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NI 43-101 TECHNICAL REPORT
AND
UPDATED MINERAL RESOURCE ESTIMATE
ON THE
CHITA VALLEY PROJECT
SAN JUAN PROVINCE, ARGENTINA
30° 36’ S and 69° 30’ W

FOR

MINSUD RESOURCES CORP.

NI-43-101 & 43-101F1
TECHNICAL REPORT

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P&E Mining Consultants Inc.,
Report 335

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1.0 SUMMARY

Minsud Resources Corp. ("Minsud" or the "Company") retained P&E Mining Consultants Inc. ("P&E") to complete an independent National Instrument 43-101 ("NI 43-101") compliant Technical Report and Mineral Resource Estimate on the Chita Deposit on the Chita Valley Property (the "Property"), located in the San Juan Province of Argentina. The Mineral Resource Estimate considers copper as a primary consideration along with molybdenum, gold and silver mineralization at the Chita Deposit that is potentially amenable to surface mining.

The Chita Property covers 17,422.65 hectares (174 km^2) and consists of seven contiguous properties: the Brechas Vacas, Chita and Minas de Pinto mining concessions or Minifestaciones de Descubrimiento (8,514.24 ha); and four exploration permits or Cateos, Chita Este (4,490.77 ha), Brechas Vacas Oeste (1,232.15 ha), Chita Norte (1,881.31 ha), Chita Sur (1,304.18 ha). The Company, through its affiliate MSA owns 100% of the Chita Property and the four adjacent claims (Chita Este, Brechas Vacas Oeste, Chita Norte, Chita Sur). Minsud is also the beneficial owner of a 50% interest in the trusts that own 100% of the Brechas Vacas Property and the Minas de Pinto Property, while the remaining 50% beneficial interest in each of these properties is subject to an exclusive and irrevocable purchase option agreement granted in favour of MSA. All required payments and terms as per the various ownership agreements are up to date.

The Chita Valley Property is located within the eastern part of the mountain range known as the Andean Frontal Cordillera. The Palaeozoic basement of the Andean Frontal Cordillera is exposed out on its easternmost margin, where it meets the Rodeo-Calingasta basin. Based on surface outcrop and drill core observations, the Chita Valley Complex includes at least five episodes of Tertiary intermediate to felsic epizonal intrusive activity. The principal target types sought in the Chita Valley area are porphyry Cu-Mo-Ag-Au and epithermal gold (± Ag and base metals) mineralization.

Geologically, the Chita Valley Project is located within the eastern part of the mountain range known as the Andean Frontal Cordillera. The oldest exposed basement rocks in the Chita Valley region belong to the Upper Carboniferous-Permian age Agua Negra Formation. On the Chita Valley Properties, the Agua Negra units are primarily shallow marine quartzites, lutites and interbedded sandstones and lutites. Permo-Triassic granitoids are exposed on the Chita Valley Properties are predominantly granodioritic in composition and intrude the Agua Negra Formation. All of the above lithologies have been intruded by sub-volcanic andesitic-dacitic porphyry bodies and felsic dykes of Mid- to Upper-Tertiary Age. One of these exposures, the southern sector of Chita Porphyry has been dated as Miocene age (11.7 ma.). Structurally the Chita Valley Project is located along a NW striking valley associated with a regional transfer fault. A complex of sub-volcanic mineralized intrusives are located at the intersection of the NW transfer faults with the N-S faults of the Andean structural system, as is the Chita copper-molybdenum mineralized porphyry complex.

P&E's NI 43-101 Mineral Resource Estimate for the Chita Deposit includes Indicated Resources of 33.02 million tonnes at a grade of 0.43% Cu and Inferred Resources of 8.59 million tonnes at a grade of 0.40% Cu.

The Mineral Resource Estimate has been prepared in compliance with NI 43-101 and Form 43-101F1 which require that all estimates be prepared in accordance with the "CIM Definition

Standards on Mineral Resources and Mineral Reserves as prepared by the CIM Standing Committee on Reserve Definitions" and in effect as of the effective date of this report.

1.1 MINERAL RESOURCE ESTIMATE

The NI 43-101 Mineral Resource Estimate in the Indicated and Inferred Resource categories for an open pit cut-off grade of 0.25% Cu is summarized in Table 1.1.

TABLE 1.1
CHITA PIT CONSTRAINED MINERAL RESOURCE ESTIMATE(1-5)
at 0.25% Cu Cut-Off

Category	Tonnes M	Cu %	Contained Cu M lb	Au g/t	Ag g/t	Mo %
Indicated	33.02	0.43	310.8	0.07	2.28	0.018
Inferred	8.59	0.40	75.4	0.07	1.73	0.016

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. It is noted that no specific issues have been identified as yet.
(2) The Inferred Mineral Resource in this estimate has a lower level of confidence that that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
(3) Mineral Resources were estimated utilizing Gemcom software and conventional block modeling within 3D wireframes defined on a 0.25% Cu cut-off, capped composites and inverse distance grade interpolation.
(4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.
(5) The 0.25% Cu Mineral Resource Estimate cut-off grade was derived from the Nov 30/17 two year trailing average Cu price of US$2.46/lb, 78% process recovery, US$8/t process cost, and US$2.50/t G&A cost. An optimized pit shell was utilized for Mineral Resource reporting that utilized a US$2/t mining cost and 45 degree pit slopes.

1.2 CONCLUSIONS AND RECOMMENDATIONS

The Chita Valley Project is an early stage prospect with widespread indications of Cu+/-Mo+/-Au+/-Ag mineralization associated with a large Miocene age porphyry/diatreme breccia/epithermal vein complex. The project is a spatially and temporally zoned hydrothermal system that includes an early porphyry style of Cu+Mo mineralization, followed by components of high, intermediate and low sulphidation quartz-base metal +/- Au-Ag mineralization in various igneous and sedimentary lithologies and breccias, and finally a late chalcedony vein event.

The large size of the property package coupled with the complexity of mineralization styles indicates a clear need for a careful and systematic approach to target definition.

This Technical Report containing a CIM compliant Mineral Resource Estimate was prepared primarily to document what the Company considers to be a material change to Mineral Resources previously published by press release and supported by an earlier Technical Report.

The following observations and conclusions are made concerning the updated Mineral Resource Estimate:

- The primary purpose of this Technical Report and the Indicated and Inferred Mineral Resource Estimate therein, is to continue providing the basic foundation for advancing the Chita Valley Project in a logical and systematic manner from its present status, through the various stages of Mineral Resource confidence, and the various stages of economic viability determinations. While commercial success is the obvious main objective, minimizing exploration expenditure losses is equally important in the event of a non viable project, country or environmental risks.

- It is concluded that the drilling assay database is sufficient for current purposes. However, substantial campaigns of target testing, outline and infill drilling will be required to fully test the whole Chita South and North Porphyry area.

- It is also believed that the preliminary mineralogical and process testwork is sufficiently encouraging to proceed to a Preliminary Ecomomic Assessment.

The Indicated and Inferred Mineral Resource model indicates that (up to a point) higher cut-off and average grades are possible without excessive separation of the potentially open pit mineable areas. Potential stripping ratios are also favourable.

Various other factors including a mining friendly region and province, lack of active glacial features and very low population density are positive for potential mining operations.

In general it is concluded that the Chita Valley Project is a large, very promising and underexplored region. The Chita Porphyry South Area is the most advanced sector in terms of detailed exploration and drilling.

- **Topographic control**: DGPS surveying has been used to locate all historical and Company drill collars, as well as a variety of topographic features that may be incorporated into a digital terrain model. Downhole inclination and directional surveys have been completed for all Minsud drill holes in the 2014 to 2017 programs. All Minsud work is in the UTM coordinate system WGS84 Zone 19 (Southern Hemisphere) as well as the Gauss Kruger faja 2 – POSGAR94 system used for mineral property boundaries. The current budget provides for DGPS surveying of new drill collars, while downhole surveys are included in the diamond drilling budget.

- **Access roads, road maintenance and drill set-up sites**: The current proposal includes several sites in three general areas. While it is unlikely that all these sites can be drilled now due to likely budget constraints, it is considered prudent to construct the roads and set-ups all at once for logistical purposes. Due to the rugged terrain, access routes and individual set-ups might vary somewhat from the initial plan.

- **Geophysical surveys**: While magnetic and IP/Resistivity surveys have been completed to varying degrees of detail throughout the project area between the Placetas and Minas de Pinto, there are deficiencies for selecting certain specific drilling targets. For example, the N-S oriented magnetic and IP survey lines are inadequate for defining potential epithermal vein structures oriented in similar directions. Line spacings of 200 m in the Chinchillones and Placetas sectors are also too wide for effective detailed interpretation. A modest budget is allocated as warranted for selective infill around drill targets.

- **Diamond drilling program**: There is no specific detailed plan for new drilling at Chita Porphyry or elsewhere. However, the following conceptual plan has been formulated by Minsud management as a compromise between available funding and overall work requirements:

  - **Definition drilling at Chita Porphyry South**: This is a large budget undertaking that is not warranted of justified in the current financial market.

  - **Outline drilling at Chita Porphyry South**This is nearing completion. A few strategically located holes are required to complete outline drilling. This is planned for initial 2018 drilling program.

  - **Exploration drilling Chita Porphyry**: This has two aspects; the first to begin testing the northern flank of Chita Porphyry for mineralization similar to that at Chita Porphyry South, and the second to begin testing the Chita Porphyry system for large primary chalcopyrite-bornite mineralization targets. This is planned for initial 2018 drilling program.

  - **Exploration drilling outside Chita Porphyry**: A number of targets areas are being considered for initial testing, including the Chinchillones Breccia/Porphyry complex, the Placetas Flow Dome Complex and selected areas of Minas de Pinto. This is provisionally planned for the second 2018 drilling program.

- **Mineralogical studies/metallurgical testwork**: Petrographic and SEM studies are planned for selected core samples from the 2018 drilling programs. The Company also plans to continue with the second stage of the CodelcoTec Bioleach SX-EW column testwork.

- **Environmental baseline study**: Water quality monitoring and weather data collection work will continue as previously planned.

- **Report**: An internal report with revisions to geological and alteration maps will be prepared by Minsud technical personnel.

The main budget items connected with this project over the next 12 months are expenditures for the following:

- Costs of administrative and technical staff and consultants/contractors to manage and implement the program.
- Support Costs for fieldwork including food, accommodations, field supplies, travel, vehicles, communications, etc.
- Topographic control costs associated with DGPS surveys.
- Obtain or renew various permits required to maintain properties and to conduct exploration/development activities.

- Access roads, road maintenance and drill set-up sites.
- Contract geophysical surveys.
- Contract diamond drilling, includes mob-demob and down-hole surveys.
- Assays/analyses.
- Metallurgical testwork.
- Environmental studies continuation.
- Fuel costs.
- Reports.
- G&A.
- VAT/HST.

A budget of approximately C$ 2.4 million is required to complete the 2018 exploration work on the Chita Valley Properties. This is a preliminary estimate for a firm or non-provisional program. Thorough program planning and cost estimations that will require tendered quotations from various contractors will need to be obtained before a final cost estimate can be made. Table 1.2 provides a preliminary summary of the total work program budget over 12-month period. In the opinion of P&E Mining Consultants Inc. this work is fully warranted and justified. Additional expenditures may be required to continue work on the Chita Valley Properties after the initial program is completed. Additional equity funding would be required for this.

TABLE 1.2
RECOMMENDED PROGRAM AND BUDGET

	US$ 1 = C$ 0.77	Amounts in C$ Details
Staffing		270,000
	Supervision & Consulting	115,000
	Field Geologists	88,000
	Casual Labour	62,000
	Data & maps Processing	5,000
Support Costs		130,000
	Food & Accom.	46,000
	Field Supplies & Equip.	37,000
	Exploration Permits	22,000
	Travel	12,000
	Communications	1,000
	Other	12,000
Property Acquisition Payments		162,000
	Brechas Vacas	75,000
	Minas de Pinto	87,000
Topographic Control		10,000
		10,000
Road and access construction		122,000
	Backhoe / Bulldozer	122,000
Diamond drilling		897,000
	Diamond Drilling (2500m - 1st tranche)	496,000
	Diamond Drilling (2000m - 2nd Tranche)	401,000

TABLE 1.2 **RECOMMENDED PROGRAM AND BUDGET**		
	US$ 1 = C$ 0.77	**Amounts in C$ Details**
Assays		61,000
	1250 samples @ $27/sample	34,000
	1000 samples @ $27/sample	27,000
Metallurgical Testwork		70,000
	3 additional Column tests	70,000
Geophysics		30,000
	IP/Resistivity Surveys	30,000
Environmental Baseline Studies		20,000
NI 43-101Report (balance)		28,000
HST & VAT (IVA 21% in Argentina)		275,000
Sub-Total		**2,075,000**
	General & Admin	**240,000**
	5% Contingency	**104,000**
	Grand Total for Budget Purposes	**C$ 2,419,000**

2.0 INTRODUCTION AND TERMS OF REFERENCE

2.1 TERMS OF REFERENCE

Minsud Resources Corp. retained P&E Mining Consultants Inc. ("P&E") to complete an updated, independent NI 43-101 Technical Report and Mineral Resource Estimate on the Chita Property, located in the Province of San Juan in Argentina. The Mineral Resource Estimate considers copper, molybdenum, gold and silver mineralization at the Chita Porphyry Deposit that is potentially amenable to open pit mining.

The current P&E Mineral Resource Estimate presented in this report has been prepared in full conformance and compliance with the "CIM Standards on Mineral Resources and Reserves – Definitions and Guidelines" as referred to in NI 43-101 and Form 43-101F, Standards of Disclosure for Mineral Projects and in force as of the effective date of this report.

This Technical Report was prepared by P&E, at the request of Mr. Carlos Massa, President and CEO of Minsud Resources, an Ontario registered company, trading under the symbol of "MSR" on the TSX-V Exchange with its corporate office at:

340 Richmond Street West,
Toronto, Ontario, Canada
M5V 1X2

This Technical Report is considered current as of February 7, 2018.

Mr. David Burga, P.Geo., a Qualified Person under the terms of NI 43-101, conducted a site visit of the Property on March 24 and 25, 2015, November 7 and 8, 2015 and December 5 and 6, 2017. Data verification sampling programs were conducted as part of the on-site reviews.

2.2 SOURCES OF INFORMATION

This Technical Report is based, in part, on internal company Technical Reports, and maps, published government reports, company letters, memoranda, public disclosure and public information as listed in the References at the conclusion of this Technical Report. Sections from reports authored by other consultants have been directly quoted or summarized in this Technical Report, and are so indicated where appropriate.

The present Technical Report is prepared in accordance with the requirements of NI 43-101 and in compliance with Form NI 43-101F1 of the Ontario Securities Commission (OSC) and the Canadian Securities Administrators (CSA). The Mineral Resource Estimate is prepared in compliance with the CIM Definitions and Standards on Mineral Resources and Mineral Reserves that are in force as of the effective date of this Technical Report.

2.3 UNITS AND CURRENCY

Unless otherwise stated all units used in this report are metric. Copper (Cu) and Molybdenum (Mo) values are reported as percentages (%), Gold (Au) and Silver (Ag) assay values are reported in grams of metal per tonne ("g/t Au"). Values reported in Cu, based on a Cu price of

$2.46/lb which was the two year trailing average. The US$ is used throughout this report unless otherwise specified.

The coordinate system used by Minsud for locating and reporting drill hole information is the UTM system. The Property is in UTM Zone 19S and the WGS84 datum is used. Maps in this Report use either the UTM coordinate system or Gauss Kruger-Posgar 94 datum coordinates that are the official registration coordinates of the local registry.

The following list shows the meaning of the abbreviations for technical terms used throughout the text of this report.

Abbreviation	**Meaning**
"4WD"	four wheel drive
"Ag"	silver
"As"	arsenic
"Au"	gold
"ALS"	ALS Global Geochemistry
"asl"	above sea level
"Alex Stewart"	Alex Stewart Argentina S.A.
"CIM"	Canadian Institute of Mining, Metallurgy and Petroleum
"cm"	centimetre(s)
"Cu"	copper
"DDH"	diamond drill hole
"DGFM"	Dirección General de Fabricaciones Militares
"DGPS"	differential global positioning system
"EIR"	Environmental Impact Report (DIA in Spanish)
"g/t"	grams per tonne
"ha"	hectare(s)
"ICP"	inductively coupled plasma
"IP/RES"	Induced Polarization / resistivity survey
"km"	kilometre(s)
"m"	metre(s)
"Ma"	millions of years
"MAG"	magnetometer survey
"MASA"	Minas Argentinas S.A.
"Mo"	molybdenum
"MSA"	Minera Sud Argentina S.A.
"NI"	National Instrument
"No."	number
"NSR"	Net Smelter Royalty
"P&E"	P&E Mining Consultants Inc.
"RC"	Reverse Circulation
"Rio Tinto"	Rio Tinto Mining and Exploration
"Silex"	Silex Argentina S.A.
"t"	metric tonne(s)
"T"	Imperial ton
"UTM"	Universal Transverse Mercator

3.0 RELIANCE ON OTHER EXPERTS

P&E has assumed, and relied on the fact, that all the information and existing technical documents listed in the References section of this Technical Report are accurate and complete in all material aspects. While P&E carefully reviewed all the available information presented to P&E, P&E cannot guarantee its accuracy and completeness. P&E reserves the right, but will not be obligated to revise our Technical Report and conclusions if additional information becomes known to us subsequent to the date of this Technical Report.

Although copies of the tenure documents, operating licenses, permits, and work contracts were reviewed, an independent verification of land title and tenure was not performed. P&E has not verified the legality of any underlying agreement(s) that may exist concerning the licenses or other agreement(s) between third parties but has relied on the clients solicitor to have conducted the proper legal due diligence.

A draft copy of this Technical Report has been reviewed for factual errors by Minsud and P&E has relied on Minsud's historical and current knowledge of the Property in this regard. Any statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and misleading at the date of this Technical Report.

4.0 PROPERTY DESCRIPTION AND LOCATION

The following descriptions are quoted or summarized from the records and regulatory filings of Minsud Resources Corp and its 99.56% controlled affiliate Minera Sud Argentina S. A. ("MSA"). P&E requested and obtained a letter dated January 4, 2018, updated up to March 16, 2018, from the Company's arm's length legal attorneys, Ricardo Daniel Lopez Legal License T° 75 F° 535 Colegio Público de Abogados de la Poder Judicial de la Nación Argentina, verifying the accuracy of the following descriptions.

4.1 REPÚBLICA ARGENTINA- MINERAL POLICY

The mining industry in Argentina is regulated by the Federal Mining Code, enacted in 1886 and subsequently amended several times. However, mineral deposits under Argentine law are provincially owned and the individual Provinces govern and administer the Federal Mining Code, along with decrees and resolutions issued by each individual Province. Individuals and corporations can obtain permits to explore, develop and freely dispose of the minerals extracted.

The Mining Code provides for two basic types of mineral rights; the "Cateo" or Exploration Permit and the "Manifestacion de Descubrimiento" (Mining Concession). The "Mina" is a Mining Concession with Commercial Mining Permit.

4.1.1 Cateo

The "cateo" is an exploration permit that grants a preferential right to obtain a mining concession in a specific exploration area. Exploration Permits are measured in 500 hectare nominal units. Individual Exploration Permits can have a surface area up to 10,000 hectares, equivalent to 20 nominal units. A company may request up to a maximum of 200,000 hectares in a particular Province. The right to explore is authorized for a limited time and it has periodic reductions in area as indicated in Table 4.1.

According to the size of the exploration permit there is a plan for reduction that basically follows the rule that the larger the surface the larger the term for exploring under the permit.

The process for acquiring an Exploration Permit involves filing an application form with the mining authority that basically includes the coordinates of the area of interest and payment of an exploration fee ("canon"). Additionally the claimant has to outline the proposed exploration activities as well as the assessment of the environmental impact and provide information about the surface landowners.

Once the Registro Gráfico verifies that the area is free of pre-existing claims the exploration permit is formally placed on the Cadaster and then is published in the official bulletin. The surface owners are notified before the permit is granted.

As a result of the field work performed within the exclusive area of the exploration permit, the explorer can request for a mining concession in some or all of the area of the Exploration Permit, ("Manifestación de Descubrimiento"), to enable development of a potential mining operation.

TABLE 4.1 EXPLORATION PERMIT ("CATEO"), AREA REDUCTION SCHEDULE				
Number of Units	**Original Area (ha)**	**Period (days)**	**Surface Area Remaining After 300 days**	**Surface Area Remaining After 700 days**
1	500	150		
2	1,000	200		
3	1,500	250		
4	2,000	300		
5	2,500	350	2,250	
6	3,000	400	2,500	
7	3,500	450	2,750	
8	4,000	500	3,000	
9	4,500	550	3,250	
10	5,000	600	3,500	
11	5,500	650	3,750	
12	6,000	700	4,000	
13	6,500	750	4,250	3,125
14	7,000	800	4,500	3,250
15	7,500	850	4,750	3,375
16	8,000	900	5,000	3,500
17	8,500	950	5,250	3,625
18	9,000	1,000	5,500	3,750
19	9,500	1,050	5,750	3.875
20	10,000	1,100	6,000	4,000

4.1.2 "Manifestacion de Descubrimiento"

The private party shall file an application with the mining authority, which includes a report on the discovered minerals and the location of the extraction, information on the ownership of the land involved, investments to be performed, corresponding environmental reports and assessments of the area that will be part of the Mining Concession, all which shall be verified by the mining authority prior condition to the granting of the right.

After being awarded, the private party has to comply with the following legal requirements:

i. Provide coordinates and a description of the "Labor Legal", that is the type of field work performed to identify the mineralization;

ii. Designate a surveyor to further produce the measurement of the mining concession; and

iii. Provide a five year investment plan that minimally has to be 300 times the basic canon.

Generally the holder of a mining concession is given an opportunity to correct any deficiencies noted by government authorities with respect to fulfilling its requirements as outlined above.

Prior to conducting any field work, the private party must submit an Environmental Impact Report ("EIR" or "Declaración de Impacto Ambiental" or "DIA" in Spanish") to the prominent authority describing in detail the kind of field work and measures to be taken in order to prevent environmental risk and potential damages. There is a legal term of two years to file a report detailing the field work performed and the implementation of the protective measures taken.

In the San Juan Province the Secretary of Environment makes the first assessment and subsequently the Ministry of Mines issues a final resolution termed DIA.

4.1.3 "Minas"

A mining concession becomes a mine once it gets a permit for exploitation on a commercial basis. The area of the mina or the mining concession is to be measured in smaller areas termed "pertenencias". Conventional size for pertenencias of veins are six hectares but for disseminated deposits are 100 has. An annual canon fee of ARS$320 or ARS$3200 respectively, per pertenencia is payable to the provincial mining authorities.

The canon (fee) for a Mining concession is due three years after the date of its Registration.

After locating pertenecias then the expedient progresses to the legal survey or measurement stage. A surveyed ("Mensurada") of a Mining Concession provides the highest degree of mineral land tenure and rights in Argentina.

The Mining Concessions are perpetual, subject to the concessionaire´s compliance with payment of the yearly canon, compliance with the investment plan, the designation of a surveyor for measurement and monument, regular exploitation of the mine and compliance with environmental regulations. Procedures with the mining authority may last one to three years.

Mining rights in Argentina are separate from surface rights. Even though the owners of the surface right cannot prevent the granting of mining rights they are notified in accordance with the Mining Code and the EIR proceedings and have a right to collect an indemnity.

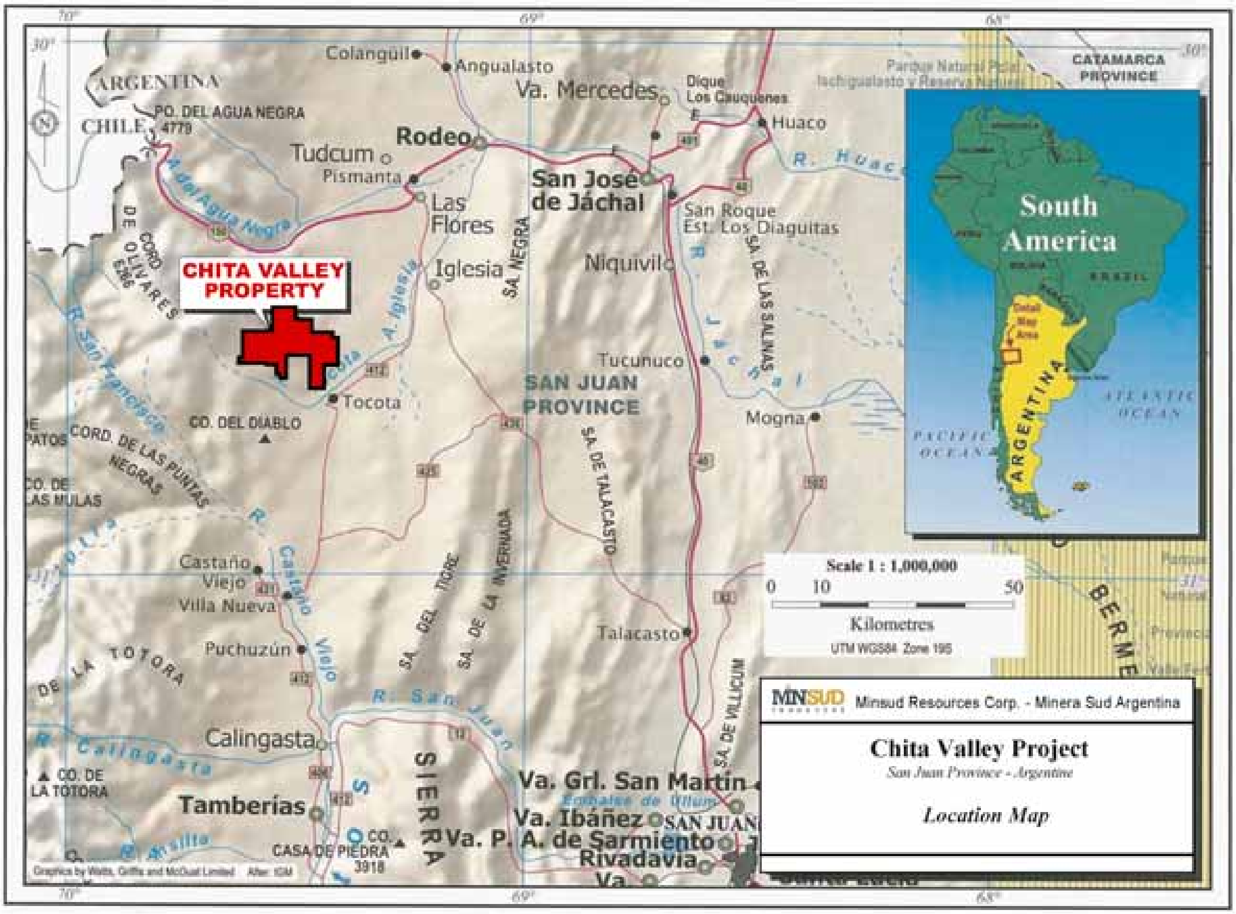
There are different sectorial permits that are required to conduct mining activities, but the most relevant ones are those associated with the environmental permits. Ancillary permits for water usage, archeological research and investigation, hazardous waste, sewage and domestic waste.

The federal government creates minimum standards for environmental protection, and then the provincial and municipal governments normally implement stronger regulations.

4.2 THE CHITA VALLEY PROPERTIES

The Chita Valley Project area is located at approximately 30° 36' South latitude and 69° 30' West longitude, approximately 145 km northwest of the city of San Juan (Figure 4.1).

Figure 4.1 Location Map



*(**Source:** wwww.minsud.com)*

The Chita Valley Project consists of seven contiguous blocks of properties including:

- The core properties; Brechas Vacas, Chita and Minas de Pinto mining concessions or Manifestaciones de Descubrimiento (8,514.24 ha).

- There are several mines inside of each block of properties controlled by MSA except Gabriela and the GAP. See comments below.

  - Gabriela: Thirty hectares within the boundaries of the Chita property are owned by third parties, however, the Company does not consider such property held by third parties as being material to its current exploration activities.

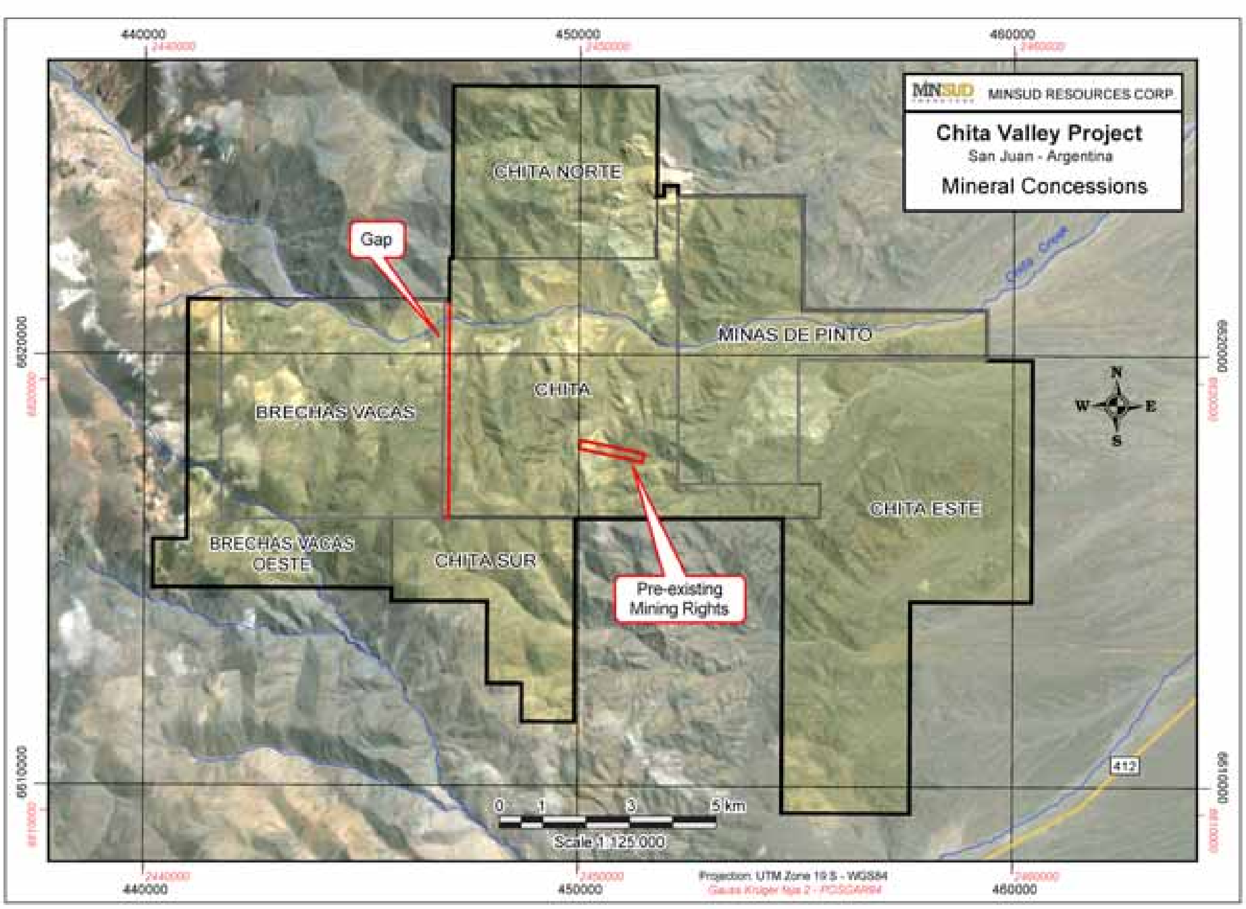
  - There is a gap (the "Gap") of 6.6 hectares between the properties Chita and Brechas Vacas. MSA has modified the request for measurement (pedido de mensura) of the Mining Concessions Chita I, II and V up to the western boundaries with Brechas Vacas covering the Gap. As requested by the authority, MSA justified such claim both technically and legally. The discussion now progressed up to the Legal Department that dated Dec 27, 2017 issued a resolution approving the petition of MSA. The next step is to remove the GAP on the Cadaster of San Juan and further measurement of the mines.

- On April 16, 2014 MSA acquired from Troy Resources Argentina Ltd.–Sucursal two exploration permits or Cateos adjacent to Minsud's Chita mining concession in exchange for a 2% Net Smelter Return (NSR) royalty on future production revenue from the acquired claims. Minsud has the right to purchase one half or 1% of the NSR royalty by paying US$750,000. The northern property, Chita Norte, is an exploration permit granted covering 1,881.31 hectares, within the limits and terms of the exploration permit Chita Norte, MSA has requested a Mining concession (MD) that has not yet been granted. The southern property, Chita Sur, is an exploration permit application pending government approval covering 1,304.18 hectares.

- The Chita Este (formerly Chita II) exploration permit or Cateo (4,490.77 ha) and Brechas Vacas Oeste exploration permit covering (1,232.15 ha) on the western area adjacent to the Brechas Vacas property which, as of the date of this report, both are register at the Cadaster but are still pending governmental approval

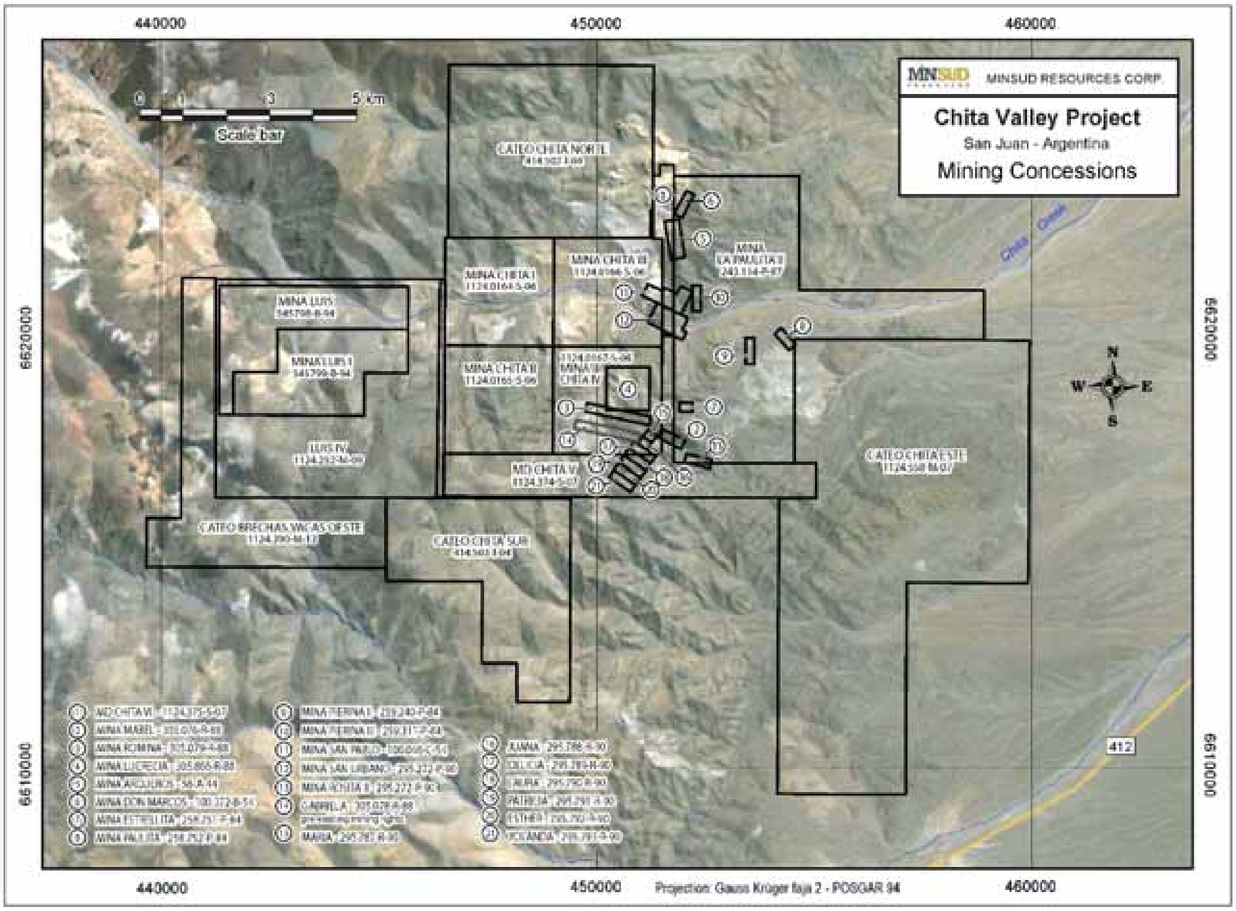
Minsud's Chita Valley Project now comprises seven concessions covering an un-surveyed area of 17,422.65 hectares or approximately 174 km^2 as shown in the following map (Figure 4.2). The mineral rights are located in Argentina 1:250,000 scale topographic map sheet 3169-I. The coordinates shown in Figure 4.2 and Figure 4.3, are internationally recognized Universal Transverse Mercator ("UTM") coordinates UTM WGS 84, Zone 19S. Also shown in the figures are Gauss Kruger-Posgar datum coordinates that are the official registration coordinates of the local registry. A summary in blocks of mineral rights is provided in Table 4.2.

