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Updated NI 43-101 Technical Report Minera IRL Limited Corihuarmi Mine

Central Peru

Effective Date of Report: May 2nd, 2018

Effective Date of Resource Estimate: December 31st, 2017

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2.1.1 Document Control Information

	Updated NI 43-101 Technical Report Minera IRL Limited Corihuarmi Mine	REVISION	
		No.	DATE
		04	22/06/18

2.1.2 Revision Tracking

Revision	Prepared By	Reviewed By	Issued For	Approved By	Date
00	D. Seers	A. Fowler	RC		12/04/18
01	D. Seers	P. Murphy	RC		17/04/18
02	D. Seers	A. Johnston	RC		30/04/18
03	D. Seers	R. Espinoza	RC		01/05/18
04	D Seers	All	FV	PM	22/06/18

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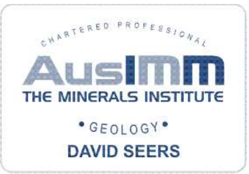
SIGNATURE PAGE

This Technical Report is effective as of May 2nd, 2018.

Name	Signed	Date Signed (dd/mm/yy)
David Seers	 	22 June 2018
Andrew Fowler		22 June 2018
Raul Espinoza		22 June 2018
Adam Johnston		22 June 2018

1 EXECUTIVE SUMMARY

1.1 Introduction

Mining Plus was commissioned by Minera IRL Limited (MIRL) to complete a Technical Report in accordance with NI 43-101 for their operating Corihuarmi Mine in Peru. This Technical Report is an update on the Technical Report written by Coffey (2010) and the effective date is May 2nd, 2018.

1.2 Property Description

Corihuarmi (the Property) is located in the high Andes of Central Peru, straddling the regions of Lima, Junín and Huancavelica approximately 160 km southeast of Peru's capital city, Lima.

The Property is formed of 14 concessions totalling approximately 9830 hectares. These concessions include 6 mining concessions held in the names of Minera Andes Exploration (Minandex) and 7 mining concession and 1 beneficiation concession held by MIRL. There are eight mine zones (open-pits) at the Property; Laura, Cayhua, Cayhua Norte, Diana, Diana Ampliación, Susan, Scree Slope, Ampliación Scree Slope.

An agreement between MIRL and Minandex states that Minandex maintain a variable Net Smelter Return (NSR) for production from within mining concessions TUPE 2, TUPE 3 and TUPE 5. Gold production from the Property is also subject to an NSR payment to the Peruvian government which varies according to total sales.

All concessions are in good legal standing and Mining Plus is not aware of any pending litigation or legal issues relating to the Property.

1.3 Geology and Mineralisation

The Property is located at the northern extreme of the southern Peru Au-Ag epithermal belt. Mineralisation identified at the Property is of a High-sulphidation (HS) epithermal type hosted in volcanic rocks close to the Chonta fault, a regionally significant NNW trending structure. The Chonta fault is a major geological break which separates Cenozoic volcanic deposits from folded Paleozoic sediments. Zoned alteration and mineralisation is centred on dacitic and rhyodacitic domes intruded close to the Chonta Fault at its intersection with subordinate NE faults.

1.4 Exploration

The Property was first identified in 1996 via colour anomalies on Landsat imagery. Subsequent, mapping, geochemistry, geophysics and drilling in the area led to the identification of seven centres mineralised with gold and economically less significant silver.

1.5 Mining

Gold mineralisation is mined by open pit methods at a mine production rate of 9,000 tonnes per day (t/d) of ore and 5,000 t/d of waste. The average grade produced in the last year (2017) is around 0.27 g/t and it is expected 0.28 g/t will be produced in the following years (2018 to 2020).

Mining at Corihuarmi uses a conventional truck and excavator configuration. Open pits are mined on 5-meter-high benches through drilling, blasting, loading and hauling unit operations. The material transportation circuit is performed in two parts; the first one is from the pit to the crusher and the second one from the crusher to the leach pad. If the ore does not require additional crushing, the material is transported directly to the leach pad. The waste is transported to the waste dump.

The mine schedule was produced in monthly periods and is based on 7 small pits which will be mined throughout 3 years of mining operations.

1.6 Mineral Resource

Mineral resources were estimated by Mr J. Limaylla (independent consultant) and have been reviewed by Dr A. Fowler (QP), who considers that the input data was suitable for use in a Mineral Resource Estimate and that the gold grade estimation process was consistent with CIM mineral resource, mineral reserve estimation best practice guidelines. Dr Fowler modified the Limaylla block model by reclassifying the Mineral Resource and depleting it to December 31st, 2017.

The Mineral Resource is reported at a cut-off grade of 0.09 g/t Au inside an optimized pit shell. Both the pit shell and cut-off grade are calculated using a gold price of USD1,400.

Resource Category	Tonnage (t)	Au (g/t)	Contained Metal (oz Au)
Measured	11,800,000	0.27	104,000
Indicated	1,760,000	0.27	15,000
Measured + Indicated	**13,560,000**	**0.27**	**119,000**
Inferred	420,000	0.30	4,000

1. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
2. There is no certainty that all or any part of the estimated Mineral Resources will be converted into Mineral Reserves.
3. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
4. The Mineral Resource was estimated by Mr. J. Limaylla and reviewed by Dr A. Fowler, MAusIMM, CP(Geo), Independent Qualified Person under NI 43-101., of Mining Plus Consultants who takes responsibility for it.
5. Data was verified by Mr. D. Seers, MAusIMM, CP(Geo), Independent Qualified Person under NI 43-101., of Mining Plus Consultants.
6. The Mineral Resource was estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the Standards Committee on Reserve Definitions and adopted by the CIM Council on May 10, 2014.
7. The Mineral Resource is sub-horizontal, outcropping or close to surface, and has been proven to be mineable by open pit methods with a low strip ratio.
8. The oxide material has reasonable prospects of economic extraction at a cut-off grade of 0.09 g/t gold.
9. Sulphide material as currently modelled, is considered too low grade to have reasonable prospects of economic extraction.
10. The cut-off grade of 0.09 g/t gold was estimated using a gold price of US1400, which was the mean rounded price for Mineral Resource reporting from a survey of 22 industry peers in February 2018.
11. Drilling results as of 1st April 2017 are included.
12. The numbers may not divide due to rounding.

Gold grade is estimated using ordinary kriging.

This Mineral Resource inclusive of the Mineral Reserve is classified in accordance with CIM Definition Standards (May 2014).

1.7 Mineral Reserves

The mineral reserves (with dilution and ore loss) is equal to 8,742,800 tonnes of ore at an average grade of 0.28 g/t Au using cut-off grade of 0.10 g/t and represents an operation of 2.8 years. The entire reserve comprises 77,700 ounces of gold (before processing recovery). Total waste, including rock, inferred resources and overburden, is 4,353,300 t; resulting in a waste to ore ratio of 0.50:1. The total mineral reserve estimate is shown in Table

Mineral Reserves Category	Tonnage (t)	Au (g/t)	Contained Metal (oz Au)
Proven	7,966,900	0.28	70,900
Probable	775,800	0.27	6,900
Proven + Probable	***8,742,800***	***0.28***	***77,700***

1. The Mineral Reserve was estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the Standards Committee on Reserve Definitions and adopted by the CIM Council on May 10, 2014.
2. The Mineral Reserve was estimated by Mr. R. Espinoza MAusIMM, CP(Min), Independent Qualified Person under NI 43-101., of Mining Plus Consultants.
3. Mr. A. Johnston MAusIMM, CP(Met), Independent Qualified Person under NI 43-101., provided input to the processing parameters used to demonstrate economic viability.

4. The cut-off grade of 0.10 g/t gold was estimated using a forecasted gold price of US1250, which was the mean rounded price for Mineral Reserve reporting from a survey of 22 industry peers in February 2018.
5. The numbers may not divide due to rounding.

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FIGURES & TABLES

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2 INTRODUCTION

Mining Plus was commissioned by Minera IRL Limited (MIRL) to complete a Technical Report in accordance with NI43-101 for their operating Corihuarmi Mine in Peru (the Property). This technical report is an update on the NI 43-101 technical report written by Coffey (2010) and its' effective is May 2nd, 2017.

The purpose of this report is to provide an updated Mineral Resource and Mineral Reserve statement for the Corihuarmi Mine.

Mining Plus is a professional services company wholly independent of MIRL.

MIRL, headquartered in Lima, Peru, is listed on the Canadian Securities Exchange (CSE) under the ticker "MIRL". The Property is MIRL's only producing mine and it has been in production since 2006.

This report complies with the disclosure and reporting requirements set forth in the Toronto Stock Exchange Manual, National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101), Companion Policy 43-101CP to NI 43-101, and Form 43-101F1 of NI 43-101.

Information used in the preparation of this technical report was taken from various sources:

- Estimation de Reservas – Prepared by Minera IRL (2017) ["MIRL 2017"]
- National Instrument 43-101 Technical Report – Prepared by Coffey Mining (2010) ["Coffey 2010"]
- Geology and Exploration Summary of Corihuarmi Property Central Peru – Prepared by AMEC (2006) ["Amec 2006"]
- Corihuarmi Feasibility Study 1,000,000 Tonne per Year Heap Leach Project, Junín, Peru – Prepared by Kappes Cassiday and Associates (2006) ["KCA 2006"]
- 1:50k mapsheet 26L-1 "Mapa Geológico del Cuadrangulo Tupe" – Prepared by INGEMMET (2009) ["INGEMMET 2009"]
- Boletín #44 "Boletín de Mala (26-J), Lunahuana (26-K), Tupe (26-L), Conaica (26-M)" – Prepared by INGEMMET (1993) ["INGEMMET 1993"]

For the purposes of this technical report, Mr David Seers (QP) and Mr Raul Espinoza (QP), employed full-time by Mining Plus, undertook a personal inspection of the Property on January 18th, 2018. Mr Seers reviewed (QP) reviewed various geological aspects including, sampling, drill core, logging and assay laboratory. Mr Espinoza (QP) reviewed mining aspects including, leach pads, mining methods and mine planning.

Mr Adam Johnston (QP) visited the property on 19th July, 2017 and reviewed mineral processing facilities.

Dr Andrew Fowler (QP) has not visited the Property.

Specific sections of the report that the Qualified Persons are responsible for are provided in Table 2-1and a detailed further in the attached Qualified Persons certificates.

Table 2-1: Qualified Persons – Report Responsibilities

Qualified Person	Company	Section
David Seers	Mining Plus	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 23, 24, 25 and 26
Andrew Fowler	Mining Plus	14, 24, 25 and 26
Raul Espinoza	Mining Plus	15, 16, 18, 19, 20, 21, 22, 24, 25 and 26
Adam Johnston	Transmin	13, 17, 24, 25 and 26

Units of Measure

The metric system has been used throughout this report. Tonnes are dry metric of 1,000 kg, or 2,204.6 lb. All currency is in US dollars (US$), and referenced as '$', unless otherwise stated.

Effective Date

The effective date of the mineral resource and reserve estimates in this report is December 31st, 2017.

The effective date is this report is May 2nd, 2018.

3 RELIANCE ON OTHER EXPERTS

Neither Mining Plus nor the authors of this report are qualified to provide comment on legal issues associated with the Project included in Section 4 of this report. Inclusion of these aspects was based on information provided by MIRL solicitors, Marco Arevalo, Arevalo abogados & consultores and has not been independently verified by Mining Plus.

4 PROPERTY, DESCRIPTION AND LOCATION

The Property is located in the high Andes of Central Peru, straddling the regions of Lima, Junín and Huancavelica, approximately 160 km southeast of Peru's capital city, Lima (Table 4-1).

The approximate centre of concession P0000207 ("Corihuarmi"), as defined in the WGS84 Latitude/Longitude coordinate system and UTM WGS 84 (zone 18S) is given in Table 4-1:

Table 4-1: Project Coordinates

Geographic		UTM WGS 84 (Zone 18S)	
Latitude	-12.57053	Easting	437474
Longitude	-78.57637	Northing	8610332

The Property is formed of 14 concessions totalling approximately 9830 hectares (Figure 4-1 and Table 4-2). These concessions include 6 mining concessions held in the name of Minera Andes Exploration (Minandex) and 7 mining concession and 1 beneficiation concession held by MIRL. Mining activities, infrastructure and the Mineral Resource are all contained within the central block of mining concessions (Figure 4-1).

Table 4-2: Property Concession Details

Concession Name	Concession Code	Concession Holder	Concession Type	Region	Hectares
VERA IX	10131705	MIRL	Mining	HUANCAVELICA	900
TAMBO NUEVO 11	10109515	MIRL	Mining	JUNIN	400
FIOPO I	10337905	MIRL	Mining	HUANCAVELICA / JUNIN	1000
EL ALCATRAZ 12	10207994	MIRL	Mining	HUANCAVELICA	1000
CORIHUARMI	P0000207	MIRL	Beneficiation	JUNIN / LIMA	127.5
CHANTAL 3	10132715	MIRL	Mining	LIMA	1000
CHANTAL 2	10110115	MIRL	Mining	LIMA	900
CHANTAL 1	10109715	MIRL	Mining	LIMA	1000
VERA III	10379704	Minandex	Mining	JUNIN / LIMA	500
VERA II	10379604	Minandex	Mining	JUNIN	700
VERA I	10379504	Minandex	Mining	JUNIN / LIMA	800
TUPE 5	10363594	Minandex	Mining	LIMA	300
TUPE 3	10201794	Minandex	Mining	JUNIN / LIMA	600
TUPE 2	10201694	Minandex	Mining	LIMA	600
					9827.5

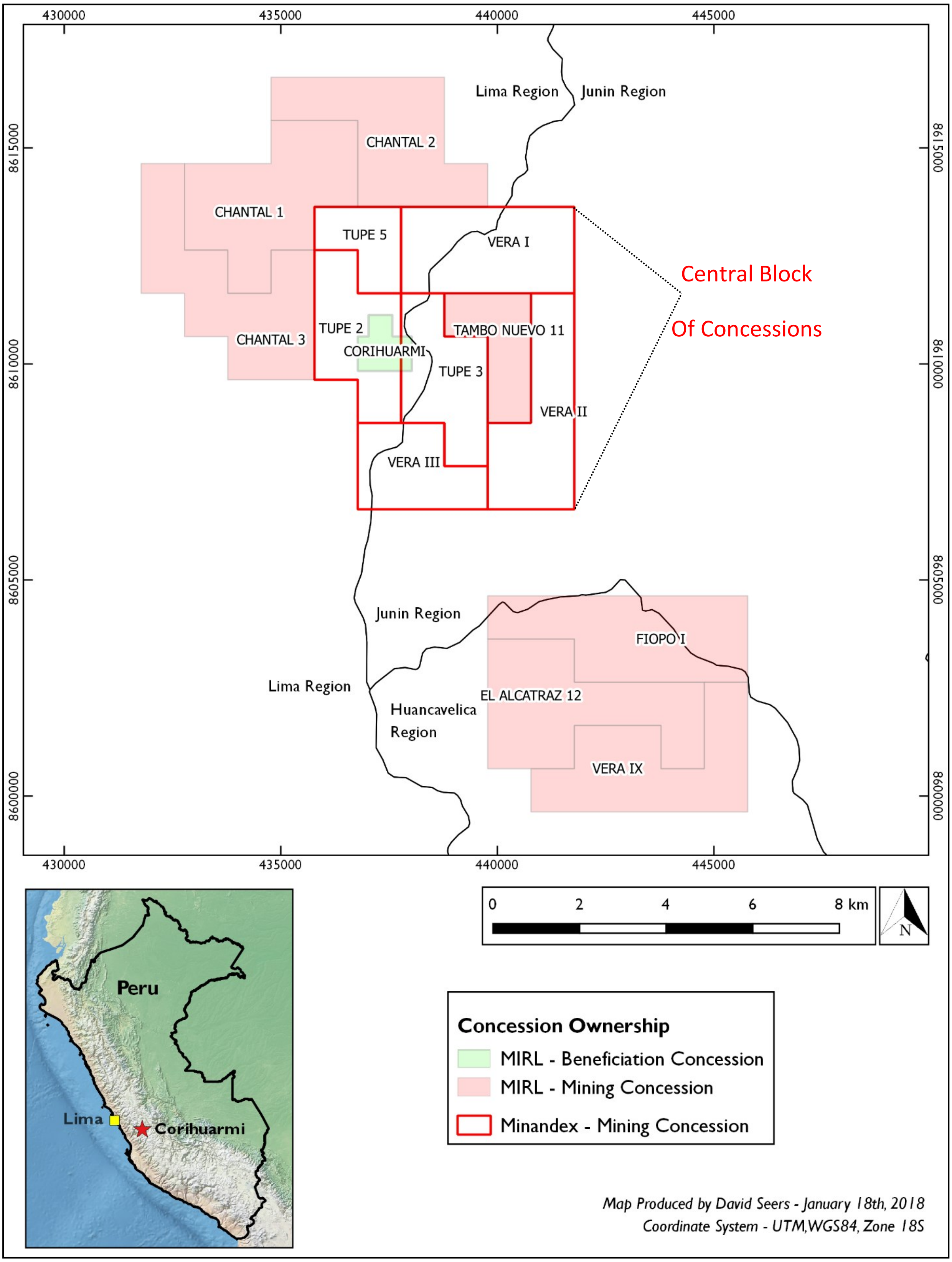

Figure 4-1: Concession Map

All concessions are in good standing. Mining Plus are not aware of any pending litigation or legal issues relating to the Property. Assuming the requisite annual investment is achieved and annual "derecho de vigencia" payments are made, concessions are considered irrevocable.

Mine output in Peru is subject to a Royalty payable to the government, this royalty is based on a percentage of the sale value ranging between 1% and 3% (Table 4-3).

Table 4-3: Royalties payable to government

Total Sales	Royalty to Government
Less than US$60M	1.00%
US$60M to <US$120M	2.00%
US$120M and greater	3.00%

Minandex retain a Net Smelter Royalty (NSR), based on the price of gold (Table 4-4), for gold production from Mining Concessions: Tupe 2, Tupe 3 and Tupe 5.

Table 4-4: NSR Payable to Minandex

Gold Price ($/Troy Ounce)	Royalty Payable
< 300	1.50%
300 to 350	2.00%
>350	3.00%

The Environmental and Social Impact Assessment (EIA), completed as part of a feasibility study issued in 2006 by Vector Engineering, rates Corihuarmi as having limited adverse social and environmental impact. Those impacts identified are considered by Vector to be largely reversible and readily mitigated.

4.1 Permitting

Like other mines, Corihuarmi is subject to various Peruvian mining laws, regulations and procedures. Mining Activities in Peru are subject to the provisions of the Uniform Code of the General Mining Law ("General Mining Law"), which was approved by Supreme Decree No. 14-92-EM, on June 4, 1992 and its subsequent amendments and regulations, as well as other related laws. Under Peruvian law, the Peruvian State is the owner of all mineral resources in the ground. The rights to explore for and develop these mineral resources are granted by means of the "Concessions System".

Mining concessions are considered immovable assets and are therefore subject to being transferred, optioned, leased and/or granted as collateral (mortgaged) and, in general, may be subject to any transaction or contract not specifically forbidden by law. Mining concessions may be privately owned and the participation in the ownership of the Peruvian State is not required. Buildings and other permanent structures used in a mining operation are considered real property accessories to the concession on which they are situated.

4.2 Annual Fees and Obligations

4.2.1 Maintenance Fees

Pursuant to article 39 of the General Mining Law, title holders of mining concessions pay an Annual Maintenance Fee (Derecho de Vigencia). The Derecho de Vigencia is due on June 30 of each year and is paid one year in advance and is calculated at $ 3.00 per hectare. Failure to pay Derecho de Vigencia for two consecutive years causes the termination (caducidad) of the mining concession. However, according to article 59 of the General Mining Law, payment for one year may be delayed with penalty and the mining concessions remain in good standing. The outstanding payment for the past year can be paid on the following June 30 along with the future year.

4.2.2 Minimum Production Obligation

Legislative Decree 1010, dated May 9, 2008 and Legislative Decree 1054, dated June 27, 2008 amended several articles of the General Mining Law regarding the Minimum Production Obligation, establishing a new regime for compliance ("New MPO Regime").

According to the New MPO Regime, titleholders of metallic mining concessions must reach a minimum level of annual production ("Minimum Production") of at least one (1) Tax Unit or "UIT" (PEN S./ 4150 in 2018, approximately US $1290) per hectare, within a period of ten years. The ten-year period begins on January 1st of the year following granting of the concession.

In the case of mining concessions that were granted on or before October 10, 2008, until the ten (10) year term for reaching Minimum Production established by the New MPO Regime elapses (on January 1st, 2019), these mining concessions will be subject to the former provisions of the General Mining Law.

Once the deadline to comply with the minimum production of the New MPO Regime has passed, and if the Company fails to comply with production requirements, it will be obliged to pay the Penalty of the New MPO Regime and will be subject to the termination of the mining concession.

4.3 Ownership of Mining Rights

Pursuant to the General Mining Law:

Mining rights may be forfeited only due to a number of circumstances defined by law (i.e. non-payment of the maintenance fees and/or noncompliance with the Minimum Production Obligation);

The right of concession holders to sell mine production freely in world markets is established. Peru has become party to agreements with the World Bank's Multilateral Investment Guarantee Agency and with the Overseas Private Investment Corporation.

4.4 Taxation and Foreign Exchange Controls

Corporate taxes in 2018 are 27% and will reduce to 26% in 2019. Rates of tax applicable to dividends will increase from 8% in 2018 to 9.3% in 2019.

There are currently no restrictions on the ability of a company operating in Peru to transfer dividends, interest, royalties or foreign currency in to or out of Peru or to convert Peruvian currency into foreign currency.

Congress has approved a Temporary Net Assets Tax, which applies to companies' subject to the General Income Tax Regime. Net assets are taxed at a rate of 0.4% on the value exceeding one million Peruvian soles (approximately $345,000). Taxpayers must file a tax return during the first 12 days of April and the amounts paid can be used as a credit against Income Tax. Companies which have not started productive operations or those that are in their first year of operation are exempt from the tax.

The Tax Administration Superintendent is the entity empowered under the Peruvian Tax Code to collect federal government taxes. The Tax Administration Superintendent can enforce tax sanctions, which can result in fines, the confiscation of goods and vehicles, and the closing of a taxpayer's offices.

Property, description and location

The Property is located in the high Andes of Central Peru, straddling the regions of Lima, Junín and Huancavelica, approximately 160 km southeast of Peru's capital city, Lima (Table 4-5).

The approximate centre of concession P0000207 ("Corihuarmi"), as defined in the WGS84 Latitude/Longitude coordinate system and UTM WGS 84 (zone 18S) is given in Table 4-5:

Table 4-5: Project Coordinates

Geographic		UTM WGS 84 (Zone 18S)	
Latitude	-12.57053	Easting	437474
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The Property is formed of 14 concessions totalling approximately 9830 hectares (Figure 4-2 and Table 4-6). These concessions include 6 mining concessions held in the name of Minera Andes Exploration (Minandex) and 7 mining concession and 1 beneficiation concession held by MIRL. Mining activities, infrastructure and the Mineral Resource are all contained within the central block of mining concessions (Figure 4-2).

Table 4-6: Property Concession Details

Concession Name	Concession Code	Concession Holder	Concession Type	Region	Hectares
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TAMBO NUEVO 11	10109515	MIRL	Mining	JUNIN	400
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CHANTAL 1	10109715	MIRL	Mining	LIMA	1000
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VERA I	10379504	Minandex	Mining	JUNIN / LIMA	800
TUPE 5	10363594	Minandex	Mining	LIMA	300
TUPE 3	10201794	Minandex	Mining	JUNIN / LIMA	600
TUPE 2	10201694	Minandex	Mining	LIMA	600
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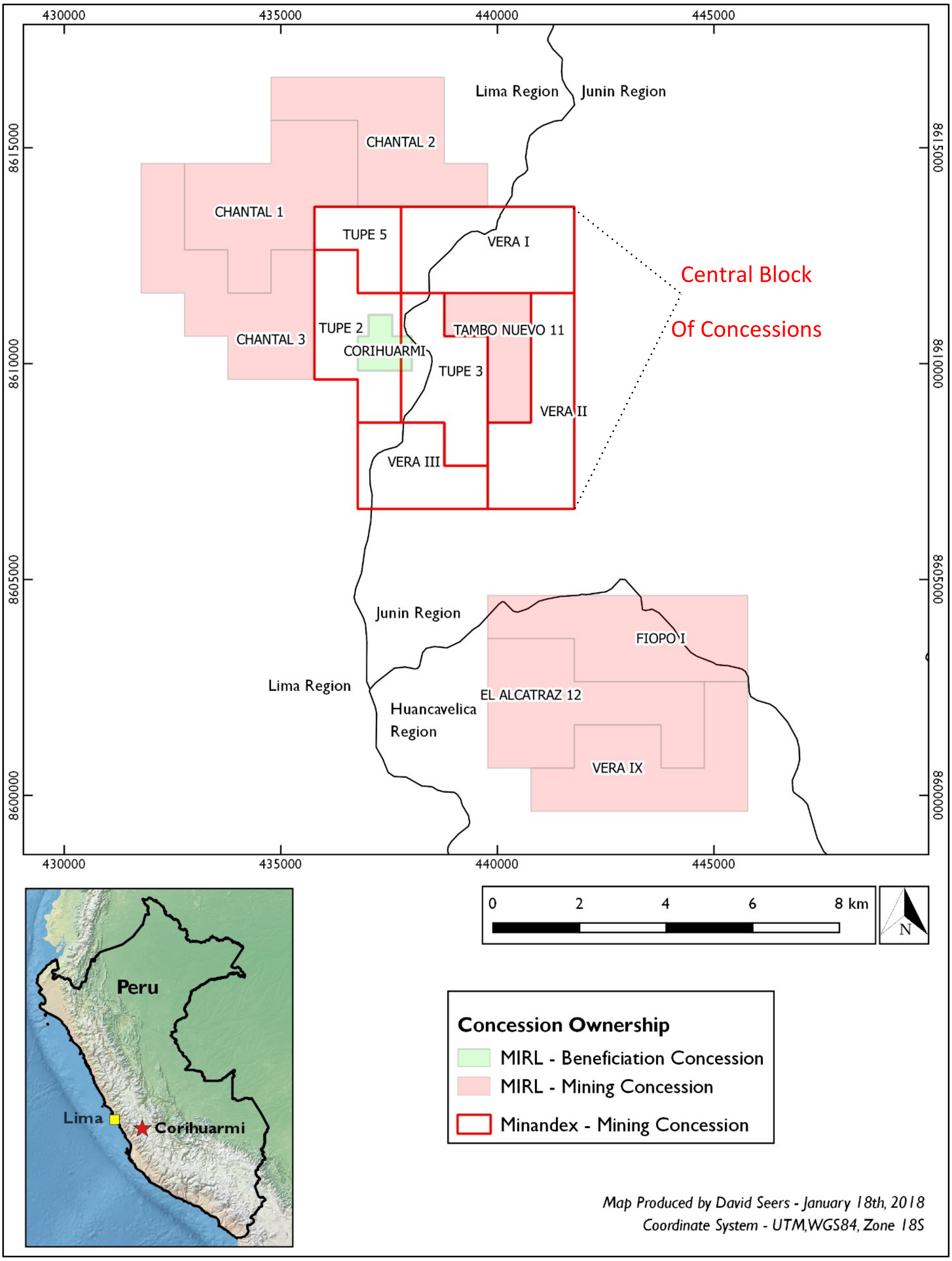

Figure 4-2: Concession Map

All concessions are in good standing. Mr Seers (QP) is not aware of any pending litigation or legal issues relating to the Property. Assuming the requisite annual investment is achieved and annual “derecho de vigencia” payments are made, concessions are considered irrevocable.

Mine output in Peru is subject to a Royalty payable to the government, this royalty is based on a percentage of the sale value ranging between 1% and 3% (Table 4-7).

Table 4-7: Royalties payable to government

Total Sales	Royalty to Government
Less than US$60M	1.00%
US$60M to <US$120M	2.00%
US$120M and greater	3.00%

Minandex retain a Net Smelter Royalty (NSR), based on the price of gold (Table 4-8), for gold production from Mining Concessions: Tupe 2, Tupe 3 and Tupe 5.

Table 4-8: NSR Payable to Minandex

Gold Price ($/Troy Ounce)	Royalty Payable
< 300	1.50%
300 to 350	2.00%
>350	3.00%

The Environmental and Social Impact Assessment (EIA), completed as part of a feasibility study issued in 2006 by Vector Engineering, rates Corihuarmi as having limited adverse social and environmental impact. Those impacts identified are considered by Vector to be largely reversible and readily mitigated.

4.5 Permitting

Like other mines, Corihuarmi is subject to various Peruvian mining laws, regulations and procedures. Mining Activities in Peru are subject to the provisions of the Uniform Code of the General Mining Law (“General Mining Law”), which was approved by Supreme Decree No. 14-92-EM, on June 4, 1992 and its subsequent amendments and regulations, as well as other related laws. Under Peruvian law, the Peruvian State is the owner of all mineral resources in the ground. The rights to explore for and develop these mineral resources are granted by means of the “Concessions System”.

Mining concessions are considered immovable assets and are therefore subject to being transferred, optioned, leased and/or granted as collateral (mortgaged) and, in general, may be subject to any transaction or contract not specifically forbidden by law. Mining concessions may be privately owned and the participation in the ownership of the Peruvian State is not required. Buildings and other permanent structures used in a mining operation are considered real property accessories to the concession on which they are situated.

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Pursuant to article 39 of the General Mining Law, title holders of mining concessions pay an Annual Maintenance Fee (Derecho de Vigencia). The Derecho de Vigencia is due on June 30 of each year and is paid one year in advance and is calculated at $ 3.00 per hectare. Failure to pay Derecho de Vigencia for two consecutive years causes the termination (caducidad) of the mining concession. However, according to article 59 of the General Mining Law, payment for one year may be delayed with penalty and the mining concessions remain in good standing. The outstanding payment for the past year can be paid on the following June 30 along with the future year.

4.6.2 Minimum Production Obligation

Legislative Decree 1010, dated May 9, 2008 and Legislative Decree 1054, dated June 27, 2008 amended several articles of the General Mining Law regarding the Minimum Production Obligation, establishing a new regime for compliance ("New MPO Regime").

According to the New MPO Regime, titleholders of metallic mining concessions must reach a minimum level of annual production ("Minimum Production") of at least one (1) Tax Unit or "UIT" (PEN S./ 4150 in 2018, approximately US $1290) per hectare, within a period of ten years. The ten-year period begins on January 1st of the year following granting of the concession.

In the case of mining concessions that were granted on or before October 10, 2008, until the ten (10) year term for reaching Minimum Production established by the New MPO Regime elapses (on January 1st, 2019), these mining concessions will be subject to the former provisions of the General Mining Law.

Once the deadline to comply with the minimum production of the New MPO Regime has passed, and if the Company fails to comply with production requirements, it will be obliged to pay the Penalty of the New MPO Regime and will be subject to the termination of the mining concession.

4.7 Ownership of Mining Rights

Pursuant to the General Mining Law:

Mining rights may be forfeited only due to a number of circumstances defined by law (i.e. non-payment of the maintenance fees and/or noncompliance with the Minimum Production Obligation);

The right of concession holders to sell mine production freely in world markets is established. Peru has become party to agreements with the World Bank's Multilateral Investment Guarantee Agency and with the Overseas Private Investment Corporation.

4.8 Taxation and Foreign Exchange Controls

Corporate taxes in 2018 are 27% and will reduce to 26% in 2019. Rates of tax applicable to dividends will increase from 8% in 2018 to 9.3% in 2019.

There are currently no restrictions on the ability of a company operating in Peru to transfer dividends, interest, royalties or foreign currency in to or out of Peru or to convert Peruvian currency into foreign currency.

Congress has approved a Temporary Net Assets Tax, which applies to companies' subject to the General Income Tax Regime. Net assets are taxed at a rate of 0.4% on the value exceeding one million Peruvian soles (approximately $345,000). Taxpayers must file a tax return during the first 12 days of April and the amounts paid can be used as a credit against Income Tax. Companies which have not started productive operations or those that are in their first year of operation are exempt from the tax.

The Tax Administration Superintendent is the entity empowered under the Peruvian Tax Code to collect federal government taxes. The Tax Administration Superintendent can enforce tax sanctions, which can result in fines, the confiscation of goods and vehicles, and the closing of a taxpayer's offices.

5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Property straddles the borders of the provinces of Lima, Junín and Huancavelica in the high Andes of central Peru. From Lima, it is possible to drive to the Property via the Carretera Central and the towns of Jauja and Huancayo in approximately 6 hours (Figure 5-1). Alternatively, it is possible to fly from Lima to Jauja and drive to the Property via Huancayo, this route also takes approximately 6 hours. Roads between Huancayo and the Property are of variable quality but are passable year-round with 4x4 vehicles.

Huancavelica, with a population of approximately 450k and Huancayo, with a population of approximately 340k, are the nearest significant population centres. These towns offer a range of goods and services as well as workers experienced in mining.

The Property is characterised by gently rolling topography between 4500 and 5100 m above sea level. Hillsides can be barren of vegetation or populated by short grasses and bushes, valley bottoms are typically more densely vegetated. Transient grazing of various animals is the only recognised farming activity in the Property.

Climate is seasonal with heavy rains typically falling between November and March but does not hinder operations.

MIRL operate a camp with capacity to house approximately 140 employees, other facilities include; core-shed, offices and warehouse.

Permitted installations include; processing plant, waste dumps, fuel storage and explosives magazine.

Operations are connected to the national power grid via overhead cables. In the event that connection to the national power grid is lost, MIRL have the ability to generate sufficient power to maintain operations.

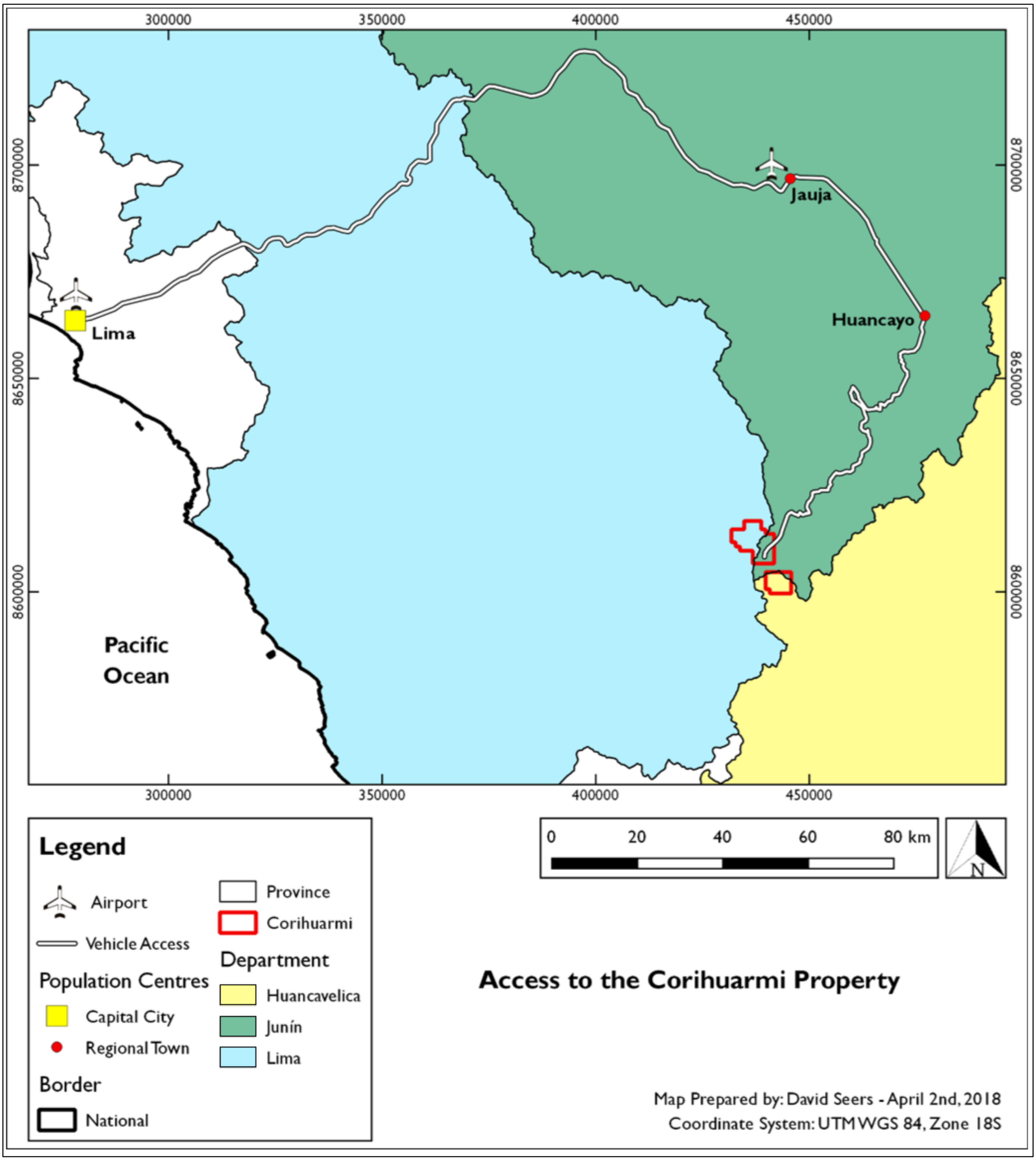

Figure 5-1: Property Location and Access

6 History

Minandex first identified the Property as a colour anomaly on Landsat imagery in 1996. Ground truthing by geologists working for Minandex confirmed the presence of an extensive hydrothermal alteration system as well as identifying the Susan and Diana zones.

In 1998, Cardero entered into an agreement with Minandex to continue exploring the Property under joint venture arrangements with Barrick and Newmont. Portable infrared mineral analysis (PIMA) was used to refine alteration mapping and controlled source audio magnetotelluric's (CSAMT) was used to define drill targets which were tested by Newmont. In 2000 Cardero returned the Property to Minandex concluding that the environment was not favourable for the development of large zones of epithermal gold mineralization.

MIRL became involved in the Property in 2002, initially focusing efforts on better defining the Susan and Diana zones. By 2005, 3551.95 m of drilling (53 holes) had been completed along with metallurgical test work and geotechnical studies which culminated in a Feasibility Study authored by Kappes Cassiday and Associates (KCA 2006).

Coffey (2010) authored an NI43-101 Technical Report containing a measured and indicated mineral resource in accordance with CIM definitions for the Diana and Susan pits (Table 6-1):

Table 6-1: Historic Measured and Indicated Mineral Resource

Measured and Indicated Summary		
Tonnes (Mt)	Au (g/t)	Contained Ounces (Au)
5.3	0.6	103,000

Au g/t cut-off grades – Diana = 0.3 and Susan = 0.25

The accompanying mineral reserve is shown in (Table 6-2):

Table 6-2: Historic Proven and Probable Mineral Reserve

Proven and Probable Reserve Summary		
Tonnes (Mt)	Au (g/t)	Contained Ounces (Au)
5.1	0.65	105,900

The historic mineral resource and mineral reserve was prepared by qualified persons in 2010, however MIRL is not treating them as current as they have largely been depleted by mining and extended laterally by additional drilling.

First production by MIRL commenced in 2008 and since over 390k Oz Au have been produced.

7 GEOLOGICAL SETTING AND MINERALISATION

7.1 Regional Geology

The geological, mining and metallurgical institute (INGEMMET) publish geological maps covering much of Peru at 1:100k and 1:50k scale. INGEMMET also publish descriptive Boletín's detailing regional geology, lithological units, structure and economic geology for much of Peru.

The Property is covered by 1:50k map sheet 26L-1 "Mapa Geológico del Cuadrangulo Tupe" and Boletín #44. Using these sources, David Seers (QP) summarises the key regional geological features (Figure 7-1, Figure 7-2):

- An angular unconformity separates folded Paleozoic sediments and Cenozoic volcanics
- Paleozoic sediments are folded along an NNW trend
- Andean trending, NNW faulting in part controls exposure of Paleozoic sediments through Cenozoic volcanics
- Andesitic intrusions related to Cenozoic volcanism are exposed in central and eastern parts of the map sheet
- The coastal batholith is exposed in the southwestern corner of the map sheet
- Varied quaternary deposit are concentrated along water courses and valley bottoms
- Corihuarmi is located on a major NNW fault
- The Property is lies at the northern extreme of the Southern Peru Au-Ag Epithermal Belt

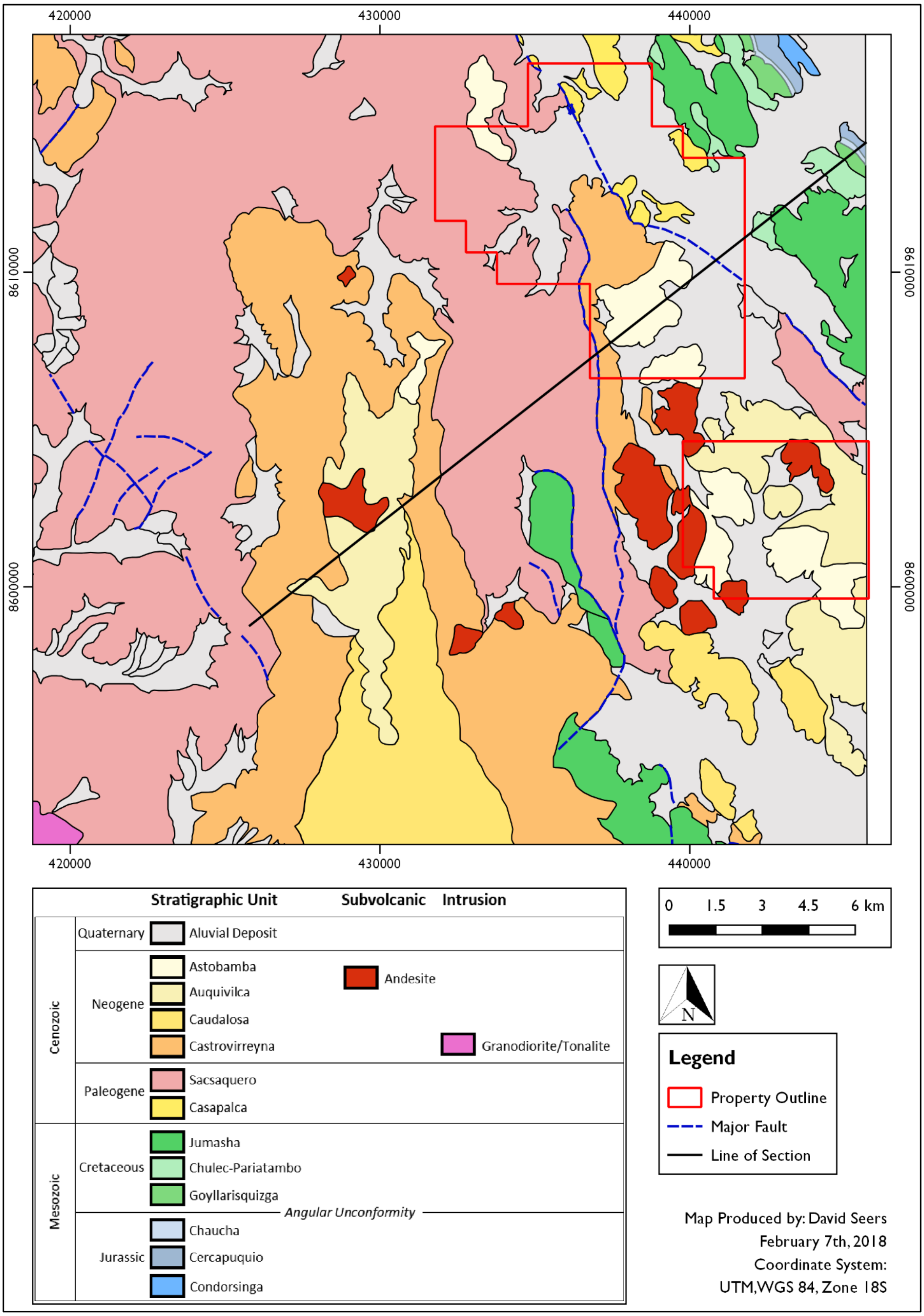

Figure 7-1: Regional Geology Map

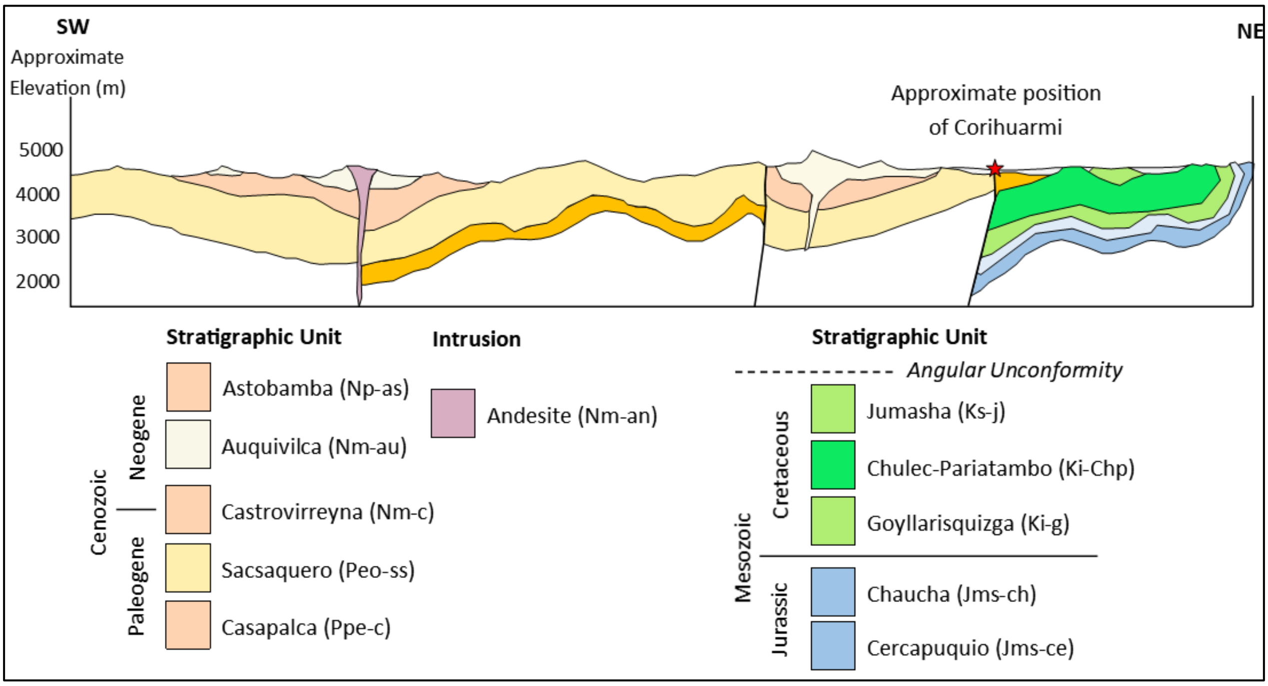

Figure 7-2: Cross-section through Regional Geology

7.2 Local Geology

Outcrop is obscured by vegetation and quaternary deposits.

The north-northwest trending Chonta fault, obscured in part by quaternary deposits, separates folded Cretaceous and Jurassic sediments from Cenozoic volcanics and is the main conduit for extensive hydrothermal alteration.

Hydrothermal alteration related to inferred buried intrusions is recorded to the southwest of the Chonta fault in Cenozoic volcanics. Centres of alteration, observable on remote sensing imagery, are mapped along the Chonta fault; alteration is particularly strong where secondary northeast faults intersect the Chonta fault.

7.3 Property Geology

Detailed understanding of geology is centred around the Central Block of Concessions (Figure 4-1).

Variably sub-cropping and outcropping dacite and rhyodacite domes and more recent volcanic deposits dominate geology and the Property. Domes broadly define the margins of a collapsed caldera structure measuring 4.5 by 3.5 km, elongate along a north-northwest trend (Coffey, 2010).

The NNW Andean trend is well developed and is the dominant orientation of faulting and fold hinges at the Property. The hydrothermal system which drove alteration and mineralisation at the Property is focused along the Chonta fault. Intense alteration, brecciation and mineralisation are intimately associated with the Chonta fault, specifically where it is cross-cut by east-west and northeast tensional structures.

Zoned alteration, typical of a High-Sulphidation (HS) epithermal system, is recognised at the property. Zones of vuggy silica occur within a more widely developed silica and alunite alteration assemblage. These zones of alteration grade in to more expansive argillic alteration and localised but distal zones of propylitic alteration (Figure 7-3). Vuggy silica centres approximately align along the NNW Andean trend. Photographs shown Figure 7-4 demonstrate vuggy silica and lesser silica cay alteration.

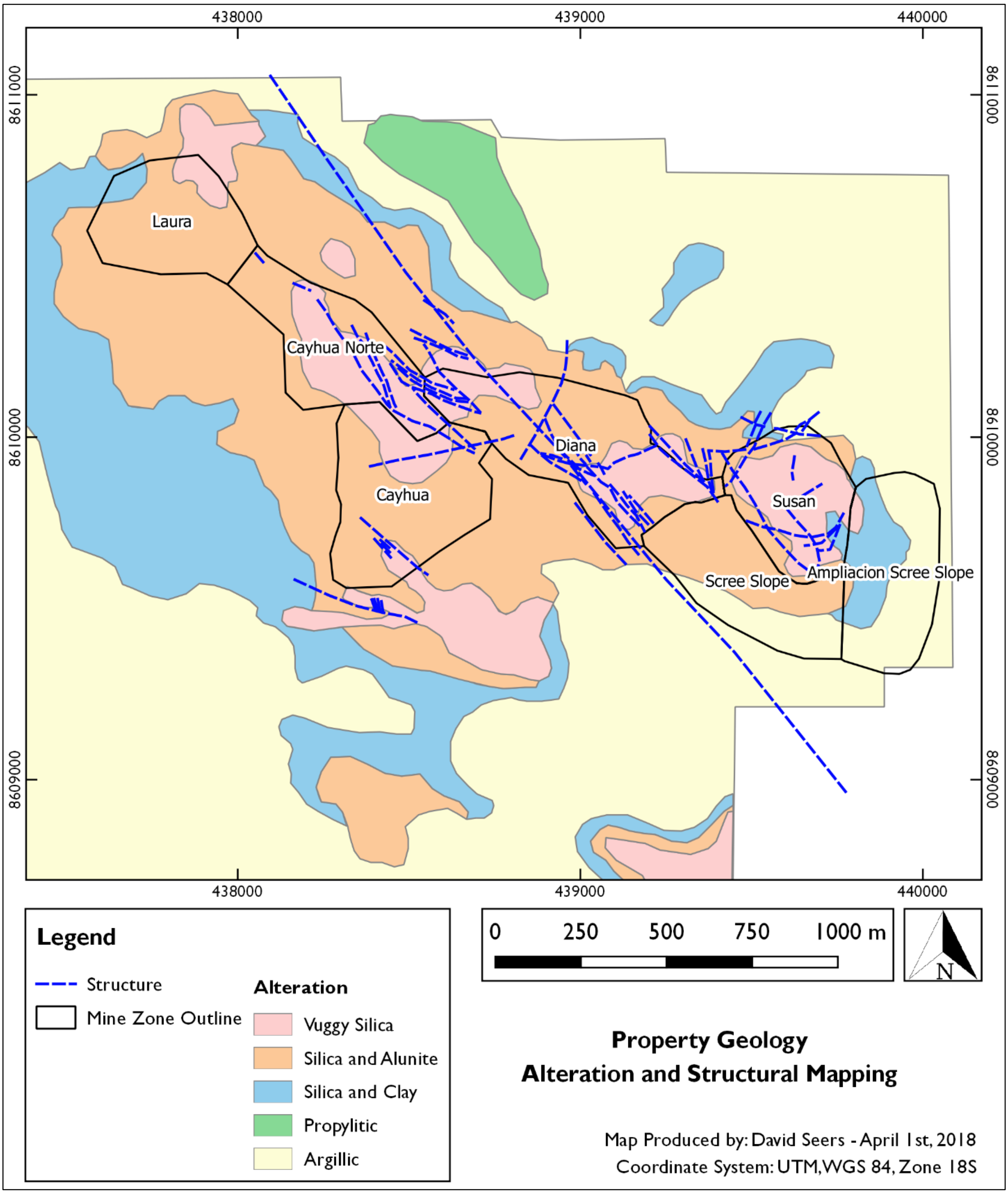

Figure 7-3: Property Geology

Susan Mine Zone

Left: Vuggy silica from the Susan Mine Zone. Vuggy silica typically occurs at the centre of high-sulphidation epi-thermal system and represents high intensity acid alteration. Note the voids left by leached plagioclase crystals.

