Study.

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.

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 \$3.81 million. This payment was made in mid-2010.

In the fourth quarter of 2012, Minera IRL completed the Ollachea DFS and, in the third quarter of 2013, it was agreed that Minera IRL would pay a final amount of \$21.5 million to Rio Tinto based upon the results of the November 2012 Feasibility Study for the Ollachea Gold Project. In December 2013, the timing of payments was amended again. The current terms of payment for this final amount are discussed in Section 15 - Material Contracts, near the end of this document.

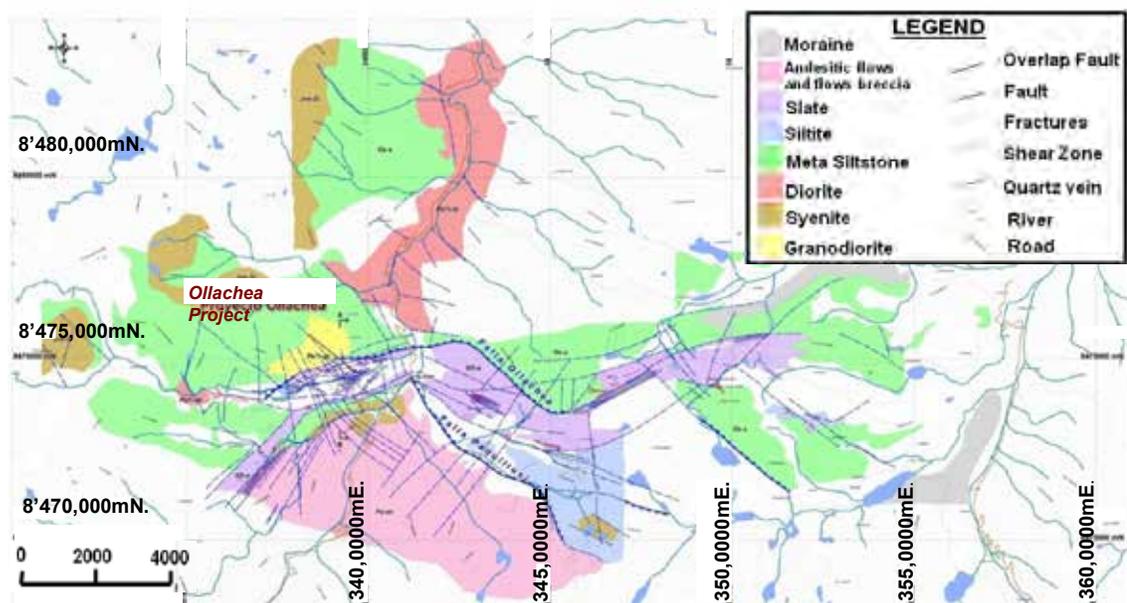
MKK negotiated a surface rights agreement with the Community of Ollachea covering an area of 5,998.9848ha of the Oyaechea 3 concession, which was signed on 25 November 2007. The agreement will be in force for a maximum of five years, and will automatically revert to a development contract at the time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

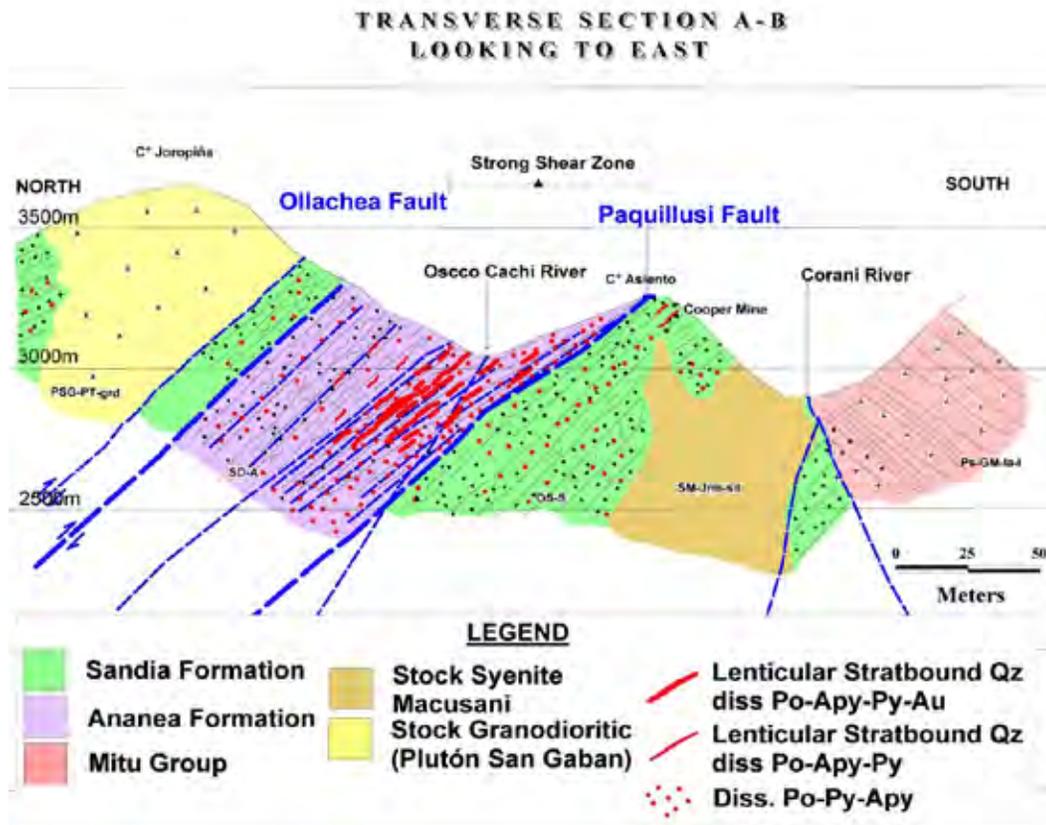


(after Ing. Valdivieso, Y., MKK, 2008. Regional Map of the Ollachea Project. 1:50,000 scale)

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 Oscco Cachi River. Mineralization has been traced continuously for 900m 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 Oscco Cachi River that is referred to as Concurayoc, located some 400m west of Minapampa. The known mineralized zone is approximately 1,900m long, up to 200m thick and has been traced in places to over 400m 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 40cm, 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 activities is mesothermal quartz vein style gold mineralization. The Ollachea deposit has also been described as a member of the class of orogenic gold deposits, which are known for their large size and continuation to depth, and are a major source of the world's gold production. Important examples include Muruntau in Uzbekistan (currently world's largest open pit gold mine), Skukhoi Log in Russia (widely considered the world's largest undeveloped gold deposit), Ballarat and Bendigo in Australia (the first economically significant gold discoveries on the continent).

Furthermore, it is believed that local syngenetic gold enrichment plays a role in the location of the Ollachea 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. Important examples include the Haile, Ridgeway, and Barite Hill mines of the Carolina Slate Belt in the United States.

### **Drilling and Exploration Techniques**

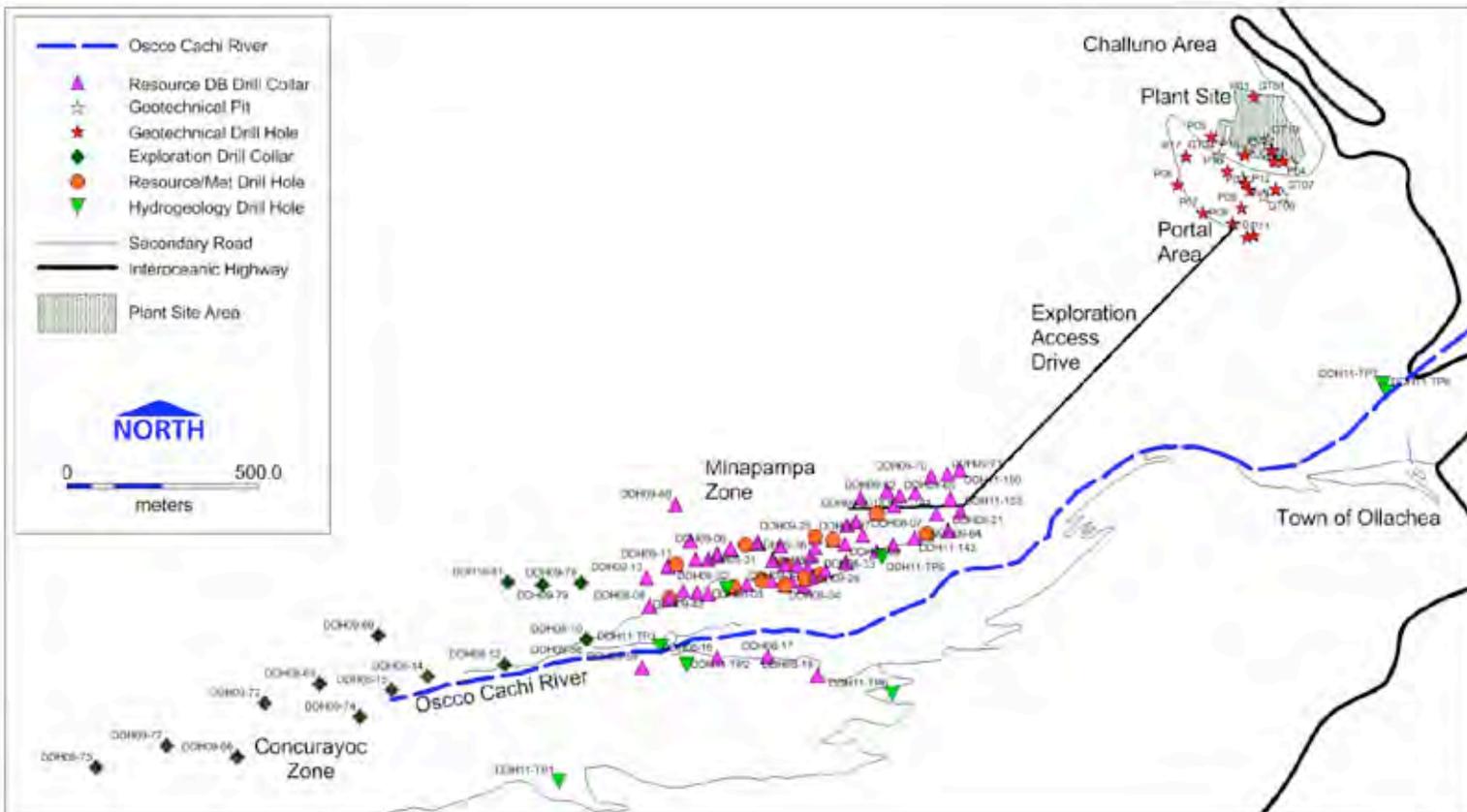
Since Minera IRL commenced drilling in October 2008, it has completed approximately 82,275m of drilling in 211 holes over a strike length of approximately 2km, resulting in the delineation of significant gold mineral resources and reserves at Ollachea. There is significant exploration upside at Ollachea, as all zones of known mineralization remain open-ended both along strike and down-dip.

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, utilizes 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. The Minapampa zone has been drilled at a nominal spacing of approximately 30m by 30m.

Figure 19 Drill Hole Location Map



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

Down-hole surveys have been undertaken by the contract drilling company utilizing 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 0.3m to 5m lengths within the known mineralized zones (samples of 2m to 5m lengths have been taken in the surrounding non-mineralized areas) and have an average length of 1.33m (the median length is 1m).

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 >1km 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 40m 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 1.0m length be taken in mineralized zones recognized during the logging process. Core outside the 1.0m sampling intervals but transitional to the visually identified mineralized zones, is half-core sampled on a 2.0m sample length. Core interpreted to represent zones sterile of gold mineralization are quarter-sawn and sampled at 5.0m lengths. If any assayed intercepts with greater than 0.5 g/t Au are encountered in the 5.0m sampling intervals, these intervals are re-sampled taking half-core samples at 1.0m 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 50g 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 100m 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.

A total of 707 samples have been taken from Minapampa for bulk density determinations. A total of 201 of these determinations correspond to mineralized horizons and 506 to sterile rock from the hanging-wall and footwall components of the mineralized package.

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 Ollachea DFS, metallurgical testwork was conducted on samples from the Ollachea deposit to investigate the ore's metallurgical response and to generate process design data. The Ollachea DFS 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 \$3/t to \$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 DFS 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.

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

<sup>1</sup> Using \$1,250/oz gold price and \$3.6/kg sodium cyanide cost

- Moderate double refractory component, with some gold locked in silicates and sulphides (minor arsenopyrite and dominant pyrrhotite).

In the Ollachea DFS, it is envisioned that 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>

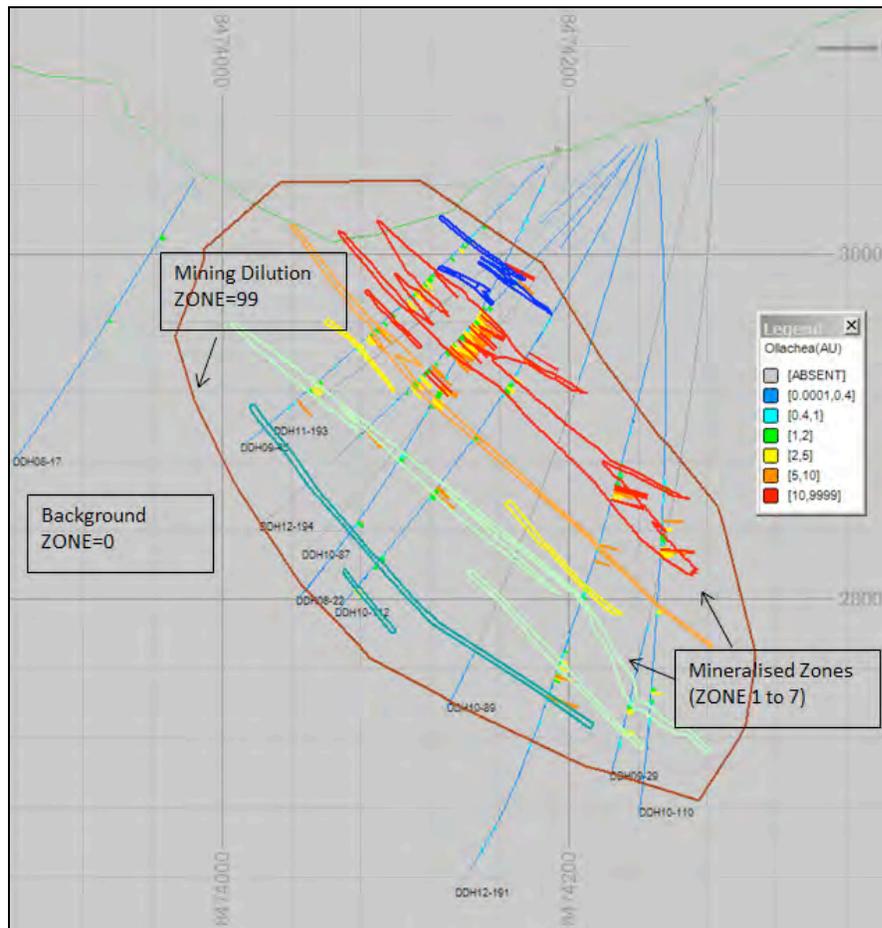
## Mineral Resource Estimates

Coffey Mining has estimated an Indicated and Inferred Mineral Resource for the Minapampa Zone of the Project as at 6 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 1.0g/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 707 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 2m 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 20mE x 20mN x 4mRL was selected with sub-blocking to a 2mE x 2mN x 0.4mRL 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 40m x 40 m or better, and an estimated grade greater than 2g/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 2.0g/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 2.0g/t Au cut off consist of 10.6 Mt of Indicated Mineral Resources with an average grade of 4.0g/t Au and 3.3 Mt of Inferred Mineral Resources with an average grade of 3.3g/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**

Mineral Resources above a 2.0 g/t Au Cut-off Grade	Tonnage (Mt)	Au Grade (g/t)	Contained Au (Moz)
<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 2.0g/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 2775mRL. 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 mineralized 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 mineralized lodes that are of significantly lesser width than the mineralized 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 mineralized 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)