Figure 4.2 Mining Rights Map



*(**Source:** www.minsud.com)*

Figure 4.3 Mining Concession and Exploration Permits; Projection Gauss Kruger Faja 2 – Posgar 94 (as in the San Juan cadastre)



Source*: www.minsud.com*

MSA, through its subsidiary MSA, owns 100% of the Chita Property and the four adjacent claims (Chita Este, Brechas Vacas Oeste, Chita Norte, Chita Sur). Minsud is also the beneficial owner of a 50% interest in the trusts that own 100% of the Brechas Vacas Property and the Minas de Pinto Property, while the remaining 50% beneficial interest in each of these properties is subject to an exclusive and irrevocable purchase option agreement granted in favour of MSA. All required payments and terms as per the various ownership agreements are up to date.

Table 4.2 Mineral Properties				
Property	**Type**	**Surface Area (ha)**	**Status**	**Expiry/ Renewal Date**
Chita	Mining Concession	3,492.18	3th update granted	Oct 11, 2019
Brechas Vacas	Mining Concession	2,578.70	4th update granted granted	Feb 27, 2020
Minas de Pinto	Mining Concession	2,443.36	3th update granted	Feb 16, 2020
Chita Este	Exploration Permit	4,490.77	Application, pending approval	pending
Brechas Vacas Oeste	Exploration Permit	1,232.15	Application, pending approval	pending
Chita Norte	Exploration Permit	1,881.31	Granted	Feb 22, 2018
Chita Sur	Exploration Permit	1,304.18	Pending for approval	pending
Total		**17,422.65**		

4.3 AGREEMENTS

There are four agreements with third parties with respect to parts of the Chita Valley Project. These are summarized individually below.

4.3.1 Chita Mining Concession Agreement

On September 28, 2006, the Company, through MSA, entered into an Exploration Agreement (the "Chita Agreement") including a Purchase Option with Mr. ESTANISLAO JUAN SANGUEDOLCE and Mr. EUGENIO CONRADO OROSCO the “Chita owners” to purchase a 100% ownership interest in the mining properties identified as Proyecto Chita, located 30 km from Iglesia, in the Chita Valley, in the Province of San Juan, Argentina. The Chita Property includes the mining concession termed Chita I, II, III, IV, V and VI, as well as the Romina, Lucrecia and Mabel concessions, covering 3,492.18 hectares.

On August 3, 2012, the Company exercised its Purchase Option to acquire a 100% interest in the Chita Property in exchange for a series of cash payments totalling US$420,000. On September 12, 2012, the ownership interest in the Chita Property was transferred to the Company which is now registered by the Ministry of Mines in San Juan Province.

All the payments committed in the Chita Agreement were settled on time, therefore MSA is now the 100% owner of the Chita Properties.

4.3.2 Brechas Vacas Mining Concession Agreements

On September 7, 2007, the Company, through its subsidiary MSA, entered into an Exploration Agreement including a Purchase Option (the "Brechas Vacas Agreement") with Mrs. MARTA ALEJANDRINA MEDINA DE BASTIAS, MARIA MARTA, BASTIAS AND LUIS FEDERICO BASTIAS. There are also two parts, one being Mr. Hugo Enrique Bastías Tobalina, and the other Jorge Alfredo Bastías as judicial representative administrator of the heirs of Hugo

Atilio Bastías Sarmiento, called the “obliged part” that make a party with the “optionors” but they are not owners of any mining right in the area”, all of them the "BV Owners" could be legally compelled to honor the agreement, identified as Proyecto Brechas Vacas, located 35 km from Iglesia in the Chita Valley, in the Province of San Juan, Argentina. Included in the Brechas Vacas properties are the mining concession termed Luis, Luis I and Luis IV covering 2,579.20 hectares.

In exchange for the right to evaluate, prospect and explore the properties, the Company paid the BV Owners a series of staggered payments totalling US$240,000 within four years of the date of the Brechas Vacas Agreement. In addition to the exploration rights, the BV Owners granted to the Company an irrevocable and exclusive option to purchase a 50% ownership interest in these properties pursuant to certain terms and conditions stated in the Brechas Vacas Agreement.

On September 6, 2011, MSA exercised its option to purchase a 50% ownership interest in these properties for US$210,000. In order to facilitate this, on December 23, 2011, ownership of the properties was transferred by the BV Owners to the Brechas Vacas Trust. MSA simultaneously acquired a 50% beneficial interest in the Brechas Vacas Trust in exchange for US$210,000 in accordance with the terms of the option agreement dated September 7, 2007, and an extension agreement dated November 23, 2011.

The remaining 50% beneficial interest in the Trust held by the BV Owners is subject to a new exclusive and irrevocable purchase option agreement granted in favor of MSA (the “BV Option”) dated January 3, 2012, as amended through the Fist Addendum dated December 19, 2013 and Second Addendum dated June 24, 2016. The BV Option can be fully exercised by MSA at any time on or before June 26, 2022 (the “Expiration Date”).

The BV Option provides MSA with an irrevocable and exclusive right to purchase the remaining 50% beneficial interest in the BV Trust in addition to the exclusive right to evaluate, prospect and explore the Brechas Vacas Properties.

The BV Option’s exercise price is US$735,000 payable by cash payments of US$535,000 and a payment of US$200,000 to be satisfied by the issuance of an equivalent number of common shares of MINSUD. The issuance of common shares of MINSUD is subject to the TSX Venture Exchange approval and will be issued at the market price as of the date any commitment becomes due. If MSA decides to exercise the BV Option before the Expiration Date, 50% of any outstanding payments, whether accrued or not, will be added to the final exercise price of the BV Option.

Once, and if, the BV Option is exercised and the remaining 50% of the beneficial interest in the Trust is transferred to MSA, the BV Owners will retain a 0.60% Net Smelter Return (“NSR”) on the Brechas Vacas property production, with MSA having the option to purchase a 0.30% NSR, at any time, for an agreed one-time payment of US$400,000.

In order to maintain the exclusive right to evaluate, prospect and explore the Brechas Vacas Properties MSA has agreed to pay semi-annual contingency staggered payments for US$740,000 in cash and US$40,000 payable in Minsud shares between July 4, 2012 and June 26, 2021. A summary of staggered payments is provided in Table 4.3.

Table 4.3 Brechas Vacas Property Payments Schedule							
Year	**Payment date**	**Cash Payments**		**Payments in Shares Price**			
		$US	**Status**	**Shares**	**Price per Share**	**$US**	**Status**
2012	Payment date July 4, 2012	50,000	Paid				
2012	December 28, 2012	50,000	Paid				
2013	June 28, 2013	50,000	Paid	419,000	0.05	20,000	Issued
2013	December 26, 2013	20,000	Paid	210,000	0.10	20,000	Issued
2014	June 24, 2014	20,000	Paid				
2014	December 19, 2014	20,000	Paid				
2015	June 24, 2015	25,000	Paid				
2015	December 19, 2015	25,000	Paid				
2016	June 24, 2016	20,000	Paid				
2016	December 19, 2016	20,000	Paid				
2017	June 24, 2017	25,000	Paid				
2017	December 19, 2017	25,000	Paid				
2018	June 24, 2018	30,000					
2018	December 19, 2018	30,000					
2019	June 24, 2019	35,000					
2019	December 19, 2019	50,000					
2020	June 25, 2020	50,000					
2020	December 19, 2020	75,000					
2021	June 26, 2021	120,000					
Totals		**740,000**		**629,000**	**0,067**	**40,000**	

As of the date of this Technical Report, the Company had made cash payments totalling US$350,000 and issued 629,000 common shares of the Company related to twelve instalments to the BV Owners pursuant to the terms of the Option. As of the date of this Technical Report, the Company was in compliance with their staggered payments schedule. The contingency payments still outstanding but not overdue, are in total US$390,000.

4.3.3 Minas de Pinto Mining Concession Agreement

On May 7, 2010, the Company, through MSA, entered into an Exploration Agreement including a Purchase Option (the "Minas de Pinto Agreement") with Mrs. MIRTA RAMONA CASTRO DE PINTO, Mr. JUAN MANUEL PINTO, and REMBERTO WILSON PINTO the “Minas de Pinto owners” of the mining properties identified under the name of Proyecto Minas de Pinto, located 30 km from Iglesia, in the Chita Valley in the Province of San Juan, Argentina. The Minas de Pinto includes the Mining concession termed Arqueros, San Marcos, Estrellita, Paulita, Paulita II, Pierina II, Pierina III, San Pablo, San Urbano and 50% Rosita II, covering 2,443.36 hectares.

Pursuant to the Minas de Pinto Agreement, the Minas de Pinto owners granted MSA the irrevocable and exclusive right to evaluate, prospect and explore the properties using any method, and at the Company's sole discretion. In addition to the exploration rights, the Minas de

Pinto owners granted to MSA an irrevocable and exclusive option to purchase a 100% ownership interest in these properties pursuant to certain terms and conditions stated in the Minas de Pinto Agreement. The Company paid, in total, US$252,500 for settlement when due any committed payment according to the Minas de Pinto Agreement.

On April 22, 2014 the Minas de Pinto Owners settled the Minas de Pinto Trust and transferred 100% of the mineral properties governed by the Minas de Pinto agreement to the Minas de Pinto Trust. The Company acquired a 50% interest in the Minas de Pinto Trust for total consideration of US$412,500 with the first payment due upon signing and the final payment due May 7, 2018.

The remaining 50% beneficial interest in the Minas de Pinto Trust held by the Minas de Pinto Owners was subject to a new exclusive and irrevocable purchase option agreement (the "Option") granted in favour of MSA. The Option provides MSA with an irrevocable and exclusive right to purchase the remaining 50% beneficial interest in the Minas de Pinto Trust in addition to the exclusive right to evaluate, prospect and explore the Minas de Pinto properties for consideration of US$1,335,000 payable at any time on or before May 7, 2019.

On May 8, 2017, the Company and the Minas de Pinto Owners signed an addendum to extend the period in which the Company can acquire the remaining 50% beneficial interest by exercising the Option to November 7, 2020, modifying the payment schedule and increasing the total amount to US$417,500.

The staggered payments related to Minas de Pinto Trust are summarized in Table 4.4.

TABLE 4.4
MINAS DE PINTO AGREEMENT PAYMENTS
(1ST 50% OF TRUST)

Year	Payment	$US	Status
2014	April 24, 2014	50,000	Paid
2015	May 7, 2015	50,000	Paid
2015	December 7, 2015	50,000	Paid
2016	May 7, 2016	57,500	Paid
2017	May 7, 2017	35,000	Paid
2017	Nov 7, 2017	35,000	Paid
2018	May 7, 2018	35,000	
2018	Nov 7, 2018	35,000	
2019	May 7, 2019	35,000	
2019	Nov 7, 2019	35,000	
Total		**417,500**	

As of the date of this Technical Report, the Company made six payments totalling US $277,500 related to the acquisition of the 50% interest in the Minas de Pinto Trust. As at the effective date of this Technical Report, the Company was in compliance with their staggered payments schedule. The payments still outstanding but not overdue, are in total US$140,000.

4.3.4 Chita Norte and Chita Sur Exploration Permits Agreement

On April 16, 2014, MSA acquired from Troy Resources Argentina Ltd.-Sucursal the Chita Norte exploration permit directly north of Minsud's 100% owned Chita mining concession. The northern property is an awarded exploration permit (Cateo) covering 1,881.31 hectares. Also on April 16, 2014, MSA acquired the Chita Sur exploration permits directly south of the Chita mining concession. The southern property is an exploration permit application in the normal course but pending for approval, covering 1,304.18 hectares.

Both exploration permits, were acquired outright from Troy Resources Limited ("Troy") in exchange for a 2% Net Smelter Return (NSR) royalty on future production revenue. Minsud has the right to purchase one half or 1% of the NSR royalty by paying US$750,000.

4.4 ENVIRONMENTAL LIABILITIES

The following is an outline of general environmental regulations for San Juan Province. For an account of the Company's progress to date in these matters, the reader is referred to Section 20 of this report entitled Environmental Studies.

The main legal requirements that are applicable to a mining project during its development can be summarized as: environmental, mining, hazardous waste management, occupational health and safety and mining investments.

The legislation applicable to a mining project's environmental requirements in San Juan Province is as follows:

- i) environmental legislation at the national level applicable to all productive activities including mining;
- ii) specific environmental legislation for the mining activity, i.e. National Law Number 24585 for Environmental Protection for Mining activity incorporated into the text of the Mining Code of the Nation;
- iii) environmental legislation at the provincial level - adherence to national laws and / or specific rules - applicable to all productive activities including mining; and
- iv) environmental legislation at the provincial level and / or municipal that are applicable to the activities developed by a mining project.

Failure to comply with environmental obligations can result in sanctions, including fines, temporary suspension of work or closure of mining operations. These actions do not affect the ownership of the mining concession.

4.4.1 Hazardous Waste

The generation, handling, transportation, treatment and disposal of hazardous waste is regulated by the National Law Number 24051 to which Province of San Juan by Provincial adhered by Law Number 6665 and Regulatory Decree Number 1211-1207. MSA is registered as a generator of hazardous waste before the "Secretaria de Ambiente y Desarrollo Sustentable" of the Province of San Juan.

4.4.2 Health and Safety

Aspects related to labor safety and health of personnel involved in mining activities at different stages prospecting, exploration and / or exploitation - are regulated by the Health and Safety Regulations for Mining Activities as National Decree No. 249 / 07 Annex I and all staff involved in the work must have insurance coverage of Occupational Risks (Aseguradora de Riesgos de Trabajo or ART) in accordance with the provisions of the National Law Number 24557.

4.4.3 Environmental Liabilities

At the present time, there are no known environmental liabilities at the Project, as it is in an exploration stage. Reclamation activities are comprised of re-grading the drill pad sites and roads construction to access the main drilling targets.

4.5 PERMITTING REQUIREMENTS

The mining law of Argentina distinguishes the different stages in the process for developing mineral deposits like prospection, exploration and exploitation. Even though there are a number of permits necessary to perform such activities, the most important one is the Environmental Impact Report (EIR) or Declaración de Impacto Ambiental in Spanish or DIA, a requirement to carry out any mining task (Article 253 of the Mining Code of the Nation).

The regulations relating to environmental protection applicable to mining activities were established through the enactment of the National Law Number 24585 of Environmental Protection for Mining Activity which is incorporated as Title XIII of the Mining Code of the Nation. The Province of San Juan expressed adherence through the provincial Decree Number 1426/96.

4.5.1 Environmental Permit for Exploring

Chita Valley Project is made up of three different mining concession blocks - Chita, Brechas Vacas and Minas de Pinto. In all of them the EIR or DIA has been approved by the mining environmental authority of the Province of San Juan – Ministry of Mining – and are in good standing. All the subsequent updated requested by law were filed on term.

It should be noted that the EIR or DIA should be updated every two years (Article 256 of the Mining Code of the Nation). The third update for Chita Project has been approved on October 10, 2017 and expires on October 11, 2019. The forth update for Brechas Vacas project has been approved on January 18, 2018, notified February 27, 2018 and expires on February 27, 2020. The third update for Minas de Pinto project has been approved on January 18, 2018, notified and expires on January 16, 2020.

Additionally, it is necessary to apply for permits and get approval, either before or during the execution of any exploration program for:

i. extraction of water for camp consumption;
ii. extraction of water for any drilling program;
iii. for transporting samples to the laboratory; and
iv. for transportation and final disposal of hazardous waste, solid waste of domestic nature as well as liquid waste (sewage and / or domestic).

There are no known environmental liabilities or additional permitting requirements other than the routine permitting aspects for drilling/surface trenching at the current early stage of exploration activities. As noted above inter-departmental bureaucratic delays can be experienced in the permitting process, but permits are usually forthcoming. There are no known other significant factors, or risks that might inhibit the Company's planned activities.

4.6 LANDOWNERS

On July 1, 2015 the landowners of the area where the Company's exploration activities are located (expedient 1124-0169-M-09) signed an agreement with MSA granting permission to access their property and conduct all operations required for the completion of the exploration program.

On Dec 15, 2016 The Honorable Counsil of Mining of the Province of San Juan granted to MSA a provisional servitude for way, stay and camp through resolution number 329-CM-16. MSA has filed the requested guarantee.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

Access to the Properties is very good. The area is reached from the provincial capital city of San Juan, by proceeding north-west on paved Highways N40 and P436 approximately 160 km to the town of Iglesia, then southerly on mostly unpaved Highway RP412 for approximately 10.5 km and finally westerly on unpaved local roads approximately 25 km to the Property. The total road distance to the property from San Juan is approximately 195 km. There is daily scheduled air service to San Juan from Buenos Aires.

Regional infrastructure is good with the modern city of San Juan about a two-hour drive from the Properties. The city has modern hotels, a modern airport and other conveniences. Local towns including Bella Vista, Iglesia and Las Flores have basic services including food, accommodation, automotive service stations, electrical power, internet service, mobile telephone service, and educational, medical, recreational and limited shopping facilities. Other than road access, a network of drill site 4WD access roads, a modest core logging, sampling and storage facility, and an available water supply, the Property has no campsite or mining related infrastructure.

In terms of mining related infrastructure, northwestern San Juan Province has a long history of medium to large-scale mining operations. As a result, mining personnel, contractors and suppliers are well established in the region.

A 132 kV electrical power transmission line is located approximately 20 km east of the Property and a major solar power project is currently under construction in this area. In addition, fibre optic cable technology is being installed throughout region. The Provincial power authority is currently upgrading the main power line from Calingasta in the south, northward for 138 km to the Departments of Iglesia and Jáchal to a 500 kV high voltage line (Figure 5.1). At present the higher capacity transmission line has been constructed for 96 km along highway RP 412 from Calingasta to the Bauchazeta Road (also Chita Valley access road). A transformer station is currently under construction at Bauchazeta Road that will service the planned upgraded power line running 42 km northward to Iglesia and Rodeo (Figure 5.2). There is also a major solar power project planned west of the Bauchazeta Road site in the plains zone between RP412 and the Andes.

In terms of suitable sites for potential mining processing, waste and tailings storage no detailed investigations have been conducted due to the early stage of project development. The Property area is very sparsely populated and is currently utilized only for small-scale pastoral livestock activities. Arroyo Chita (Chita Stream) has a small concrete dam and rudimentary concrete and cobble-stone aqueduct (Figure 5.3) that supplies irrigation water to the Iglesia area.

The property is in mountainous terrain of the Andean Frontal Cordillera. Slopes are steep but manageable for site access roads. Valleys are broad and U-shaped in the lower sections with the streams flowing generally from west to east.

Figure 5.1 Satellite Photograph of the Electrical Power Infrastructure, Existing and Planned

Figure 5.2 Photograph of Bauchazeta Road Transformer Station Under Construction and 500 kV Power Line

Figure 5.3 Photograph of the Chita Valley Access Road (Left) and Irrigation Aqueduct

5.1 CLIMATE

San Juan Province has a desert climate with less than 100 mm of annual precipitation. Temperatures in the Chita Valley area vary from summer highs of 35° C to winter minimum temperatures that are well below 0° C. Strong windy conditions are the norm and vegetation is scarce. With elevations between 3,000 and 4,200 metres above sea level, year-round field operations are possible.

Climate data have not been collected continuously within and around Chita Valley area. On December 2016, the Company installed a weather station (Davis Vantage Pro2) at E2450832; N6619917 (CAI) at an altitude of 3,100 metres asl. Climate parameters for the station during year 2017 are as follows:

Rainfall: The annual median rainfall is 19.1 mm per month with the highest monthly rainfall occurring in February with 74.60 mm. During June through November, rainfall is rare. According to recorded data, the months of February and May have the highest monthly rainfall and averages over 50% of the annual total.

Temperature: The average maximum and minimum annual temperatures are 28.4° C and -4.7° C, respectively. The warmest months are January and February with an average monthly temperature of 18.6° C and 15.7° C, respectively. The coldest month is May with a monthly average temperature of 4.2° C. The absolute maximum temperatures in January is 33.2° C and the minimum is 9.5° C, while in May the maximum is 28.4° C and the minimum -11.3° C.

Wind: The annual average wind speed recorded was 7 km/h and the maximum annual rate was recorded in November at 93.3 km/h.

6.0 HISTORY

Several old mineral prospects and mine workings exist on the Property. Gold, silver, lead and arsenic were produced on a small scale early in the 20th century. The first documented exploration work started in 1968 by the Argentine government organization Direccion General de Fabricaciones Militares who after a program of mapping and geophysical surveying drilled eight drill holes (1,331 m) on a copper-molybdenum anomalous porphyritic monzodiorite intrusion (Chita South Porphyry) in search of Cu-Mo porphyry type deposits (Mezzetti, et. al., 1969, Ruggiero, 1976, Mallimacci, 1976). The intermittent work program was terminated in 1976.

In 1989, Exploration Barlow carried out a two week preliminary geological study and sampling program in the Brechas Vacas area (Tanner, 1989). The company concluded the property has the potential for important gold and silver mineralization and noted that mineralized breccia pipes and hydrothermal explosive breccias occurring on the property are common features to epithermal precious metal deposits.

In 1995, Minas Argentinas S.A. ("MASA") conducted an exploration program collecting approximately 1,000 rock and soil samples for geochemical analysis (Rowell, 1995), and carried out a 40 km geophysical survey grid of Induced Polarization ("IP") and Resistivity (Ikola, 1996). Ten reverse circulation drill holes (1,546m) were drilled to test the geophysical anomalies (White, 1996). MASA concluded that when the sulphides occurred as fine grained disseminations they were not significantly auriferous and only the sulphide veinlets were auriferous but they were not sufficiently abundant to be economic.

Early in 2006, Silex Argentina S.A. ("Silex") carried out a geological reconnaissance survey of the Minas de Pinto area that indicated the property's potential for Low Sulphidation Epithermal mineralization. Silex concluded that the Chita area is intermediate between a porphyry and epithermal setting although there was somewhat overprinting of the mineralizing events. Surface channel sampling and the twenty-two diamond drill holes (2,631m) directed Silex to the four most promising areas, each located on principle vein structures: Chita Norte; Chita Centro; Fatima Vein and Barba Vein. The exploration program indicated the veins to be persistent, but marginal in terms of precious metal grade. Silex was not able to make option payments for the exploration rights and left the Property.

Rio Tinto Mining and Exploration ("Rio Tinto") carried out a reconnaissance exploration program on the Placetas Porphyry area during 2006-2007. Three diamond drill holes (879m) showed that the anomalous Cu and Au mineralization in the central core of the intrusive body at depth was sub-economic. Rio Tinto terminated any further work.

6.1 DIRECCION GENERAL DE FABRICACIONES MILITARES 1968-69, 1976

The first documented systematic exploration work was carried out in 1968-69 by Direccion General de Fabricaciones Militares ("DGFM"), a governmental enterprise. This work consisted of geological mapping, geochemical stream and soil sampling and surface rock sampling, followed by five AQ diamond drill core holes (SD01 to SD05 totalling 981 m) in the Chita South Porphyry sector (Mezzetti, et. al., 1969; Spring, 2011). The drilling confirmed the presence of a Cu-porphyry type deposit in a porphyritic monzodiorite.

On the basis of this work it was postulated that the Chita Porphyry north and south blocks probably represent the same intrusive that has been cut by a transverse fault with the south block uplifted and more deeply eroded. The actual fault zone is believed to be covered by Quaternary sediments. Work was discontinued after the 1969 drilling program.

In 1974, Dr. Richard H. Sillitoe, a porphyry copper expert with the United Nations visited the project area (Sillitoe, 1974). In 1976, on the advice of Dr. Sillitoe, the DGFM revisited the area and conducted a more detailed examination of the geology and a dipole-dipole Induced Polarization/Resistivity ("IP") geophysical survey carried out (Ruggiero, 1976). On the basis of the IP survey and the results of the previous five drill holes (1969) three new AQ drill holes FM-2, FM-3 and FM-4 totalling 500 m were located to define a possible Cu enrichment zone (Mallimacci, 1976; Spring, op. cit.).

A rudimentary grade/tonnage estimate by DGFM reported "based on the drilling results the southern Chita intrusive contained a secondary enriched zone at a cutoff of 0.20% Cu of approximately 30.2 million tonnes containing an average grade of 0.27% Cu and 0.019% Mo." (Mallimacci; Spring, op. cit.). The historical estimate contained in the above reports is presented for information purposes only. The estimate predates the current standards embodied in NI 43-101 and therefore does not conform to same.

Also during this latter period, as part of the United Nations sponsored work, potassium-argon (K-Ar) age determinations were done on three rock sample with biotitic alteration from the Chita Porphyry area (Rundle & Brook, 1975). These indicated a probable minimum age for the alteration of 8.5 to 13.0 Ma (Miocene).

Minsud has acquired many records of this work including exploration reports, maps, drill logs, assay and analytical data. Analytical and assay certificates were not provided by the DGFM in-house laboratory. Split drill core sections from the drilling programs are still preserved and stored in a government warehouse in Mendoza.

6.2 EXPLORATION BARLOW INC., 1989

The following is quoted from Spring, 2011: "In January 1989, Dr. Mehmet F. Taner, a geological engineer with the Canadian exploration company, Exploration Barlow Inc., during a two week study, carried out a preliminary geological study and sampling of the mineralized zones along the Quebrada de Los Caballos of the Chita Property (this area is currently known as the Chinchillones Complex sector of the Brechas Vacas Property) and prepared a trip report. Dr. Taner concluded from both the field observations and the analytical results of the limited sampling that the Chita property has the potential for important economic gold and silver mineralization. Mineralization was found in veins that formed mineralized zones up to 7 m wide, with the veins varying from a few centimetres to a few metres, in thickness. The veins are brecciated and the structures appear to be continuous and generally strike with an azimuth of 115°. The veins are continuous across the quartzites (the principal outcropping rock) and into the granodiorite that has intruded the quartzites. Mineralized breccia pipes and/or hydrothermal explosive breccias are present and this type of mineralization is common to epithermal precious metal deposits."

6.3 MINAS ARGENTINAS S. A., 1995-96

The following account (Spring, 2011) summarizes information contained in unpublished company reports on the 1995-96 work; work proposal (Rowell, 1995), geophysics (Ikola, 1996) and drilling (White, 1996): "In late 1995, Minas Argentina S.A. ("MASA") commenced an exploration program over the Chita claim consisting initially of geological mapping and the collecting of approximately 1,000 rock and soil samples for geochemical analysis. Samples were collected every 50 m along 100 m spaced lines, over a total 40 km length grid (over two smaller areas, the samples were collected at 25 m intervals along the 100 m spaced lines). Based on the geochemical sample results an Induced Polarization ("IP") and Resistivity survey were conducted consisting of eight N-S lines spaced at 200 m with dipole readings at 100 m intervals. A ninth, approximately EW line, was carried out along the northern edge of the grid. The dipole length was selected as a compromise between detecting relatively narrow zones and at the same time providing adequate depth penetration."

"MASA designed a reverse circulation ("RC") drilling program of 10 drill holes (totalling 1,545 m) to test the geophysical targets with the purpose to discover economic gold mineralization peripheral to the cupriferous Chita stock."

"Eight of the drill holes (C-96-01 and C-96-02 and C-96-04 to C-96-09) were targeted to test large and strong IP anomalies and one drill hole (C-96-03) to test a resistivity anomaly. The nine drill holes were all directed at sulphide related gold targets. Hole C-96-10, the tenth drill hole, was drilled vertical near the centre of the previously drilled DGFM outlined copper zone to test for leachable supergene enriched copper at depth."

"A total of 1,200 RC drill assay samples were collected, the great majority of them at a one metre interval. Only on some of the final drill holes were the samples collected on two metre intervals when the rock looked not too well mineralized. Samples were collected by a cyclone separator followed by a Jones Riffle splitter to give roughly a one eighth split. The volumes recovered appeared to correspond to a total (100%) recovery. Samples were delivered by MASA to Bondar Clegg in Mendoza Argentina where they were dried, crushed, pulverized and the pulp splits sent to Coquimbo Chile for a 30 g fire assay for Au (lead collection) and by atomic absorption or gravimetric finish as appropriate. The lower limit of detection was 5 ppb Au. Splits of the pulps were also sent to Vancouver, Canada for accessory analyses using a multi-acid digestion and ICP atomic spectroscopy technique for the Ag, Cu, Pb, Zn, As and Sb contents as this assemblage from earlier work on Chita appeared to be correlatable with Au mineralization."

"The best single gold assay was from a one metre interval (133 m to 134 m true thickness unknown) in hole C-96-05 at 5.6 g/t Au within a 20 m interval at 0.8 g/t Au (125 m to 145 m)."

"Partial oxidation was noted to extend to a 10 m to 20 m depth. No visible gold was observed and the gold likely occurs as solid solution within arsenopyrite, pyrite and chalcopyrite minerals. Visible sphalerite, galena, a trace of chalcopyrite and abundant arsenopyrite were observed."

"The sulphides of Chita have two modes of occurrence: i) as disseminated fine grained pyrite; and, ii) as fracture-filling veinlets. The fracture filling veinlets consist of complex mineralogy, dimensions and abundances relative to pyrite. The veinlets usually are aggregates of pyrite, arsenopyrite with a trace of chalcopyrite and possible chalcocite, minor galena, black sphalerite and quartz. Veinlets occur mostly in swarms or sheeted sets, striking between 070° and 120°

(average E-W) with dips varying between -80° N to -70° S (average vertical). Thicknesses of the veinlets vary from the common hairline to a few millimetres up to locally 30 cm or even short lenses of up to 1.0 m thick. The veinlets are likely responsible for the extraordinary strong IP anomalies. The sets of E-W oriented veinlets explain the E-W continuity of the IP anomalies and the low resistivity anomalies (ie, conductors). The sulphide veinlets are weakest to nonexistent in the Chita stock but rather are present as more quartz-dominated stockwork-fracturing containing fewer sulphides and lower gold grades e.g. the last test hole C-96-10. The best developed sulphide veinlets are found in the granodiorite SE of the Chita stock where the best Au, Ag and base metals were intersected. MASA believes that the granodiorite was more brittle and more massive and thus is more fractured than the surroundings rocks."

"MASA concluded that the disseminated sulphides are not significantly auriferous and that only the sulphide veinlets are auriferous but they unfortunately are not as abundant, as the zones of sheeted veinlets do not arrive at sulphide or metal abundances that could be economic for the thicknesses found, nor to the broader thick zones of wider spaced veinlets carry grades that even approach economic bulk mineability."

"MASA concluded that the IP survey identified most of the sulphidic zones of West Chita and Main Chita grids and the majority and best of these sulphidic zones (based on geological interpretation and geochemically supported) were tested by them. MASA do not see, within the present structural system, the veinlets aggregating and their present dimensions are too small."

"MASA also concluded that there was no reason to expect better host rocks at depth."

Minsud has acquired many records of this work including exploration reports, maps, drill logs, assay and analytical data spreadsheets. Analytical and assay certificates are not available. Original reference chip samples for the individual samples of all drill holes are stored in Minsud's Buenos Aires offices.

6.4 SILEX ARGENTINA S. A. 2006-09

In 2006 Silex conducted geological reconnaissance on the Minas de Pinto mining concession. During the survey rock samples were collected, analyzed and a preliminary evaluation of the mineral potential of the area was made. Silex considered the concession to have good potential for low sulphidation Au-Ag mineralization and completed an option agreement that would allow it to obtain eventual ownership of the concession.

Exploration work by Silex in 2007 included 1:10,000 scale surface geological mapping of the concession and 1:500 scale detailed mapping and surface channel sampling of the various exposed veins. A total of 1,631 grab and sawn channel rock samples were analyzed in the program. Based on this data a drilling program on various targets was completed in 2008 that consisted of 22 diamond drill holes totalling 2,631.25 m.

Spring (2011) summarizes the Silex work conclusions as follows: "Silex concluded that all the mineral occurrences correspond to a Low Sulphidation Epithermal Au Ag Cu deposit model with the different amounts of the metals at different sampled locations due to different temperatures and distance from the mineralizing source. The ratio of Au to Ag in the Fatima Vein is 1:54 in and in the Argentina Vein 1:73.5 indicating that the Fatima vein is closer to the mineralizing source, probably within or near the bonanza horizon. The Fatima Vein indicates an enrichment area as all intercepts occurred in the oxidation zone, while the Argentina Vein is farther from the mineralizing source indicated by an increase in Ag and a reduction in Au. However, although the exploration program indicated the deposits to be consistent with regards to their size, but was marginal as regards to the grade, and everything indicated that the mineralization could continue at depth with increasing grades, the program was terminated. Unexpected delays, in the drilling program and delays in receiving laboratory assay results, resulted in important option payments becoming due and Silex was not able to make the future payments for the exploration rights and left the property."

Upon termination of the option agreement Silex provided the property owner with all exploration data obtained in its work programs including geological maps, drill logs, drill sections, assay and analytical data. Due to the company's financial situation it appears that no comprehensive report on the work was completed.

6.5 RIO TINTO MINING AND EXPLORATION, 2006-07

Rio Tinto carried out a reconnaissance exploration program on the Placetas Porphyry area of the Brechas Vacas property in 2006 (Orts & Vazquez, 2007). The company collected 62 surface rock samples (anomalous in Cu and Au) from a hydrothermally altered zone in porphyritic monzodioritic intrusions and intrusive breccias of presumed Miocene age. The program confirmed the presence of a classic Au-Au porphyry system with a 700 m diameter potassic core surrounded by a quartz-sericite-pyrite halo. This initial program was followed by a semi-detailed mapping program and the collecting of 289 soil samples on a 50 m x 50 m grid over the central core of the porphyry (850 m x 850 m) and a petrographic microscopic study of 26 rock samples (Rio Tinto, 2007). On the basis of these studies Rio Tinto drilled three diamond drill holes, PLCT0001 to PLCT0003 (totalling 879.5 m). The overall exploration results were not considered encouraging and Rio Tinto terminated the program in 2007.

Minsud has acquired many records of this work including exploration reports, maps, drill logs, assay and analytical data spreadsheets. Analytical and assay certificates are not available. The location of any possible remaining drill core is unknown.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 PALEOTECTONIC SETTING AND TEMPORAL RANGE

The Chita Valley Project is located within the eastern part of the mountain range known as the Andean Frontal Cordillera. The Palaeozoic basement of the Andean Frontal Cordillera is exposed out on its easternmost margin, where it meets the Rodeo-Calingasta basin. To the west of the Chita Valley area lies the high mountain range, or Andean Principal Cordillera, including the El Indio Belt. The Precordillera ranges lie to the east of the Rodeo-Calingasta basin.

The Andean Frontal Cordillera is composed mainly of Upper-Paleozoic strata deposited unconformably on a middle Paleozoic basement or Lower Paleozoic sediments, dependent upon its location (Cardo & Diaz, 1999). These Upper-Paleozoic sediments of Upper Carboniferous-Lower Permian age corresponds to the Agua Negra Formation, a marine transitional sedimentary unit about 2,000 m thick that is widely distributed throughout the region. This formation was, during the Gondwana orogenic cycle, folded and then intruded by Lower Permian granitoids, mostly granodiorites, granites and tonalites respectively termed the Tocota Pluton and the Chita Pluton, parts of the Colanguil Batholith. Structurally the basement assemblage comprises a fold and thrust belt along the eastern border of the high mountain range. A series of porphyries and subvolcanic andesitic bodies of middle to upper Tertiary age, belonging to the Olivares Group, are seen cutting all the previous rock sequences, or occurring locally as volcanic flows and volcaniclastic/epiclastic deposits.