Higher-grade gold is typically associated with vuggy silica, late gold may be deposited in the voids left by leached plagioclase.

Right: Plagiophyric andesite at the margins of the Susan Mine Zone . At the margins of alteration centres, alteration is weaker. Plagioclase crystals are softened and clay altered but remain in place.

Clay altered zones are typically lower grade than zones of vuggy silica

Figure 7-4: Alteration photographed at the Diana Pit.

Zones of increased grade are typically associated with vuggy silica in the near surface oxidation zone. Interpretation of drilling data indicates that oxidation extends some 80 m below the surface.

8 DEPOSIT TYPES

The extensively developed hydrothermal system developed at the Property is related to a high-sulphidation epithermal system.

High-sulphidation (HS) epithermal systems are the surface expression of an underlying intrusion and often occur in clusters of vents developed along a feeder structure. Alteration around individual vents is typically zoned with intense silicifiation and acid leaching at the centre, referred to as vuggy silica (Figure 8-1). Typically, with increasing distance from a vent alteration intensity diminishes grading to quartz-alunite, kaolinite and eventually fresh rock.

Precious metal mineralisation associated with HS systems is typically late and is often deposited in the voids of vuggy silica.

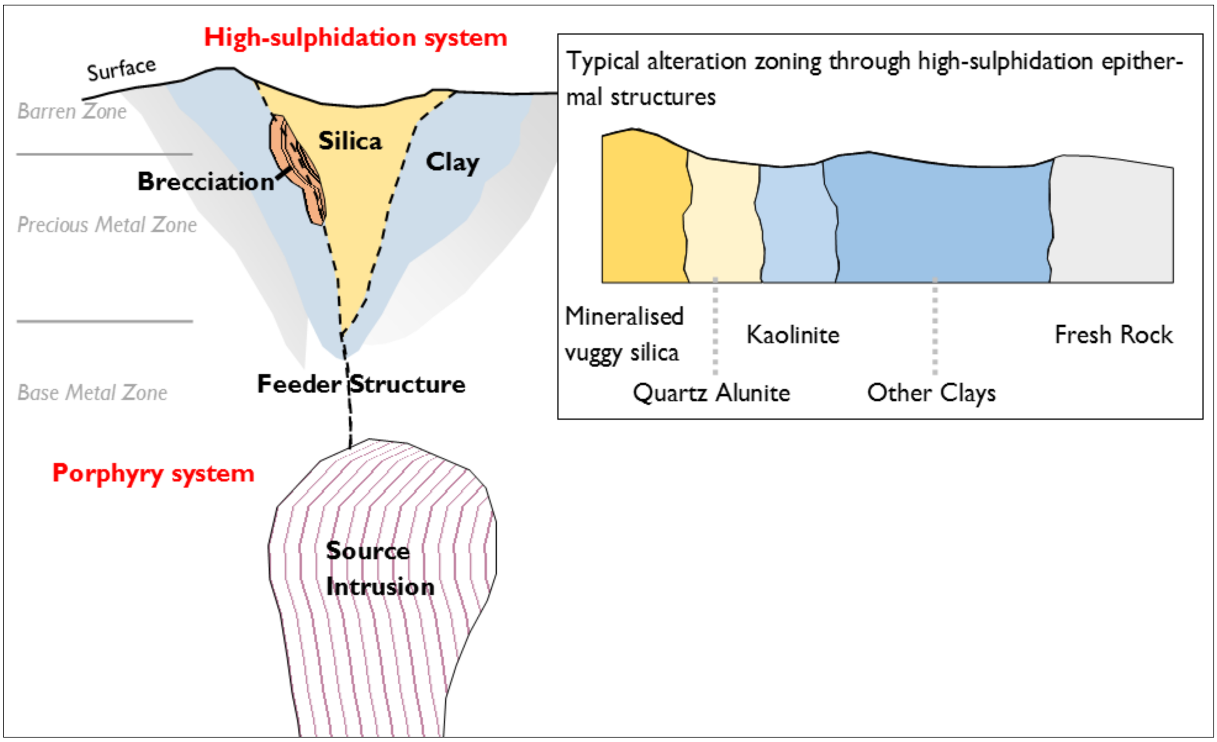

Figure 8-1: Typical cross section of a HS epithermal deposit

9 EXPLORATION

Documented exploration at Corihuarmi can be traced back a little over 20 years to 1996. Exploration at the Property includes; Landsat imagery, surface mapping, surface sampling, and ground-based geophysics including; magnetics, IP and CSAMT.

In 1996, Minera Andina de Exploraciones (Minandex) identified what would become the Corihuarmi Property as a colour anomaly on a Landsat scene (Figure 9-1). Follow-up ground truthing including geological mapping and wide-spaced surface sampling (Figure 9-2) identified an extensively developed hydrothermal alteration system, encompassing what would become the Diana and Susan deposits among others.

In 1998, Minandex ceded control of the Property to Cardero Resources Corporation (Cardero), in a joint venture arrangement with Barrick Gold Corporation and Newmont Mining Corporation. Cardero continued exploring the Property over a two-year period. Systematic surface sampling focused around the north-northwest trending Chonta fault zone. Alteration was mapped using Portable Infrared mineral Analysis (PIMA) and a Controlled Source Audio Magnotelluric (CSAMT) survey was completed, following which, drill targets were identified and tested with 1971.15 m of diamond drilling over 9 holes. At the conclusion of this work Cardero took the decision to return the Property to Minandex as they considered it was unlikely to host significant zones of epithermal gold mineralisation.

In 2002, MIRL entered into an agreement with Minandex to earn in to the Property. Extensive surface sampling and mapping confirmed the 3 km, northwest-southeast trending, zone of hydrothermal alteration around the Chonta fault zone.

In 2008, MIRL commissioned Fugro Ground Geophysics (Fugro) to undertake 2D Induced Polarisation (IP2D) and ground magnetics surveys. Based on the surveys four targets were identified, based on highly resistive zones surrounded by zones of low resistivity. The full characteristics of the survey are detailed in the Fugro report (Fugro 2007), summary findings are listed here:

- Negative ground magnetic anomalies identified during the survey correspond to zones that had suffered strong hydrothermal activity which was magnetite destructive
- Four highly chargeable (>32 mV/V) zones interpreted to be associated with disseminated sulphides (Figure 9-5)
- Four highly resistive anomalies (between 1100 and 1600 Ohms) were identified as part of the IP survey (Figure 9-5). These anomalies directly relate

to massive silica introduction and the developed of vuggy silica around high-sulphidation centres.

- Three resistivity lows were recorded during the resistivity survey (<5 Ohms), these lows were related to the development of hydrothermal breccias and increased sulphide content

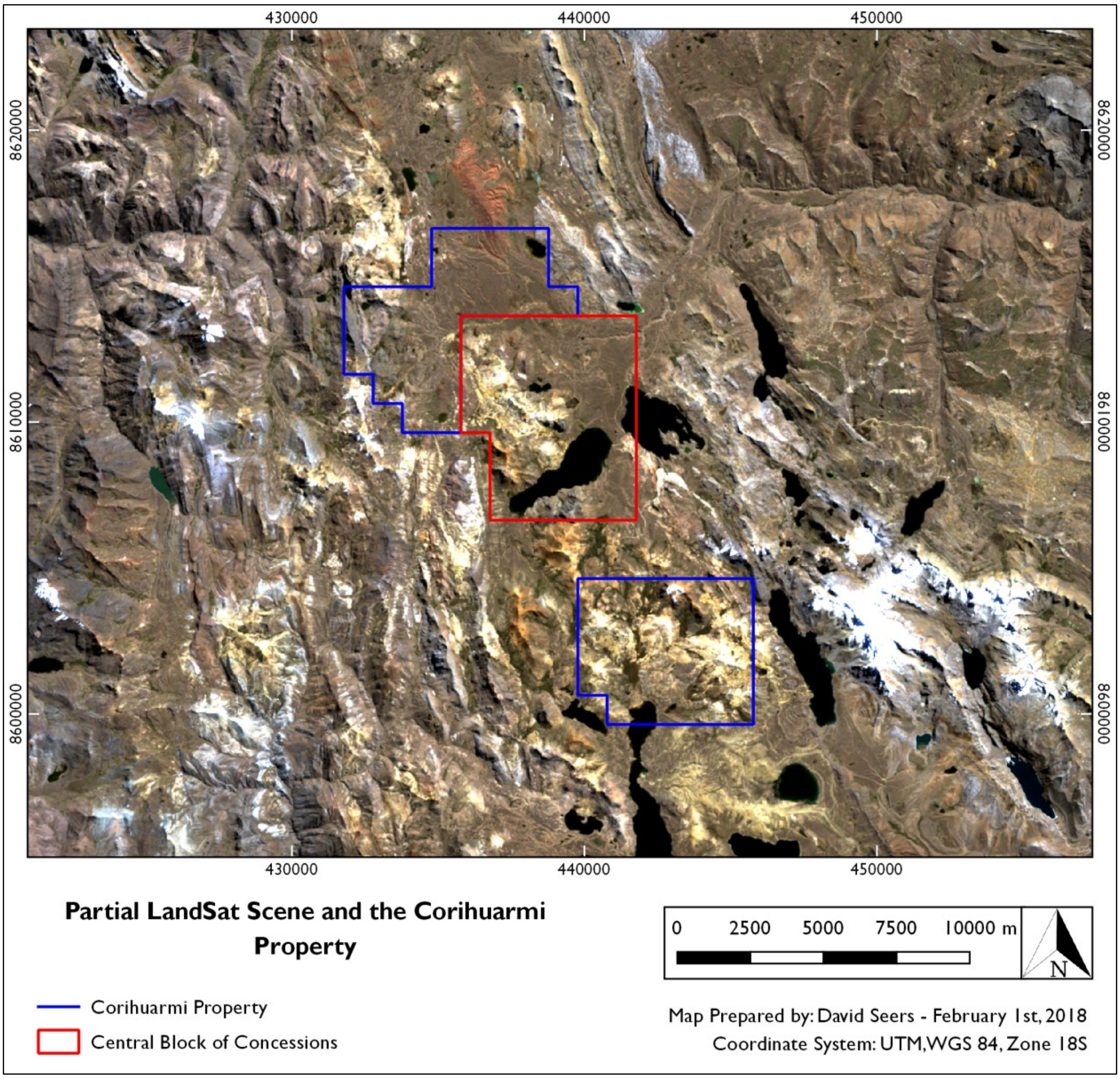

Figure 9-1: Partial Landsat Scene and the Corihuarmi Property

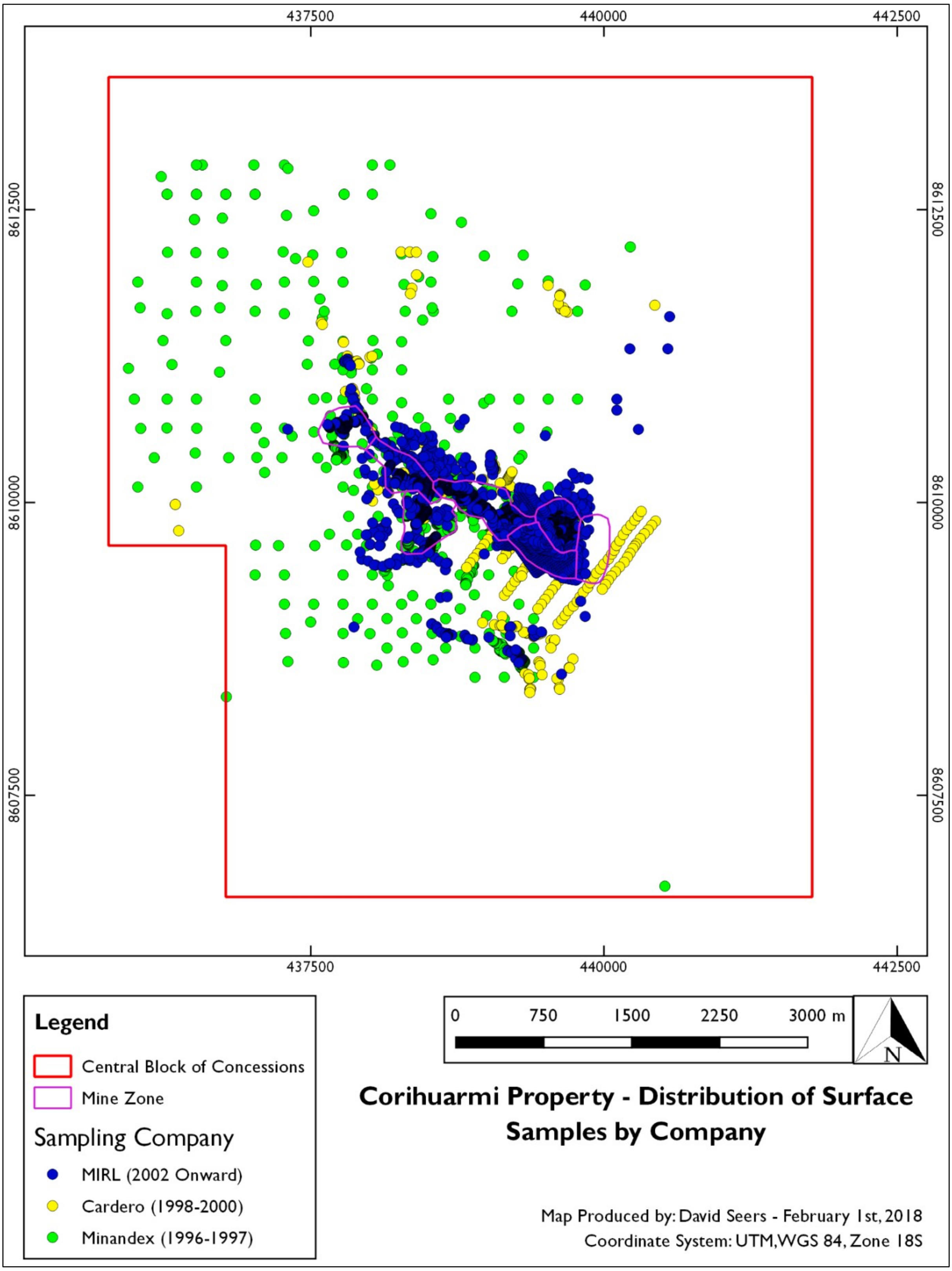

Figure 9-2:Corihuarmi Property - Distribution of Surface Samples by Company

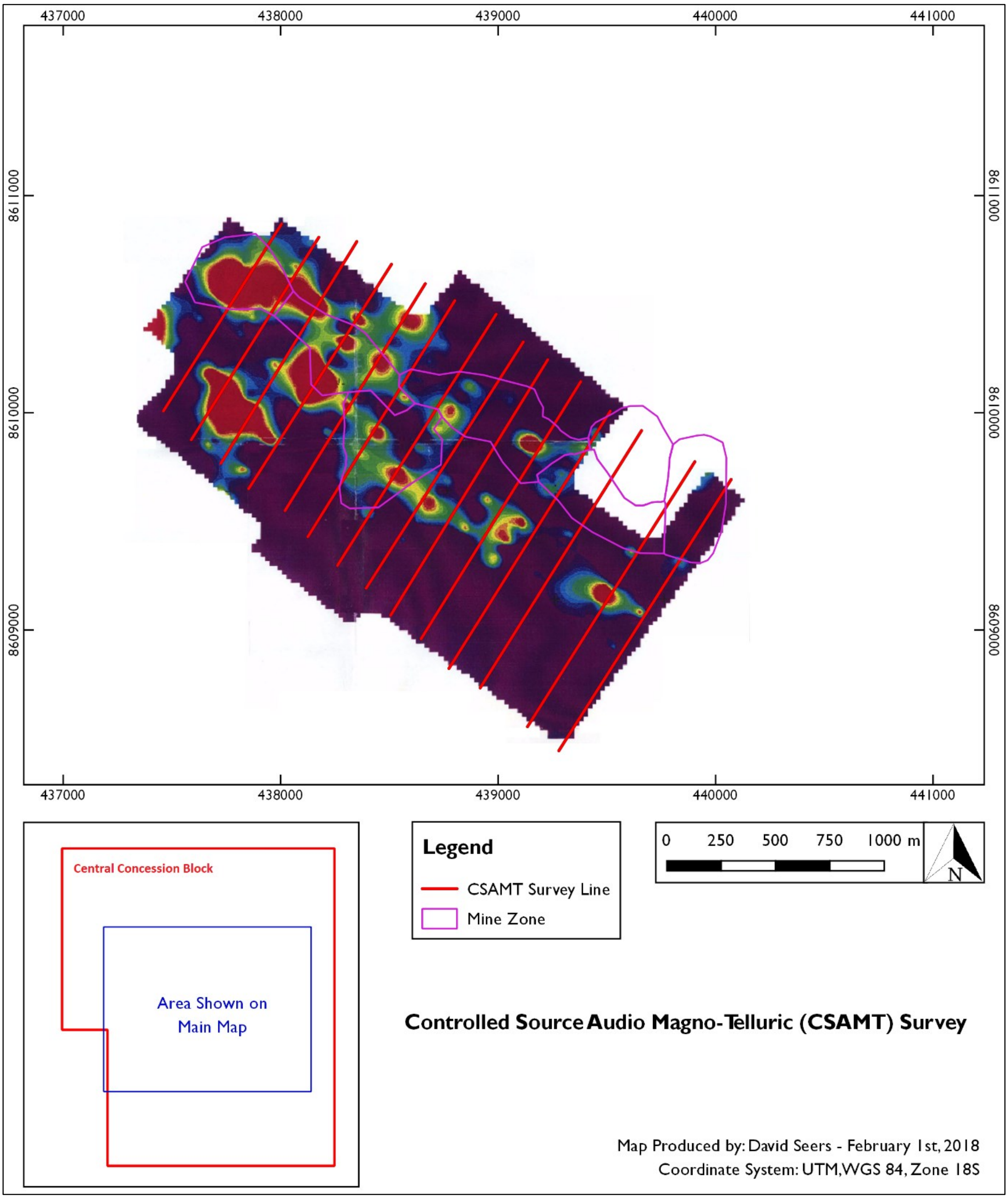

Figure 9-3: Controlled Source Audio Magno-Telluric (CSAMT) Survey

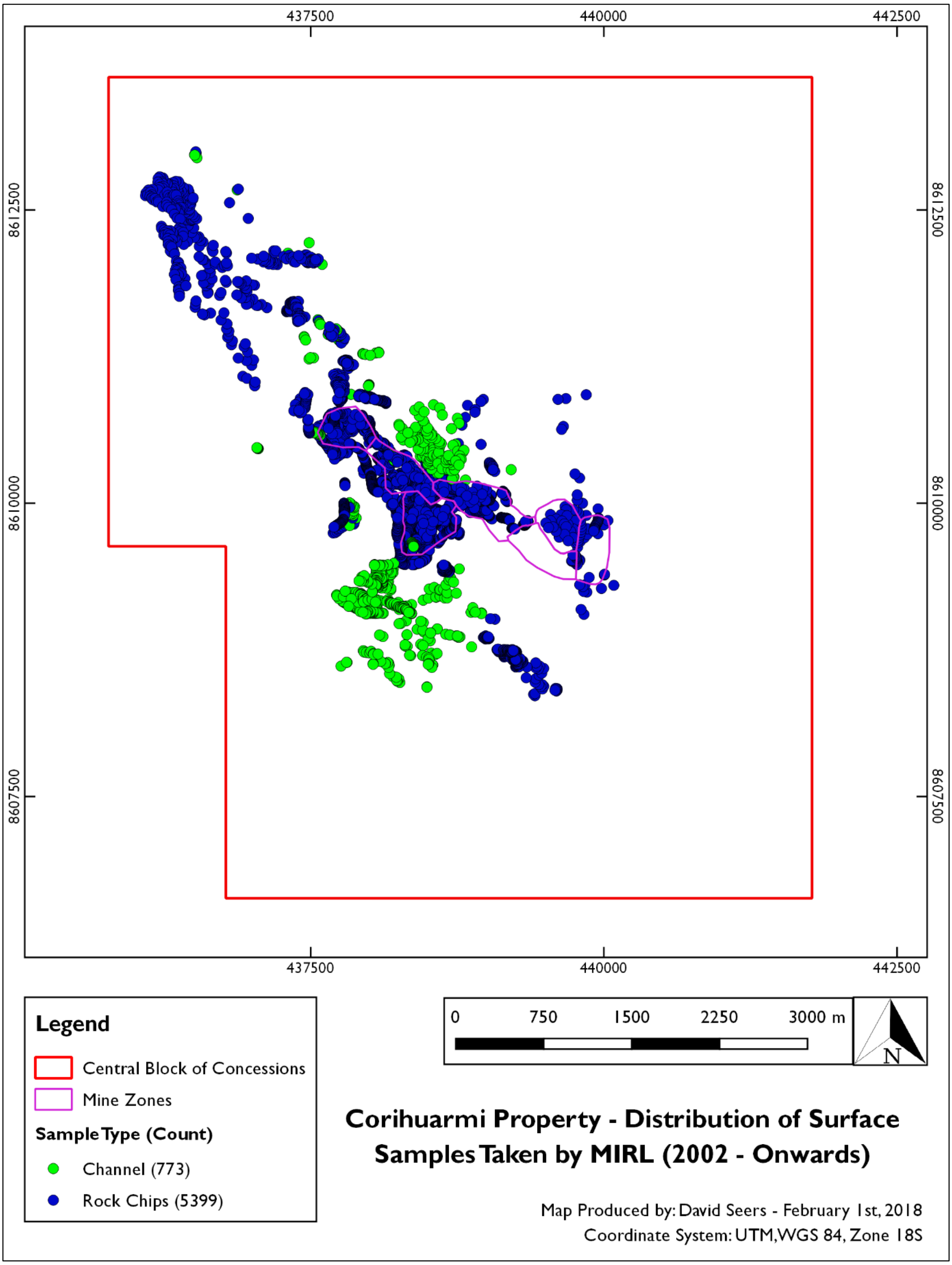

Figure 9-4: Corihuarmi Property – Distribution of Surface Samples Taken by MIRL

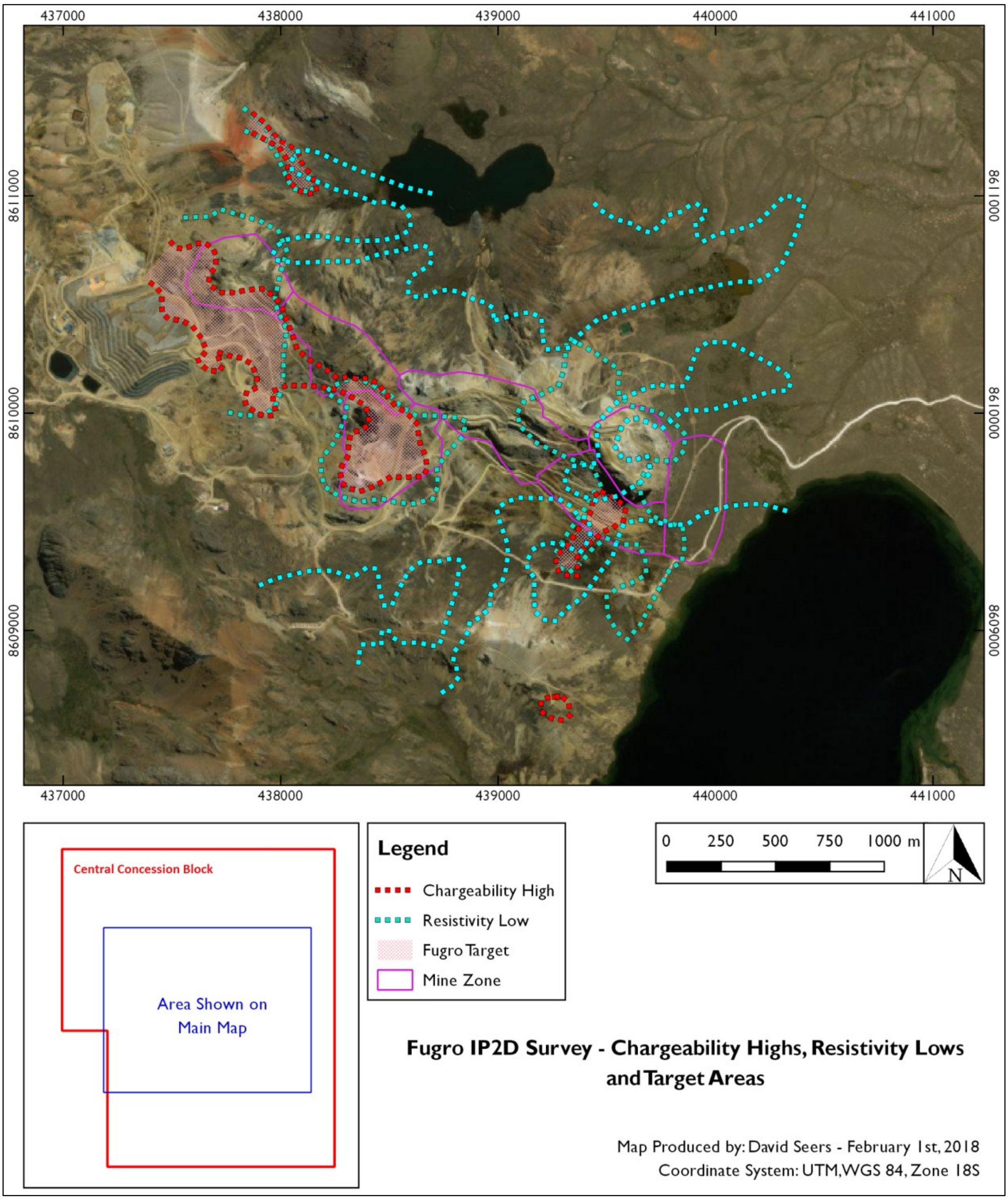

Figure 9-5: Fugro IP2D Survey – Chargeability Highs, Resistivity Lows and Target Areas

Mr Seers (QP) considers that the exploration techniques employed by MIRL are suitable for the exploration of HS type mineralisation. Furthermore, Mr Seers (QP) notes that some of the Fugro and CSAMT anomalies have not been drill tested.

10 DRILLING

MIRL maintain an extensive drilling database for the Property, the database includes exploratory diamond (DDH) and reverse circulation (RC) drilling completed by MIRL and their predecessors. As well as production drilling which includes Long holes and Blast holes.

10.1 Exploration and Resource Definition Drilling

Collar locations are surveyed by MIRL using Total Station with sub centimetre accuracy. Drill-mast orientations are surveyed by MIRL to give hole orientations, down-hole surveys are not routinely completed. Mr Seers (QP) considers this is poor practice, however, the impact on the Mineral Resource and Reserve should be minimal as the average hole depth is less than 100m.

Diamond drilling has been used exclusively as an exploration tool, RC drilling is typically used for resource drilling. Table 10-1 provides a summary of drilling by; type, year and operator:

Table 10-1: Summary of drilling

Year	Company	Count DDH Holes	DDH Meters	DDH Av. Depth	Count RC Holes	RC Meters	RC Av. Depth	Areas
1997	Minandex	3	699.96	233.32	-	-	-	Di, Su
2000	Cardero	-	-	-	9	1975.15	219.46	Pad, Cy, Adi, Di, Scr
2003	MIRL	12	759.4	63.28	-	-	-	Di, Su
2004	MIRL	18	1452.65	80.70	-	-	-	Cy, Di, Adi, Su
2005	MIRL	53	2294.9	43.30	83	2641	31.82	Adi, Bd, Cy, Di, Pad, Scr, Su
2006	MIRL	6	256.45	42.74	-	-	-	Cy, Adi
2008	MIRL	32	3625.7	113.30	43	3460	80.47	Adi, Cy, Di, La, Su
2009	MIRL	14	1815.4	129.67	53	2960	55.85	Adi, Cy, Di, La, Su
2011	MIRL	31	3069.2	99.01	-	-	-	Cy
2012	MIRL	39	2919.8	74.87	-	-	-	Adi, Cy, Pad, Su
2014	MIRL	50	2962.4	59.25	-	-	-	Adi, Bd, Cr, Cy, La, Pad
2015	MIRL	8	231.4	28.93	-	-	-	Bmi, Pad, Tn
2016	MIRL	32	2617.2	81.79	-	-	-	Adi, Cy, Su, Tn
2017	MIRL	35	3535.3	101.01	13	1337.5	102.88	Adi, Bd, Cy, La, Pad, So, Su
	Totals	**330**	**25539.8**	**917.84**	**192**	**10398.5**	**271.02**	

Some Area Abbreviations: Di – Diana, Su – Susan, Cy – Cayhua, Scr – Scree Slope, Adi – Ampliación Diana

10.2 Diamond Drilling

Diamond drilling (DDH) at the Property is undertaken by MDH, a recognised Peruvian drill contractor. Core diameter is typically HQ although NQ diameter is used less frequently.

Drilling extends 3km northwest-southeast around the Chonta Fault Zone (Figure 10-1). The majority of DDH holes are focused in the areas of the Laura, Cayhua, Ely, Diana and Susan pits.

Diamond drill hole orientations cover a wide range of azimuths, mast inclination ranges between vertical (-90) and -27 degrees. Once set, drill masts are surveyed by MIRL, downhole orientations are not measured. Between 2012 and 2016 drill core recovery averaged over 95%.

Mr Seers (QP) noted the following during his site visit and considers that core handling meets industry best practice, but, core storage could be improved:

- All core is logged for geotechnical, geological and structural information. Printed quick-logs, for core, are available at the core-shed, these logs are detailed and clear.
- Core Recovery is recorded as a matter of course and is generally good (i.e. >95%)
- Drill core is photographed
- Core is stacked on the concrete floor of a designated core-shed within the Property but away from mining operations. Shelving is not provided, and stacks of core are susceptible to falling. Core-sheds are at capacity and there is little room to store new core.
- Core is stored in wooden boxes marked with permanent marker. Wooden core tags are placed between core runs which detail; hole name, azimuth, dip and the start and end depth of each run
- Sample lengths are determined by MIRL geologists based on their observations and experience. As a rule, sample intervals are not less than 0.2 m or greater than 2.5 m
- Marks on boxes identify the beginning and end of each sample and sample ticket is stapled in to the box close to the samples centre point
- Samples are halved using a core saw
- Samples are submitted to MIRL’s on-site laboratory for analysis for gold and silver in batches including QAQC additions. Samples to be sent for external analysis are split at MIRL’s laboratory
- Samples are prepared in batches of 20 samples which include 1 x blank, 1 x standard and 1 x duplicate (crush or pulp) QAQC additions
- A choice of two standards (certified for gold) are currently available
- For the purposes of QAQC, MIRL review assay data on a by batch basis

Mr Seers (QP) recommends the following:

1. Downhole surveying of DDH and RC drill holes as a matter of course
2. Shelving for core should be installed to increase the ease of access to core and to reduce the risk of stacks of core boxes falling

10.3 RC Drilling

The majority of RC drilling is centred around the Diana and Susan pits.

Based on conversations with MIRL staff, Mr Seers (QP) noted the following during his site visit:

- RC samples vary in length between 1 and 5 m. Samples are split using a riffle-splitter, approximately 1 kg of sample is submitted for analysis
- Riffle splitters are cleaned using paint brushes after every sample
- Unsampled RC chips are stored, underroof, in piles of "rice sacks" labelled with permanent marker pen and sealed using one-way plastic ties. Mr Seers (QP) notes that this system of storage would prove inefficient if it was necessary to locate RC chips

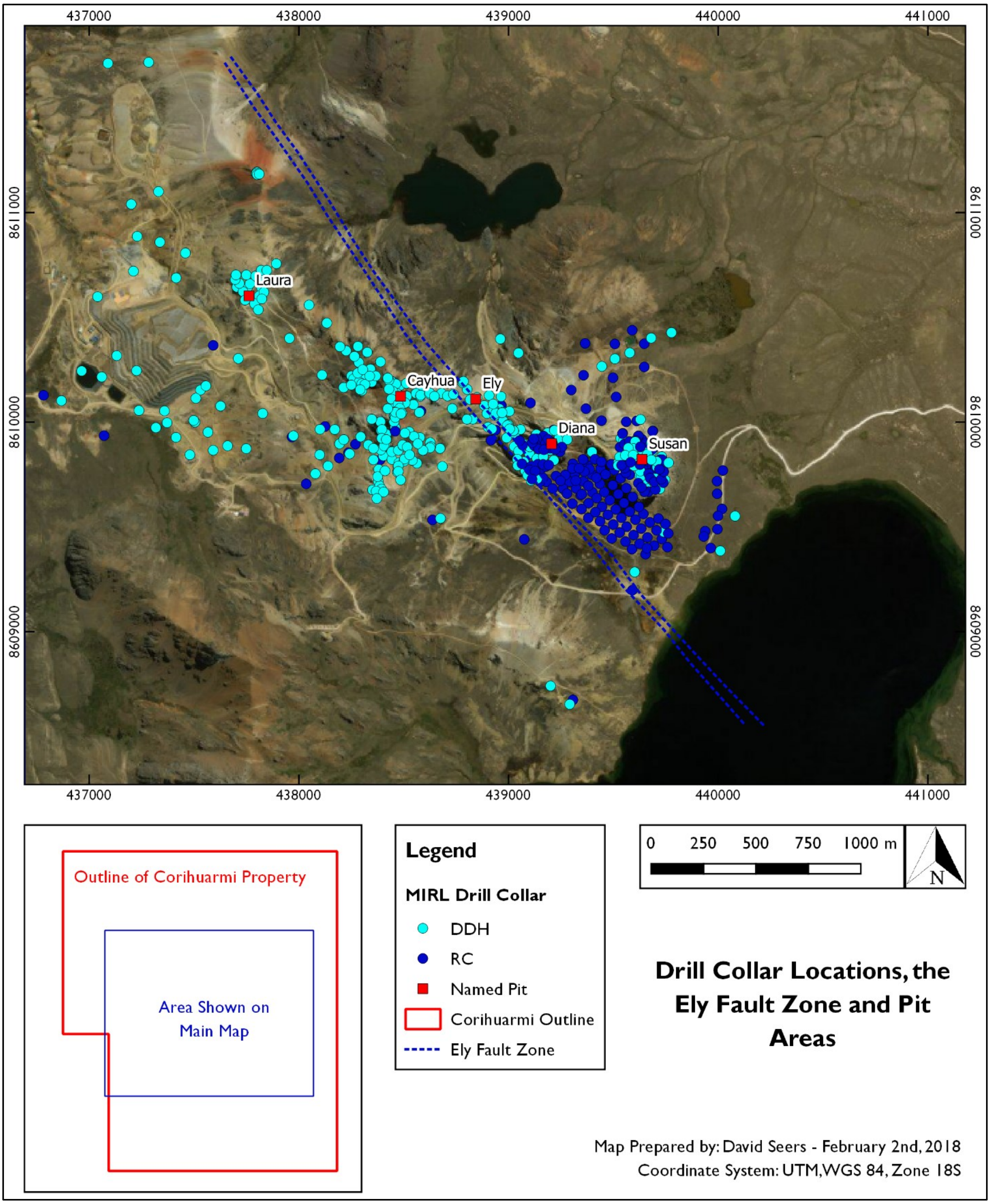

Figure 10-1: Drill Collar Locations, the Ely Fault Zone and Pit Areas

10.4 Blast Drilling (Blast holes and Long holes)

Rotary air drilling is used for pattern drilling blasts holes. A single sample of drill chips is taken over the length of the hole, typically 5m. Blast holes are typically drilled on a 5 x 5 m grid.

Long holes are effectively blast holes extended up to 21 m to help with resource estimation in areas with limited assay information.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 Sample preparation

Mr Seers (QP) discussed drill core and RC sampling procedures with MIRL and consider their procedures adequate but with room for improvement. Diamond core a RC samples are sent to the ISO certified Certimin laboratory in Lima for analysis. Before samples are transported to Certimin, MIRL prepare and reduce samples at the mine laboratory.

11.1.1 Diamond Drilling

Mr Seers (QP) observed the following procedure for diamond drill core sample preparation:

1. Drill core is described and photographed, geologists mark it for sampling to be cut in half lengthways using a core-saw. Logging and sampling methods follow standard industry practice.

2. Typically, diamond drill holes are sampled from top to bottom with no gaps in the sampling. Minimum and maximum sampling intervals for diamond drill core are established at 0.2 and 2.5 m respectively. Sample intervals are based on geological observations including lithology and alteration.

3. Samples are crushed to <20mm at an on-site preparation laboratory then split with a riffle splitter to separate a coarse sub-sample weighing approximately 0.5 kg.

4. Coarse sub-samples are sent to the Certimin laboratory in batches of 30 including QAQC additions of one certified blank, one Certified Reference Material (CRM) and one duplicate to be prepared by the laboratory from crushed material

When reviewing the drill database, Mr Seers (QP) noted that significant numbers of samples measure over 2.5 m in length the longest sample measured 7.65 m.

11.1.2 Reverse Circulation Drilling

Mr Seers (QP) notes the following procedure which is used for the collection and preparation of reverse circulation drill holes:

1. Prior to starting a hole, the cyclone is hit with a rubber hammer and the interior flushed with compressed air. The three-tier riffle splitter is inspected for fragments and cleaned with compressed air.

2. Samples from the cyclone are guided into the riffle splitter, the sample tube is moved back and forth across the top of the splitter, and the sample is constantly levelled. After every fifth sample, the cyclone is hit with a rubber hammer to free up any lodged material. RC samples were collected over 1, 1.5, 2, 2.5, 4 or 5 m intervals.

3. The samples are riffle split down to two trays. The riffle splitters are levelled to ensure that a 50 / 50 split is achieved. The material in the first tray is sent to the waste bag. The second tray is re-split in a second riffle splitter to achieve 25% splits. One of the two 25% splits is then further split to achieve a 12.5% split of the original two metre sample, which is then sent to the on-site preparation laboratory, with the remaining 25% and 12.5% split samples being retained for reference purposes.

4. Samples are dried and crushed to <20mm at an on-site preparation laboratory then split with a riffle splitter to separate a coarse sub-sample weighing approximately 0.5 kg.

5. Coarse sub-samples are sent to the Certimin laboratory in batches of 30 including QAQC additions of one certified blank, one Certified Reference Material (CRM) and one duplicate to be prepared by the laboratory from crushed material.

Records for some RC samples submitted to Certimin were reviewed. Mr Seers (QP) notes significant variability in the weight of samples being sent to Certimin for analysis, of the records reviewed the weight of 2 m samples ranged between 0.3 kg and 1.23 kg. This variation likely reflects inconsistent sampling which could negatively impact confidence in the data.

11.2 Sample security

Reference material is retained and stored in Lima, including half-core and photographs generated by diamond drilling, and duplicate pulps and residues of all submitted samples. All pulps are stored in Lima at the MIRL storage base. The Corihuarmi mine has 24-hour security. The mine site preparation laboratory is kept locked.

Samples are transported from site by road to the Certimin facility in Lima by private mine vehicles. Certimin takes custody of the sample on receipt, at which time they inspect the batch, cross-check with the submission form and attach bar codes to register the samples. The Certimin laboratory is security controlled.

11.3 Chemical analyses

All Diamond and RC samples are analysed by Certimin laboratory in Lima. Certimin has been servicing the Peruvian mining industry for 21 years. It participates in international proficiency testing programs such as CANMET and GEOSTATS, and develops its services with the support of the Integrated Management System for the compliance of regulatory requirements such as ISO 9001, ISO /IEC 17025, ISO 14001, and OHSAS 18001. Certimin prepares and assays samples with the following methodology:

1. 500g sample pulverised to 90% passing #200.
2. 50g sample split digested by aqua regia
3. Analysed by 50g Fire Assay (FA) with an atomic absorption spectrometry (AAS) finish.

11.4 Quality Assurance / Quality Control

MIRL currently inserts Quality Assurance / Quality Control (QAQC) samples including blanks, Certified Reference Materials (CRMs) and pulp duplicates before submission to Certimin laboratory. The QAQC data reviewed by Mr Seers (QP) indicates that approximately 10% of samples analysed are a QAQC insertion.

Mr Seers (QP) reviewed QAQC data for 2558 half-core samples, drilled between 2012 and 2016 (the reporting period), that are used as inputs to the current Measured and Indicated Mineral Resource Estimate. Results are summarised below.

QAQC data prior to 2012 were not available, however, Coffey Mining (2010) analysed the QAQC data prior to 6th April 2010 and found that:

- Generally, standard results showed acceptable accuracy with some obvious outliers that could be attributed to sample mix-ups.
- Diamond core field duplicates showed poor precision, which was attributed to poor duplicate sample preparation methodology and not necessarily reflecting poor preparation of the main sample.
- Diamond core pulp duplicates showed very good precision
- The results showed the data were suitable for use as inputs to Mineral Resource Estimation.

11.4.1 Certified Reference Materials (Standards)

Certified Reference Material (CRM) is a standard sample that has been manufactured by a certified company and is itself certified. The manufacturing process creates a homogenized sample that has undergone an extensive and rigorous certification process. This process generates an expected value and acceptable limits for all elements in the sample.

Laboratories use CRMs to ensure that their analytical processes are accurate between calibrations of the machines. Where drift is observed, it is normal procedure for a machine to be re-calibrated. It is possible for internal laboratory CRM assay results to be altered and as such it is now industry standard for laboratory clients to submit their own CRM samples to be able to monitor the accuracy of the laboratory.

Between 2012 and 2016, MIRL submitted four different CRM's certified for Au grade to Certimin Laboratory (Table 11-1). These CRM's reasonably reflect the range of grades expected at the Property (Figure 11-1 to Figure 11-4). Of the 233 CRM's were submitted for analysis, 96% assayed within certified ranges. Two CRM's that assayed significantly above expected ranges were submitted with samples from the Laura and Ely mine zones Figure 11-1 and Figure 11-2). Mr Seers (QP) notes that these samples were not submitted by MIRL for reanalysis and that they could reflect a mislabelled CRM Ley Media (A). Furthermore, the Ely zone is not considered in the Mineral Resource estimate. Mr Seers (QP) considers that assays from the affected batch from the Laura mine zone should be resubmitted for analysis and the database updated for the next Mineral Resource estimate, however, Mr Seers (QP) expects that one batch will not materially affect the Mineral Resource or Reserve Estimate.

Table 11-1: Au CRM's submitted Certimin

CRM	Certifying Laboratory
Low grade 1	Actlabs Skyline Peru SAC
Middle grade 1	Actlabs Skyline Peru SAC
Middle grade 2	Actlabs Skyline Peru SAC
Low grade 2	Actlabs Skyline Peru SAC

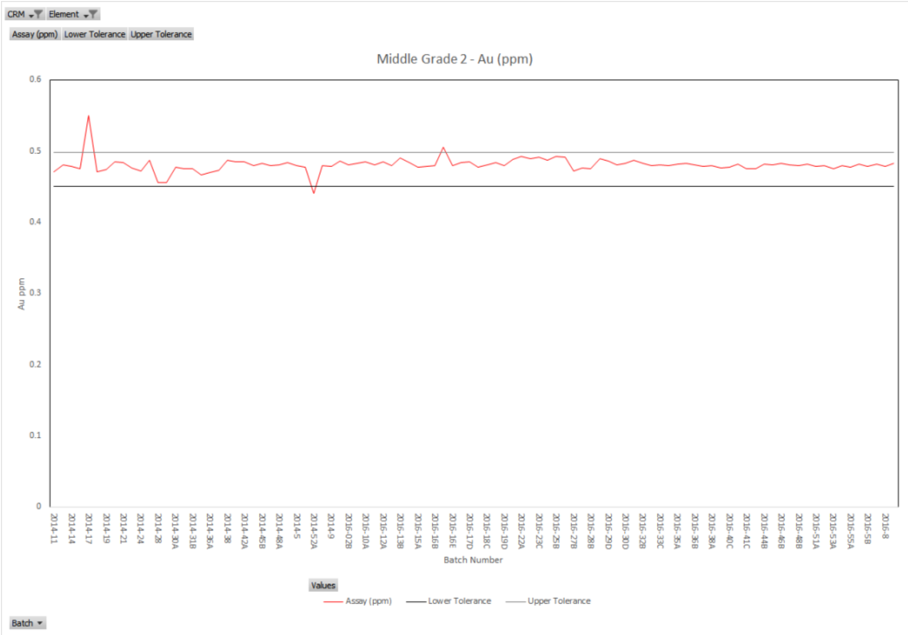

Figure 11-1: CRM Ley Media Au

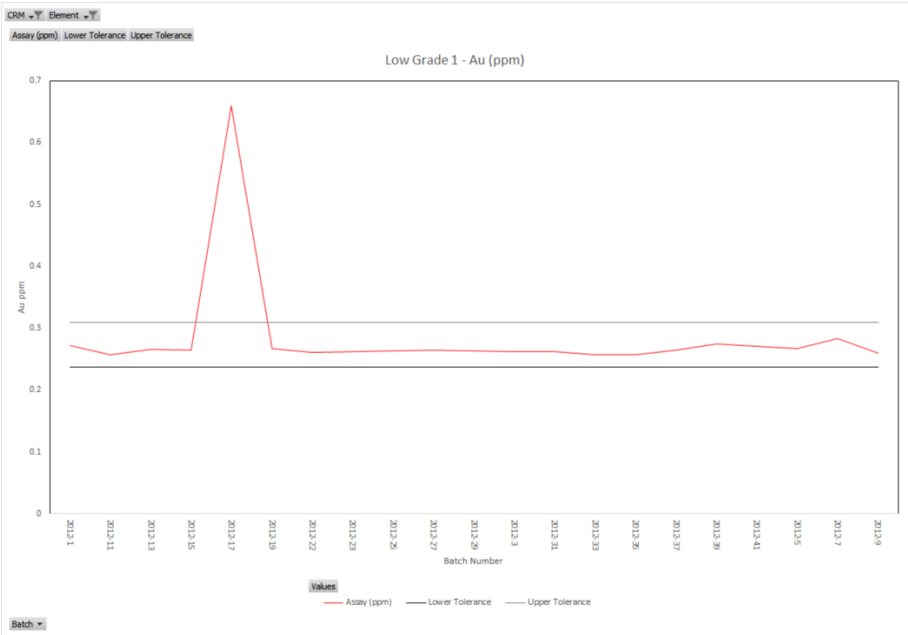

Figure 11-2: CRM Low Grade 1

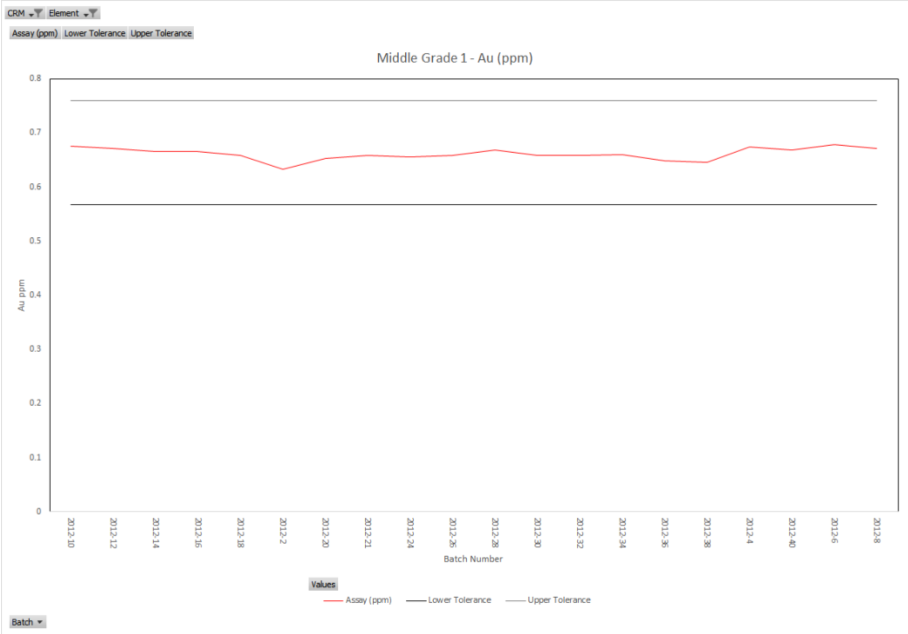

Figure 11-3: CRM Middle Grade 1

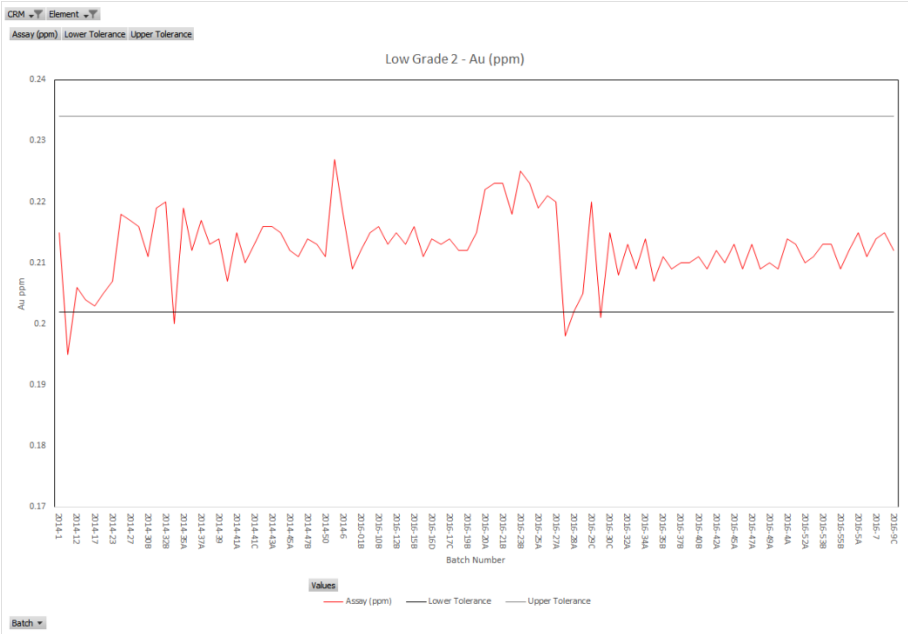

Figure 11-4: CRM Low Grade 2

11.4.2 Duplicates

MIRL used coarse duplicates during the reporting period. Coarse duplicates are splits of samples that are resubmitted to the laboratory with a different sample number. The duplicates are blind to the laboratory and give a measure of the precision of the assays.

Mr Seers (QP) observes that the coarse duplicate performance is good with most duplicate samples assaying within 10% of the original assay value. Duplicate performance is particularly good for samples assaying above 0.25 g/t Au (Figure 11-5).

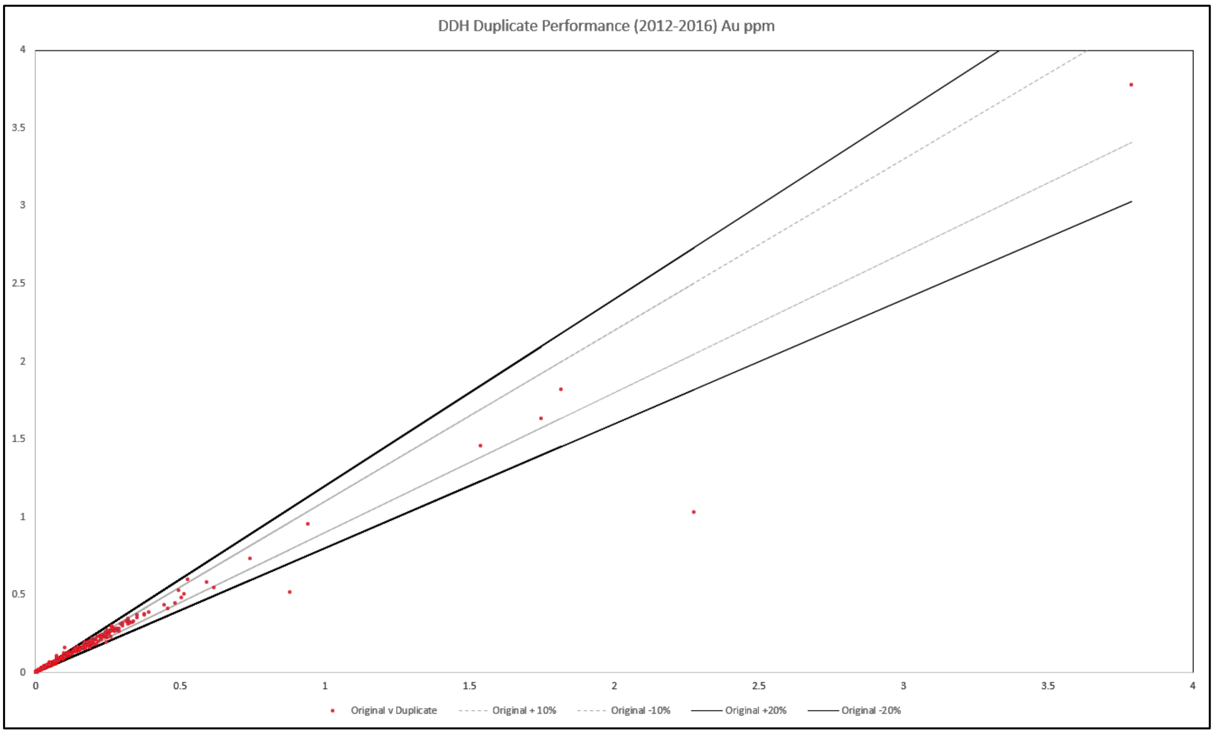

Figure 11-5: Coarse Duplicate Performance

11.4.3 Certified Blank

Fine blanks prepared by ACTLABS, certified for Au and Ag, are submitted with each batch. 227 blanks were assayed between 2012 and 2016, the majority of these blanks assayed at or below the lower detection limit for Au (0.005 ppm for the analytical method used). All blank samples assayed within two times the lower detection limit for gold (Figure 11-6). The highest Au assay returned from a blank sample was 0.008 ppm.