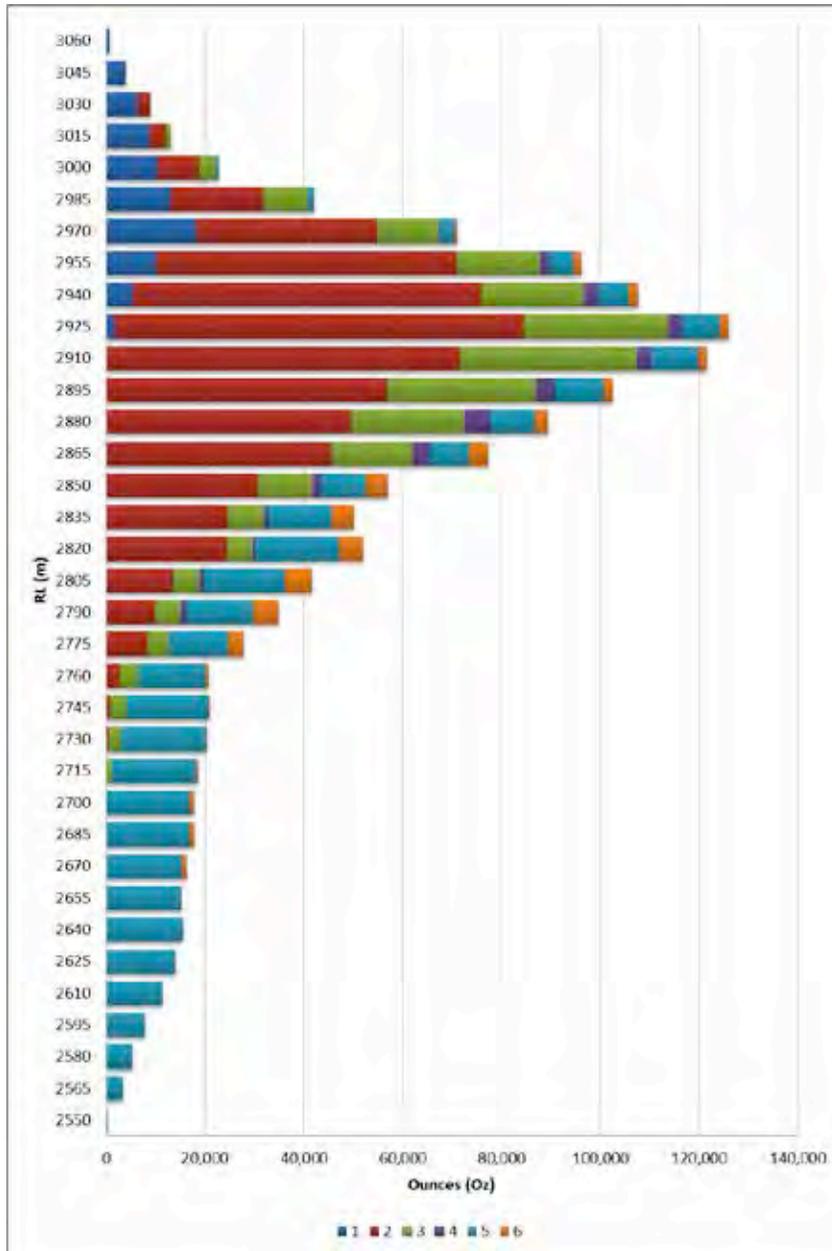
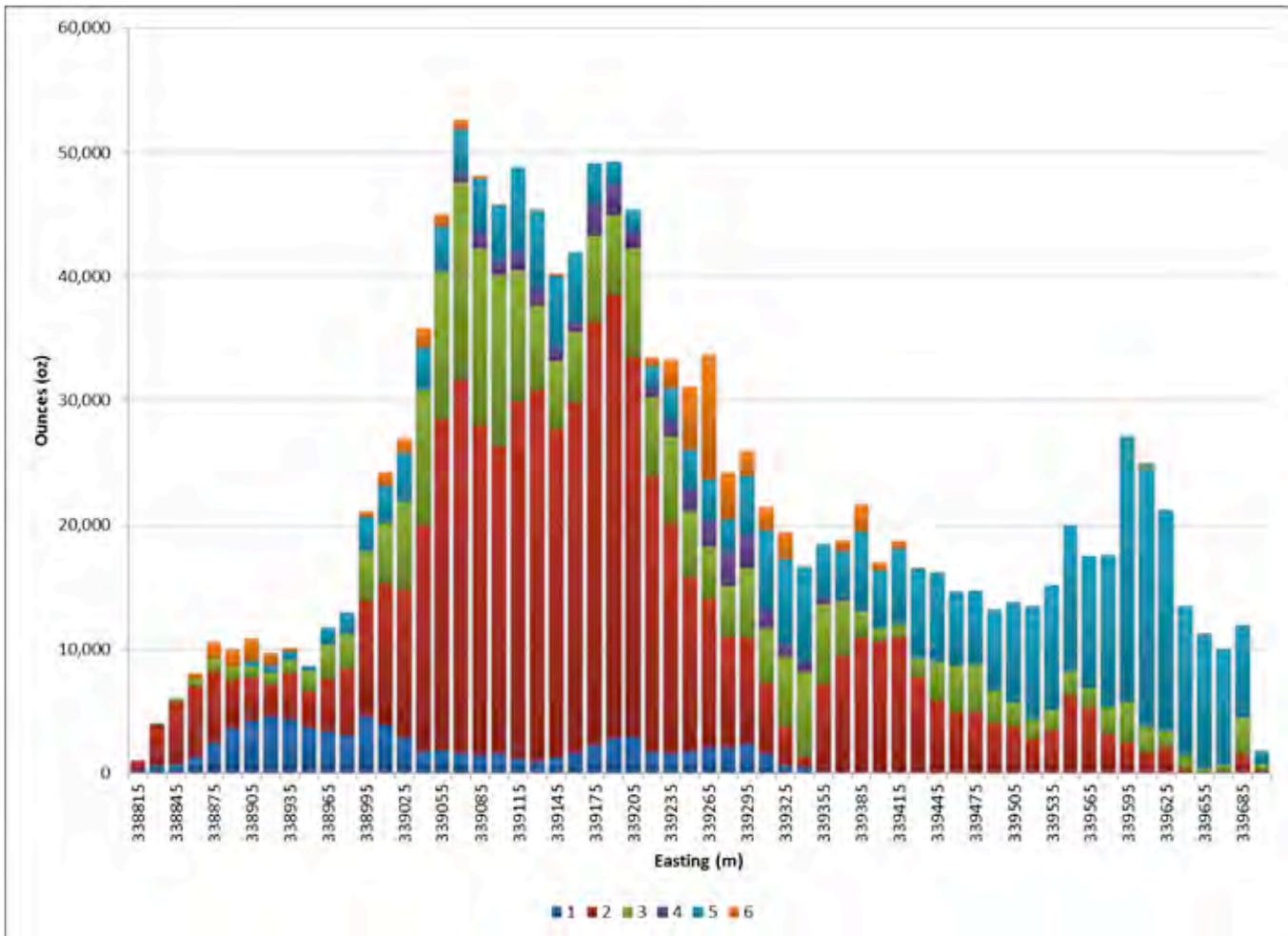


Figure 22 Ounces per 15 m Easting Step (Indicated Category Only)



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 Ollachea DFS. Included in this model is an interpreted shear zone that cuts through the mineralized 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 mineralized zones is shown in Figure 23.

*Figure 23 DFS 3D Structural Model Shear Zone*



A mine design cut-off grade of 2.0g/t Au was used for the Ollachea DFS. The financial outcome of the study and company strategic objectives were key considerations in the selection process. The Project Mineral Resource is also reported above a 2.0g/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: 0.3m on each wall for a total of 0.6m;
- minimum mining width: 2.0m (2.6m with dilution);
- minimum waste pillar width: 7.5m lode true width;

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

The selection of a 15m by 15m 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 2.0g/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 2.0g/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 1.0g/t Au has been applied to this material.

**Table 11 Mineral Reserve Estimate (29 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 \$1,300 / oz, a project COG of 2.0g/t Au, LOM project operating costs of \$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 2.0g/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 1.0g/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 (29 November 2012)**

Description	Units	Value
<b>Gold Price</b>	<b>\$/oz</b>	<b>1,300</b>
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	\$/ t ore	23.4
Milling Operating Cost	\$/ t ore	21.5
G&A Operating Cost	\$/ 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	\$M	177.5
Sustaining Capital Cost	\$M	41.5
Closure Cost	\$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 (29 November 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>

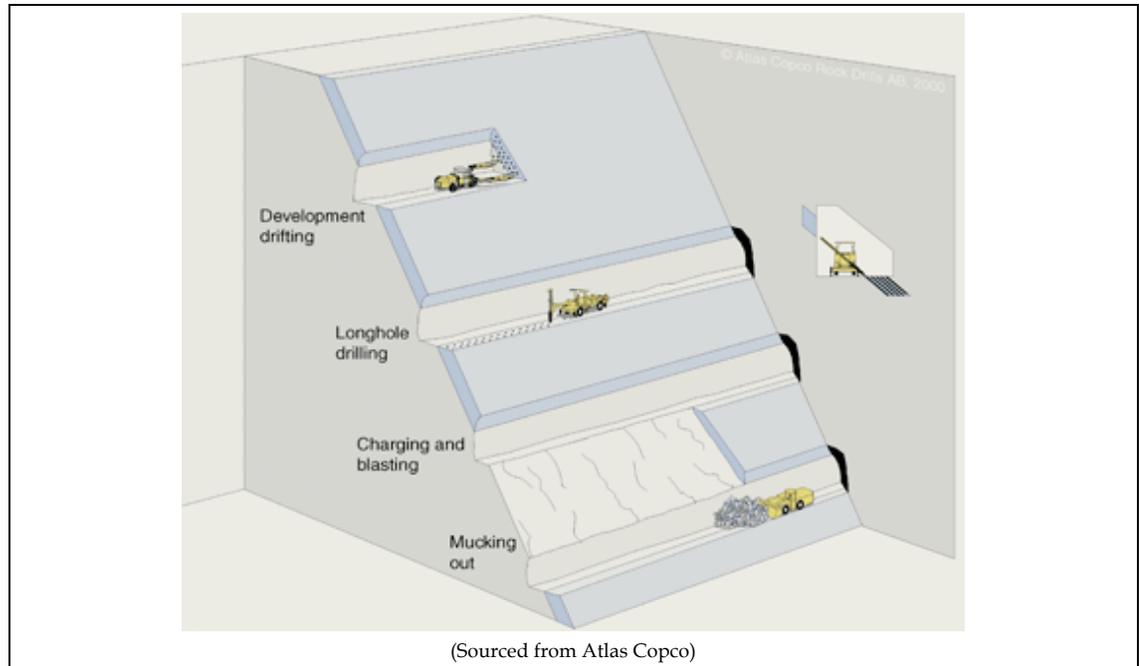
*Totals may not sum due to rounding*

## Mining Methods

The mining method selected for the Ollachea DFS was long hole open stoping (LHOS) with paste backfill, which may 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.

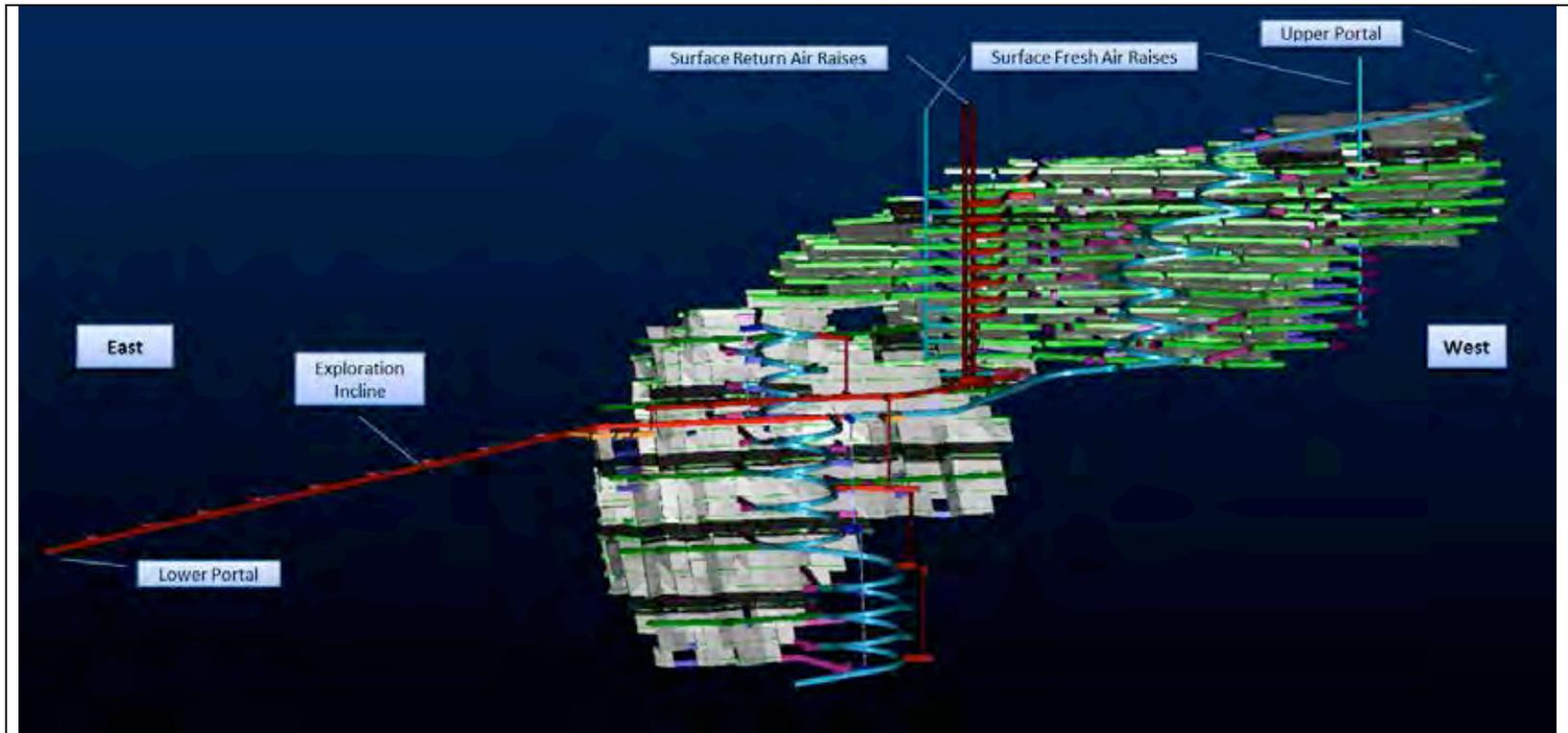
*Figure 24 Typical View of the Selected Longitudinal Mining Method*



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 Ollachea DFS mine layout is shown in Figure 25.

Figure 25 Isometric Mine Layout Looking South



The main access to the mineralization will be via a 1.2km-long exploration access incline (1.5%) which has its portal in a valley on the north-eastern side of Cerro Joropiña and the Oscoco 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 2765mRL.

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 2782mRL, to access the eastern part of the mine. The decline drive will extend to 2550mRL to service the deepest planned mining level at 2565mRL. The incline drive will extend to a mining level at 2865mRL.

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 3060mRL. These drives when connected will provide a second means of egress, access to all the mineralization 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 mineralization 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 2940mRL.

Due to the non-visual nature of the ore body, 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. Mineralized 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 2790mRL and 2805mRL 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 15m vertically floor to floor. Planned stope strike length is based on geotechnical interpretation and varies between 13m and 23m 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 (76mm or 89mm) 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 10m vertically or 14m 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 80m<sup>3</sup>/h during the exploration tunnel excavation, and will reach a flow rate of approximately 120m<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 2.4m long rock bolts installed on a systematic pattern with nominal spacing of 1.3m to 1.7m, 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 50mm.