7.2 REGIONAL GEOLOGY

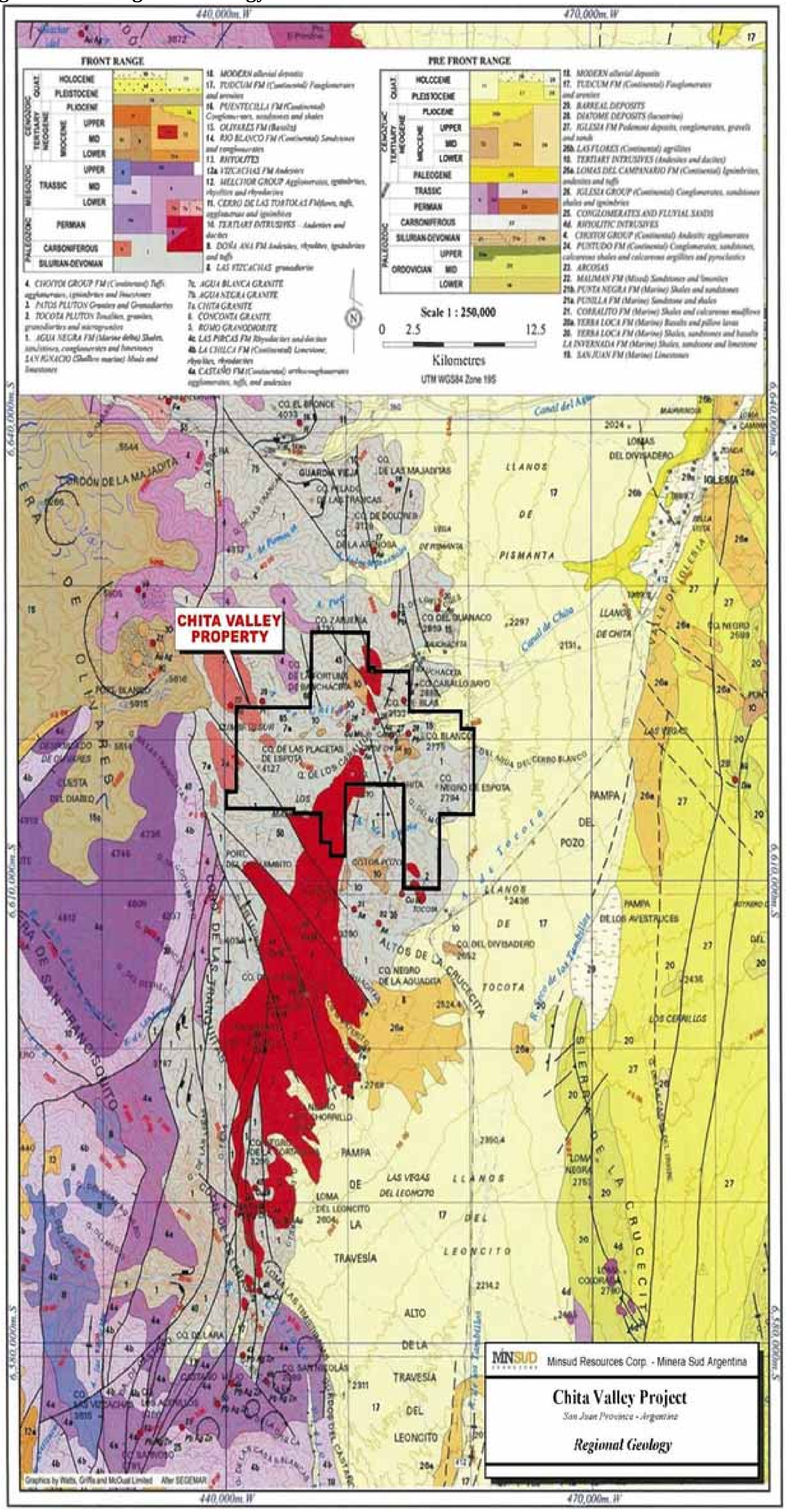
The oldest exposed basement rocks in the Chita Valley region belong to the Upper Carboniferous-Permian age Agua Negra Formation (Cardo & Diaz, 1999) (Figure 7.1). Regionally the formation is made up of alternating sandstones, quartzites, lutites and conglomerates, with limestones in the upper part. On the Chita Valley Properties the Agua Negra units are primarily shallow marine (Figure 7.2) quartzites, lutites and interbedded sandstones and lutites. The Agua Negra Formation was deposited during the Gondwanic Orogenic cycle.

The Permo-Triassic granitoids are exposed along two north-south corridors on the Chita Valley Properties. The oldest plutonic suite, the regionally extensive Tocota Pluton includes a variety of tonalities, granites, granodiorites and microgranites may be as old as Carboniferous in some areas. In the east central part of the Properties two outliers of the Tocota Pluton are predominantly granodioritic (Figure 7.3) in composition and intrude the Agua Negra Formation.

The Devonian and Permo-Carboniferous marine sedimentary rocks are intruded by Permo-Triassic granitoids, and an Andean Mesozoic–Tertiary cover sequence intruded by Mesozoic and Tertiary granitoids.

The Chita Granite of Lower Triassic to Permian age is exposed in the north-western corner of the Properties. The Placetas Porphyry is designated as part of the Chita Granite on the regional geology map. It is possible, even likely, that this intrusion might be part of the younger Tertiary-Cretaceous group of felsic to intermediate porphyry that are exposed in the Chita Valley. Further geological studies are planned for this area.

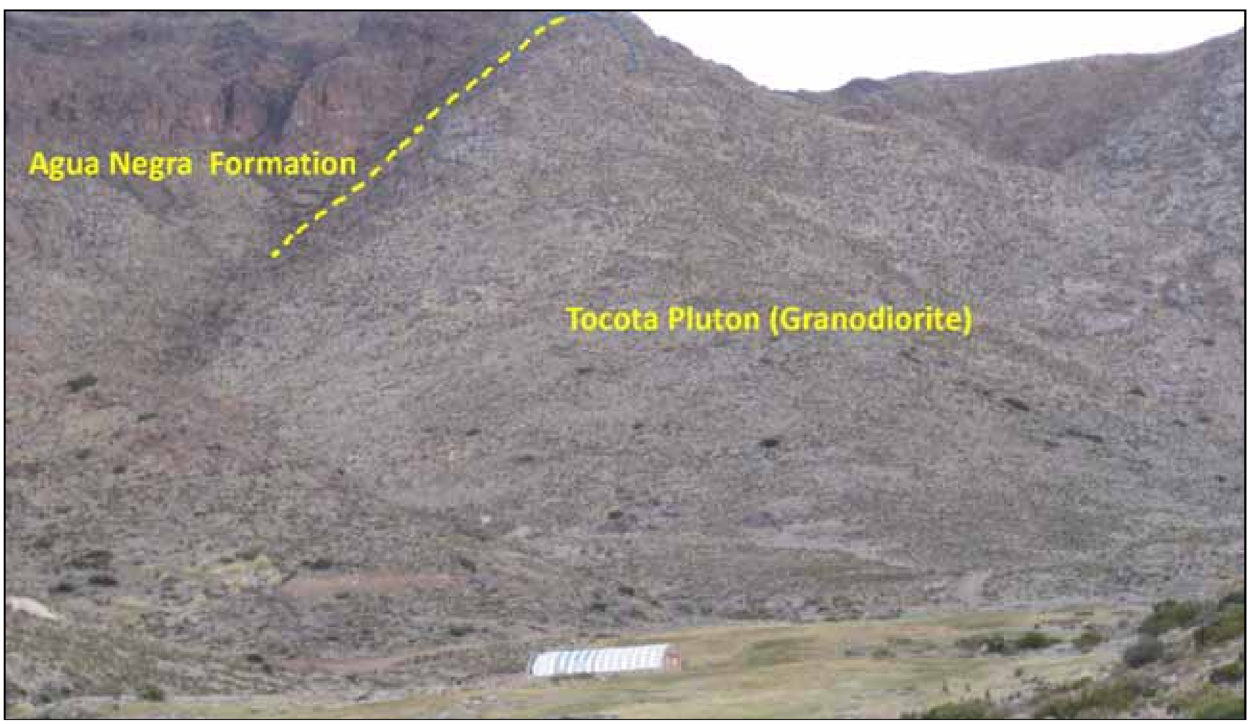
Figure 7.1 Regional Geology



Source: *Cardo & Diaz, (1999)*

Figure 7.2 Photograph of Agua Negra Formation with Shallow Water Ripple Marks, Pinto Property

Figure 7.3 Photograph of Permo-Triassic Granodiorite



All of the above lithologies have been intruded by sub-volcanic andesitic-dacitic porphyry bodies and felsic dykes of Mid- to Upper-Tertiary Age corresponding to the Olivares Group and probably to the Pircas Unit. One of these exposures, the southern sector of Chita Porphyry (not to be confused with the Chita Granite) has been dated as Miocene age (11.7 ma.). Mafic to felsic intrusive and extrusive units in the Chinchillones, the northern sector of Chita Porphyry, Placetas and Minas de Pinto areas are interpreted as probable mid to upper Tertiary age. Structurally the Chita Valley Project is located along a NW striking valley associated with a regional transfer fault. A complex of sub-volcanic mineralized intrusives are located at the intersection of the NW transfer faults with the N-S faults of the Andean structural system, as is the Chita copper-molybdenum mineralized porphyry complex. Recent detailed lithological mapping, mineralization and alteration studies by Minsud have encountered enigmatic features that are indicative of a variety of classical mineralization environments.

Unconsolidated Pleistocene deposits are found in the Chita Valley and also to the east and west of the project area. Unconsolidated Quaternary alluvial and colluvial deposits cover the central portion of the Chita Valley.

7.3 GEOLOGY OF THE CHITA VALLEY PROPERTIES

The main consideration for Minsud in its systematic detailed mapping of lithologies, alteration, structure and mineralization were to locate areas with good potential for the discovery of commercially viable precious and/or base metal deposits. Although the Chita Valley area is not unknown to explorers ranging from artisanal prospectors to multinational mining companies, the first coordinated attempt to map the entire valley was started by Minsud in 2012. Nearly six years later this work continues to demonstrate priority areas for further multidisciplinary exploration leading eventually to drilling of high quality targets.

The detailed geological (Figure 7.4) and alteration (Figure 7.5) mapping are two of several parameters that constituted Minsud’s integrated approach to systematic early-stage exploration. The others include mineralization descriptions, alteration patterns, structural analyses, trace element geochemistry, ground magnetometer surveying and Induced Polarization/Resistivity (“IP/Resistivity”) surveying. The combined results will be discussed more fully under the Exploration heading in a subsequent section of this report.

This section presents an abbreviated and simplified version of the geology of the Chita Valley Properties based on current knowledge. The principal aim of the ongoing studies is to gain a better understanding of the highly prospective Tertiary diatreme volcanic vent/porphyry complex that underlies the Chita Valley.

Figure 7.4 Property Geology Map

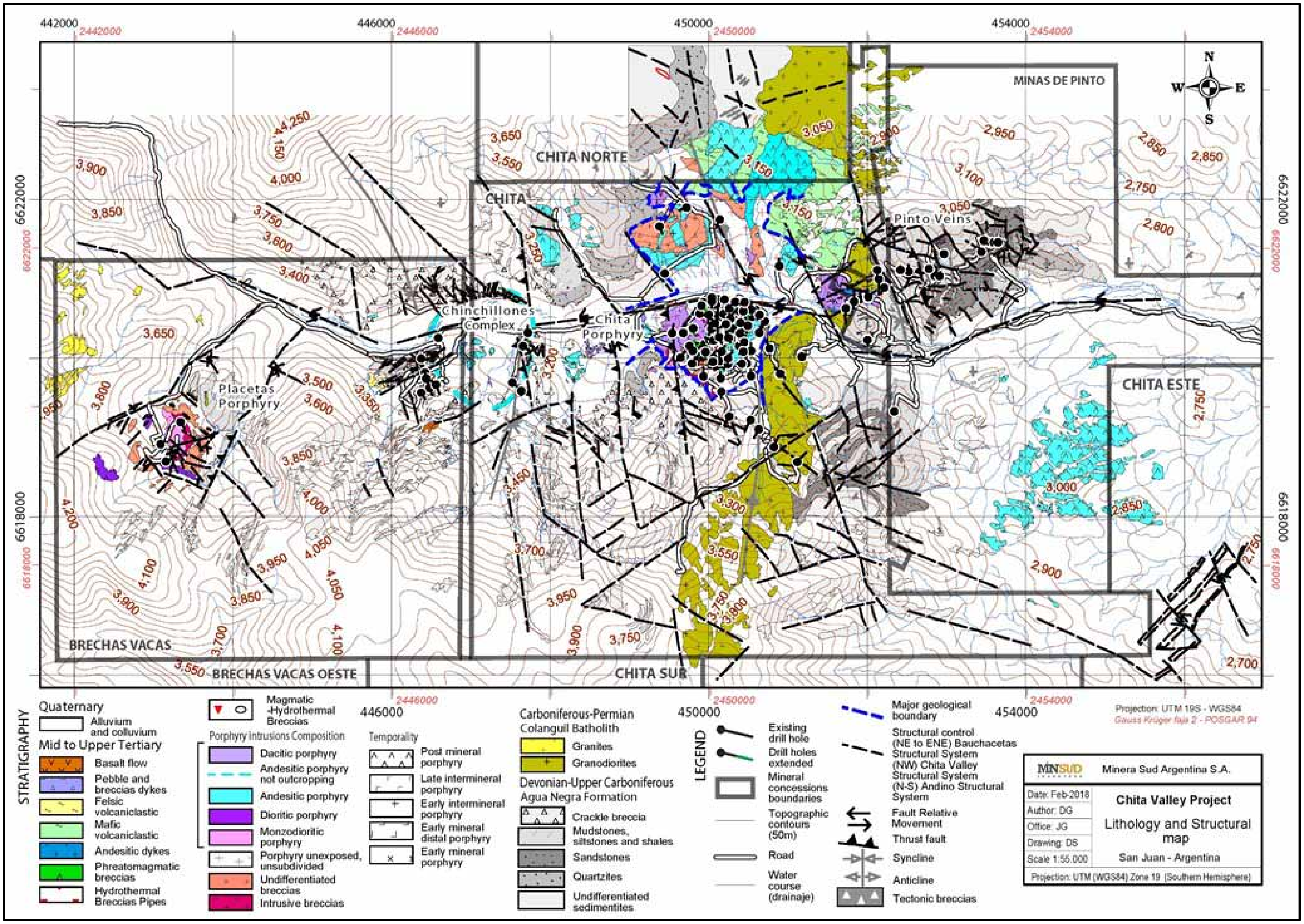
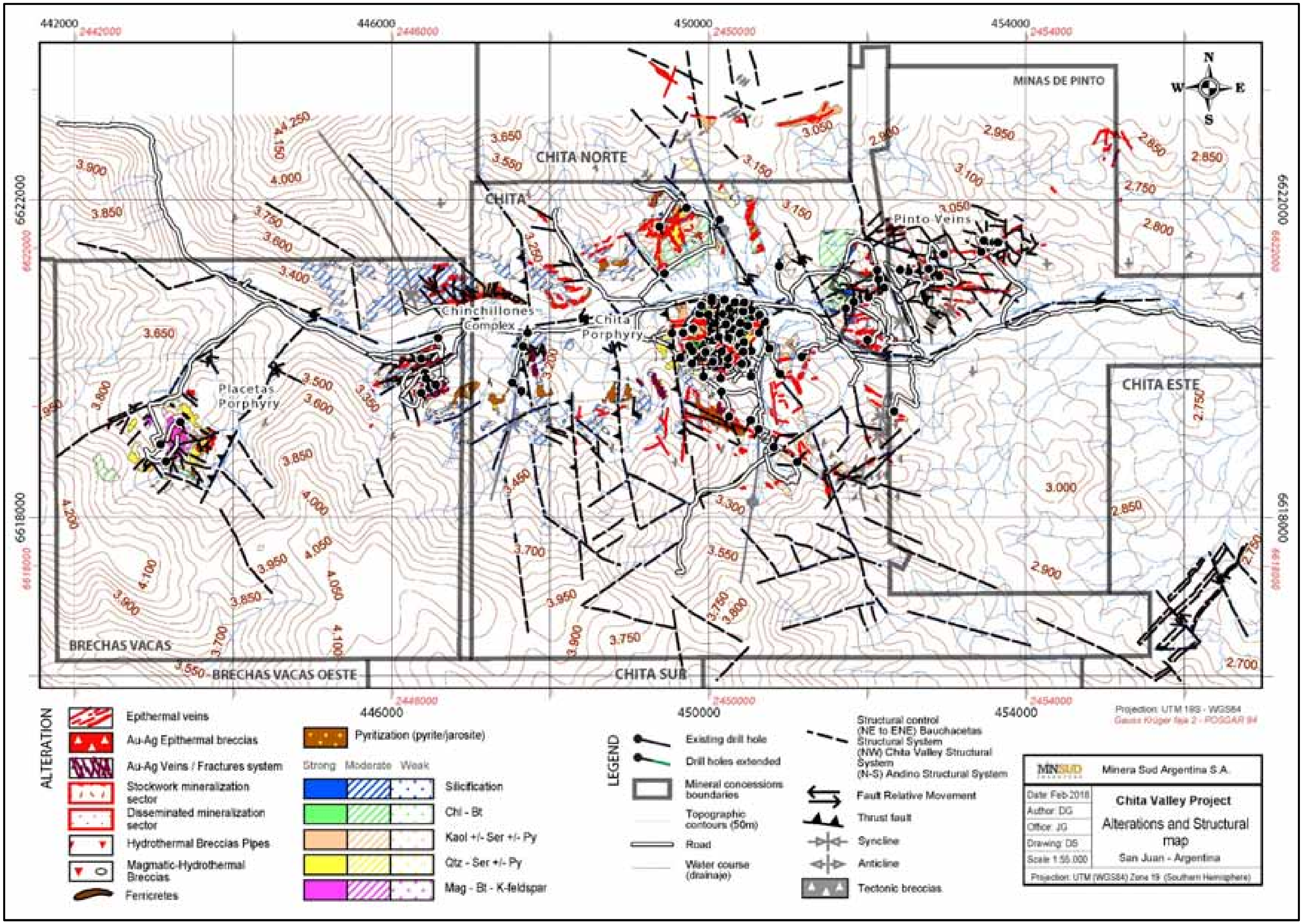


Figure 7.5 Property Alteration Map



Based on surface outcrop and drill core observations, the Chita Valley Complex includes at least four episodes of Tertiary intermediate to felsic epizonal intrusive activity. In various places throughout the Chita Valley Properties subaerial volcanic and volcaniclastic units are found as the coeval extrusive equivalents, along with multiple varieties of hydrothermal breccias as combined indicators of the paleo-environment. The phases of porphyry intrusion, alteration and mineralization are described as follows from oldest to youngest:

- Early mineralization stage (EM), monzodiorite to diorite porphyry: This lithologic unit contains the earliest episodes of mineralization. Alteration in the interior of a typical pluton is potassic, typified by K-feldspar + biotite + magnetite with “A-type” Bn + Cpy + Py diffuse anastomosing veinlets formed under semiductile cooling conditions. The roof and marginal regions are characterized by Ca-Na alteration typified by albite +tremolite + actinolite + chlorite. The Placetas porphyry located in the western part of the Brechas Vacas Property is the principal example of the EM stage. Localized low-sulphidation epithermal veins.

- Early inter mineral stage (EIM), andesitic to dacitic porphyry: This unit is characterized by phyllic alteration typified by quartz + sericite with “A and B-type” veinlets containing Py and Cpy plus hypogene digenite, covellite and chalcocite. May be superimposed upon potassic alteration. Example, South Chita. Localized low-sulphidation epithermal veins.

- Late inter mineral stage (LIM), altered dacite porphyry: This unit is compositionally similar to the older inter mineral dacite porphyries. A possible distinguishing feature is spherulites which are seen in the Chita South and Chita North areas. It is also altered, showing similar potassic and phyllic alteration features, but without veinlets or substantial concentrations of Cu, Mo, Au or Ag. There is a sharp intrusive contact between the LIM and older inter mineral dacite porphyries in the South Chita area and the LIM intrusive breccias can contain mineralized fragments. Localized low-sulphidation epithermal veins.

- Post mineralization stage (PM), andesite, dacite and monzodiorite porphyries: Generally unaltered porphyries of variable composition. These occur as local dykes and as resurgent domes in the Chinchillones complex structure, and between the Chinchillones complex and the Chita porphyries. Low-sulphidation epithermal veins absent.

The Tertiary sub-aerial volcanic and volcaniclastic units exposed in the Chita Valley Properties include:

- Felsic to intermediate volcaniclastic rocks: Altered felsic tuffs are exposed in the western part of the Chinchillones complex as well as the northern margin of the Chita North porphyry area. In both areas the volcaniclastics are juxtaposed with Agua Negra Formation quartzites along brecciated contact zones or high angle faults. Alteration is mostly moderate to strong argillic with localized pervasive silicification and areas of rusty pyritic sulphides.

- Andesitic volcaniclastic rocks: These units underlie a substantial portion of the Chita North and adjacent western Minas de Pinto areas. In the Chita North area the units are predominantly tuffaceous with alteration varying from moderate to strong argillic to moderate to strong phyllic with localized pervasive silicification and areas of rusty pyritic sulphides. In the western Pinto area the units can be much coarser grained with pyroclastic fragments (bombs) sometimes approaching one metre in diameter. The alteration in the latter area is predominantly phyllic.

- Basaltic lavas: Several exposures of generally unaltered massive basaltic lava have been mapped in the Chinchillones area. Although no inter-unit relationships are seen here the units are thought to be younger than the nearby volcaniclastics.

The Chita Valley properties are typified by widespread occurrences of a wide variety of breccia types. Not surprisingly the complex magmatic and tectonic setting also gives rise to an enigmatic assemblage of breccia styles related to various stages of Tertiary volcanic activity and epizonal plutonism that include the following types. It is noted that fragmental volcaniclastic, epiclastic and detrital sedimentary deposits genetically unrelated to mineralization are excluded from this discussion.

- Intrusion breccias: These typically poorly mineralized breccias are generally related to emplacement of an intrusive body and are typically located on the margins of the body. This type of breccia is found in the several locations throughout the Chita South porphyry and in the De los Pozo and Chinchillones Hill sectors of the Chinchillones complex. Similar breccias are found at the margins of the LIM porphyry at Chita South. The latter breccias locally contain fragments of earlier mineralized units.

- Magmatic hydrothermal breccias: These breccias may contain extensive zones of Cu +/- Mo mineralization. A tentative example of this type of fracture system is the eastern part of Placetas porphyry.

- Magmatic/phreatomagmatic tectonic breccias: The clear association of the Chita Valley complex with NS Andean faults and NW transfer faults is often reflected by similar orientations of consolidated breccias in several locations. An example of this hybrid type of breccia is the Agua Negra basement – Tertiary felsic tuff contact at Chita North.

- Phreatomagmatic breccias: This type of brecciation occurs when magma encounters water and breccias of this nature are of prime importance to the genesis of various styles of epithermal mineralization. A variety of phreatomagmatic breccias are found in the Chita South porphyry area and in the Chinchillones complex area. Chinchillones Hill contains excellent examples of vertical chimneys with sub-horizontal protrusions/layers of matrix supported breccias. Clasts are predominantly angular to sub-angular fragments of basement quartzite with occasional rounded altered igneous fragments.

The above descriptions are based primarily on field observations during mapping. Additional laboratory work including mineralogical, petrographic, rock geochemical, MLA/SEM studies, age dating, etc. would likely result in a much clearer understanding of the Chita Valley complex.

The structural setting of the Chita Valley complex has four principal components:

- An approximately N-S trending fold and thrust belt along the long axis of the Andean Frontal Cordillera.
- An approximately E-W trending dislocation or transfer fault, the Chita Valley Fault zone, roughly at right angles to the Andean trend.
- NNE-SSW to NE-SW secondary faults adjacent to E-W transfer fault.
- Localized caldera collapse/resurgent dome structures related to Tertiary igneous activity.

The major tectonic features provide the setting that controls the emplacement and deposition of the various Tertiary epizonal plutons and associated volcanic rocks as well as the various types of mineralization. The Chita complex is a 14 km long, 2 to 4 km wide corridor featuring three outcropping multiphase porphyries, extensive alteration features and literally hundreds of epithermal vein systems. The complex has been traced from the Placetas Porphyry-Horse Tail veins area in the west to the eastern Minas de Pinto veins area in the east.

The regional structures play a significant role in the localization of the Tertiary igneous activity beginning with the observation that the Chita Valley complex as a whole is located at the intersection of the two major systems. Firstly, the cluster of Tertiary plutons are along or closely adjacent to the major E-W transfer fault or Chita Valley fault. The N-S trending fold and thrust belt structures also influence the emplacement of intrusions in certain areas such as anticlinal hinge zones (Figure 7.6) which might lead to the development of additional porphyry targets in similar structural areas, such as Pinto east. Thrust faults (Figure 7.7) and collapse structures (Figure 7.8) might juxtapose different styles and settings of mineralization.

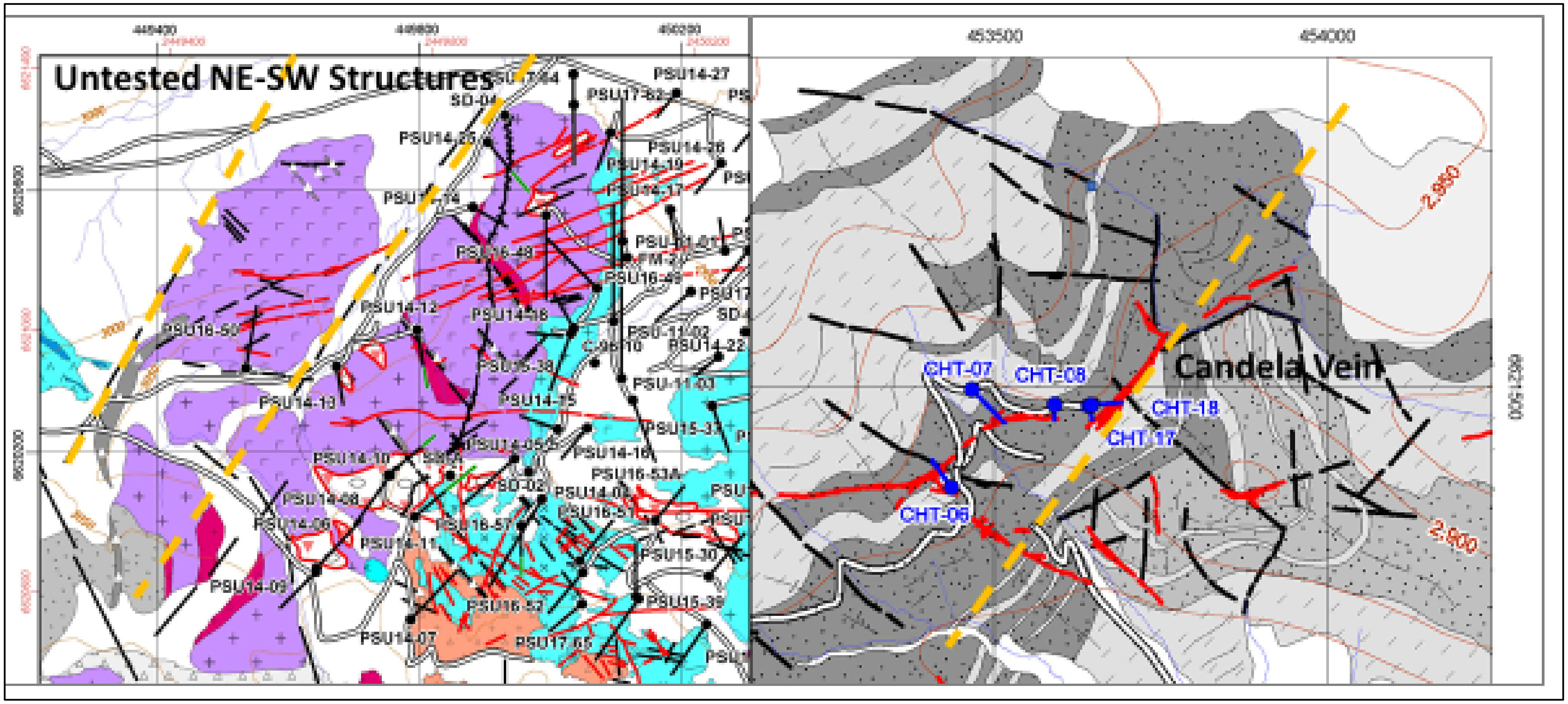
Figure 7.6 Photograph of Folded Agua Negra Formation with Porphyry in Anticlinal Core

Figure 7.7 Photograph of Thrust Fault in Agua Negra Formation, West Pinto Sector

Figure 7.8 Photograph of Collapse Structure Faulting Breccias Ridge Sector, Chinchillones Complex

The NNE-SSW to NE-SW secondary faults are potentially important in terms of providing a favourable structural setting for low-sulphidation epithermal Au-Ag mineralization. While there are numerous generally E-W trending epithermal veins that border the Chita Valley fault the vast majority are narrow and discontinuous. The NE-SW trending Candela vein (Figure 7.9 right) is up to 2 metres thick and continuously traceable for over 100 metres. Several similar and totally untested structures exist in the Chita Valley Project area including prospects directly adjacent to the south Chita Porphyry Mineral Resource area (Figure 7.9 left).

Figure 7.9 NE-SW Secondary Fault Structures



7.4 MINERALIZATION

Mineralization in the Chita Valley Project area occurs over a broad area in wide variety of styles including:

- Sheeted NW-SE, NE-SW and N-S quartz-sulphide veins;
- Stockworks of quartz-sulphide veinlets;
- Base metals-carbonates veins;
- Quartz-adularia veins;
- Breccias zones; and
- Fine disseminated sulphides.

The mineralization styles are enigmatic in that they include both porphyry Cu-Mo-Au-Ag and low-sulphidation epithermal Au-Ag +/- base metals types. As noted in Section 7.3 above the porphyry mineralization is confined to earlier phases of porphyry intrusion, while the epithermal veins are found in all but the last (resurgent dome) porphyry phases, as well as adjacent basement units.

It is emphasized that the porphyry mineralization features described below are primarily based on the detailed surface mapping and extensive core drilling information from the part of Chita Porphyry south of Arroyo Chita ("Chita Creek"). The low-sulphidation epithermal veins features are based on property wide observations and data. Also, both types of mineralization are influenced to varying degrees by Recent surficial weathering phenomena, resulting in zones of oxidation near surface and supergene enrichment of certain metals at depth. In particular the Indicated/Inferred Cu resources in the south Chita Porphyry sector comprise a combination of copper oxides, supergene (chalcocite/digenite) and primary (chalcopyrite) copper sulphides. On the other hand, the oxidation of near surface epithermal veins might be expected to result in higher gold values (by weight) than at depth.

Porphyry Cu-Mo Mineralization: The south Chita Porphyry area has disseminated and stockwork mineralization. The disseminated mineralization is homogeneously distributed in the porphyry matrix surrounding breccia clasts. Mineralization occurs in sub-1mm crystals and is principally comprised of pyrite + molybdenite + chalcopyrite. Disseminated sulphides are commonly associated with phases of porphyritic andesites and coincides with potassic alteration. Disseminated mineralization is also associated with veinlets, increased in areas where series of veins are present.

The stockwork mineralization is associated with two principal sets of fractures. The E-W system E (100°) is the dominant system and produced strong calcification and jointing in the porphyry, mainly along the north-northwest border. The second fracturing system runs NW (320° a 330°) and predominantly occurs along the south border. Here there is strong jointing of the porphyry with the fracture planes being filled with hematite and goethite. Both structural tendencies dictate the direction of the veins which suggests that they were active before, during and after the mineralizing events. The widest area of veinlets occurs the intersections of these dominant structures. A third series of fractures, striking NE (40°), caused fracturing and jointing but do not show any signs of mineralization.

The stockwork surface distribution is 10 to 20% of the total porphyry and has a semi-circular distribution towards the limits of the porphyry body. Beds and veinlets of early pegmatoids, comprised of coarse quartz with widths up to 20 cm, are present and do not show a preferential strike direction. Malachite and turquoise are present in the quartz. A secondary early veining event, vein type “A”, features winding and discontinuous quartz veins less than 3 mm wide and filled with fine sulphides + magnetite + molybdenum. Type “B” quartz veins are a series of parallel, continuous, planar veins between 5-30 mm wide and contain sulphides and magnetite. Neither type “A” or type “B” veins display alteration haloes. The quartz is relatively crystalline and coarse grained. The sulphides occur as discontinuous streaks and small pods of mineralization and are characterized by molybdenite-chalcopyrite with traces of pyrite. Some veins in the central portion of the porphyry are vuggy and filled with hematite. Late stage veins, type “D” veins, cut the “B” veins and have a mild radial alteration pattern of sericite or sericite-chlorite with a preferential direction of N 280° and N 320°. Type “D” veins are between 1 to 50 mm wide and contain pyrite and chalcopyrite and the quartz is less crystalline that Type “B” veins.

Pyrite is the dominant sulphide with chalcopyrite, this can be differentiated in the boxwork fill and features an in-situ oxidation. Molybdenite is harder to observe in this area despite the strong alteration. The boxwork fill falls into two categories of mineralization – the first features oxidized pyrite cubes and the second type of mineralization features irregular, platy chalcopyrite. Mineralization is observed with magnetite and molybdenite in type “B” fracture veins. The iron oxides, in order of abundance are Hematite>Goethite>Jarosite, and are mainly distributed in cavities, box work, and fractures, see Figure 7.10.

Figure 7.10 Photograph of Various Stockwork Veins at Chita Porphyry

It is noted, based on outcrops and geophysical interpretation, that less than 25% of the **Chita Porphyry** surface area is effectively tested by drilling. The remaining 75% of Chita Porphyry that lies beneath the Chita Valley floor and in the adjacent Chita North sector has only five widely spaced drill holes. Three of these holes have elevated Cu values over significant core lengths (Historical RC hole C96-08 with **30 m @ 0.16% Cu**, historical DDH SD-03 with **37 m @ 0.14% Cu + 0.036% Mo** and Minsud DDH PNO 14-01 with **16 m @ 0.30% Cu + 0.003% Mo.)**. Similar observations are made for the Tertiary porphyry intrusions located to the west of Chita porphyry, the Chinchillones Complex and Placetas Porphyry, with 1 and 3 drill holes, respectively.

The mineralized porphyry in the approximately 2.5 km2 **Chinchillones Complex**, known as "Porphyry A", was first detected by drilling by Minera Sud Argentina in 2008. This body is, except for a small exposure, located beneath Recent alluvial deposits of the Chita Valley. The mineralization based on minimal data comprises low to moderate grade disseminations, stockwork and veinlets with widespread Mo + Cu mineralization along with localized Au + Ag values. Essentially, this porphyry has yet to be systematically explored.

The **Placetas Porphyry** covers an area of approximately 1.5 square kilometres. Mineralization in the surface exposures is confined to Cu oxides along fractures/veinlets and the three drill holes all into the potassic altered core sector is typically contained in EM veinlets containing chalcopyrite +quartz +/- magnetite +/- pyrite with little in terms of disseminated sulphides. Two of the three historical drill holes (PLCT-0001 and 0003) are characterized by weakly anomalous Au and Ag and moderately anomalous Cu (average ~0.05% Cu) throughout. The third drill hole (PLCT-0002) encountered scattered areas of weakly anomalous Au, Ag and Cu (average ~0.005% Cu). A few sporadic anomalous Mo values were encountered but on the whole were uninteresting (average for three holes ~10 ppm Mo).

Low-sulphidation Epithermal Veins: A complex swarm of discontinuous quartz veins containing variable concentrations of polymetallic sulphides and widespread localized Au-Ag mineralization has been traced for some 14.0 kilometers along the Chita Valley from the Placetas porphyry area in the west to the eastern part of the Minas de Pinto property. The vein swarm cuts various lithologies including Devonian-Carboniferous sediments (Agua Negra Formation), Carboniferous-Permian granodiorite (Colanguil Batholith), and Mid to Upper Tertiary volcaniclastics and andesitic porphyry (Chita Valley Complex). Only the youngest post-mineralization resurgent dome intrusions are devoid of these veins.

Many structurally aligned corridors comprising multiple veins and stockworks are present throughout the Chita Valley Project. These are briefly described from east to west across the properties:

- **Minas de Pinto Sector**: Located north of Chita Creek in the eastern part of the project area, this is essentially an east-west trending swarm of discontinuous quartz veins. These veins contain variable concentrations of polymetallic sulphides and widespread localized Au-Ag mineralization that has been traced for 4.0 kilometers along strike. The vein swarm cuts various lithologies including Devonian-Carboniferous sediments (Agua Negra Formation), Carboniferous-Permian granodiorite (Colanguil Batholith), and Mid to Upper Tertiary volcaniclastics and andesitic porphyry (Chita Valley Complex). Several corridors comprising multiple veins and stockworks are present. In the eastern and southern parts of the sector are veins known as Candela, Johanna, Esperanza, Josephina, Argentina, Glenda. In the western sector, from north to south, these are termed; the Barba, Amparo, Fatima, Fatima Sur, Branca, Maria, Carmen and Carmen Sur vein assemblages.