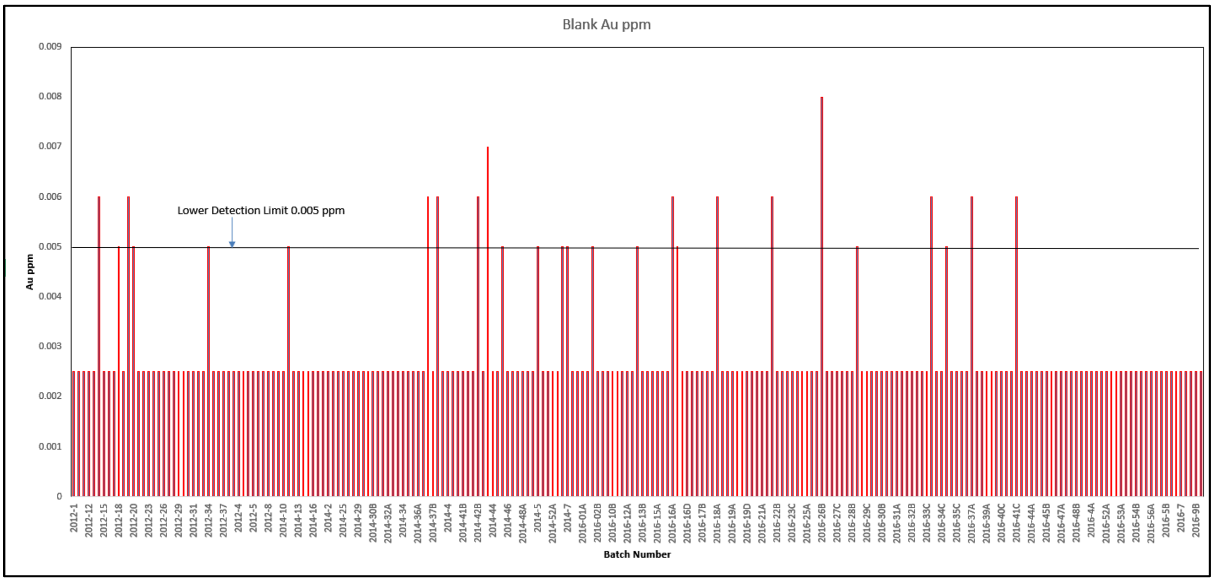

Figure 11-6: Certified Blanks

11.4.4 Secondary comparison assays

Independent re-assaying of selected pulps from the primary sample by a secondary laboratory provides a measure of both precision and accuracy by quantifying the repeatability of the assays. However, it is difficult to determine which result is better if the results are significantly different.

One in fifty pulp samples prepared at the mine laboratory are submitted to Certimin as a means of comparing analytical precision (Figure 11-7). Between 2014 and 2017, 228 pulps approximately 2% were sent to Certimin for analysis to compare assay values from the mine laboratory and the Certimin laboratory. Results demonstrate that on average Certimin assays within 10% of the mine laboratory. Comparative precision is worse at lower grades.

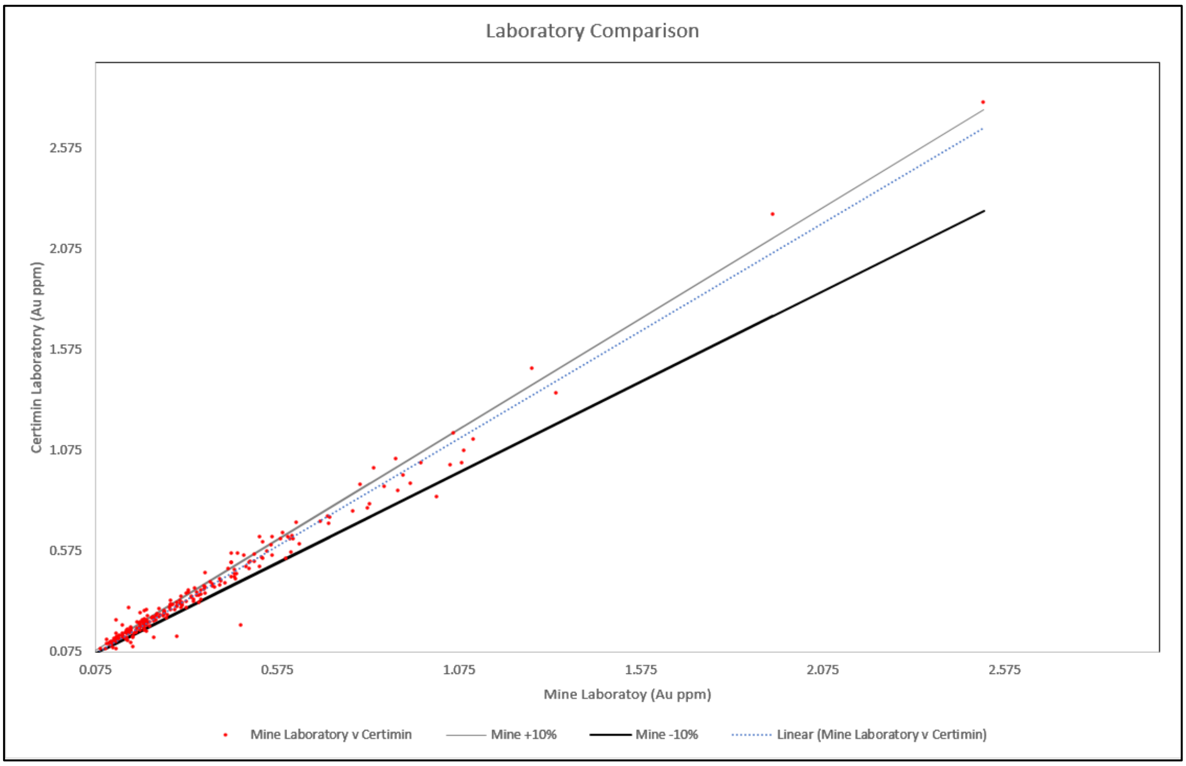

Figure 11-7: Secondary Laboratory Comparison

11.4.5 Discussion

Mr Seers (QP) notes the following regarding the QAQC results:

- That CRM performance is satisfactory with only two batch failures for the reporting period.
- That duplicate performance reflects adequate sample preparation and homogenisation and that the sampled fraction reasonably reflects the sampled interval.
- That blank performance is satisfactory and that there are no indications of materially significant contamination during sample preparation or analysis.
- That the mine laboratory and Certimin have comparable precision, which provides confidence in the mine laboratory assays.

Having reviewed QAQC performance for the reporting period and pervious work compiled by Coffey Mining (2010) Mr Seers (QP) is satisfied that industry standard procedures have been followed in the collection and preparation of samples and that the assay values in the drill hole database are suitable for use as input to a Mineral Resource and Reserve Estimate.

12 DATA VERIFICATION

Mr Seers (QP) completed a review of the drill hole database including QA/QC data used in the Mineral Resource estimate, his review included:

- Review of standard operating procedures relating to core logging and core sampling
- Check for duplicate sample numbers, minimum and maximum sample lengths
- Comparison of sections of drill core (DDH 16-34 and DDH 16-53) against digital logs
- Comparison of 1799 Au assays recorded in the database against digital assay certificates
- Comparison of recorded Certified Reference Material (CRM/Standard) certified grades and laboratory reported assay values
- Review of blank inserts and laboratory reported assays values

As per standard industry practice a percentage of the database was reviewed with random spot checks. This review demonstrated that the mine has good database management practices with all checks coming back as accurate. Based on the information he reviewed, Mr Seers (QP) is satisfied that sample database is consistent, accurate and suitable for use in the Mineral Resource estimate.

Check Sampling

Mr Seers (QP) undertook a personal inspection of the Property on January 18th, 2018. Whilst at site Mr Seers took two independent channel samples from the Susan pit, one from a zone of vuggy silica the other from a zone of silicification with less intense clay alteration, these samples confirm gold mineralisation at the Susan pit (Table 12-1).

Table 12-1: Check sampling by Mr Seers – Susan Pit

Sample #	Easting	Northing	Type	Width (m)	Au (ppm)	Description
13001	439561	8609786	Channel	1.00	0.241	Weakly brecciated and oxidised vuggy silica
13002	439527	8609812	Channel	1.00	0.128	Porphyritic andesite flow. Silicified with weak clay alteration

Coordinates are reported as UTM WGS 84 Zone 18S

Check assay values are consistent with grades in the resource model.

Drilling Database

Mr Seers (QP) reviewed MIRL's drill hole database for consistency, during this review the following checks were made, and no issues were identified:

- Search for duplicate collar ID
- Search for duplicate sample number
- Search for maximum Au grade
- Search for maximum samples length
- Comparison of 1799 DDH and RC database entries with assay certificates. This was undertaken for assay certificates from June 2014 onwards, Earlier certificates were not provided by MIRL.

The review of spreadsheet certificates for RC samples revealed inconstancy in the weight of samples submitted to Certimin, with 2 m samples ranging between 0.3 kg and 1.23 kg. Mr Seers (QP) recognises that density variation and recovery variations will affect sample weight, however it recommends that samples outside a specified weight tolerance are investigated.

This is not considered material to the overall Mineral Resource Estimate.

Minesight Project export

Dr Fowler (QP) exported the drill holes, wireframe solids and block model from Minesight mining software to Datamine mining software to enable verification and validation. This led to identification of numerous duplicate sample numbers and numerous samples without ID's, however, further investigation showed that the errors were a result of the export process and not a cause for concern for the accuracy of the Mineral Resource.

Based on the reviews completed, Dave Seers (QP) is satisfied that sufficient checks have been performed and that the drill hole database is suitable as input for the Mineral Resource estimate.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

The metallurgical section of this report was based on data sent by MIRL in the form of spreadsheets and monthly reports from the Corihuarmi project site and the Corihuarmi Feasibility Study.

13.1 Previous Test work

The 2006 Kappes Cassiday and Associates (KCA) feasibility study based the process design and metallurgical predictions on the Diana and Susan zones. The test work used composites of core, and bulk surface samples in bottle roll and column leach tests.

There was no report on sample representative, however the distribution of the samples between Diana and Susan was explained (Table 13-1).

Table 13-1: Metallurgical Prediction – Feasibility

Label	Head grade, Au, g/t		Reserve Mass Basis	Average Field Recovery	Expected Recovery Range	Predicted Lime Consumption	Predicted Cyanide Consumption
Zone	Resource	Test work samples	%Distr	% Au	%Au	kg/t	kg/t
Diana	1.12	2.13	39.9	87	83 -92	1	0.25
Susan	1.11	1.7	60.1	70	61- 85	1	0.26
Overall	1.11	-	100	76.8	-	1	0.26

It was postulated by KCA that the lower recovery in Susan was due to the higher arsenic concentration in this zone.

Other column leach tests were carried out from October 2009 to January 2010 by Minera IRL metallurgical personnel to examine the response of Scree Slope material when blended with Susan Ore at different ratios and with cement addition (Table 13-2).

Table 13-2: Metallurgical Results – October 2009 – January 2010

Label	Head grade, Au, g/t	Head grade, Ag, g/t	Days of Leaching	Extraction		Lime Consumption	Cyanide Consumption
Zone	Test work samples	Test work samples	day	Au%	Ag%	kg/t	kg/t
Susan/Scree Slope (2:1)	1.15	1.07	83	70.4	41.3	0.314	0.635
Susan/Scree Slope (1:1) with 2kg/t cement	1.10	1.00	83	69.2	37.3	0.158	0.418
Average	1.13	1.04	83	69.8	39.3	0.24	0.53

The results show that the recoveries of gold and silver was similar in the different blends, achieving a gold recovery of 70% in 83 days of leaching.

These results were previously reported in the 6 April 2010 NI 43-101 report for Minera IRL by others.

13.2 Current Status

Currently, there are seven zones of exploitation of which are realized test work with the objective to estimate recovery and reagents consumption for the economic evaluation of mine Plan.

Table 13-3 shows the achieved recovery in column leach test work and the prediction for gold recovery and reagents consumption in the mine plan.

Table 13-3: Metallurgical Prediction - Current

Label	Head grade, Au, g/t		Test work Recovery, Au	Ore in Mine Plan	Predicted Recovery, Au	Predicted Lime Consumption	Predicted Cyanide Consumption
Zone	Resource	Test work samples	%	%Distr	%	kg/t	kg/t
Scree Slope	0.34	-	-	4	86.4	1.1	0.084
Susan	0.24	0.21	73.3	23	75.3	1.1	0.084
Cayhua	0.26	0.23	77.4	23	78.6	1.1	0.084
Ext. Diana	0.3	0.57	84.3	7	85.2	1.1	0.084
Cayhua Norte	0.38	1.07	80.5	13	80.1	1.1	0.084
Laura	0.23	0.33	78	16	80	1.1	0.084
Ext. Scree Slope	0.28	0.43	74.2	13	73.1	1.1	0.084

There is general agreement between the test work performance and the predicted industrial performance for gold recovery.

The samples used for the tests were significantly higher in gold grade than the planned diluted mine plan grades for the Ext. Diana, Ext. Scree Slope and Cayhua Norte zones.

No test work has been reported for the Scree Slope zone. This zone represents 4% of the planned production, and so it has been assumed that its performance will be similar to the other zones, given its similar geography and rock type.

Samples that contained sulfide from the Cayhua and Laura zones were tested, giving below 50% Au recovery.

It is critical to the metallurgical performance that sulfide material not be included in the heap leach feed. This was reviewed with the geologists and it was confirmed that the mine plan will only consist of oxide ore. Furthermore, it was noted that there is a visual contrast between the oxide and sulfide ore, facilitating selective mining.

Figure 13-1 shows that the projected cyanide and lime consumption is suitable for an economic evaluation, provided that sulfide material is not included, as it would increase both lime and cyanide consumption. The consumptions for Laura were distorted by the samples that contained high sulfide content.

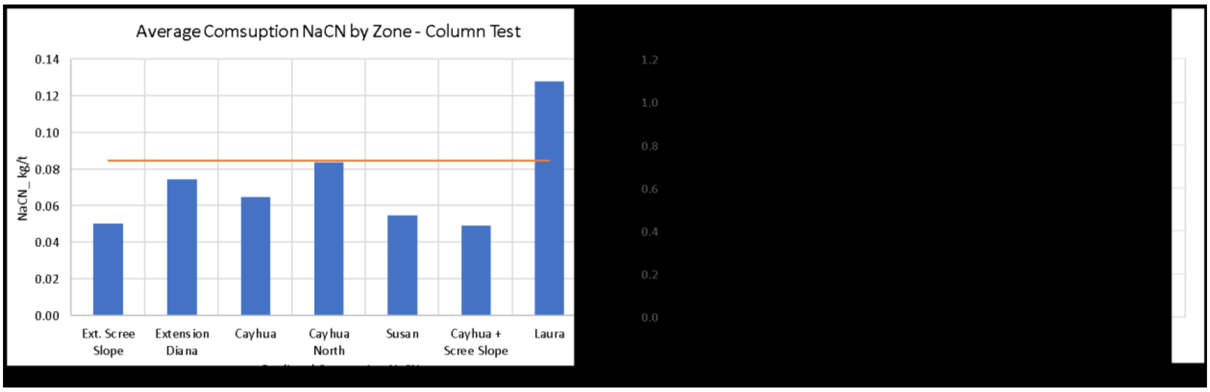

Figure 13-1: Na-CN Consumption predicted and Test work Result

It is recommended that further testing be conducted:

i) Sulfide zones, to mitigate risk and improve understanding of how to manage the heap if sulfide material is inadvertently added to the heap.

ii) Laura zone. This zone presents 16% of the planned production, so better understanding would be useful in reducing risk and optimizing processing parameters.

iii) Low grade samples. The samples tested to date are all much higher grade than the low-grade material that remains to be treated. Grade-recovery relationships can exist, so the samples tested should include material with a similar head grade to the material to be treated.

13.3 Plant Production

13.3.1 Ore to Heap Leach Pad

Figure 13-2 shows the tonnage profile sent to the heap leach pads since 2008 to 2017, and the planned tonnages for 2018 to 2020.

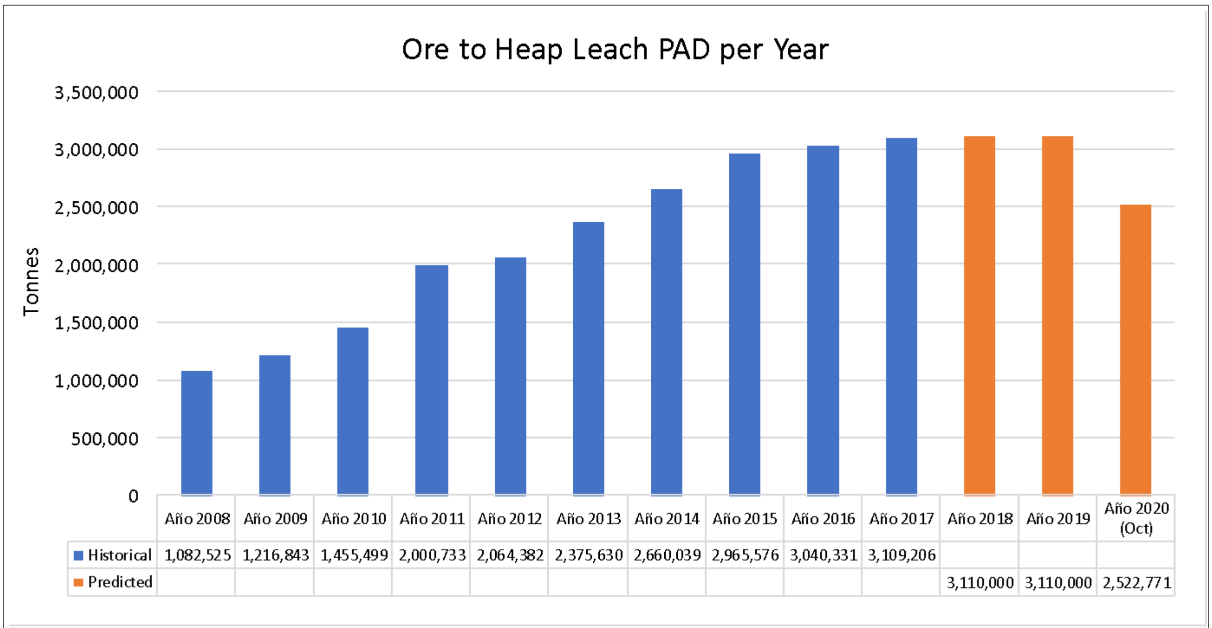

Figure 13-2: Ore to heap leaching by year

13.3.2 Gold in Ore

Figure 13-3 shows the drop in gold head grade over the years.

The current mine plan projects a feed grade of approximately 0.28 g/t Au from 2018 to 2020, which is slightly lower than 0.32 g/t Au in the material that has been treated in 2017.

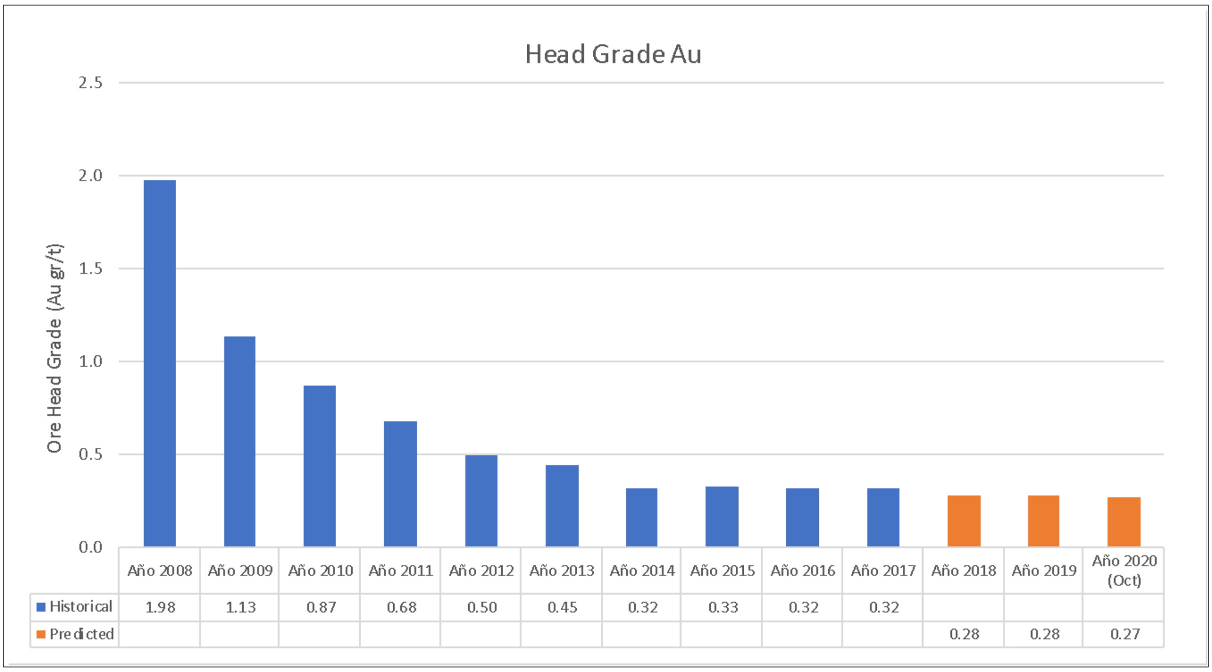

Figure 13-3: Head Grade to Heap Leach Pad

Figure 13-4 show the trends of fine gold metal added to the heap leach pads, versus the mass of fine gold metal recovered over time. It can be seen that there has been a slight decrease in recovery over the years, with an overall cumulative recovery of 77% to the end of 2017.

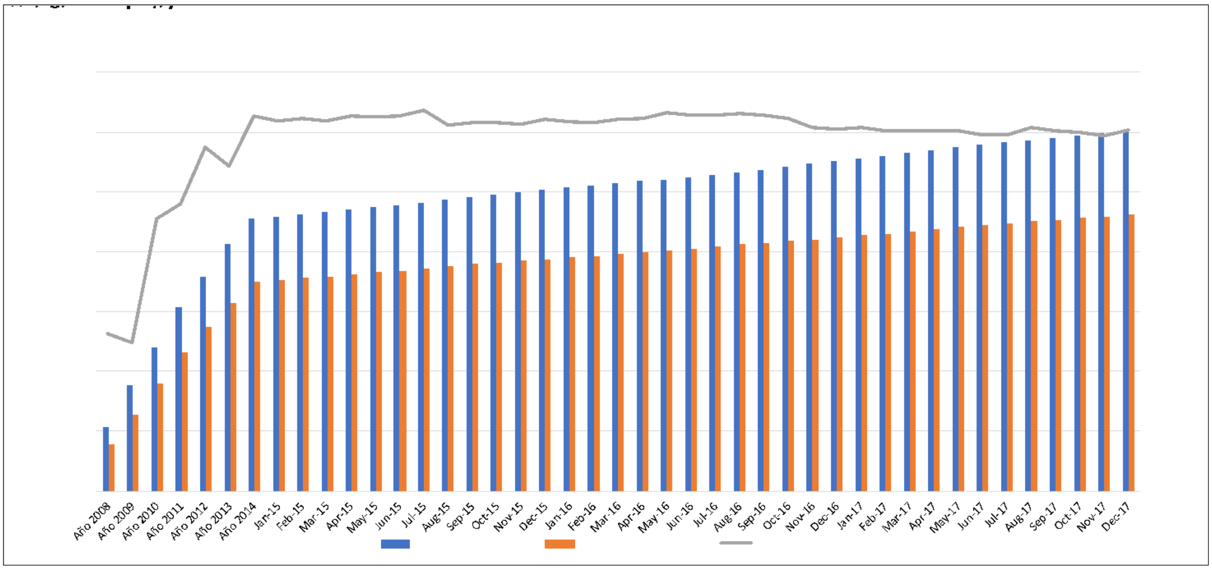

Figure 13-4: Gold Ounces Input / Output / Recovery

13.3.3 Metallurgical Recovery

The metallurgical recovery predictions used in the mine plan, which were developed by Minera IRL, are consistent with the production experience and metallurgical test work knowledge for Corihuarmi (Figure 13-5)

If sulfide material is fed to the heap, then the recoveries will be substantially lower.

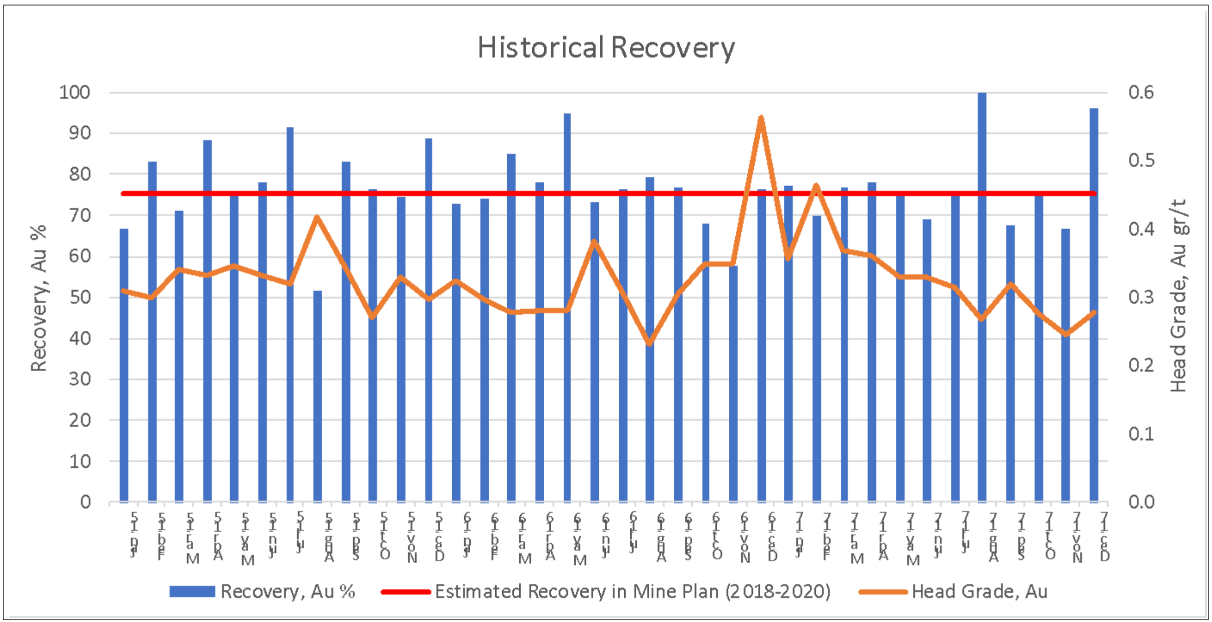

Figure 13-5: Historical Metallurgical Recovery

13.4 Reagent Consumptions

Lime and cyanide consumption trends are shown in Figure 13-6. These are consistent with the lime and cyanide consumptions used in the operating costs.

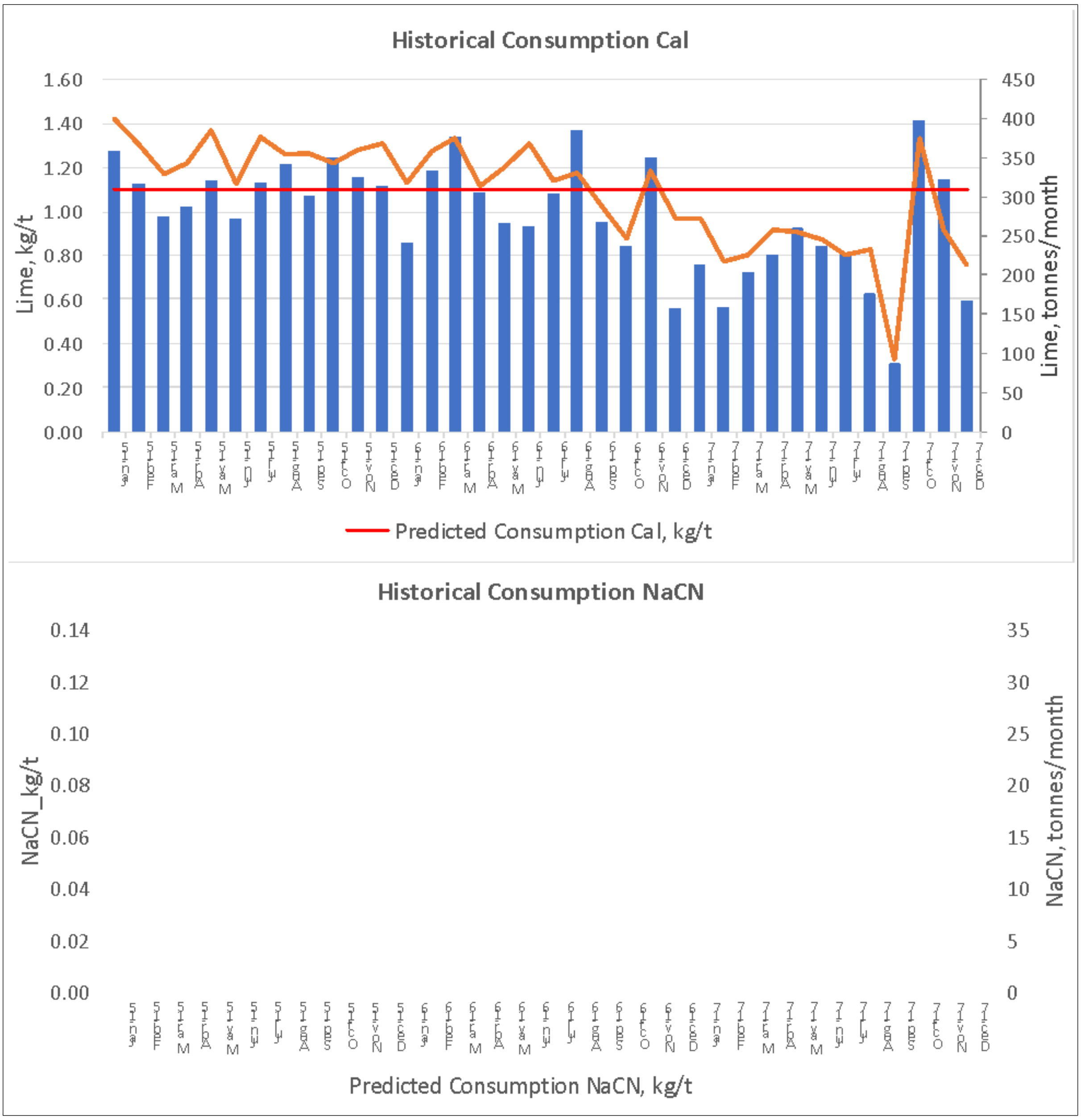

Figure 13-6: Cal Historical Consumption

14 MINERAL RESOURCE ESTIMATES

14.1 Summary

Minera IRL SA engaged Mr. J. Limaylla (independent consultant), to estimate the Mineral Resource for the Corihuarmi deposit in March 2017. The Limaylla block model and supporting documentation was reviewed by Dr A. Fowler (QP), which included detailed revision of the block model sections and statistics and completion of a check estimate. Following this review, Dr Fowler was satisfied that the gold grade estimation process was consistent with CIM mineral resource, mineral reserve estimation best practice guidelines. Dr Fowler modified the Limaylla block model by reclassifying and depleted the Mineral Resource. The effective date of the Mineral Resource reported in this Technical Reported is December 31st, 2017. Dr Fowler takes responsibility for the Mineral Resource Estimate reported herein.

A general database was constructed with a cut-off date of 1st April 2017. The total number of exploration drill holes drilled in the mine area to date is 1923, which includes 259 Diamond Drill holes (DDH) with a total drilled length of 21,321m, 193 Reverse Circulation Drill holes (RCD) with a total drilled length of 11,426 m, and 1,471 Long Hole (LH) drill holes with a total drilled length of 22,446.8 m

A statistical study of the gold grades was carried out, to analyze their distribution, behaviour and inform the grade interpolation in the block model. The drill hole intervals were composited to a length of 5m, which is the bench height in the mine. No grade capping was considered necessary after compositing.

A single block model has been generated that combines all the Corihuarmi mine zones. Boundary polygons provided by the company have been used to delimit these mine zones (Figure 14-1).

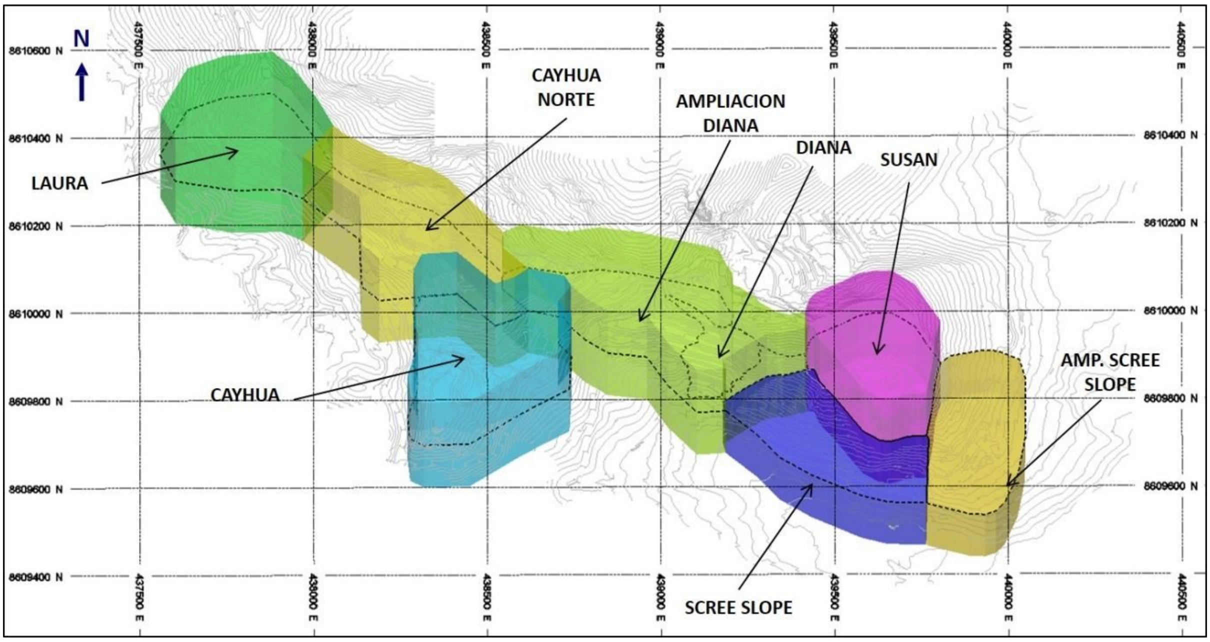

Figure 14-1: Perspective view north of the Corihuarmi mine zones

Three dimensional (3D) geological models of oxidation state and alteration have been interpreted by the Corihuarmi mine geologists. Estimation domains are based on the oxidation state models for each mine zone provided by the company. In addition, a gold grade shell has been generated for each mine zone at a nominal value of 0.5 g/t gold, to better control the estimation of high grades. The grade estimation in each zone used ordinary kriging in three passes and was informed by variographic analysis for each zone.

The Mineral Resource was classified into Measured, Indicated and Inferred categories by taking account the following information:

- Observations of grade continuity and predictability by the mine geology team
- Proven history of the profitability of the mine for the past 10 years
- Kriging variance of the gold estimate
- QA/QC results
- Drill hole spacing in comparison with other similar deposits.

The Mineral Resource is sub-horizontal, outcropping or close to surface, and mining has proven it to be mineable by open pit methods with a low strip ratio. The oxide material has reasonable prospects of economic extraction at a cut-off grade of 0.09 g/t gold. This cut-off grade was calculated using current costs and recoveries provided by the mine operation, and a forecasted gold price of US 1,400, which was the mean price used for Mineral Resource reporting from a survey of 22 industry peers in February 2018. To apply the reasonable prospects of economic extraction test, Dr Fowler (QP) has reported the Mineral Resource inside a Lerchs-Grossman open pit optimization pit shell and above the 0.09 g/t gold cut-off grade.

Dr Fowler (QP) is not aware of any deleterious elements, or any environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that could materially affect the prospects of economic extraction for the Mineral Resource.

14.2 Database

The total number of exploration drill holes drilled in the mine area to 1st April 2017 was 1923, which includes 259 Diamond Drill holes (DDH) with a total drilled length of 21,321m, 193 Reverse Circulation Drill holes (RCD) with a total drilled length of 11,426 m, and 1,471 Long Hole (LH) drill holes with a total drilled length of 22,446.8 m (Table 14-1).

Table 14-1: Exploration drill holes by type completed to 1st April 2017

Year	Drill holes by year				Length drilled by year (m)			
	DDH	RCD	LH	Grand Total (Drill holes)	DDH	RCD	LH	Grand Total (Drilled Length)
1997	3			3	615.6			615.6
2000		4		4		921		921.0
2003	12			12	759.4			759.4
2004	17			17	1405.7			1405.7
2005	25	64		89	1521.0	1886.0		3407.0
2006	6			6	256.5			256.5
2008	29	43		72	2752.3	3460.0		6212.3
2009	11	53		64	1355.3	2960.0		4315.3
2011	25		201	226	2283.9		3155	5438.9
2012	32		28	60	2605.5		235	2840.5
2014	38		412	450	2552.7		5525.6	8078.3
2015			133	133			1428	1428.0
2016	32	16	623	671	2617.2	861.5	10797.5	14276.2
2017	29	13	74	116	2596.0	1337.5	1305.7	5239.2
Grand Total	**259**	**193**	**1471**	**1923**	**21321.1**	**11426.0**	**22446.8**	**55193.7**

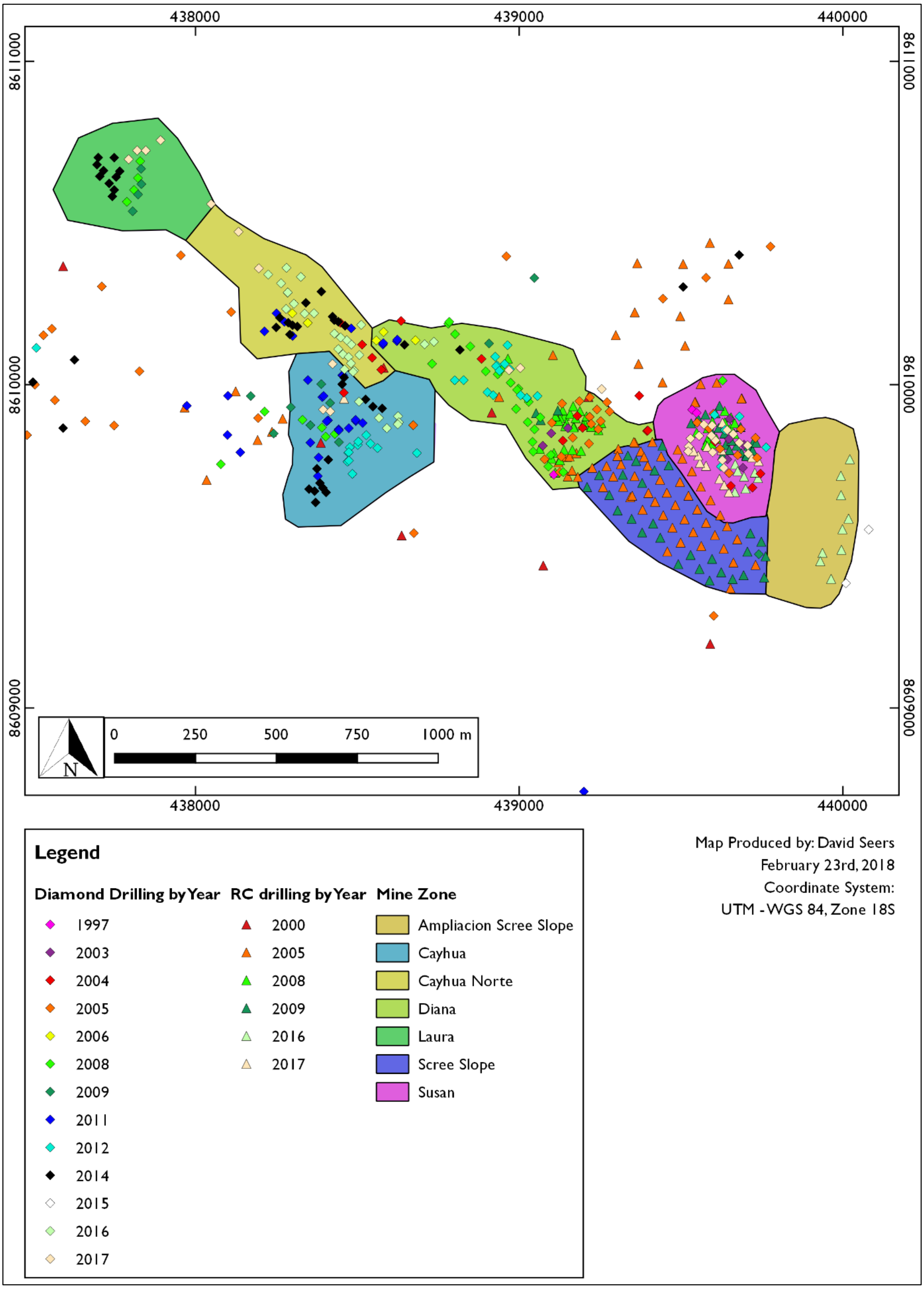

Figure 14-2: Plan view north of the Diamond and Reverse Circulation drill holes coloured by year

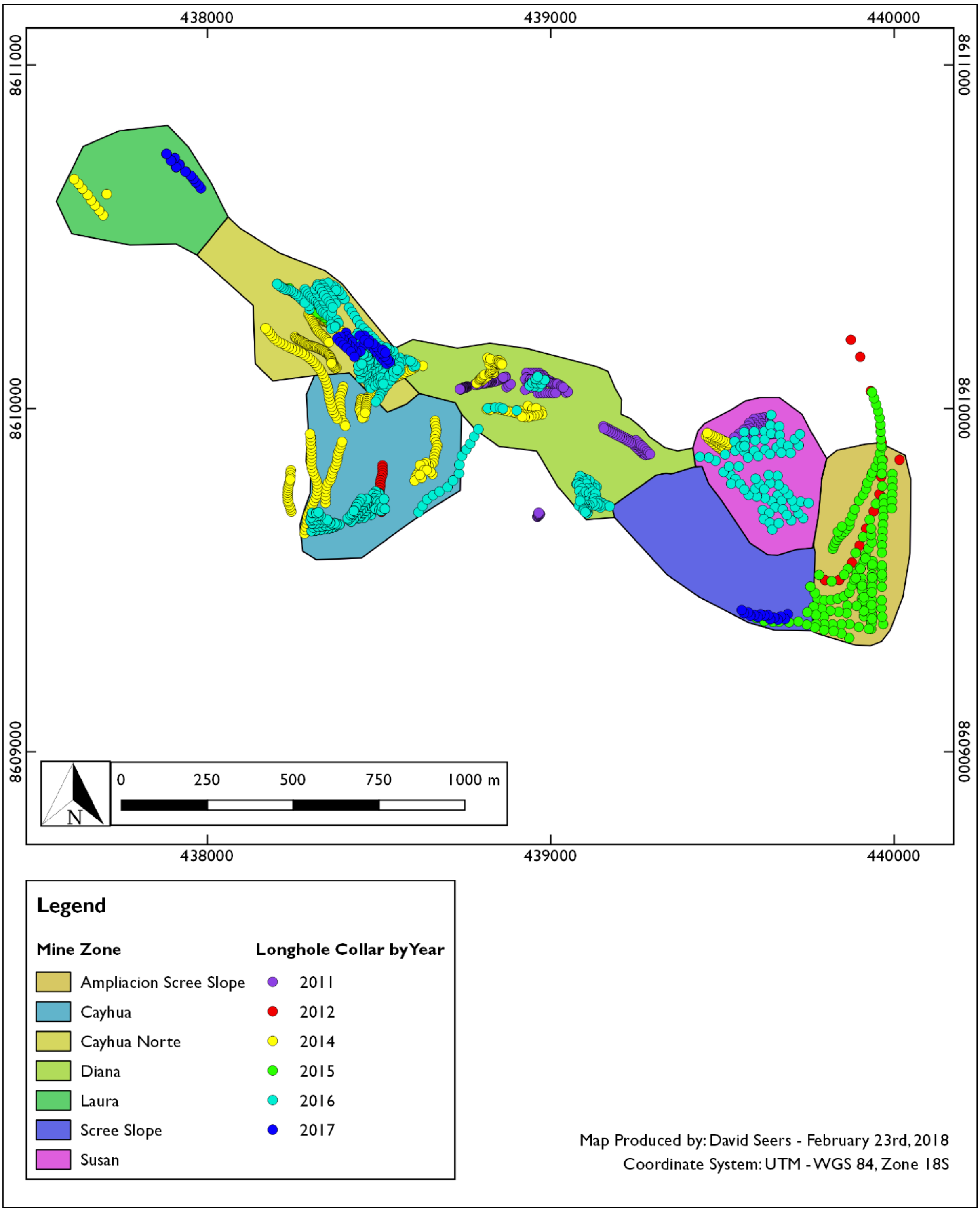

Figure 14-3: Plan view north of the Long holes coloured by year

14.3 Geological Interpretation

The Corihuarmi mine geology team reports that the dominant control on gold grade is the oxidation state. Discontinuous zones of high-grade mineralization are spatially associated with zones of strong brecciation and/or silicification, however, these zones are difficult to interpret between drill sections, and therefore, grade shells have been used to represent and constrain the high-grade zones. It should be noted that these zones have now been largely mined out and do not materially impact on the current Mineral Resource Estimate.

Other alteration assemblages are logged and have been modelled in three dimensions (3D); however, mining experience has shown that their influence on grade is too subtle to be seen through the oxidation overprint. Therefore, they have not been used to constrain the estimation of grades.

Oxidation state and alteration type was logged and interpreted in 2D sections by the mine geological staff. Mr J. Limaylla then linked the 2D section strings to form 3D solids that were used to code the drill holes and block model in preparation for gold grade estimation. Examples of a typical section are shown in Figure 14-4 and Figure 14-5.

Based on conversations with Project geologists, Dr Fowler (QP) consider that there is a good control on the oxide and sulphide boundary and make the following observations:

- The base of oxide is defined visually by the logging geologist
- Visual sulphides are generally very low in abundance but increase in areas of brecciation
- Non-visual (microcrystalline) sulphides are known to exist in dark grey quartz but are not logged as sulphide
- Corihuarmi geologists are convinced they have tight control on the base of oxidation with sections drawn every 20 m.
- The sections are digitised in 2D cross sections, and then imported into Minesight mining software for 3D solid generation.
- The 3D solids are then used to code the blocks as either sulphide or oxide. The blocks are 6 m high.
- The oxidation state is used as a constraint during the pit optimisation. Sulphide blocks were assigned zero value.

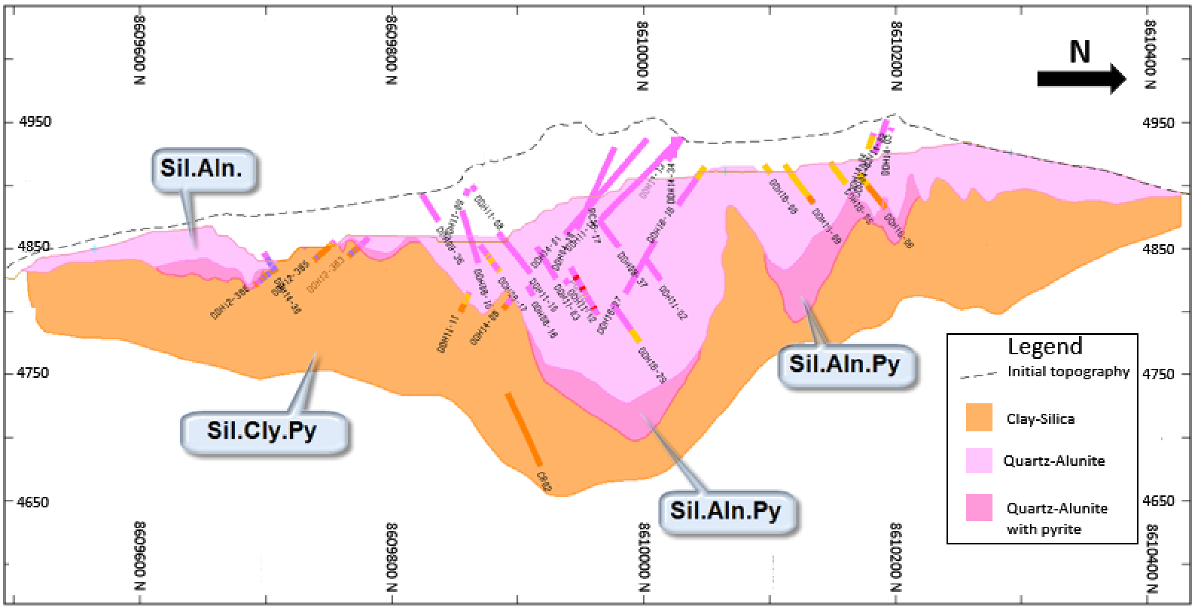

Figure 14-4: Cross section at 438450 mE showing logged and interpreted alteration types

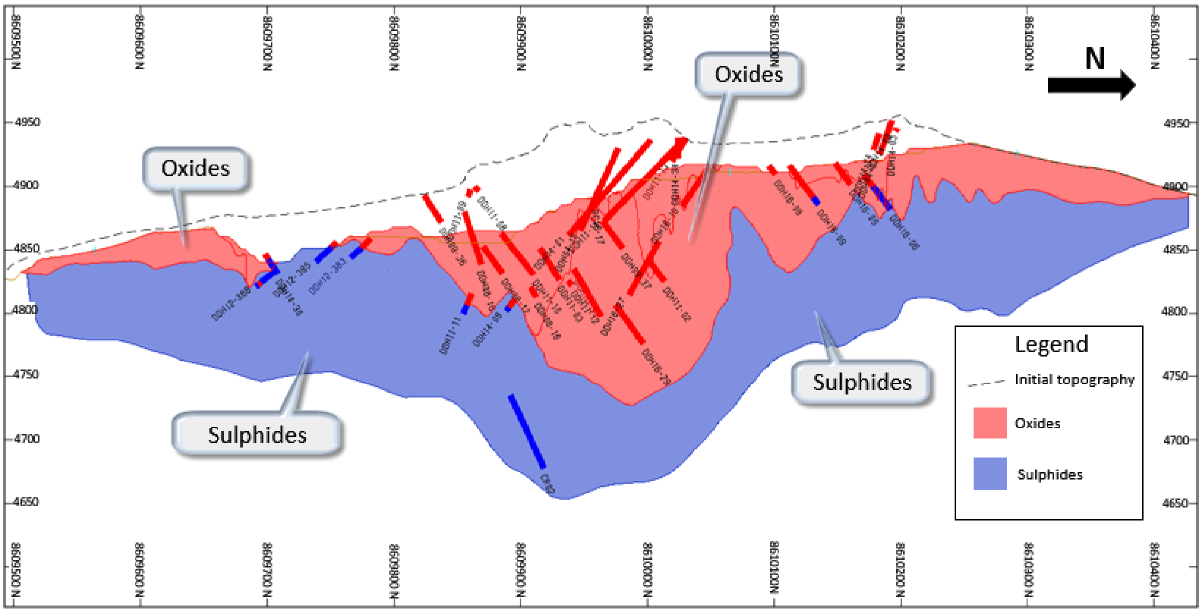

Figure 14-5: Cross section at 438450 mE showing logged and interpreted oxidation state

Log histograms and probability plots were used to select the boundaries of the low-grade and high-grade mineralization (Figure 14-6, Figure 14-7). The outer limit of mineralization was modelled at 0.06 g/t Au and the high-grade zones were modelled at 0.5 g/t Au. Approximately 5% of the samples are above 0.5 g/t gold.