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

**Table 14 Stable Stope Dimensions**

Stope Face	HR	Stope Dimension (m)										
Back	5.7	Length (L)	12.00	<b>15.00</b>	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									
		Length(L)	<b>23.0</b>									
Footwall	6.4	Inclined Height (H)	21.2									
		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's 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 15m 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 2.0m (minimum mining width) to 48.0m. 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 18.6m and 33.6m, and three ore drives are planned when lode thickness is greater than 33.6m. Ore drive spacing is based on a 15m 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

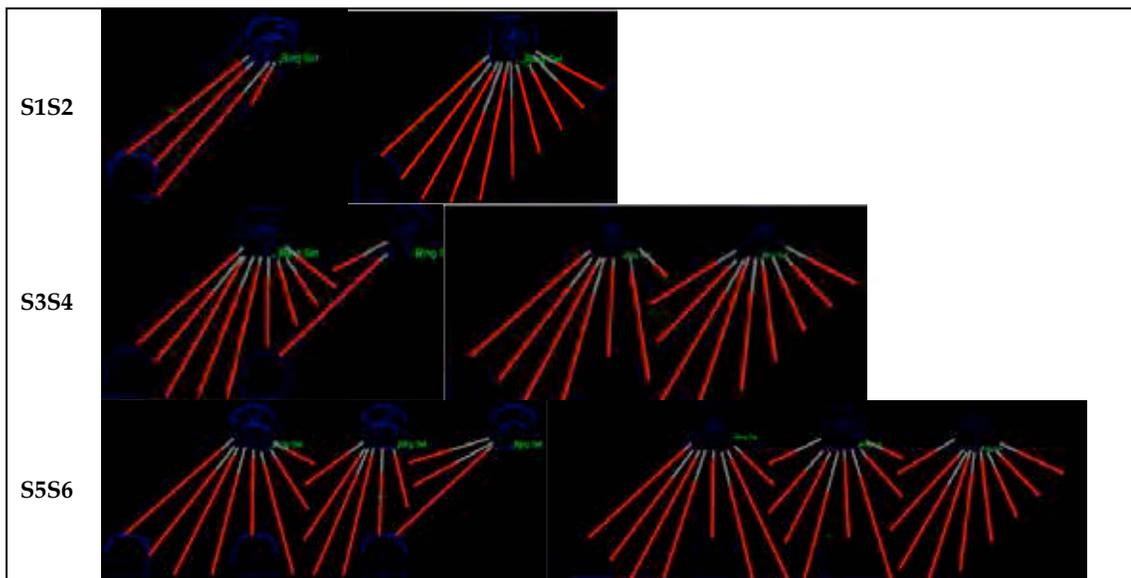
All stope slot raises will be drilled and blasted using a drop raise technique. This requires holes to be drilled in a similar pattern to a development drive drill pattern. A stope slot drive is required on the lower level to provide void for opening the stope slot. This is developed post-filling, with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

Stope drill and blast parameters for the Ollachea DFS are:

- Recommended drill hole size is 76mm for narrower stopes and 89mm 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 0.44kg/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 Ollachea DFS 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.

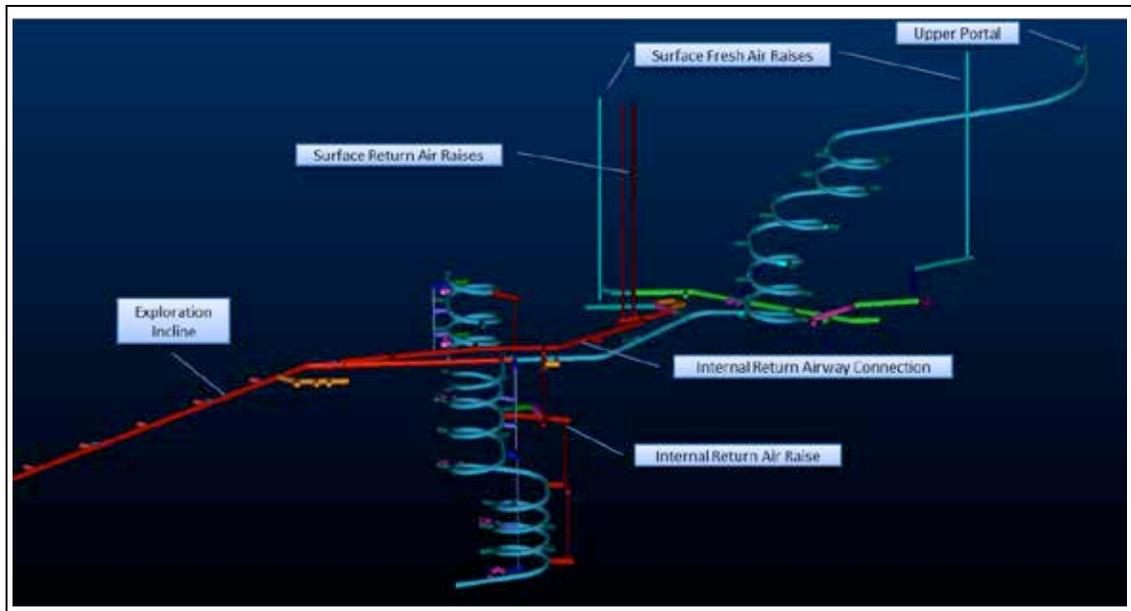
The planned primary ventilation system consists of:

- Two surface intake shafts.
- Two surface return air shafts that will have a single primary fan with a duty of 350m<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 700m<sup>3</sup>/s at a prevailing air density of 0.8kg/m<sup>3</sup> (equivalent of 470m<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. Lower ramp $Q_{TOTAL}=54m^3/s$ . Upper ramp $Q_{TOTAL}=54m^3/s$ .
July 2014	First surface FAR commissioned. 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. $Q_{TOTAL}=250m^3/s$ .
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. $Q_{TOTAL}=700m^3/s$ .
May 2020	Mining is at its extremities and at maximum production rate $Q_{TOTAL}=700m^3/s$ .

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.

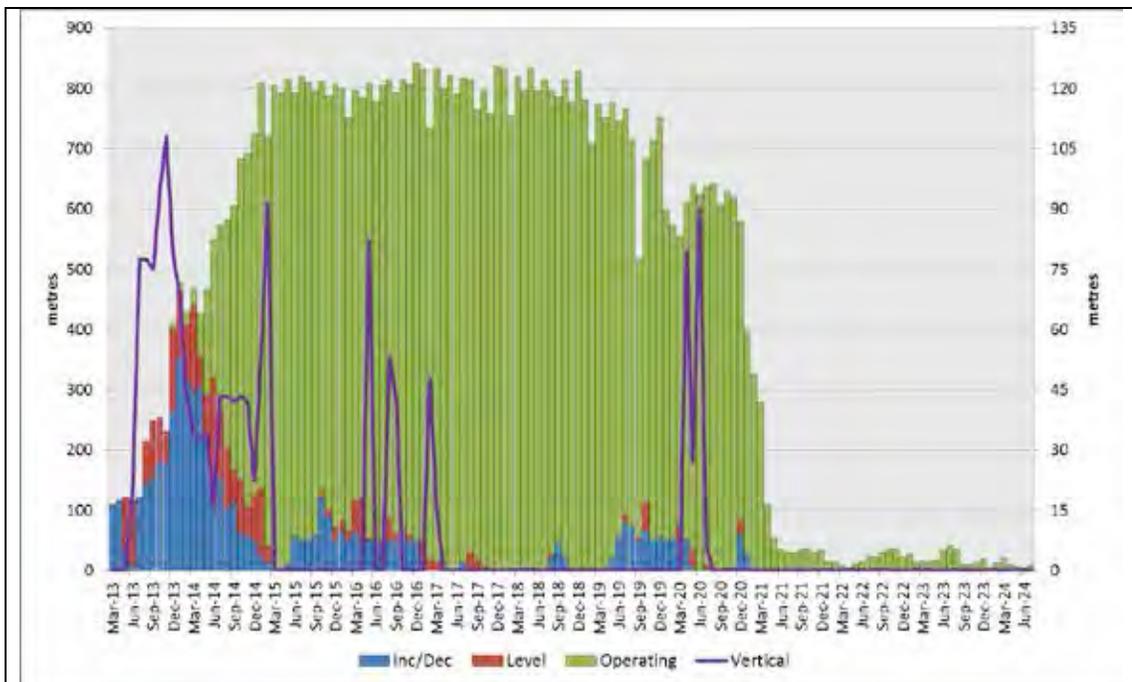
The mine development strategy employed for the Ollachea DFS is as follows:

- 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 2775mRL 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 2805mRL 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. Ollachea DFS LOM underground mining physicals are summarised in Table 19 and Figure 29 shows LOM percentage tonnage splits.

Figure 29 LOM Percentage Tonnage Split

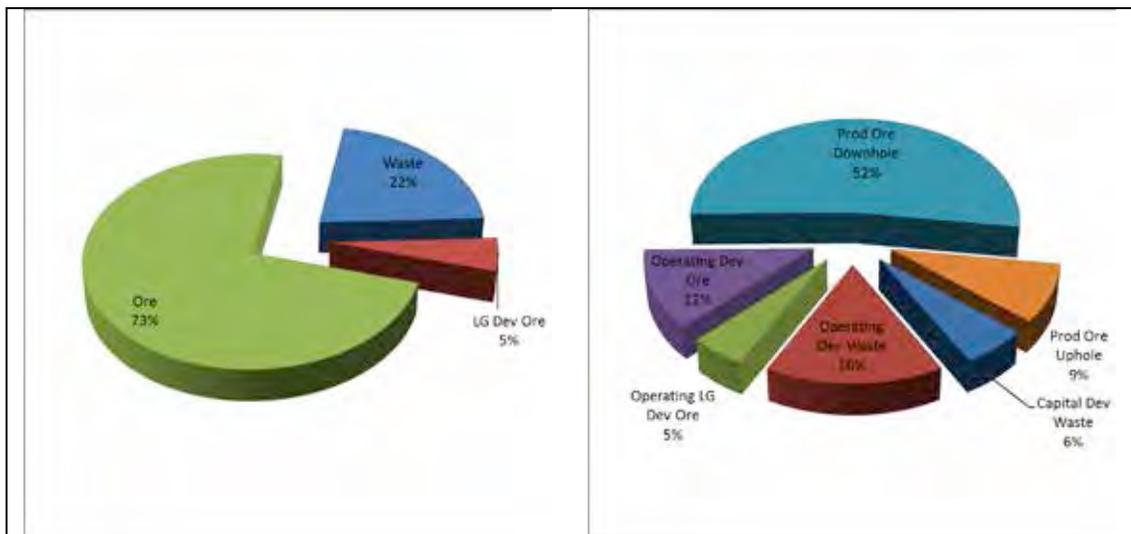


Table 19 Mining Physicals Summary

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		
	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			
Production	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/IT	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.

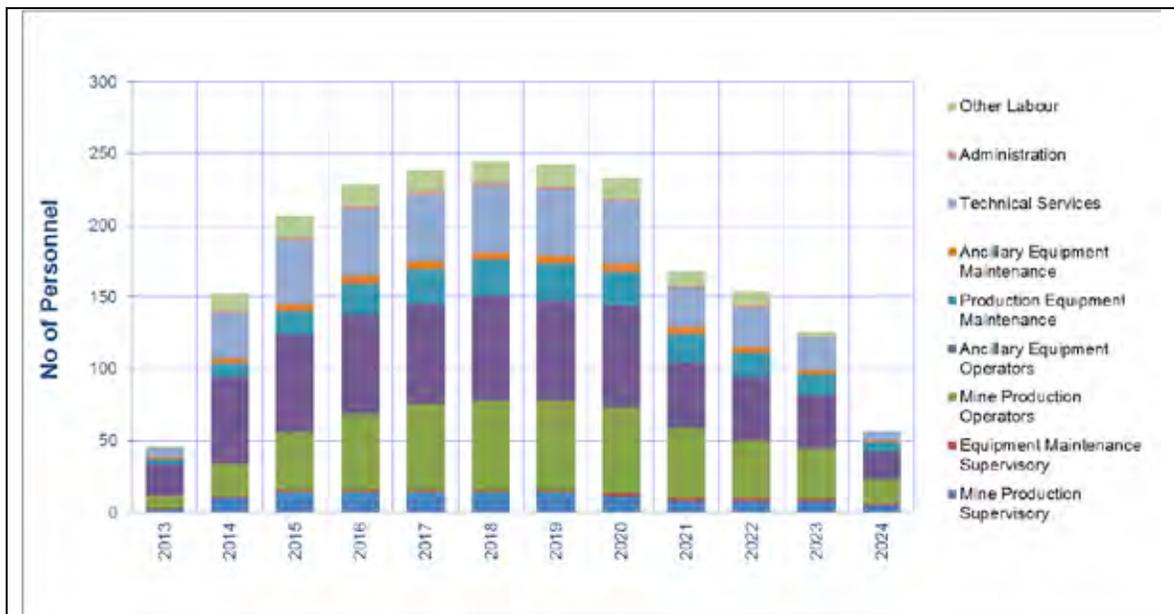
Project sustaining capital for equipment replacement has been estimated based on industry standards and original equipment manufacturers (OEM) recommendations.

The mine is planned to be owner operated. Specialist contractors would be used for specialized 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 utilize 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.

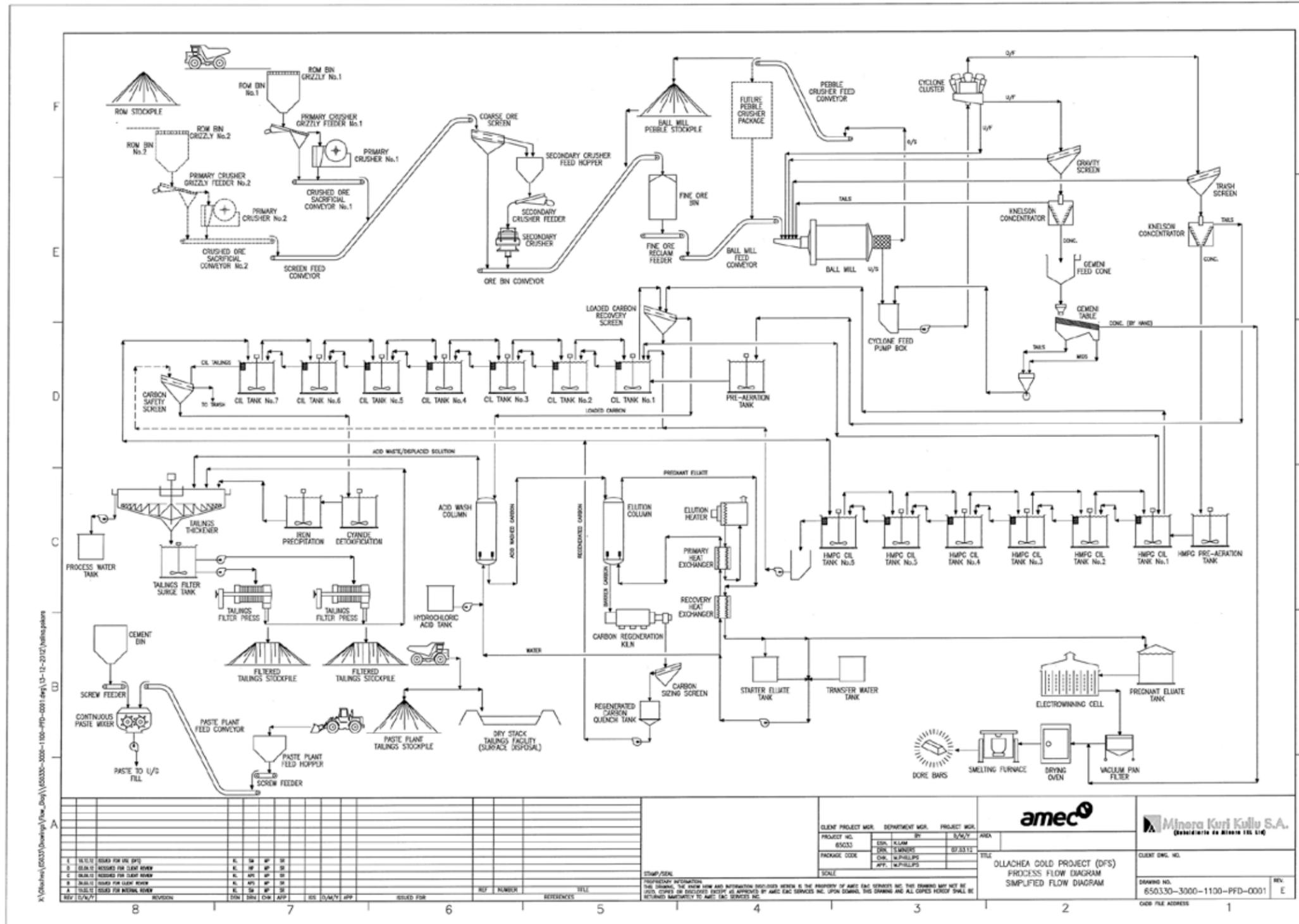
The design parameters of the processing plant are:

- Plant throughput: 1.1Mt/y, or 137.5t/h
- Plant availability: 91.3% or 8,000 hours per year
- ROM feed size: F100 600mm, F80 270mm

- Final product grind: P80 of 106  $\mu\text{m}$
- Design head grade: 3.65g/t Au
- Head grade (LOM Average): 3.37g/t Au
- Residue grade (LOM Average): 0.30g/t Au
- Overall recovery (LOM Average): 91.1%
- HMPG CIL residence time: 24h
- CIL residence time: 36h
- 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



X:\Projects\65033\Drawings\Flow\_Diag\65033-3000-1100-PFD-001.dwg (3-12-2012) jhmqjpk

REV	DATE	BY	CHK	APP	DESCRIPTION
1	12/10/12	JHMQJPK	APP		ISSUED FOR BIDDING
2	02/01/13	JHMQJPK	APP		REVISED FOR CLIENT REVIEW
3	02/01/13	JHMQJPK	APP		REVISED FOR CLIENT REVIEW
4	02/01/13	JHMQJPK	APP		REVISED FOR CLIENT REVIEW
5	02/01/13	JHMQJPK	APP		REVISED FOR WORKING DRAWING

CLIENT PROJECT NO.	DEPARTMENT NO.	PROJECT NO.	SCALE
65033		3267	
DATE: 07/23/12	BY: JHMQJPK	AREA:	
CHK: JHMQJPK	APP: JHMQJPK	TITLE:	
<p><b>amec</b></p> <p>OLLACHEA GOLD PROJECT (DFS) PROCESS FLOW DIAGRAM SIMPLIFIED FLOW DIAGRAM</p>			
<p><b>Minera Kuri Kullu S.A.</b> (subsidiaria de Minera ISL S.A.)</p>			<p>CLIENT ENG. NO.</p> <p>DRAWING NO. 65033-3000-1100-PFD-001</p> <p>REV. E</p>

A single stage ball mill (5.3 x 7.3m, drive 3.45MW), operating in closed circuit with a cyclone cluster (10 duty/2 standby x 250mm), will be utilized to grind the ore from a feed  $F_{80}$  of 10 mm ( $F_{100}$  of 15mm) 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 480m<sup>3</sup>, equating to a total residence time of 24 hours at a nominal mass pull to concentrate of 7tph 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 9,450m<sup>3</sup>, equating to a total residence time of 36 hours at 137.5tph 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 2,000g/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 1,000t 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 1.3km 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 2.45Mt of waste rock and temporary storage of 0.6Mt of low-grade ore.

The Tailings Storage Facility (TSF) has been designed to store 5.85Mt of tailings corresponding to 11 years of mine operations, as taken from the Ollachea DFS 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 9.34Mt, the TSF requires storage for 5.70Mt 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 84m<sup>3</sup>/h. The total water inflow into the project area is estimated to be approximately 388m<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 500m of the Interoceanic Highway. The camp will have catering and accommodation capacity for approximately 275 persons.

The Project will connect to the 138kV 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 10km from the Project. A 138kV supply line will be installed from the main transmission to the plant site, and will have a length of approximately 1.2km. 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 Oscco 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.

In December 2012, as part of the permitting process, the Company submitted an Environmental and Social Impact Assessment (“ESIA”) report on the Ollachea Project to the Peruvian Ministry of Mines and Energy (“MEM”), the government agency responsible for ESIA approval. The ESIA report is the culmination of over three years of environmental baseline studies, the Ollachea DFS, archaeological studies, water management plan, flora and fauna studies, social baseline studies and comprehensive community public consultations.

In May 2013, the Ollachea ESIA received final approval from the Community of Ollachea; subsequently, in September 2013, the MEM approved the ESIA. The approval of a mining project’s ESIA is a major milestone on the path towards production and is the key permit required to build a mine in Peru.

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 night time national environmental noise standards. Noise levels recorded in the town of Ollachea were above daytime and night time standards, mainly due to Inter-oceanic 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 gryphus*. 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 dominant religion is Catholicism.

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 500m x 100m 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 \$3.1 million 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.

- 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 Oscoco Cachi stream.
- Authorization by ANA for MKK to use water resources from the Oscoco 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, in addition to the approved ESIA, 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. Of these items, Construction Permit for the Ollachea Gold Mine is the most critical. The Company is working closely with the government and currently expects to receive the Construction Permit in the second quarter of 2014.

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 DFS 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 \$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>\$(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>
\$/EUR	0.760
\$/CAD	0.990
\$/CHF	0.950
\$/AUD	0.970
\$/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>\$M</b>	<b>%</b>	<b>\$/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 \$23.41/t ore.

A consolidated operating cost schedule for the Project is shown in Table 24. Mine operating costs average \$23.4/t ore processed (including backfill). Plant operating costs total \$21.5/t ore processed (include tailings disposal), and G&A costs average \$4.3/t ore processed. Total site operating costs are \$49.2/t ore or \$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	\$M			11.8	15.5	18.4	18.5	18.4	18.6	18.7	18.5	12.2	3.6	153.6
Labour	\$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.	\$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>\$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>\$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>\$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>														
Fuel	\$M			1.6	1.9	2.4	2.4	2.4	2.3	2.2	1.9	1.6	0.5	19.2
Explosives	\$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	\$M			3.2	3.9	5.0	5.1	5.0	4.4	3.9	3.5	2.8	1.0	37.9
Labour	\$M			4.7	5.0	5.6	5.7	5.5	5.3	4.1	3.9	3.1	1.1	44.0
Power	\$M			2.1	2.3	2.5	2.5	2.5	2.4	1.8	1.4	1.2	0.5	19.2
Consumables	\$M			6.1	7.5	9.5	8.7	8.8	8.9	8.3	5.4	4.3	1.2	68.7
Other	\$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>\$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>\$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 realization, 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 \$1,300/oz.
- Mineral Resources for the Ollachea DFS total 10.6 Mt of Indicated Mineral Resources grading 4.0g/t Au and containing 1.4Moz of gold. Mineral Resources are inclusive of Mineral Reserves. Mineral Reserves for the Project total 9.3Mt of Probable Mineral Reserves at an average grade of 3.4g/t Au containing 1.0Moz of gold. The Mineral Reserves are split between ore (+2g/t Au) and low grade development ore (+1g/t to 2g/t Au)
- Stope ore production and commission of the process plant is currently expected to commence in the first quarter of 2016. The mine production rate is forecast to increase at a significant rate the first 18 months of operation. 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 \$1.10/oz and payable gold of 99.9%
- The total capital costs estimated over the LOM from commencement of construction is \$223.3 million
- The total operating costs estimated over the LOM are \$458.7 million

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**

Cash Flows		2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total LOM
<b>Inflows</b>															
Net Revenue	\$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	\$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	\$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	\$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	\$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	\$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>\$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>\$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	\$M	(67.8)	(109.8)	-	-	-	-	-	-	-	-	-	-	-	(177.5)
Initial Capital Costs –		(7.3)													
IGV	\$M		(4.1)	16.4	-	-	-	-	-	-	-	-	-	-	5.0
Sustaining Capital Costs	\$M	-	-	(9.2)	(7.4)	(2.9)	(5.0)	(6.8)	(6.3)	(2.5)	(1.4)	(0.1)	-	-	(41.5)
Closure Costs	\$M	-	-	-	-	-	-	-	-	-	-	-	(3.8)	(0.4)	(4.2)
Movement in Working Capital	\$M	-	-	(0.3)	(0.3)	(0.1)	0.0	0.0	(0.0)	(0.1)	0.4	(0.0)	0.4	-	-
Total Outflows – Investing	\$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>\$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>4)</b>	<b>325.3</b>
<b>Net Cash Flow before Tax</b>	<b>\$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>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%.

Net Cash Flow results exclude the effects of the 1% gross revenue royalty issued to Macquarie Bank in 2013 and 2014.

The Project was evaluated on a project stand-alone, 100% equity-financed basis. The base case gold price used in the financial analysis was \$1,300/oz., which was significantly lower than the prevailing spot gold price of approximately \$1,700/oz at the time of the study, but comparable to the current gold spot 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 the Ollachea DFS report.

**Table 26 Summary of Ollachea Financial Results**

Parameter	Unit	Base Gold Price	
		\$1,300/oz	Upside Gold Price \$1,600/oz
Net Cash Flow before tax	\$ M	489	749
NPV @ 5% real (before tax)	\$ M	309	497
NPV @ 7% real (before tax)	\$ M	256	422
NPV @ 10% real (before tax)	\$ M	192	331
IRR (before tax)	%	29.2	40.2
Payback (before tax)	Years	3.2	2.5
Net Cash Flow (after tax)	\$ M	325	486
NPV @ 5% real (after tax)	\$ M	194	310
NPV @ 7% real (after tax)	\$ M	155	258
NPV @ 10% real (after tax)	\$ 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 the final instalment of the final Ollachea payment amount payable by MKK and due to Rio Tinto in accordance with Mining Claim Transfer Agreement dated 23 February 2007.

All results exclude the effects of the 1% gross revenue royalty issued to Macquarie Bank in 2013 and 2014.

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

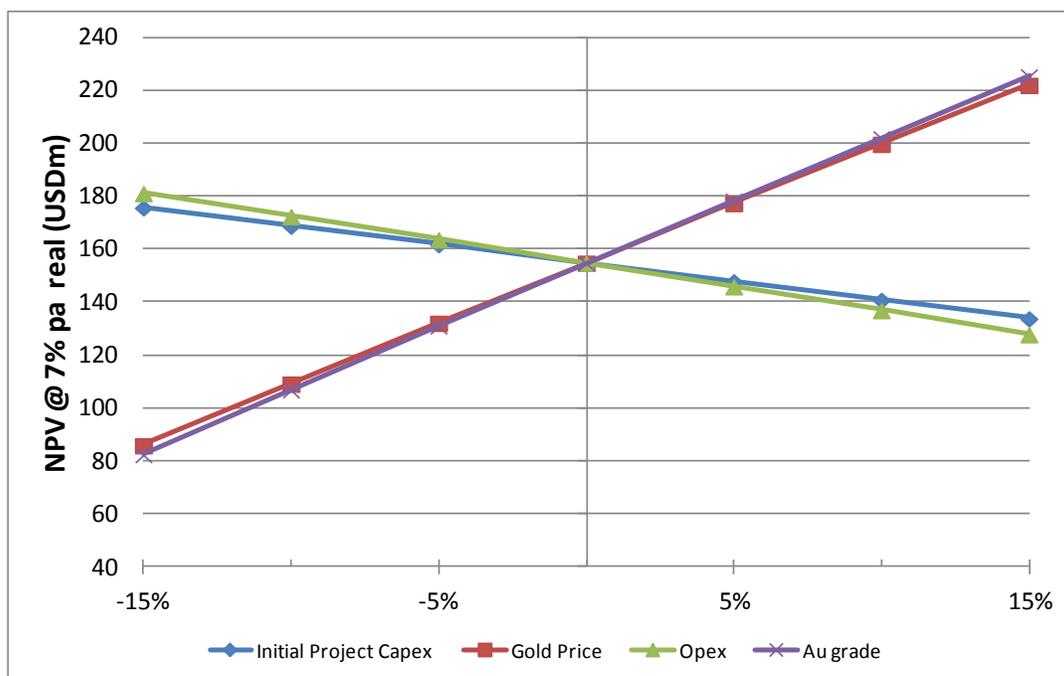
**Table 27 LOM average Unit of Production**

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

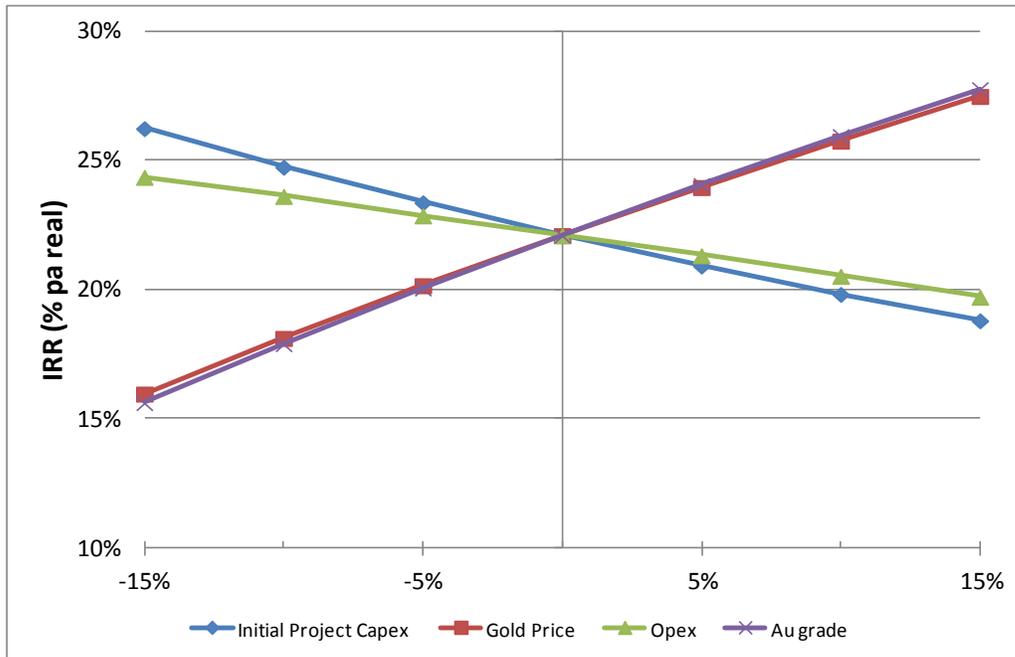
Note:  
 Costs are estimated in 3Q 2012 US dollars.  
 Per ounce based on payable gold.  
 Royalties exclude a 1% gross revenue royalty payable to Macquarie Bank

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*



## Royalties, Rights and Encumbrances

There are currently two non-government royalties apply to the Ollachea Project:

- 1) A 1% net smelter royalty (NSR) for the life of mine payable to an undisclosed third party.
- 2) A 1% gross revenue royalty for the life of mine that is payable to Macquarie Bank. Further details on this royalty, including buy back provisions, is provided in "Section 15 - Material Contracts - Feasibility Finance Facility Agreement"

With respect to royalties payable to the Government of Peru, in the second half of 2011, the royalty payable was amended from a sliding scale of 1% to 3% on sales to royalties based on operating profits. 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.

A mining royalty and a special mining tax ("SMT") will also be payable the Government of Peru on a quarterly basis. The SMT 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 SMT, marginal rates range from 2% for operating profit margins between 0% and 10% to 8.4% for operating profit margins above 85%.

The Ollachea Project will also subject to the Peru corporate income tax at a rate of 30%.

## **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 21 months (includes detail design, procurement, construction) to the start of commissioning.

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.