The gold-silver mineralization in the sector is associated with multiple episodes of Tertiary hydrothermal activity. The generally E-W oriented extensional vein system comprises a series of discrete veins, brecciated veins, sheeted parallel veins and vein stockworks that are typified by widespread elevated Au, Ag, As, Ba, Cu, Fe, Mn, P, Pb, S, and Zn values as well as localized elevated Mo and Sb concentrations. The polymetallic veins range from intermediate depth (mesothermal) to shallow (epithermal) in style in all areas examined. The superimposed and overlapping veins include quartz-sulphide (Au-Cu) type, carbonate (base metals-Au) and epithermal quartz or quartz-sericite (Au-Ag). The veins in general have the sinuous geometry and sigmoidal anastomosing patterns that typify multiple episodes of mineralization.

The Minas de Pinto corridor contains artisanal workings of unknown age and an early 20th Century exploration adit. A now defunct TSX:V listed company optioned the Minas de Pinto Property in the mid-2000s, completing extensive (approximately 1,950) grab or channel samples and in 2006 drilled 22 diamond drill holes totaling 2,631.25 metres. In 2011 Minsud drilled two holes totaling 435.5 metres to test the earlier results. In 2014, Minsud collected an additional 450 surface channel samples. High grade gold silver values have been obtained from surface channel samples in several vein systems as highlighted by examples below:

1. **Argentina Vein**: **0.70 m** (true thickness) @ **9.50 g/t Au, 1,284 g/t Ag**, 0.14% Cu, 1.73% Pb & 0.95% Zn.
2. **Candela Vein**: **2.00 m** (true thickness) @ **12.53 g/t Au & 200.1 g/t Ag.**
3. **Carmen Vein: 3.00 m** (true thickness) @ **11.69 g/t au & 23.4 g/t Ag**.
4. **Esperanza Vein: 0.80m** (true thickness) @ **8.49 g/t Au & 46.9 g/t Ag.**
5. **Fatima Vein**: **2.00 m** (true thickness) @ **58.29 g/t Au & 38.8 g/t Ag.**
6. **Johana Vein**: **1.00 m** (true thickness) @ **12.76 g/t Au & 198.9 g/t Ag.**
7. **Pulenta Vein**: **1.50 m** (true thickness) @ **20.72 g/t Au & 42.7 g/t Ag.**

- **Romina/Dora-Muñoz Sector**: This area is located south of Chita Porphyry in the eastern part of the project area. The majority of vein structures in this area are oriented along the general N-S Andean or the general E-W Chita Fault trend (eg. Dora-Muñoz vein). A notable exception is the main prospect to date in this sector is the Romina vein, a NW-SE trending structure traceable for approximately 1.5 km. This vein intrudes a highly altered area known as Pajaro Loco, an area of altered granodiorite, measuring approximately 500 m x 200 m, containing disseminated sulphide mineralization and polymetallic veins. Historical small-scale mining activities have been conducted in this zone. Minsud completed 5 drill holes in 2011. All holes encountered Ag-Au+/-Cu mineralized veins. The best drill hole Ro11-04 intersected a **4 m core length (unknown true thickness)** averaging **0.83 g/t Au; 101 g/t Ag & 3.20% Cu**.

- **Chita Porphyry Sector**: In 2016 and 2017 detailed mapping and sampling of epithermal Au/Ag vein areas in the Chita Porphyry was conducted mostly inside the Inferred Resource wireframe model. The precious metal veins are believed to have potential complementary benefits to the deposit's economic model either as discrete high-grade areas of direct shipping material or as broader sectors of elevated Au/Ag inside the Cu wireframe. One epithermal prospect, the Condor Vein, shows extensive potential for high grade Au/Ag including a number very high or "Bonanza-type" assays, see Table 7.1 below for Condor Vein results. The 2017 drill hole PSU17-67 with a **core length (unknown true thickness)** of **2.25 m** averaging **0.55 g/t Au, 762.0 g/t Ag & 4.38% Cu** is another largely untested prospect of this type.

TABLE 7.1
CONDOR VEIN – SURFACE CHANNEL SAMPLING RESULTS

Sample ID	Easting m	Northing m	Elevation (m)	Strike	Dip	Thickness (cm)	Au g/t	Ag g/t
15043	2,450,038	6,621,344	3,012	N70°	85°N	35	0.72	75.6
15044	2,450,045	6,621,348	3,013	N70°	85°N	20	1.63	265
15045	2,450,048	6,621,347	3,014	N70°	85°N	30	0.15	24.8
15046	2,450,055	6,621,349	3,011	N70°	85°N	25	**5.64**	**449**
15047	2,450,058	6,621,352	3,011	N60°	85°N	15	1.05	80.7
15048	2,450,060	6,621,351	3,008	N55°	85°N	30	0.84	77.3
15049	2,450,067	6,621,356	3,007	N60°	75°N	30	2.58	245
15050	2,450,084	6,621,361	3,002	N65°	85°N	20	**4.41**	**489**
15051	2,450,098	6,621,370	2,993	N70°	75°N	20	**42.10**	**2,390**
15052	2,450,112	6,621,375	2,981	N70°	75°N	20	**46.50**	**2,660**
15053	2,450,114	6,621,377	2,981	N70°	75°N	20	**2.54**	**794**
15054	2,450,134	6,621,384	2,972	N70°	75°N	15	**5.73**	**850**

- **Chinchillones Complex Sector:** The exposed basement of the Chinchillones Complex comprises greywackes (silicified), siltstones and shales of the Carboniferous age Agua Negra Formation. The sedimentary succession is cut by several phases of intrusive porphyries and related breccias of probable Miocene age. The Agua Negra sediments in the southwestern corner of the area are overlain by felsic volcaniclastics and mafic flows/dykes also of probable Miocene age.

  The area is centered on the Chita Valley (NW striking valley associated with a regional transfer fault), at a turning point or break in orientation. In addition, the Chinchillones Complex is locally characterized by radial and ring fractures around its margins that may be associated with caldera subsidence and resurgent dome phenomena. Several low sulphidation precious metal mineralization showings or exploration targets have been detected at present by different exploration methods, namely:

1. **"Chinchillones Breccias"** target is a complex breccia hosted in diatreme system, with a superimposed epithermal system. The Agua Negra Formation sedimentary host rocks are extensively 'crackle' brecciated in a first stage related to the porphyry intrusion. A second brecciation, event comprises polymictic clast and matrix support breccias occupying irregular sub-horizontal layers several meters thick. A third phase of brecciation is associated with shallow epithermal Au + Ag mineralization. In this area the majority of epithermal veins are in ENE-WSW structures that follow the Chita Valley fault. The 2008 drill hole MSA08-B with a **core length (unknown true**

thickness) of **1.00 m** averaging **3.40 g/t Au & 60.1 g/t Ag** is the only drill hole in this target area.

2. **"Breccias Ridge"** target: is located on the north side of the Chita Valley. The area's bedrock exposures are primarily Agua Negra Formation sediments with a few porphyry exposures and dykes along the valley's edge. Radial faults, fractures and epithermal veins more or less at right to the main porphyry contact typify the area. The sector also has epithermal veins in ENE-WSW structures parallel to the Chita Valley Fault. Artisanal mining activities have taken place locally in this area.

3. **"South Chinchillones"** target: is an area of discontinuous and sometimes bifurcating Au + Ag + base metals epithermal veins primarily in ENE-WSW structures parallel to the Chita Valley fault. Other localized veins are oriented in a NW-SE direction more or less along the Andean trend. This area has been extensively tested by surface trenching/channel sampling (192 samples) and by 6 shallow diamond drill holes. The best surface channel sampling and drill hole intersections are shown in Table 7.2.

TABLE 7.2
CHINCHILLONES SOUTH AREA BEST TRENCH AND DRILLING INTERSECTIONS

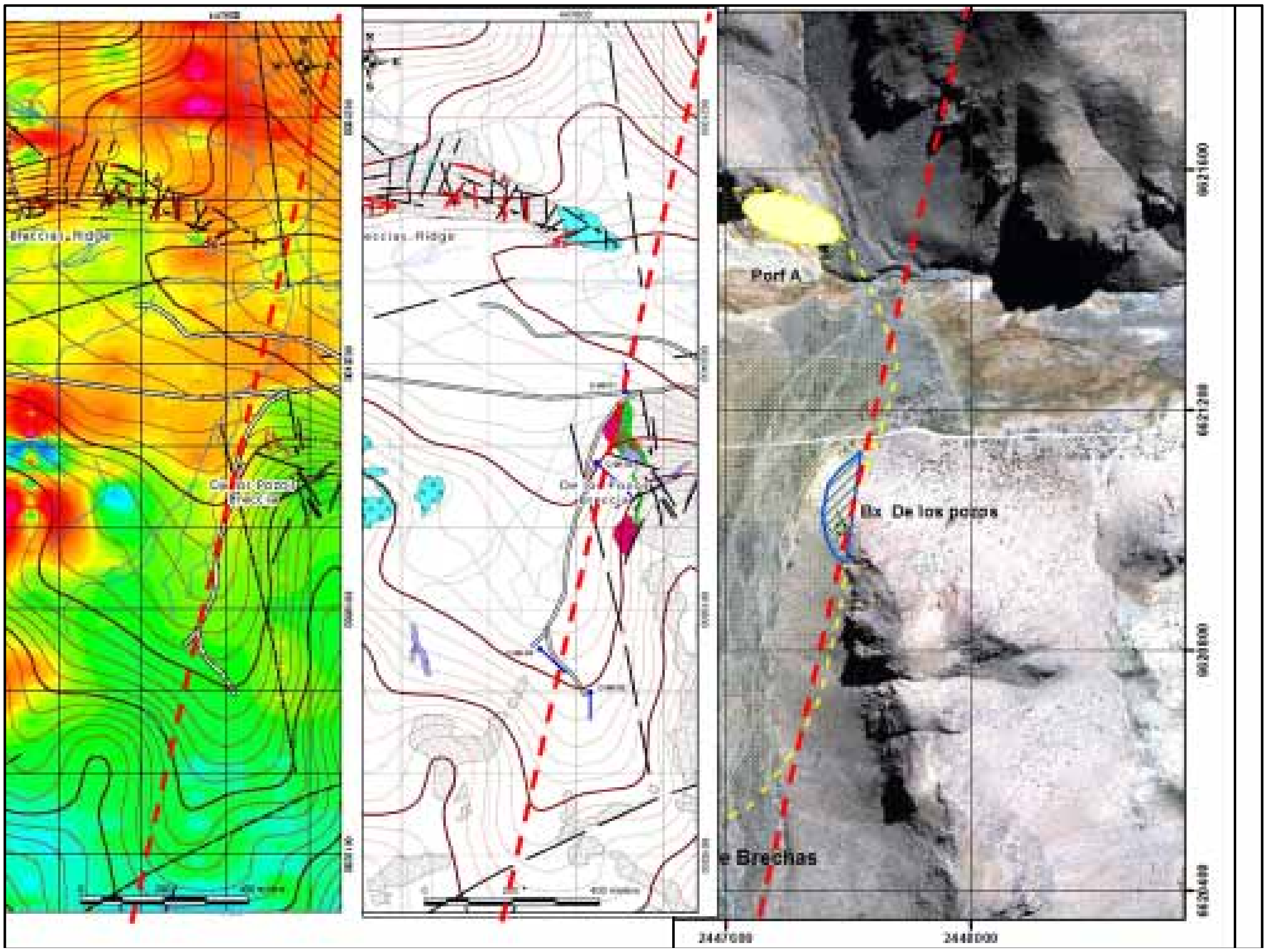
Trench No. **Hole No.**	**Intersection**			**Assays**			
	From (m)	**To (m)**	**Interval (m)**	**Au g/t**	**Ag g/t**	**Cu %**	**Mo %**
TChs12-11	17.0	19.0	**2.0**	**3.71**	**5.0**	0.01	Tr
TChs12-15	0.0	1.0	**1.0**	**3.54**	**684.9**	0.09	Tr
TChs 12-18	0.0	0.3	**0.3**	**8.76**	**1,032.8**	0.05	Tr
MSA08-C	104.0	198.0	**94.0**	0.14	**58.0**	**0.19**	n/a
ChS11-01	112.0	114.0	2.0	0.18	**105.0**	**1.34**	Tr
ChS11-04	62.0	63.0	1.0	0.44	**393.0**	**1.46**	Tr
ChS11-05	135.0	137.0	2.0	0.40	**136.0**	n/a	Tr

4. **"De los Pozos"** target area along the eastern margin of the Chinchillones complex contains a variety of sedimentary and igneous lithologies, breccias and mineralization structural trends. This area marks the intersection of three prominent structural and epithermal vein trends:

    - The oldest NNW-SSE Andean trend.
    - The approximately E-W transfer fault or Chita Valley trend.
    - The latest NNE-SSW trend related to Tertiary igneous activity.

    The general geological and structural setting is illustrated in Figure 7.11.

Figure 7.11 Magnetic, Geological and Structural Features, De Los Pozos Area



The area was mapped in detail and selectively channel sampled during the first half of 2013. Historical RC drilling data was re-examined and incorporated into the overall interpretation. Table 7.3 shows highlights of the surface outcrop channel sampling. It is noted that the channel sample base metal values are significantly understated due to surface weathering and leaching. This is clearly demonstrated for general comparison purposes by the historical drilling analyses from below the weathering profile. Highlights of the 2013 channel sampling program and the historical drill sampling are presented in Table 7.3. This underexplored area is clearly prospective for both precious and base metals.

TABLE 7.3 **DE LOS POZOS AREA BEST TRENCH AND DRILLING INTERSECTIONS**										
Area	**Trench** ***Historical RC Hole***	**From** **(m)**	**To** **(m)**	**Length** **(m)**	**Au** **g/t**	**Ag** **g/t**	**Cu** **ppm**	**Mo** **ppm**	**Pb** **ppm**	**Zn** **ppm**
De los	Chinch-2013-03	0.00	24.00	**24.00**	0.04	2.2	**285**	11	**160**	**370**
Pozos	Chinch-2013-04	0.00	30.00	**30.00**	0.14	6.7	**251**	22	97	43
	incl.	0.00	4.00	4.00	**0.27**	**10.5**	**169**	28	43	35
	Chinch-2013-05	0.00	48.00	48.00	0.05	3.4	86	14	**269**	82
	C96-01	*66.00*	*74.00*	***8.00***	*0.11*	***14.0***	***4967***	*n/a*	***1883***	***3759***
	C96-02	*56.00*	*58.00*	*2.00*	***0.25***	***17.0***	***1383***	*n/a*	***4744***	***10116***
	C96-03	*108.00*	*116.00*	***8.00***	***0.22***	*9.0*	***8901***	*n/a*	***250***	***453***
	C96-04	*160.00*	*162.00*	***2.00***	***1.33***	***81.0***	***8902***	*n/a*	***10001***	***20001***

- **Placetas Porphyry-Horse Tail Sector:** The Placetas Porphyry area comprises a flow dome complex, with a central core of dacite porphyry bordered by intrusive breccias and an outer exogene volcaniclastic sequence of pyroclastic breccia flows (siliceous breccia fragments) and air-fall tuff. Favorable permeable tuff is altered to illite and may be cut by epithermal quartz veinlets. The dome carapace is cut by a late NNE/SSW structural feature with development of hydro-fracture epithermal quartz veins (Figure 7.12) in the vein halo. This area has not been systematically explored for precious metals mineralization.

- The Horse Tail areas lies approximately a kilometer south-east of the Placetas Porphyry area. The area is underlain exclusively by Agua Negra sedimentary rocks that are extensively folded and fractured primarily in the early generally N-S fold and thrust fault stage (Figure 7.6). Prospecting in this area has identified discontinuous quartz veining with localized elevated precious metal values. This is believed to be a low priority target area.

Figure 7.12 Photograph of Epithermal Veins at Placetas Porphyry

8.0 DEPOSIT TYPES

The northwestern region of San Juan Province, Argentina and neighbouring Chile is home to a world class collection of precious and/or base metal deposits mostly within a broad classification of hydrothermal deposits including **Tertiary Porphyry Cu-Mo-Au-Ag deposits** and related **High and Low-sulphidation Epithermal Au-Ag deposits**. Deposits are hosted by a variety of plutonic, volcanic and sedimentary lithologies. Northwestern San Juan Province also hosts an earlier group of **Lower Permian-Triassic Porphyry Cu-Mo and Cu-Au deposits** and related **Low-sulphidation Au deposits** associated with intrusive and volcanic rocks, of calc-alkaline affinity.

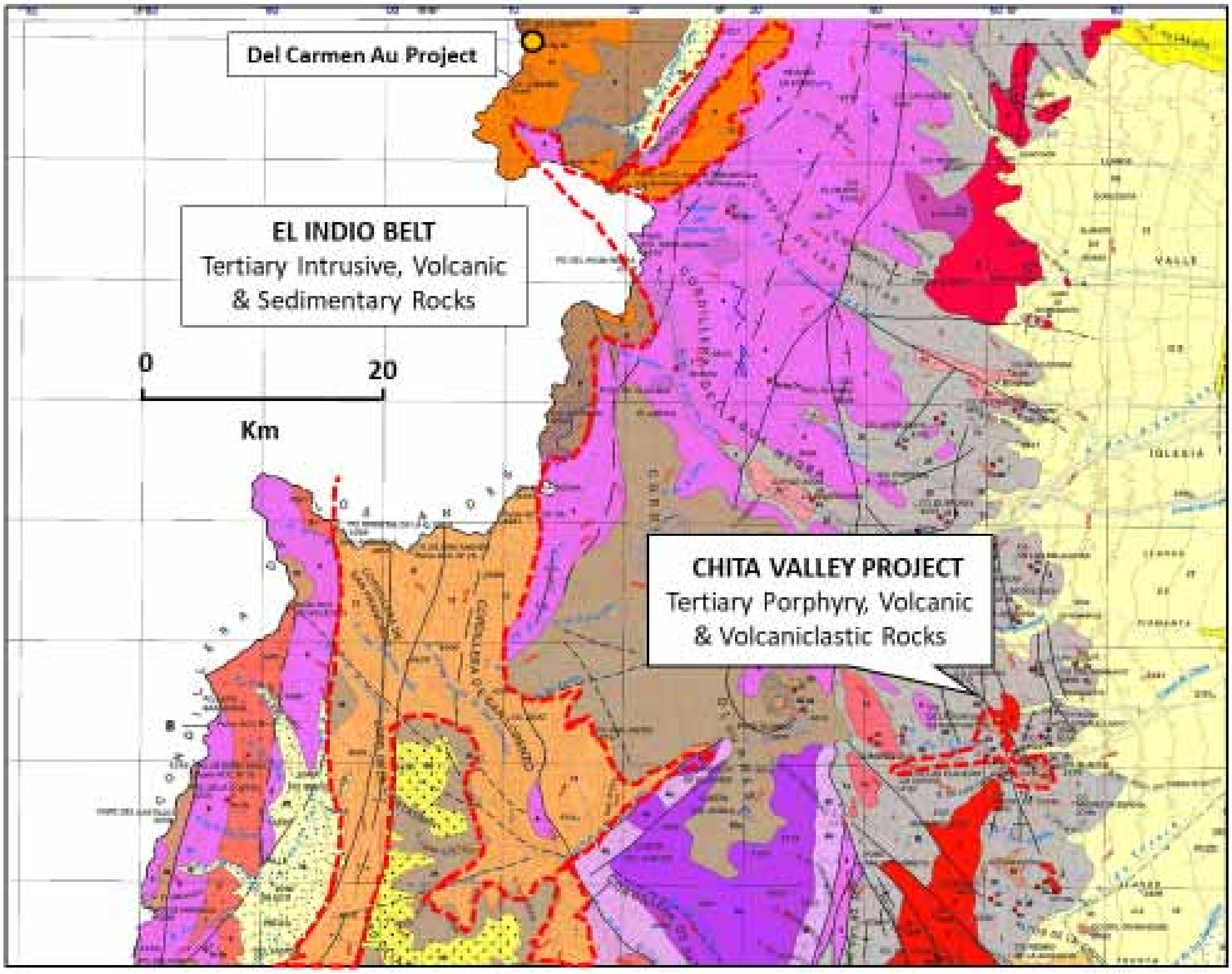
The Tertiary Age El Indio Belt deposits account for the bulk of the historical and planned production in the region. Contrary to some earlier investigations the El Indio deposits are no longer considered to be simple "classical" high-sulphidation ("HS") epithermal deposits. Heberlein (2008) states; that El Indio is *"a spatially and temporally zoned epithermal system with components of high, intermediate ("IS") and low-sulphidation ("LS") styles of alteration and mineralization. Bonanza gold grades are associated with later intermediate to low-sulphidation quartz-gold veins that are superimposed over early high-sulphidation enargite-pyrite veins. Deposit formed by a two-stage process: an earlier prograde event (HS to IS) and a later retrograde event (LS)."* Interestingly there are two additional types of hydrothermal activity and associated non-commercial mineralization at El Indio: a porphyry-style that predates the HS to IS event and a later post-LS chalcedony vein event.

Heberlein (2008) also shows that the El Indio porphyry-epithermal system lies inside a temporal range mostly within the Miocene epoch of the Tertiary system or between 25 ma. and 5 ma. Volcanic activity is dated throughout the temporal range while three types of sub-volcanic intrusions are dated within the period of 21 to 9 ma. Ore body HS, IS and LS mineralization is dated between 9 and 5 ma.

The economic importance of this mineralization style is illustrated by the combined historical production and current published reserves for El Indio/Tambo, Veladero and Pascua Lama which total 34.16 million ounces of gold, 898.7 million ounces of silver and 472,000 tonnes of copper.

It is postulated that the Tertiary volcaniclastic and porphyry units found throughout the Chita Valley Project area might be a remnant or outlier of the El Indio Belt, although at a somewhat deeper erosional level. The Chita Valley area, located about 70 km southeast of the former Tambo Mine, has very similar structure, lithology, alteration and mineralization styles. The southern part of the El Indio Belt is actually much closer to the Chita Valley Tertiary epizonal intrusions and volcaniclastic units, with less than 20 km distance separating the two areas (Figure 8.1). However, the Chita Valley Project setting appears to be more conducive to development of low-sulphidation epithermal and porphyry deposits, than to the high sulphidation epithermal deposits that predominate in the El Indio Belt (*senso stricto*).

Figure 8.1 Regional Geology Outlining the El Indio Belt



Source: *Cardo & Diaz, (1999)*

Porphyry Cu-Mo-Au-Ag deposits and related **High and Low-sulphidation Epithermal Au-Ag deposits** are associated with shallow (1.5-2 km) level plutonic complex emplaced in magmatic arcs at convergent plate margins. The form of emplacement is related to tectonic and structural events affecting the host rocks where the porphyry/volcanic system occurs. In the Chita Valley area, the structural controls are the generally N-S Andean thrust and folds regime and the generally E-W to WNW-ESE Chita Valley transfer fault.

The development of mineral deposit models with respect to the Chita Valley Project is an evolving process. The following selected references identify some of the geoscientists that have helped to build the current conceptual model. In chronological order these are: Sillitoe, R. H., 1974; Ganem, F. & Milanese, R., 2009; Pugliese, L. E., 2012; Coates, H. J., Ganem, F., & Gordillo, D., 2014; Alfaro-Cortes, M., 2016 & 2017. The work of Dr. Mario Alfaro-Cortes is especially significant in formulating the current Chita Valley conceptual model. The exceptional field work of geologists, Javier Gill and David Valdez, is also fundamentally important.

Porphyry intrusions emplaced at high levels in the crust tend to have tabular shapes with flat tops. Such magma chambers grow above feeder zones (reverse, vertical structures) related mainly to a thrust and folds regime, and spread laterally as sill like intrusions, lacoliths and, lopoliths. Porphyry deposits can display distinct stages of development of hydrothermal alteration as well as, different types of veins and mineralisation. Initial intrusion emplacement is followed by prograde alteration as: Potassic (K-feldspar, biotite, magnetite), quartz-sericite +/-, pyrite, grading outwards to inner propylitic (actinolite, epidote), and outer propylitic (chlorite, zeolites). Early barren A veins (ptygmatic high temperature quartz) form while the intrusion is cooling, and are overprinted by mineralised M veins (quartz, magnetite with pyrite-bornite) which are associated with potassic alteration. Later B veins (open coxcomb quartz with later pyrite-chalcopyrite) display stronger associations with retrograde phyllic (silica, sericite, pyrite) alteration. Sheeted quartz veins, develop in dilatant structural sites and favour wall rock porphyry formation, while laminated veins occur in settings of reactivated dilational structures, and stockwork quartz (A, B, D) veins may result from polyphasal porphyry emplacement with potential to host elevated Cu-Au grades.

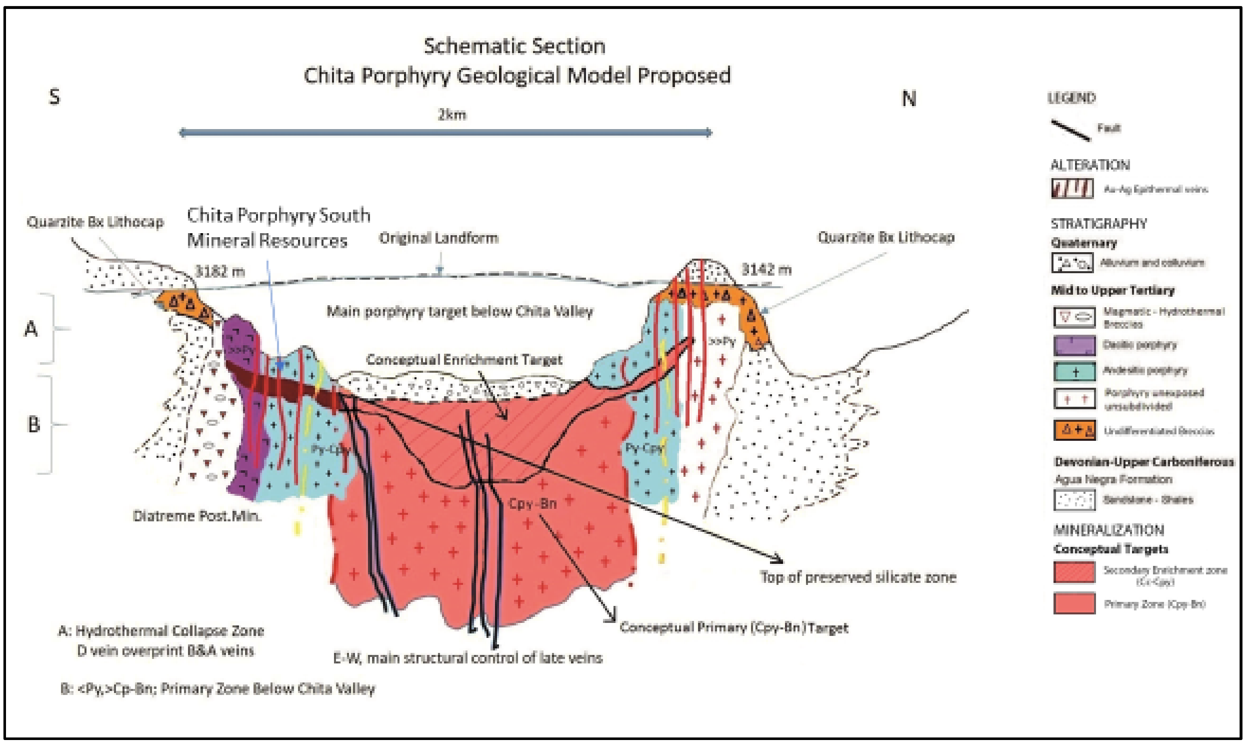
Advanced argillic grading to marginal argillic alteration, are interpreted to form by several processes and display varying relationships to porphyry and epithermal Cu-Au-Ag mineralisation. This also contributes towards the development of lithocaps when a favorable and permeable rock is reached, thereby confining and concentrating buried porphyry mineralisation. When the host rocks are not permeable, as occurs with the silicified arenites or quarzites that are the Chita host rock, the lithocap forms a sealed rock, as a carapace, trapping a saturated fluid. In this instance explosive pressure leads to formation of breccia above the top of the porhyry stock. Early ascending vapour-dominated magmatic fluids react with wall rocks to form barren advanced argillic alteration. This differs from alteration associated with high sulphidation epithermal Au deposits, which may be capped by steam heated alteration zones. Percolating cool low pH waters react with wall rocks to higher temperature and more acidic percolating waters result in the development of retrograde phyllic alteration, which may also contain advanced argillic portions, and grade to marginal argillic alteration.

After porphyry emplacement, heat radiating from the cooling body dissipates into the wall rocks by conductive heat transfer, while the deeper magma chamber cools more slowly. Initially, magmatic fluids exsolved from the magmatic source at depth form prograde alteration in the porphyry and in the wall rocks as well as mineralisation processes. The magma heat source at depth drives convective rise of initially magmatic-dominated hydrothermal fluids. This sets up circulating hydrothermal cells which develop as meteoric-dominated waters are drawn to deeper levels, where they may entrain magmatic volatiles to form magmatic-meteoric hydrothermal fluids. The convective fluids, initiated at this stage, continue to be active over a protracted period of time as important mechanisms of heat and metal transfer. Depending upon host rock permeability and structure, the composite magmatic-meteoric waters may migrate into the wall rocks and beyond the porphyry environment, as hydrothermal cells circulate to elevated crustal settings. Here these hydrothermal fluids may be responsible for hydrothermal alteration and formation of epithermal Au-Ag deposits in lithocap. Permeable volcanic host rocks often host broad alteration zones while less permeable and brittle arrenites in the Chita Project form less prominent masses of pyritic advanced argillic lithocap. This phase separation may also occur during sudden pressure drops such as massive hydrofracturing observed at the Placetas Porphyry.

8.1 CHITA PORPHYRY SECTOR PROPOSED DEPOSIT MODEL

The Chita Porphyry is multiphase in character. At least three major phases of porphyry intrusion have been recognized in surface exposures and drill core. Contacts between the porphyry phases are mainly sharp. Two main stages of alteration are recognized, Potassic silicate (quartz-biotite-K-feldspar) and intermediate argillic (sercite-clay-chlorite) with the former totally or partially over printed by the latter. The porphyry is thought initially to have been dominated by K silicate alteration, the intensity of which decreased during progressive porphyry emplacement. All quartz-magnetite vein stockwork and copper introduction accompanied the K silicate event. K silicate alteration is most widely preserved in the intermineral porphyry in the lower southern part of the Chita Valley. The proposed Chita Porphyry deposit model is illustrated in Figure 8.2.

Figure 8.2 Chita Porphyry Sector Proposed Deposit Model



Above this porphyry surface, intermediate argillic alteration, a product of hot groundwater incursion, predominates. Moderate intensity intermediate argillic alteration gave rise to chloritization of mafic lithologic units, including hydrothermal biotite, and hematitization of hydrothermal magnetite. More intense intermediate argillic alteration caused illite alteration of feldspars and the conversion of hematite and any remnant magnetite to pyrite. Veinlet quartz was unaffected by the intermediate argillic overprint.

In the northern and southern outer margins of Chita Porphyry siliceous –argillic alteration has resulted in redistribution of copper, including appreciable leaching (base of silicified sandstone breccia lithocap) commonly accompanied by the conversion of magnetite and hematite to pyrite. Rocks that retain magnetite are also leached *in situ*. Leaching is concentrated in areas of intense quartz veining and along possible steep contacts between porphyry phases and siliceous/silicified sandstone, where permeability would have been at a maximum to allow ingress of supergene ground water. Although hydrothermal leaching clearly took place at Chita there are elements of doubt as to whether all quartz stockwork deficient in copper resulted from this process. The overall process is related to the hydrothermal collapse affecting the Chita Porphyry during its uplift, erosion and emplacement to shallow depth.

Supergene modification of the Chita porphyry system was relatively minor. Thin, immature zone of leaching and chalcocite (digenite) enrichment, separated locally by transitional zone containing both copper-bearing oxides and sulphides cap the mineralized parts of the system, mainly in the south Chita porphyry where extensive drilling has taken place. The overburden covered central part of the area may have additional enrichment zone potential, if not removed by Pleistocene glaciation.

In porphyry systems with outcropping K-silicate alteration the erosion level may be assumed to be sufficiently deep to reveal the true initial metal content of the system. However, when sericitic or advanced argillic alteration has overprinted, the quartz veinlet stockwork and metal content may have been reduced because of partial or complete mobilization. Deeper levels may require drill testing.

To date the depth potential of the Chita Porphyry has not been tested, nor has the central overburden covered section of Chita Valley adjacent to the major Chita Valley transfer fault. Geological characteristics discussed above strongly suggest that the upper marginal parts of a typical porphyry copper system are exposed at Chita South and North ("Chita Sur and Chita Norte") with the two separated by the broad Chita Valley. Evidence for this, includes the presence of pyrite-rich sericitic and local intermediate argillic alteration as seen in field observations and drill core sections. A downward transition to K-silicate alteration is indicated at the southern margin the Chita Valley. In addition, magnetic data indicates the overburden covered valley area may be underlain by magnetite bearing K-Silicate alteration and by inference possible chalcopyrite-bornite mineralization. The outer pyrite or argillic zone remnants are preserved at the extreme north and south of Chita, where the porphyry contact is evident with the overlying Agua Negra sediments.

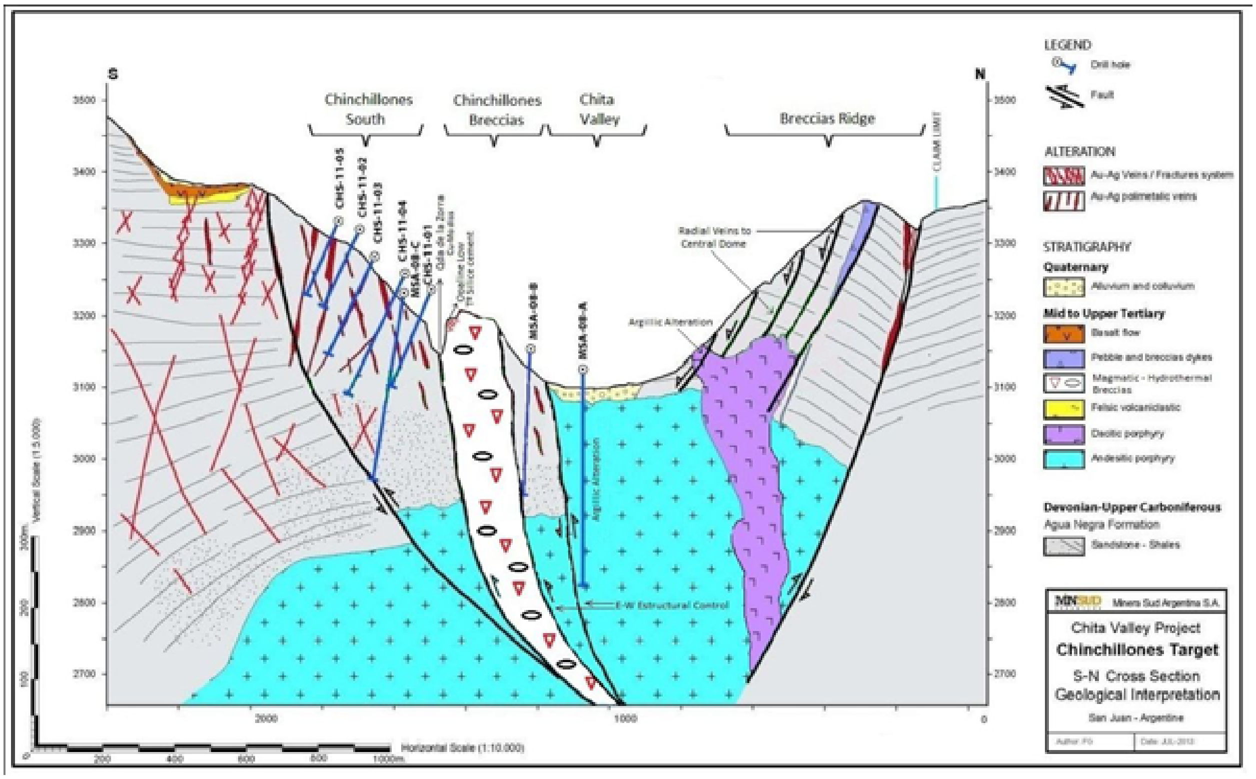
8.2 THE CHINCHILLONES PHREATIC BRECCIA AND POTENTIAL PORPHYRY PROPOSED DEPOSIT MODEL

The Chinchillones phreatic breccia is emplaced into an E-W structural system, which dips steeply 70º north. The breccia comprises monolithic silicified Agua Negra sandstone fragments in an hydrothermal matrix of opaline silica. The Chinchillones Breccia, the De Los Pozos and Breccias Ridge areas occur in the periphery, or annular structure, of a pre-mineralization Central Dome. Outcrops of porphyry at the Chinchillones and Breccias Ridge areas and a core section in drill hole MSA08A, indicate potential for porphyry concealed below the Chita Valley.