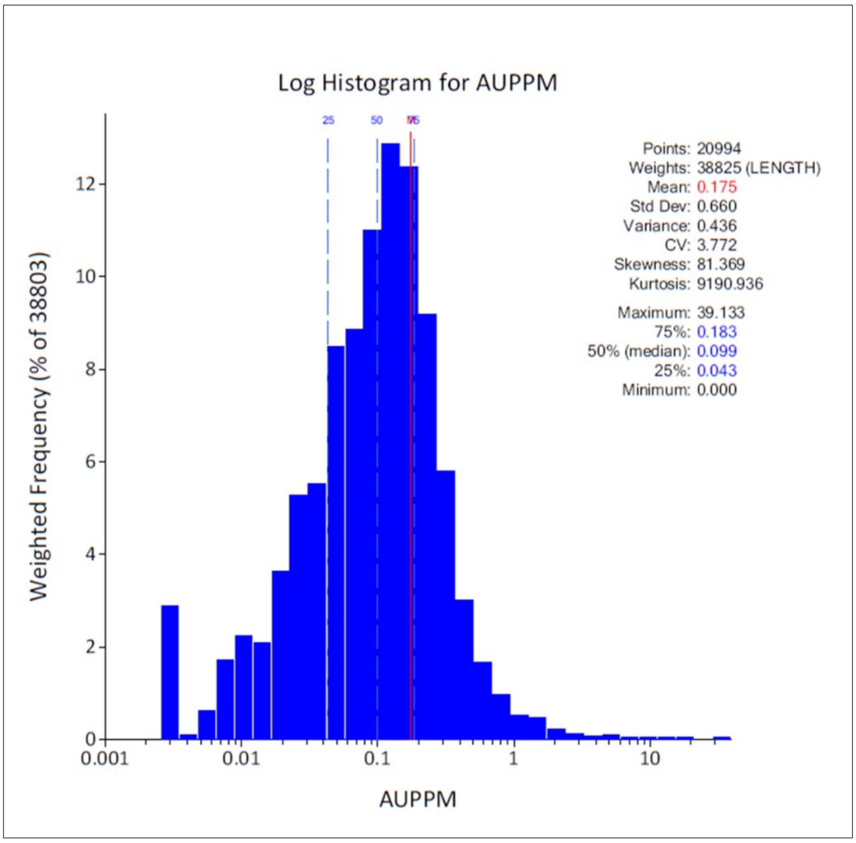

Figure 14-6: Length-weighted log histogram of gold grades in drill holes: all mine zones

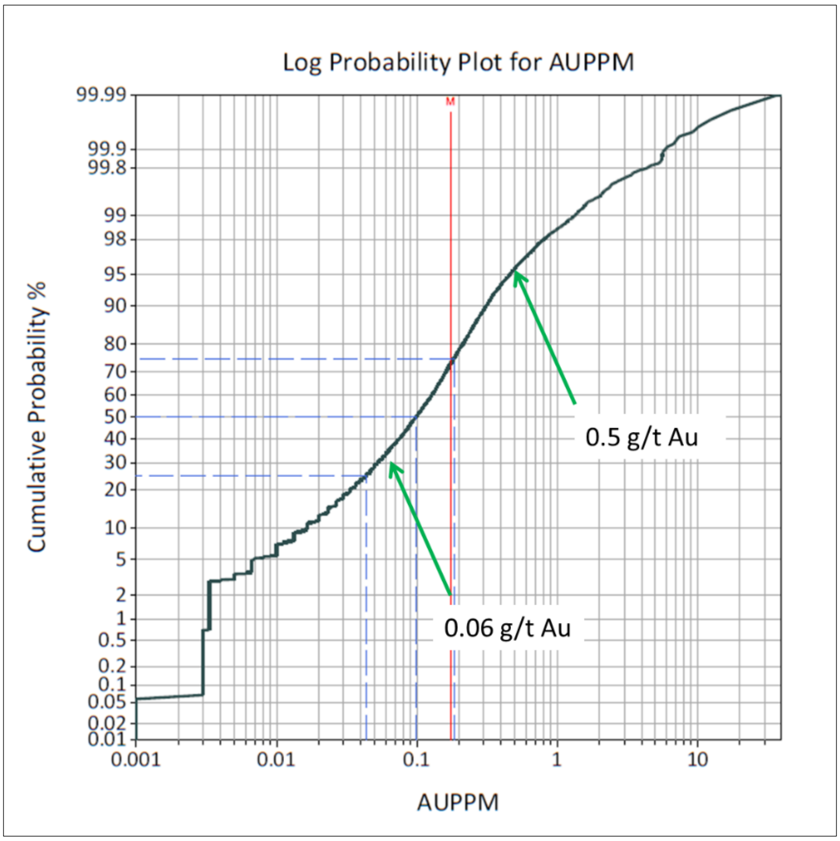

Figure 14-7: Length-weighted log probability plot of gold grades in drill holes: all mine zones

The drill hole intervals are selected inside the 0.06 g/t Au grade shell and divided by mine zone and above or below the base of oxidation surface (BOX) for the purposes of exploratory data analysis, variography and grade estimation. The resulting estimation domains are described in Table 14-2. The length-weighted domain statistics are presented visually in box-and-whisker plots and log-histograms in Figure 14-8, Figure 14-9, Figure 14-10, Figure 14-11.

Table 14-2: Estimation domains and codes

MINERALIZED ZONES		MINERALIZATION		DOMAIN	
Description	Code	Description	Code	Description	Code
Susan	1	Non-sulphide	0	Non-sulfides in Susan	10
Scree Slope	3	Sulphide	1	Sulfides in Susan	11
Cayhua	4			Non-sulfides in Scree Slope	30
Laura	5			Sulfides in Scree Slope	31
Ampliacion Diana	6			Non-sulfides in Cayhua	40
Cayhua Norte	7			Sulfides in Cayhua	41
Ampl. Scree Slope	8			Non-sulfides in Laura	50
				Sulfides in Laura	51
				Non-sulfides in Amp. Diana	60
				Sulfides in Amp. Diana	61
				Non-sulfides in Cayhua Norte	70
				Sulfides in Cayhua Norte	71
				Non-sulfides in Ampl. Scree Slope	80
				Sulfides in Ampl. Scree Slope	81

Box-and-whisker plots have been used to present summary statistics for gold grades by domain (Figure 14-8). The mean and median are displayed as red and blue lines respectively. The dark grey box represents the 50% – 75% quartile, while the light grey box represents the 25% – 50% quartile. The upper and lower ticks represent the maximum and minimum data values respectively. The group label is above the upper tick with the number of samples in brackets. The box-and-whisker on the right-hand side of the plot represents the total dataset.

The log-histograms display the grade distribution for each domain after a log-transform of the data. Summary statistics for each domain are also displayed on the upper right-hand corner of the histograms (Figure 14-9, Figure 14-10, Figure 14-11).

The following observations are made from the plots, histograms and from visual inspection of the grade distribution in 3D:

- The mine zones effectively discriminate grade sub-populations as can be seen in the box-and-whisker plots.
- The oxidation state is also a good discriminator of grade sub-populations within each mine zone.

- The base of oxide boundary is commonly observed to coincide with a distinct change in gold grade in the drill holes.
- Most of the domains display characteristics that are consistent with a log-normal distribution with few outliers.

In summary, the analysis shows that mine zone polygons in combination with the base of oxide boundary usefully separate distinct sub-populations within the Corihuarmi mine. Mining experience has shown that high-grade zones are poddy, discontinuous and associated with highly-brecciated and/or silicified alteration styles. However, the known occurrences of this style of mineralization have now largely been mined out. There may be additional high-grade zones at depth that have not been modelled, however, with the current drill spacing, their location and geometry is uncertain.

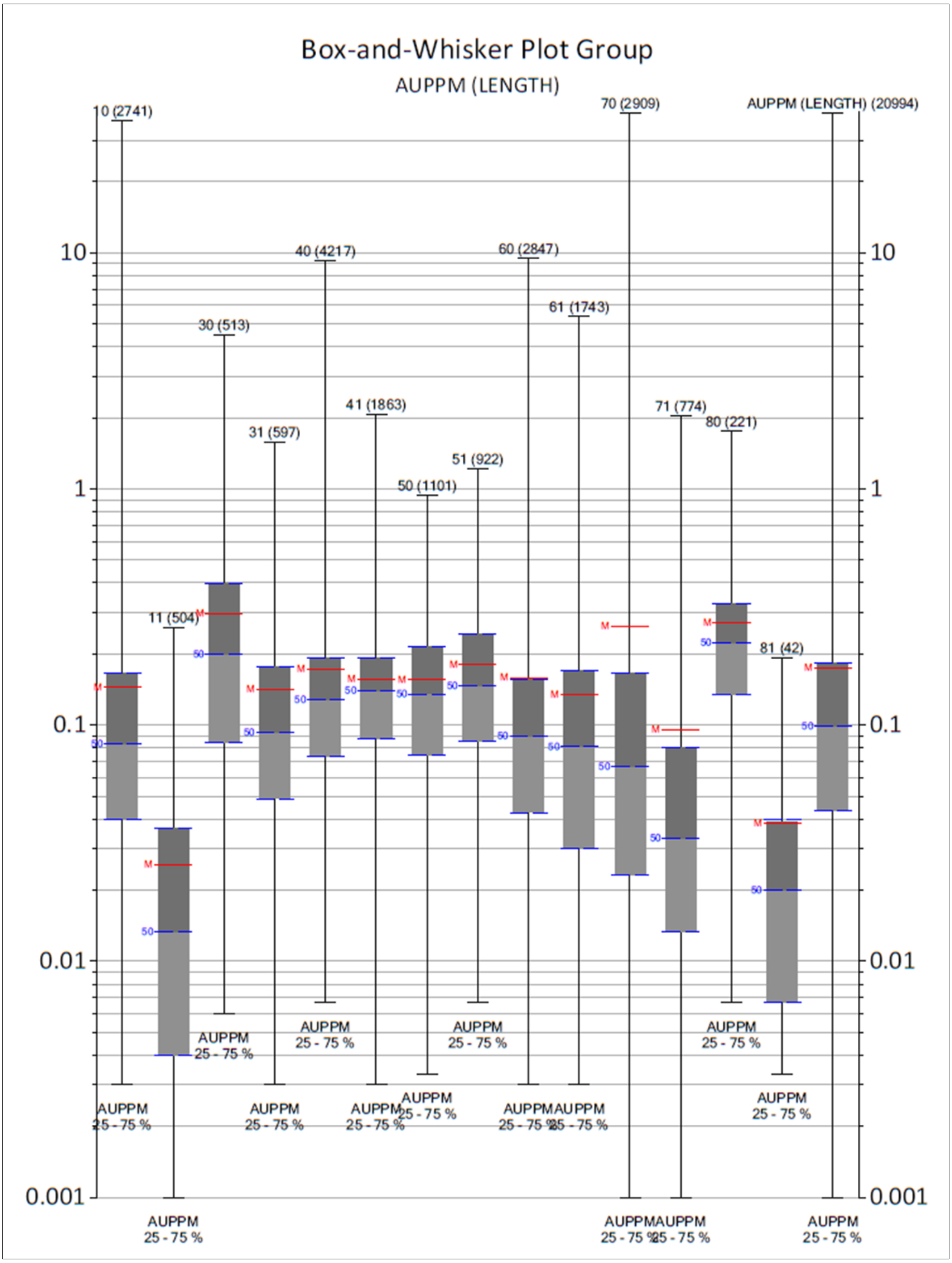

Figure 14-8: Drill hole gold box-and-whisker plot by estimation domain

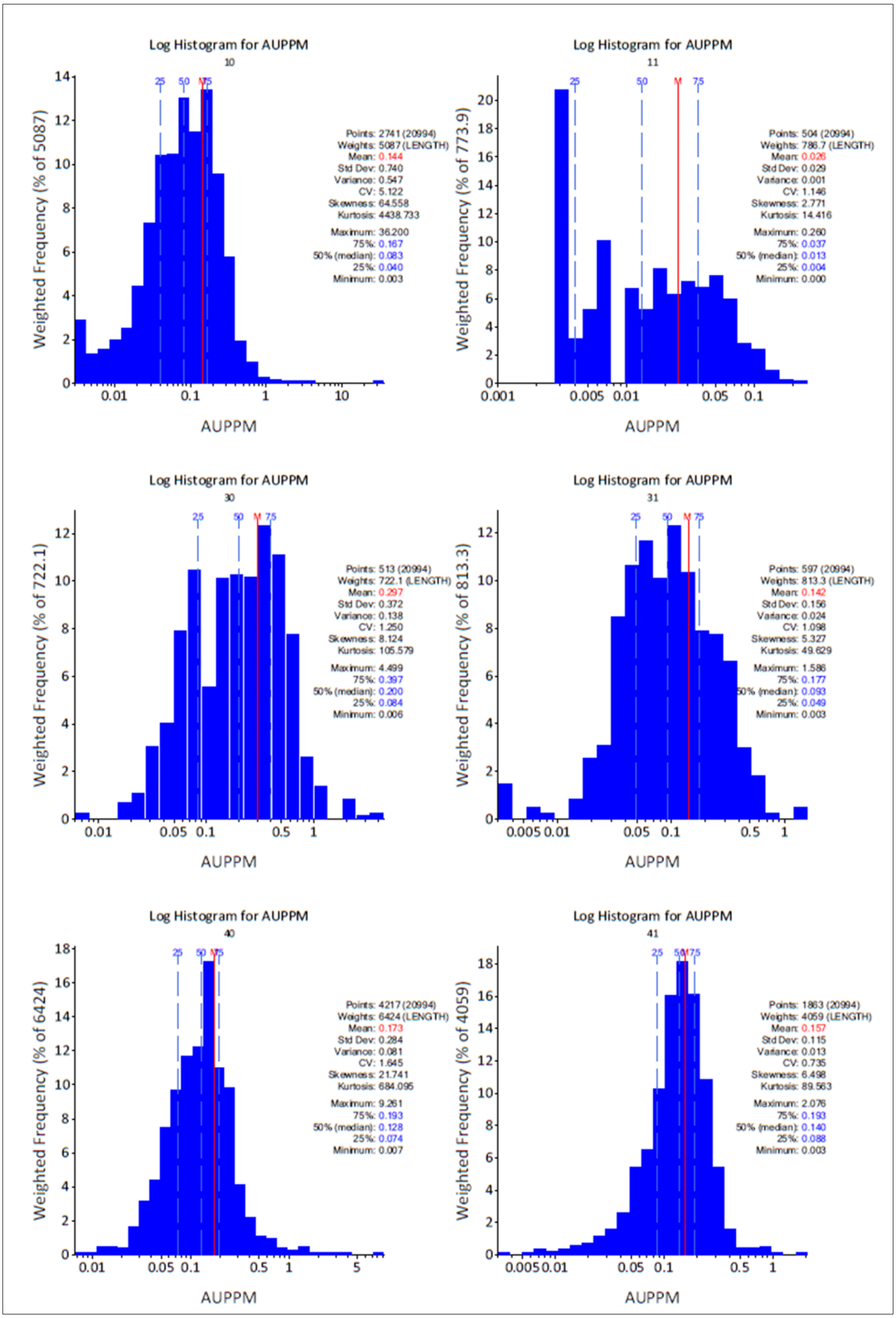

Figure 14-9: Drill hole gold log-histograms by estimation domain: part A

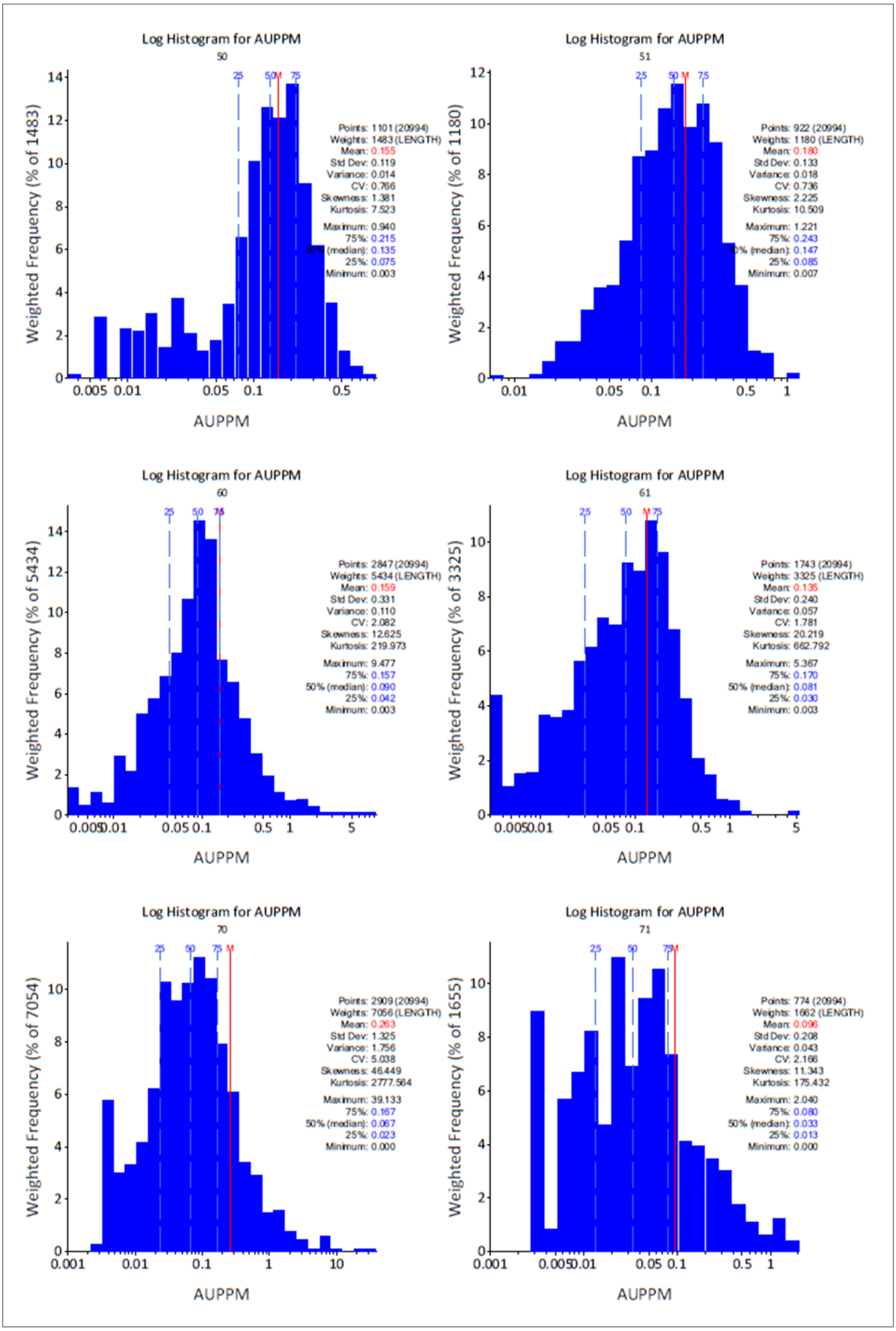

Figure 14-10: Drill hole gold log-histograms by estimation domain: part B

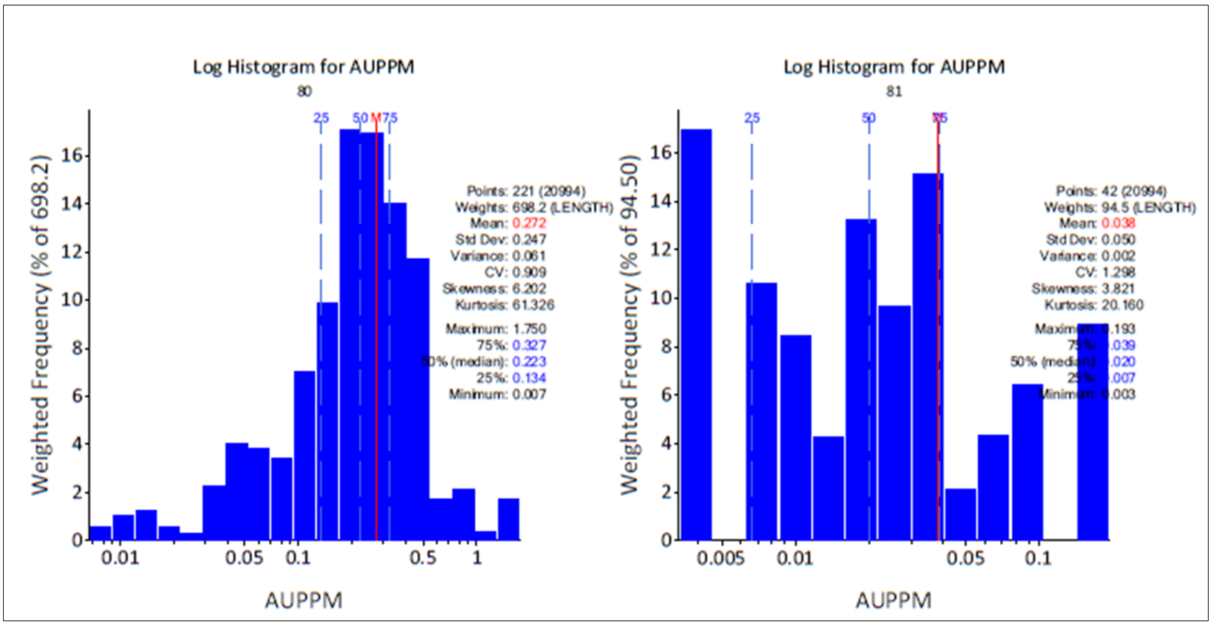

Figure 14-11: Drill hole gold log-histograms by estimation domain: part C

14.4 Compositing

Drill hole intervals were composed to a target length of 5m while honouring the base of oxide boundary. The 5m composite was chosen to match the bench height used at the mine. Composite log-histograms and summary statistics by estimation domain are presented in Figure 14-12, Figure 14-13, Figure 14-14. Visual validation of the gold grade estimate shows that erratic high-grades and grade smearing in the model was not an issue for the parts of the deposit that are still in-situ (i.e. not yet mined). Therefore, grade capping was not considered necessary for this estimate.

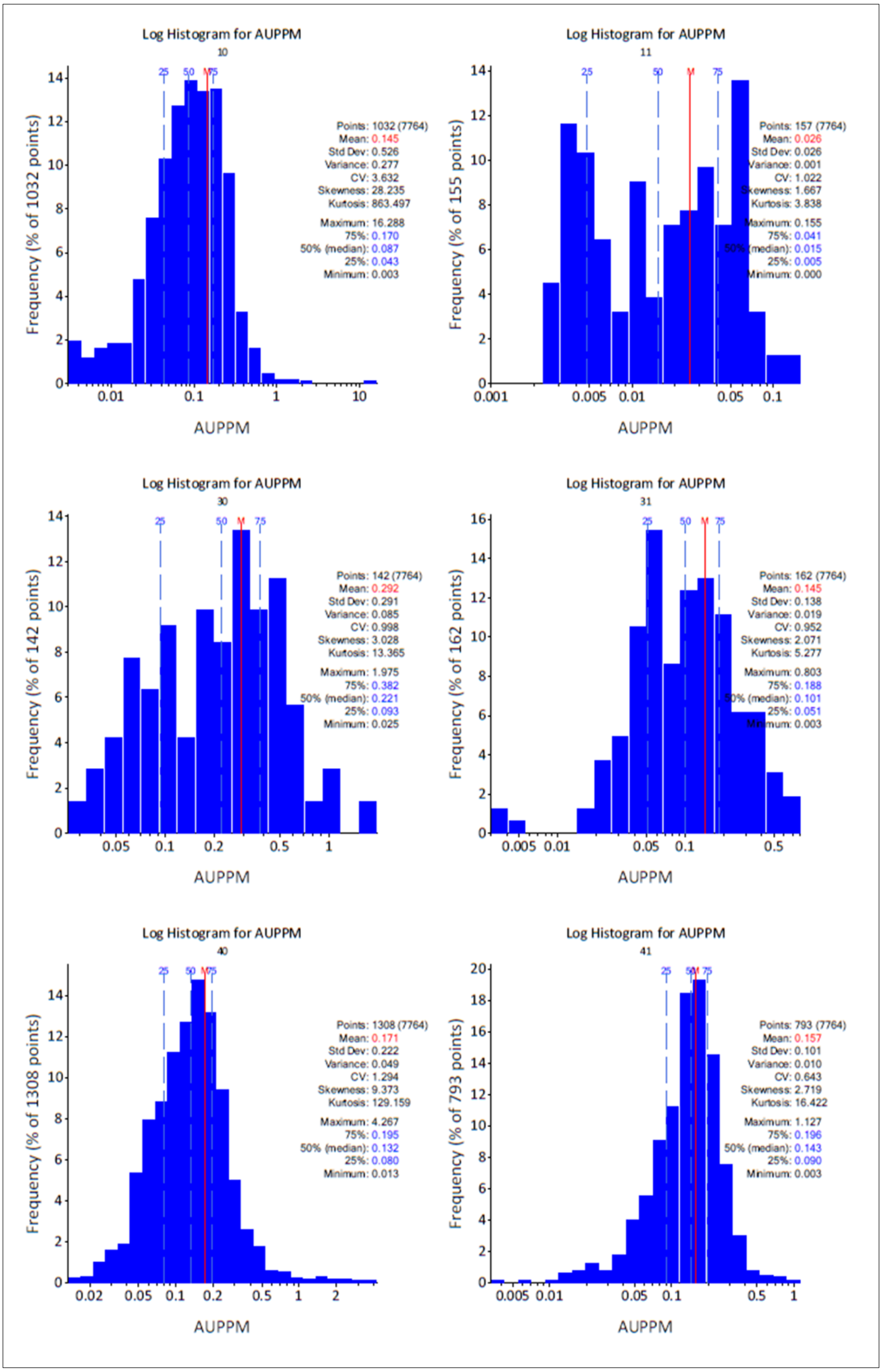

Figure 14-12: Composite gold log-histograms by estimation domain: part A

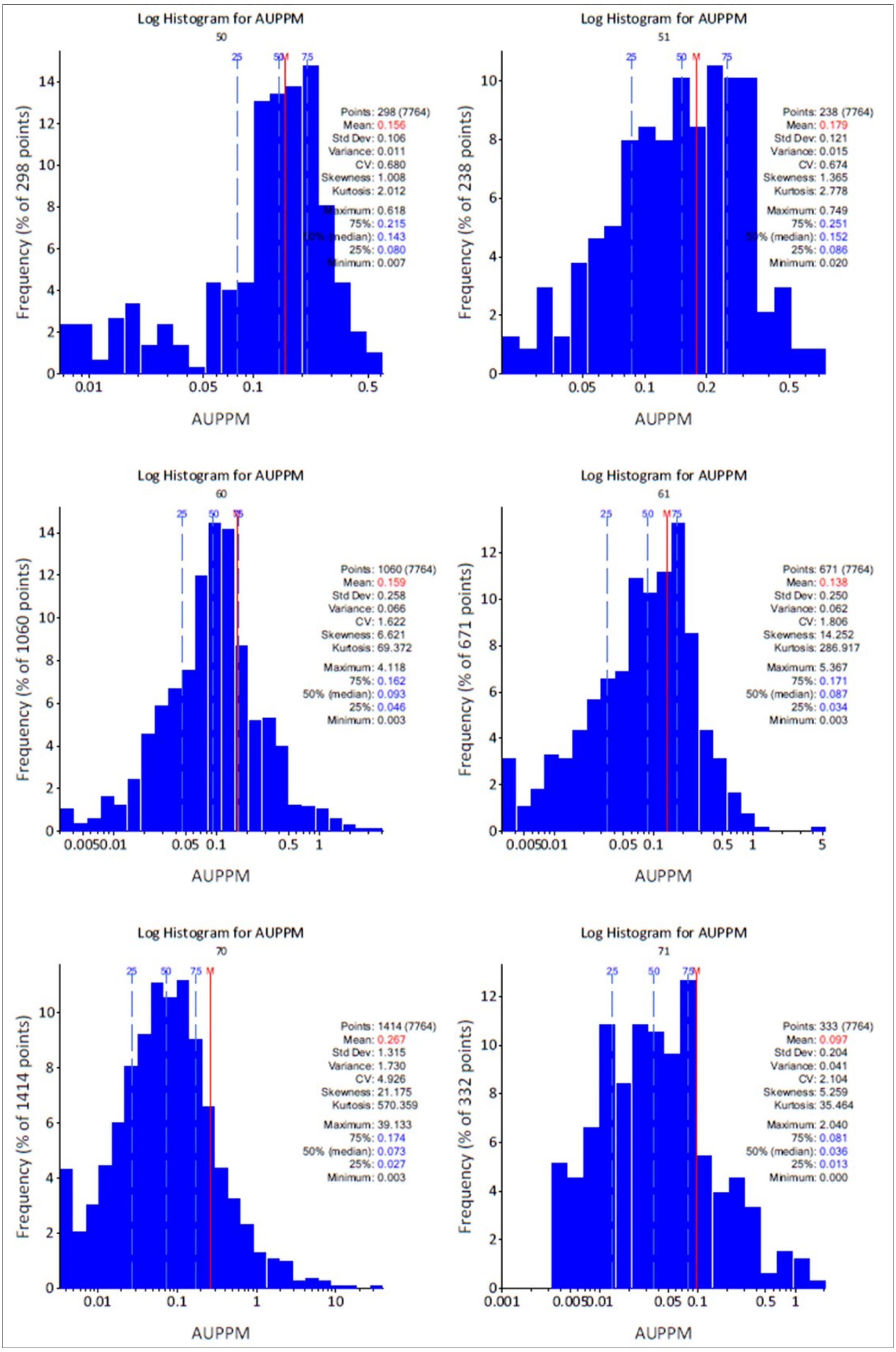

Figure 14-13: Composite gold log-histograms by estimation domain: part B

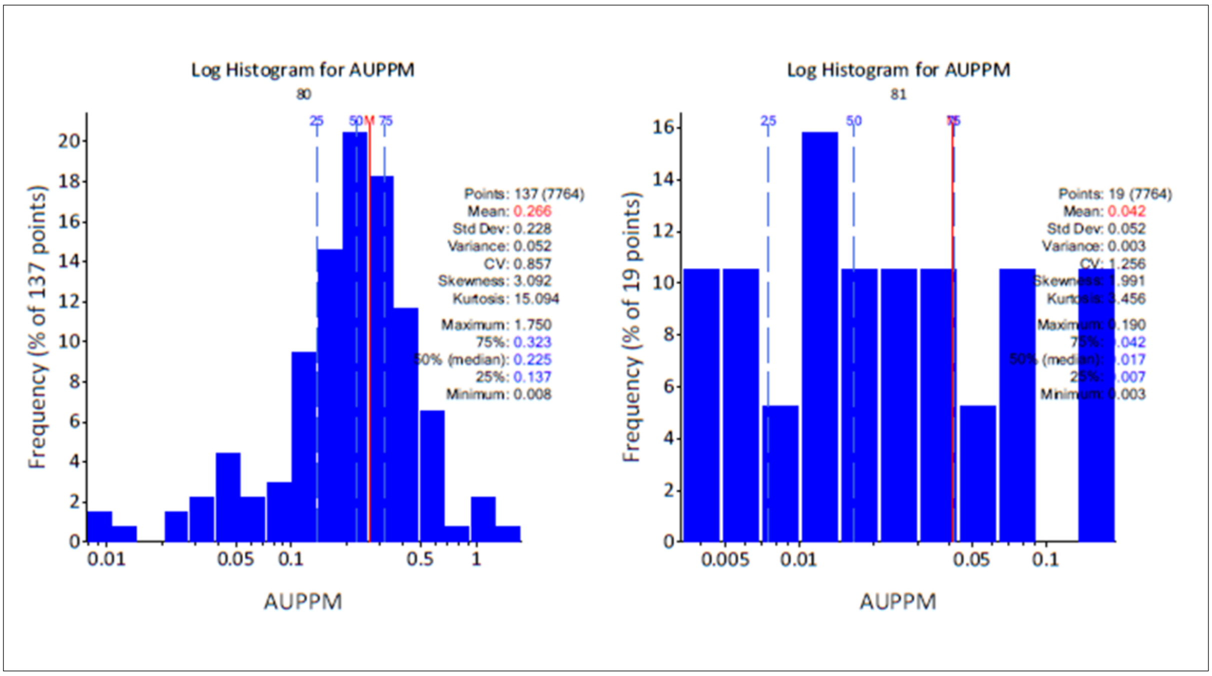

Figure 14-14: Composite gold log-histograms by estimation domain: part C

14.5 Variography

Variography reflects the mean spatial continuity for a located variable. A variogram or correlogram is used to assign the appropriate kriging weights in the estimation process, considering the mean spatial characteristics of the underlying grade distribution. Correlograms were chosen to model the 3D gold grade continuity as they were found to give better structures. A correlogram is more resistant to heteroscedasticity and clustering[1] than a traditional variogram (Srivastava & Parker, 1989).

The nugget effect was first determined using the downhole correlogram tool. Subsequently, directional correlograms were produced with a 10m lag, in horizontal directions from 0 ° to 180 ° with increments of 10 ° and a window of +/- 5 °, in vertical directions from -90 ° to + 90 ° with increments of 30 ° and a window of +/- 15 °.

Experimental correlograms were generated in a fan in the horizontal plane, and perpendicular vertical planes. The direction showing the best continuity (longest range) and the two perpendicular directions were modelled. Spherical models with a nugget and two structures were manually fit to the directional correlograms. An example from the Cayhua mine zone is presented in Figure 14-17.

[1] Heteroscedasticity means that the dispersion of the values is related to their magnitude. Clustering means that available samples are preferentially clustered in areas with high values.

The ranges obtained from the variographic analysis were used to inform the search distances in the first pass. The second pass was based on the average drill spacing of the deposit and the third pass was intended to fill blocks that were later classified as Inferred.

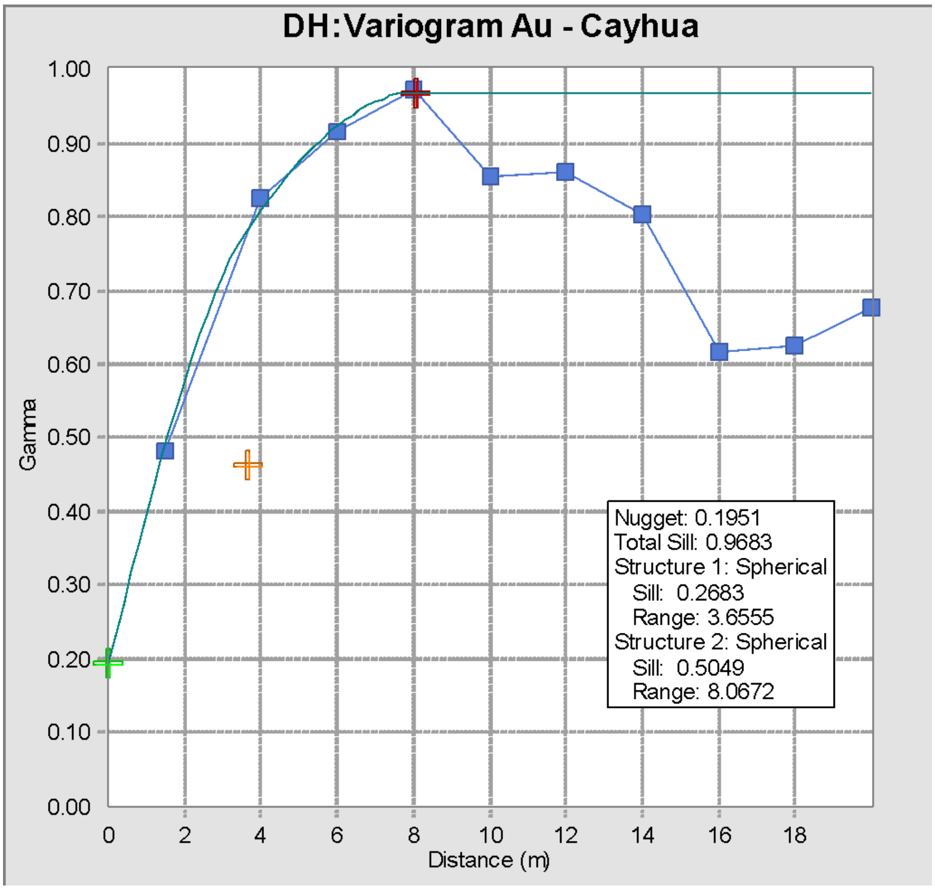

Figure 14-15: Au grades (Cayhua) Combined Downhole Correlogram

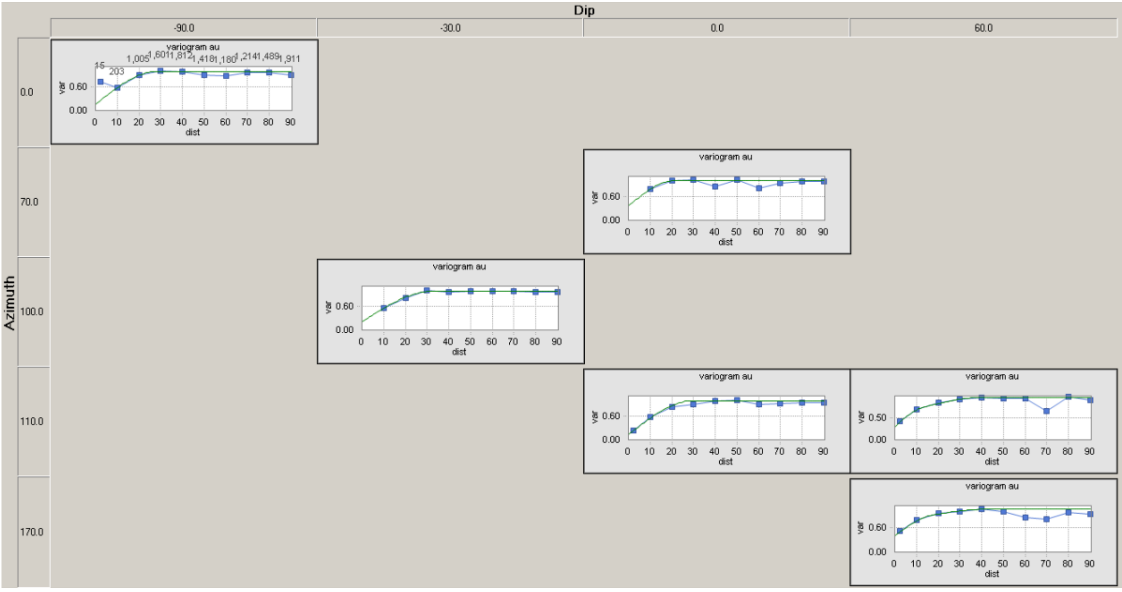

Figure 14-16: Directional variograms in Cayhua

Table 14-3: Variographic parameters

		Rotation				1st Structure				2nd Structure			
Domain Name	Domain	r1	r2	r3	Nugget	Sill 1	d1	d2	d3	Sill 2	d1	d2	d3
Above BOX in Susan	10	42	-40.1	7.9	0.2	0.3	10	15	10	0.5	30	40	30
Below BOX in Susan	11	42	-40.1	7.9	0.2	0.3	10	15	10	0.5	30	40	30
Above BOX in Scree Slope	30	120	85	90	0.2	0.8	60	30	20				
Below BOX in Scree Slope	31	120	85	90	0.2	0.8	60	30	20				
Above BOX in Cayhua	40	42	-40.1	7.9	0.2	0.3	15	20	20	0.5	30	40	30
Below BOX in Cayhua	41	42	-40.1	7.9	0.2	0.3	15	20	20	0.5	30	40	30
Above BOX in Laura	50	18.3	7.5	77.8	0.2	0.25	20	25	18	0.55	35	50	50
Below BOX in Laura	51	18.3	7.5	77.8	0.2	0.25	20	25	18	0.55	35	50	50
Above BOX in Amp. Diana	60	42	-40.1	7.9	0.2	0.3	10	15	10	0.5	30	40	30
Below BOX in Amp. Diana	61	42	-40.1	7.9	0.2	0.3	10	15	10	0.5	30	40	30
Above BOX in Cayhua Norte	70	187	25.7	45	0.2	0.2	10	20	10	0.6	30	35	30
Below BOX in Cayhua Norte	71	187	25.7	45	0.2	0.2	10	20	10	0.6	30	35	30

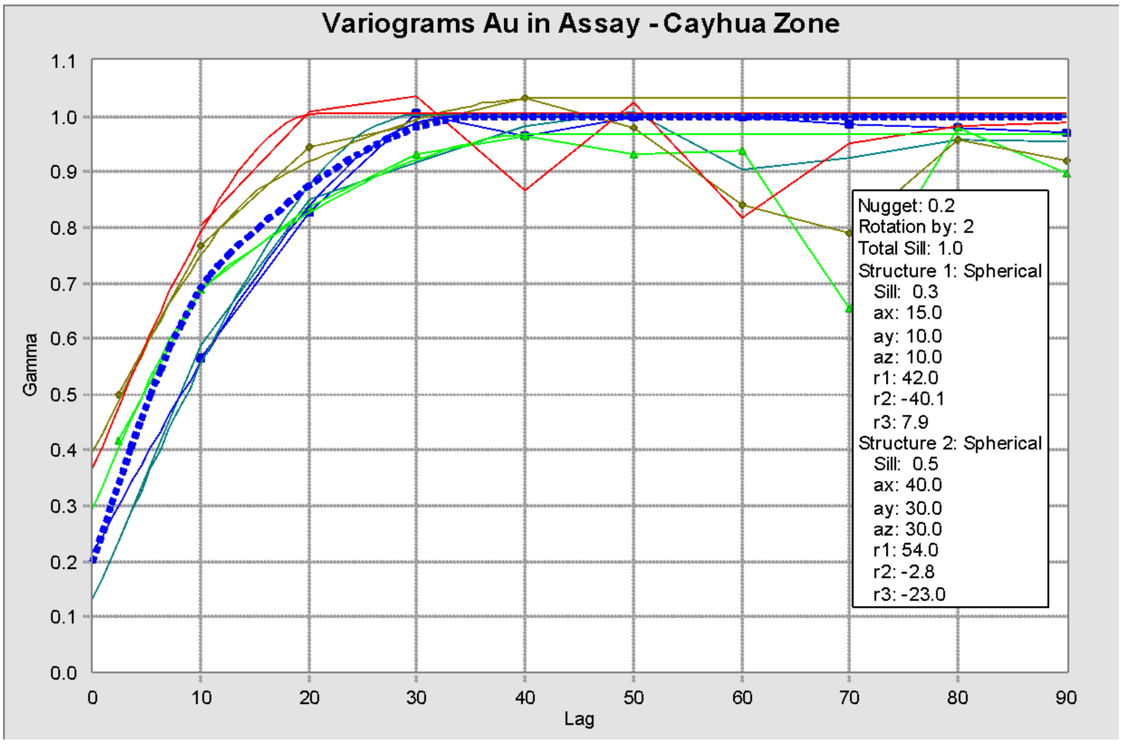

Figure 14-17: Cayhua's 3D variogram adjustment parameters and ellipsoid projections

14.6 Contact plots

Contact plots were prepared at the boundary between oxides and sulfides by mine zone to determine the nature of the contacts and how they should be treated during gold grade estimation (Figure 14-18,Figure 14-19, Figure 14-20).

Mr. J. Limaylla made the following observations:

- In Laura a soft contact was interpreted meaning that samples were used to estimate grades across the domain boundary
- In Cayhua and Cayhua Norte, hard contacts were interpreted and so these domains were estimated separately.

Dr A. Fowler (QP) agrees with these observations.

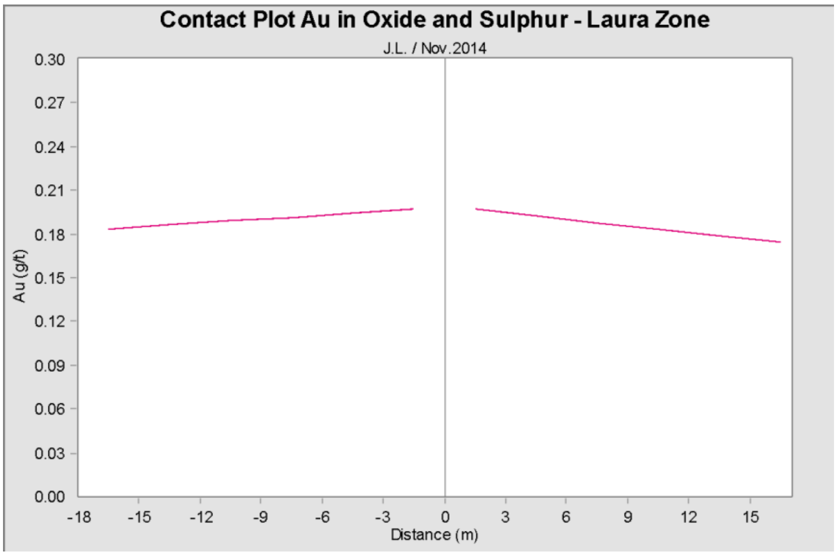

Figure 14-18: Contact analysis between the oxide and sulphide in Laura

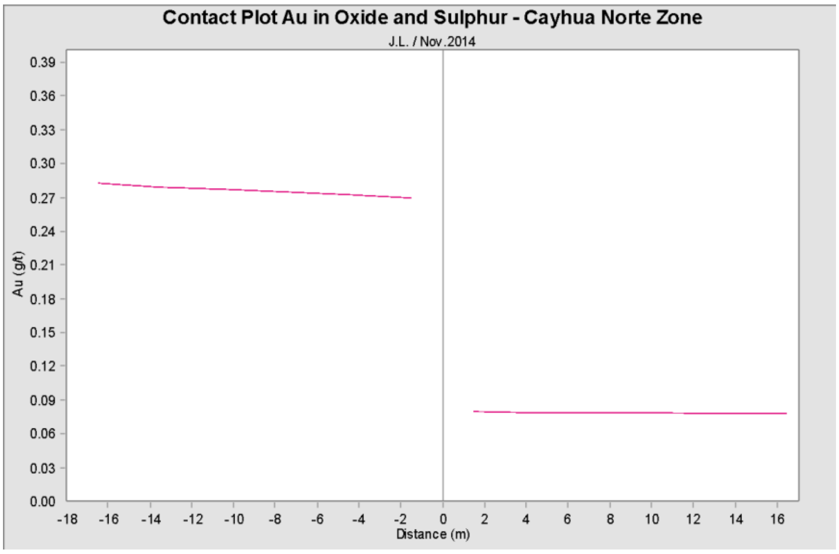

Figure 14-19: Contact analysis between oxide and sulphide in Cayhua Norte

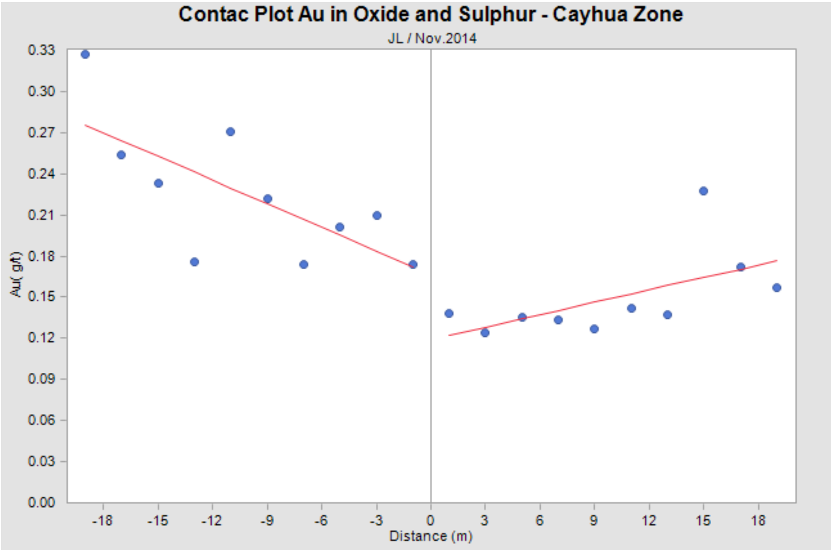

Figure 14-20: Contact analysis between oxide and sulphide in Cayhua

14.7 Gold grade estimation

Gold grades were estimated with ordinary kriging (AUKRG), using the parameters provided in Table 14-4 Table 2-1(Figure 14-21). The inverse distance to the power of three (AUIDW), and the nearest neighbor method (AUNN) were estimated simultaneously for comparison purposes (Figure 14-22, Figure 14-23). The example cross sections below show blocks and drill holes colored by gold grade (legend displayed). Blocks that were not estimated after three passes were assigned detection limit grades of 0.001 g/t Au.