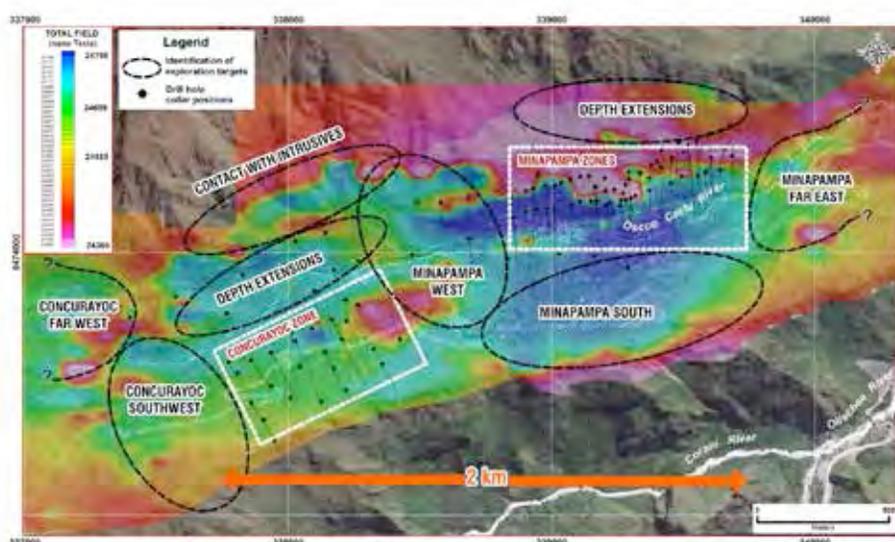
The schedule is constrained by a number of critical approvals, as follows:

- Construction Permit – Second quarter of 2014, 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

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. Diamond drilling from surface will require drill holes in excess of 1,000m 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 400m 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 (Mt)	Au Grade (g/t)	Contained Au (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 14 February 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 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. Unless stated otherwise, the economic and operational figures discussed in this section are on a 100% project basis and not on a net basis. On 16 August 2013, the Company entered into a definitive agreement with Compañía Inversora en Minas (“CIMINAS”), whereby CIMINAS would provide project financing to Minera IRL Patagonia S.A. (“Minera IRL Patagonia”) and become up to a 45% equity owner of Minera IRL Patagonia, the holding company for the Don Nicolas assets. For additional information on this joint venture agreement, see “Section 15 – Material Contacts - Definitive Agreement with CIMINAS – Don Nicolás Gold Project”.

*Figure 35 Martinetas project site*



The Project area consists of over 47,000ha of mineral rights located in Santa Cruz Province approximately 100km 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*

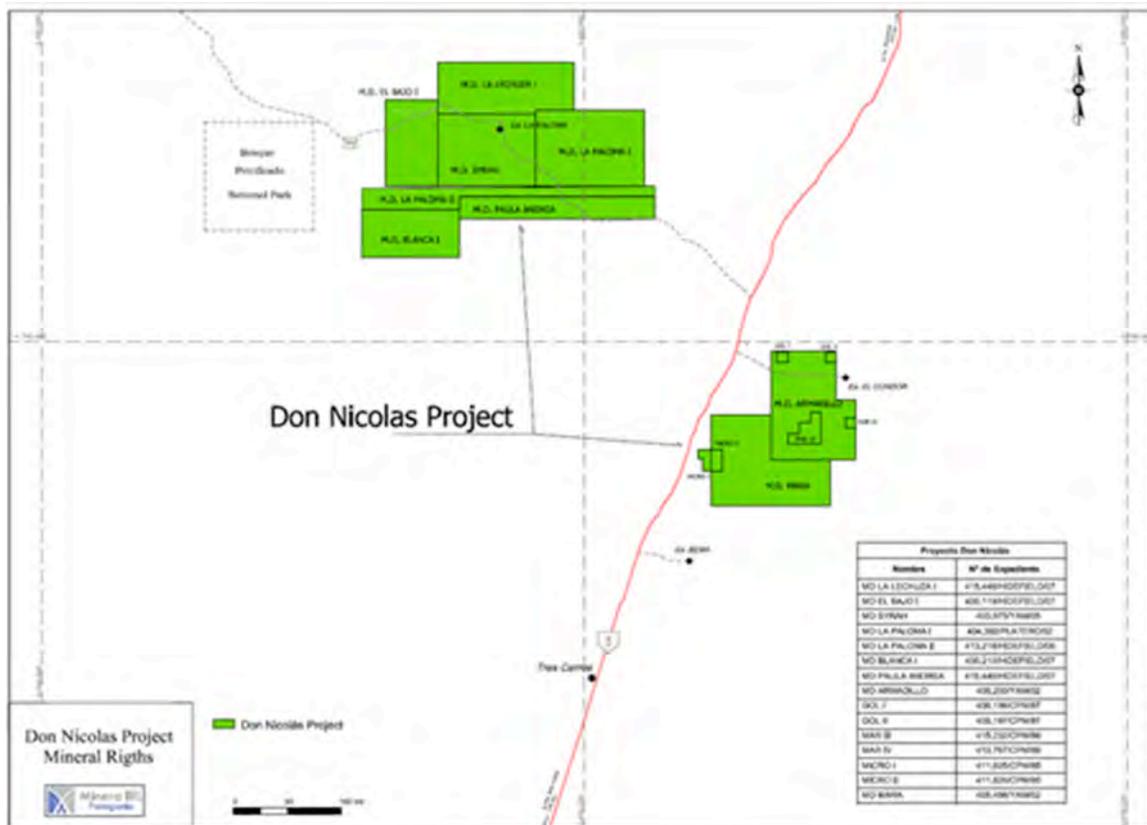
	<b>La Paloma</b>	<b>Martinetas</b>
Latitude	47°42'30" S	47°54'23" S
Longitude	67°46'23" W	67°22'44" W
Elevation, m	~120	~160
Distance in km to:		
• Comodoro Rivadavia	275	270
• Rio Gallegos	565	530
• San Julian	212	180
• Puerto Deseado	230	225



## 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 33,798ha as shown in Figure 37.

*Figure 37 Property Claim Map, Don Nicolás Project*



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

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

**Table 30** *Minera IRL Patagonia 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 2% net smelter royalty reserved to Royal Gold Inc., pursuant to agreements dated 1 February 2000 (Polimet Royalty Agreement) and 1 January 2002, with Yamana and associate companies (La Paloma Royalty Agreement). The first agreement includes the following Minera IRL 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 Minera IRL. The latter covers the Syrah declaration of discovery.
3. A \$3.00/oz gold royalty to a cap of \$2 million payable to Sandstorm. This is applicable to all of the current resource areas and, effectively, those key licenses covered by the Sandstorm agreement.

In June 2013, the Province of Santa Cruz in Argentina passed amendments to the Provincial Tax Code and Provincial Tax Law that imposed a new tax on mining reserves. The law came into effect on July 5, 2013. The tax will amount to 1% of the value of mine reserves reported in feasibility studies and financial statements inclusive of variations resulting from ongoing operations. Regulations require that the tax be calculated on "measured" reserves, and Minera IRL's legal counsel has interpreted this to mean "proven" reserves. The Province has disputed this interpretation but has not provided further clarification on the definition of "measured" reserves, and the effect of this new mining tax is not clear at this time. The Company continues to monitor the situation closely.

### **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 220m 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 eruption. 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 300mm, with occasional heavy snowfall 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 1,750km 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 280km. 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 in the region.

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 60,000km<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 170ma). It is criss-crossed by numerous extensive fault and fracture zones that 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 4m 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, such as lattice textures, crustiform-colloform banding, and comb

quartz, 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, Minera IRL 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 Minera IRL 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. MIRC 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, Minera IRL'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 metres 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 metres at 10.5g/t gold and 19.8g/t silver, CH-D12-018 with 6.10 metres at 5.43g/t gold and 27.6g/t silver and CH-D12-021 with 11.10 metres grading 5.38g/t gold and 5.26g/t silver.

In 2013, the Company identified three new high priority prospects: The Cecilia Vein, the Paula Andrea Vein, and the Goleta Prospect. These prospects are within a reasonable trucking distance to the future Don Nicolás central ore processing facilities that warrant follow-up exploration activities.

The Cecilia Vein has been traced on surface for a strike length of over two km, has never been drilled, and is located approximately 20km south of the proposed site of the Don Nicolás central ore processing facilities. To date, systematic diamond saw sampling has encountered significant gold mineralization of up to 19.3g/t gold over at least 1.5km of the principal vein structure, which remains open along strike. Additionally, several other mineralized vein structures have also been discovered in close proximity to the Cecilia Vein.

The undrilled Paula Andrea vein system is located less than 4km southeast of the Sulfuro Vein (Measured and Indicated Resource of 498,361 tonnes grading 9.2g/t gold containing 147,214 ounces), a significant contributor of high-grade ore to the Don Nicolás Project. Diamond saw channel sampling of quartz vein outcrops along three mineralized trends at Paula Andrea has returned a number of high-grade gold assay results up to 54.4g/t gold.

The Goleta Prospect is located approximately six km north of the proposed Don Nicolás central ore processing facilities. Minera IRL Patagonia recently sourced historical exploration results carried out by Yamana Gold Inc. in 1997. These results included 49 shallow reverse circulation drill holes for a total of 1,326m, with the best hole intersecting 6 m grading 27.7g/t gold. Recent surface sampling carried out by Minera IRL Patagonia has defined scattered anomalous gold values up to 24.9g/t gold over a 600m by 400m area.

Generative exploration and related activities continue with the objective of developing exploration drill targets. No exploration drilling was conducted in 2013 at Don Nicolás and none is planned for 2014.

## **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, Minera IRL Patagonia 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.

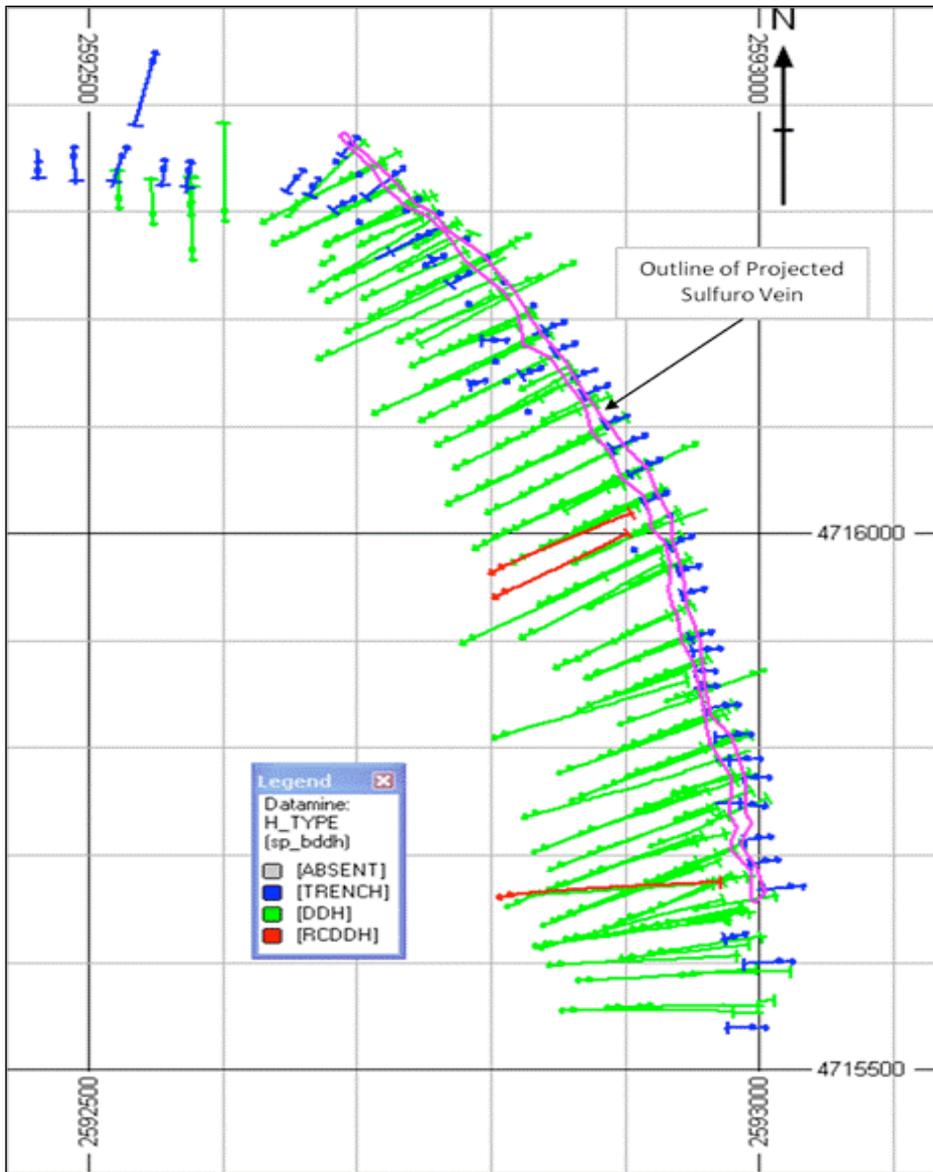
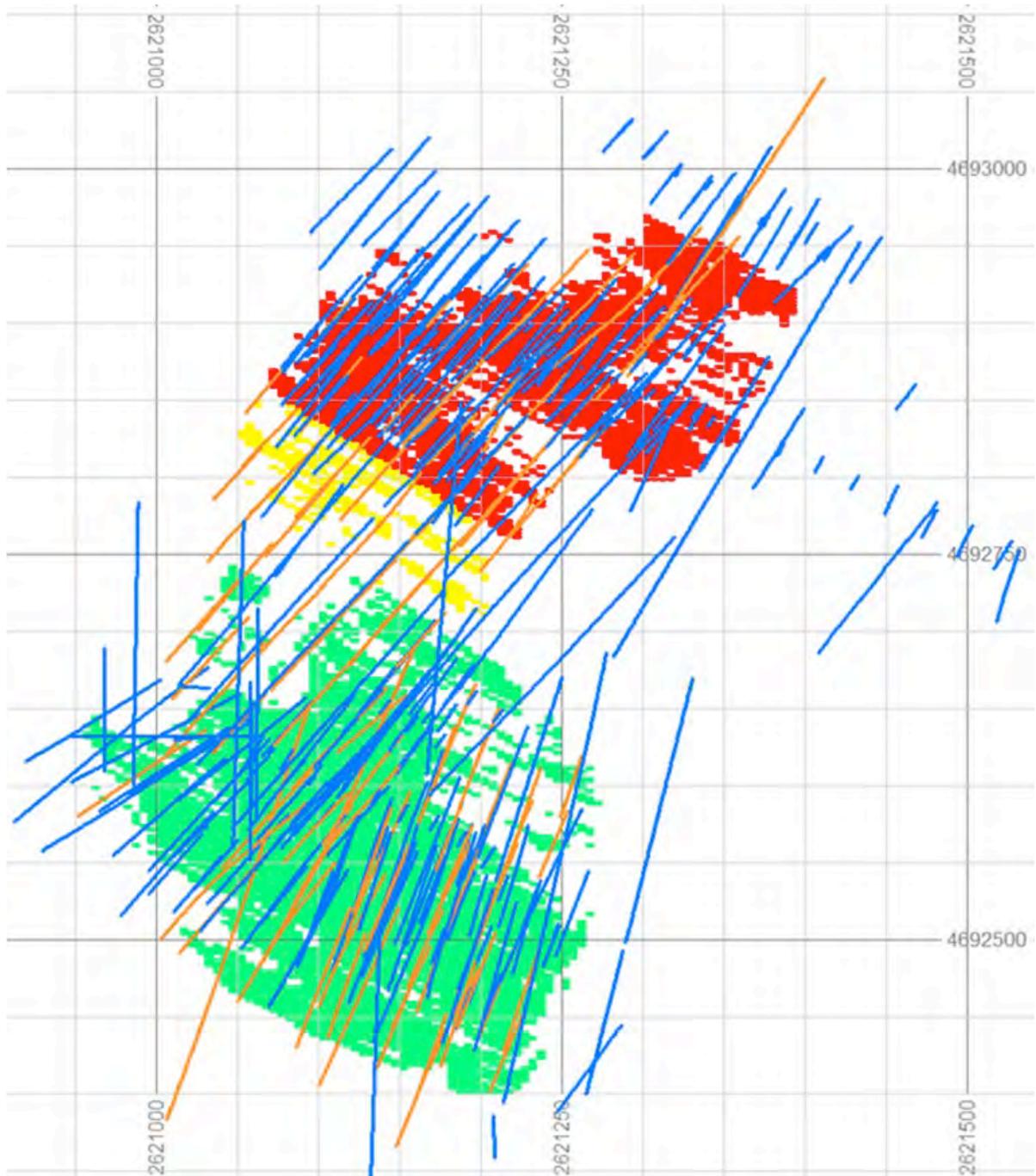
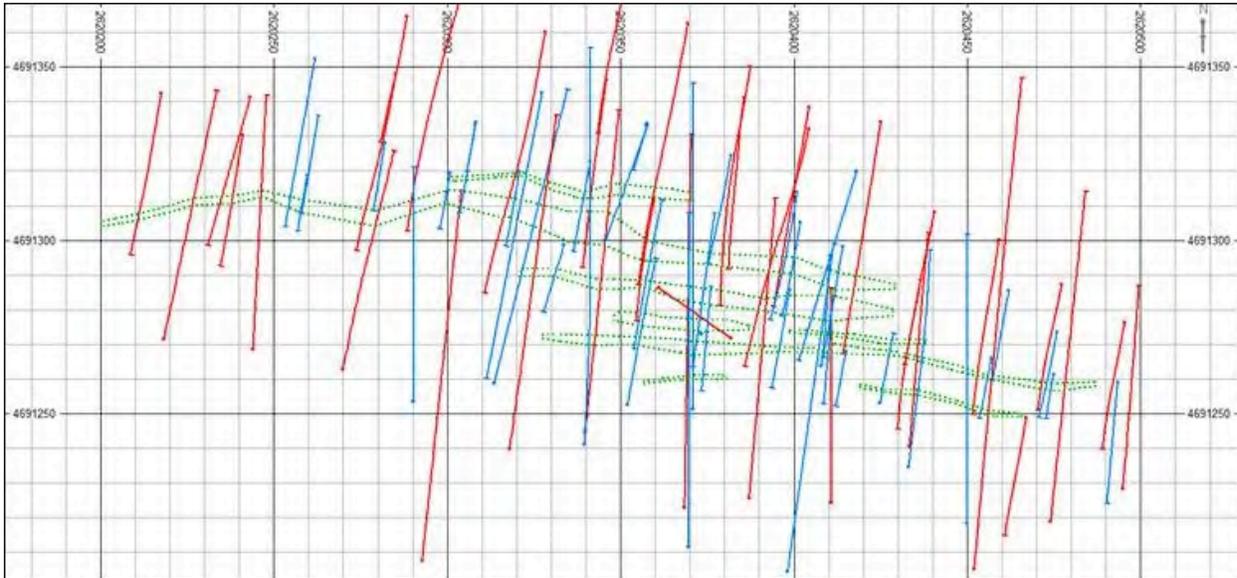


Figure 39 Paloma (Sulfuro) Drill and Trench Plan

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 +/- 5m 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 2m lengths within the known mineralized zones (some core samples have been taken at a minimum length of 0.4m based on geological interpretation); average sample length is approximately 1m.