The Central Dome typifies a classic endogenous dome with characteristic fluidal texture. The Central Dome would trigger the hydrothermal system around the annular and radial structure. These areas are favorable for epithermal deposits controlled by the radial structure from the Central Dome in the intercept of these with favorable sandstone layer of the Agua Negra Formation, as observed in the Chinchillones South Target area.

The formation of a phreatic breccia is the result of the indirect interaction between a magma body and an external source of water, or between magmatic heat and an external source of water. As compared to phreatomagmatic activity, which is caused by the direct interaction/contact between a magma body and water, the phreatic activity releases less energy, and consequently the dimensions of phreatic breccias are smaller. The indirect interaction between a magma body and a water supply induces specific characteristics to phreatic breccias as compared to the phreato-magmatic breccias. Phreatic breccias usually occur as inverted cone structures with their narrow part towards the depth. Commonly they have an irregular shape, which ranges from small veins, veinlets organized in anastomosing (stockwork-like) bodies, as observed in the Chinchillones breccia, see Figure 8.3.

Figure 8.3 Chinchillones Sector Proposed Deposit Model



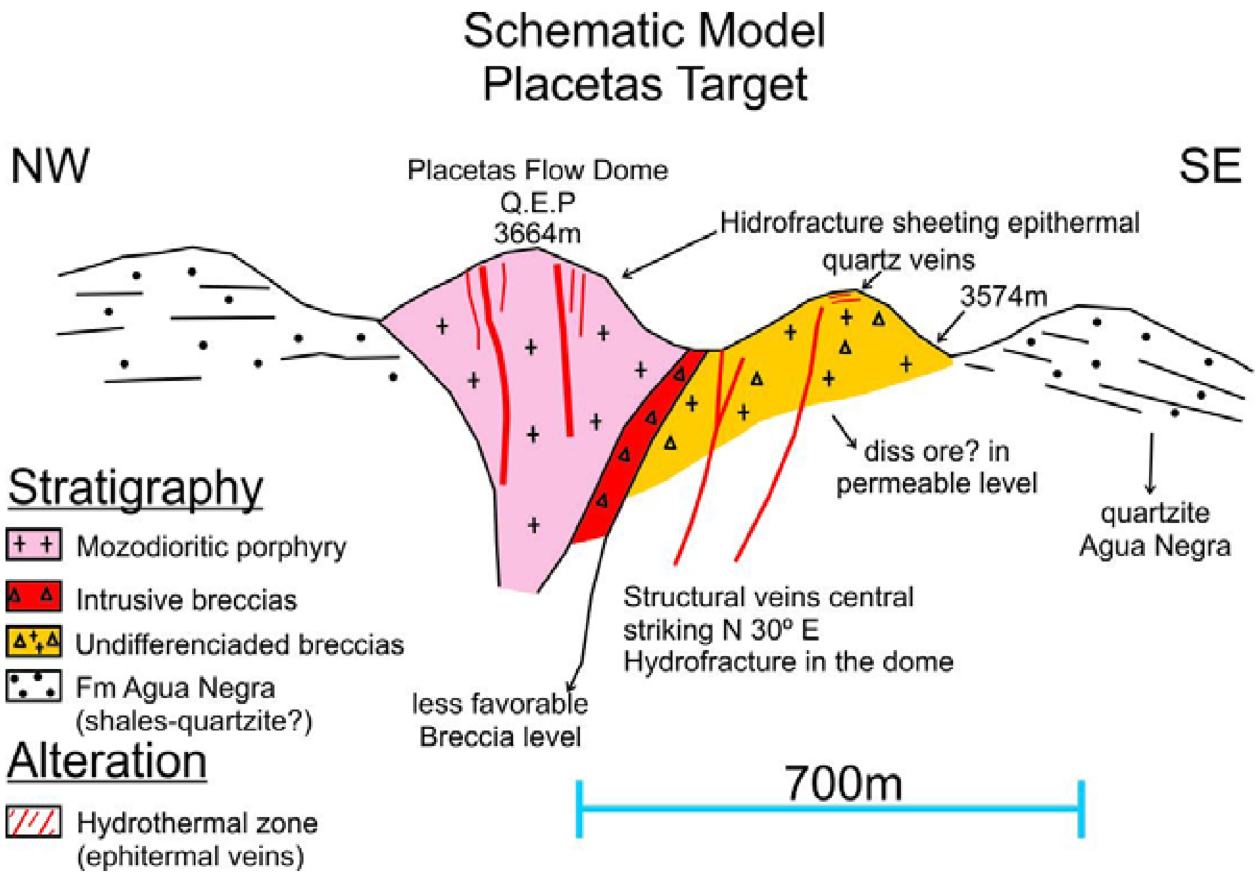
8.3 THE PLACETAS FLOW DOME COMPLEX AU-AG EPITHERMAL VEINS AND DISSEMINATED AU-AG MINERALIZATION TARGET MODEL

This area forms part of an extensive field of domes extending from the Naty Dome, located west of Placetas on the western boundary of Minsud properties, and continuing eastward with the emplacements of the Central Dome, West Dome, North Dome, Pinto Dome, and finally the easternmost Cerro Blanco Dome. This sequence of dome emplacements may suggest that the magmas that fed the dome and porphyry evolved during a relatively short time related to accelerated west-east slab flattening convergence, that is characteristic of this region.

The Placetas target corresponds to a flow dome complex, the endogenous part of the dome is a dacite porphyry and the exogene flow is characterized by a sequence of pyroclastic breccia flows (with quartzite breccia fragments) and air fall tuff. Favorable-permeable tuff is altered to illite and is cut by quartz veinlets. The carapace of the dome is cut by a late structural N30ºE veins system with development of hydrofracture quartz veins in the vein halo. Hydro-fractures in the halo follow a N30ºE structural system cutting the Placetas carapace Dome, see Figure 8.4.

Erosion is thought to have removed significant volumes of the upper parts of the flow dome complexes so that most effusive components of the domes other than the Placetas Dome, have been removed.

Figure 8.4 Placetas Sector Proposed Flow Dome Complex Deposit Model



9.0 EXPLORATION

There are two distinct phases of exploration conducted by Minsud in the Chita Valley Project area:

Initial Minsud/MSA exploration work conducted between 2006 and 2011: The various drilling and surface sampling programs confirmed Cu- Mo- Au porphyry style mineralization together with sometimes superimposed epithermal alteration features and Au – Ag polymetallic veins. It is noteworthy that none of the programs rigorously followed a systematic multidisciplinary approach to drill target development. This is partly attributed to the fact that the Chita Valley properties were only recently consolidated by MSA into a (nearly) complete package.

Systematic multidisciplinary approach Minsud/MSA exploration programs conducted between 2012 and 2018: This phase constitutes a retroactive plan to gradually complete what are generally considered to be the basic successive stages of mineral exploration (reconnaissance > early stage work > target testing) that lead to mineral deposit discovery. The significant milestone that marked the beginning of the multidisciplinary era was the 2012 implementation of a ground magnetic survey over a large part of the project area. Following this the exploration program is a combination of site specific work that re-evaluates the historical data in the broader context, while at the same time including new data from the broader spectrum of exploratory tools.

It is also noted that certain drilling results are discussed under this heading entitled Exploration. The coauthors are aware that a Drilling section follows, but for a smoother discussion of exploration (*sensu lato*) drilling results pertaining to early stage target areas are presented in the current section. The more advanced outline and definition drilling results pertaining to an updated Mineral Resource Estimate are contained in the latter section, as are the logistical details of the various drilling programs.

9.1 INITIAL WORK 2006 TO 2011

After acquiring the Chita, Brechas Vacas and Minas de Pinto properties MSA compiled the historic work from various sources and completed two field programs in the summers of 2007 and 2008.

The following historical data was compiled and integrated into the evolving general Chita Valley conceptual model:

- 1968 and 1976, Direccion General de Fabricaciones Militares ("DGFM") program of geological mapping, Schlumberger Vertical Electrical Sounding geophysical surveying and diamond drilling (Chita Porphyry).

- 1995, Minas Argentina S.A. reverse circulation drilling (Chita Porphyry).

- 2006-2008, Silex Argentina S.A. ("Silex") geological reconnaissance, surface channel sampling and diamond drilling (Minas de Pinto property).

- 2008, Rio Tinto Mining and Exploration ("Rio Tinto") reconnaissance exploration and diamond drilling (Placetas Porphyry, Brechas Vacas property).

In 2009, MSA carried out a program of surface trenching. During this program 135 sites were manually cleared from which 651 rock samples were collected for geochemical analysis. Also 94 rock chip samples were collected by MSA (552 geochemical assays) that when added to the above rock samples gave a total of 1,203 geochemical assay results

In 2011 MSA completed 16 diamond drill holes on the Chita Project with a cumulative total of 3,360.1 m. The holes are distributed as follows:

- Target Chinchillones: 915.0 m (five drill holes: ChS1101, ChS1102, ChS1103, ChS1104, ChS1105).

- Target Romina: 1,044.6 m (five drill holes: RoW1101, RoW1102, RoW1103, Ro1104, Ro1105).

- Target Muñoz-Dora: 81.0 m (one drill hole: DoM1101).

- Target Porphyry Chita: 884.0 m (three drill hole: PSu11-01, PSU-11-02 and PSU-11-03)).

- Target Minas de Pinto: 435.5 m (two drill hole: CHT-11-023 and CHT-11-024).

Table 9.1 selectively illustrates the various property-wide styles of mineralization along with some of the better grade/core length or thickness (channel samples) combinations.

Table 9.1 **Summary of Key Chita Valley Drilling/Channel Sampling Results**									
Prospect	**Drill Hole (Trench)**	**From (m)**	**To (m)**	**Length (m)**	**Au (g/t)**	**Ag (g/t)**	**Cu (%)**	**Mo (%)**	**Comments**
Fatima Zone	CHT-004	78.2	79.8	1.6	10.58	88.33	0.22	0.001	Silex, 2006 DDH
Fatima South Zone	CHT-005	90.0	94.0	4.0	0.63	32.10	0.00	0.000	Silex, 2006 DDH
Fatima South Zone	CHT-019	56.0	58	2.0	14.98	12.40	0.00	0.000	Silex, 2006 DDH
Barba Zone	CHT-012	129.5	130.5	1.0	4.43	738.00	1.06	0.002	Silex, 2006 DDH
Johana Vein	CHT-013	42.4	47.0	4.6	7.09	24.42	0.01	0.000	Silex, 2006 DDH
Johana Veins	CHT-013	52.5	53.5	1.0	12.75	57.00	0.01	0.000	Silex, 2006 DDH
Candela Vein	CHT-018	38.8	44.0	5.2	2.07	48.0	0.007	0.000	Silex, 2006 DDH
Argentina Vein	CHT-022	130.0	131.0	1.0	8.42	204.0	0.100	0.000	Silex, 2006 DDH
Chita Porphyry	SD-2	0.0	246.0	246.0	n/a	n/a	0.18	0.039	DGFM, 1968 DD
Chita Porphyry	SD-A	28.5	58.5	30.0	0.053	2.27	0.36	0.020	DGFM, 1968 DD
Chita Porphyry	C96-04	160.0	162.0	2.0	1.329	81.00	0.89	n/a	MASA, 1996 RC
Chita Porphyry	C96-05	126.0	138.0	12.0	1.186	36.00	0.15	n/a	Masa 1996 RC
Chita Porphyry	PSu11-01	9.0	10.0	1.0	32.29	36.10	0.04	0.003	MSA, 2011 DDH
Chita Porphyry	PSu11-01	114.0	120.0	6.0	1.30	66.66	0.24	0.041	MSA, 2011 DDH
Chita Porphyry	PSu11-02	41.0	217.0	177.0	0.02	2.50	0.228	0.034	MSA, 2011 DDH
Chita Porphyry	TGCC-2012-01	0.0	549.0	549.0	n/a	n/a	0.014	0.011	MSA, 2011 TR
Porphyry A	MSA08-A	26.0	300.4	274.4	0.035	0.55	0.09	0.010	MSA, 2008 DDH
Chinchillones South	MSA08-B	42.0	43.0	1.0	3.40	60.10	n/a	n/a	MSA, 2008 DDH
Chinchillones South	MSA08-C	104.0	198.0	94.0	0.14	58.00	0.194	n/a	MSA, 2008 DDH
Chinchillones South	ChS11-01	112.0	114.0	2.0	0.18	105.00	1.34	n/a	MSA, 2011 DDH
Chinchillones South	ChS11-04	62.0	63.0	1.0	0.44	393.00	1.46	n/a	MSA, 2011 DDH
Chinchillones South	ChS11-05	135.0	137.0	2.0	0.40	136.00	n/a	n/a	MSA, 2011 DDH
Chinchillones South	TCHS-2012-03b	0.0	0.3	0.3	8.76	1032.83	0.05	0.000	MSA, 2012 TR
Chinchillones South	TCHS-2012-16	1.0	3.0	2.0	2.51	400.48	0.05	0.001	MSA, 2012 TR
Romina Vein	RoW11-04	71.0	75.0	4.0	0.83	101.00	3.20	n/a	MSA 2011 DDH
Romina Vein	RoW11-04	203.0	204.0	1.0	2.91	14.00	n/a	n/a	MSA, 2011 DDH
Placetas Porphyry	PLCT-01	78.0	86.0	8.0	0.002	0.02	0.05	0.001	RTZ, 2008 DDH
Placetas Porphyry	PLCT-03	10.0	22.0	12.0	0.004	0.50	0.15	0.001	RTZ, 2008 DDH

9.2 EXPLORATION WORK 2012-2015

During the 2012-2018 period, an early stage exploration program was performed, including:

- An orthophotograph base map (Figure 9.1) generated from satellite imagery,
- A ground magnetometer survey (Figure 9.2) covering some 40 km^2 (200 line km),
- Property wide surface geological mapping and general compilation of existing data at 1:10,000 scale,
- Detailed surface geological and alteration mapping over the Chita South Porphyry and Chinchillones Prospects in 2012 followed by similar mapping at Chita North, Placetas Porphyry, Breccas Ridge and Minas de Pinto in 2013,
- Induced Polarization/Resistivity ("IP/Resistivity") geophysical surveys covering 48.6 line km. (Figure 9.3),
- Channel sampling of outcrops and hand dug trenches utilizing a portable diamond-blade saw to define geological units, geochemical signatures, alteration features and as an initial test of potentially mineralized structures.

The general geological map of the Chita Valley Properties is a work in progress that is being modified to varying degrees as new information becomes available. In 2012 detailed geological mapping was completed in the Chinchillones and Chita South Porphyry areas followed by similar work in the Chita North, Pinto, Brechas Ridge and Placetas Porphyry areas. Basic early-stage magnetic surveying and high-resolution current satellite imagery was utilized for the first time in 2012 to augment lithological, alteration and structural mapping. Additional magnetic surveying to complete initial coverage of the remaining un-surveyed parts of the Properties, as well as selective infill lines were completed in 2014. In 2015 IP/Resistivity surveying included 44.85 line km of pole-dipole array and 3.75 line km of dipole-dipole array coverage.

Over the years several thousands of surface rock and soil geochemical samples have been collected by various parties and analysed for a variety of elements (Figure 9.4). The majority of the rock samples are believed to have been selected to test veins or other potentially favourable host rocks for concentrations of precious and/or base metals. Due to various factors, not the least of which is surface weathering/leaching, these prospecting samples rarely typify what lies at depth. However, with proper interpretive analysis the sampling data is important as a general guide to commercial mineralization. The data for three elements, Au, Cu and Mo, is shown in Figures 9.5, 9.6 and 9.7, respectively:

- Gold distribution is quite erratic and not confined to any particular major host rock lithology. Nugget effect may understate or overstate actual concentrations.
- Copper is widely distributed but concentrated in and adjacent to the porphyry bodies. Due to surface leaching, Cu content is typically understated and values of a few hundred ppm can indicate much higher oxide, supergene and primary values at depth.
- Molybdenum is concentrated in Chinchillones and Chita porphyries. Surface and subsurface concentrations are typically similar.
- Silver distribution which generally coincides with that of gold is not shown.

Figure 9.1 Chita Valley Orthophotograph Base Map from IKONOS Satellite Imagery with Drill Holes