Table 14-4: Search and Estimation parameters

Estimation Domain	Pass 1					Pass 2			Pass 3		
10	15	15	15	1	3	4	2	6	5.33	3	12
11	15	15	15	1	3	4	2	6	5.33	3	12
30	60	60	60	2	6	1.67	5	16	1.67	3	16
31	60	60	60	2	6	1.67	5	16	1.67	3	16
40	15	15	15	2	3	2.67	2	6	5.33	2	12
41	15	15	15	2	3	2.67	2	6	5.33	2	12
50	25	25	25	2	3	2	2	6	4	2	12
51	25	25	25	2	3	2	2	6	4	2	12
60	15	15	15	1	3	4	2	6	5.33	3	12
61	15	15	15	1	3	4	2	6	5.33	3	12
70	20	20	20	1	3	1.75	2	6	3.5	2	12
71	20	20	20	1	3	1.75	2	6	3.5	2	12
80	60	60	60	2	6	1.67	5	16	1.67	3	16
81	60	60	60	2	6	1.67	5	16	1.67	3	16

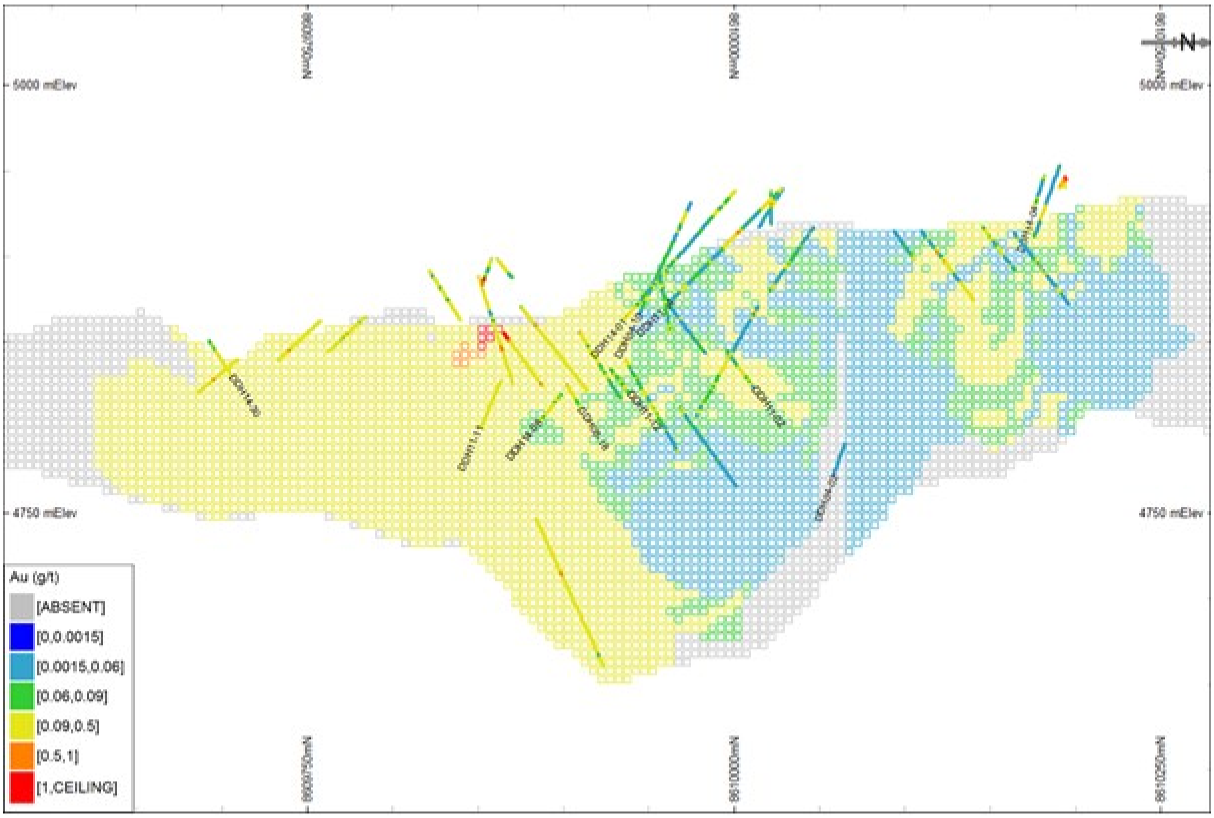

Figure 14-21: Cross section at 438450 mE showing block model with ordinary kriged estimate

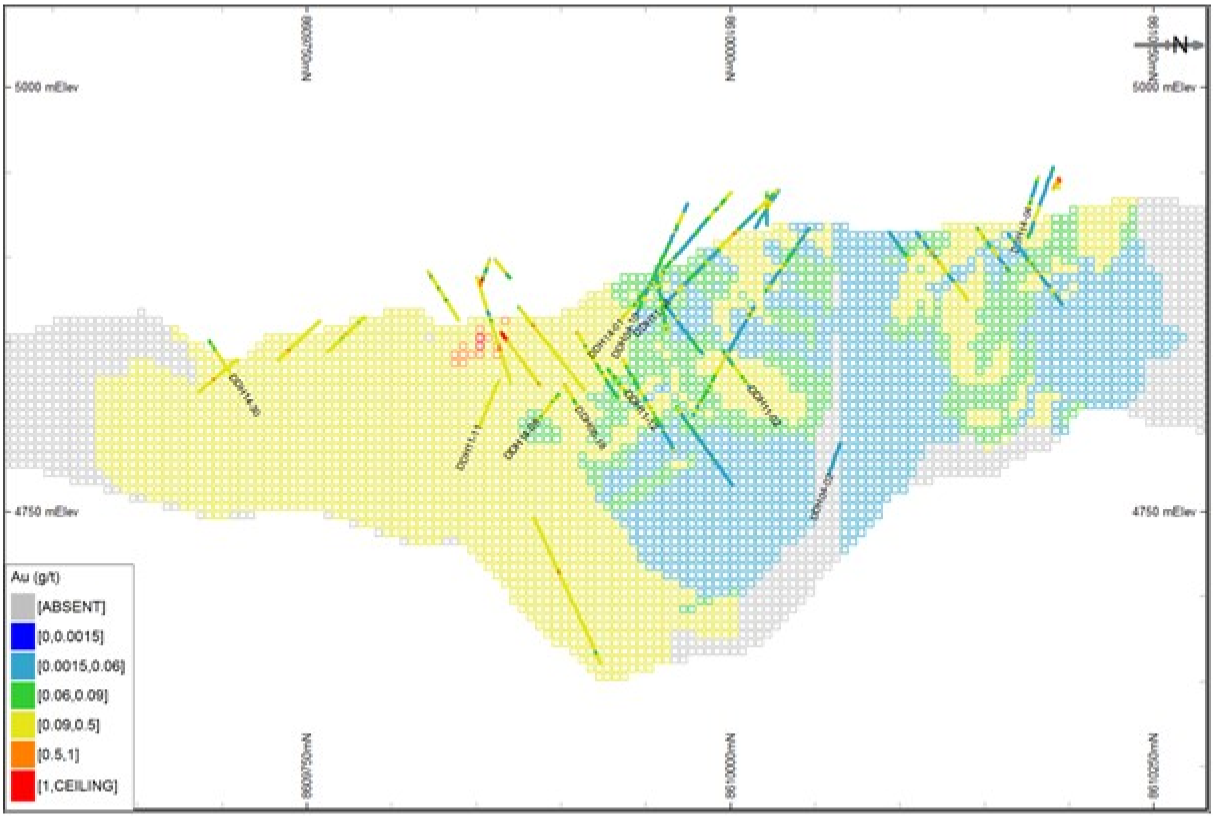

Figure 14-22: Cross section at 438450 mE showing block model with inverse distance cubed estimate

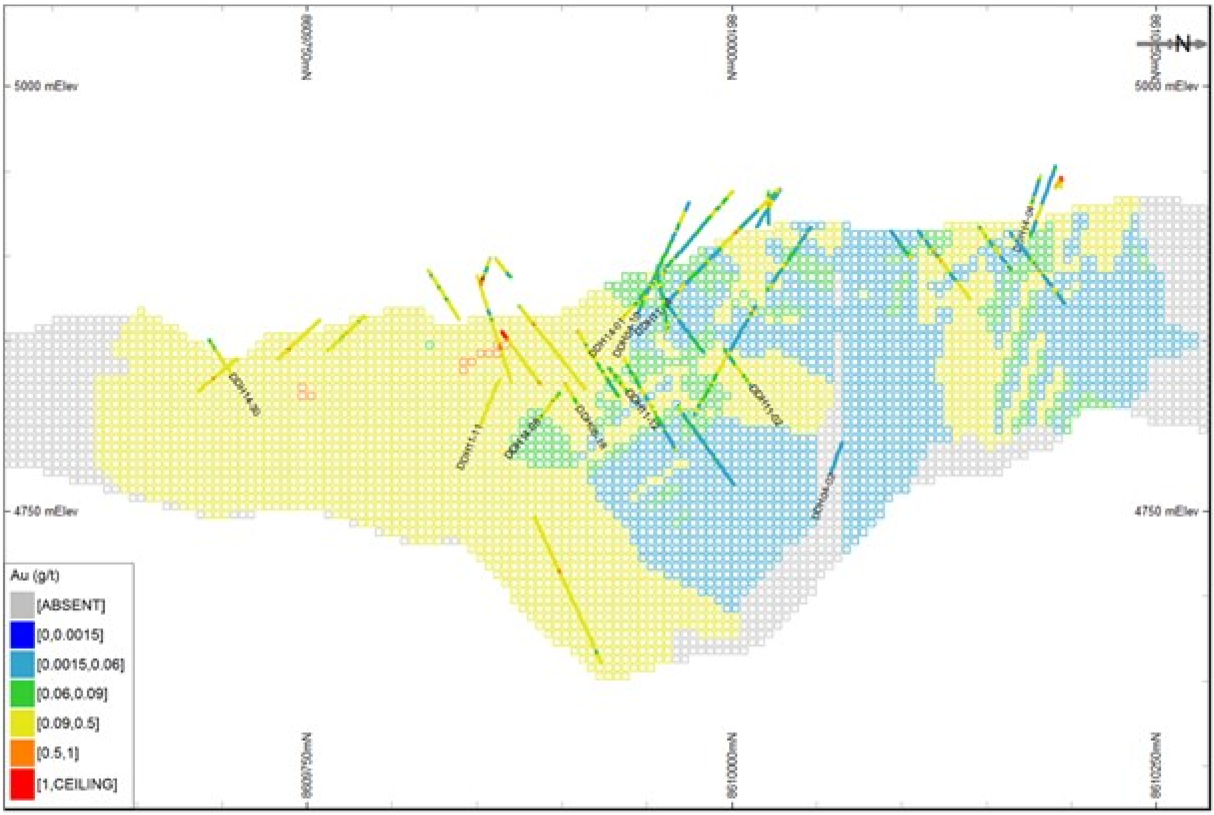

Figure 14-23: Cross section at 438450 mE showing block model with nearest neighbour estimate

14.8 Bulk Density

Bulk density has been measured in campaigns by mine zone using an external laboratory Actlabs Skyline Peru. The measurements were collected on intact pieces of core that were coated in paraffin wax then weighed in air and weighed in water. Results are presented in Table 14-5. Density values were assigned in the model based on the dominant mine zone and oxidation state per block.

Table 14-5: Bulk density statistics

Pit/Zone	No. of Samples	Minimum	Maximum	Mean	Median	Std.Dev	Source
Susan-Oxides	50	1.84	2.56	2.22	-	-	AMEC 2004
Diana-Oxides	50	1.84	2.56	2.35	-	-	AMEC 2004
Scree Slope-Oxides	50	1.84	2.56	2.22	-	-	AMEC 2004
Scree-Slope	6	2.04	2.14	2.08	2.11	0.04	Internal MIRL
Ampl. Diana-Oxides	50	1.84	2.56	2.23	-	-	AMEC 2004
Ampl. Diana-Sulfides	2	2.18	2.47	2.3	2.33	0.21	Internal MIRL
Cayhua-Oxides	44	1.56	2.61	2.04	2.1	0.25	Internal MIRL
Cayhua-Sulfides	2	2.18	2.47	2.3	2.33	0.21	Internal MIRL
Cayhua Norte-Oxides	42	1.94	2.57	2.3	2.35	0.14	Internal MIRL
Cayhua Norte-Sulfides	7	2.29	2.68	2.48	2.37	0.16	Internal MIRL
Laura-Oxides	22	2.01	2.57	2.35	2.44	0.17	Internal MIRL
Laura-Sulfides	25	2.00	2.69	2.44	2.46	0.15	Internal MIRL

14.9 Resource Classification

The Mineral Resource was classified by taking account of the following information:

- Observations of grade continuity and predictability by the mine geology team
- Proven history of the profitability of the mine for the past 10 years
- Kriging variance of the gold estimate
- QA/QC results
- Drill hole spacing in comparison with other similar deposits.

Mr J Limaylla and Dr A. Fowler (QP) consider that classifying blocks based on the mean distance to the three nearest drill holes is a robust method that can incorporate all of the above information. The classification was accomplished in the block model by first estimating mean distance to the three nearest drill holes, followed by a smoothing step to make the resource categories more contiguous.

The Measured Mineral Resource was based on a nominal drill hole spacing of <=28m, While the Indicated Mineral Resource was based on a nominal drill hole spacing of >28m <=40m. The Inferred Mineral Resource was based on a nominal drill hole spacing of >40m up to approximately 100m.

Finally, blocks that were <=5m below the 31 December 2017 topographic surface in the active mining areas were classified as Measured, while blocks that were >5m <=10m below the surface in the active mining areas were classified as Indicated. This was to take into the account the increased confidence gained from pit mapping and blast hole sampling.

A plan view and cross section provide examples of the Mineral Resource categories coded into the block model (Figure 14-24, Figure 14-25). The blocks are coloured by Resource category (legend displayed) and the drill holes are displayed as black lines.

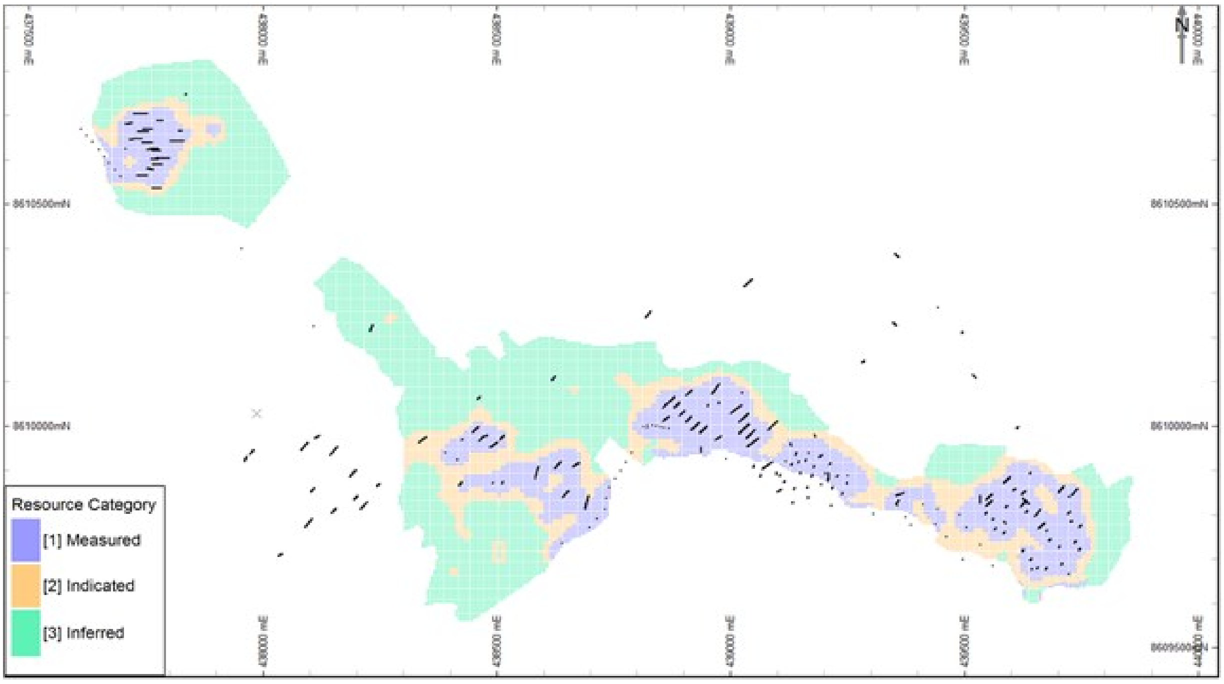

Figure 14-24: Plan view at 4780m elevation showing Resource category in the block model

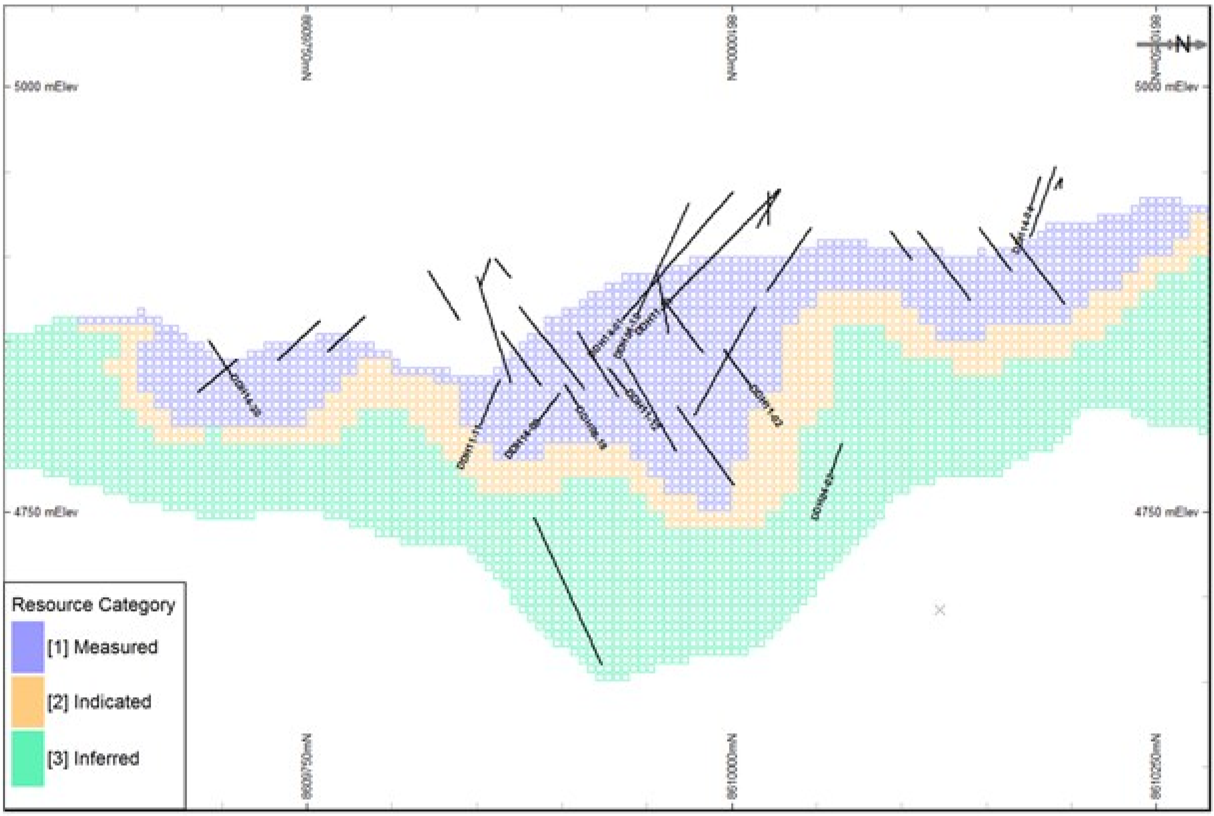

Figure 14-25: Cross section at 438450 mE showing Resource category in the block model

14.10 Block model validation

Block model validation was undertaken by comparing the drill hole composite grades with the estimated block grades using the following methods:

- Visual validation in vertical sections and in top views.
- Trend plots comparing the mean grades by easting, northing and elevation increments through the deposit (also called swath plots)
- Log-histograms, log-probability and Q-Q plots by resource category comparing the global grade distributions

The Nearest Neighbor (AUNN) estimate in the block model was used as a proxy for the composite grade as it effectively declusters the composite grades in 3D. The Ordinary Kriged (AUKRG) estimates were used in the final Mineral Resource tabulation. Inverse Distance Weighted to the power of three (AUIDW) was also estimated for validation purposes only.

AUKRG and AUIDW estimates are compared with the composites (AUNN estimate) for the Measured and Indicated Mineral Resource categories separately. Inferred Mineral Resources are expected to validate poorly and are not included in this analysis. Results are provided in Figure 14-26 to Figure 14-37. Line colors are described in the legends in each plot. The grey bars in the trend plots indicate the number of blocks in each increment.

Dr Fowler (QP) makes the following observations from the block model validation:

- The AUKRG estimates generally show closer agreement with the composites than the AUIDW estimates.
- The AUKRG estimates in the Measured Mineral Resource show less variability and closer alignment with the composites than the Indicated Mineral Resource.
- It appears from the trend plots that the Measured Mineral Resource might be slightly under-estimated by 0.01 to 0.03 g/t gold. However, this could also be due to a few high-grade composites having undue influence on the local mean grade. Over or under-estimation is less apparent in the Indicated Mineral Resource.
- The Measured Mineral Resource log-probability plots show that the AUKRG and AUIDW estimates contain similar amounts of smoothing. However, the AUKRG displays greater smoothing than the AUIDW estimates in the Indicated Mineral Resource.

Overall, Dr A. Fowler (QP) considers that the agreement between the AUKRG and the composite grades are acceptable and demonstrate the reliability of the Mineral Resource Estimate.

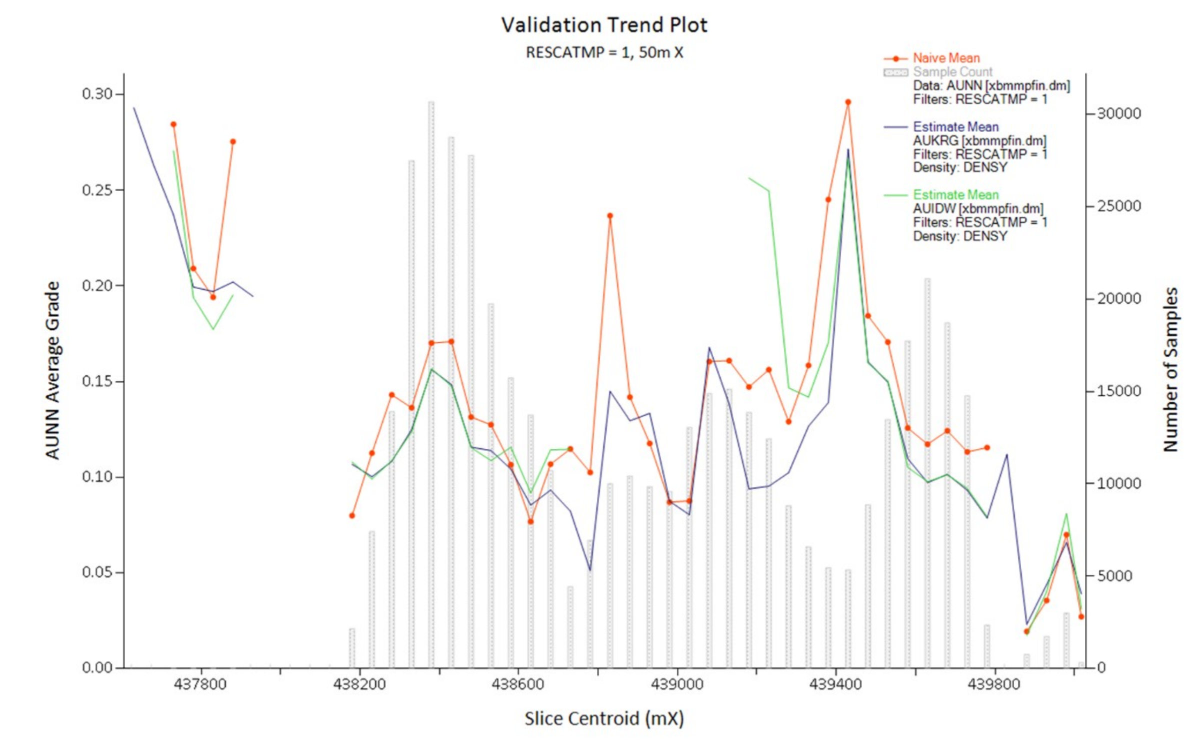

Figure 14-26: Trend Plot by Easting: Measured category

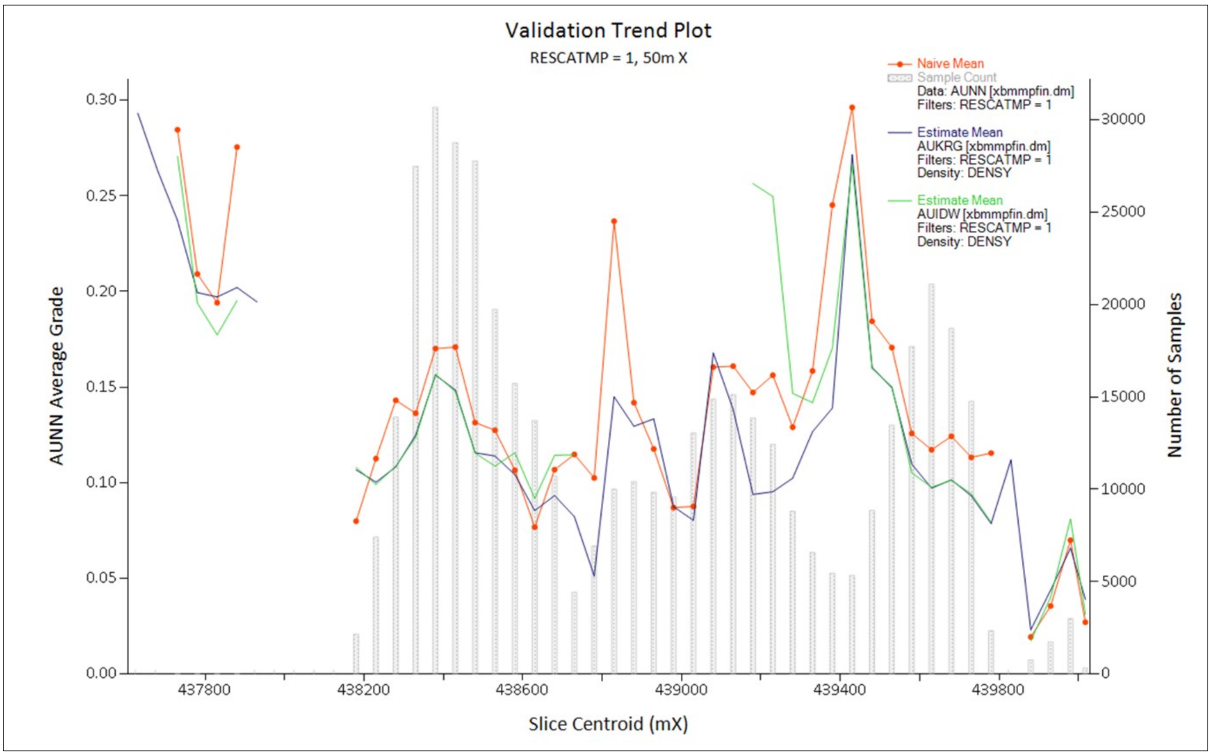

Figure 14-27: Trend Plot by Northing: Measured category

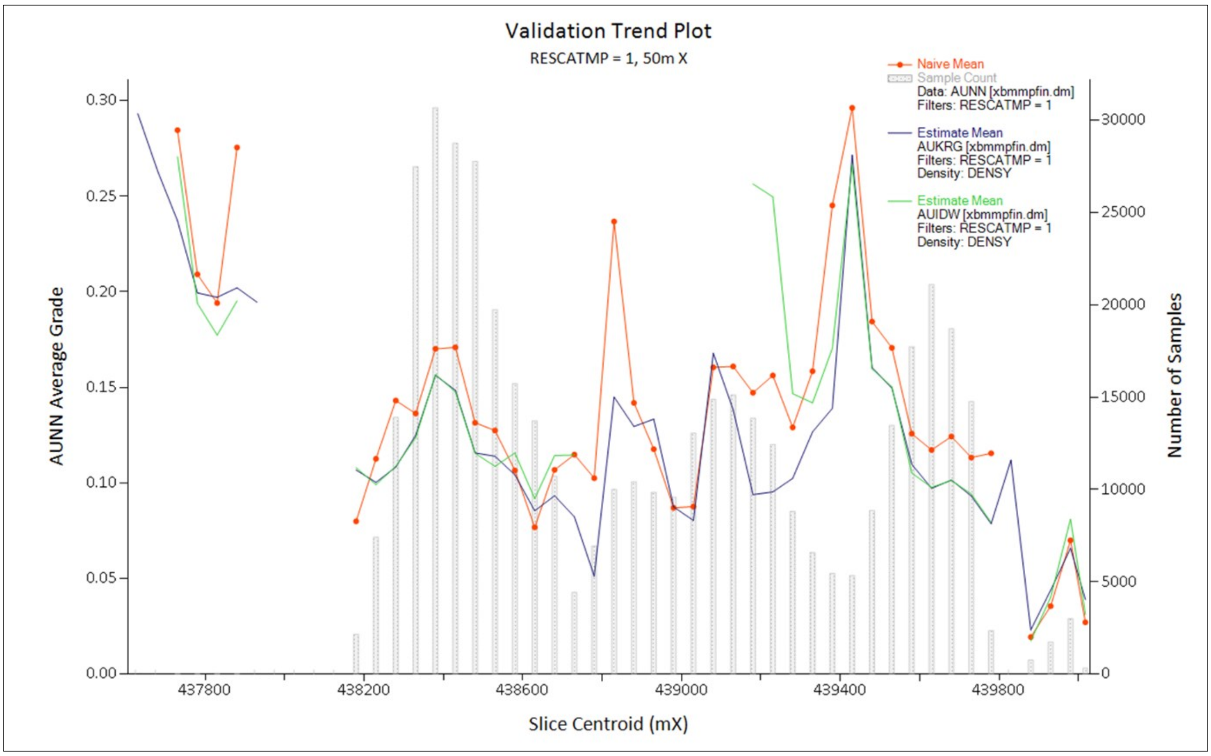

Figure 14-28: Trend Plot by Elevation: Measured category

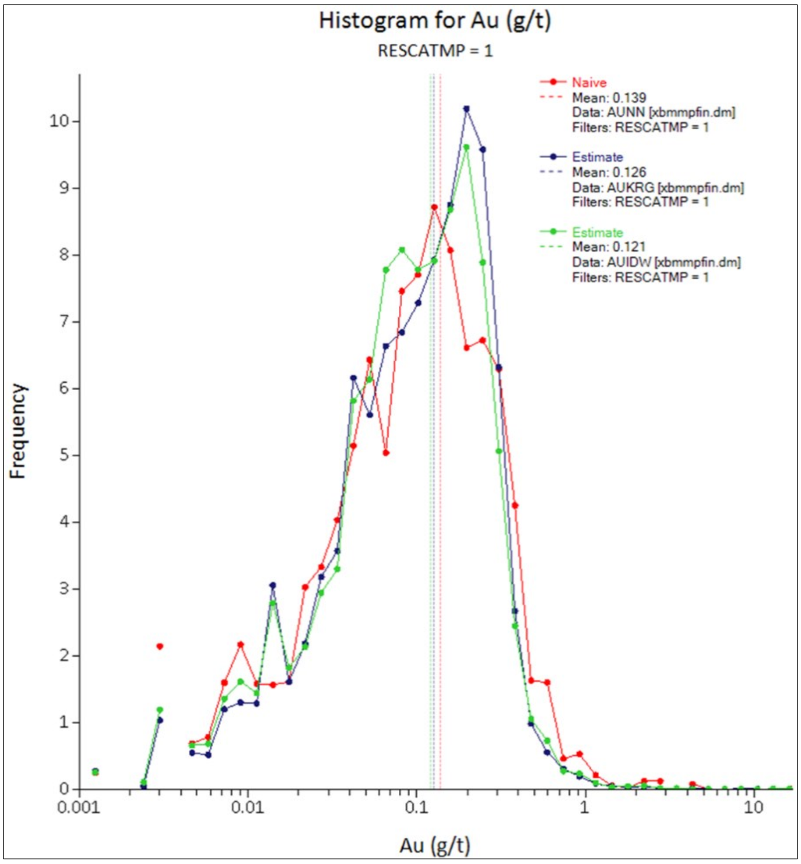

Figure 14-29: Log Histogram: Measured category

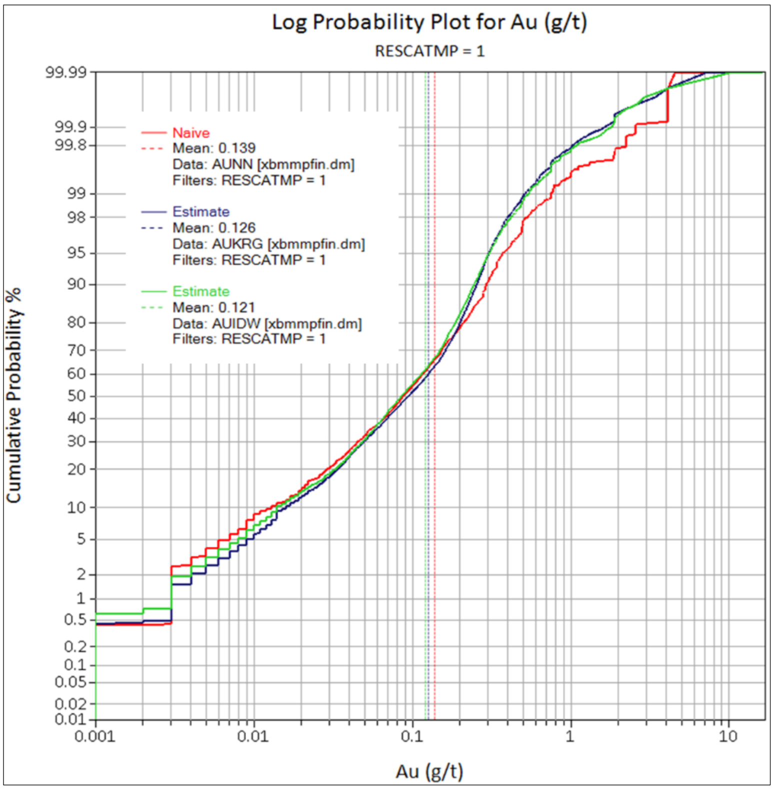

Figure 14-30: Log Probability Plot: Measured category

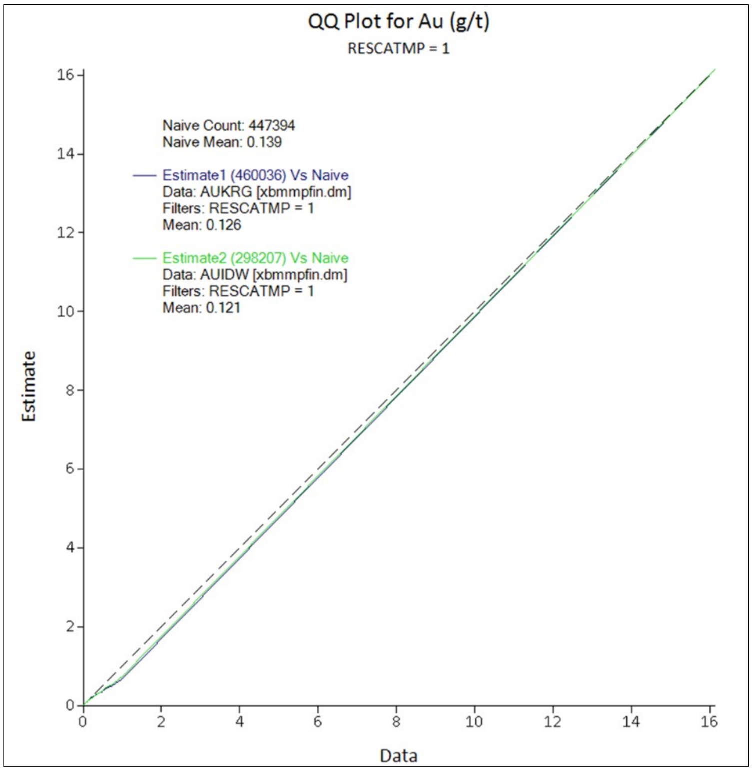

Figure 14-31: Q-Q plot: : Measured category

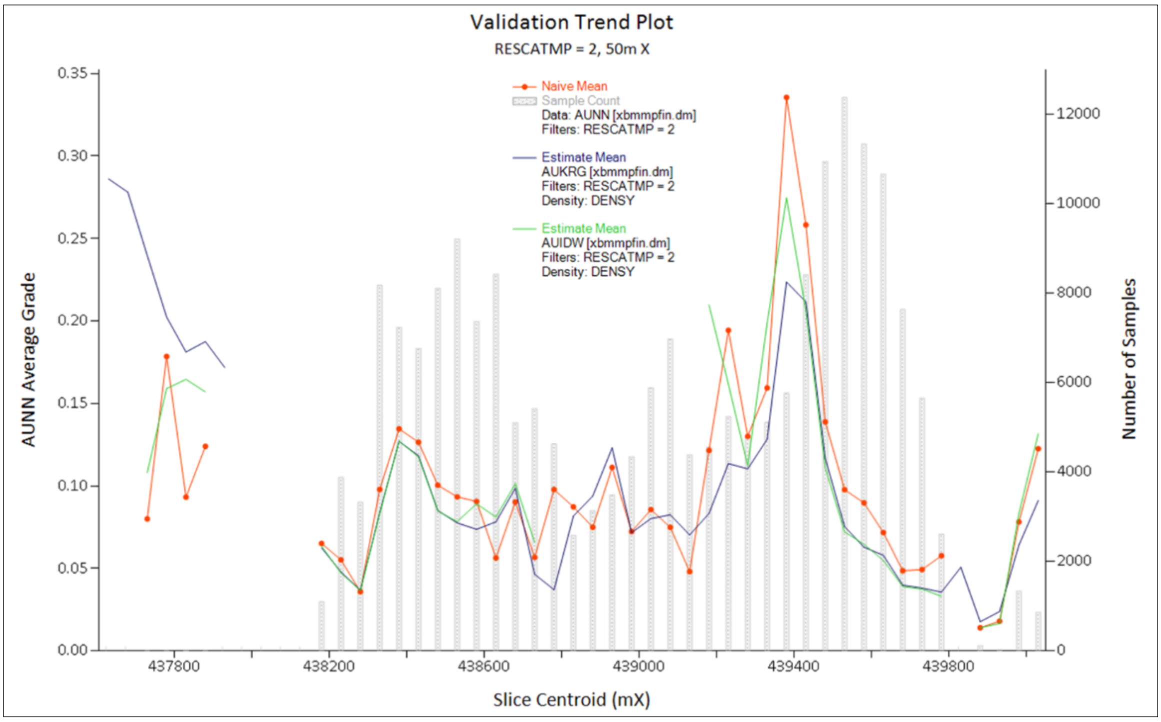

Figure 14-32: Trend Plot by Easting: Indicated category

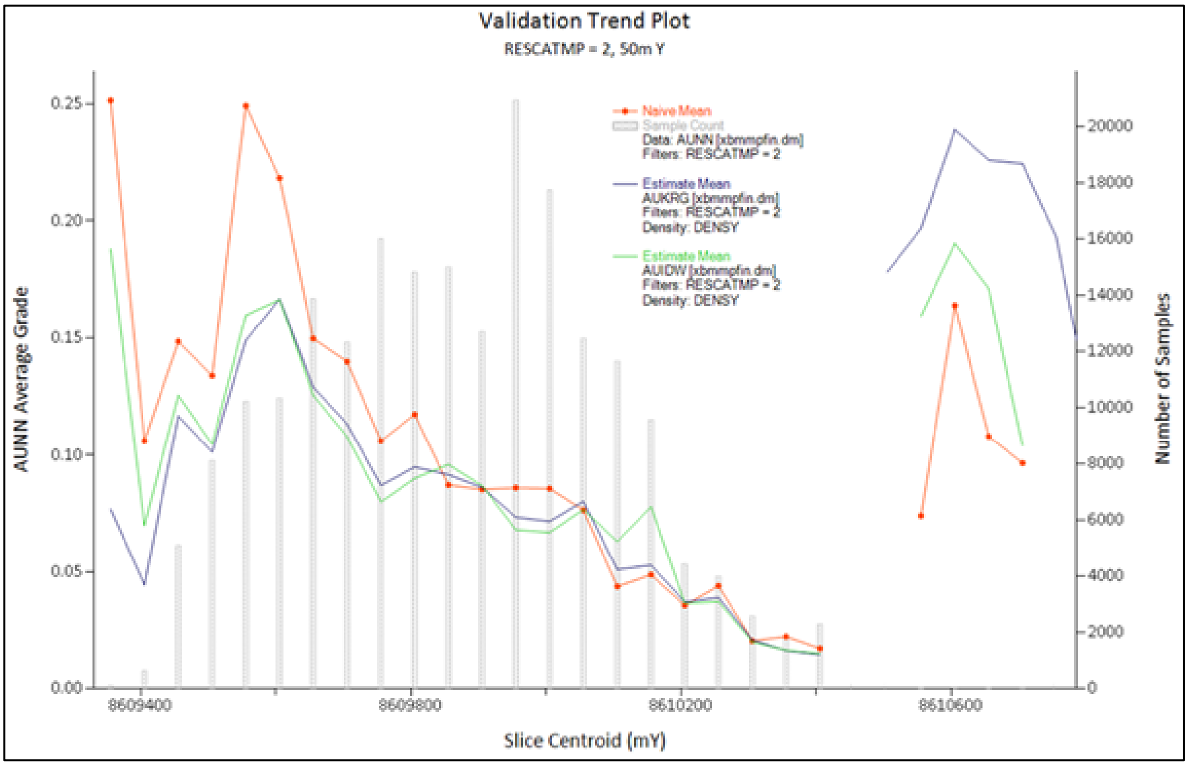

Figure 14-33: Trend Plot by Northing: Indicated category

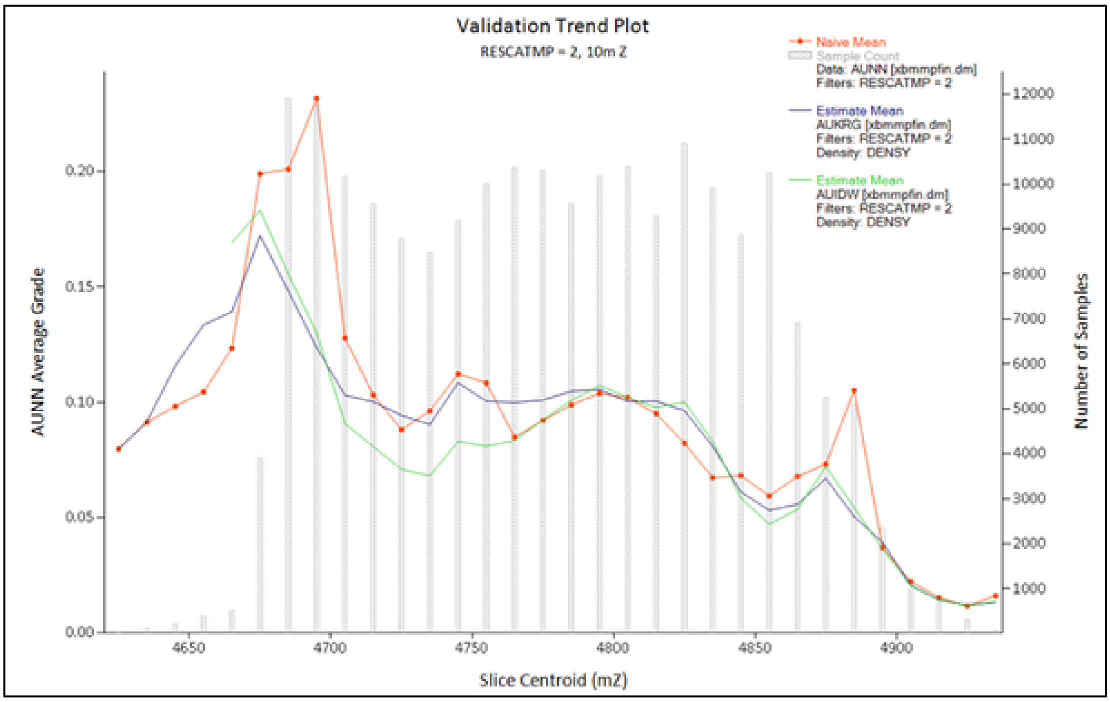

Figure 14-34: Trend Plot by Elevation: Indicated category

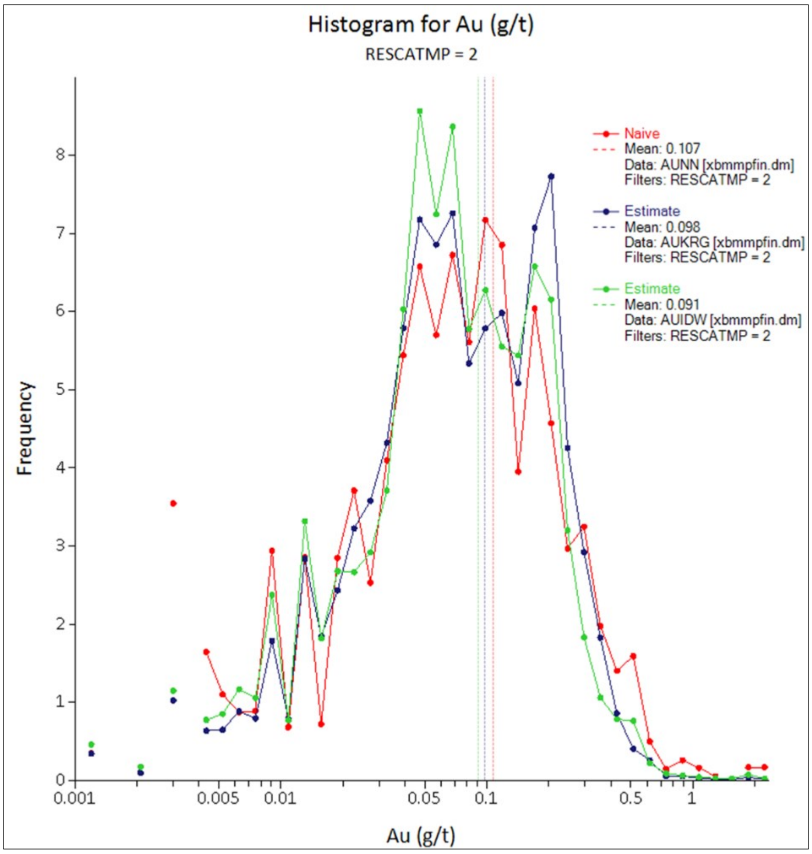

Figure 14-35: Log Histogram: Indicated category

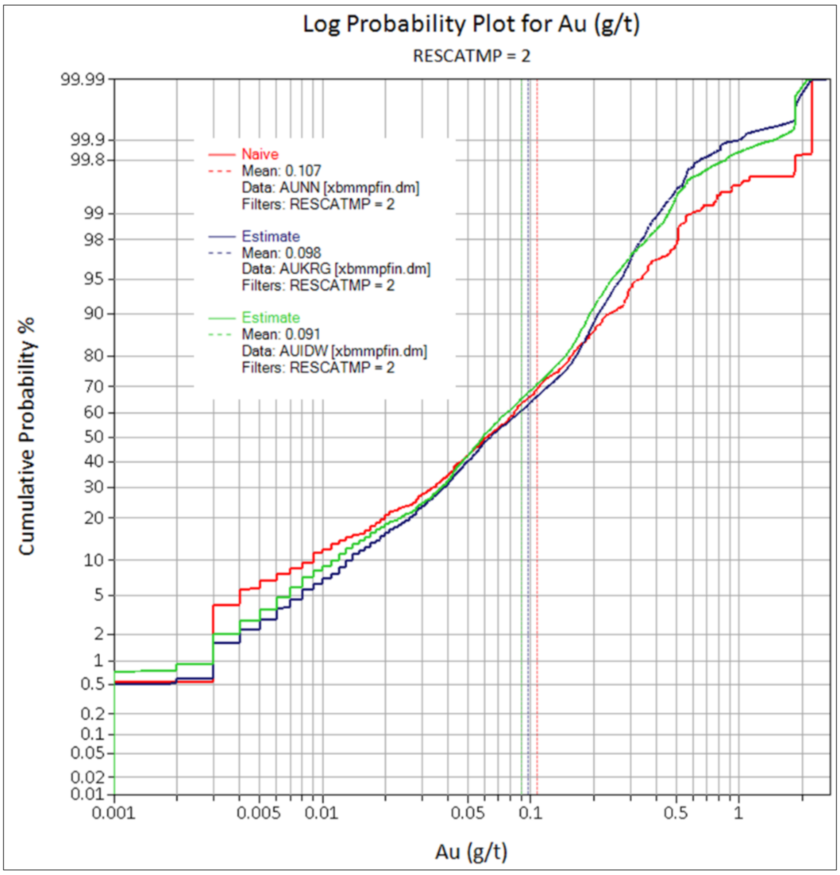

Figure 14-36: Log Probability Plot: Indicated category

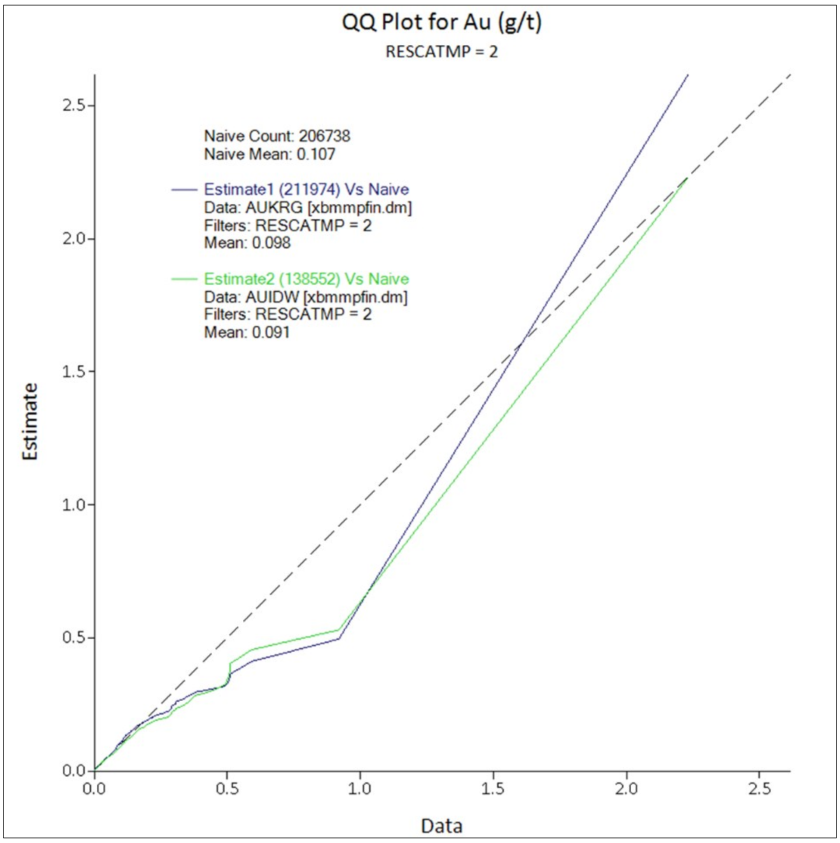

Figure 14-37: Q-Q plot: Indicated category

14.11 Reasonable prospects of economic extraction

The Mineral Resource is sub-horizontal, outcropping or close to surface, and mining has proven it to be mineable by open pit methods with a low strip ratio. The oxide material has reasonable prospects of economic extraction at a cut-off grade of 0.09 g/t gold. This cut-off grade was estimated using current costs and recoveries provided by the mine operation a gold price of US 1,400/oz, which was the mean rounded price used for Mineral Resource reporting from a survey of 22 industry peers in February 2018. The sulphide material is considered to be too low grade to have reasonable prospects of economic extraction and has been excluded from the Mineral Resource.

To apply the reasonable prospects of economic extraction test, Dr Fowler (QP) completed a Lerchs-Grossman open pit optimization. This was based on the current costs and recoveries provided by the Corihuarmi mine operation and the US 1,400/oz gold price. Blocks inside the revenue factor 1 pit and above the cut-off grade comprise the Mineral Resource. Assumptions used in the cut-off grade calculation and in the optimization are provided in Table 14-6.

Dr Fowler (QP) is not aware of any deleterious elements, or any environmental, permitting, legal, title, taxation, socio-economic, marketing, political or other relevant factors that could materially affect the economics of the mine.