Drill holes 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 (Minera IRL) at Martinetas. Trenches are typically 1.2m wide, 0.5 to 1.5m 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 1m.

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

In 2011, the Company preformed 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 The Company meets acceptable industry standards.

Recent core drilling at La Paloma by the Company 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 Minera IRL 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 Minera IRL 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 Minera IRL.

Samples are transported by courier service to the ALS-Chemex laboratory in Mindoza. 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 1000g.
- 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 10ppm Au detected, they were re-analyzed using a gravimetric method (Au-GRA22).
- b. Where Ag returned values greater than 100ppm 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 Minera IRL 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. Minera IRL 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 15 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 DFS 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**

Area	Deposit	Estimation Method	Elements Estimated
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 Don Nicolás DFS 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 34.

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

	Deposit	Cutoff Au, 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
<b>Total All Deposits</b>		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	
<b>Total</b>		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 metres. 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 1.6km 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>Above 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 \$1,100/oz Au and \$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 2.1Mt of LG mineralization between 0.3 and 1.5g/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

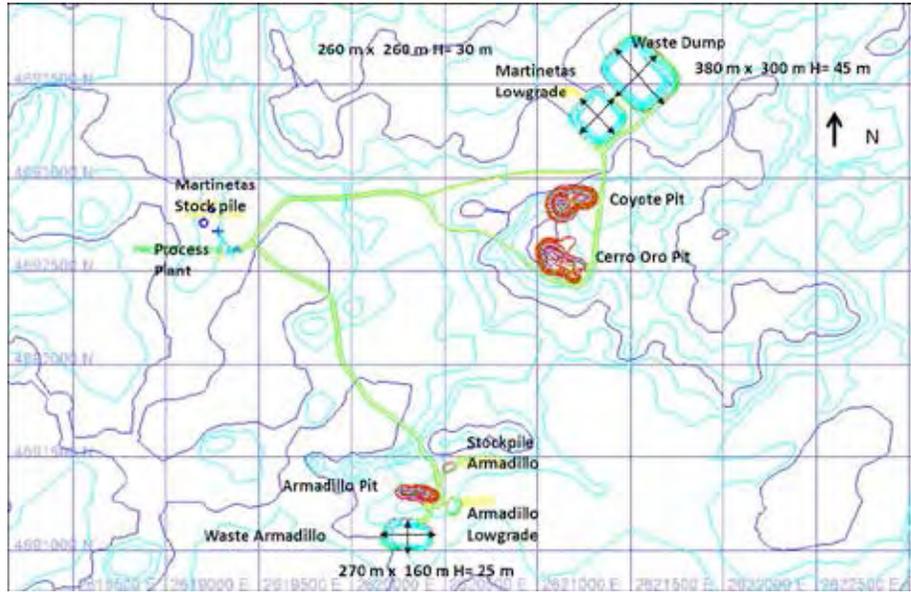
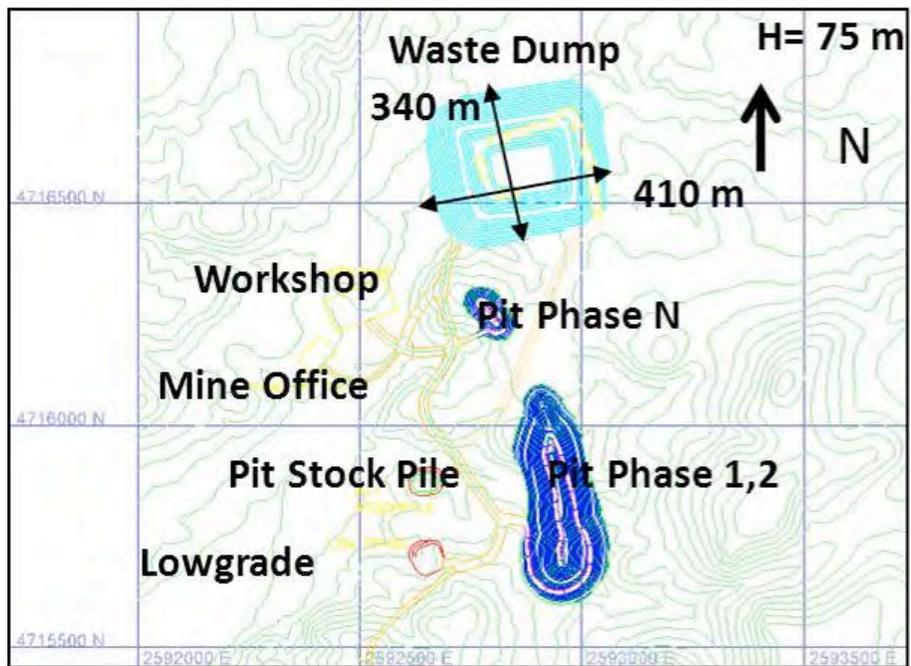


Figure 43 La Paloma Mining Area



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 10m and a gradient of 12%. A nominal minimum mining width of 30m 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 Equiv.Gold	Stripping Ratio	Total Tonnage/ k oz Au eq)
	Tonnage (kt)	Au (g/t)	Ag (g/t)	Tonnage (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 1.60g/t Au and for the other sectors was 1.50g/t Au.

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

Period	Ore >1.5 g/t Au			LG 0.3-1.5 g/t Au			Waste Moved	Total Material Moved
	kt	Au g/t	Ag g/t	kt	Au g/t	Ag 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 Don Nicolás DFS has assumed that an owner's fleet of equipment will be used in mine operations.

The Don Nicolás DFS mine design specifies 5-m benches and has adequate phase geometry to achieve the required productions. The design calls for annual mill throughput of 350,000t 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 50km 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 20kWh/t. The average CWi for sulfide samples was 11.4kWh/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 3.6kWh/t with an average CWi for the oxide-sulphide samples of 8.0kWh/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 17.6kWh/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 972t/d, equivalent to 350,000t/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 masl (Phase 1). These dams will then be subsequently raised to a final height of 144masl during a second construction period (Phase 2).

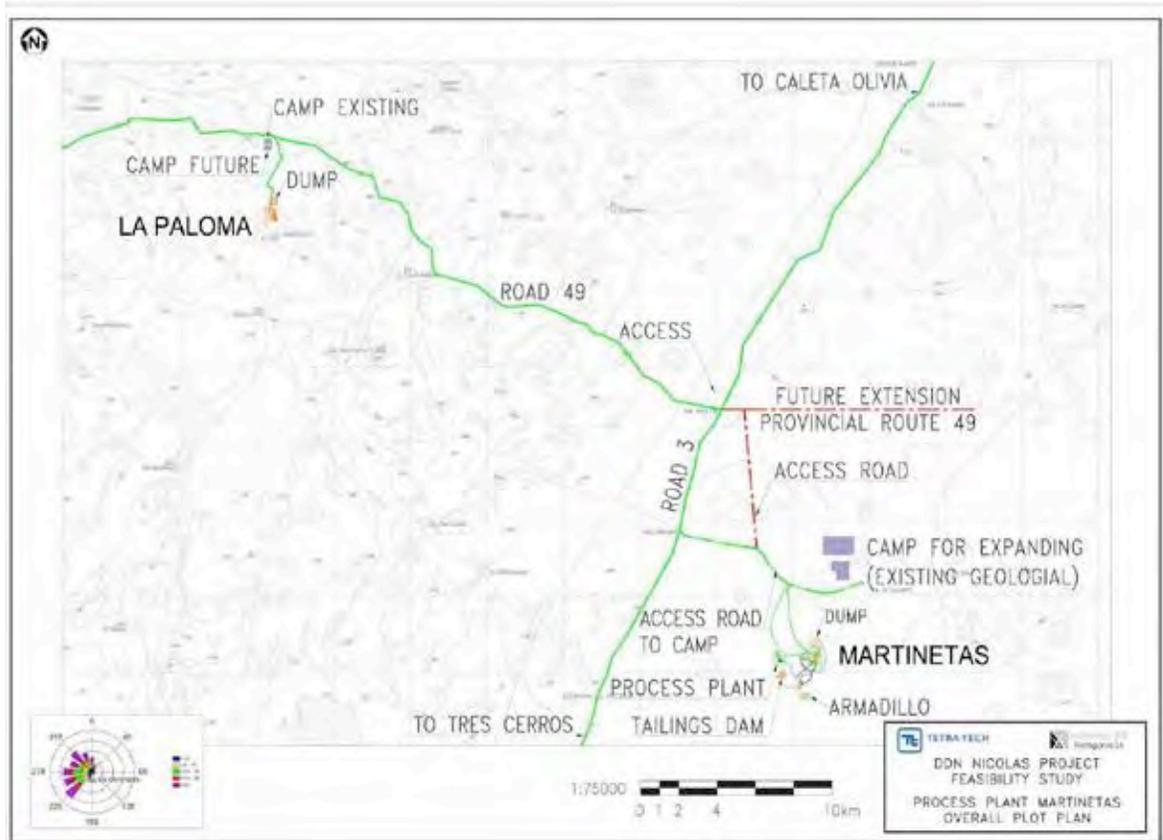
All dams will be constructed of rock fill material obtained from suitable waste rock from the Martinetas pits and will be constructed directly on top of the in-situ superficial deposits. All dams will be built with a slope angle of 1(v):2(h) on both the upstream and downstream sides and have a crest 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 in the DFS, some 395,000t of ore will be transported from the La Paloma mining area to the central plant at Martinetas, a distance, by road, of approximately 50km.

The proposed routing from La Paloma will follow an existing secondary highway (Ruta 49) for some 33km 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 50km 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 1.4MW 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 (240m<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 (312m<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 (160m<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 periods 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 Nicolás 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 on a 100% ownership basis:

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

Area/WBS	Initial Capital Cost \$k	LOM Sustaining Capital Cost \$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**

	LOM OPEX Costs \$k	\$/t Processed	\$/ oz. Au Recovered
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 (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 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. The results reported below are upon a 100% ownership basis:

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

<b>Parameter</b>	<b>Units</b>	<b>Base Gold Price \$1,250/oz</b>	<b>Upside Gold Price \$1,500/oz</b>
Net Cash Flow before tax	\$ M	58.7	101.6
NPV @ 5% real (before tax)	\$ M	44.7	82.2
NPV @ 7% real (before tax)	\$ M	39.9	75.6
NPV @ 8% real (before tax)	\$ 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)	\$ M	36.1	62.2
NPV @ 5% real (after tax)	\$ M	25.1	48.0
NPV @ 7% real (after tax)	\$ M	21.6	43.7
NPV @ 10% real (after tax)	\$ 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 \$/oz</b>	<b>Pre-tax NPV @ 5% real \$ M</b>	<b>Pre-tax IRR (real) %</b>	<b>Pre-tax Payback (years)</b>	<b>Post-tax NPV @ 5% real \$ M</b>	<b>Post-tax IRR (real) %</b>	<b>Post-tax Payback (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 Nicolás Project.

On 16 August 2013, the Company entered into a definitive agreement with Compañía Inversora en Minas (“CIMINAS”), whereby CIMINAS would make a \$45,000,000 investment in Minera IRL Patagonia S.A. (“Minera IRL Patagonia”) to become up to a 45% equity owner of Minera IRL Patagonia. The equity investment, in addition to a \$35,000,000 credit facility CIMINAS has made available to Minera IRL Patagonia, is expected to provide the financing required to develop Minera IRL Patagonia’s Don Nicolás Gold Project in Santa Cruz Project, Argentina. For additional information on this joint venture agreement, see “Section 15 - Material Contacts - Definitive Agreement with CIMINAS - Don Nicolás Gold Project”

## 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 metres wide with anomalous gold and silver values over a strike length of some 700 metres. 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 25.38m averaging 1.45g/t gold and 9.62g/t silver, including 13.75m grading 2.39g/t gold and 14.56g/t silver
- E-D10-03 100.0m averaging 1.19g/t gold and 7.77g/t silver, including 48.00m grading 1.71g/t gold and 9.18g/t silver
- E-D10-07 120.40m averaging 0.65g/t gold and 5.70g/t silver, including 14.70m grading 1.30g/t gold and 11.86g/t silver and 8.40m grading 2.45g/t gold and 8.31g/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 metres 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	Metres	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 metres 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 metres, 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	Metres	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 metres. This program probed a 950 metre strike length with staggered holes which targeted the vein structure between 30 and 160 metres 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 PDA-D10	Intercept			Assay - g/t		Host
	From	To	Metres	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 metre, 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 1g/t Au, of which 16 were above 5g/t Au. Eleven samples analyzed also assayed above 30g/t Ag including one sample of 1,460g/t Ag. A 4,698 metre, 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 @ 1.22g/t Au, 159g/t Ag from 36.00m
- MI-D12-040 0.75m @ 0.13g/t Au, 569g/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 - < 1g/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 \$100,000 payment. Payment of \$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, \$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 \$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 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 metres. 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 metres at 0.72g/t Au and 0.14% Cu. This hole was designed to twin hole RC drill hole RC10-BET10 which intersected 72 metres 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 metres from surface i.e.: 100 metres at 0.64g/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 kilometres 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 \$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 metres 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 \$5 million 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 metre drill program.

Highlights include copper-gold mineralized sections of skarn reporting:

- 22.60 metres (35.50m to 58.10m) grading 0.35% copper, 0.25g/t gold, 1.30g/t silver and 0.01% molybdenum, and
- 14.70 metres (80.60m to 95.30m) grading 0.52% copper, 0.27g/t gold, 1.81g/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 metres (181.00m to 209.00m) grading 0.27g/t gold and 0.35g/t silver in drillhole CHA-11-02,
- 30.00 metres (13.20m to 43.20m) grading 0.37g/t gold and 0.67 g/tsilver, and
- 26.70 metres (121.20m to 147.90m) grading 0.39g/t gold and 1.45g/t silver, including 10.30 metres grading 0.66g/t gold and 2.75g/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 2.5km 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 metres of drilling on the Chapi Chapi Property and completing a scoping study on any potential discovery before 31 December 2013.