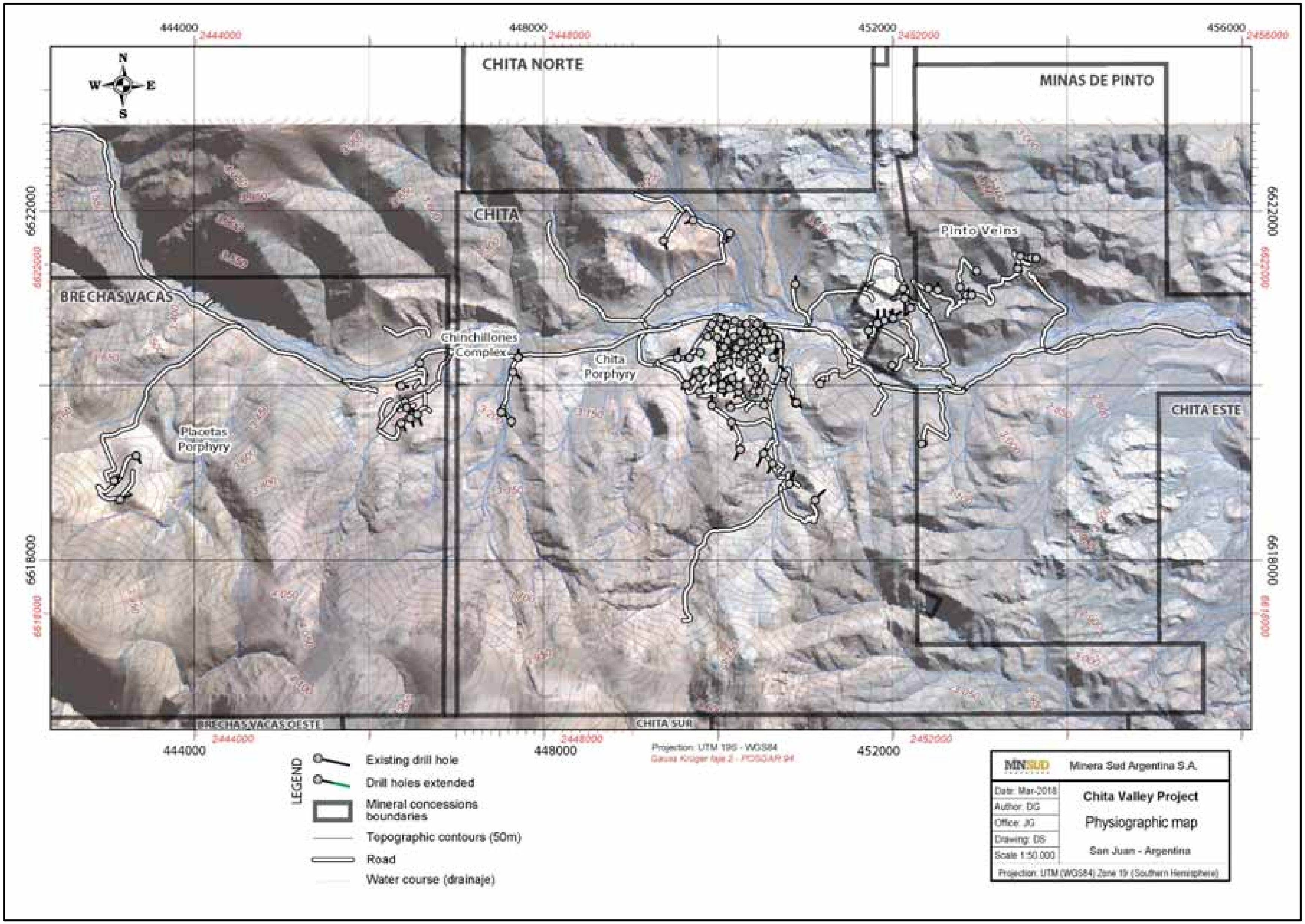


Figure 9.2 Chita Valley Ground Magnetic Survey, Reduction to Pole Contour Map

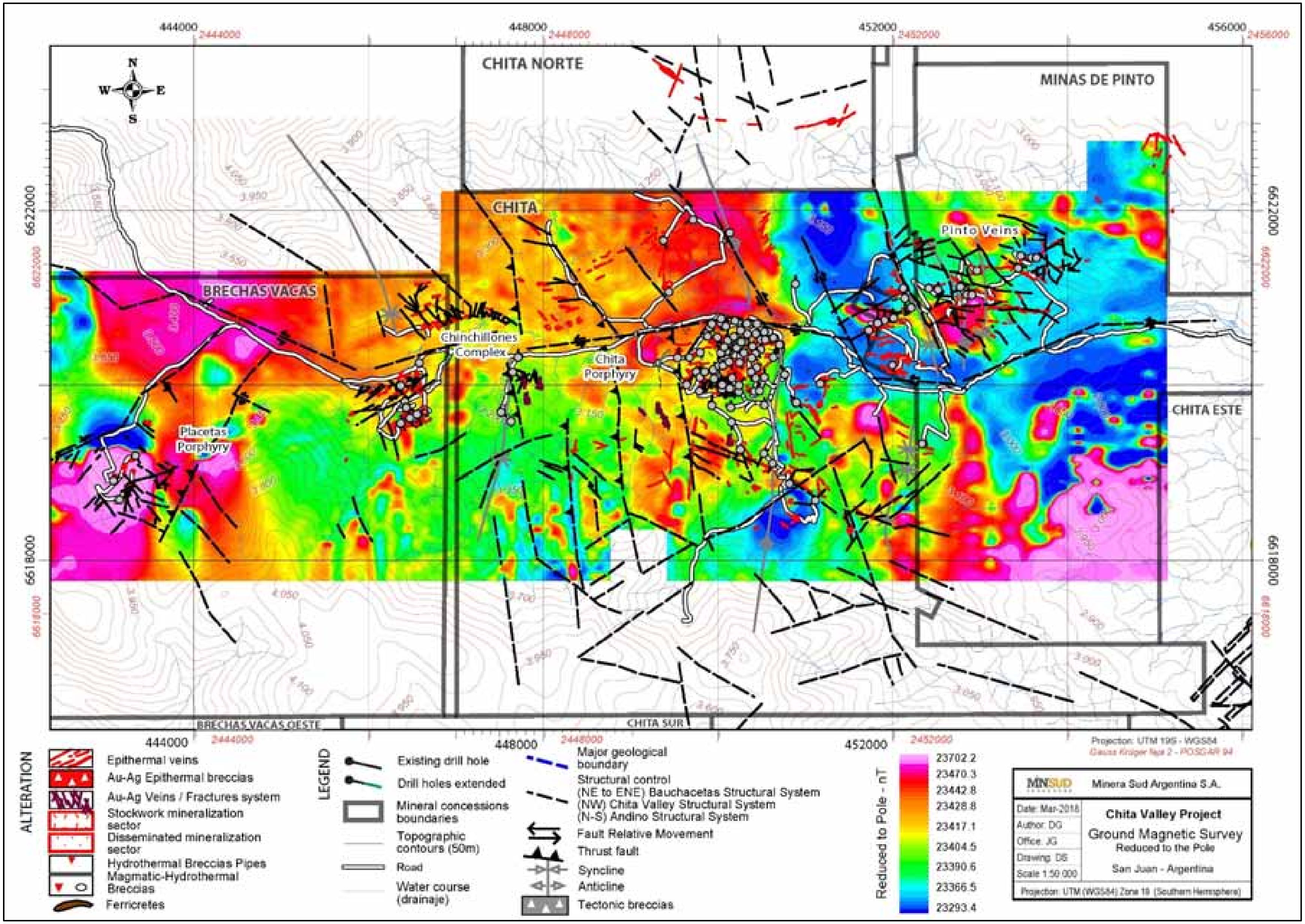


Figure 9.3 2015 IP/Resistivity Survey, Lines and Stations

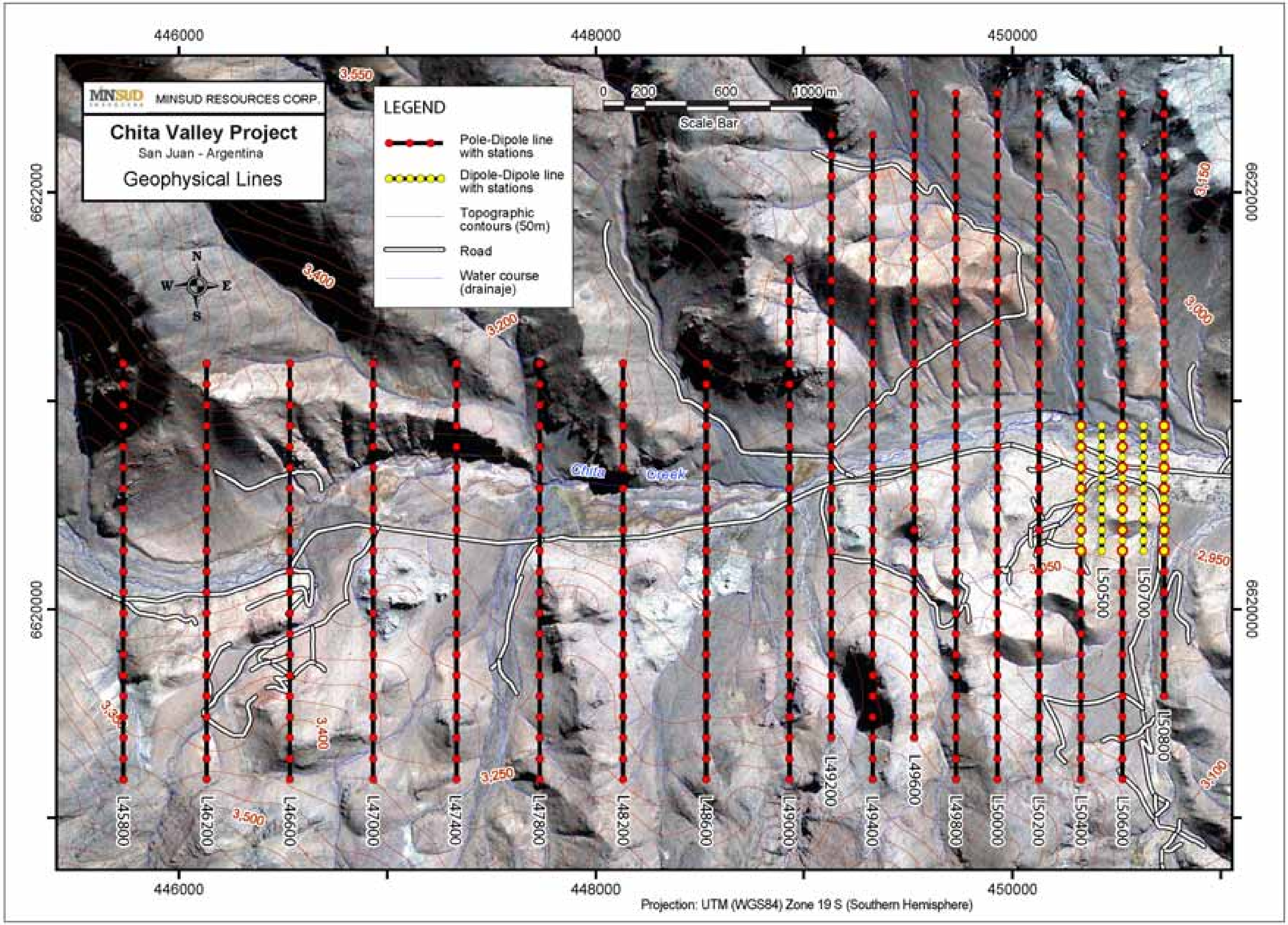


Figure 9.4 Chita Valley Surface Geochemistry Rock and Soil Sample Locations

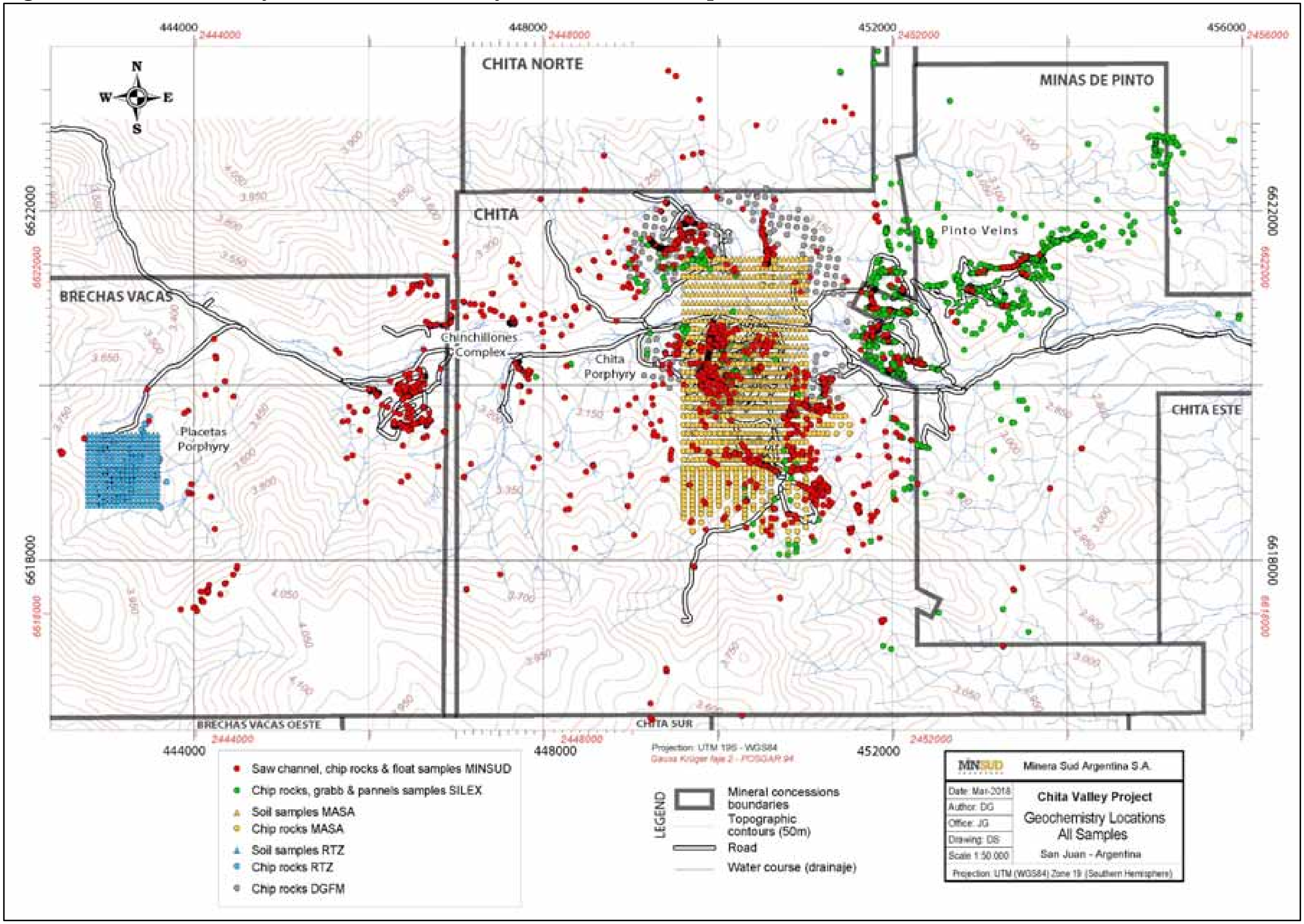


Figure 9.5 Chita Valley Surface Rock Geochemistry Gold

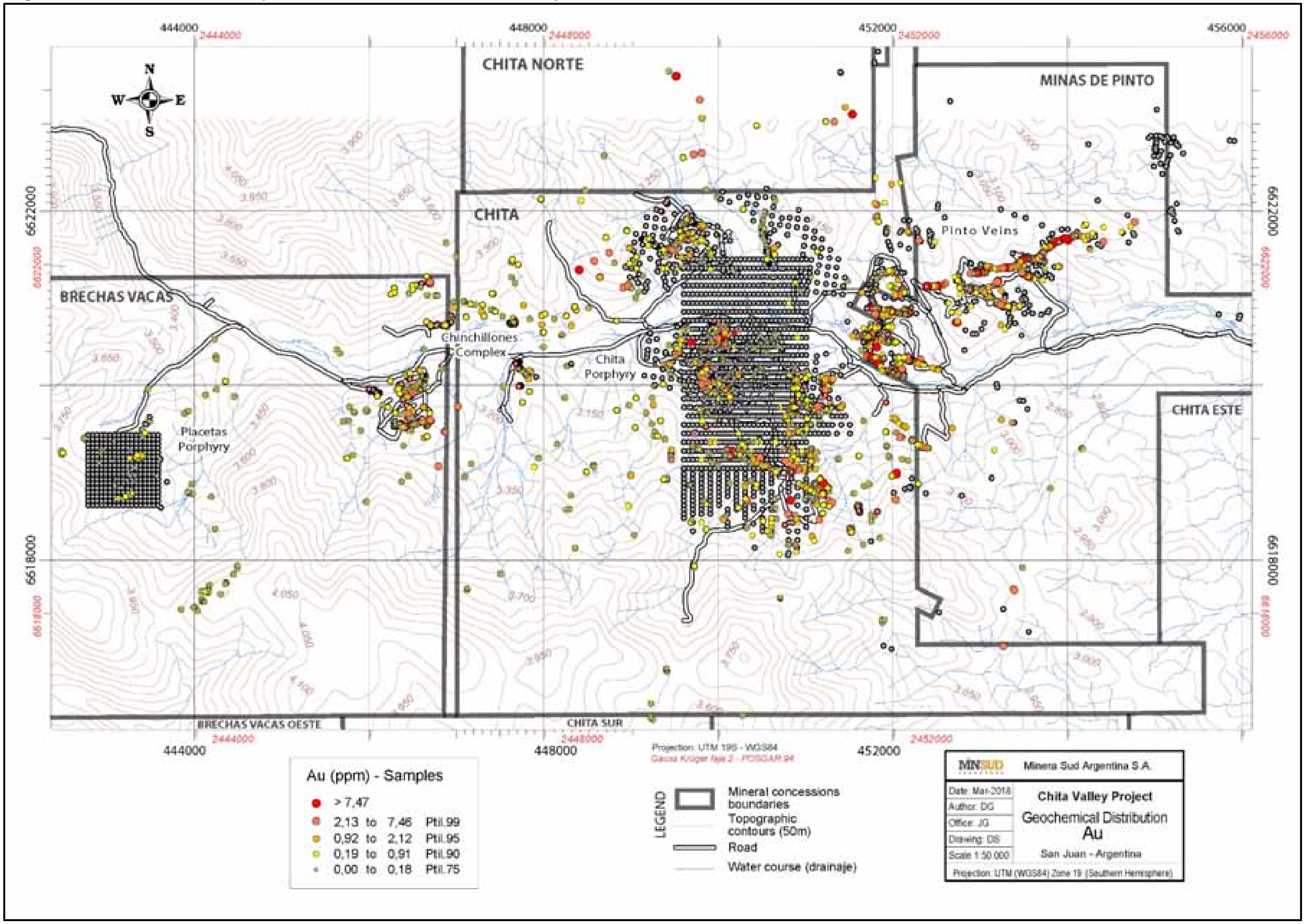


Figure 9.6 Chita Valley Surface Rock Geochemistry Copper

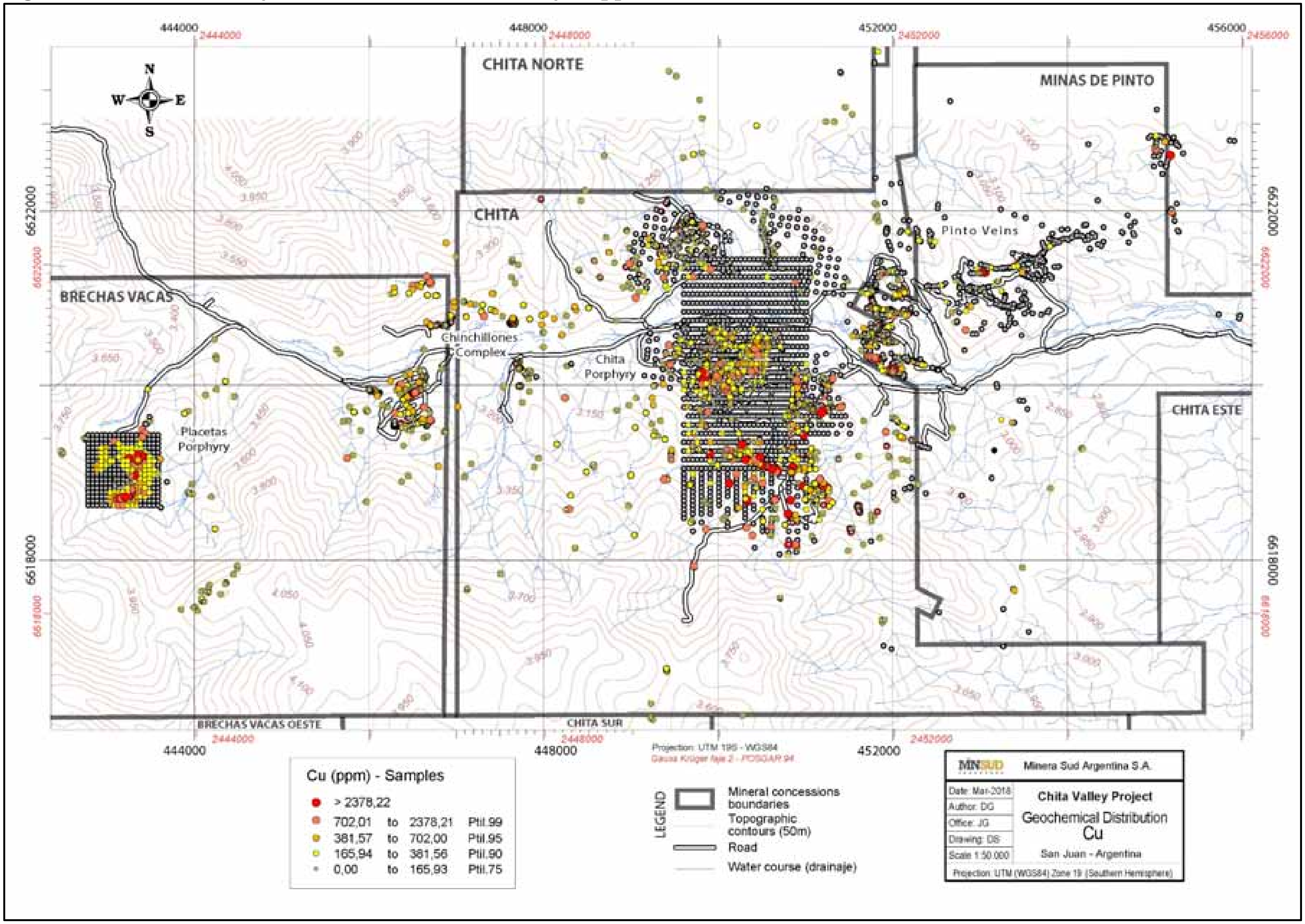
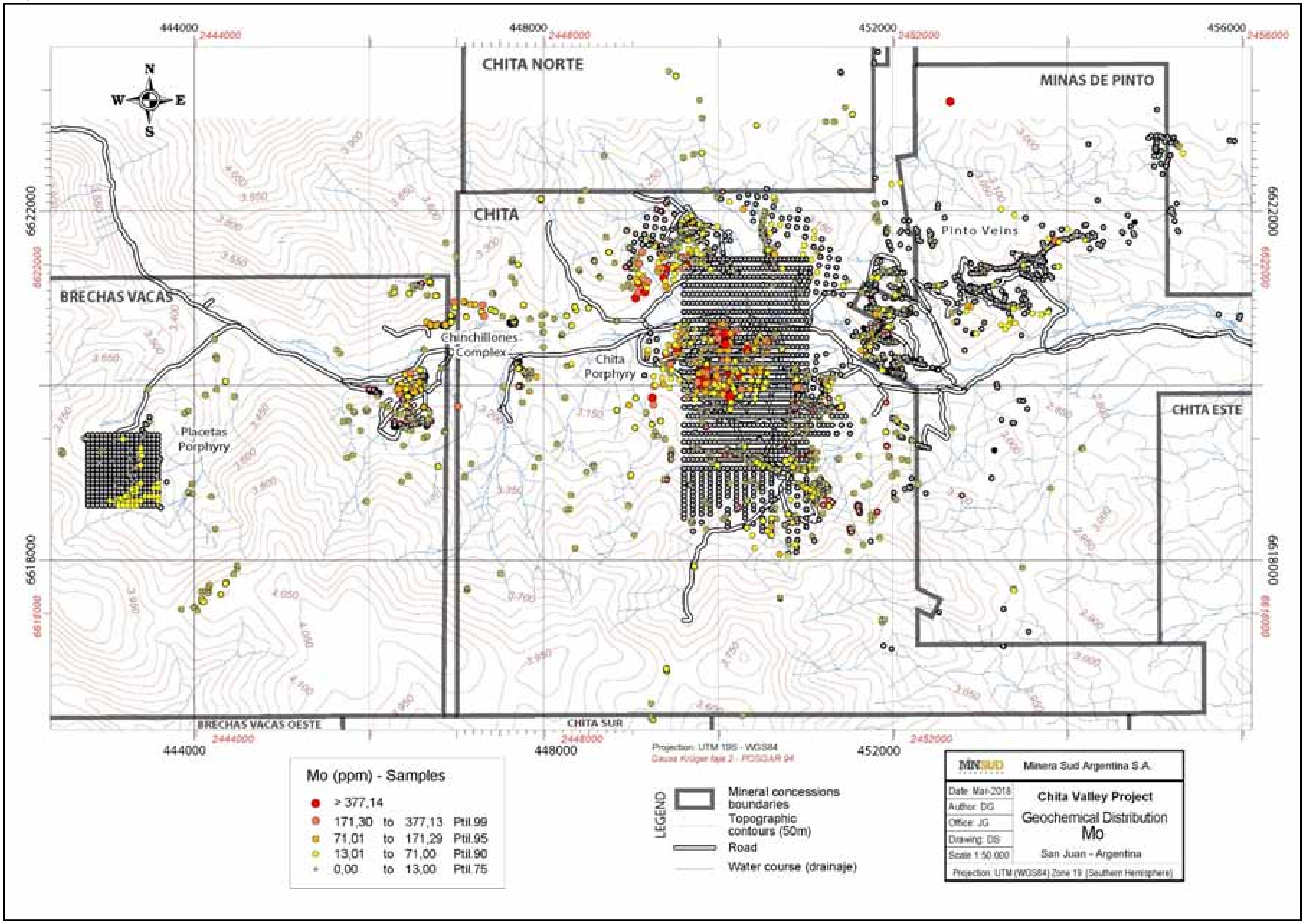


Figure 9.7 Chita Valley Surface Rock Geochemistry Molybdenum



9.3 DETAILED EXPLORATION WORK CHITA PORPHYRY

9.3.1 History

Between 1967 and 1976 Direccion General de Fabricaciones Militares undertook exploration activities in the area with the aim of developing a Cu-Mo project. These activities included geological mapping, geochemical sampling for Cu, Mo, Pb and Zn, an IP/resistivity geophysical survey and eight diamond holes totalling 1213.2 metres. All drill holes were vertical, with a maximun depth of 299.8 m. Propylitic to argillic alteration and silicification, Cu - Mo anomalies were obtained in all the holes. The maximum metal contents were 0.45% Cu and 0.041% Mo.

Between 1995 and 1996 Minas Argentinas S.A. carried out prospecting and exploration for Cu-Au mineralization. This company completed 37.4 km of geochemical sampling, a few magnetometer profiles and two vertical reverse circulation drill holes totalling 282.0 m.

9.3.2 Geology

The Miocene Chita Porphyry underlies an area of approximately 4 km^2 in the Chita Valley (Figure 9.8). Bedrock exposures on the south side of the valley (also known as the Chita South Porphyry area) include andesitic porphyry in the central and eastern portions and dacitic porphyry in the west, located at the intersection of two substantial regional structures. Intense alteration typifies all exposures. In the south and southwest the Chita Porphyry intrudes shales and quartzites of the Upper Carboniferous-Permian Agua Negra Formation. In the southeast it intrudes partially altered granodiorite of the Permo-Triassic Tocota Pluton. In the stock edges monomictic intrusion breccias are developed with fragments of quartzite in an andesitic matrix. In general, these zones are strongly silicified and altered.

Basement in the northern side of the valley (Chita North Porphyry area) is again Agua Negra Formation metasediments. This sedimentary succession is intruded by several phases of intrusive porphyries and breccias and is overlain by coeval andesitic and dacitic tuffs, both of probable Miocene age. Andesitic tuffs (TBA) covers 80% of the area and is characterized by 5-10 mm lithic fragments plus crystals of plagioclase, primary biotite and amphiboles. Quartz is very scarce, less than 3%. The unit occupies the entire top and northern edge of the area. It is believed to be the extrusive equivalent of the andesitic porphyry. The dominant alteration is argillic which affects both groundmass and phenocrysts. Andesitic porphyry (PFA) occupies the peripheries of the hill and the eastern half of the area called “La lengua”. It is a porphyry with euhedrical 3-5 mm plagioclase phenocrysts in an, aphanitic groundmass with nodules of biotite and amphibole. Dacitic tuff (TBD) underlies a 200 x 200 m area in the north-western part of the area. This rock has abundant 2 to 5 mm quartz crystals and strong argillic alteration. There is little veining in this area but it develops pervasive silica structures with NW alignment. Volcanic Breccias (BXV) occupy the central area of Chita North hill. These are typified by coarse sub-rounded fragments in a sand size matrix. These are generally located in the middle elevation part of the hill which gives the impression that they are a stratigraphic level. There are fault breccias associated with sediment-tuff contacts in some areas.

The north and south sectors of the Chita Porphyry contain distinct lithological assemblages that are juxtaposed along a regional transfer fault along the Chita Valley. A typical interpretive cross sections for the south sector is presented in Figure 9.9.

Figure 9.8 Chita Porphyry Surface Geology Map with Interpretation

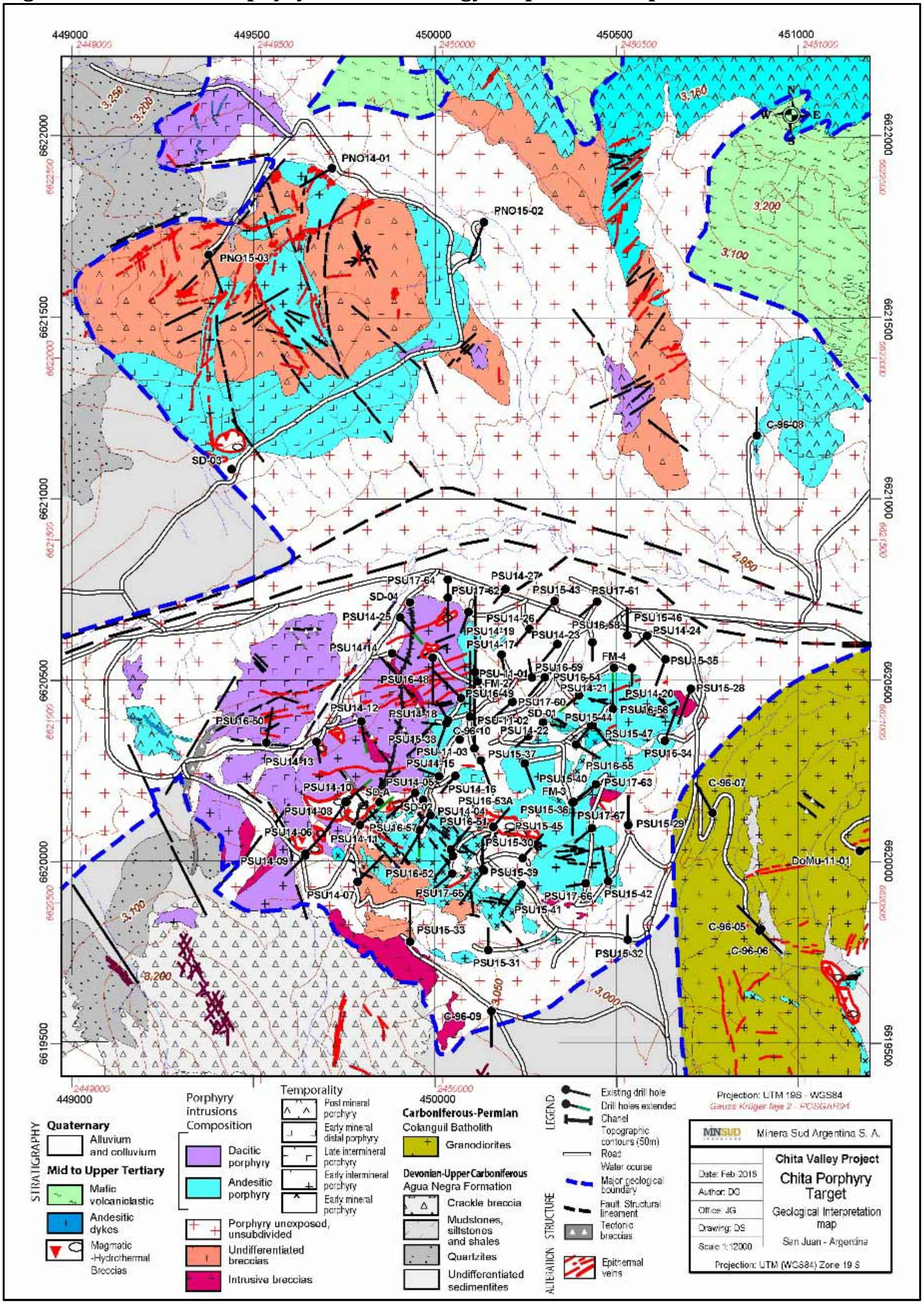
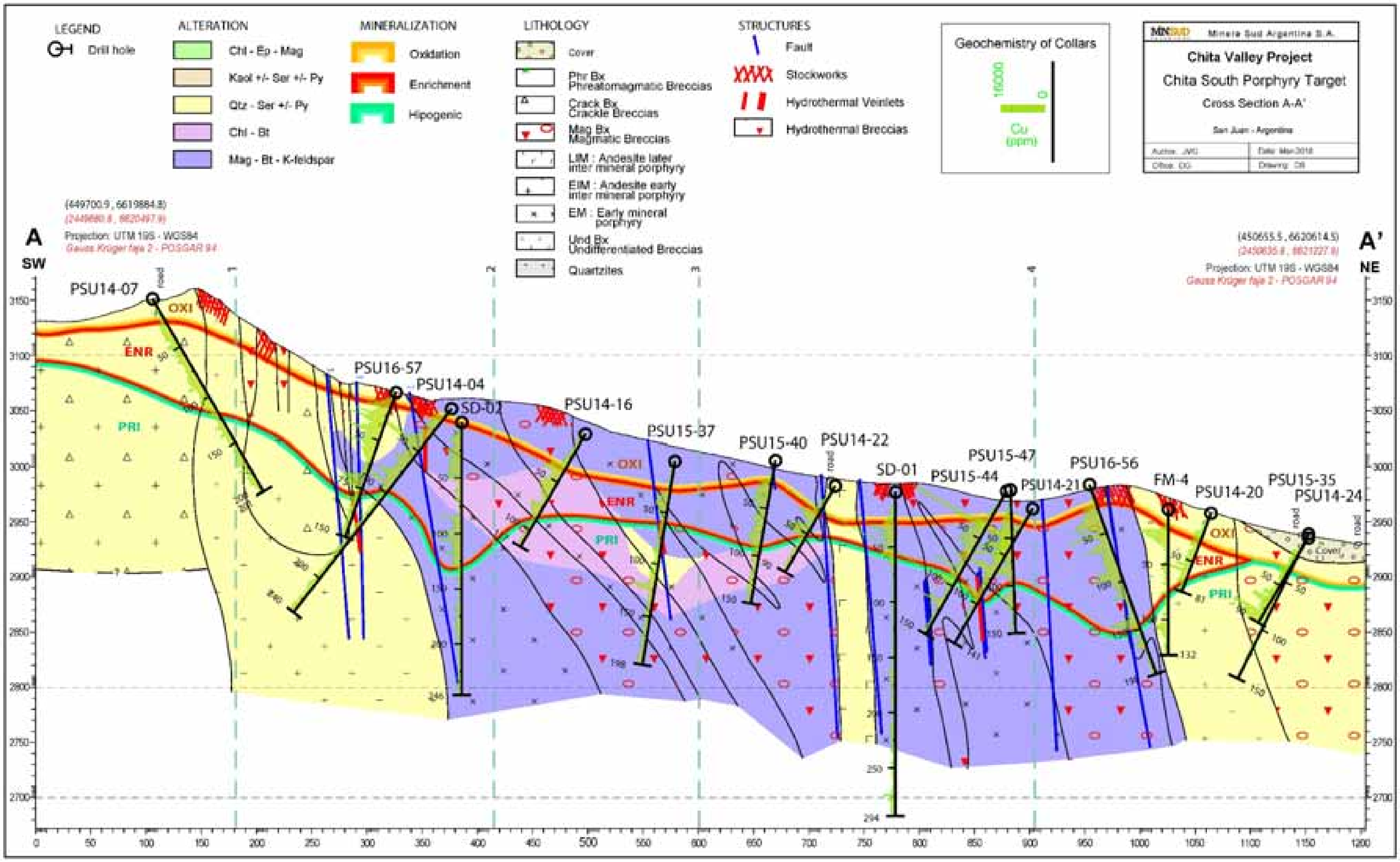


Figure 9.9 Interpretive Cross Section, South Chita Porphyry



9.3.3 Alteration

Alteration south of the Chita Valley fault is predominantly phyllic (Sericite - Quartz +/- Py) moderate to strong and related to high density stock-work (qtz+iron oxides) zones (Figure 9.10). There is marginal argillic alteration and, in some cases, superimposed to the phyllic alteration. In general, the argillic alteration is related to a more pervasive event. At the center zone of the stock there is a zone of potassic alteration typified by a magnetite + K-spar + biotite +/- chlorite assemblage. A similar zone of potassic alteration has been recently found near the south margin of the porphyry. The chlorite altered the original mafic rock. It may be related to an event of retrograde alteration over a potassic alteration at depth.

Moderate to strong argillic alteration is dominant in the Chita North area. Kaolin and white clays replace biotite and plagioclase phenocrysts. The control of this alteration is strongly related with the siliceous structures and it is stronger in the selvages of these veins and veinlets, then grading outwards to fresh rock.

The alteration seems to be a low temperature argillic, kaolin, haloicita + /-illite. The alteration is stronger in the higher porosity volcanoclastic rock than in the porphyry. The dominant alteration in the porphyry is propylitic with chlorite and epidote replacing mafics. Strong magnetism was observed because of the presence of primary magnetite. In the area called “La lengua” alteration is controlled by faulting and propylitic alteration becoming argillic alteration because of the shearing and quartz veining is clearly observed. The alteration of the Chita North area is of a lower temperature and it is marginal to a porphyry system.

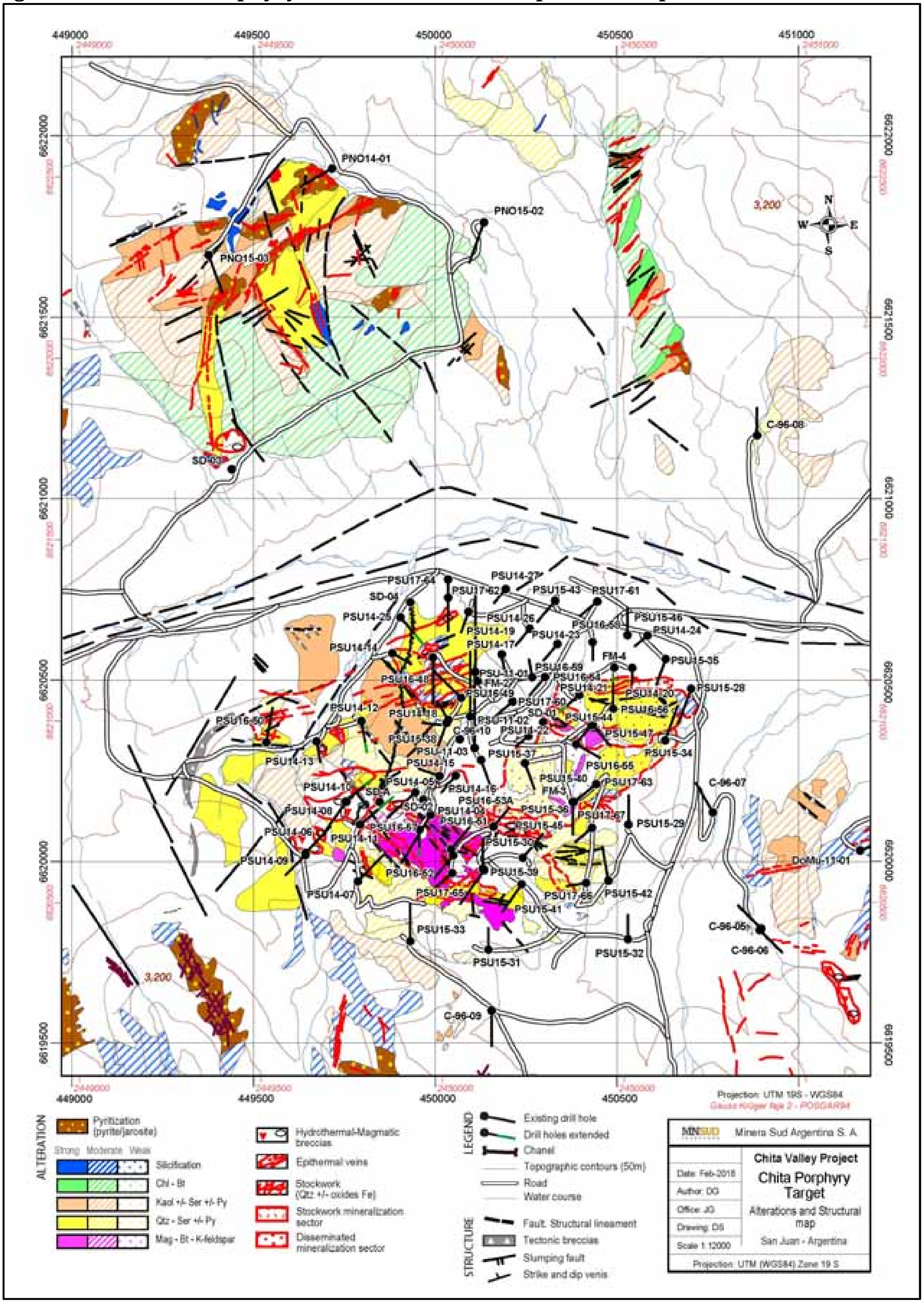
9.3.4 Mineralization

In the south sector the Cu, Mo, Au, Ag occurs mainly in the stockwork. The stockwork has an approximately semicircular distribution toward the edges of the body particularly in the southwestern part of the body. Two types of stockwork veinlets are distinguished: Early quartz-sulphide-magnetite "B" type veinlets, which appears to be associated most molybdenite; and quartz-sulphide (Py-Cpy) veinlets of "D" type veinlets. The preferential strike is N 280-320 degrees.

The mineralized stockwork and veinlets are controlled by two preferential directions of fracturing and jointing, one EW and another N320. There is a LS epithermal system superimposed on the porphyry mineralization system. This quartz veins system is N70 preferred strike, and locally can be highly anomalous in Au and Ag (for example 32 g/t Au and 265.8 g/t Ag over 1.0 m, and 45.5 g/t Au and 2,660 g/t Ag over 0.2 m thickness).

The northern sector porphyry has very little development of stockwork (~ 1% of the outcropping surface). The veinlets are quartz pyrite + /-magnetite of 2 to 3 mm width. They are presumably of an early stage. The mineralization is associated with these vein systems. The Au – Ag content and the Cu - Mo low values are very erratic without a definite pattern. It is important to mention the intense development of pyritization, mostly in the porphyry, within propylitic alteration. The 2-3 mm very pale ehuedral pyrite is disseminated. The destruction of this pyrite is the reason of the intense jarosite colouration as patina and fissure fillings in the area.

Figure 9.10 Chita Porphyry Surface Alteration Map with Interpretation



According to its distribution this pyrite seems to be a pervasive event related more to the porphyry than to the quartz veins formation.

9.3.5 Geochemistry

Soil: The MASA and DGFM soil sampling shows a wide distribution of strong Cu and Mo values. The Mo, by its lower mobility in the leaching environment area of Chita South, is an important guide in the design of the exploration program. The correlation with significant copper (more leachable under these conditions) is very encouraging sign of the primary rock geochemistry and supergene enrichment potential.

Rock: The rock outcrop and channel samples support the soil geochemistry and also indicate a good potential for epithermal vein system with localized highly anomalous Au and Ag (up to 10.13 g / t Au and 1,146.38 g / t Ag over 1.0 m in thickness) (Figure 9.11).

In the northern side of the valley the rock grab and channel samples show a few localized anomalous Au and Ag values and generally low Cu and Mo values even for leached/weathered surface material. However, the samples were taken primarily from volcaniclastic units that may be too high in the system and it can be postulated that more prospective conditions might exist at depth in this area.

Drill Samples: It is noted that many drill holes have been completed in the south Chita Porphyry sector, including historical holes and 67 Minsud holes from several programs between 2011 and 2017. All south Chita Porphyry drilling is described in detail in Section 10.0 Drilling and provides the database supporting Section 14.0 Mineral Resource Estimate.

On the north side of the valley three widely separated historical drill holes were completed in the lower flanks of the Chita Porphyry area. The first hole, SD-03, a vertical AQ diamond drill hole to a depth of 152 metres was completed by DGFM in 1969 near the south-western faulted contact of the porphyry. Brecciated andesite porphyry with disseminated pyrite +/- chalcopyrite and pyrite +/- molybdenite-bearing veinlets typified the hole, except for two sections of basement sediments in its lower part. The second hole by MASA was a RC hole C-96-8, a 118 metre depth, -50° inclined hole in the eastern part of the area. Except for a late andesitic dyke at the bottom, the hole intersected only medium grained monzodiorite with 2 to 6% disseminated and veinlet pyrite with localized minor chalcopyrite and molybdenite. Geochemically the two holes are similar in that both contain appreciable amounts of mostly iron-rich sulphides with sporadic elevated Cu and Mo. One of the holes RC-C-96-8, encountered anomalous gold throughout its length including a 30-metre section from 22 to 52 metres averaging 135 ppb Au. Minsud drilled three HQ holes with two containing sections of elevated Cu, Au and Ag during its 2014-15 programs. Drilling highlights are shown in Table 9.2.

Figure 9.11 Chita Porphyry Surface Epithermal Veins with Gold-Silver Geochemistry

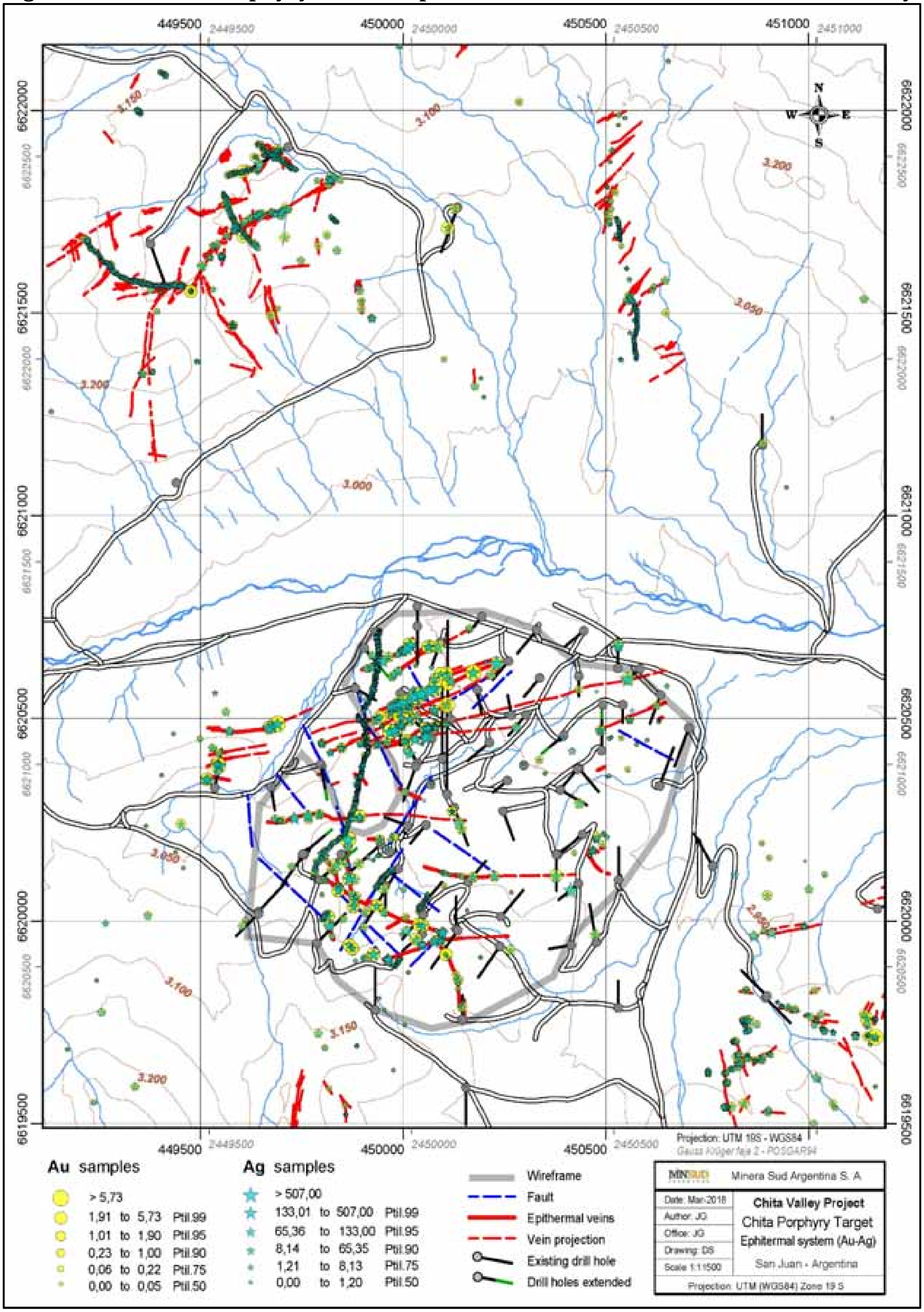


TABLE 9.2 **CHITA PORPHYRY NORTH MINSUD AND HISTORICAL DRILLING HIGHLIGHTS**								
Drill Hole	**From** (m)	**To** (m)	**Interval** (m)	**True Thickness** (m)	**Au g/t**	**Ag g/t**	**Cu %**	**Mo %**
DDH SD-03	18.0	58.5	37.5	unknown	0.04	0.31	0.17	0.018
RC-C-96-8	22.0	52.0	30.0	unknown	0.14	0.79	0.16	n/a
PNO14-01	20.0	28.0	8.0	unknown	0.11	3.20	0.48	0.004
PNO14-01	167.9	192.0	24.1	unknown	0.09	18.00	0.32	0.010

9.3.6 Geophysics

Magnetics: The initial ground magnetic survey was done for Minsud by Quantec Geoscience Argentina S. A. in 2012 utilizing GEM GSM-19 magnetometers for surveying and as a base station for diurnal corrections. The initial survey was carried out at 200-meter line spacing and 10-meter stations. Selective infill was done at 100-meter line spacing in 2014. Contoured “reduced to pole” survey results for the Chita Porphyry area are shown in Figure 9.12.

On the south side of the Chita Valley there are important correlations between the magnetic survey results and mapped lithological/alteration features. The magnetics show a magnetic high zone to the south and aligned with Chita Valley. Also, the extent of the magnetite-K-spar-biotite alteration zone is quite evident, as is an intermediate response coincident with the phyllic alteration halo.

The northern side of the valley shows several clearly differentiated areas with high magnetism in Chita Norte. The survey “maps” the porphyry stock with very weak propylitic alteration without magnetite destruction. This coincides with the edge of the volcaniclastic unit.

Although no data is currently available, the historical graphic log indicates the target for drill hole C-96-8 was an Induced Polarization anomaly.

IP/Resistivity: Quantec Geoscience Argentina S. A. was contracted to implement a conventional IP/Resistivity survey over the Chita Porphyry and adjacent Chinchillones area in the second quarter of 2015 (Ensink, et al., 2015). The survey instrumentation included an IRIS Elrec-Pro IP receiver coupled with an IRIS VIP 3000 transmitter. The work included 19 lines totalling 44,850 metres of Pole-Dipole surveying together with 5 lines totalling 3,750 metres of Dipole-Dipole survey detailed infill. Survey parameters are shown in Table 9.3.

Figure 9.12 Ground Magnetics (Reduced to Pole Contours), Chita Porphyry Area

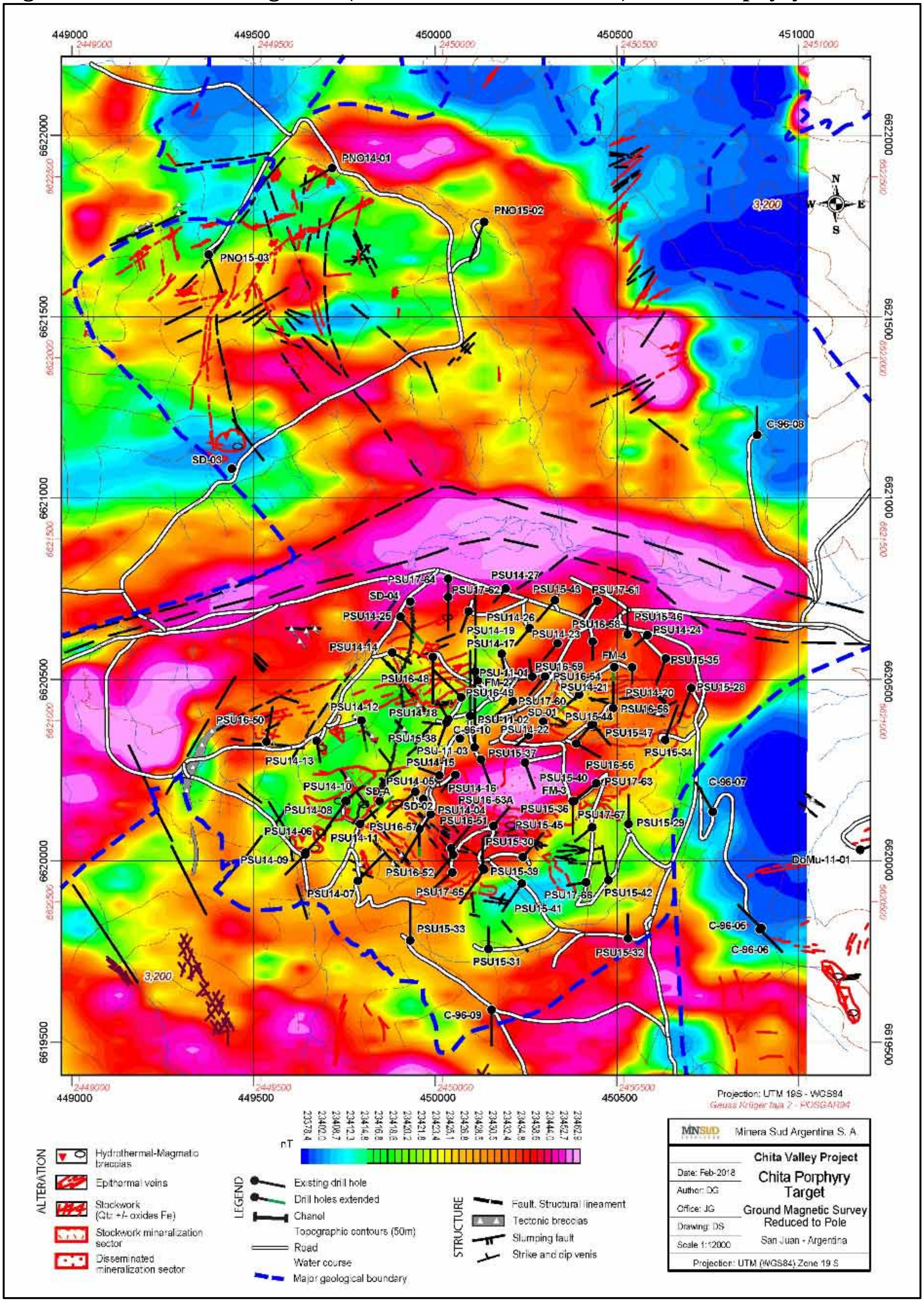


TABLE 9.3 IP/RESISTIVITY SURVEY PARAMETERS	
Configuration	**Pole-Dipole Array**
Survey line orientation:	N0°E
Rx Dipole spacing (a)	a=100m
Rx Dipole array (n)	n=1 to10
Station interval	50 m
Number of lines	19
Configuration	Dipole-Dipole Array
Survey line orientation	N0°E
Rx Dipole spacing (a)	a=50m
Rx Dipole array (n)	n=1 to10
Station interval	25m
Number of lines	5

The IP/Resistivity survey was designed to characterize the chargeability/resistivity and derivative parameters of the various known styles of mineralization and related lithological and alteration features. Taken in conjunction with other multidisciplinary exploration efforts the survey represents an attempt to locate similar exploration targets beneath Quaternary cover and beyond the limits of current surface geoscientific studies and drilling information. The Pole/Dipole survey supplies geophysical data regarding geometry, volume and spatial relationships, reaching estimated depths of up to -350 m below the surface, while the more detailed Dipole/Dipole survey provides greater definition of smaller targets to approximately -150 m depth. The main objectives of the studies are described below:

- Determine the electrical response characteristics (chargeability and resistivity) of a block measuring 5.6 km long by 3 km wide by 350 m deep, from the Chita Porphyry to the Chinchillones Complex targets areas.