Table 14-6: Cut-off grade assumptions

Assumptions	Mean value: All mine zones	Units
Mineral Resource	Measured, Indicated, Inferred	-
Slope Angle	45	degrees
Dilution Factor	0	%
Recovery Factor	100	%
Mining Cost Ore	1.60	US$/t
Mining Cost Waste	1.26	US$/t
Incremental Haulage	0.10	US$/t
Processing Cost	1.22	US$/t
Sustaining Capital	0.45	US$/t
G&A	1.17	US$/t
Selling Cost	6.60	US$/oz
Metallurgical Recovery	80.10	%
Au Price Resources	1,400	US$/oz
Cut-off grade	**0.09**	**g/t Au**

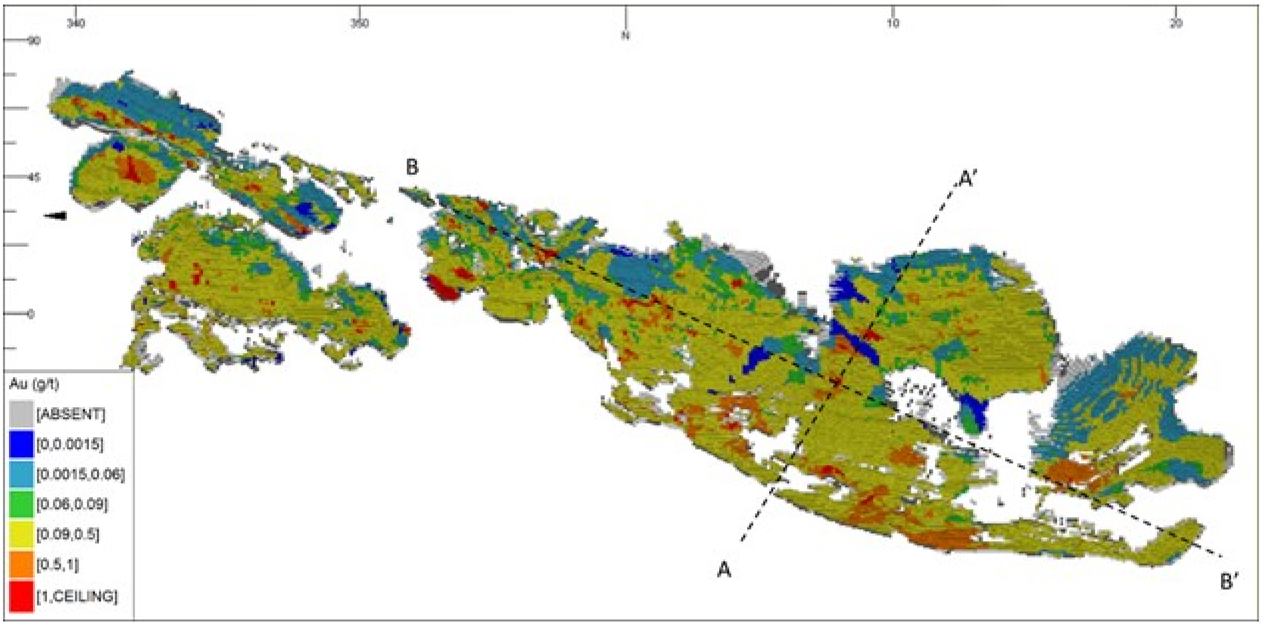

Figure 14-38: Perspective view north of the block model selected inside the optimised Mineral Resource pit shell

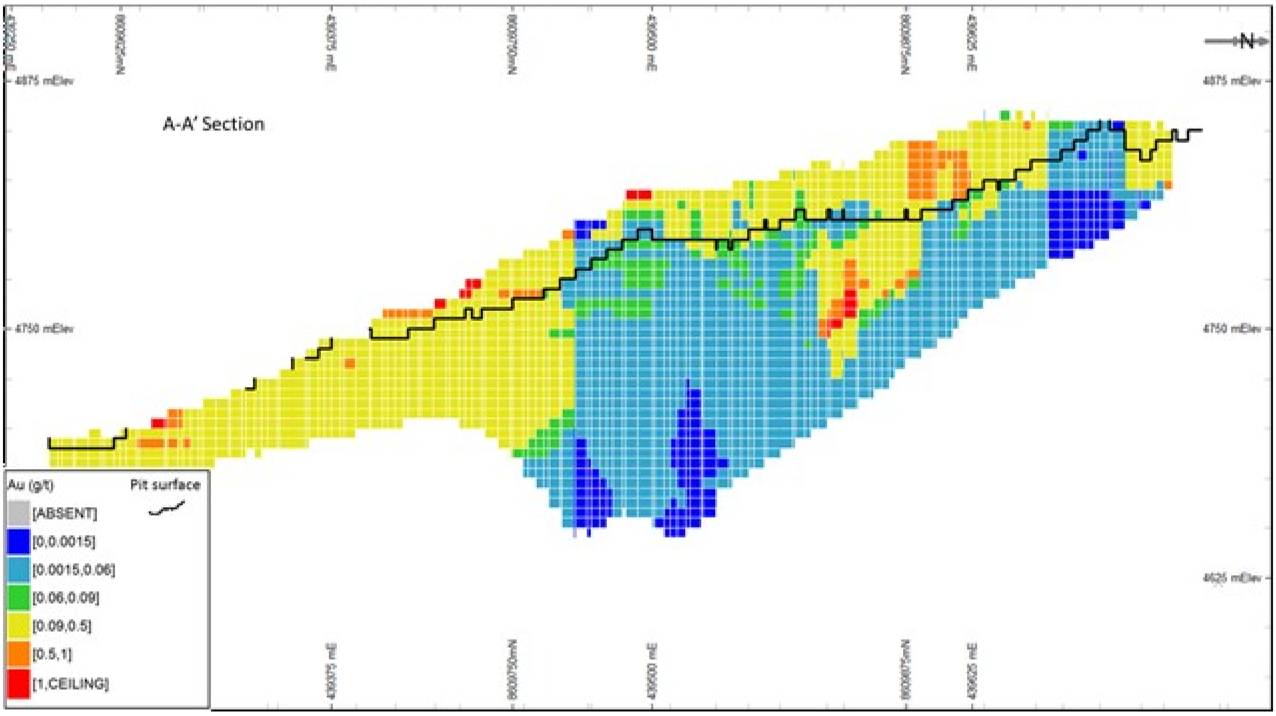

Figure 14-39: Vertical section A-A' through the block model and optimised Mineral Resource pit shell

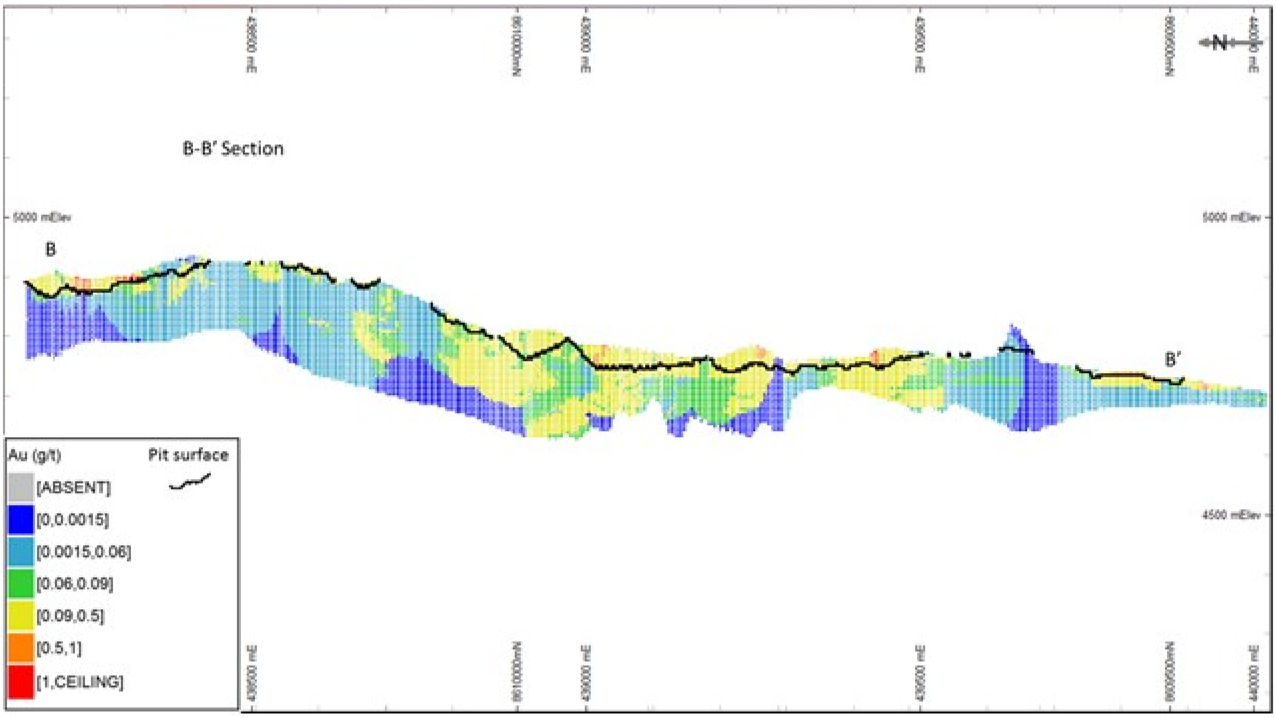

Figure 14-40: Vertical section B-B' through the block model and optimised Mineral Resource pit shell

14.12 Mineral Resource Tabulation

The Mineral Resource is reported at a cut-off grade of 0.09 g/t Au inside an optimized pit shell (Table 14-7). Both the pit shell and cut-off grade are calculated using a gold price of US1,400. The Mineral Resource is reported by Mine Zone in Table 14-8.

Table 14-7: Mineral Resource inclusive of Mineral Reserve (Effective Date – December 31st, 2017

Resource Category	Toonage (t)	Au (g/t)	Contained Metal (oz Au)
Measured	11,800,000	0.27	104,000
Indicated	1,760,000	0.27	15,000
Measured + Indicated	**13,560,000**	**0.27**	**119,000**
Inferred	420,000	0.3	4,000

13. Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability.
14. There is no certainty that all or any part of the estimated Mineral Resources will be converted into Mineral Reserves.
15. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues.
16. The Mineral Resource was estimated by Mr. J. Limaylla and reviewed by Dr A. Fowler, MAusIMM, CP(Geo), Independent Qualified Person under NI 43-101., of Mining Plus Consultants who takes responsibility for it.
17. Data was verified by Mr. D. Seers, MAusIMM, CP(Geo), Independent Qualified Person under NI 43-101., of Mining Plus Consultants.
18. The Mineral Resource was estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the Standards Committee on Reserve Definitions and adopted by the CIM Council on May 10, 2014.
19. The Mineral Resource is sub-horizontal, outcropping or close to surface, and has been proven to be mineable by open pit methods with a low strip ratio.
20. The oxide material has reasonable prospects of economic extraction at a cut-off grade of 0.09 g/t gold.
21. Sulphide material as currently modeled, is considered too low grade to have reasonable prospects of economic extraction.
22. The cut-off grade of 0.09 g/t gold was estimated using a gold price of US1400, which was the mean rounded price for Mineral Resource reporting from a survey of 22 industry peers in February 2018.
23. Drilling results as of 1st April 2017 are included.
24. The numbers may not divide due to rounding.

Table 14-8: Mineral Resource inclusive of Mineral Reserve by Mine Zone

Resource Category	Tonnage (t)	Au (g/t)	Contained Metal (oz Au)
Susan Pit			
Measured	2,650,000	0.25	21,000
Indicated	50,000	0.29	500
Measured + Indicated	**2,700,000**	**0.25**	**21,000**
Inferred			
Scree Slope Pit			
Measured	730,000	0.40	9,000
Indicated	640,000	0.23	5,000
Measured + Indicated	**1,370,000**	**0.32**	**14,000**
Inferred	80,000	0.40	1,000
Cayhua Pit			
Measured	2,350,000	0.24	18,000
Indicated	90,000	0.20	1,000
Measured + Indicated	**2,440,000**	**0.24**	**19,000**
Inferred			
Laura Pit			
Measured	1,330,000	0.21	9,000
Indicated	140,000	0.20	1,000
Measured + Indicated	**1,480,000**	**0.21**	**10,000**
Inferred			
Ampliacion Diana Pit			
Measured	2,460,000	0.29	23,000
Indicated	490,000	0.27	4,000
Measured + Indicated	**2,950,000**	**0.29**	**27,000**
Inferred	90,000	0.30	1,000
Cayhua Norte Pit			
Measured	1,460,000	0.35	16,000
Indicated	80,000	0.62	2,000
Measured + Indicated	**1,540,000**	**0.36**	**18,000**
Inferred			
Ampliacion Scree Slope Pit			
Measured	820,000	0.29	8,000
Indicated	260,000	0.28	2,000
Measured + Indicated	**1,080,000**	**0.29**	**10,000**
Inferred	230,000	0.31	2,000

15 MINERAL RESERVE ESTIMATES

15.1 Reported Reserve for Corihuarmi Au Deposits

The reserves derived from the detailed pit design have been estimated in accordance with the definitions and guidelines adopted by the Canadian Institute of Mining, Metallurgy, and Petroleum (CIM Standards on Mineral Resources and Reserves). The reserves are based entirely on measured and indicated resources and were converted as proven and probable reserves respectively.

The mineral reserves (with dilution and ore loss) is equal to 8,742,800 tonnes of ore at an average grade of 0.28 g/t Au using cut-off grade of 0.10 g/t and represents an operation of 2.8 years. The entire reserve comprises 77,700 ounces of gold (before processing recovery). Total waste, including rock, inferred resources and overburden, is 4,353,300 t; resulting in a waste to ore ratio of 0.50:1. The total mineral reserve estimate is shown in Table 15-1 and a detailed breakdown by pit is shown in Table 15-2.

The design parameters applicable on reserve estimation are detailed in Section 16 of this report.

Table 15-1: Mineral Reserves report up to 31st December 2017

Mineral Reserves Category	Tonnage (t)	Au (g/t)	Contained Metal (oz Au)
Proven	7,966,900	0.28	70,900
Probable	775,800	0.27	6,900
Proven + Probable	***8,742,800***	***0.28***	***77,700***

1. The Mineral Reserve was estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM"), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the Standards Committee on Reserve Definitions and adopted by the CIM Council on May 10, 2014.
2. The Mineral Reserve was estimated by Mr. R. Espinoza MAusIMM, CP(Min), Independent Qualified Person under NI 43-101., of Mining Plus Consultants.
3. Mr. A. Johnston MAusIMM, CP(Met), Independent Qualified Person under NI 43-101., provided input to the processing parameters used to demonstrate economic viability.
4. The cut-off grade of 0.10 g/t gold was estimated using a forecasted gold price of US1250, which was the mean rounded price for Mineral Reserve reporting from a survey of 22 industry peers in February 2018.
5. The design parameters applicable are detailed in Section 16 of this report.
6. The numbers may not divide due to rounding.

Table 15-2: Mineral Reserves by Pit report up to 31st December 2017

Mineral Reserves by Pit	Tonnage (t)	Au (g/t)	Contained Metal (oz Au)
Susan Pit			
Proven	2,000,352	0.26	16,842
Probable	22,041	0.34	239
Proven + Probable	*2,022,393*	*0.26*	*17,081*
Scree Slope Pit			
Proven	119,457	0.39	1,516
Probable	213,914	0.22	1,539
Proven + Probable	*333,371*	*0.29*	*3,055*
Cayhua Pit			
Proven	1,998,585	0.25	16,153
Probable	51,378	0.23	384
Proven + Probable	*2,049,963*	*0.25*	*16,536*
Laura Pit			
Proven	1,220,033	0.21	8,263
Probable	140,431	0.20	890
Proven + Probable	*1,360,464*	*0.21*	*9,153*
Diana Pit Extension			
Proven	726,861	0.37	8,553
Probable	65,376	0.39	822
Proven + Probable	*792,237*	*0.37*	*9,376*
Cayhua Norte Pit			
Proven	1,125,870	0.33	12,080
Probable	44,852	0.53	767
Proven + Probable	*1,170,722*	*0.34*	*12,847*
Scree Slope Pit Extension			
Proven	775,785	0.30	7,455
Probable	237,837	0.29	2,216
Proven + Probable	*1,013,622*	*0.30*	*9,671*

16 MINING METHODS

Mining at Corihuarmi uses a conventional truck and excavator configuration. Open pits are mined on 5-meter-high benches through drilling, blasting, loading and hauling unit operations to be selective enough. The open pits are located on a hillside which offer multiple access points to each bench. This configuration allows retreat mining of operational ramps, consequently, the final pit designs are shown without ramps.

Mr Espinoza (QP) is aware the final pit designs without operational ramps are not conventional but considers that the designs are suitable and operationally achievable having considered topography, mineralization form and current mining practices.

16.1 Geotechnical Input and Conditions

The initial geotechnical evaluation was undertaken by Vector (2005) and updated during the operation of the various open pits. Also, in 2005, CGT Company and Mincon mining consultants prepared the information and report for the pits Diana, Laura, Susan, Cayhua, Cayhua Norte y Scree Slope, they recommended the following slope angles (Table 16-1).

Table 16-1: Summary of Geotechnical parameters for Slope angles

Pit	Bench height	Bench Face Angle (°)	Overall Angle (°)
Susan	10	70	45
Scree Slope	10	58	36
Cayhua	10	70	45
Laura	10	70	45
Diana	20	70	52
Diana Extension	10	70	45
Cayhua Norte	10	70	45
Scree Slope Extension	10	58	36

Typical slope parameters are shown in Figure 16-1.

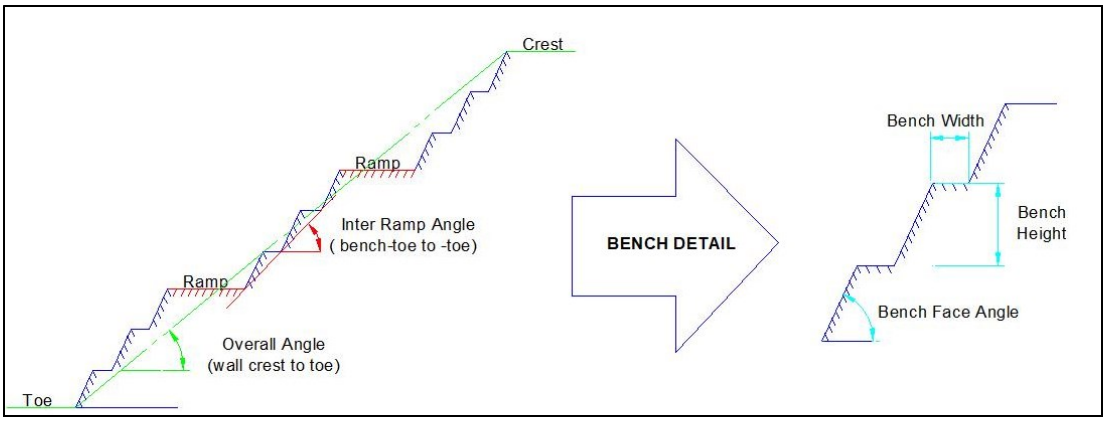

Figure 16-1: Typical Pit Slope Section

16.2 Hydrogeology Input

Initial hydrogeology studies were conducted by Vector (2006) and updated by CGT Company consultants in 2015. The Hydrogeological System has been monitored in the areas of the cutbacks Diana, Diana Expansion, Susan, Laura, Scree Slope and Scree Slope Expansion, as well as in the waste dumps and the leaching pad. The data collection methodology consisted of hydrogeological mapping, diamond drilling for hydraulic tests, piezometric monitoring with water level measurement and groundwater sampling. Based on this information, it can be seen that the mining infrastructure does not present risks due to the presence of groundwater, nor of contamination towards underground aquifers given the waterproofing installation of the dump and the PAD. Additionally, rainwater can be controlled with bypass channels to avoid contact with rock of the mining process and the potential acid water generation.

16.3 Block Model

The mineral resource block model used for the pit optimization has a block size of 5 x 5 x 5 meters (x, y, z respectively). This block size is suitable for a Whittle Optimization because the current mining practices uses a Selective Mining Unit with the same dimensions. The final height of the walls is 10 meters but the drilling, blasting, loading and hauling operations are every 5 meters.

16.4 Dilution and Recovery

A dilution factor of 1 % at zero grade and a mining recovery of 100% were applied in the block model affecting the tonnes and grades.

Dilution and recovery values are suitable to the mineralization type and the current mining practices.

16.5 Cut-off Calculation

Cut-off grades were calculated on a pit by pit basis as each pit is associated with distinct processing recovery, ore mining cost, waste mining cost and incremental haulage cost.

Cut offs calculations are based on these formulas:

$$Internal\ Cut\ off\ grade = \frac{((MOCost - MWCost) + IHCost + ProCost + SCCost + G\&A)}{((AuPrice - SeCost) * MR)}$$

$$Economic\ Cut\ off\ grade = \frac{(MOCost + IHCost + ProCost + SCCost + G\&A)}{((AuPrice - SeCost) * MR)}$$

Where:

- MOCost : Ore Mining Cost
- MWCost : Waste Mining Cost
- IHCost : Incremental Haulage Cost
- ProCost : Processing Cost
- SCCost : Sustaining Capital Cost
- G&A : General and Administration Cost
- AuPrice : Gold Price
- SeCost : Selling Cost
- MR : Metallurgical Recovery.

16.6 Pit Optimization

A pit optimization was carried out based on the resource block model, economic parameters, metallurgical recoveries and geotechnical constraints. Mr Espinoza (QP) used Lerchs-Grossmann algorithm implemented in Geovia's Whittle software. Mr Espinoza (QP) worked with Minera IRL Mine Planning Team to derive the Whittle input parameters.

The mine has 7 small pits and each one has different characteristics. For that reason, each pit was analysed independently. The pit optimization parameters for each of them are provided in the following tables.

16.6.1 Susan Pit

The Whittle input parameters given in Table 16-2 were used for the Susan Pit optimisation.

Table 16-2: Susan Pit – Pit Optimization Parameters

Parameters	Units	Value	Basis
Resource Classification			
Included Resources	(na)	Measured + Indicated	Provided by Minera IRL
Production			
Mining Limit	(ktps)	2,520.00	Provided by Minera IRL
Processing Limit	(ktps)	1,620.00	Provided by Minera IRL
Geotechnical			
Susan	(°)	45.00	Geotechnical Assessment – Provided by Mineral IRL
Mining Factors			
Dilution	%	1.00	Mineralization Type
Recovery	%	100.00	Mineralization Type
Processing			
Recovery Au	%	75.29	Metallurgical Database - Provided by Minera IRL
Operating Costs			
Ore Mining Cost	(US/t moved)	2.25	Cost Database - Provided by Minera IRL
Waste Mining Cost	(US/t moved)	1.55	Cost Database - Provided by Minera IRL
Incremental Haulage	(US/t moved)	0.16	Cost Database - Provided by Minera IRL
Processing Cost	(Z Elevation)	1.22	Cost Database - Provided by Minera IRL
Sustaining Capital	(US/t ore)	0.45	Cost Database - Provided by Minera IRL
G&A	(US/t ore)	1.17	Cost Database - Provided by Minera IRL
Selling Cost Au	(US/oz)	6.60	Cost Database - Provided by Minera IRL
Metal Price			
Gold	(US/oz)	1,250.00	Consensus Economics LTP
Other			
Discount Rate	(%)	10.00	Consensus Economics LTP
Cut-Off Grade			
Internal	(g/t)	0.12	Cut off Formula

Following the Whittle pit optimization, a Pit by Pit graph was built for the Susan Pit, the behaviour of the best and worst-case curves is similar. Considering that the pit is small, and that mining will most likely be on a bench by bench basis, the worst-case curve was used to determine the final pit design. Based on the final pit design, the peak value is achieved in the Pit number 43 – Revenue Factor 0.98.

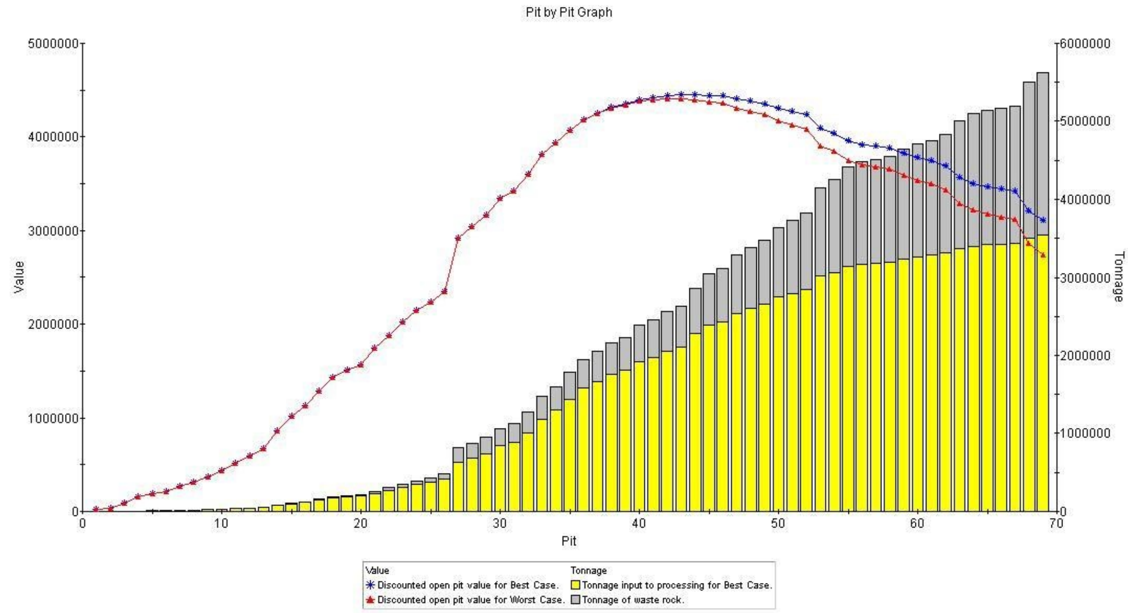

Figure 16-2: Susan Pit – Pit by Pit Graph

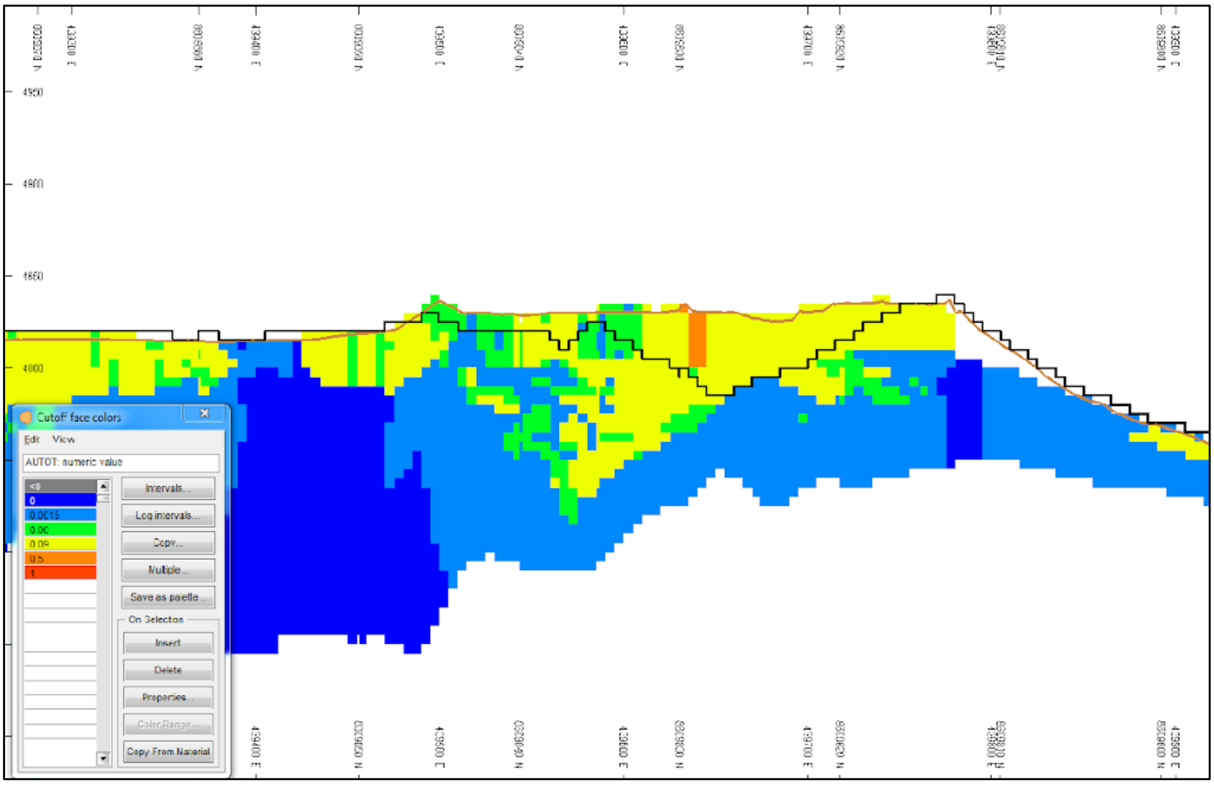

Figure 16-3: Susan Pit – Vertical Section through the block model and optimised Mineral Reserves pit shell

16.6.2 Scree Slope Pit

The Whittle input parameters given in Table 16-3 were used for the Scree Slope Pit optimisation.

Table 16-3: Scree Slope Pit – Pit Optimization Parameters

Parameters	Units	Value	Basis
Resource Classification			
Included Resources	(na)	Measured + Indicated	Provided by Minera IRL
Production			
Mining Limit	(ktps)	2,520.00	Provided by Minera IRL
Processing Limit	(ktps)	1,620.00	Provided by Minera IRL
Geotechnical			
Susan	(°)	36.00	Geotechnical Assessment – Provided by Mineral IRL
Mining Factors			
Dilution	%	1.00	Mineralization Type
Recovery	%	100.00	Mineralization Type
Processing			
Recovery Au	%	86.41	Metallurgical Database - Provided by Minera IRL
Operating Costs			
Ore Mining Cost	(US/t moved)	1.45	Cost Database - Provided by Minera IRL
Waste Mining Cost	(US/t moved)	1.15	Cost Database - Provided by Minera IRL
Incremental Haulage	(US/t moved)	0.19	Cost Database - Provided by Minera IRL
Processing Cost	(Z Elevation)	1.22	Cost Database - Provided by Minera IRL
Sustaining Capital	(US/t ore)	0.45	Cost Database - Provided by Minera IRL
G&A	(US/t ore)	1.17	Cost Database - Provided by Minera IRL
Selling Cost Au	(US/oz)	6.60	Cost Database - Provided by Minera IRL
Metal Price			
Gold	(US/oz)	1,250.00	Consensus Economics LTP
Other			
Discount Rate	(%)	10.00	Consensus Economics LTP
Cut-Off Grade			
Internal	(g/t)	0.10	Cut off Formula

Following the Whittle pit optimization, a Pit by Pit graph was built for the Scree Slope Pit, the behaviour of the best and worst-case curves is similar. Considering that the pit is small, and that mining will most likely be on a bench by bench basis, the worst-case curve was used to determine the final pit design. Based on the final pit design, the peak value is achieved in the Pit number 43 – Revenue Factor 0.92.

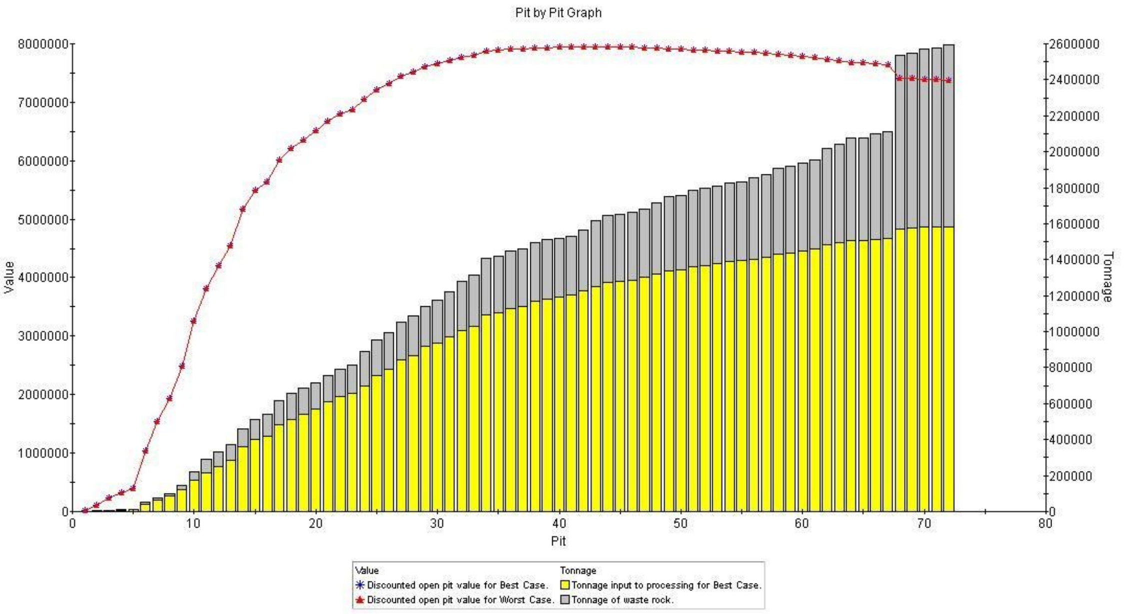

Figure 16-4: Scree Slope Pit – Pit by Pit Graph

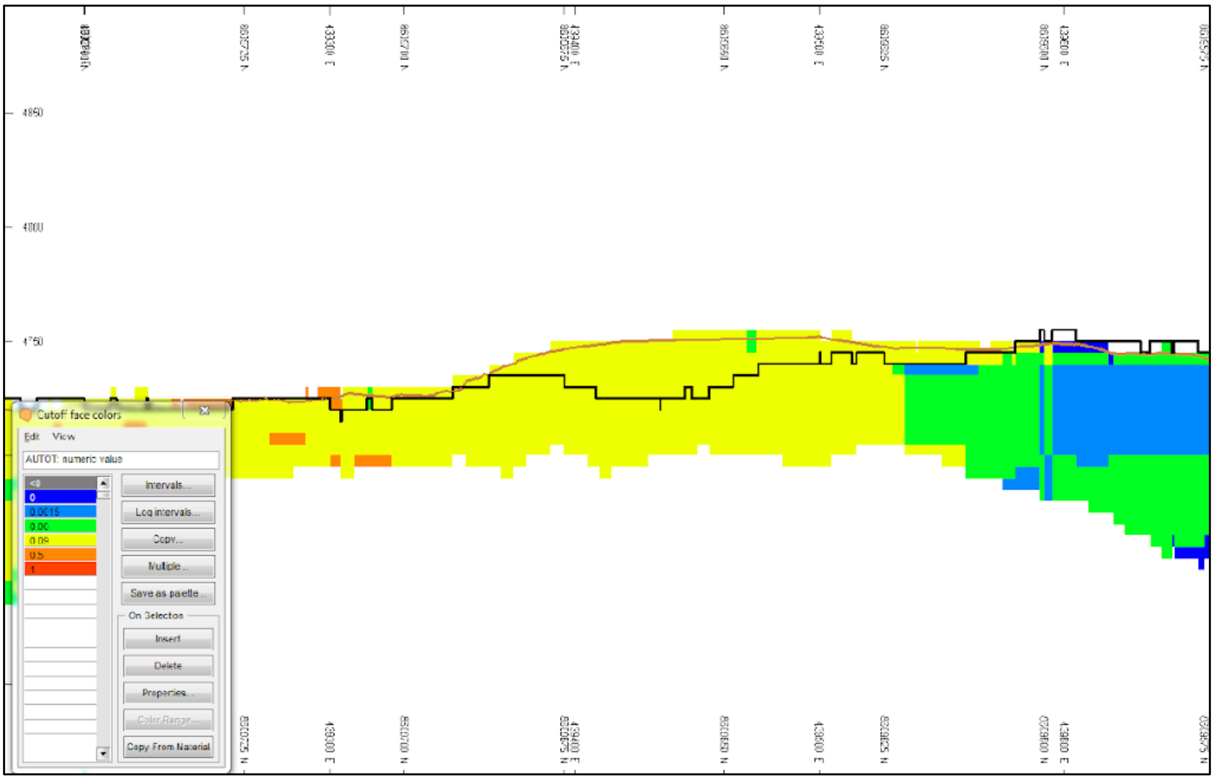

Figure 16-5: Scree Slope Pit - Vertical Section through the block model and optimised Mineral Reserves pit shell

16.6.3 Cayhua Pit

The Whittle input parameters given in Table 16-4 were used for the Cayhua Pit optimisation.

Table 16-4: Cayhua Pit – Pit Optimization Parameters

Parameters	Units	Value	Basis
Resource Classification			
Included Resources	(na)	Measured + Indicated	Provided by Minera IRL
Production			
Mining Limit	(ktps)	2,520.00	Provided by Minera IRL
Processing Limit	(ktps)	1,620.00	Provided by Minera IRL
Geotechnical			
Susan	(°)	45.00	Geotechnical Assessment – Provided by Mineral IRL
Mining Factors			
Dilution	%	1.00	Mineralization Type
Recovery	%	100.00	Mineralization Type
Processing			
Recovery Au	%	78.61	Metallurgical Database - Provided by Minera IRL
Operating Costs			
Ore Mining Cost	(US/t moved)	1.41	Cost Database - Provided by Minera IRL
Waste Mining Cost	(US/t moved)	1.27	Cost Database - Provided by Minera IRL
Incremental Haulage	(US/t moved)	0.00	Cost Database - Provided by Minera IRL
Processing Cost	(US/t ore)	1.22	Cost Database - Provided by Minera IRL
Sustaining Capital	(US/t ore)	0.45	Cost Database - Provided by Minera IRL
G&A	(US/t ore)	1.17	Cost Database - Provided by Minera IRL
Selling Cost Au	(US/oz)	6.60	Cost Database - Provided by Minera IRL
Metal Price			
Gold	(US/oz)	1,250.00	Consensus Economics LTP
Other			
Discount Rate	(%)	10.00	Consensus Economics LTP
Cut-Off Grade			
Internal	(g/t)	0.09	Cut off Formula

Following the Whittle pit optimization, a Pit by Pit graph was built for the Cayhua Pit, the behaviour of the best and worst-case curves is similar. Considering that the pit is small, and that mining will most likely be on a bench by bench basis, the worst-case curve was used to determine the final pit design. Based on the final pit design, the peak value is achieved in the Pit number 47 – Revenue Factor 0.96.

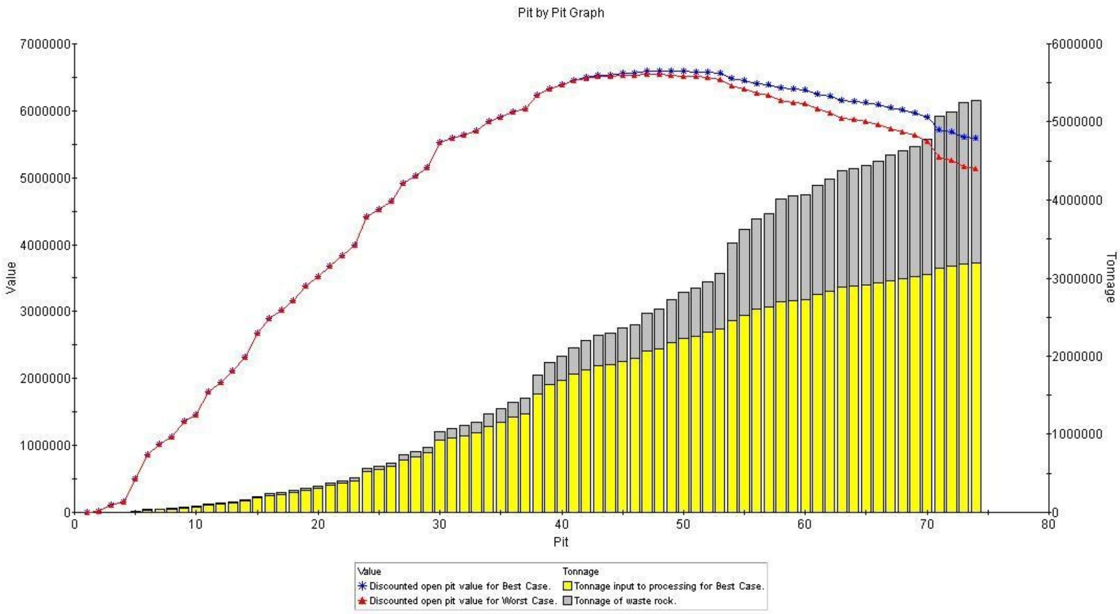

Figure 16-6: Cayhua Pit – Pit by Pit Graph

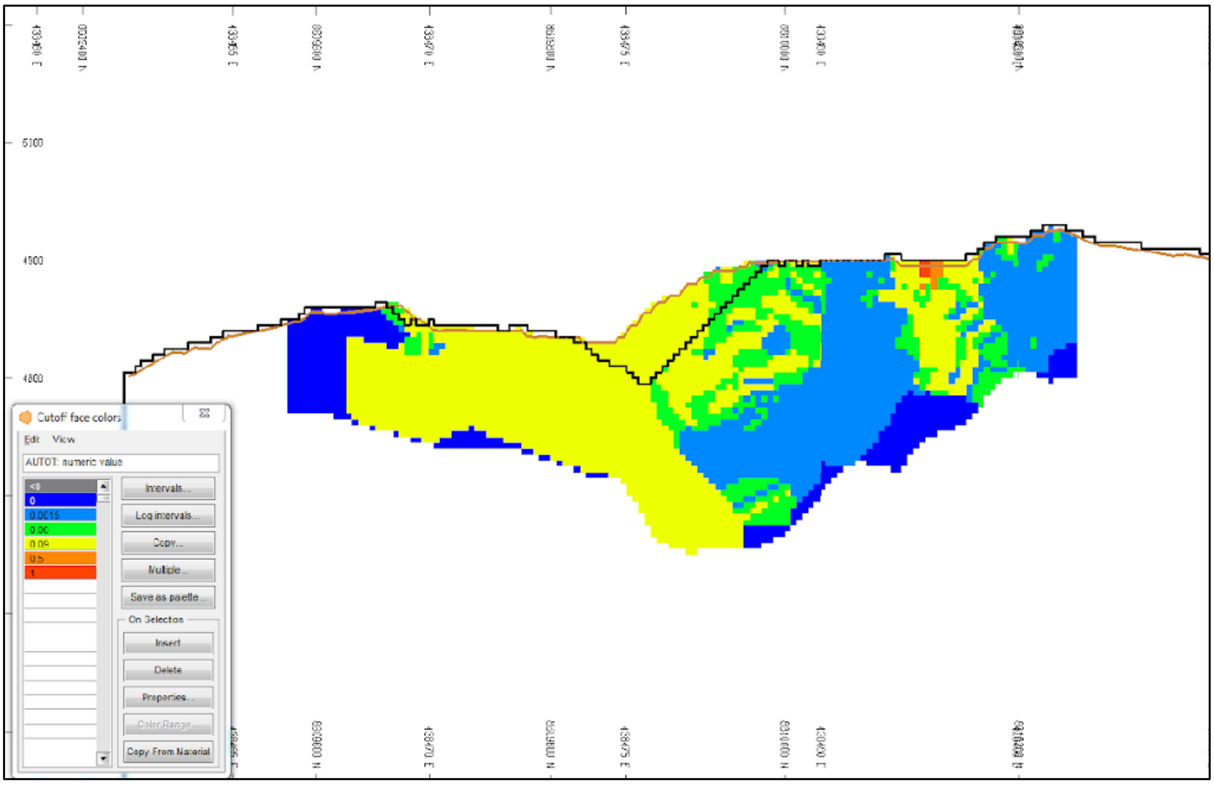

Figure 16-7: Vertical Section through the block model and optimised Mineral Reserves pit shell

16.6.4 Laura Pit

The Whittle input parameters given in Table 16-5 were used for the Laura Pit optimisation.

Table 16-5: Laura Pit – Pit Optimization Parameters

Parameters	Units	Value	Basis
Resource Classification			
Included Resources	(na)	Measured + Indicated	Provided by Minera IRL
Production			
Mining Limit	(ktps)	2,520.00	Provided by Minera IRL
Processing Limit	(ktps)	1,620.00	Provided by Minera IRL
Geotechnical			
Susan	(°)	45.00	Geotechnical Assessment – Provided by Mineral IRL
Mining Factors			
Dilution	%	1.00	Mineralization Type
Recovery	%	100.00	Mineralization Type
Processing			
Recovery Au	%	80.00	Metallurgical Database - Provided by Minera IRL
Operating Costs			
Ore Mining Cost	(US/t moved)	1.41	Cost Database - Provided by Minera IRL
Waste Mining Cost	(US/t moved)	1.27	Cost Database - Provided by Minera IRL
Incremental Haulage	(US/t moved)	0.00	Cost Database - Provided by Minera IRL
Processing Cost	(Z Elevation)	1.22	Cost Database - Provided by Minera IRL
Sustaining Capital	(US/t ore)	0.45	Cost Database - Provided by Minera IRL
G&A	(US/t ore)	1.17	Cost Database - Provided by Minera IRL
Selling Cost Au	(US/oz)	6.60	Cost Database - Provided by Minera IRL
Metal Price			
Gold	(US/oz)	1,250.00	Consensus Economics LTP
Other			
Discount Rate	(%)	10.00	Consensus Economics LTP
Cut-Off Grade			
Internal	(g/t)	0.09	Cut off Formula

Following the Whittle pit optimization, a Pit by Pit graph was built for the Laura Pit, the behaviour of the best and worst-case curves is similar. Considering that the pit is small, and that mining will most likely be on a bench by bench basis, the worst-case curve was used to determine the final pit design. Based on the final pit design, the peak value is achieved in the Pit number 30 – Revenue Factor 0.96.

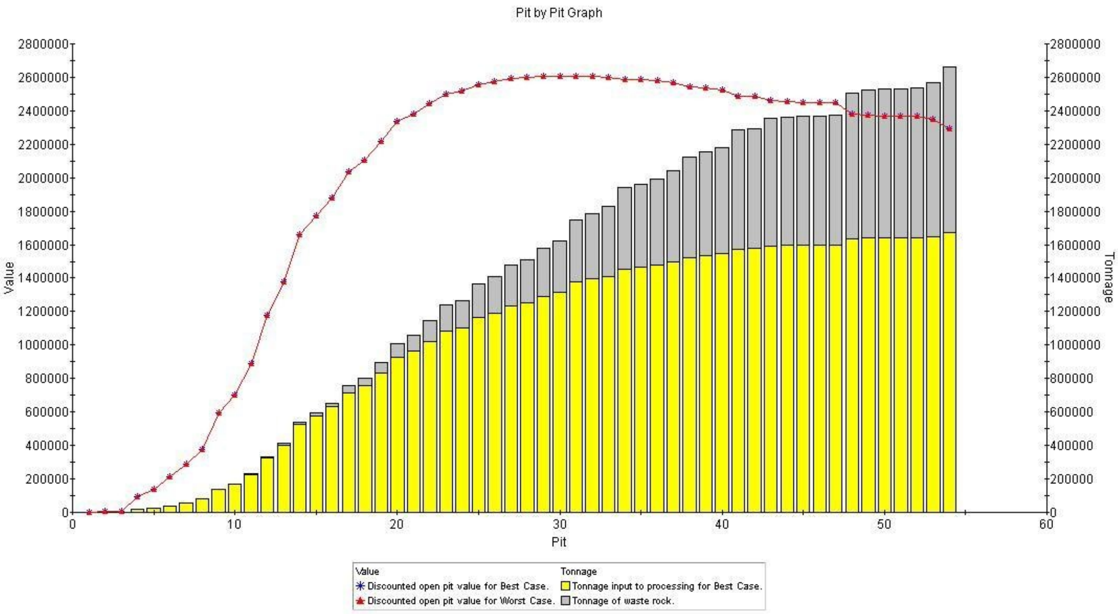

Figure 16-8: Laura Pit – Pit by Pit Graph

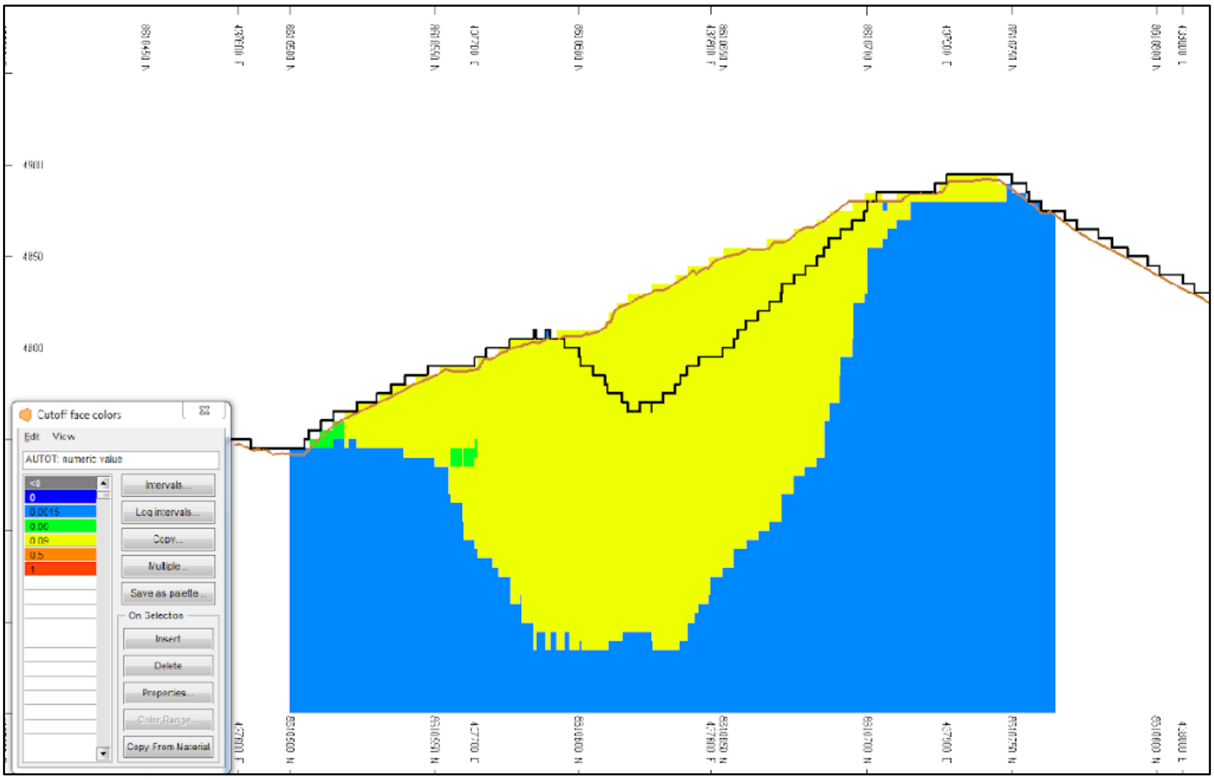

Figure 16-9: Laura Pit - Vertical Section through the block model and optimised Mineral Reserves pit shell

16.6.5 Diana Extension Pit

The Whittle input parameters given in Table 16-6 were used for the Diana Extension Pit optimisation.

Table 16-6: Diana Pit Extension – Pit Optimization Parameters

Parameters	Units	Value	Basis
Resource Classification			
Included Resources	(na)	Measured + Indicated	Provided by Minera IRL
Production			
Mining Limit	(ktps)	2,520.00	Provided by Minera IRL
Processing Limit	(ktps)	1,620.00	Provided by Minera IRL
Geotechnical			
Susan	(°)	45.00	Geotechnical Assessment – Provided by Mineral IRL
Mining Factors			
Dilution	%	1.00	Mineralization Type
Recovery	%	100.00	Mineralization Type
Processing			
Recovery Au	%	85.18	Metallurgical Database - Provided by Minera IRL
Operating Costs			
Ore Mining Cost	(US/t moved)	1.48	Cost Database - Provided by Minera IRL
Waste Mining Cost	(US/t moved)	1.20	Cost Database - Provided by Minera IRL
Incremental Haulage	(US/t moved)	0.14	Cost Database - Provided by Minera IRL
Processing Cost	(Z Elevation)	1.22	Cost Database - Provided by Minera IRL
Sustaining Capital	(US/t ore)	0.45	Cost Database - Provided by Minera IRL
G&A	(US/t ore)	1.17	Cost Database - Provided by Minera IRL
Selling Cost Au	(US/oz)	6.60	Cost Database - Provided by Minera IRL
Metal Price			
Gold	(US/oz)	1,250.00	Consensus Economics LTP
Other			
Discount Rate	(%)	10.00	Consensus Economics LTP
Cut-Off Grade			
Internal	(g/t)	0.10	Cut off Formula

Following the Whittle pit optimization, a Pit by Pit graph was built for the Diana Extension Pit, the behaviour of the best and worst-case curves is similar. Considering that the pit is small, and that mining will most likely be on a bench by bench basis, the worst-case curve was used to determine the final pit design. Based on the final pit design, the peak value is achieved in the Pit number 45 – Revenue Factor 0.92.