In August 2013, the terms of the 2011 Letter Agreement between the Company and Alturas had been amended. It was agreed that Minera IRL would waive the requirement for Alturas to complete a further 9,500 m drill program and a scoping study prior to the end of 2013. In consideration for this waiver, Alturas agreed to pay Minera IRL the sum of \$1 million to earn an

80% interest in the Chapi-Chapi property. Alturas paid \$50,000 to Minera IRL upon signing of the amended agreement as was to make two subsequent payments totalling \$950,000 to complete the arrangement before the end of 2013. Alturas failed to make these two final payments and Minera IRL has subsequently retained a 100% of the Chapi-Chapi project.

Subsequent to the 31 December 2013, the Company sold the Chapi Chapi project for proceeds of \$1,125,000.

### **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

Exploration, development and mining of precious metals involve numerous inherent risks as a result of the nature of the business, global economic trends as well as local social, political, environmental and economic conditions in the various geographical areas of operation. As such, the Company is subject to several financial and operational risks that could have a significant impact on its profitability and levels of operating cash flows.

The Company assesses and attempts to minimize the effects of these risks through careful management and planning of its facilities, hiring qualified personnel and developing a skilled workforce through training and development programs.

Below is a summary of the principal risks and related uncertainties facing the Company. Such risk factors could 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.

## **Metal Price Risk**

The mining industry is highly dependent on commodity prices that are often strongly correlated to global economic conditions and the interplay of supply and demand. Minera IRL is principally a producer of gold with silver as a by-product and thus the economic results of its operations may be affected by movements in the price for these two precious metals.

Gold and silver prices have historically fluctuated widely and are affected by numerous external factors beyond the Company's control. As examples, the market price of gold may change for a variety of reasons, including: the strength of the United States Dollar, in which the gold price trades internationally, relative to other currencies; financial market expectations regarding the rate of inflation; monetary policies announced, changed or implemented by central banks; changes in the demand for gold, including the demand from the gold exchange traded fund ("ETF"), as an investment or as a result of leasing arrangements; changes in the physical demand for gold used in jewellery; changes in the supply of gold from production, divestment, scrap and hedging; global or regional political or economic events, and speculative positions taken by investors or traders in gold.

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 realized 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. While the Company's current policy is to sell its gold on a spot basis, the Company may in the future 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 realized. 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 that 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.

## **Interest Rate Risk**

The Company is exposed to interest rate risk on its variable rate debt. Monetary policy by central banks in the countries in which the Company operates have maintained interest rates relatively low to avoid a relapse of the credit crisis and incentivize economic growth. At 31 December 2013, the majority of the Company's long-term debt was carried at variable rates, hence there is potential for meaningful market risk arising from fluctuations in floating interest rates, particularly LIBOR.

## **Construction and Start-up of New Mines Risk**

The success of construction projects and the start-up of new mines by the Company is subject to a number of factors including the availability and performance of engineering and construction contractors, mining contractors, suppliers and consultants, the receipt of required governmental approvals and permits in connection with the construction of mining facilities and the conduct of mining operations (including environmental permits), the successful completion and operation of ore passes, the ADR plants and conveyors to move ore, among other operational elements. Any delay in the performance of any one or more of the contractors, suppliers, consultants or other persons on which the Company is dependent in connection with its construction activities, a delay in or failure to receive the required governmental approvals and permits in a timely manner or on reasonable terms, or a delay in or failure in connection with the completion and successful operation of the operational elements in connection with new mines could delay or prevent the construction and start-up of new mines as planned. There can be no assurance that current or future construction and start-up plans implemented by the Company will be successful; that the Company will be able to obtain sufficient funds to finance construction and start-up activities; that available personnel and equipment will be available in a timely manner or on reasonable terms to successfully complete construction projects; that the Company will be able to obtain all necessary governmental approvals and permits; and that the completion of the construction, the start-up costs and the ongoing operating costs associated with the development of new mines will not be significantly higher than anticipated by the Company. Any of the foregoing factors could adversely impact the operations and financial condition of the Company.

The Company's development projects have no operating history upon which to base estimates of future cash flow. The capital expenditures and time required to develop new mines or other projects are considerable and changes in costs or construction schedules can affect project economics. Thus, it is possible that actual costs may change significantly and economic returns may differ materially from the Company's estimates.

Currently, the Company has one mine under construction in Argentina, Don Nicolás, which is a joint venture. Commercial viability of a new mine or development project is predicated on many factors. There is no certainty that the realization of mineral reserves and mineral resources projected by the feasibility study and technical assessment performed on the project may be realized, the necessary permits can be obtained and future metal prices to ensure commercial viability will materialize. Consequently, there is a risk that start-up of new mine

and development projects may be subject to write-down and/or closure as there is no certainties that they are commercially viable.

### **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 that 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 Risk**

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 Risk**

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.

In efforts to tighten capital flows and protect foreign exchange reserves, the Government of Argentina issued foreign exchange resolutions with respect to export revenues that resulted in a temporary suspension of export sales of concentrate during the second quarter of 2012 from many mining companies. The Government of Argentina subsequently announced amendment to the foreign exchange resolution extending the time for exporters to repatriate net proceeds from export sales enabling most mining companies to resume exports in the third quarter of 2012. The Government of Argentina has also introduced certain protocols relating to the importation of goods and services and providing where possible for the substitution of Argentine produced goods and services. During 2012, some mining companies were unable to obtain permission to repatriate dividends although certain accommodations have since been made to permit distribution of profits from Argentina. Discussion between mining companies and the Argentine government on the remittance of dividends are ongoing and are monitored closely by the Company. The Company continues to monitor developments and policies in all its jurisdictions and the impact thereof to its operations.

The Company continues to monitor developments and policies in all its jurisdictions and the impact thereof to its operations.

### **Foreign Operations and Political Risk**

The Company holds mining and exploration properties in Peru, Argentina and Chile exposing it to the socioeconomic conditions as well as the laws governing the mining industry in those countries. Inherent risks with conducting foreign operations include, but are not limited to, high rates of inflation; military repression; war or civil war; social and labour unrest; organized crime and hostage taking which cannot be timely predicted and could have a material adverse effect on the Company's operations and profitability. The governments in those countries are currently generally supportive of the mining industry but changes in government laws and regulations including taxation, royalties, the repatriation of profits, restrictions on production, export controls, changes in taxation policies, environmental and ecological compliance, expropriation of property and shifts in the political stability of the country could adversely affect the Company's exploration, development and production initiatives in these countries and could potentially lead to expropriation of mining rights.

### **Currency Risk**

The Company reports 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. Accordingly, fluctuations in these exchange rates can significantly impact the results of operations. Furthermore, 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.

## **Health, Safety and Environmental Risks**

Mining, like many other extractive natural resource industries, is subject to potential risks and liabilities due to accidents that could result in serious injury or death and or material damage to the environment and Company assets. The impact of such accidents could affect the profitability of the operations, cause an interruption to operations, lead to a loss of licenses, affect the reputation of the Company and its ability to obtain further licenses, damage community relations and reduce the perceived appeal of the Company as an employer. Minera IRL has rigorous procedures in place to manage health and safety protocols in order to reduce the risk of occurrence and the severity of any accident and is continually investing time and resources to enhance health and safety at all operations.

The Company's operations are subject to various laws and regulations governing the protection of the environment, exploration, development, production, exports, taxes, labour standards, occupational health, waste disposal, toxic substances, mine safety, and other matters. Permits from various governmental authorities are necessary in order to engage in mining operations in all jurisdictions in which the Company operates. Such permits relate to many aspects of mining operations, including maintenance of air, water and soil quality standards. In most jurisdictions, the requisite permits cannot be obtained prior to completion of an environmental impact statement and, in some cases, public consultation. Further, the Company may be required to submit for government approval a reclamation plan, to post financial assurance for the reclamation costs of the mine site, and to pay for the reclamation of the mine site upon the completion of mining activities. The Company mitigates this risk by performing certain reclamation activities concurrent with production.

Environmental liability may result from mining activities conducted by others prior to the Company's ownership of a property. To the extent the Company is subject to uninsured environmental liabilities, the payment of such liabilities would reduce funds otherwise available for business activities and could have a material adverse effect on the Company. Should the Company be unable to fully fund the cost of remedying an environmental problem, the Company might be required to suspend operations or enter into interim compliance measures pending completion of the required remedy, which may have a material adverse effect. The Company mitigates the likelihood and potential severity of these environmental risks it encounters in its day-to-day operations through the application of its high operating standards.

## **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.

## **Energy Risk**

The Company consumes energy in mining activities, primarily in the form of diesel fuel, electricity and natural gas. As many of the Company's mines are in remote locations and energy is generally a limited resource, the Company faces the risk that there may not be sufficient energy available to carry out mining activities efficiently or that certain sources of energy may not be available. The Company manages this risk by means of long-term electricity agreements with local power authorities and inventory control process on consumables including fuel. Mines have on-site generator sets as back-up to mitigate the anticipated and unanticipated interruptions from the energy providers. Furthermore, the Company's operations are continually improved to reduce input costs and maximize output.

## **Nature and Climatic Condition Risk**

The Company and the mining industry are facing continued geotechnical challenges, which could adversely impact the Company's production and profitability. No assurances can be given that unanticipated adverse geotechnical and hydrological conditions, such as landslides, droughts and pit wall failures, will not occur in the future or that such events will be detected in advance. Geotechnical instabilities and adverse climatic conditions can be difficult to predict and are often affected by risks and hazards outside of the Company's control, such as severe weather and considerable rainfall, which may lead to periodic floods, mudslides, wall instability and seismic activity, which may result in slippage of material.

Geotechnical failures could result in limited or restricted access to mine sites, suspension of operations, government investigations, increased monitoring costs, remediation costs, loss of ore and other impacts, which could cause one or more of the Company's projects to be less profitable than currently anticipated and could result in a material adverse effect on the Company's results of operations and financial position.

## **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.

### **Credit Risk**

Credit risk is the risk that a third party might fail to fulfill its performance obligations under the terms of a financial instrument. For cash, cash equivalents and trade and other receivables, credit risk is represented by the carrying amount on the balance sheet. The Company limits credit risk by entering into business arrangements with high credit-quality counterparties, limiting the amount of exposure to each counterparty and monitoring the financial condition of key counterparties.

### **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 228,868,605 are issued as at 31 March 2014. 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 31 March 2014, the Company also had 30,796,525 options issued and outstanding, of which 12,010,000 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 price	Quantity granted	No. at 31 March 2014	No. at 31 December 2013
<b>Share Option Plans Issued Options</b>						
17 November 2009	17 November 2009	17 November 2014	£0.9125	2,300,000	2,100,000	2,100,000
25 January 2010	25 January 2010	25 January 2015	£0.8875	275,000	50,000	50,000
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	£1.080	2,680,000	2,510,000	2,510,000
03 April 2012	03 April 2012	03 April 2017	£0.8063	3,485,000	3,325,000	3,325,000
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	£0.5250	150,000	0	0
17 May 2013	17 May 2013	17 May 2018	£0.2469	425,000	425,000	425,000
15 November 2013	15 November 2013	15 November 2018	£0.1500	3,550,000	3,350,000	3,350,000
<b>Other Issued Options</b>						
7 July 2010	7 July 2010	31 Dec 2014 <sup>1</sup>	\$1.08	6,944,444	6,944,444	6,944,444
30 September 2010	30 September 2010	31 Dec 2014 <sup>1</sup>	\$1.08	1,633,987	1,633,987	1,633,987
6 Nov 2012	6 Nov 2012	31 Dec 2014	\$1.08	680,828	680,828	680,828
5 Dec 2012	5 Dec 2012	31 Dec 2014	\$1.07	4,672,897	4,672,897	4,672,897
24 Dec 2012	24 Dec 2012	31 Dec 2014	\$1.03	4,854,369	4,854,369	4,854,369
<b>Total</b>					<b>30,796,525</b>	<b>30,796,525</b>

1. 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 \$1.08 from \$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 closing prices, and volume of Ordinary Shares on AIM on a monthly basis during the financial year ended 31 December 2013.

Month	High	Low	Volume
January 2013	£0.550	£0.480	554,242
February 2013	£0.485	£0.430	800,197
March 2013	£0.450	£0.378	532,260
April 2013	£0.395	£0.260	1,062,075
May 2013	£0.265	£0.163	3,589,630
June 2013	£0.195	£0.125	1,932,488
July 2013	£0.14313	£0.113	4,468,900
August 2013	£0.153	£0.123	18,578,700
September 2013	£0.155	£0.138	16,222,900
October 2013	£0.188	£0.133	13,764,500
November 2013	£0.139	£0.082	7,045,600
December 2013	£0.113	£0.088	3,601,200

The below table outlines the high and low closing prices, and volume of the Ordinary Shares on the BVL on a monthly basis during the financial year ended 31 December 2013.

<b>Month</b>	<b>High</b>	<b>Low</b>	<b>Volume</b>
January 2013	\$0.89	\$0.75	442,368
February 2013	\$0.78	\$0.65	758,588
March 2013	\$0.65	\$0.60	248,178
April 2013	\$0.62	\$0.40	622,214
May 2013	\$0.41	\$0.27	1,215,250
June 2013	\$0.30	\$0.20	1,113,018
July 2013	\$0.22	\$0.19	1,282,600
August 2013	\$0.26	\$0.20	3,791,001
September 2013	\$0.25	\$0.23	2,863,640
October 2013	\$0.29	\$0.22	3,385,658
November 2013	\$0.23	\$0.13	4,686,047
December 2013	\$0.18	\$0.15	1,625,348

The below table outlines the high and low closing prices, and volume of the Ordinary Shares on the TSX on a monthly basis during the financial year ended 31 December 2013.

<b>Month</b>	<b>High</b>	<b>Low</b>	<b>Volume</b>
January 2013	C\$0.90	C\$0.70	224,650
February 2013	C\$0.77	C\$0.63	737,678
March 2013	C\$0.68	C\$0.61	277,047
April 2013	C\$0.64	C\$0.40	610,368
May 2013	C\$0.42	C\$0.26	1,602,189
June 2013	C\$0.32	C\$0.21	1,316,919
July 2013	C\$0.24	C\$0.20	3,869,962
August 2013	C\$0.27	C\$0.21	9,633,470
September 2013	C\$0.26	C\$0.23	4,602,668
October 2013	C\$0.31	C\$0.23	4,405,973
November 2013	C\$0.24	C\$0.14	6,752,687
December 2013	C\$0.19	C\$0.15	2,285,676

## Prior Sales

During the financial year ended 31 December 2013, the Company issued the following Ordinary Shares:

- 21,775,000 on 7 February 2013 at C\$0.71 per share via an equity offering; and
- 9,146,341 on 9 October 2013 at \$0.328 per share via an equity offering as part of the Definitive Agreement with CIMINAS in respect to the Don Nicolás Transaction.

Subsequent to the financial year ended 31 December 2013, the Company issued the following Ordinary Shares:

- 44,126,780 on 28 January 2014 at C\$0.179 per share to Rio Tinto Mining and Exploration Ltd. (Rio Tinto) to settle the first instalment of the final Ollachea payment and interest due; and
- 1,917,598 on 31 January 2014 at a C\$0.179 per share to certain creditors of the Company to settle outstanding debts.

The Company issued options during the financial year ended 31 December 2013 as follows:

- 425,000 options exercisable at £0.2469 were issued on 17 May 2013 for a term of five years; and
- 3,550,000 options exercisable at £0.15 were issued on 15 November 2013 for a term of five years.

## 9 ESCROWED SECURITIES

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

## 10 DIRECTORS AND OFFICERS

The Company's Articles of Association states that at every 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 director has at the start of the annual general meeting been in office for more than three years since their appointment or reappointment, they shall retire; and if there is only one director who is subject to retirement by rotation, he shall retire. However, as per the rules, regulations and policies of the TSX, directors are required to be elected annually.

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 31 March 2014 are present in the below table.