- Detect potential hypogene (primary) Cu-Mo-Au-Ag mineralization targets related to porphyry.

- Detect potential supergene and transition mineralization of Cu (secondary) related to porphyry.

- Detect potential mineralization of Au + Ag + Cu + Pb + Zn related to breccias at the contact zone between sediments de Agua Negra Formation sediments and Tertiary Porphyry.

- Detect potential mineralization Au + Ag + metal base, related to polymetallic veins.

Cross sections were generated for all lines surveyed for both survey configurations. Primary data for measured Chargeability and Resistivity and derivative Metal Factor are presented as pseudosections along with three 2D inversions. The UBC DCIP2D inversion code (Oldenburg & Li, 1994) was used for the 2D inversion of the data. The inversion of measured geophysical data mathematically determines the subsurface distribution of the geophysical property, such as chargeability, that best reproduces the measured data, and can be particular helpful to assist in delineating the source of anomalies detected by the survey for optimal determination of the location for drilling targets. Selected cross sections are shown with Figure 9.13 as an example of the Pole/Dipole survey and Figure 9.14 as an example of the more detailed Dipole/Dipole survey.

The DC data was inverted using an unconstrained 2D inversion with a homogenous half space of average input data as starting model. Two IP inversions are calculated from the same data set and parameters, but using a different reference model. The first inversion of the IP data uses the previously calculated DC model as the reference model, and is labelled as 2D DC-ref IP. The second IP inversion uses a homogeneous half-space resistivity model as the reference model and is labelled as 2D HS-ref IP. This model is included to test the validity of chargeability anomalies, and to limit the possibility of inversion artefacts in the IP model due to the use of the DC model as reference.

Plan maps were generated for contoured resistivity and chargeability for both survey configurations. These results are presented at a nominal scale of 1:15,000 for the Pole/Dipole survey and 1:3,500 scale for the Dipole/Dipole survey. Typical Pole/Dipole results are illustrated by plans of the -100 m level for resistivity (Figure 9.15) and chargeability (Figure 9.16). Typical Dipole/Dipole results are similarly illustrated by plans of the -50 m level for resistivity (Figure 9.17) and chargeability (Figure 9.18).

Figure 9.13 Pole/Dipole IP/Resistivity Section 50200 E, Chita Porphyry Area

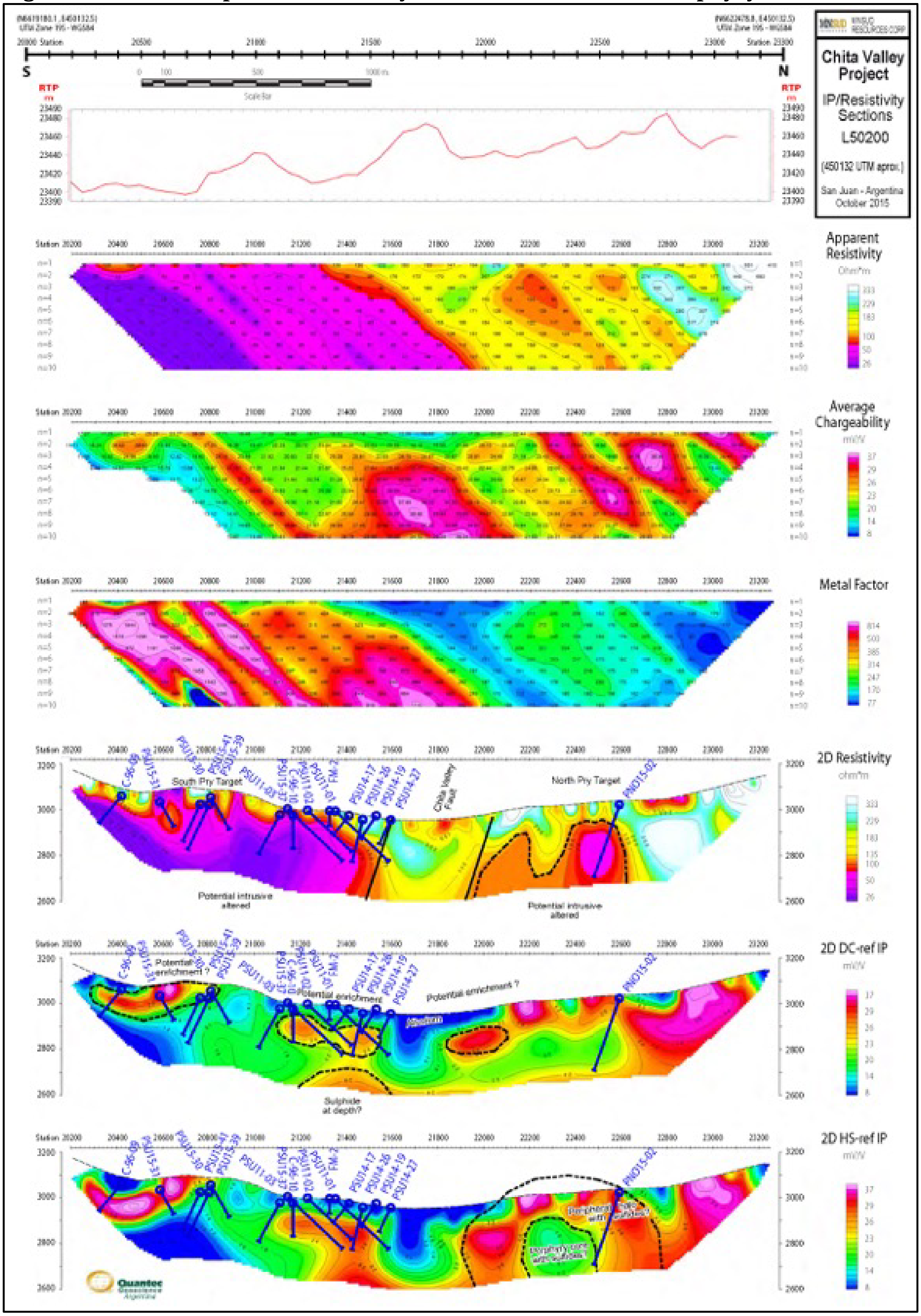


Figure 9.14 Dipole/Dipole IP/Resistivity Section 50600 E, Chita Porphyry Area

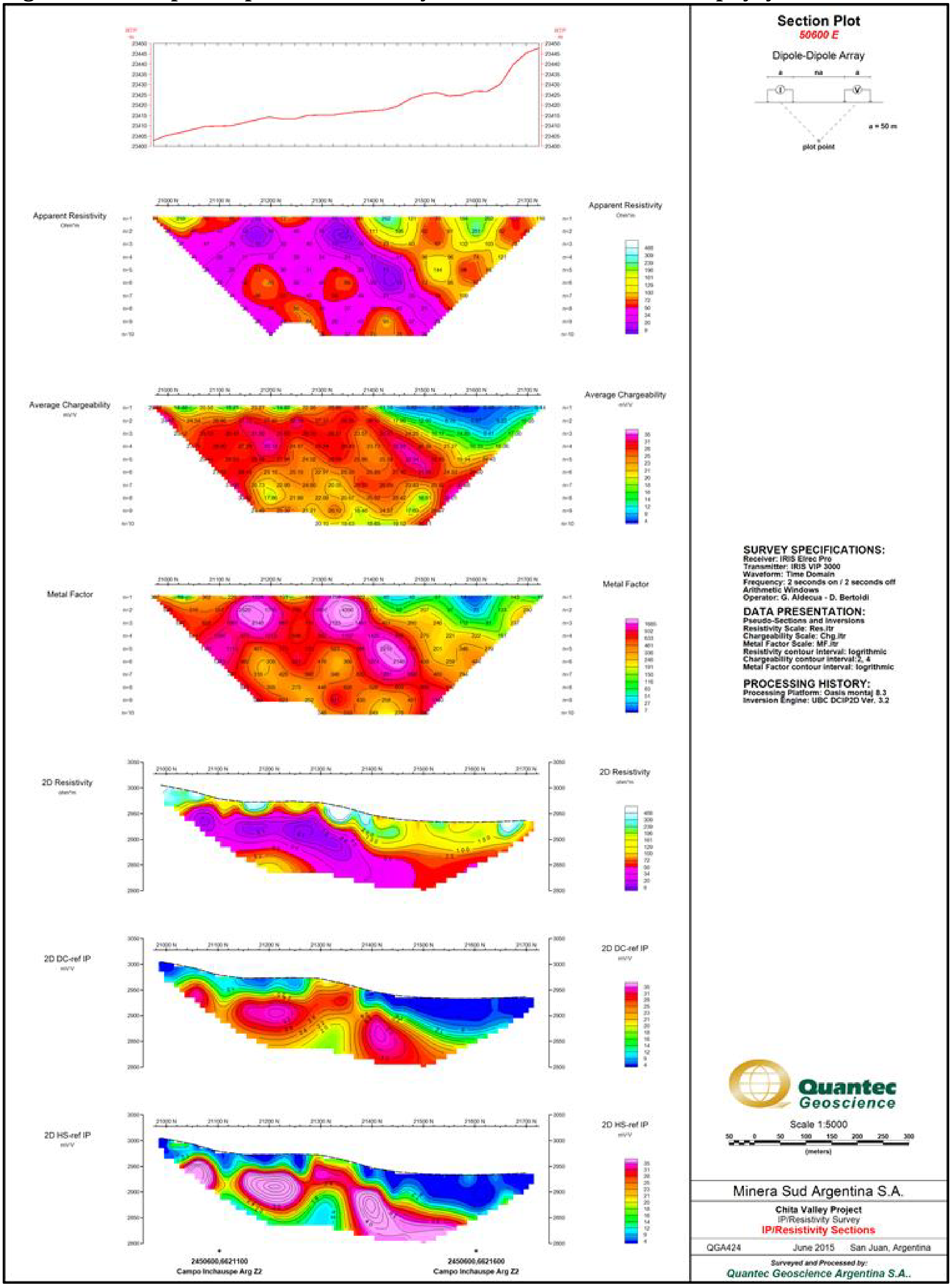


Figure 9.15 Pole/Dipole Resistivity Plan -100 Metre Level, Chita Porphyry Area

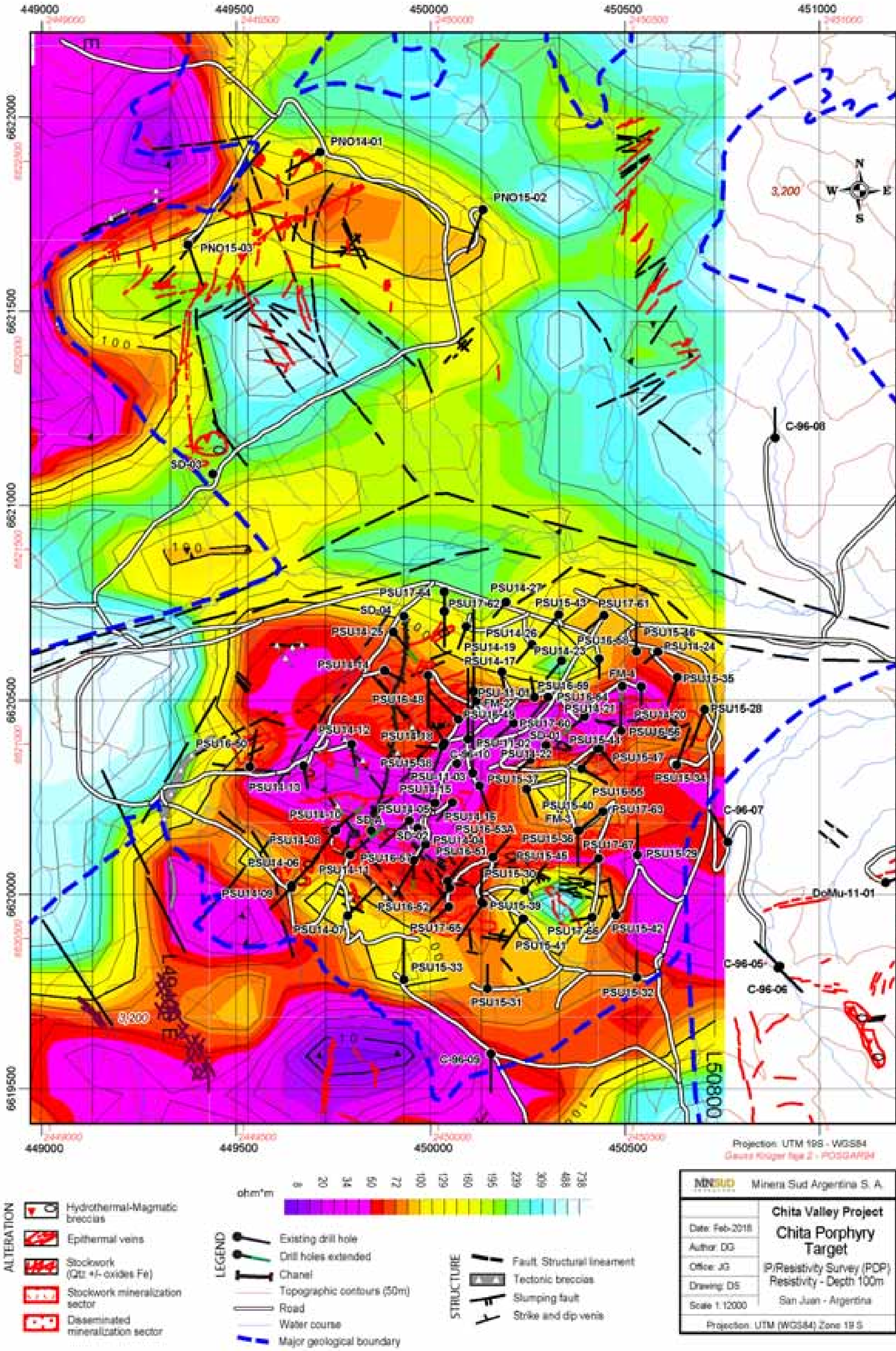


Figure 9.16 Pole/Dipole Chargeability Plan -100 Metre Level, Chita Porphyry Area

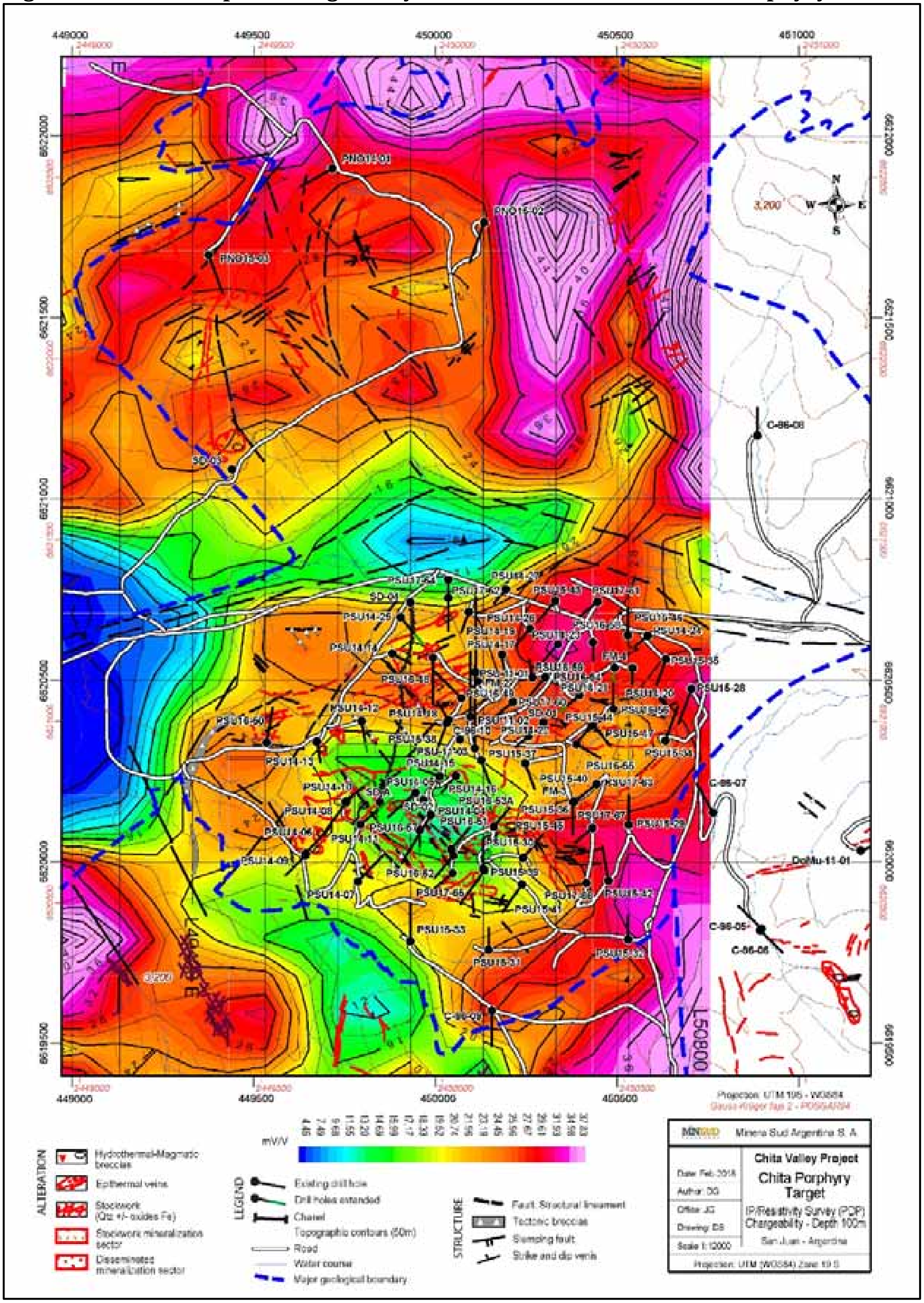


Figure 9.17 Dipole/Dipole Resistivity Plan -50 Metre Level, Chita Porphyry Area

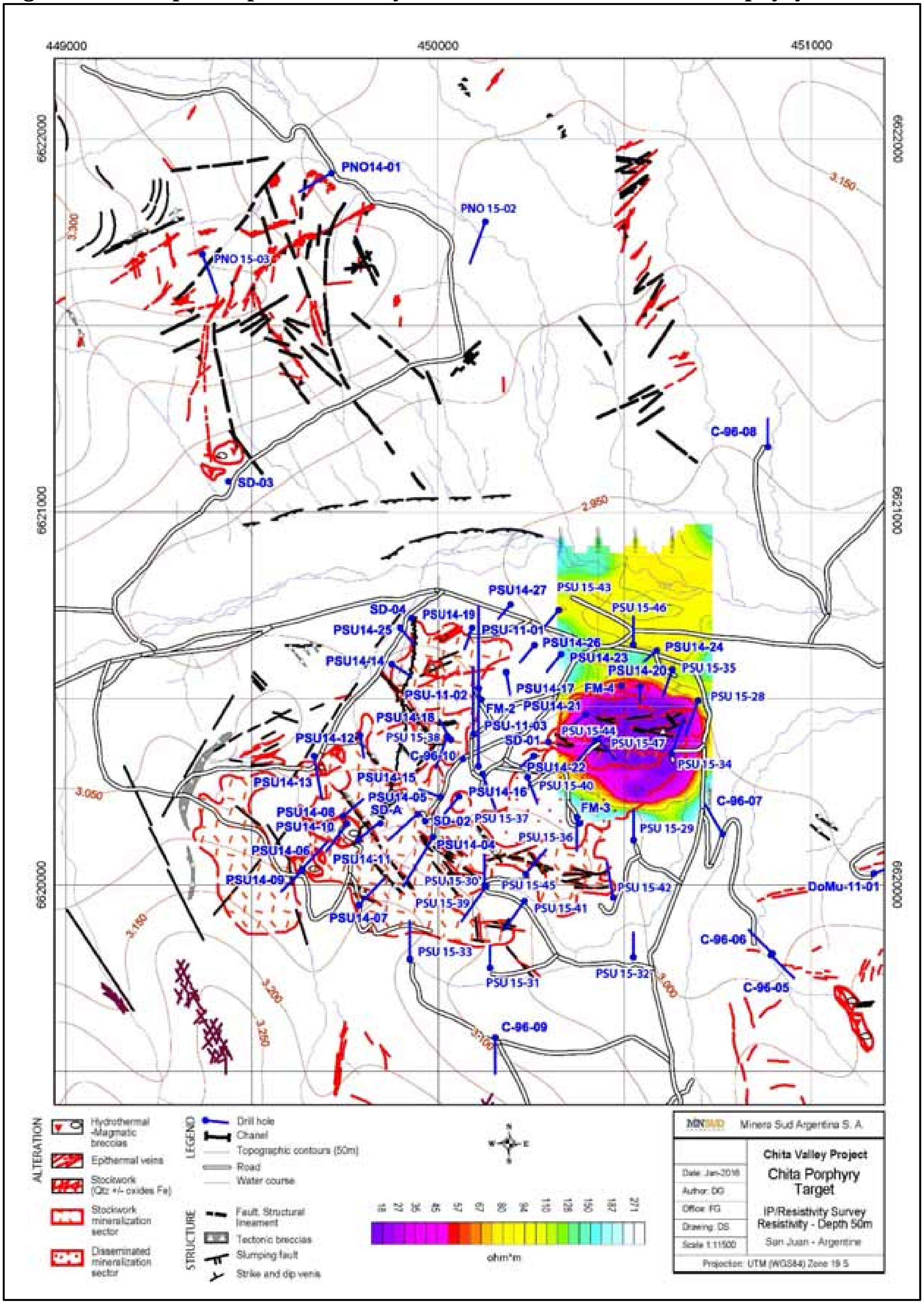
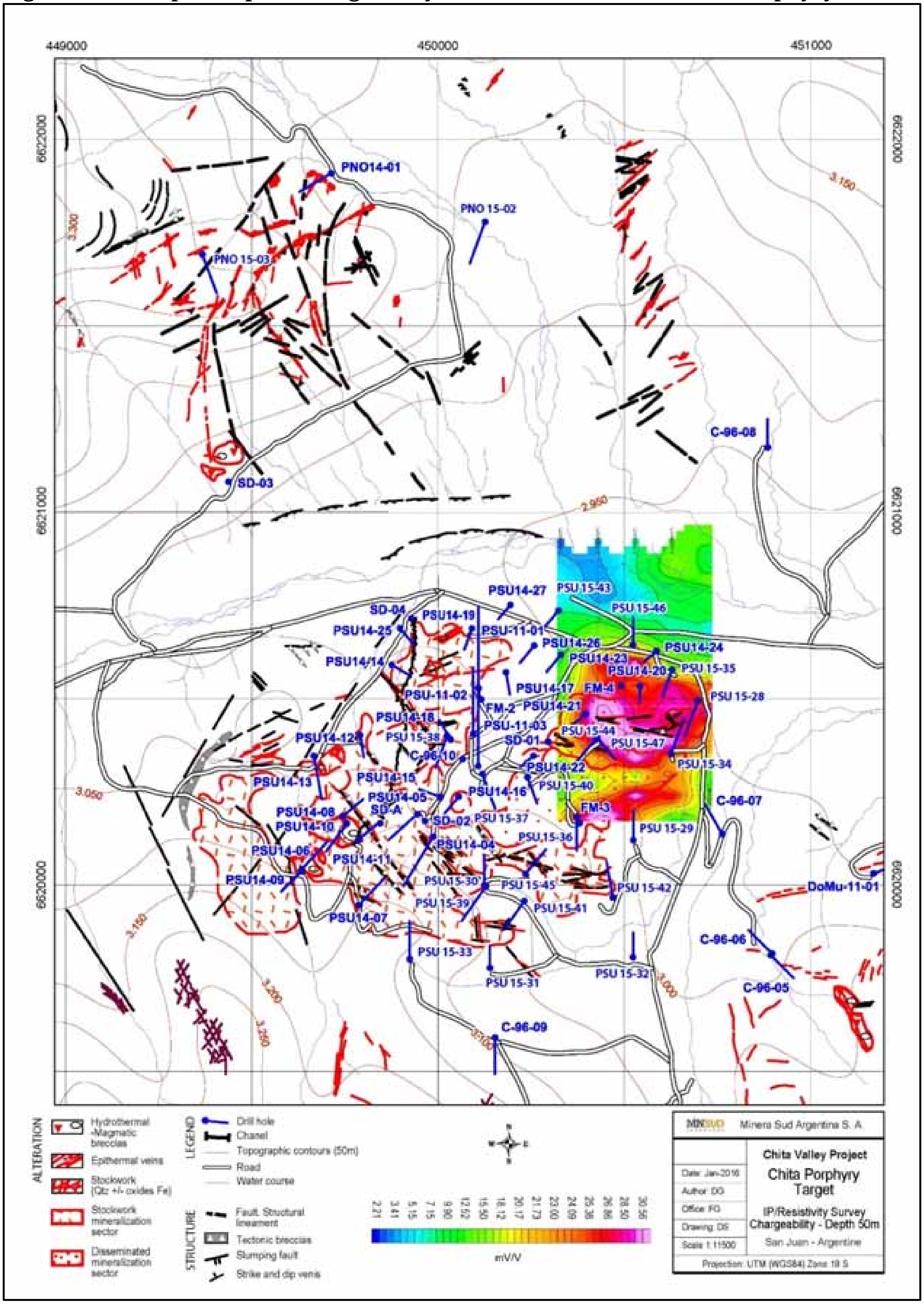


Figure 9.18 Dipole/Dipole Chargeability Plan -50 Metre Level, Chita Porphyry Area



9.4 DETAILED MAPPING AND SAMPLING CHINCHILLONES COMPLEX

9.4.1 History

The earliest known exploration in this area was conducted in early 2005 by Marifil Mines Limited. Work included a couple of exploration campaigns of regional mapping, trenching and sampling of the Chinchillones area. The property was relinquished in mid 2005. Results of the program are not known.

9.4.2 Geology

The Chinchillones Complex is overlaps the Brechas Vacas and Chita Properties and covers an area of approximately 2 km^2. In most respects the prospect is markedly similar to the Chita South Porphyry. The prospect comprises three successive stages as follows:

- An early stage of epizonal porphyritic intermediate to felsic intrusions and associated satellite veins, intruded into the sediments of the Agua Negra Formation,
- Diatreme breccias as a result of contact of magma with a water table, associated with volcanic and volcaniclastic eruptions, and
- Culminating with a shallow epithermal late stage.

The exposed basement of the Chinchillones Complex comprises quartzites, siltstones and shales of the Carboniferous age Agua Negra Formation. The sedimentary succession is cut by several phases of intrusive porphyries and related breccias of probable Miocene age. The Agua Negra sediments in the southwestern corner of the area are overlain by felsic volcaniclastics and mafic flows/dykes of probable Miocene age. The area is structurally controlled by the Chita Valley (NW striking valley associated with a regional transfer fault), at a turning point or break in orientation. In addition the Chinchillones Complex is locally characterized by radial and ring fractures around its margins that may be associated with caldera subsidence and resurgent dome phenomena. The lithological and structural setting is shown in Figure 9.19.

9.4.3 Alteration

There is very little information on alteration inside the Porphyry A due to a lack of bedrock exposure. The southern edge of the Chinchillones Hill has exposures along the contact between Porphyry A and the Agua Negra Formation. Argillic alteration as well as copper oxide staining is noted in this area (Figure 9.20). As previously noted, drill hole MSA-08-A intersected 274 m of strongly argillic and phyllic altered porphyry.

Figure 9.19 Geological Plan Map, Chinchillones Complex

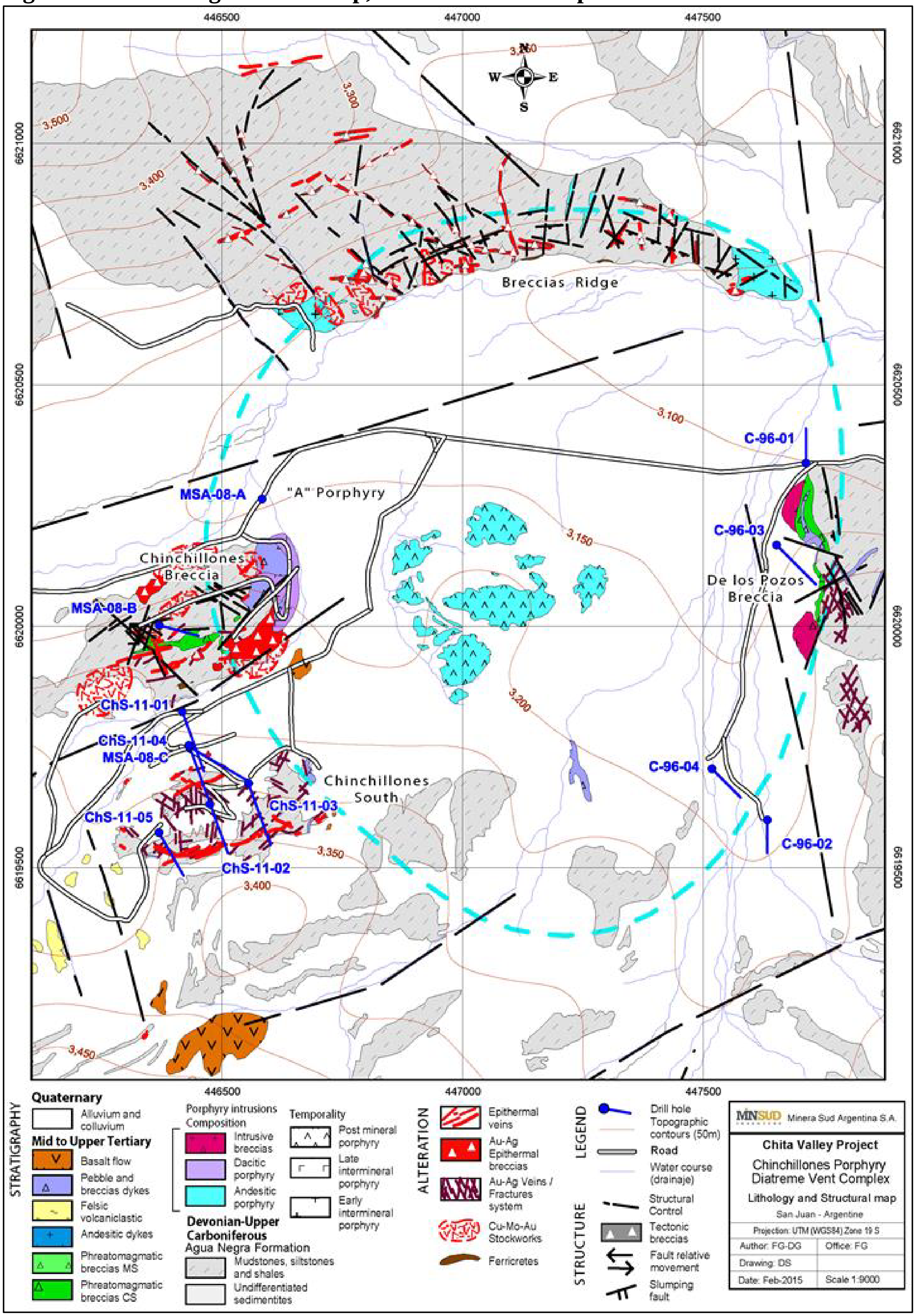
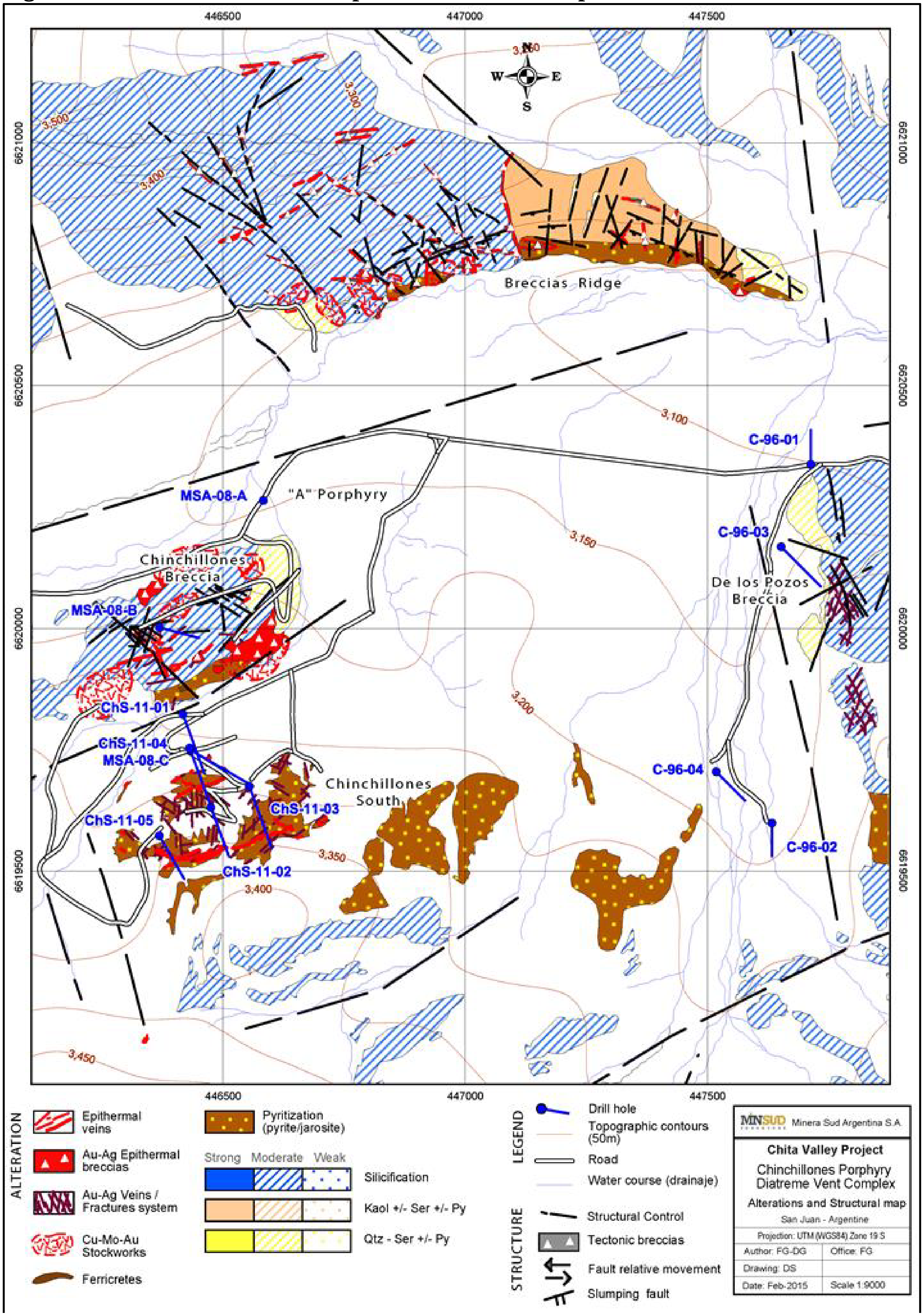


Figure 9.20 Alteration Plan Map, Chinchillones Complex



9.4.4 Mineralization

Several mineralization showings or exploration targets have been detected at present by different exploration methods, namely:

- Porphyry A Target: first detected by drilling by Minera Sud Argentina (2011/04/28 Chita Valley Technical Review) is, except for a small exposure, located beneath Recent alluvial deposits of the Chita Valley. The mineralization comprises low to moderate grade disseminations, stockwork and veinlets with widespread Mo + Cu mineralization along with localized Au + Ag values.