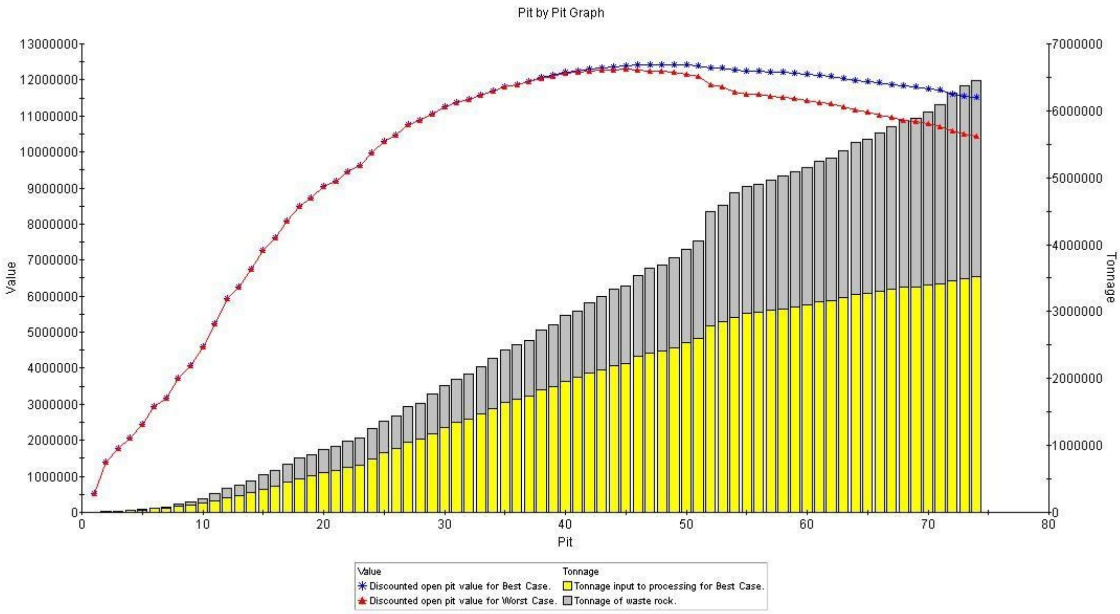

Figure 16-10: Diana Pit Extension – Pit by Pit Graph

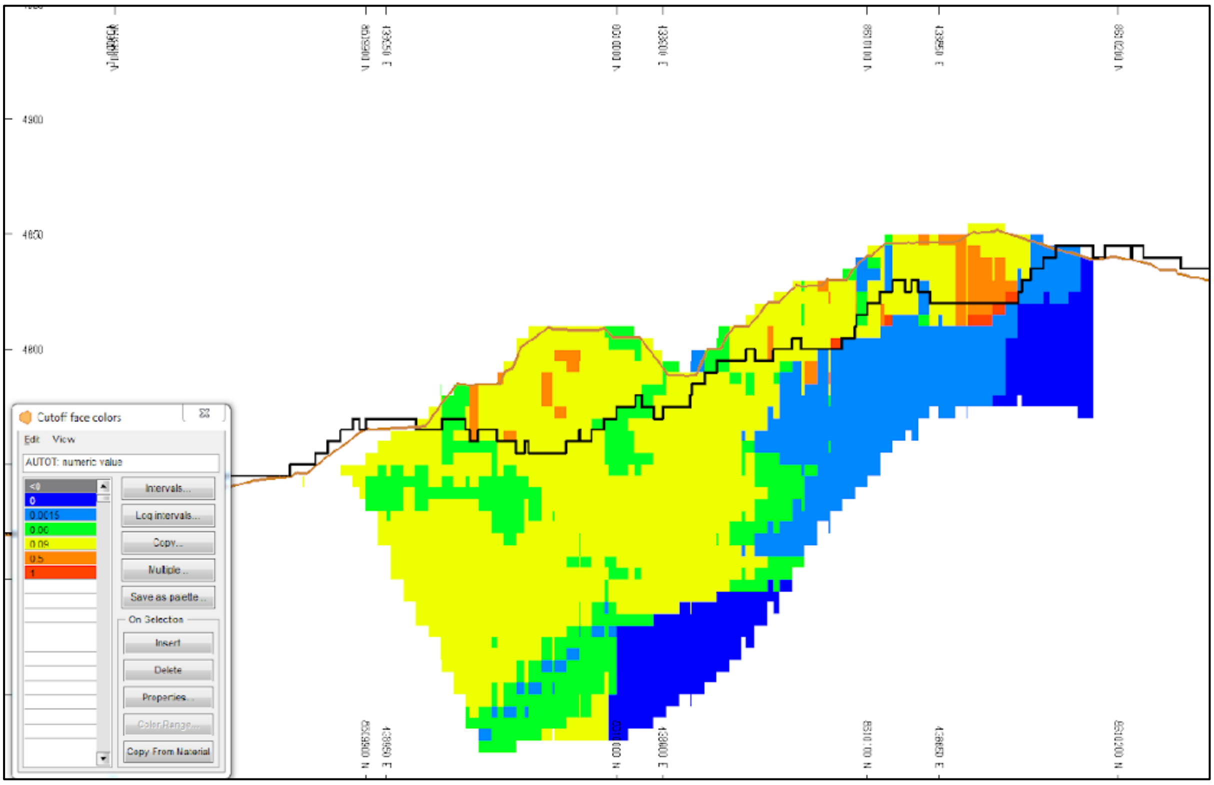

Figure 16-11: Diana Pit Expansion - Vertical Section through the block model and optimised Mineral Reserves pit shell

16.6.6 Cayhua Norte Pit

The Whittle input parameters given in Table 16-7 were used for the Cayhua Norte Pit optimisation.

Table 16-7: Cayhua Norte Pit – Pit Optimization Parameters

Parameters	Units	Value	Basis
Resource Classification			
Included Resources	(na)	Measured + Indicated	Provided by Minera IRL
Production			
Mining Limit	(ktps)	2,520.00	Provided by Minera IRL
Processing Limit	(ktps)	1,620.00	Provided by Minera IRL
Geotechnical			
Susan	(°)	45.00	Geotechnical Assessment – Provided by Mineral IRL
Mining Factors			
Dilution	%	1.00	Mineralization Type
Recovery	%	100.00	Mineralization Type
Processing			
Recovery Au	%	80.12	Metallurgical Database - Provided by Minera IRL
Operating Costs			
Ore Mining Cost	(US/t moved)	1.53	Cost Database - Provided by Minera IRL
Waste Mining Cost	(US/t moved)	1.29	Cost Database - Provided by Minera IRL
Incremental Haulage	(US/t moved)	0.00	Cost Database - Provided by Minera IRL
Processing Cost	(Z Elevation)	1.22	Cost Database - Provided by Minera IRL
Sustaining Capital	(US/t ore)	0.45	Cost Database - Provided by Minera IRL
G&A	(US/t ore)	1.17	Cost Database - Provided by Minera IRL
Selling Cost Au	(US/oz)	6.60	Cost Database - Provided by Minera IRL
Metal Price			
Gold	(US/oz)	1,250.00	Consensus Economics LTP
Other			
Discount Rate	(%)	10.00	Consensus Economics LTP
Cut-Off Grade			
Internal	(g/t)	0.10	Cut off Formula

Following the Whittle pit optimization, a Pit by Pit graph was built for the Cayhua Norte Pit, the behaviour of the best and worst-case curves is similar. Considering that the pit is small, and that mining will most likely be on a bench by bench basis, the worst-case curve was used to determine the final pit design. Based on the final pit design, the peak value is achieved in the Pit number 42 – Revenue Factor 0.88.

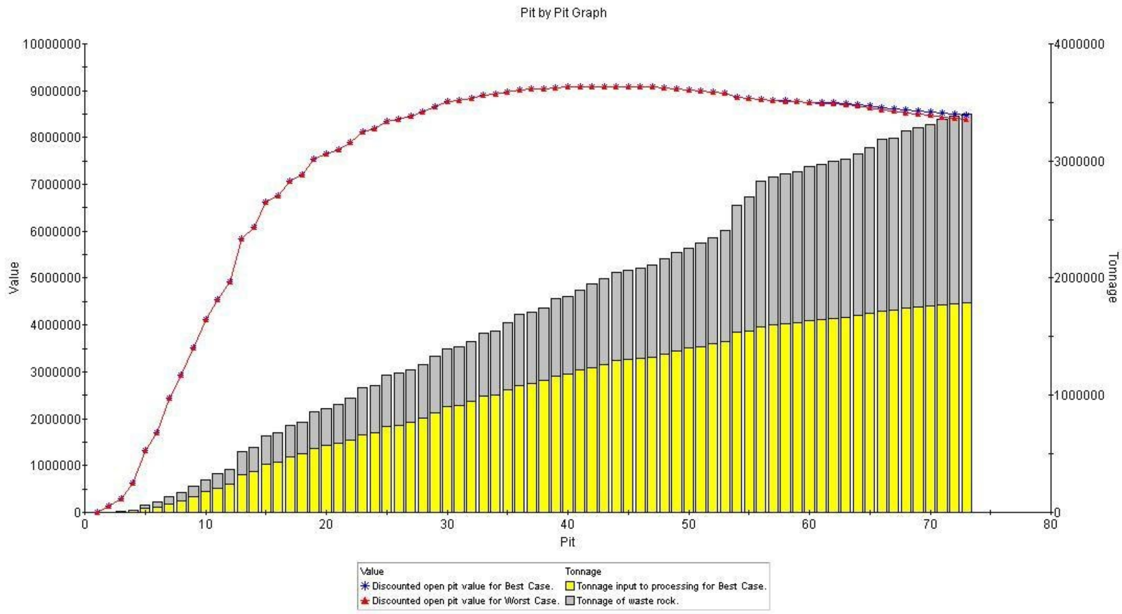

Figure 16-12: Cayhua Norte Pit – Pit by Pit Graph

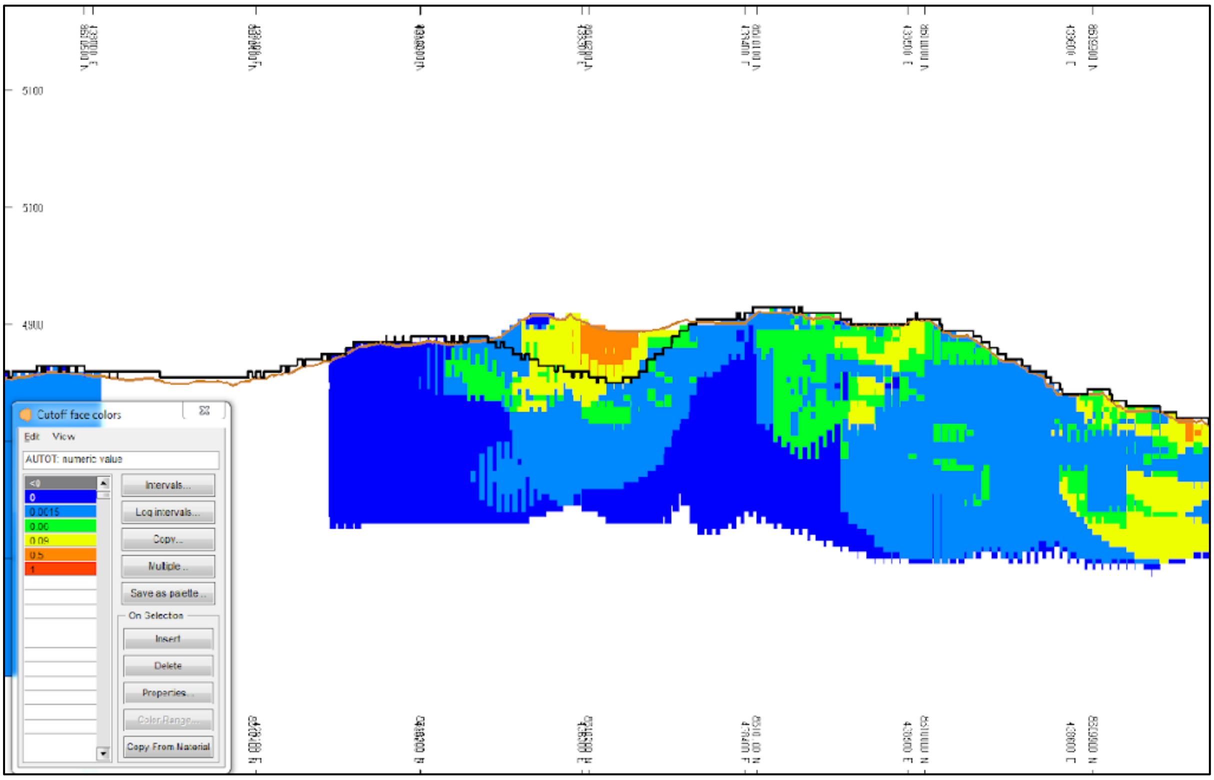

Figure 16-13: Cayhua Norte Pit - Vertical Section through the block model and optimised Mineral Reserves pit shell

16.6.7 Scree Slope Extension Pit

The Whittle input parameters given in Table 16-8 were used for the Scree Slope Extension Pit optimisation.

Table 16-8: Scree Slope Pit Extension – Pit Optimization Parameters

Parameters	Units	Value	Basis
Resource Classification			
Included Resources	(na)	Measured + Indicated	Provided by Minera IRL
Production			
Mining Limit	(ktps)	2,520.00	Provided by Minera IRL
Processing Limit	(ktps)	1,620.00	Provided by Minera IRL
Geotechnical			
Susan	(°)	45.00	Geotechnical Assessment – Provided by Mineral IRL
Mining Factors			
Dilution	%	1.00	Mineralization Type
Recovery	%	100.00	Mineralization Type
Processing			
Recovery Au	%	73.14	Metallurgical Database - Provided by Minera IRL
Operating Costs			
Ore Mining Cost	(US/t moved)	1.75	Cost Database - Provided by Minera IRL
Waste Mining Cost	(US/t moved)	1.15	Cost Database - Provided by Minera IRL
Incremental Haulage	(US/t moved)	0.19	Cost Database - Provided by Minera IRL
Processing Cost	(Z Elevation)	1.22	Cost Database - Provided by Minera IRL
Sustaining Capital	(US/t ore)	0.45	Cost Database - Provided by Minera IRL
G&A	(US/t ore)	1.17	Cost Database - Provided by Minera IRL
Selling Cost Au	(US/oz)	6.60	Cost Database - Provided by Minera IRL
Metal Price			
Gold	(US/oz)	1,250.00	Consensus Economics LTP
Other			
Discount Rate	(%)	10.00	Consensus Economics LTP
Cut-Off Grade			
Internal	(g/t)	0.12	Cut off Formula

Following the Whittle pit optimization, a Pit by Pit graph was built for the Scree Slope Extension Pit, the behaviour of the best and worst-case curves is similar. Considering that the pit is small, and that mining will most likely be on a bench by bench basis, the worst-case curve was used to determine the final pit design. Based on the final pit design, the peak value is achieved in the Pit number 40 – Revenue Factor 0.96.

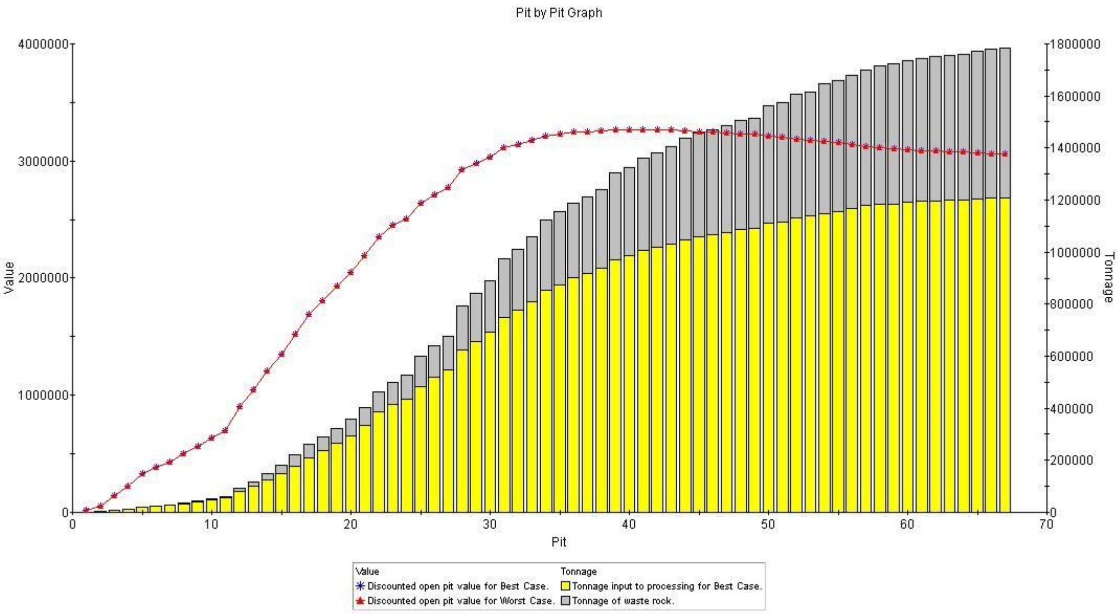

Figure 16-14: Scree Slope Pit Extension – Pit by Pit Graph

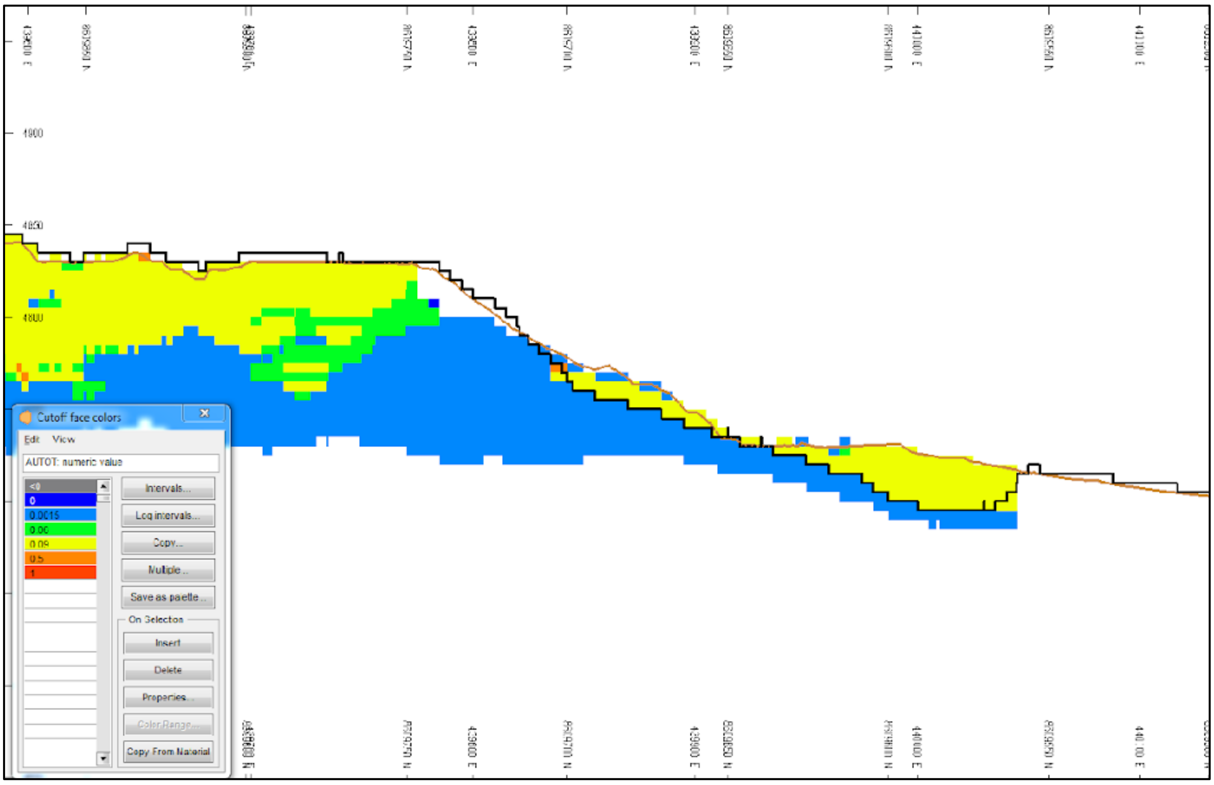

Figure 16-15: Scree Slope Pit - Vertical Section through the block model and optimised Mineral Reserves pit shell

16.7 Mine Design

The life of mine (LOM) open pit design was completed by MIRL staff according to conventional industry standards required for the mining of the Corihuarmi mine.

The pit shells selected during the pit optimization were used as a guide to the pit designs. The pit designs were built bench by bench following the pit shells and ensuring the access to all benches. In this process the final pit designs can incorporate and/or remove ore and/or waste. Figure 16-16 present topography at the end 2017. Projected topography, considering pit designs, is shown in Figure 16-17.

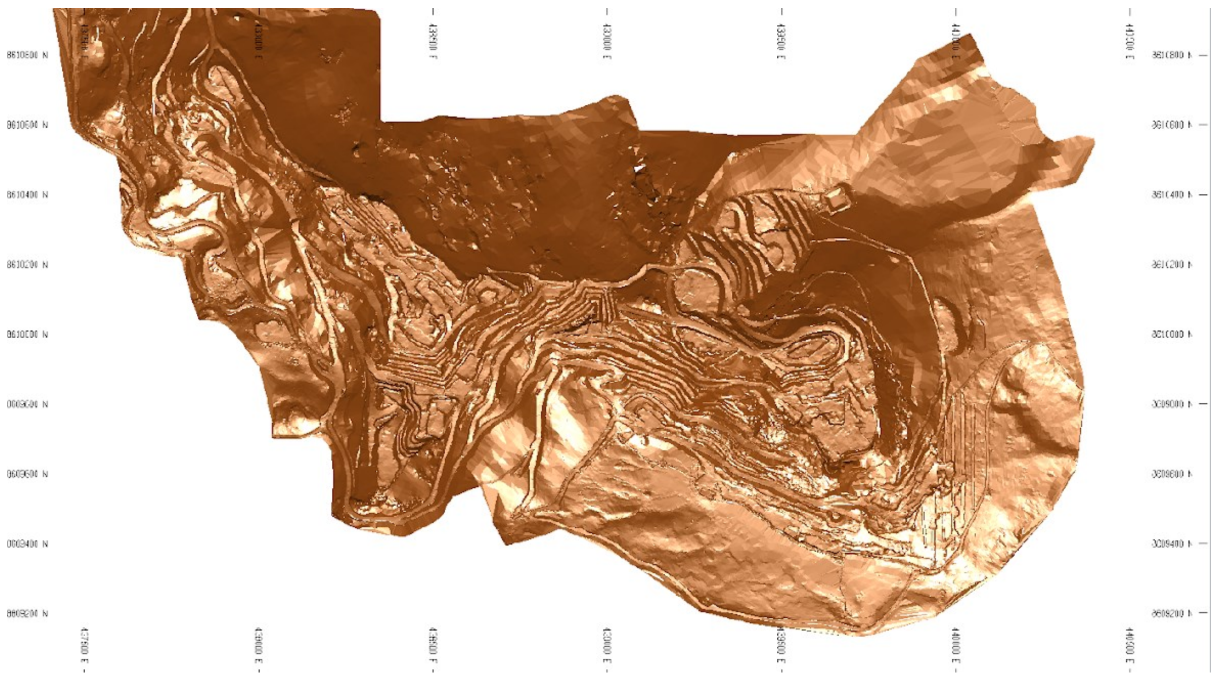

Figure 16-16: Initial Topography – End of December 2017

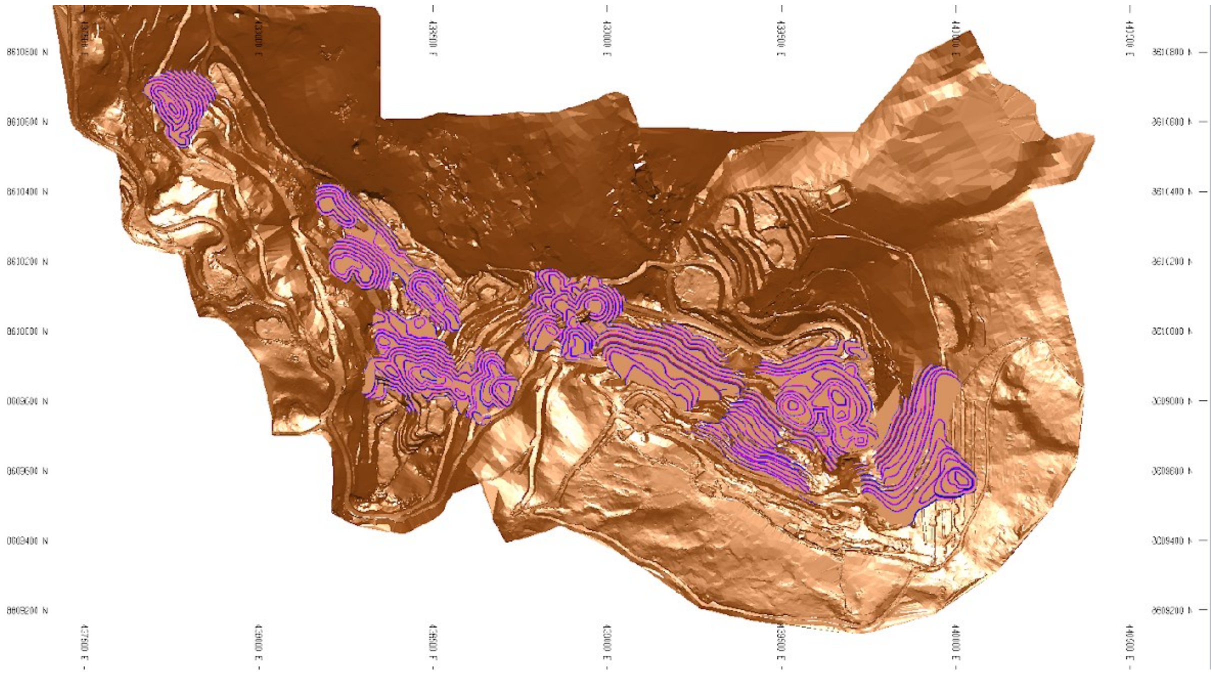

Figure 16-17: Pit Designs and Final Topography – End of October 2020

Table 16-9 summarises ore and waste tonnages, grades and contained metal by pit. The mining schedule presented in section 16.8 is based on this material inventory.

Table 16-9: Summary of Pit Design Material Inventory

Material Inventory by Pit	Ore (t)	Waste (t)	Au (g/t)	Contained Metal (oz Au)
Susan Pit	*2,022,393*	*662,634*	*0.26*	*17,081*
Scree Slope Pit	*333,371*	*365,524*	*0.29*	*3,055*
Cayhua Pit	*2,049,963*	*794,434*	*0.25*	*16,536*
Laura Pit	*1,360,464*	*406,824*	*0.21*	*9,153*
Diana Pit Extension	*792,237*	*577,006*	*0.37*	*9,376*
Cayhua Norte Pit	*1,170,722*	*749,518*	*0.34*	*12,847*
Scree Slope Pit Extension	*1,013,622*	*797,328*	*0.30*	*9,671*
Total	***8,742,771***	***4,353,268***	***0.28***	***77,718***

16.8 Mining Schedule

The LOM plan was completed by Mr Espinoza (QP) and MIRL staff utilising bench by bench ore and waste scheduling units. The schedule was prepared on a monthly basis with the objective of maximizing the recovered ounces of gold and following an achievable mining advance.

The mine schedule by pit / month is shown from Table 16-10 to Table 16-15 and summarize by year in Figure 16-18.

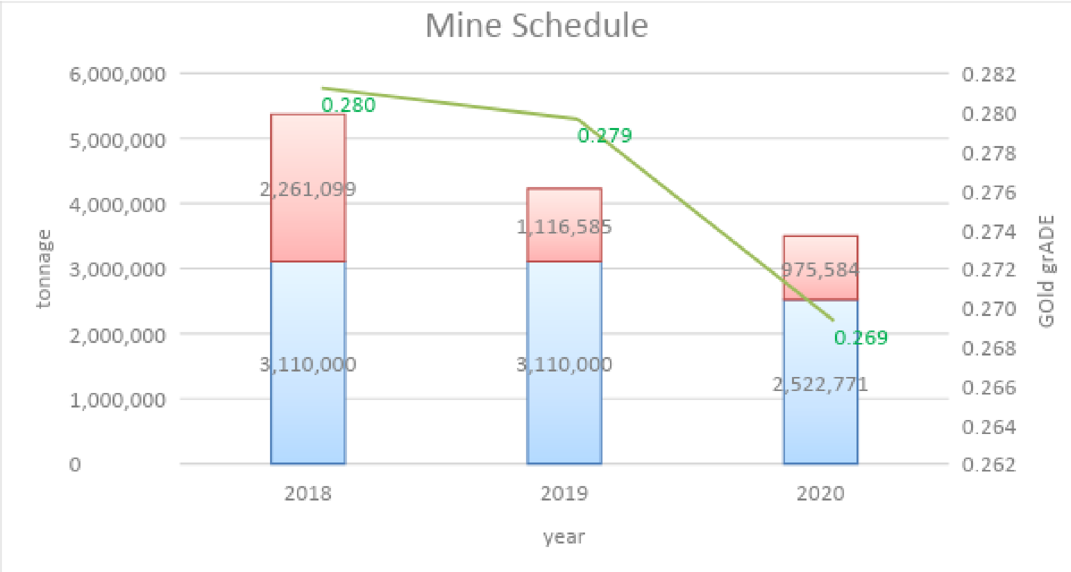

Figure 16-18: Mine Schedule by Year

Table 16-10 Corihuarmi Mine Schedule - 2018

Mine Schedule - 2018			Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total 2018
Susan	Ore	t						14,101	1,912	101,602	76,441	56,643	92,376		343,075
	Waste	t					115	86,986	8,760	176,264	40,718	20,726	30,609		364,179
	Total	t					115	101,087	10,672	277,866	117,159	77,369	122,985		707,254
	Au Grade	g/t						0.158	0.182	0.247	0.289	0.261	0.252		0.256
	Metal content	oz						71.85	11.19	807.90	710.26	474.51	749.43		2,825
	Recovery Au	%						0.75	0.75	0.75	0.75	0.75	0.75		0.75
	Metal recovered	oz						54.10	8.43	608.23	534.78	357.25	564.27		2,127
	SR	w/o						6.17	4.58	1.73	0.53	0.37	0.33		1.06
Scree Slope	Ore	t													
	Waste	t													
	Total	t													
	Au Grade	g/t													
	Metal content	oz													
	Recovery Au	%													
	Metal recovered	oz													
	SR	w/o													
Cayhua	Ore	t	115,000	2,108	1		9,072	85,125	80,839						292,145
	Waste	t	116,544	1,518	1		6,533	47,648	34,814						207,059
	Total	t	231,544	3,626	2		15,605	132,773	115,653						499,204
	Au Grade	g/t	0.177	0.197	0.197		0.197	0.203	0.236						0.202
	Metal content	oz	655.47	13.33	0.01		57.37	555.87	613.62						1,896
	Recovery Au	%	0.75	0.75	0.75		0.75	0.75	0.75						0.75
	Metal recovered	oz	493.57	10.04	0.01		43.20	418.60	461.84						1,427
	SR	w/o	1.01	0.72	0.72		0.72	0.56	0.43						0.71
Diana_Extension	Ore	t		112,892	95,889	150,000	105,928	61,964	5,065	149,041		16,780	79,412		776,972
	Waste	t		174,664	111,645	143,771	58,421	32,525	2,748	31,665		1,589	14,464		571,492
	Total	t		287,556	207,534	293,771	164,350	94,489	7,813	180,707		18,369	93,877		1,348,464
	Au Grade	g/t		0.401	0.344	0.305	0.455	0.583	0.598	0.352		0.244	0.248		0.370
	Metal content	oz		1,455.66	1,060.94	1,469.21	1,549.38	1,162.32	97.43	1,687.41		131.70	633.12		9,247
	Recovery Au	%		0.85	0.85	0.85	0.85	0.85	0.85	0.85		0.85	0.85		0.85
	Metal recovered	oz		1,095.89	798.75	1,106.10	1,166.57	875.11	73.35	1,270.48		99.15	476.70		6,962
	SR	w/o		1.55	1.16	0.96	0.55	0.52	0.54	0.21		0.09	0.18		0.74

Table 16-11 Corihuarmi Mine Schedule - 2018

Mine Schedule - 2018			Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Total 2018
Laura	Ore	t	150,000	150,000	150,000	95,531	150,000	103,810	64,243	14,357	84,487	25,315		113,518	1,101,260
	Waste	t	109,189	35,818	23,943	14,412	15,969	16,381	11,605	4,070	23,952	7,177		46,055	308,570
	Total	t	259,189	185,818	173,943	109,943	165,969	120,191	75,847	18,427	108,438	32,492		159,573	1,409,830
	Au Grade	g/t	0.201	0.200	0.204	0.206	0.207	0.210	0.210	0.214	0.214	0.214		0.216	0.207
	Metal content	oz	968.05	965.56	982.83	632.52	995.88	699.36	434.63	98.79	581.34	174.19		789.71	7,323
	Recovery Au	%	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80		0.80	0.80
	Metal recovered	oz	728.80	726.91	739.95	476.36	749.83	526.58	327.25	74.37	437.62	131.13		594.57	5,513
	SR	w/o	0.73	0.24	0.16	0.15	0.11	0.16	0.18	0.28	0.28	0.28		0.41	0.28
Scree Slope Extension	Ore	t							112,941		84,592	16,812			214,345
	Waste	t					129,793		154,074		32,019	6,363			322,249
	Total	t					129,793		267,015		116,611	23,175			536,594
	Au Grade	g/t							0.367		0.378	0.378			0.372
	Metal content	oz							1,332.86		1,027.87	204.28			2,565
	Recovery Au	%							0.73		0.73	0.73			0.73
	Metal recovered	oz							1,003.52		773.97	153.82			1,931
	SR	w/o							1.36		0.38	0.38			1.50
Cayhua Norte	Ore	t			19,110	19,469					19,480	149,451	93,212	81,482	382,203
	Waste	t			76,412	53,817					53,848	176,144	64,772	62,557	487,550
	Total	t			95,521	73,286					73,328	325,595	157,984	144,039	869,753
	Au Grade	g/t			0.32	0.27					0.27	0.31	0.37	0.40	0.341
	Metal content	oz			196.53	169.94					170.04	1,504.91	1,106.97	1,042.26	4,191
	Recovery Au	%			0.80	0.80					0.80	0.80	0.80	0.80	0.80
	Metal recovered	oz			147.95	127.94					128.01	1,133.04	833.42	784.70	3,155
	SR	w/o			4.00	2.76					2.76	1.18	0.69	0.77	1.28
TOTAL	Ore	t	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	195,000	3,110,000
	Waste	t	225,733	212,000	212,000	212,000	210,832	183,540	212,000	212,000	150,537	212,000	109,846	108,612	2,261,099
	Total	t	490,733	477,000	477,000	477,000	475,832	448,540	477,000	477,000	415,537	477,000	374,846	303,612	5,371,099
	Au Grade	g/t	0.191	0.286	0.263	0.267	0.305	0.292	0.292	0.304	0.292	0.292	0.292	0.292	0.280
	Metal content	oz	1,624	2,435	2,240	2,272	2,603	2,489	2,490	2,594	2,490	2,490	2,490	1,832	28,046
	Metal recovered	oz	1,222	1,833	1,687	1,710	1,960	1,874	1,874	1,953	1,874	1,874	1,874	1,379	21,116
	SR	w/o	0.85	0.80	0.80	0.80	0.80	0.69	0.80	0.80	0.57	0.80	0.41	0.56	0.73

Table 16-12 Corihuarmi Mine Schedule - 2019

Mine Schedule - 2019			Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total 2019
Susan	Ore	t	3,665	128,700					18,838		346	121,936	51,955	68,775	394,216
	Waste	t	1,081	37,973					4,143		76	26,815	11,425	15,124	96,637
	Total	t	4,746	166,673					22,981		422	148,751	63,380	83,899	490,853
	Au Grade	g/t	0.244	0.244					0.237		0.237	0.237	0.237	0.237	0.239
	Metal content	oz	28.72	1,008.38					143.27		2.63	927.38	395.14	523.07	3,029
	Recovery Au	%	0.75	0.75					0.75		0.75	0.75	0.75	0.75	0.75
	Metal recovered	oz	21.62	759.28					107.90		1.98	698.38	297.57	393.91	2,281
	SR	w/o	0.30	0.30					0.22		0.22	0.22	0.22	0.22	0.25
Scree Slope	Ore	t													0
	Waste	t									4,591				4,591
	Total	t									4,591				4,591
	Au Grade	g/t													0.000
	Metal content	oz													0
	Recovery Au	%													0.00
	Metal recovered	oz													0
	SR	w/o													0.00
Cayhua	Ore	t	98,209	100,830	107,432	26,968	96,975	132,057	125,920	142,001	126,772		150,000	38,716	1,145,879
	Waste	t	45,998	40,873	42,907	5,613	20,185	29,083	14,411	27,463	21,742		61,377	16,043	325,697
	Total	t	144,207	141,703	150,339	32,581	117,160	161,140	140,332	169,463	148,513		211,377	54,759	1,471,576
	Au Grade	g/t	0.267	0.265	0.268	0.283	0.283	0.280	0.262	0.241	0.239		0.226	0.211	0.256
	Metal content	oz	843.63	859.06	927.39	245.63	883.26	1,187.36	1,059.43	1,099.64	972.89		1,088.17	263.25	9,430
	Recovery Au	%	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75		0.75	0.75	0.75
	Metal recovered	oz	635.03	646.72	698.31	185.00	665.25	893.92	797.71	827.81	732.42		819.01	198.26	7,099
	SR	w/o	0.47	0.41	0.40	0.21	0.21	0.22	0.11	0.19	0.17		0.41	0.41	0.28
Diana_Extension	Ore	t	15,265												15,265
	Waste	t	5,513												5,513
	Total	t	20,778												20,778
	Au Grade	g/t	0.262												0.262
	Metal content	oz	128.43												128
	Recovery Au	%	0.85												0.85
	Metal recovered	oz	96.66												97
	SR	w/o	0.36												0.36

Table 16-13 Corihuarmi Mine Schedule - 2019

Mine Schedule - 2019			Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Total 2019
Laura	Ore	t	5,027	35,470	36,056	107,038	41,862	24,115	5,714	3,922					259,204
	Waste	t	2,039	15,848	16,110	48,862	12,299	3,009	79	9					98,254
	Total	t	7,066	51,318	52,166	155,900	54,160	27,124	5,793	3,931					357,458
	Au Grade	g/t	0.216	0.224	0.224	0.219	0.214	0.213	0.230	0.235					0.220
	Metal content	oz	34.97	255.48	259.70	753.88	288.57	165.37	42.25	29.61					1,830
	Recovery Au	%	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80					0.80
	Metal recovered	oz	26.33	192.32	195.50	567.62	217.20	124.51	31.82	22.30					1,378
	SR	w/o	0.41	0.45	0.45	0.46	0.29	0.12	0.01	0.00					0.38
Scree Slope Extension	Ore	t	104,736				37,413	25,916	30,928	25,923	65,512	87,215	41,764	87,509	506,917
	Waste	t	35,509				14,576	10,097	12,050	10,035	25,361	50,139	41,323	124,832	323,923
	Total	t	140,245				51,989	36,013	42,978	35,959	90,873	137,354	83,087	212,342	830,841
	Au Grade	g/t	0.317				0.278	0.278	0.278	0.261	0.261	0.252	0.389	0.323	0.295
	Metal content	oz	1,067.68				334.40	231.64	276.45	217.75	550.29	705.73	522.17	908.77	4,815
	Recovery Au	%	0.73				0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
	Metal recovered	oz	803.98				251.76	174.39	208.12	163.98	414.40	531.41	393.07	684.14	3,625
	SR	w/o	0.34				0.39	0.39	0.39	0.39	0.39	0.57	0.99	1.43	0.64
Cayhua Norte	Ore	t	38,098		121,512	130,994	88,751	82,912	83,599	93,154	72,370	55,849	21,280		788,519
	Waste	t	29,250		56,362	58,707	21,723	25,586	14,732	16,410	9,743	18,262	11,194		261,969
	Total	t	67,348		177,874	189,701	110,474	108,498	98,331	109,563	82,113	74,111	32,474		1,050,488
	Au Grade	g/t	0.40		0.44	0.43	0.35	0.31	0.29	0.27	0.28	0.25	0.22		0.341
	Metal content	oz	487.33		1,718.64	1,817.28	994.44	828.33	771.34	794.55	640.52	453.23	150.52		8,656
	Recovery Au	%	0.80		0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80		0.80
	Metal recovered	oz	366.90		1,293.88	1,368.17	748.69	623.71	580.80	598.17	482.36	341.27	113.30		6,517
	SR	w/o	0.77		0.46	0.45	0.24	0.31	0.18	0.18	0.13	0.33	0.53		0.33
TOTAL	Ore	t	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	195,000	3,110,000
	Waste	t	119,391	94,694	115,379	113,182	68,784	67,775	45,415	53,917	61,513	95,216	125,319	156,000	1,116,585
	Total	t	384,391	359,694	380,379	378,182	333,784	332,775	310,415	318,917	326,513	360,216	390,319	351,000	4,226,585
	Au Grade	g/t	0.304	0.249	0.341	0.331	0.294	0.283	0.269	0.251	0.254	0.245	0.253	0.270	0.279
	Metal content	oz	2,591	2,123	2,906	2,817	2,501	2,413	2,293	2,142	2,166	2,086	2,156	1,695	27,888
	Metal recovered	oz	1,951	1,598	2,188	2,121	1,883	1,817	1,726	1,612	1,631	1,571	1,623	1,276	20,997
	SR	w/o	0.45	0.36	0.44	0.43	0.26	0.26	0.17	0.20	0.23	0.36	0.47	0.80	0.36

Table 16-14 Corihuarmi Mine Schedule - 2020

Mine Schedule - 2020			Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Total 2020
Susan	Ore	t	150,000	150,000	142,324	150,000	150,000	150,000	150,000	125,990	99,488	17,300			1,285,102
	Waste	t	33,112	33,112	22,144	19,055	19,964	20,591	15,430	11,744	22,951	3,715			201,817
	Total	t	183,112	183,112	164,468	169,055	169,964	170,591	165,430	137,734	122,439	21,015			1,486,919
	Au Grade	g/t	0.256	0.256	0.262	0.264	0.264	0.264	0.269	0.271	0.313	0.602			0.272
	Metal content	oz	1,236.33	1,236.33	1,198.43	1,274.78	1,274.93	1,275.04	1,296.72	1,097.84	1,002.40	334.68			11,227
	Recovery Au	%	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75			0.75
	Metal recovered	oz	931.12	931.12	902.57	960.08	959.84	959.68	976.14	826.52	754.81	252.02			8,454
	SR	w/o	0.22	0.22	0.16	0.13	0.13	0.14	0.10	0.09	0.23	0.21			0.16
Scree Slope	Ore	t							49,392	108,271	130,335	45,373			333,371
	Waste	t					37,302	76,681	178,580	31,395	21,036	15,939			360,933
	Total	t					37,302	76,681	227,972	139,666	151,370	61,311			694,304
	Au Grade	g/t							0.366	0.306	0.241	0.273			0.285
	Metal content	oz							581.94	1,064.94	1,009.98	397.88			3,055
	Recovery Au	%							0.86	0.86	0.86	0.86			0.86
	Metal recovered	oz							438.15	801.80	760.40	299.60			2,300
	SR	w/o							3.62	0.29	0.16	0.35			1.08
Cayhua	Ore	t	55,267	32,857	5,860	90,219	106,114	115,000	65,608	30,738	35,177	75,099			611,939
	Waste	t	22,967	13,654	2,435	49,458	46,151	31,484	17,810	9,321	15,337	53,061			261,679
	Total	t	78,235	46,511	8,295	139,677	152,265	146,484	83,418	40,060	50,515	128,160			873,618
	Au Grade	g/t	0.208	0.208	0.208	0.200	0.255	0.297	0.321	0.332	0.286	0.292			0.265
	Metal content	oz	370.13	220.04	39.24	578.70	870.45	1,098.39	677.52	328.32	323.95	704.00			5,211
	Recovery Au	%	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75			0.75
	Metal recovered	oz	278.79	165.75	29.56	435.47	655.37	827.01	510.13	247.21	243.93	530.04			3,923
	SR	w/o	0.42	0.42	0.42	0.55	0.43	0.27	0.27	0.30	0.44	0.71			0.43
Diana_Extension	Ore	t													
	Waste	t													
	Total	t													
	Au Grade	g/t													
	Metal content	oz													
	Recovery Au	%													
	Metal recovered	oz													
	SR	w/o													

Table 16-15 Corihuarmi Mine Schedule - 2020

Mine Schedule - 2020			Jan-20	Feb-20	Mar-20	Apr-20	May-20	Jun-20	Jul-20	Aug-20	Sep-20	Oct-20	Nov-20	Dec-20	Total 2020
Laura	Ore	t													
	Waste	t													
	Total	t													
	Au Grade	g/t													
	Metal content	oz													
	Recovery Au	%													
	Metal recovered	oz													
	SR	w/o													
Scree Slope Extension	Ore	t	59,733	82,143	116,816	24,781	8,886								292,359
	Waste	t	56,284	43,226	41,888	7,996	1,761								151,155
	Total	t	116,017	125,369	158,704	32,778	10,647								443,515
	Au Grade	g/t	0.270	0.266	0.223	0.218	0.211								0.244
	Metal content	oz	518.87	701.79	836.92	173.30	60.37								2,291
	Recovery Au	%	0.73	0.73	0.73	0.73	0.73								0.73
	Metal recovered	oz	390.56	528.45	630.16	130.50	45.45								1,725
	SR	w/o	0.94	0.53	0.36	0.32	0.20								0.52
Cayhua Norte	Ore	t													
	Waste	t													
	Total	t													
	Au Grade	g/t													
	Metal content	oz													
	Recovery Au	%													
	Metal recovered	oz													
	SR	w/o													
TOTAL	Ore	t	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	265,000	137,771			2,522,771
	Waste	t	112,363	89,993	66,467	76,510	105,178	128,756	211,820	52,460	59,324	72,714			975,584
	Total	t	377,363	354,993	331,467	341,510	370,178	393,756	476,820	317,460	324,324	210,486			3,498,356
	Au Grade	g/t	0.249	0.253	0.243	0.238	0.259	0.279	0.300	0.292	0.274	0.324			0.269
	Metal content	oz	2,125	2,158	2,075	2,027	2,206	2,373	2,556	2,491	2,336	1,437			21,784
	Metal recovered	oz	1,600	1,625	1,562	1,526	1,661	1,787	1,924	1,876	1,759	1,082			16,402
	SR	w/o	0.42	0.34	0.25	0.29	0.40	0.49	0.80	0.20	0.22	0.53			0.39

16.9 Drill and Blast

Drilling is performed with a Soosan STD14E drill rig where the hole diameter is 101.6 mm (4 in). The drill pattern generally used is on triangle shape, using 3.46 m x 4.00 m as burden and spacing for a 5m bench and 0.5m of sub-drilling. Approximately 80 holes are drilled per day (on 2 shifts per day). The drill and blast design parameters are shown in Table 16-16.

Table 16-16: Drill and Blast Design Parameters

Drill and Blast Parameters	Value	Units
Hole Diameter	4.00	in
Burden	3.46	m
Spacing	4.00	m
Bench Height	5.00	m
Hole Length	5.50	m
Detritus	1.80	m
Air Deck	0.70	m
Density	2.05	t/m3
Load Length	3.00	m
Power Factor	0.16	kg/t
Loading Factor	0.33	kg/m3
Energy Factor	3678	kcal/t
Blast tonnes per hole	156.00	t
Blast volume per hole	76.12	m3
Explosives per hole	25.50	kg/dh
ANFO	23.50	kg/dh
Emulsion	2.00	kg/dh
Lineal density	7.80	kg/m

16.10 Loading and Hauling

The historical loading and hauling performance is shown in Table 16-17 and Table 16-18.

Table 16-17: Excavator Performance by Pit and Material Type

Pit	Ore (t/h)	Waste (t/h)
Susan	444	684
Scree Slope	506	NA
Cayhua	646	602
Laura	676	590
Diana Extension	609	691
Cayhua Norte	558	608
Scree Slope Extension	382	509

Table 16-18: Truck Performance by Pit and Material Type

Pit	Ore (t/h)	Waste (t/h)
Susan	95	153
Scree Slope	78	NA
Cayhua	133	121
Laura	143	134
Diana Extension	113	128
Cayhua Norte	92	98
Scree Slope Extension	51	187

16.11 Grade Control

For grade control purposes a representative sample of the drill cuttings produced from blast holes is used for grade determination (Blast hole sampling). In light of the apparent underestimation of the diamond core drilling, reverse circulation drilling has also been adopted for grade control purposes. The samples are analysed in the on-site laboratory.

16.12 Infrastructure

A camp to accommodate approximately 140 employees was constructed to the east of the plant facilities. Existing buildings include the offices, warehouse, messing facilities and other buildings.

The principal mining related infrastructure comprises the waste dump, haul roads, mining contractor workshop and related infrastructure, fuel farm and explosives storage facility.

16.13 Mine Operations

Corihuarmi mine is an epithermal high sulphidation deposit, that actively mines Susan, Scree Slope, Diana, Laura and Cayhua deposits. The mining operation is a traditional open pit mine utilising dump trucks, excavators and loaders.

The operation uses the following fleet:

- Three drills Soosan STD-14E – 4 inches.
- Three Hyundai R380LC-9SH excavators – Bucket capacity 2.4 m^3.
- Three Hyundai HL770-9S front end loaders – Bucket capacity 4.5 m^3, 1 on stand-by.
- Fifteen Mercedes Benz Actors 3343k trucks – Load capacity 17m^3, 1 on stand-by.
- 1 Roller CAT CS533.
- 1 Grader CAT 140K.
- 1 Excavator 420E.
- 1 Tractor CAT D8T.
- 1 Tractor Komatsu D65EX.
- 1 Tractor CAT D6T on stand-by.

The material transportation circuit is performed in two parts, the first one is from the pit to the crusher and the second one from the crusher to the leach pad. If the ore does not require additional crushing, the material is transported directly to the leach pad. The waste is transported to the waste dump at the Susan cutback.

Currently, Corihuarmi use 15 trucks to complete the production cycle. The distance covered from Diana cutback to the crusher is around 2km, from the Susan cutback to the crusher is 2.5km, from the Scree Slope to the crusher is around 3km and from the Cayhua cutback to the crusher is around 1km. The average distance from the crusher to the leach pad is around 0.5km.

Optimal road conditions for material transportation are at least 8 m wide (3 times the width of a truck, around 2.5 m) and with a maximum ramp gradient of 10%.

A jaw crusher with a capacity of 300 tph is used to reduce fragmentation to <4 inches.

16.14 Mining Capital Costs

According to information from MIRL, CAPEX assigned to Mining refers to the investment cost of building new areas in the leach pad, where this cost is reflected in the Cut Off Grade (COG) calculation as sustaining capital cost.

16.15 Mining Operating Cost

Projected mine operating costs are based on historical data and contract information.

17 Recovery Methods

17.1 Process Description and Flowsheet

The Project 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 in January 2008 when irrigation of the heaps was started. Figure 17-1 provides a simplified flowsheet of the heap leach process. The following describes the heap leach operation in more detail.

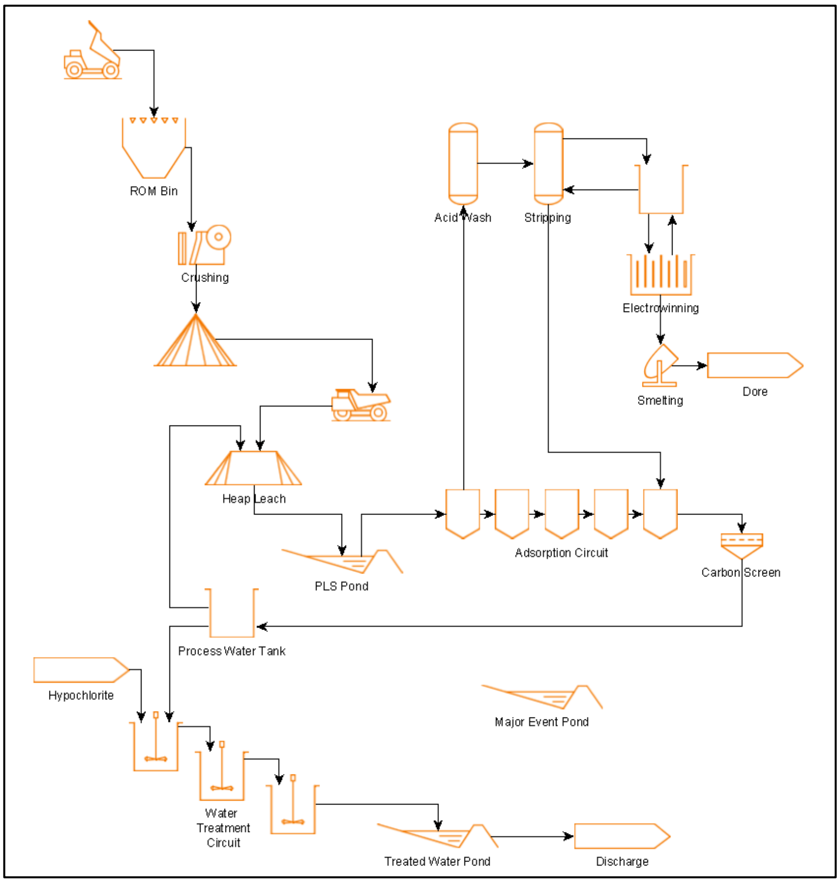

Figure 17-1: Flowsheet of heap leach process

17.2 Crushing

Ore from the mine, with a moisture content of 4 to 5% 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 withdrawn from the COB by a vibrating scalping grizzly feeder with 100mm gap size. The plus 100mm is fed into the primary jaw crusher. The minus 100 mm grizzly undersize material and the crusher product both drop onto the jaw crusher discharge conveyor. 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.