Name and Residence	Note	Principal Occupation During the Last Five Years	Director Since & Last Appointed or Reappointed
<b>Executive Directors</b>			
Courtney Charles Chamberlain Lima, Peru		Executive Chairman	28 August 2003 & 10 July 2013
<b>Non-Executive Directors</b>			
Douglas Alan Jones Perth, Australia	(2)	Technical Director Chalice Gold Mines Limited	28 August 2003 & 10 July 2013

Name and Residence	Note	Principal Occupation During the Last Five Years	Director Since & Last Appointed or Reappointed
Napoleon Oscar Valdez Ferrand Lima, Peru	(1) (2)	President Heinz Ferrand Glass S.A.C.	3 February 2010 & 10 July 2013
Daryl John Hodges Oakville, Ontario	(1)	Managing Director Ladykirk Capital Advisors Previously, Chief Executive Officer and President of Jennings Capital Inc., until September 2013.	10 February 2014
<b>Named Executive Officers</b>			
Bradley Boland Newmarket, Ontario	(3) (4)	Chief Financial Officer and Company Secretary of Minera IRL Limited; previously, mining executive	NA
Diego Francisco Benavides Lima, Peru		President Minera IRL SA	NA
Donald McIver Lima, Peru		Vice President Exploration Minera IRL SA	NA

(1) Member of the Audit Committee.

(2) Member of the Compensation Committee.

(3) Mr Tim Miller resigned as CFO on 1 April 2013. Mr Brad Boland assumed the role of CFO from this date.

(4) Mr Tim Miller resigned as Company Secretary on 10 January 2014. Mr Brad Boland assumed this role from this date.

## Directors' Information

### Mr Courtney Chamberlain

#### Executive Chairman

Mr Chamberlain is a metallurgist by profession with over 45 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 Liontown Resources Limited.

### **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.

### **Mr Daryl Hodges**

#### **Non-Executive Director and Chair of the Audit Committee**

Daryl John Hodges more than 25 years’ experience in the mining sector, having worked on exploration and development projects in Canada, Russia, Scandinavia, and southeast Asia covering precious and base metal deposits. Prior to joining Minera IRL, Mr Hodges was a founding partner of Jennings Capital Inc., co-founder of the capital markets operations of Jennings Capital Inc. Daryl was responsible for growing the successful mining franchise of the firm, originally as an Analyst and subsequently as Executive Director of Investment Banking. Most recently, Mr Hodges served as Chief Executive Officer and President of Jennings Capital Inc., until September 2013. Mr Hodges worked as both a Mining Corporate Finance Executive, and Mining Research Analyst at HSBC Securities prior to joining Jennings Capital in 1999. Prior roles also included positions of increased responsibility at Falconbridge Limited, which Mr Hodges left in 1996 after almost 10 years.

### **Executive Officers’ Information**

#### **Brad Boland**

##### **Chief Financial Officer and Company Secretary**

Mr. Boland is a Certified Management Accountant (CMA) and has over 15 years of experience in the mining industry. He has held executive positions at a number of companies in the resource sector, including Kinross Gold Corp., Goldcorp Inc., and more recently, at Consolidated Thompson Iron Mines Ltd., Crocodile Gold Inc. and Azul Ventures Inc. Mr. Boland has extensive experience in mine development, operations and finance. He joined Minera IRL as CFO in April 2013 and was appointed Corporate Secretary in January 2014.

#### **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 31 March 2014, the Company's directors and officers, as a group, beneficially own, control or direct (directly or indirectly), an aggregate of approximately 7,725,120 shares, representing about 3.4% 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 that 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 Messr. Hodges, Jones and Valdez, 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. Hodges, Chairman of the Audit Committee with over 25 years' experience in the mining sector, has a clear understanding of the accounting principles used by the Company to prepare its financial statements. Mr Hodges has spent the last 18 years working in finance and 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.

Dr. Jones management and corporate experience and several 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 31 December 2012	Year ended 31 December 2013
Audit Fees <sup>(1)</sup>	\$235,700	\$258,000
Audit-related Fees <sup>(2)</sup>	\$20,800	\$28,000
Tax Fees <sup>(3)</sup>	\$44,250	\$8,000
All Other Fees <sup>(4)</sup>	\$18,000	\$10,000

- (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 2013 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  
c/o Computershare Investor Services plc  
The Pavilions  
Bridgewater Road  
Bristol  
United Kingdom BS99 6ZY

### **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:

### **Definitive Agreement with CIMINAS - Don Nicolás Gold Project**

On 16 August 2013, the Company entered into a definitive agreement with Compañía Inversora en Minas ("CIMINAS"), whereby CIMINAS would make a \$45,000,000 investment in Minera IRL Patagonia S.A. ("Minera IRL Patagonia") to become up to a 45% equity owner of Minera IRL Patagonia. The equity investment, in addition to a \$35,000,000 credit facility CIMINAS has made available to Minera IRL Patagonia, is expected to provide the financing required to develop Minera IRL Patagonia's Don Nicolás Gold Project in Santa Cruz Project, Argentina.

In addition, Minera IRL entered into an agreement with Argenwolf S.A. ("Argenwolf"), a business corporation organized and existing under the laws of the Argentine Republic, to provide Argenwolf a 4% equity stake in Minera IRL Patagonia as compensation for arranging the investment by CIMINAS.

As part of the agreement, CIMINAS also subscribed for 9,146,341 ordinary shares of Minera IRL Limited in exchange for \$3,000,000, in equivalent Argentine Pesos, being invested in Minera IRL Patagonia. The 9,146,341 ordinary shares were issued on 9 October 2013.

The \$45,000,000 equity investment consists of 4 components (“Tranches”) that are made up of preferred and common equity and are described as follows:

1. Tranche I (Minera IRL Ordinary Shares) – \$3,000,000

CIMINAS subscribed for 9,146,341 ordinary shares of Minera IRL Limited and as consideration CIMINAS contributed \$3,000,000 to Minera IRL Patagonia toward the development of Don Nicolás. The ordinary shares were issued subsequent to 30 September 2013 pursuant to a prospectus supplement to the Company’s base shelf prospectus dated July 12, 2012.

2. Tranche II – \$7,300,000

Tranche II provides CIMINAS with a 7.8% equity interest in Minera IRL Patagonia in exchange for an investment of \$7,300,000 and has no preferred rights. As at 31 December 2013, \$1,900,000 had been advanced under Tranche II. The remaining \$5,400,000 was advanced during the first quarter of 2014.

3. Tranche III (Accelerated Payback) – \$15,000,000

Tranche III provides CIMINAS with a 16.1% equity interest in Minera IRL Patagonia in exchange for an investment of \$15,000,000. These shares will have preference on dividend payments (doubled to 32.2% of expected cash flows) until the accumulated dividend paid under Tranche III totals \$15,000,000. At which point, the preferred equity held by CIMINAS will be converted to common shares representing a 16.1% interest in Minera IRL Patagonia. In addition to receiving double dividends, Tranche III will receive 60% of the dividends payable to Minera IRL Limited to further accelerate the pay back of Tranche III, until the accumulated amount paid under Tranche III totals \$15,000,000.

4. Tranche IV (Secured) – \$19,700,000

Tranche IV provides CIMINAS with an option to acquire a 21.1% equity interest in Minera IRL Patagonia in exchange for an investment of \$19,700,000. This preferred interest has an annual secured return of 12.5% during the initial option period. At the end of years three, four and five of production, CIMINAS will have the option to request repayment of \$6,566,667 (one third of the amount of Tranche IV) or convert these preferred shares into common shares that represent approximately 7% of Minera IRL Patagonia. At each of these option dates CIMINAS can convert all of the outstanding preferred shares of Tranche IV into common shares. As guarantee for this Tranche, the Company has pledged in favour of CIMINAS its 51% stake in Minera IRL Patagonia.

Additionally, a Reserve account to guarantee each payment will be set up. The Reserve account will be funded from Minera IRL Patagonia’s free cash flow exceeding the dividend distribution capacity. In addition, once the accumulated dividends under Tranche III reach \$15,000,000, the Reserve account will receive 80% of Minera IRL Limited’s dividend from Minera IRL Patagonia until the total amount in the Reserve account reaches \$6,566,667. At which point, Minera IRL Limited will receive 100% of the dividends corresponding to its 51% stake in Minera IRL Patagonia.

CIMINAS and Minera IRL Patagonia also entered into an agreement whereby CIMINAS will provide a bridge debt facility of up to \$35,000,000 ("Credit Facility") while Minera IRL Patagonia looks to arrange an Argentina sourced debt facility. In the event that Minera IRL Patagonia is unable to obtain a replacement facility, the Credit Facility will be converted to longer term project financing under the terms of the existing agreement.

The initial term of the Credit Facility is for 12 months from the first disbursement of the funds and accrues interest at a rate of 360-day LIBOR plus 8.0%. Interest is payable at maturity. If alternative debt financing is not secured there is an option to extend the facility for an additional 24 months at an interest rate of 180-day LIBOR plus 8.5%, with a 0.5% step up per quarter (the last quarter of the loan being 180-day LIBOR plus 12.0%). During this extended period, interest is payable semi-annually and repayment of the loan will be in three equal annual instalments, the first being at the beginning of the extended period.

A commitment fee of 2.0% per annum is payable on non-disbursed funds from the closing of the Agreement. The commitment period is for 18 months from the closing of the Agreement. The Credit Facility is senior debt and will have a first-degree mining mortgage on Minera IRL Patagonia's mining rights and properties.

### **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 \$20,000,000 facility comprising two tranches of \$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 \$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 \$1.08 per share on or before 31 December 2014, 4,672,897 options exercisable at \$1.07 per share on or before 31 December 2014 and 4,854,369 options exercisable at \$1.03 per share on or before 31 December 2014. Minera IRL has provided security arrangements typical for such a facility.

In the third quarter of 2013, the Facility was amended to increase the amount available by \$10,000,000, in two separate \$5,000,000 tranches ("Tranche 3" and "Tranche 4"), increasing the total amount available under the Facility to \$30,000,000. The Facility interest rate remains LIBOR plus a 5.0% margin; however, as a condition of drawing down on each additional \$5,000,000 tranche a 0.5% gross revenue royalty on gold production from the Company's Ollachea gold project for the life of mine will be granted to Macquarie Bank (the "Macquarie Royalty"). Once granted, the Company would have the right to buyback and cancel each tranche of the Macquarie Royalty by paying a buyback fee (the "Buyback Fee"). The Buyback Fee would be calculated as the amount required to generate an internal rate of return ("IRR") to

Macquarie Bank of 25% for each tranche, but shall not be less than \$2,500,000 for each 0.5% gross revenue royalty. The IRR would be calculated using the actual drawdown and actual repayment of each tranche, the upfront fee paid (1.5% of each tranche, payable on drawdown), the interest payments associated with each tranche paid and any payments made under the Macquarie Royalty.

A condition precedent to Tranche 4 being made available was the government approval of the Environmental and Social Impact Assessment (“ESIA”) required for the development of the Ollachea gold project. The ESIA was received by the Company in September 2013. The \$10,000,000 available under Tranches 3 and 4 is subject to an undrawn line fee of 2% per annum.

In the fourth quarter of 2013, Tranche 3, totalling \$5,000,000, was drawn by the Company and the corresponding 0.5% gross revenue royalty was registered against the Ollachea property in favour of Macquarie Bank. Total debt outstanding under the Facility following Tranche 3 being drawn was \$25,000,000.

In March 2014, Tranche 4, totalling \$5,000,000, was drawn by the Company and the corresponding 0.5% gross revenue royalty was registered against the Ollachea property in favour of Macquarie Bank. Total debt outstanding under the Facility following Tranche 4 being drawn was \$30,000,000.

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 (the “Community of Ollachea”). In June 2012, MKK entered into an extension to the surface contract for a period of 30 years. As a condition to this contract, it was agreed that Community of Ollachea would earn a 5% equity interest in MKK upon the commencement of commercial gold production from the proposed Ollachea Gold Mine. 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. As previously detailed in the “Projects - Ollachea” and “General Development of the Business” sections of this document, all payments due under the terms of this agreement with Rio Tinto have been satisfied, with the exception of fulfilling payment under the final payment term.

In the 2007 agreement, MKK had committed to making an additional cash payment or the final additional payment to Rio Tinto, 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. On July 11, 2013, the Company and Rio Tinto agreed to \$21,500,000 as the amount

due by the Company to Rio Tinto in connection with the second and final additional payment under the Mining Right Transfer Contract for the Ollachea property.

The second and final additional payment was to be paid in three instalments. The first instalment of 34% of the second additional payment and was due 90 days after reception of notice from independent appraisers on the valuation of the Ollachea DFS. The second instalment of 33% of the second additional payment and was due 12 months after reception of notice from independent appraisers. The third instalment of 33% of the second additional payment and was due 24 months after reception of notice from independent appraisers. The second additional payment was to be paid with a minimum of 20% cash with the balance in ordinary shares of Minera IRL. The second and third instalments were to accrue an annual interest rate of 7%.

On July 11, 2013, the Company and Rio Tinto agreed to an amount of \$21,500,000 as the amount due by the Company to Rio Tinto in connection with the second and final additional payment under the Mining Rights Transfer Contract for the Ollachea property.

On 13 September 2013, the Company announced that it had agreed to revised payment terms with Rio Tinto. Under the revised agreement, the principal amount owing to Rio Tinto of \$21,500,000 would be repaid in two instalments. The first instalment, representing 34% of the total amount due (\$7,310,000), and originally due 11 October 2013, would be payable by 11 January 2014 (the "First Instalment"). The second and third instalments were combined into one final instalment, representing the remaining 66% of the total amount (\$14,190,000), which is due 1 July 2016 (the "Final Instalment"). The Company retained the right, at the Company's election, to pay up to 80% of the principal amount in ordinary shares of Minera IRL Limited. The Company also has the right to settle up to 100% of the amounts outstanding to Rio Tinto in cash, at any time.

Both instalments would accrue interest at a rate of 7% per annum to be paid in cash. The interest payment on the First Instalment was due on 11 January 2014 and interest payments on the Final Instalment are due on the first day of July in 2014, 2015 and 2016.

For purposes of calculating the number of shares to be issued, it was to be the lower of C\$0.242, representing the 5-day volume-weighted-average price ("VWAP") on the TSX on the date of signing the revised agreement, or the TSX's 5-day VWAP on the day on which an instalment is paid. The exchange rate between the United States and Canadian dollars is based on the average prevailing exchange rate during the 5-day VWAP period as posted by the Bank of Canada.

Additionally, should Rio Tinto not sell any ordinary shares that it receives as consideration for the First Instalment for a period of one year, Rio Tinto shall be entitled to a cash Share Hold Incentive Payment. The Share Hold Incentive Payment, which is subject to certain qualifying exceptions, will be equal to 10% of the market value of any ordinary shares provided as part of the payment of the first instalment.

On 24 December 2013, the Company and Rio Tinto announced that they had entered into an agreement for Minera IRL to pay 100% of the first instalment of the \$21,500,000 (plus accrued interest) due to Rio Tinto in ordinary shares of Minera IRL. Under this agreement, the price per share, for purposes of calculating the number of shares to be issued, on both the first and final instalments, was to be the lower of C\$0.179 (down from C\$0.242), representing the 5-day volume-weighted-average price ("VWAP") on the Toronto Stock Exchange ("TSX") on date of signing the most recently revised agreement, or the TSX's 5-day VWAP on the day on which an instalment is paid. Other terms on the payment of the first instalment remain unchanged. The exchange rate between the United States and Canadian dollars is based on the average prevailing exchange rate during the 5-day VWAP period as posted by the Bank of Canada. Subsequent to the end of 2013, on 28 January 2014, the Company issued approximately 44,126,780 ordinary shares of Minera IRL to Rio Tinto to settle the amounts outstanding under the first instalment of the final payment for the Ollachea Project.

The payment terms on the final instalment, representing the remaining 66% of the total amount, or \$14,190,000, due on 1 July 2016, remain unchanged from the 13 September 2013 agreement (with the exception of the price per share for purposes of calculating the number of shares to be issued now being the lower of C\$0.179; down from C\$0.242, and the prevailing share price). At Minera IRL's election, up to 80% of the principal amount may still be settled in ordinary shares of Minera IRL. The Company also has the right to settle up to 100% of the amounts outstanding to Rio Tinto in cash, at any time.

Both instalments accrue interest at a rate of 7% per annum. The final instalment interest payments are payable, in cash, on the first day of July in 2014, 2015 and 2016, respectively.

### **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 Clouett, 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. Don McIver of Minera IRL Limited and Tim Miller 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.

BDO LLP is the auditor who prepared the auditor’s report for the Company’s annual financial statements for the financial year ended 31 December 2013 and 2012. BDO 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

BDO LLP of 55 Baker Place, London, United Kingdom W1U 7EU 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.