17.3 Heap Leaching

Heap Leaching is carried out in a single stage system. Pregnant Leach Solution (PLS) 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 a Zadra elution plant and the gold is electrowon onto cathodes. Sludge is removed from the cathodes and retorted to recover mercury prior to being direct smelted to recover the gold into bullion ready for sale.

The current heap leach pad covers an area of nine hectares and is designed to treat 6000tpd. Trucks enter the leach pad via a ramp at one end and dump the ore within one to two metres from the edge of the heap. A bulldozer is then used to push the material over the edge to achieve an even surface over the top at the lift height of eight metres.

The leach pad has a polyethylene geomembrane layer on the base and is divided into cells with an average area of 3,000m². Each cell holds 40,000 tonnes of ore. Irrigation of the cells begins with the primary pipe network, consisting of a barren solution tank, 250HP pump and 10” Ø HDPE. This line is located in lined channel and runs to a manifold at the top of the heap. From the manifold the secondary pipe network completes the irrigation. The secondary pipe network consists of a 4” Ø Lay Flat pipes running down the leaching cells. Each Lay Flat pipe has hoses branching from them with drippers for irrigation.

The heap is irrigated at a rate of 10L/h/m². Caustic soda is added to the barren solution tank to maintain the pH of the solution between 10.0 and 10.5 to avoid cyanide losses. Cyanide is also added to the barren solution tank to maintain a concentration of 250 ppm the solution that percolates through the heap is collected by the underdrainage piping network which is connected to two HDPE pipes that transfer the solution to the Pregnant Leach Solution (PLS) pond. From the PLS pond the solution is pumped to the adsorption circuit. The adsorption circuit is filled with activated carbon. The activated carbon adsorbs the gold from solution and the barren solution (BS) exiting the adsorption circuit gravity flows back to the barren solution tank and is used for re-irrigating the heap again. The leaching cycle is completed in 90 days.

Anti-scalant is added to the barren solution to reduce the formation of scales on the irrigation pipes, heap top and the activated carbon. An excess solution (storm water) pond is included to contain leach solution in excess of that required for normal operations due to storm events. Excess solution will ultimately return to the barren tank as makeup solution to replace water lost in the process due to evaporation and wetting of the ore.

17.4 Adsorption and Elution

The present adsorption plant is capable of treating 250m³/h of solution pregnant. The circuit consists of two trains of 5 cascade columns each configured in series each containing 2t of activated carbon. The activated carbon adsorbs the cyanided gold complexes, silver and other metals in solution to remove them from the solution. When the carbon is loaded up 8,000g/t Au in the first carbon column, the carbon is removed from the column and sent to the elution circuit. Once this column is empty of carbon, carbon from the second column is loaded until it also reaches approximately 8,000g/t Au. All of the columns in the circuit will be cycled in series in this manner, with any of the columns being able to used to load gold prior to stripping. The last tank in the series is always filled with activated carbon that has been stripped and reactivated.

Stripping of the gold from the carbon (elution) is conducted in a 2t Zadra circuit at a temperature of 135°C. Barren solution, from the desportion tank, is pumped through a secondary heat exchanger and then into the primary heat exchanger prior to entering the column. The solution exiting the top of the column passed through the other side of the secondary heat exchanger, through a cooling heat exchanger to drop the temperature to 65°C. After cooling the solution passes into the electrowinning cell where the gold and any silver that is present is electrowon. The solution exiting the cell gravitates into the desorption tank and is then reused for stripping the gold from the carbon. The total time for desorption ranges between 14 hours and 16 hours.

The activated carbon is reactivated in a regeneration kiln followed by acid washing prior to being cycled back to the adsorption columns for further adsorption of gold and silver.

17.5 Harvesting and Smelting

The electrowinning cell contains 18 stainless steel cathodes and 19 anodes. The loaded cathodes are washed with high pressure water to remove the gold and silver from the surfaces. The precious metals are collected and filtrated and placed in a retort to remove any mercury that was collected in the process. The mercury free material is then smelted in a tilting furnace to produce doré. The spent solution that emerges from the electrowinning cell returns to the stripping solution tank.

17.6 Operating Costs

Figure 17-2 shows the distribution of recent operating costs, broken down by area.

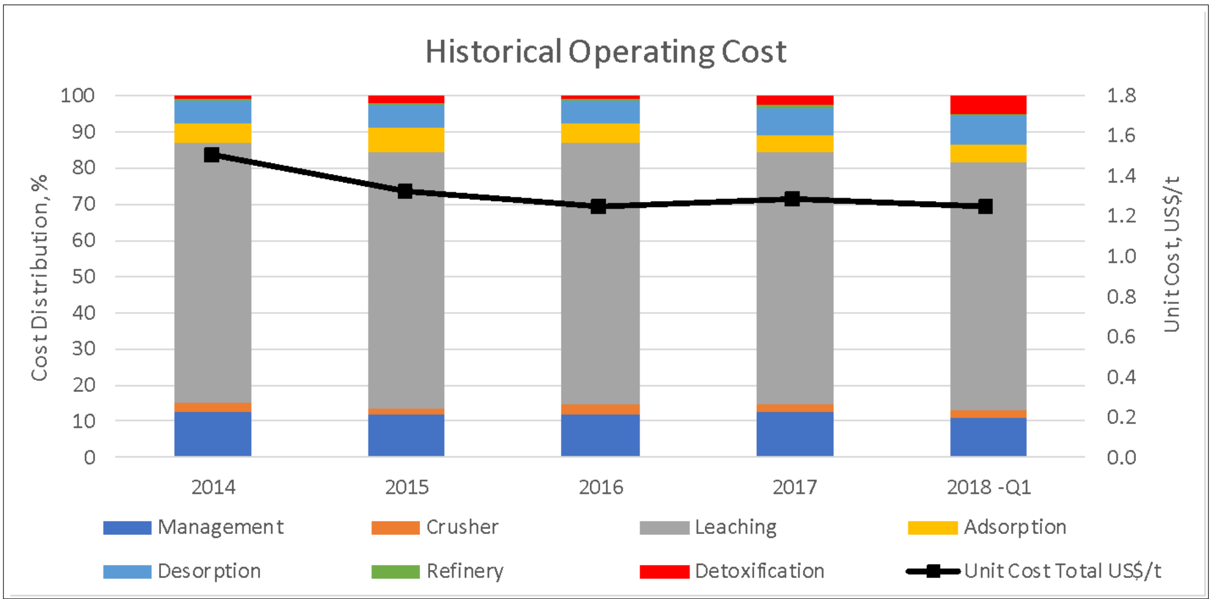

Figure 17-2: Historical Operating Cost

Table 17-1 shows the estimated operating cost for the processing area from 2018 to 2020. The lime and cyanide reagents represent 52% of the leaching costs and 36% of the total operating costs.

Table 17-1: Processing Operating Cost by Area

Area	Cost US$/t	Cost per Year (US$)	Distri, %
Management	0.16	508,382	12.3
Crushing	0.03	106,335	2.6
Heap Leach	0.92	2,868,666	69.3
NaCN and Lime	0.49	1,508,430	36.4
Other Cost	0.44	1,360,236	32.9
Adsorption	0.07	214,711	5.2
Desorption	0.08	242,302	5.9
Refinery	0.04	114,561	2.8
Cyanide Destruction	0.03	85,371	2.1
Total Cost of Plant	1.33	4,140,327	100

The costs are projected using a delivered cost of US$ 2,750/t cyanide and US$230/t lime. The power costs have been projected using the current contracted price of US$ 85/MW-h. Table 17-2 shows the breakdown of the processing operating costs by item.

Table 17-2: Processing Operating Cost by Class

Item	Cost US$/t	Cost per Year (US$)	Distri, %
Consumables and Reagents	0.5775	1,795,964	43.4
Power	0.1694	526,699	12.7
Staff	0.2415	751,161	18.1
Spare parts and Miscellaneous	0.0552	171,809	4.1
Services	0.2877	894,694	21.6
Total	1.33	4,140,327	100

17.7 Capital Costs

A budget of US$ 2,152,481 has been assigned for the expansion phase 5C sector 2 of the leach pad for heap leaching.

This includes 4 Ha of additional pad for leaching and would be executed in 2018.

18 PROJECT INFRASTRUCTURE

The Property is a mature producing open-pit mine with all the required infrastructure in place and functional. All permits and permissions required for the operation of the mine are current and in good standing.

The project is connected to the National Road Network to Huancayo and beyond via various routes which are maintained but not wholly asphalted, it is possible to access the Property via these routes year-round. Consumables used at the mine are trucked in and gold in loaded carbon is trucked out using these routes.

The mine workforce travels to site by bus from Huancayo and Huancavelica, both significant population centres within 100 km of the Property. Personnel are housed at the Campamento Nuevo camp which can accommodate approximately 140 people at any one time.

Other mine related infrastructure within the Property include, waste dump, haulage roads, mining contractor workshop, fuel storage and a secure explosive magazine, some of which are shown on Figure 18-1.

Abundant water is sourced from two reservoirs used for hydro-electric power generation, further water is available in natural lakes and tarns.

Waste water is processed and redistributed for use in the processing plant

Electrical power is sourced to the Property via the national grid. In case of interrupted power supply, back-up diesel generators are in place to supply limited power to critical mine functions.

A permitted landfill is used to dispose of the Property's solid and domestic waste, facilities are in place for the collection and recycling of oil, scrap metal, plastic and paper at licensed facilities.

Within the Property boundaries, and for some distance beyond, communications are facilitated by a radio network. Internet connectivity is provided by a satellite connection.

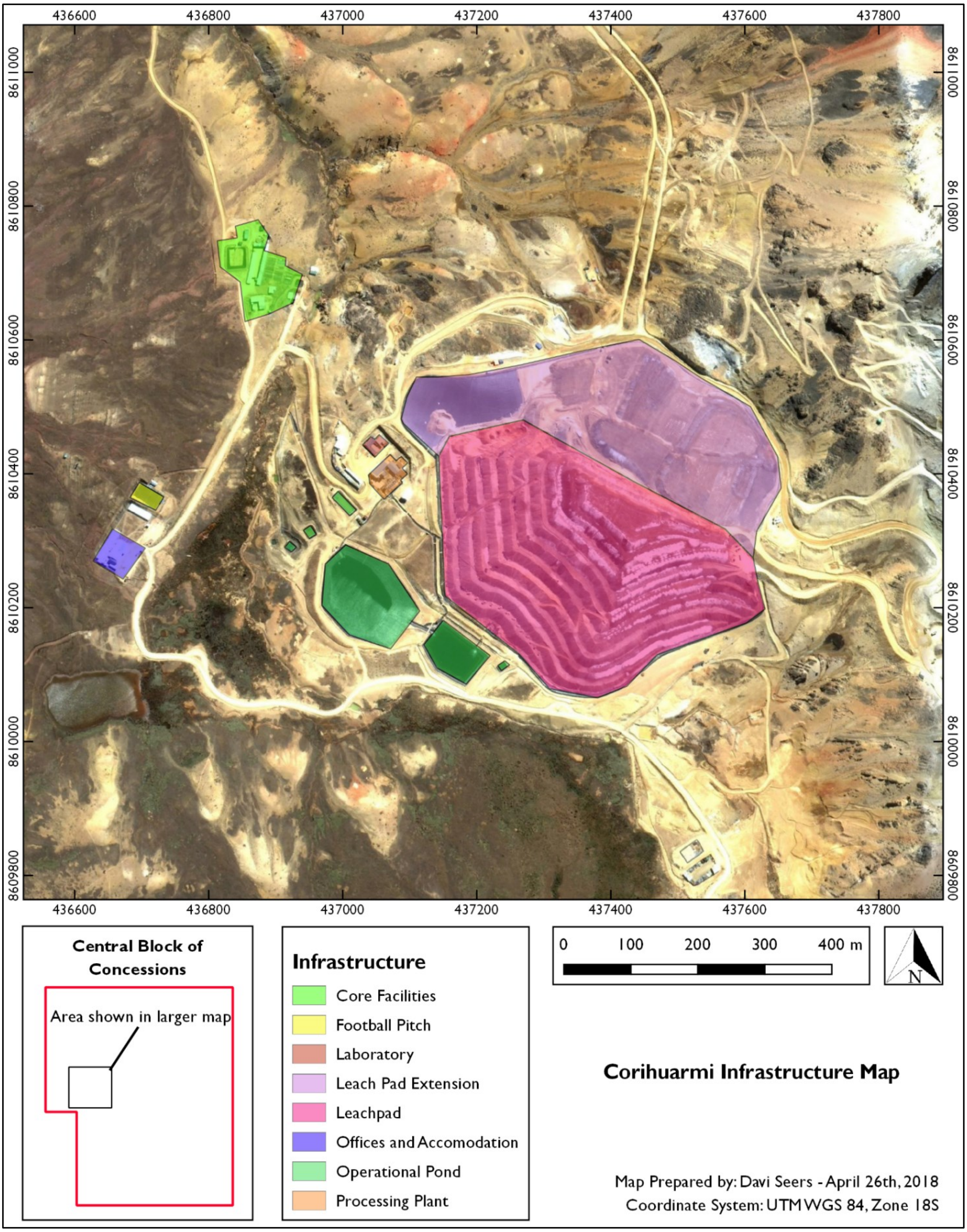

Figure 18-1: Map of Project Infrastructure

19 MARKET STUDIES AND CONTRACTS

The metal prices used in this Report are based on a Minera IRL and Mining Plus internal assessment, including Dr Fowler (QP) and Mr Espinoza (QP), of recent market and long-term prices. The Corihuarmi Operation currently produces doré bars. The doré refining terms are within industry norms.

The doré is transported by Segutruck's secure freight to Valcambi Suisse's refinery with a door to door contract, refined into gold bullion and sold to Austral International FZE that specialize in the purchase and sale of gold bullion.

The sales terms used in this Report are based on the currently sales of Corihuarmi and support by years of production. No external consultants or market studies were directly relied upon to assist with commodity price projections used in this Report. The Qualified Person for this Section 19 agrees with the assumptions and projections presented.

19.1 Contracts

The doré refining terms are typical and consistent with standard industry practices and similar to contracts for the refining of doré elsewhere.

There are a number of refineries with capacity to refine doré. Currently, Minera IRL is in a non-exclusive contractual relationship with Valcambi Suisse and SeguTruck. The average refining charges for Au and Ag are 0.69% and 5% respectively and are applied to the sell prices while the average cost for doré transport is 2200 US$ per shipment. The terms of these contracts with Valcambi Suisse and SeguTruck are within industry norms and in accordance of the cost and refining of the doré industry standards.

20 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

Information given in this chapter was provided to Mining Plus by MIRL and has not been independently verified.

20.1 Required Permits and Status

20.1.1 Required Permits

MIRL has all permits required for the current mining and metallurgical operations to support 9,000 t/d production. These permits include licences for; operation mining and processing concessions, water use license, water discharge permits, water treatment plant permit, and environmental management instruments among others.

Mr Espinoza (QP) notes that MIRL are in the process of renewing their explosives storage permit which expired on April 24th, 2018 and that MIRL are working on a revised mine closure plan that they plan to submit in June 2018.

MIRL has a community Relations Plan which is reviewed annually, Mr Espinoza (QP) understands that MIRL enjoy cordial relations with local communities.

Among the relevant permits approved a registered with SUNARP (the Public Registry) and pertinent to the exploitation of the Property the following are highlighted:

- Environmental Impact Study (RD. N° 617-2014-MEM/AAM) and modification (R.D. Nº 364- 2014-MEM/DGAAM-DGAM-DNAM/A)
- Expansion of the Beneficiation concession from 4110 to 6000 tpd (R.D. Nº 428-2012-MEM-DGM/V)
- Various water use licences (RA Nº 329-2008-ATDRM-DRA/J, RA Nº 330-2008-ATDRM-DRA/J, R.A. 454-2009-ANA-ALA MANTARO)
- Discharge of treated waste water (RD Nº 298-2013 -ANA-DGCRH, RD Nº 030-2015 -ANA-DGCRH)
- Potable water treatment (RD Nº 2025/2008/DIGESA/SA)
- Reuse of treated water for watering green areas (RD 1109-2016-ANA-AAA X MANTARO and RD Nº 987-2016-ANA-AAA X MANTARO)
- Septic tank installation (RD Nº 044-2012/DSB/DIGESA)
- Storage of explosives and accessories (RD Nº 044-2012/DSB/DIGESA)

20.1.2 State of Approved Permits

With the exception of the permit for the storage of explosives and accessories, all permits are current and valid.

Three permits are due to expire in 2019, these permits relate to the discharge of treated water and permission to use treated water for watering green areas. Mr Espinoza (QP) is not aware of any impediment to MIRL renewing these permits.

Item number 5 in Table 20-1 refers to a detailed technical memorandum which details mine planning at a production rate of 9000 tpd. This detailed technical memorandum is approved and guarantees (subject to compliance) production until 2020.

Further production extensions, beyond 2020, are subject to the submission and approval of a modified Environmental Impact Assessment. Which must implement a Citizen Participation Plan and a Community Relations Plan.

Agreements with local communities including rights of access are due to expire in 2019, MIRL expect to renew these agreements in June 2018.

Table 20-1: List of Permits

Nº	Approved Document	Date of Approval	Approved Instrument / Main Components
1	RD Nº 117-2007-MEM/AAM	27/03/2007	EIA Proyecto de explotación y beneficio Corihuarmi (Tajo Diana; Tajo Susan; Circuito Nº 1 Planta de Beneficio; PAD 1; PAD 2; Desmontera, Otros); producción 3,000 tpd.
2	RD Nº 010-2012-MEM/AAM	12/01/2012	EIA Proyecto Ampliación de producción y capacidad de la planta de beneficio a 6,000 tpd (Tajo ScreeSlope; PAD 3, Circuito Nº 2 Planta Beneficio; Otros).
3	RD N° 354-2014-MEM-AAM	10/07/2014	ITS Modificación de Ubicación de Plataformas de Exploración.
4	RD Nº 617-2014-EM/DGAAM	23/12/2014	Segunda Modificación al EIA Ampliación PAD 4 y de Tajos (Ampliación Tajo Diana; Tajo Cayhua; PAD 4B; Circuito Nº 3 Planta Beneficio; Ampliación BMI; Canteras; Otros), para 9,000 tpd.

5	R.D.N° 013-2018-MEM-DGAAM	29/01/2018	Memoria Técnica Detallada (MTD): Ampliación Tajo Diana, Tajo Cayhua, Tajo Cayhua Norte, Tajo Laura, Ampliación Tajo ScreeSlope-Susan, Ampliación BMI, PAD 4A, PAD 5 (Incluye el PAD 4B), Exploraciones, Ampliación de Producción a 9,000 tpd.

20.2 Environmental Study Results

The Environmental Adjustment and Management Program (PAMA), as established by Supreme Decree # 016-93-EM, was the first environmental management tool created for mines and metallurgical operations established before 1994 to adopt technological advances and / or alternative measures to comply maximum permissible limits for effluent discharge and emissions of mining metallurgical activities. Since then, many environmental regulations have been enacted updating and/or replacing older regulations. The environmental certification for mining activities was transferred from the Ministry of Mining and Energy to the Ministry of Environment; specifically, to the National Service for Environmental Certification (SENACE) effective December 28, 2015.

MIRL maintain an Environmental Baseline study at Corihuarmi, the latest "Memoria Tecnica Detallada" (Detailed Technical Memorandum) was approved on January 29th, 2018 (R.D.N° 013-2018-MEM-DGAAM del 29.01.2018) and shows that air and sound quality are within established limits. The environmental baseline (prior to mining operations) established areas of naturally occurring acidic waters, water quality is within permissible limits and has not been adversely affected by mining.

20.3 Operating and Post Closure Requirements and Plans

MIRL has an approved Mine Closure Plan, this plan has been subject to an approved amendment:

- Mine Closure Plan (RD Nº 006-2010- MEM-AAM) approved 7th January 2010
- Amendment to Mine Closure Plan (RD Nº 191-2013-MEM-AAM) approved 12th June 2013

According to the established Mine Closure Regulations (RD No 452-2015-MEM-DGAAM) of the 24/11/2015 (Reformation of the RD No 617-2014-EM/DGAAM), mine closure plans can be modified within 5 years of the approved amendment i.e. until June 2018.

The closure budget for the Property, approved by the Mine Authority (RD No 191-2013-MEM-AAM), is US $3.48M. In accordance with the Mine Closure plan, MIRL maintain budget guarantee payments according to the schedule shown in Table 20-2.

Table 20-2: Mine Closure Costs

Description	Approved 2009	Amended 2013
(1) Progressive Closure	$ 667,877.08	$ 632,562.26
(2) Final Closure (2 Years)	$ 1,934,423.90	$ 2,658,493.00
(3) Post Closure (5 Years)	$ 354,537.00	$ 184,236.60
(4) Total Closure (1+2+3)	$ 2,956,837.98	$ 3,475,291.86
(4) Total Guarantees (2+3)	$ 2,288,960.90	$ 2,842,729.60
Date of Reference for Costs	2009	2012

20.4 Social and Community

MIRL maintain cordial relationships with their neighbours and contribute to community development. During 2017 MIRL contributed 223,418 US$ to various projects committed to developing sustainable projects.

20.4.1 Agreements

In compliance with its social responsibility policy, MIRL has subscribed to various annual agreements with the surrounding communities including “Comunidad campesina de Atcas”.

Table 20-3 summarises the investment MIRL (in 2016) has made in to various communities and projects.

Table 20-3: 2016 community investment

Description	Amount Budgeted (US$)	Amended Spent (US$)
Education	12,611	19,458
Healthcare	3,404	11,730
Local sustainable development	145,056	140,139
Basic infrastructure	5,644	41,983
Institutional and capabilities empowerment	4,736	4,736
Culture promotion	2,072	5,369
Total	173,524	223,418

20.5 Mine Closure

Subject to amendments, in accordance with the approved mine closure plan, MIRL is committed to perform progressive closure activities starting in 2019 and to be concluded in 2021. Peruvian legislation stipulates that 5 years is the minimum time required to achieve physical, geochemical and hydrological stability of the area occupied by a mining unit.

As part of the mine closure plan, MIRL are committed to a 5 years period of post closure management plan, this plan has the objective of recovering conditions to those similar to pre-mining conditions and/or uses compatible with the surrounding environmental conditions.

Specific objectives are:

- Human health and safety. - Ensure public health and safety implementing measures to eliminate risks such as pollution caused by acid rock drainage or waste, that could be transported to populated areas by water or wind;
- Physical stability. - Implement environmental and technical measures to maintain physical stability of the mining components in the short, medium and long term (including mine entrances, chimneys, waste rock dumps, tailings deposits, etc.) that must withstand seismic and hydrological extraordinary events;
- Geochemical stability. - Implement measures to maintain chemical stability of the mining components in the short, medium and long term (including mine entrances, chimneys, waste rock dumps, tailings deposits, etc.) that must withstand ordinary and hydrological extraordinary hydrological events;
- Land use. - Implement measures to enhance post-mining beneficial land use, restoring gradually soil fertility for agriculture, livestock, landscape and / or recreational use, considering the topographical conformation and integration into the landscape:
- Water use. - Implement measures at the Property to prevent contamination of superficial and underground water, and focusing on restoring those water bodies, which have been potentially affected, by means of a strategic recovery for post-mining use.

20.6 Reclamation Measures During Operations and Project Closure

20.6.1 Reclamation Measures During Operations and Project Closure

The current Mine Closure plan (2013) considers:

- Open pits.

- Processing plant.
- Waste rock dumps.
- Water management infrastructure.
- Supporting infrastructure.
- Camps.

20.6.2 Temporary Closure

In case of a temporary closure (for a period less than three years), ordered or not by the competent authority, MIRL will develop a detailed care and maintenance plan considering future operations and evaluating the social impacts associated with it.

The temporary closure considers:

- Remove and save mobile equipment;
- Demolition, salvage and disposal - not applicable during temporary closure;
- Physical stability - maintain mine entrances, chimneys, tailing deposit, waste rock dumps, and infrastructure;
- Geochemical stability - maintain tailings deposit and waste rock dumps sedimentation ponds to capture any drainage;
- Hydrological stability - maintain canals and ditches in an operative state;
- Landform - profiling the outer slope of the tailing deposit;
- Social programs - mitigate impacts on local employment and local development implementing the following programs:
    - Communication, culture and participation program;
    - Environmental education and training program;
    - Health and responsible environmental management program; and
    - Citizenship: leadership, institutional strengthening and project transfers program.

The following measures will be adopted:

- Communicate to DGAAM any temporary closure program (indicating the causes);
- Final closure must be made if the closure needs to be prolonged over three years;
- Designate responsibilities for the safety and cleanliness of the facilities;
- Instruct the surrounding population on risk related to temporary closed facilities;
- Seal all areas that are potentially dangerous to the environment and the population, placing signs and symbols that indicate their danger for containing materials that could affect the environment;
- Perform facility inspections and establish a periodic schedule to perform the necessary maintenances (including wind erosion and sediment transport control,

channels, ditches and sediment ponds), safety and environmental inspections, water quality monitoring and progressive reclamation monitoring;

- Perform safety inspections to prevent risks associated to the physical stability of underground workings and surfaces exposed to weathering, such as tailings deposits slopes;
- Implement measurements to prevent accidents (environmental or public) by:
    - implementing security berms;
    - blocking accesses to mine entrances; and
    - profiling slopes if needed.

20.6.3 Progressive Closure

Progressive closure is performed simultaneously during operation and considers the following:

- Dismantling - All materials in disuse will be dismantled.
- Demolition, salvage and disposal - Not applicable during progressive closure.
- Physical stability:
    - Open pits.
    - Waste rock dumps.
- Geochemical stability - implementing covers considering the material to be covered (i.e. its mineralogy, net neutralization potential, presence of acid drainage, granulometry, topography and slopes) considering two types:
    - Type 1, to cover non-acid generating materials: 0.20 m of organic material, revegetated; and
    - Type 2 to cover acid generating materials: 0.20 m of organic material, overlaying a layer of 0.20 m draining material, overlaying a layer of 0.20 m clay material, overlaying a 0.20 m thick layer of limestone; and revegetated.
- Hydrological stability - implementing collector channels considering two types:
    - Type 1 - trapezoidal masonry channel with base and height of 0.50 m and 0.50 m and slope of 1H: 2V (flow 0.45 m3/sec);
    - Type 2 - trapezoidal masonry channel with base and height of 0.60 m and 0.65 m and slope of 1H: 2V (flow 0.90 m3/sec);
- Landform - consist of levelling, re-contouring and organic soil coverage;
- Revegetation - planting native grasses such as Stipa Ichu and Calamagrostis sp.;
- Social programs - programs are designed year by year considering the following topics:
    - Education;
    - Healthcare;
    - Local sustainable development;
    - Basic infrastructure;

- Institutional and capabilities empowerment; and
- Culture promotions.

20.6.4 Final Closure

For Final Closure, a final Updated Closure Plan must be presented detailing the closure specifications and process of public consultation. Components that must be closed according to the last approved closure plan and its amendment include: Leach Pads, Open Pit Excavations, Operation Ponds, Processing Plants, Laboratory, Waste Dumps. A full list of installations is given in Table 20-4 to Table 20-10.

Table 20-4: Open-pits identified in mine closure plan

OPEN PITS						
Code	Component	Name	UTM WGS 84 Coordinates		Altitude masl	Environmental Management Tool
			East	North		
IRL-TJ-01	Open pit	Susan	439633	8609848	4875	EIA - PCM*
IRL-TJ-03	Open pit	Diana	439196	8609912	4810	EIA - PCM*
IRL-TJ-03	Recovered material area	Scree Slope	439475	8609562	4835	Modification of the EIA

Table 20-5: Processing facilities identified in mine closure plan

PROCESSING FACILITIES						
Code	Component	Name	UTM WGS 84 Coordinates		Altitude masl	Environmental Management Tool
			East	North		
IRL-PAD-01	Leach PAD	Leach PAD Stage 1	437307	8610289	4744	EIA - PCM*
		Leach PAD Stage 2	437495	8610291	4775	EIA - PCM*
		Leach PAD Stage 3	437459	8610502	4760	Modification of the EIA
		Leach PAD underdrain sump Stage 1	436955	8610304	4675	EIA - PCM*
		Leach PAD underdrain sump Stage 2	437245	8610106	4685	EIA - PCM*
		Underdrain monitoring well Stage 3	437337	8610613	4705	Modification of the EIA
		Pregnant solution Pond	437177	8610126	4681	EIA - PCM*
		Poza de grandes Eventos	437025	8610218	4680	EIA - PCM*
		PLS and "Poza de grandes eventos" underdrain sump	436926	8610284	4670	EIA - PCM*
IRL-PCH-01	Crushing Plant	Primary Crusher	437926	8610125	4785	EIA - PCM*
IRL-ADR-01	Processing Plant	ADR Plant	437072	8610390	4790	EIA - PCM*
		ADR Plant Second Adsorption Circuit	437077	8610125	4790	Modification of the EIA
IR-LAB-01	Laboratories	Chemical Laboratory	437048	8610434	4688	EIA - PCM*
		Metallurgic Investigations Laboratory	437060	8610408	4688	EIA - PCM*

Table 20-6: Waste management facilities identified in mine closure plan

WASTE MANAGEMENT FACILITIES						
Code	Component	Name	UTM WGS 84 Coordinates		Altitude masl	Environmental Management Tool
			East	North		
IRL-BD-01	Waste rock Deposit	Waste Rock Dump	439339	8610202	4820	EIA - PCM*
		Collecting and monitoring sump of the waste rock dump discharge	439547	8610313	4730	EIA - PCM*
		Waste rock dump dissipation sump	439612	8610366	4740	EIA - PCM*
		Sedimentation and monitoring sump of the waste rock dump	439654	8610384	4739	EIA - PCM*
IRL-BMI-01	Inadequate material Deposit	Inadequate material dump	437259	8611398	4720	EIA - PCM*
		Underdrain sump of the Inadequate material dump	437106	8611368	4690	EIA - PCM*
IRL-RS-01	Waste Deposit	Sanitary Filling	436836	8610720	4670	EIA - PCM*
		Recycling Yard	436869	8610713	4681	EIA - PCM*

Table 20-7: Areas for buried material identified in mine closure plan

AREAS FOR BURIED MATERIAL						
Code	Component	Name	UTM WGS 84 Coordinates		Altitude masl	Environmental Management Tool
			East	North		
IRL-MP-01	Mud Quarry	Granizo	437393	8611147	4725	EIA - PCM*
IRL-MP-02		Hueco	437665	8610043	4715	EIA - PCM*
IRL-MP-03		Campamento Nuevo	436772	8610718	4675	EIA - PCM*
IRL-MP-04		Granizo II	437302	8611087	4705	EIA - PCM*
IRL-MP-05		Comedor	436795	8610493	4680	EIA - PCM*
IRL-MP-06		Almacen 2	437691	8609856	4715	EIA - PCM*
IRL-MP-07	Materials Quarry	Tania II Stage I	437744	8610732	4380	EIA - PCM*
		Tania II Stage II	437950	8610540	4860	EIA - PCM*
		Tania II Stage III	438068	8610348	4830	EIA - PCM*
		Tania II Stage IV	438254	8610190	4875	EIA - PCM*
IRL-MP-08		Carmen 1	438475	8609766	4870	EIA - PCM*
IRL-MP-09		Carmen 2	438550	8610045	4905	EIA - PCM*
IRL-MP-10		Carmen 3	438748	8609945	4810	EIA - PCM*
IRL-MP-11		Jazmin	437852	8610574	4825	EIA - PCM*
IRL-MP-12		Canchita	437639	8609960	4710	EIA - PCM*
IRL-MP-13	Aggregates Quarry	Alina	437587	8610769	4750	EIA - PCM*
IRL-MP-14		Mikita	437534	8610616	4755	EIA - PCM*

Table 20-8: Water management facilities identified in mine closure plan

WATER MANAGEMENT FACILITIES						
Code	Component	Name	UTM WGS 84 Coordinates		Altitude masl	Environmental Management Tool
			East	North		
IRL-MA-01	Fresh Water Supply	Water tank	437737	8609534	4845	EIA - PCM*
		Tank 1	438811	8609308	4685	EIA - PCM*
		Tank 2	438244	8609437	4845	EIA - PCM*
		Tank 3	437887	8610701	4895	EIA - PCM*
IRL-MA-02	Drinking water treatment system	Drinking water Treatment Plant	436589	8610409	4700	EIA - PCM*
IRL-MA-03	Domestic water treatment system	Treatment system of the domestic waste water PTARD-1	436928	8610671	4670	EIA - PCM*
		Treatment system of the domestic waste water Septic tank	438982	8608973	4815	EIA - PCM*
		Treatment plant of the domestic waste water PTARD-2 (administrative offices)	437664	8609552	4770	Modification of the EIA
IRL-MA-04	Industrial waste water treatment system	Detoxification Plant	437004	8610348	4681	EIA - PCM*
		Hydrolysis Plant	437029	8610322	4680	EIA - PCM*

Table 20-9: Other project related facilities identified in mine closure plan

OTHER PROJECT RELATED FACILITIES						
Code	Component	Name	UTM WGS 84 Coordinates		Altitude masl	Environmental Management Tool
			East	North		
IRL-INF-01	Infrastructure	General warehouse	436997	8610401	4715	EIA - PCM*
		Cyanide warehouse	437051	8610394	4687	EIA - PCM*
		Reagents warehouse	437060	8610403	4687	EIA - PCM*
		Lime warehouse	437867	8610094	4765	EIA - PCM*
		Warehouse 2	437535	8609811	4715	EIA - PCM*
IRL-INF-02		Electric maintenance workshop	438041	8609985	4685	EIA - PCM*
		Machinery workshop	437003	8610443	4785	EIA - PCM*
		Heavy machinery workshop	438047	8610005	4784	EIA - PCM*
IRL-INF-03		Administrative offices	437747	8609555	4770	EIA - PCM*
IRL-INF-04		Electric generation system (Electrogen group)	437930	8610105	4770	EIA - PCM*
IRL-INF-05		Gas station	437655	8610321	4755	EIA - PCM*
IRL-INF-06		Powder magazine	438178	8609010	4890	EIA - PCM*
IRL-INF-07		Volatilization field	437518	8609840	4710	EIA - PCM*
IRL-INF-08		Metereologic station	438207	8609395	4855	EIA - PCM*
IRL-INF-09		Explorations area	436871	8610655	4675	EIA - PCM*
IRL-INF-10		Oil trap	-	-	-	-
IRL-INF-11		Control and vigilance Posts	-	-	-	-
IRL-INF-12		Garden center	436895	8610703	4673	EIA - PCM*
IRL-INF-13		Greenhouse	436890	8610670	4669	EIA - PCM*
IRL-INF-14		Composting Field	436916	8610687	4671	EIA - PCM*

OTHER PROJECT RELATED FACILITIES						
IRL-INF-15		Vermicompost field	436954	8610700	4670	EIA - PCM*
IRL-INF-16		Nurse office	437692	8609549	4765	EIA - PCM*
IRL-INF-17		Carpentry workshop	437681	8609541	4765	EIA - PCM*
IRL-INF-18		Hazardous waste temporal storage	436851	8610756	4672	EIA - PCM*
IRL-INF-19		Washing site	438059	8610019	4785	EIA - PCM*
IRL-INF-20		Power house (offices)	437719	8609546	4765	EIA - PCM*
		Power house (Plant)	437097	8610359	4685	EIA - PCM*
IRL-INF-21		Antenna	437751	8609535	4770	EIA - PCM*
IRL-INF-22		Accesses	-	-	-	-

Table 20-10: Housing and services for the workers identified in mine closure plan

HOUSING AND SERVICES FOR THE WORKERS						
Code	Component	Name	UTM WGS 84 Coordinates		Altitude masl	Environmental Management Tool
			East	North		
IRL-CM-01	Camp	Staff camp	436897	8610700	4672	EIA - PCM*
IRL-CM-02		Laborer's camp	436686	8610315	4760	EIA - PCM*

20.7 Closure Monitoring

Operational monitoring continues until final closure is achieved (Section 20.2).

20.8 Post-Closure Monitoring

According to the Corihuarmi Mine Unit Closure Plan, updated to reflect increased production, (Report N° **1683-2013-MEMAAM/MPC/RPP/ADB/LRM)** all post closure monitoring activities shall be performed as follows:

- Physical stability monitoring - Monitoring of possible displacements and settlements, cracks, slip surfaces control in mine entrances, open pits, tailings deposit, waste rock dumps, camps and auxiliary related installations by topographic landmarks control (fixed concrete bases and stainless plates). The established monitoring frequency for the first two years is bi-annual, and for the following three years annually.
- Geochemical monitoring - Monitoring of tailings deposit, waste rock dumps, and open pits inspecting the cover´s surface for cracks and slip surfaces. The established monitoring frequency is bi-annual for the first two years and annually for the following three years;
- Hydrological monitoring - Inspection of the hydraulic components of the tailings deposit, waste rock dumps, and open pits for (structural) fissures, settlements,

collapsing and flow obstructions. The established monitoring frequency for the first two years is bi-annual, and for the following three years annually.

- Water quality monitoring - In three monitoring stations (MA-1, MA-2, MA-3, see footnote 1) for: pH, electrical conductivity, total suspended solids, total dissolved solids, nitrates, alkalinity, acidity, hardness, total cyanide, cyanide wad, ammonium, sulfates, total metals (Al, As, Cd, Ca, Cu, Fe, Pb, Hg, Mo, Ni, Se and Zn), DBO5, DQO, dissolved oxygen. The established monitoring frequency for the first two years is quaternary, and for the following three years biannual. No groundwater quality monitoring has been contemplated.
- Sediments monitoring - Data from three monitoring stations (MA-1, MA-2, MA-3, see footnote) is analyzed for: total metals (Al, As, Cd, Ca, Cu, Fe, Pb, Hg, Mo, Ni, Se and Zn), total cyanide. The data collected shall be compared with reference values for the National Oceanic and Atmospheric Administration of the USA. The established monitoring frequency for the first two years is bi-annual, and annual for the following three years.
- Hydrobiological monitoring - In three monitoring stations (MA-1, MA-2, MA-3, see footnote) for: phytoplankton, zooplankton, bentos, macrophytas. The established monitoring frequency for the first two years is bi-annual, and annual for the following three years.
- Biological monitoring - Vegetation control to verify the effectiveness of the plant cover systems evaluating the extent of engraftment of the species, the success of the revegetation systems and the need for complementary planting, seeding, fertilization and vegetation control. The established monitoring frequency for the first two years is bi-annual, and annual for the following three years.
- Social monitoring - Monitoring to ensure the quality and accuracy of the information collected in the field, ensure the compliance with the goals and achievements of the objectives of the social activities and programs, and achieve its sustainability. The post closure social program monitoring is summarized in Table 20-7.

21 CAPITAL AND OPERATING COSTS

The main capital costs are related to pad expansion and mine closure. There are not capital costs related to equipment because the mine currently works with contractors and the own equipment have already been purchased at the time of this report and it is considered a sunk cost.

21.1 Capital Cost Estimates

Estimated Capital costs are presented in Table 21-1. The pad expansion and mine closure cost estimates are based on pre-feasibility studies.

Table 21-1: Capital Cost Estimates

Capital Costs	Units	Cost
Pad Expansion	US$	2,152,481
Mine Closure	US$	3,475,292
Total	**US$**	**5,627,773**

21.2 Operating Cost Estimates

Historical operating costs for January 1, 2017 through December 31, 2017 were used as the basis for the cut offs calculation and the Mineral Reserves estimation (Table 21-2).

Table 21-2: Operating Cost Estimates

Unit Operating Costs	Units	Susan	Scree Slope	Cayhua	Laura	Diana Extension	Cayhua Norte	Scree Slope Extension
Mining	US$/t	1.71	1.34	1.27	1.27	1.34	1.29	1.34
Processing	US$/t	1.22	1.22	1.22	1.22	1.22	1.22	1.22
G&A	US$/t	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Total Unit Cost	**US$/t**	**4.10**	**3.73**	**3.66**	**3.66**	**3.73**	**3.68**	**3.73**

22 ECONOMIC ANALYSIS

22.1 Introduction

The Corihuarmi mine is currently a producing mine and in the last three years it had a gross revenue of 86.5 M$, as is detailed in Table 22-1.

Table 22-1: Corihuarmi - Gross Revenue 2015 to 2017

Production Year	Gross Revenue (M$)
2015	27.6
2016	29.2
2017	30.7
Total	**86.5**

According to NI 43-101 a "producing issuer" means an issuer with annual audited financial statements that disclose:

- Gross revenue, derived from mining operations, of at least 30 million Canadian for the issuers most recently completed financial year, and
- Gross revenue, derived from mining operations, of at least $90 million Canadian in the aggregate for the issuer's three most recently completed financial year.

Gross revenue from the Property in 2017 was 30.7 M$, but gross revenue derived from three most recently completed financial year was 86.5 M$ less than the 90 M$ required to qualify as a producing issuer. For this reason, an economic analysis was completed for the Property.

22.2 Cash flow forecast

The cash flow was based on the tonnages and grades of the mining schedule, gold metal price, capex and opex estimation, and applicable taxes according to Peruvian legislation.

The main economic factors and assumptions used in the economic analysis include the following:

- Gold Price of 1,250 US$/oz.
- Discount rate of 10%.
- Average Au head grade of 0.28 g/t.
- Mine life of 2.8 years.
- Variable mining royalty rate depending on the operating margin.
- Variable special mining royalty rate depending on the operating margin.

- Workers profit sharing rate of 8%.
- Taxes rate of 30%.
- Discount rate of 10%.
- Numbers are presented on a 100% ownership basis and do not include financing costs.

The cash flow is presented in Table 22-2 and Table 22-3 on an annual basis from 2018 to 2020.

Table 22-2: Cash Flow Analysis - Mining Schedule

Mining Schedule		2018	2019	2020
Ore	t	3,110,000	3,110,000	2,522,771
Waste	t	2,261,099	1,116,585	975,584
Total	t	5,371,099	4,226,585	3,498,356
Au Grade	g/t	0.280	0.279	0.269
Metal content	oz	28,046	27,888	21,784
Metal recovered	oz	21,116	20,997	16,402
SR	w/o	0.73	0.36	0.39

Table 22-3: Cash Flow Analysis - Economic Considerations

Economic Analysis		2018	2019	2020
Metal content	oz	28,046	27,888	21,784
Metal recovered	oz	21,116	20,997	16,402
Price Au	US$/oz	1,250	1,250	1,250
Revenue	US$	26,395,167	26,246,084	20,502,849
Selling Cost	US$/oz	6.60	6.60	6.60
Selling Cost	US$	139,366	138,579	108,255
Minandex Contract	US$/oz	36.08	36.08	36.08
Minandex Contract	US$	761,870	757,567	591,794
Gross Profit	**US$**	**25,493,931**	**25,349,938**	**19,802,800**
Ore Mining Cost	US$	4,846,413	4,984,284	4,749,330
Waste Mining Cost	US$	2,904,643	1,410,552	1,234,050
Incremental Haulage	US$	204,394	161,526	324,505
Processing Cost	US$	4,140,336	4,140,336	3,410,881

G&A	US$	3,638,700	3,638,700	2,951,643
Operating Costs	**US$**	**15,734,485**	**14,335,398**	**12,670,409**
EBITDA	**US$**	**9,759,445**	**11,014,540**	**7,132,391**
Operating margin	%	38.28%	43.45%	36.02%
Mining Royalty Rate	%	5.50%	6.25%	5.50%
Mining Royalty	US$	536,769	688,409	392,281
Special Mining Royalty Rate	%	4.40%	4.80%	4.40%
Special Mining Royalty	US$	429,416	528,698	313,825
EBIT	**US$**	**8,793,260**	**9,797,433**	**6,426,284**
Workers Profit Sharing Rate	%	8.00%	8.00%	8.00%
Workers Profit Sharing	US$	703,461	783,795	514,103
Income before taxes	US$	8,089,799	9,013,638	5,912,181
Taxes Rate	%	30.00%	30.00%	30.00%
Taxes	US$	2,426,940	2,704,092	1,773,654
NOPAT	**US$**	**5,662,860**	**6,309,547**	**4,138,527**
Pad expansion	US$	1,076,241	1,076,241	
Mine Closure	US$	316,281	316,281	2,842,730
Capital Costs	**US$**	**1,392,522**	**1,392,522**	**2,842,730**
Free Cash Flow	**US$**	**4,270,338**	**4,917,025**	**1,295,797**

The Net Free Cash Flow is 10,483,160 US$ and the Net Present Value at a discount rate of 10 % is 8,919,334 US$.

Corihuarmi is an active mine and there are no major planned changes to infrastructure therefore; internal rate of return and payback period of capital were not considered as part of this economic analysis.

22.3 Sensitivity analysis

Table 22-4 shows sensitivity analysis done in the main parameters assumed in the cash flow and Figure 22-1 shows a spider graph where these sensitivities are plotted.

The NPV is highly sensitive to gold price, and only slightly sensitive to ore mining cost, processing cost, G$A cost and waste mining cost.

Table 22-4: Sensitivity Analysis

	-40%	-30%	-20%	-10%	0%	10%	20%	30%	40%
Price	-5,270,779	-1,475,867	2,125,800	5,546,493	8,919,334	12,229,965	15,450,110	18,579,766	21,704,255
Ore Mining Cost	11,296,689	10,815,625	10,125,924	9,478,553	8,919,334	8,257,721	7,676,918	7,001,064	6,290,808
Waste Mining Cost	9,870,112	9,599,137	9,397,304	9,193,128	8,919,334	8,645,539	8,410,058	8,195,417	7,918,980
Incremental Haulage Cost	9,049,635	9,017,060	8,984,484	8,951,909	8,919,334	8,886,758	8,854,183	8,821,608	8,789,033
Processing Cost	10,970,077	10,414,189	9,901,783	9,412,491	8,919,334	8,394,014	7,829,008	7,381,161	6,842,928
G&A Cost	10,692,760	10,206,201	9,762,613	9,412,212	8,919,334	8,464,499	7,969,979	7,594,551	7,095,353

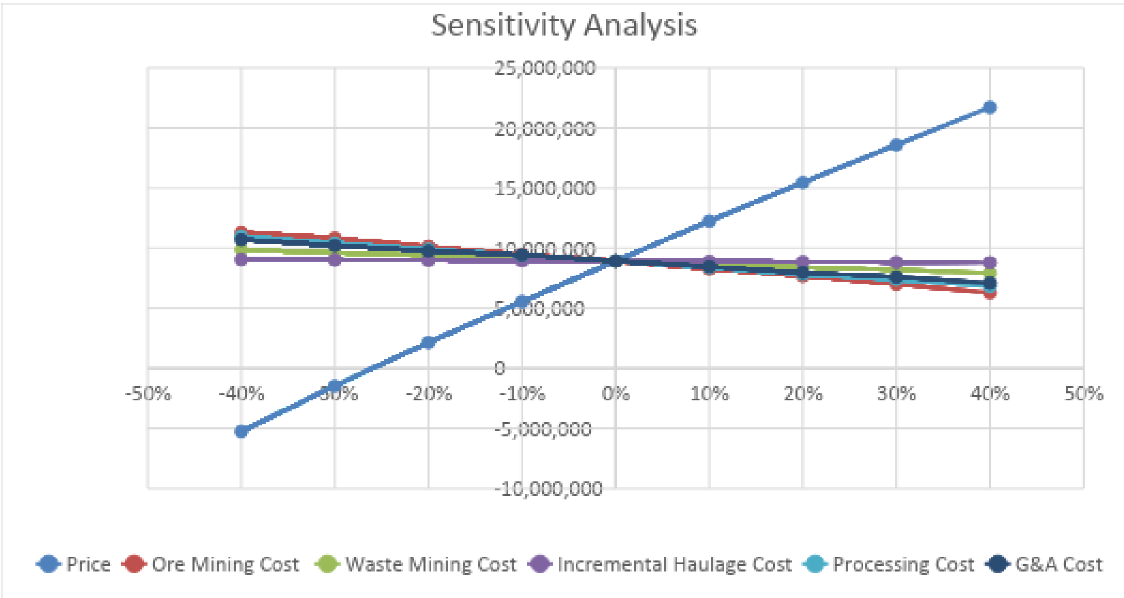

Figure 22-1: Spider Graph of Economic Sensitivities

23 ADJACENT PROPERTIES

There are no operating properties of significance adjacent to Corihuarmi.

24 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information pertaining to the estimation of the mineral resources and reserves at Corihuarmi mine.

25 Interpretation and Conclusions

25.1 Geology setting and mineralization

- The geology of Corihuarmi and mineralising controls are well understood

25.2 Exploration

- The exploration methods used throughout the history of the Property have been effective in identifying high-sulphidation style mineralisation

25.3 Mineral Processing and metallurgical testing

- No new metallurgical test work has been conducted.
- The previous test work has been deemed suitable to project the metallurgical performance of the additional resources, providing that no sulphide material is to be treated.

25.4 Mineral Resource estimates

- The Mineral Resources conform to CIM definitions and comply with all disclosure requirements for Mineral Resources set out in NI 43-101.
- The Mineral Resources have been estimated by Mr J. Limaylla (independent consultant) and reviewed by Dr A. Fowler (QP).
- The input data was suitable for use in a Mineral Resource Estimate and the gold grade estimation process was consistent with CIM mineral resource, mineral reserve estimation best practice guidelines.
- Dr Fowler did some minor changes in the resource classification to conform CIM definitions.
- The Mineral Resources are 11,800,000 t grading 0.27 g/t Au of Measured Resources, 1,760,000 t grading 0.27 g/t Au of Indicated Resources and 420,000 t grading 0.30 g/t Au of Inferred Resources. The tonnages are reported at 0.09 g/t Au cut-off grade.

25.5 Mineral Reserve estimates and Mining Methods.

- The Mineral Reserves conform to CIM definitions and comply with all disclosure requirements for Mineral Reserves set out in NI 43-101.
- The Mineral Reserves have been estimated by Mr Espinoza (QP) following the standard practices of open pit evaluation.

- The open pit mining method is suitable to the deposit type, grade distribution and economics.
- The life of mine is 2.8 years based on Mineral Reserves of 8,742,771 t grading 0.28 g/t Au (January 2018 to October 2020).

25.6 Recovery methods

- The existing plant infrastructure and recovery methods will continue to be suitable to treat the remaining reserves.

25.7 Capital and operating costs

- Corihuarmi mine is currently a mine in production and most of capital costs have been considered sunk costs.
- The main capital costs are related to pad expansion and mine closure with a total amount of 5,627,773 US$.
- The operating costs have been calculated based on historical costs of the last year of production and is supported on 10 years of mine operation. The average operating cost is 3.76 US$/t.

25.8 Economic analysis

- The economic analysis shows a positive cash flow that support the statement of Mineral Reserves.
- The economic analysis shows the gross profit, operating and capital costs, and all Peruvian taxes applicable to mining industry.
- The net free cash Flow is 10,483,160 US$ and the net present value at a discount rate of 10 % is 8,919,334 US$.
- The sensitivity analysis shows that changes in the mining and processing cost slightly affect the net present value for the whole life of mine.
- The gold metal price is the main driver. The net present value is positive until a gold price of 926 US$/oz.

26 RECOMMENDATIONS

26.1 Geology setting and mineralization

- Geology and mineralising controls are well understood my MIRL and Mr Seers (QP) offers no recommendations for improvement in this regard

26.2 Exploration

- Mr Seers (QP) recognises that the exploration techniques employed at the Property have been effective in identifying oxide gold deposits associated with high-sulphidation epithermal centres. Mr Seers (QP) recommend that consideration is given to the exploration of sulphide mineralisation at greater depths

26.3 Mineral Processing and metallurgical testing

- Run leaching bottle and column test work with material from each zone to better project the metallurgical recoveries.
- Run metallurgical test work on Laura zone, low grade (mine plan) samples and sulphide material.

26.4 Mineral Reserve estimates and Mining Methods

- Mr Espinoza (QP) recommends building a robust database of dilution and recovery measures to control them and to guarantee the mineral reserves estimation stated in this report are mined and recovered at all.

26.5 Recovery methods

- Ensure that only oxide ore is placed on the pads, and not sulphide material

27 REFERENCES

Referenced material is listed: Document - Author - Date

- Estimación de Reservas – Prepared by Minera IRL (2017) [“MIRL 2017”]
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