- Chinchillones breccias Target: is a complex breccia hosted in diatreme system, with a superimposed epithermal system. The sedimentary host rocks are extensively 'crackle' brecciated in a first stage related to the porphyry intrusion. A second brecciation, event comprises polymictic clast and matrix support breccias occupying irregular subhorizontal layers several metres thick. A third phase of brecciation is associated with shallow epithermal Au + Ag mineralization.

- Breccias Ridge" Target: located in the northern segment of the Chita Valley, and like the Chinchillones breccias target, is thought to be a breccia complex.

- "South Chinchillones" Targets: corresponds to a satellite Au+Ag+polymetallic veins system, with general direction NE structurally controlled. The structures develop in at least three corridors which have been preliminarily tested with drilling by Minsud Resources (Table 9.4).

TABLE 9.4
CHINCHILLONES AREA BEST TRENCH AND DRILLING INTERSECTIONS

Hole No. *Trench No.*	**Intersection**			**Assays**			
	From (m)	**To (m)**	**Interval (m)**	**Au g/t**	**Ag g/t**	**Cu %**	**Mo %**
TChs12-11	17.0	19.0	2.0	3.71	5.0	0.01	Tr
TChs12-15	0.0	1.0	1.0	3.54	684.9	0.09	Tr
TChs 12-18	0.0	0.3	0.3	8.76	1,032.8	0.05	Tr
MSA08-B	42.0	43.0	1.0	3.40	60.10	n/a	Tr
MSA08-C	104.0	198.0	94.0	0.12	51.00	0.15	Tr
ChS11-01	112.0	114.0	2.0	0.18	105.00	1.34	Tr
ChS11-04	62.0	63.0	1.0	0.44	393.00	1.46	Tr
ChS11-05	135.0	137.0	2.0	0.40	136.00	n/a	Tr

Earlier previously reported detailed mapping and sampling results were primarily from the South Chinchillones polymetallic vein corridors and the upper stratigraphic and marginal areas of the Chinchillones breccias areas. The veins contain widespread concentrations of gold and silver including some that may be economically significant either alone or probably more importantly when superimposed upon earlier porphyry/diatreme breccia complex mineralization. The exposed marginal parts of the diatreme breccia complex also contain localized Au and Ag.

In 2008, MSA drilled three diamond drill holes (845 m) in the areas of Chinchillones South and Breccias Chinchillones testing geophysical anomalies from a previous Schlumberger Vertical Electrical Sounding resistivity survey. Each hole intersected low sulphidation mineralization, MSA geologists recognized that the Breccia Chinchillones was a phreatomatic breccia containing anomalous precious metal values within an ENE to NE striking structure and that several other large breccia on the property with anomalous precious metal values required detailed examination.

Drillhole MSA-08-A intersected 274 m of strongly argillic and phylic altered porphyry containing crystalline quartz veins and veinlets, disseminated sulphides and sulphide veinlets. The entire hole contained anomalous copper and molybdenum values with localized elevated gold and silver values. Drillhole MSA-08-B intersected a series of sub-vertical polymetallic (base metals and Au and Ag) veinlets within a Paleozoic quartzite. This hole was abandoned due to stuck rods before its targeted depth. Drillhole MSA-08-C intersected a series of polymetallic veins and veinlets (base metals and Au and Ag) within the Paleozoic quartzite. In 2011 five diamond drill were completed in the area of drill hole MSA-08-C. The highlight results of the 2008 and 2011 Minsud drilling are presented in Table 9.5.

TABLE 9.5
CHINCHILLONES COMPLEX PREVIOUS MINSUD DRILLING HIGHLIGHTS

Drill Hole Number	Intersection			Assays			
	From (m)	To (m)	Interval (m)	Au g/t	Ag g/t	Cu ppm	Mo ppm
MSA08-A	26.0	300.45	274.45	0.035	0.55	900	100
MSA08-B	42.0	43.0	1.0	3.40	60.10	n/a	Tr
MSA08-C	104.0	198.0	94.0	0.12	51.00	1,500	Tr
ChS11-01	112.0	114.0	2.0	0.18	105.00	13,400	Tr
ChS11-04	62.0	63.0	1.0	0.44	393.00	14,600	Tr
ChS11-05	135.0	137.0	2.0	0.40	136.00	n/a	Tr

The De los Pozos Breccias area along the eastern margin of the complex is in essence the mirror image of the Chinchillones Breccia sector to the west. Like Chinchillones the De los Pozos area contains a variety of sedimentary and igneous lithologies, breccias and mineralization types.

9.4.5 Geochemistry

The Breccias Ridge and De los Pozos areas were mapped in detail and selectively channel sampled during the first half of 2013. As noted above, historical reverse circulation data in the De los Pozos area was re-examined and incorporated into the overall interpretation. Table 9.6 shows highlights of the surface outcrop channel sampling. It is noted that the channel sample base metal values are typically significantly understated due to surface weathering and leaching. This is clearly demonstrated for general comparison purposes by the historical drilling analyses from below the weathering profile. Highlights of the 2013 channel sampling program and the historical drill sampling are presented in the Table 9.6.

TABLE 9.6 2013 DE LOS POZOS AND BRECCIAS RIDGE SAMPLING HIGHLIGHTS										
Area	**Trench (Historical RC Hole)**	**From (m)**	**To (m)**	**Length (m)**	**Au g/t**	**Ag g/t**	**Cu ppm**	**Mo ppm**	**Pb ppm**	**Zn ppm**
De los Pozos	Chinch-2013-03	0.00	24.00	24.00	0.04	2.2	285	11	160	370
	Chinch-2013-04	0.00	30.00	30.00	0.14	6.7	251	22	97	43
	incl.	0.00	4.00	4.00	0.27	10.5	169	28	43	35
	Chinch-2013-05	0.00	48.00	48.00	0.05	3.4	86	14	269	82
	(C96-01)	66.00	74.00	8.00	0.11	14.0	4967	n/a	1883	3759
	(C96-02)	56.00	58.00	2.00	0.25	17.0	1383	n/a	4744	10116
	(C96-03)	108.00	116.00	8.00	0.22	9.0	8901	n/a	250	453
	(C96-04)	160.00	162.00	2.00	1.33	81.0	8902	n/a	10001	20001
Breccias Ridge	Chinch-2013-06	12.00	54.00	42.00	0.04	4.6	179	5	566	91
	incl.	12.00	15.00	3.00	0.17	15.1	141	6	306	81
	Chinch-2013-07	0.00	57.30	57.30	0.16	3.4	105	39	44	18
	incl.	21.00	39.30	18.30	0.33	2.1	70	14	28	12
	Chinch-2013-08	0.00	36.00	36.00	0.03	2.3	117	69	58	17
	incl.	30.00	33.00	3.00	0.13	7.7	263	175	86	21
	Chinch-2013-09	0.00	42.00	42.00	0.07	4.4	145	8	346	85
	incl.	0.00	3.00	3.00	0.39	17.9	175	3	608	51
	Chinch-2013-10	0.00	14.00	14.00	0.04	2.4	167	13	812	116

True thickness in RC holes unknown

All 2013 samples were submitted to the Alex Stewart (Assayers) Argentina S. A. laboratory in Mendoza, Argentina for preparation and analysis. The laboratory is certified to ISO-9001 international standards. All geochemical grab and channel rock samples were analyzed for Au by fire assay/ AA finish, 50 g, (Au4-50) plus a 39-element ICP scan (AR-39). The sampling and analytical procedures for the historical RC samples are unknown.

9.4.6 Geophysics

Magnetics: The Chinchillones area was covered by ground magnetics in 2012. Although the first pass 200 metre line spacing is less than optimal for detailed interpretation of lithological, structural and alteration phenomena, the technique shows excellent promise in these areas. Selective infill lines are required. The current data (Figure 9.21) illustrates the possibilities for tracing lithological/alteration and structural features beneath cover.

IP/Resistivity: Quantec Geoscience Argentina S. A. was contracted to implement a conventional IP/Resistivity survey over the Chita Porphyry and adjacent Chinchillones area in the second quarter of 2015 (Ensink, et al., 2015). The survey instrumentation included an IRIS Elrec-Pro IP receiver coupled with an IRIS VIP 3000 transmitter. Primary data for measured Chargeability and Resistivity and derivative Metal Factor are presented as pseudosections along with three 2D inversions. Survey specifications were previously outlined in Section 9.3.6 above.

A typical Pole/Dipole survey cross sections is shown in Figure 9.22.

Plan maps were generated for contoured resistivity and chargeability. Typical Pole/Dipole results are illustrated by plans of the -100m level for resistivity (Figure 9.23) and chargeability (Figure 9.24).

Figure 9.21 Magnetic Survey, Reduction to Pole Contours, Chinchillones Complex

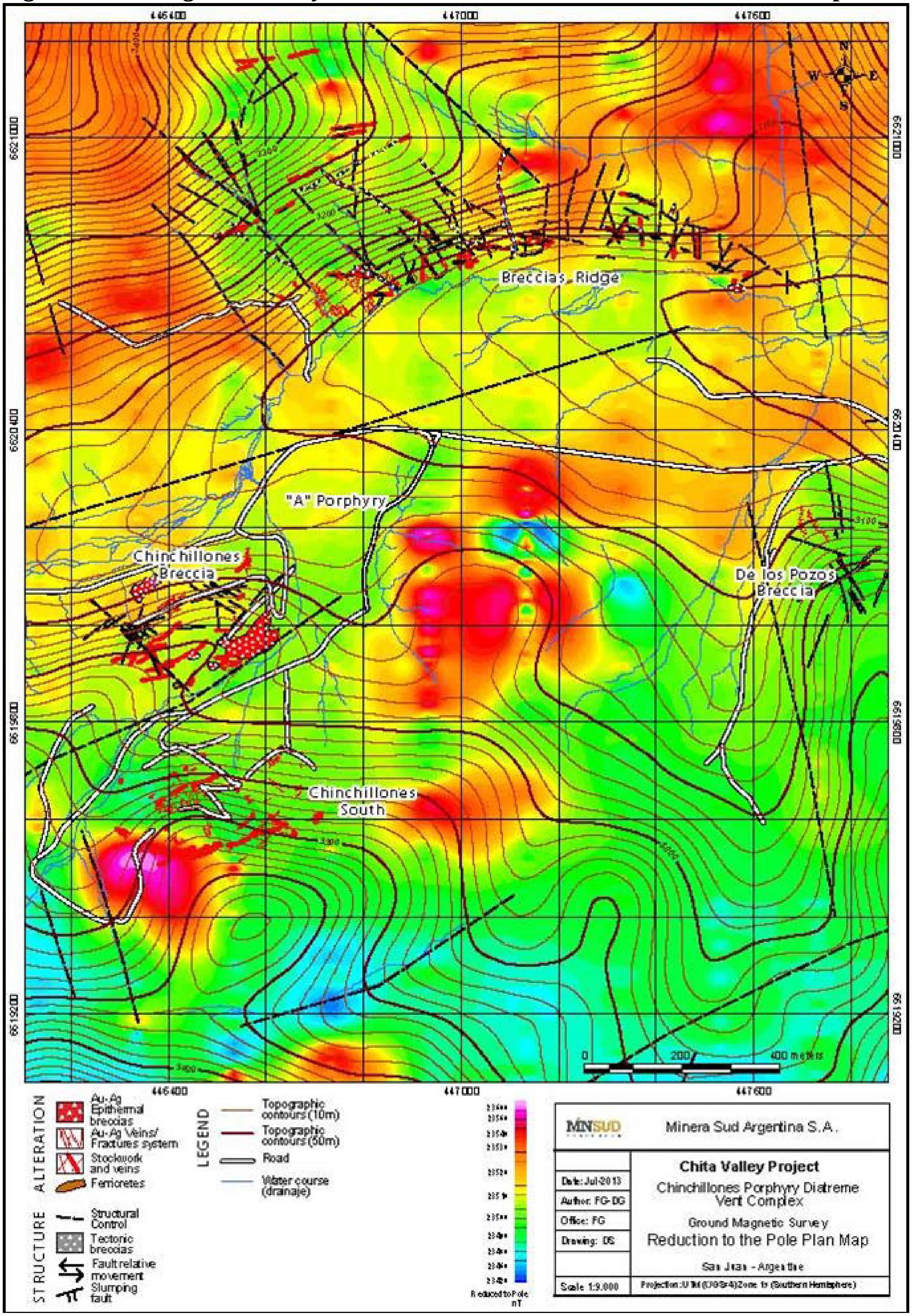


Figure 9.22 Pole/Dipole IP/Resistivity Section 46600 E, Chinchillones Complex

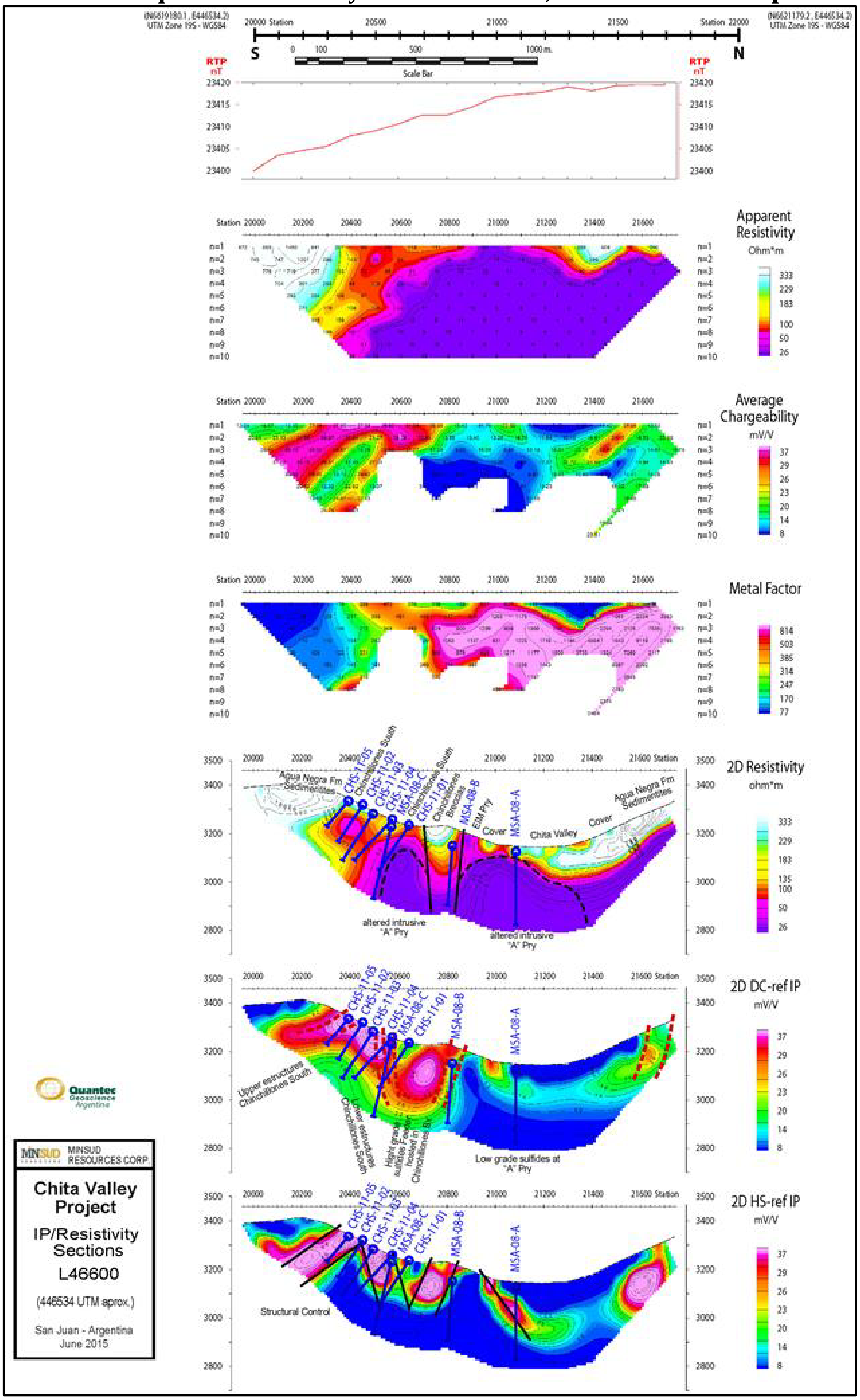


Figure 9.23 Pole/Dipole Resistivity Plan -100 Metre Level, Chinchillones Complex

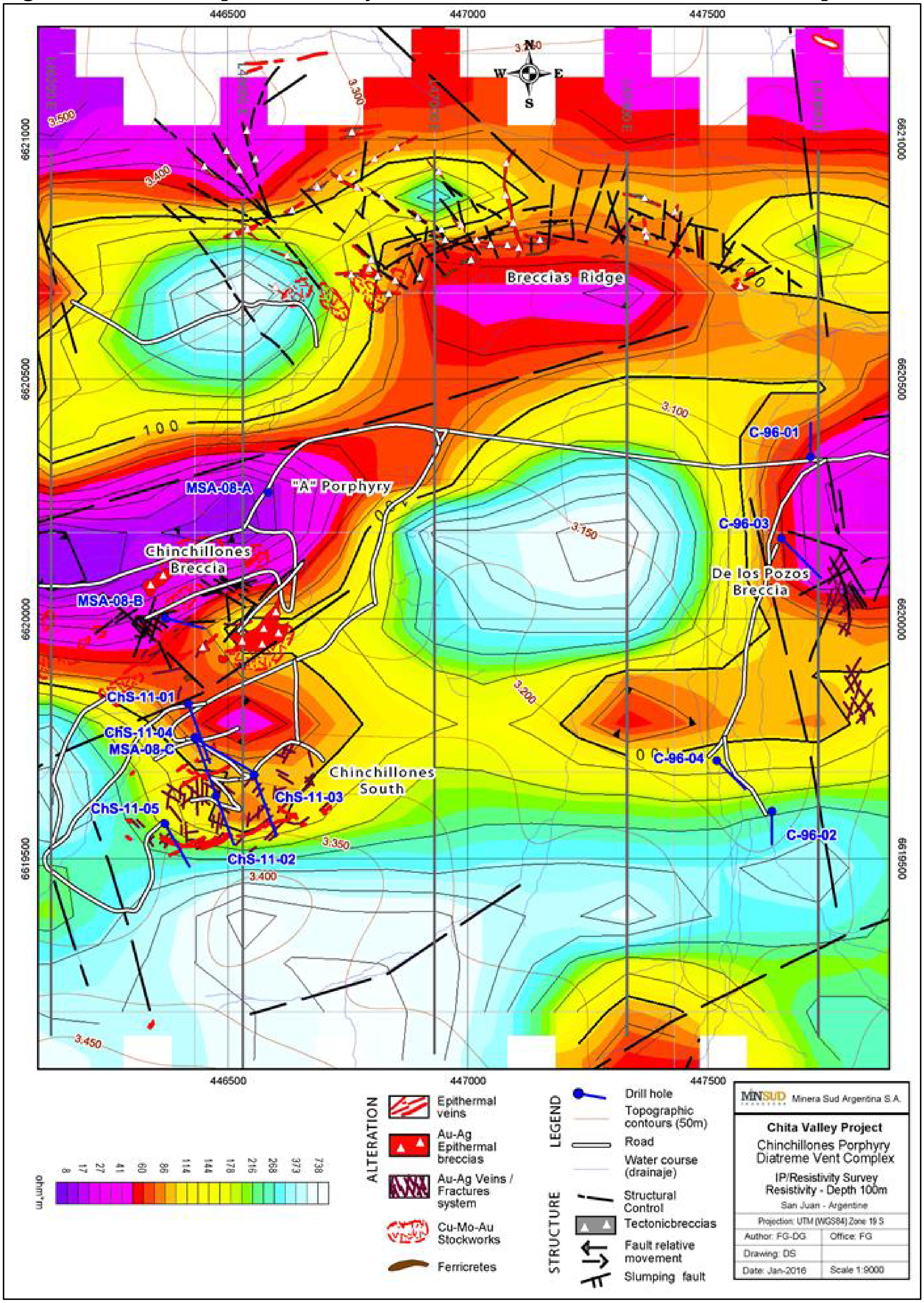
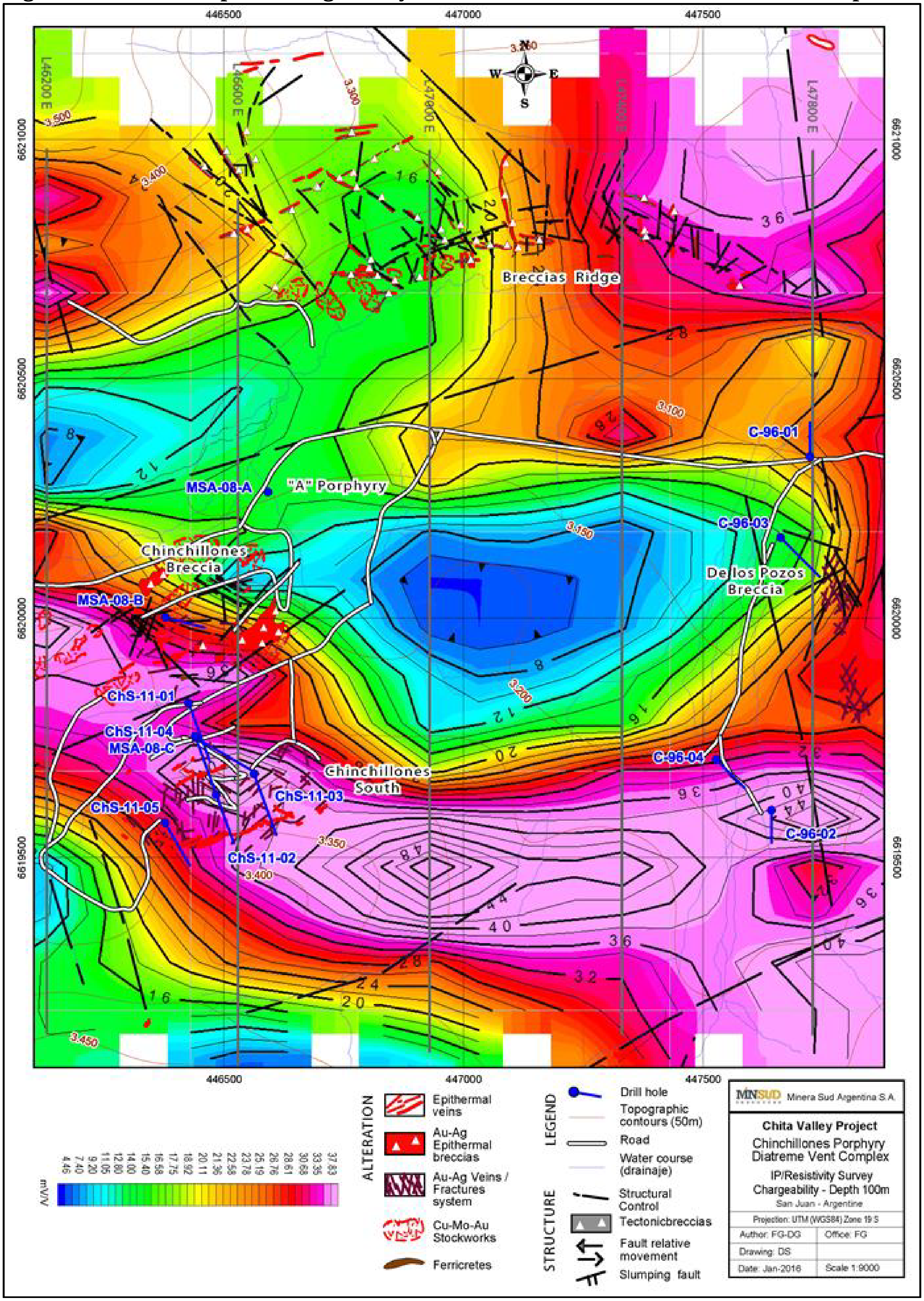


Figure 9.24 Pole/Dipole Chargeability Plan -100 Metre Level, Chinchillones Complex



9.5 EXPLORATION WORK PLACETAS PORPHYRY-HORSETAIL VEINS AREA

9.5.1 History

In 2006 Rio Tinto Mining and Exploration ("Rio Tinto") carried out a reconnaissance exploration program in the Placetas area of the Brechas Vacas property. This program was followed by a semi-detailed geological/alteration mapping program, soil geochemistry and petrographic studies. Three drill holes (totaling 879.5 m) were not considered encouraging and Rio Tinto terminated the program in 2007. Minsud re-examined the area in 2013.

9.5.2 Geology

The Placetas porphyry covers an area of approximately 1.5 km^2. The prospect comprises three successive stages as follows:

- An early (EM) stage of epizonal porphyritic monzodioritic intrusions, intrusive breccias and associated satellite veins, intruded into the sediments of the Agua Negra Formation.
- Late intermineral (LIM) stage diorite, and EIM intrusion breccias.
- Post mineralization (PM) diorite dykes.

The exposed basement of the Placetas porphyry comprises quartzites, siltstones and shales of the Devonian-Carboniferous age Agua Negra Formation with occasional Permo-Carboniferous granodiorite dykes. The sedimentary succession is cut by several phases of intrusive porphyries and related breccias of probable Miocene age. The lithological and structural setting is shown in Figure 9.25.

9.5.3 Alteration

The central core of the porphyry is characterized by strong to moderate potassic alteration (magnetite-K-feldspar-biotite) with an outer ring of moderate to strong sodic alteration (albite-tremolite-actinolite), see Figure 9.26.

9.5.4 Mineralization

Mineralization in the surface exposures is confined to Cu oxides along fractures/veinlets and the three drill holes all into the potassic altered core sector is typically contained in EM veinlets containing chalcopyrite +quartz +/- magnetite +/- pyrite with little in terms of disseminated sulphides.

Figure 9.25 Geological Plan Map, Placetas Porphyry

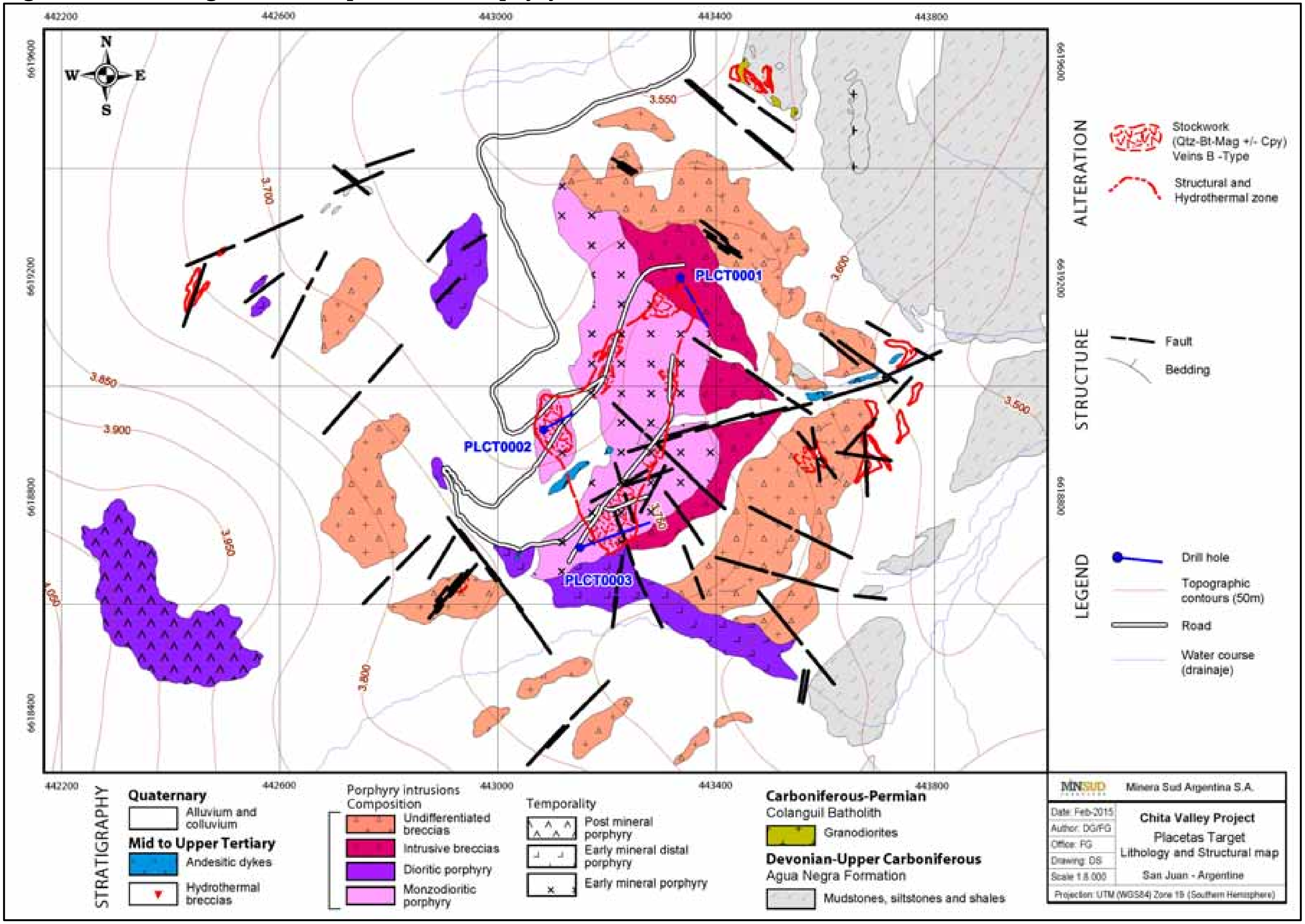
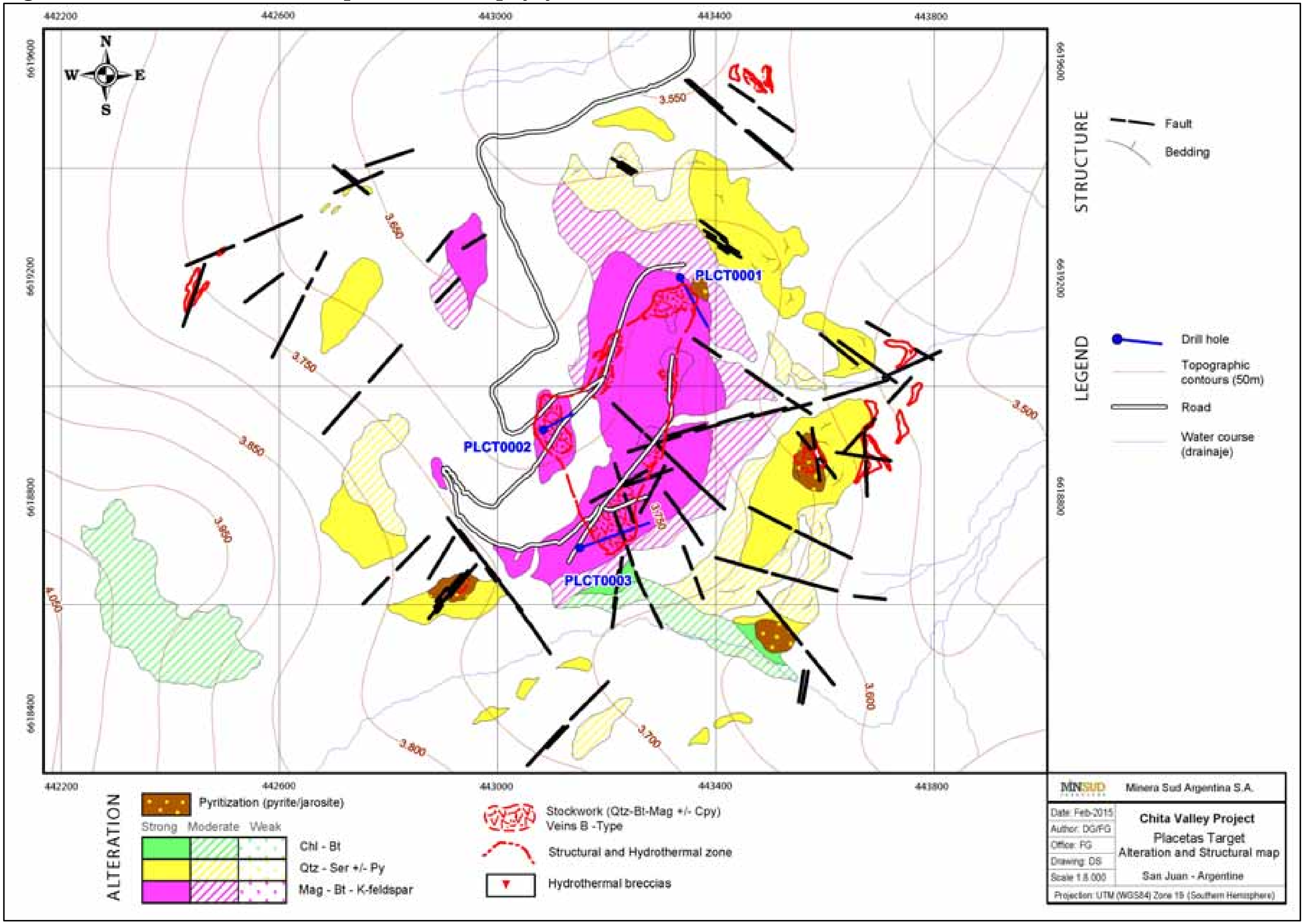


Figure 9.26 Alteration Plan Map, Placetas Porphyry



9.5.5 Geochemistry

Soil Geochemistry: 289 soil samples were collected by Rio Tinto on a 50 m x 50 m grid over the central core of the porphyry (850 m x 850 m). Results of the work are unavailable.

Surface Rock Geochemistry: 62 surface rock samples were collected by Rio Tinto (anomalous in Cu and Au) over the altered porphyry.

Drill Core Samples: Two of the three Rio Tinto drill holes (PLCT-0001 and 0003) are characterized by weakly anomalous Au and Ag and moderately anomalous Cu (average ~0.05% Cu) throughout. The third drill hole (PLCT-0002) encountered scattered areas of weakly anomalous Au, Ag and Cu (average ~0.005% Cu). A few sporadic anomalous Mo values were encountered but on the whole were uninteresting (average for three holes ~10 ppm Mo).

9.5.6 Geophysics

Magnetics: The Placetas Porphyry area was covered by ground magnetics in 2012. Although the first pass 200 metre line spacing is less than optimal for detailed interpretation of lithological, structural and alteration phenomena, the technique shows excellent promise in these areas. The current data (Figure 9.27) illustrates the possibilities for tracing lithological/alteration and structural features.

9.6 DETAILED MAPPING AND SAMPLING MINAS DE PINTO AREA

9.6.1 History

The Minas de Pinto corridor contains various artisanal diggings of unknown age and an early 20th Century exploration adit. Silex Argentina S A, an unrelated company, optioned the Minas de Pinto Property in the mid-2000s, completing extensive geological mapping and surface grab and channel sampling for a total of 1,631 samples by 2007. In 2008 the company drilled 22 diamond drill holes totalling 2,631.25 metres. The full data set pertaining to the latter work including analytical certificates and remaining drill core was turned over to the property owner upon termination of the option agreement. In 2011 Minsud completed two diamond drill holes totalling 435.5 metres to test the earlier results, with one (CHT11-24) being a twin of previous hole CHT-004 (see Press Release date February 9, 2012). The current program conducted in the Pinto Property includes detailed geological and alteration mapping together with selective surface channel sampling.

The Minas de Pinto sector (Figure 9.28) is essentially an easterly trending swarm of discontinuous quartz veins containing variable concentrations of polymetallic sulphides and widespread localized Au-Ag mineralization that has been traced for 4.0 kilometers along strike. This is part of the 12 km strike length Chita Valley Complex trend. The vein swarm cuts various lithologies including Devonian-Carboniferous sediments (Agua Negra Formation), Carboniferous-Permian granodiorite (Colanguil Batholith), and Mid to Upper Tertiary volcaniclastics and andesitic porphyry (Chita Valley Complex). Several corridors comprising multiple veins and stockworks are present. In the western sector, from north to south, these are

Figure 9.27 Ground Magnetic Survey, Placetas Porphyry

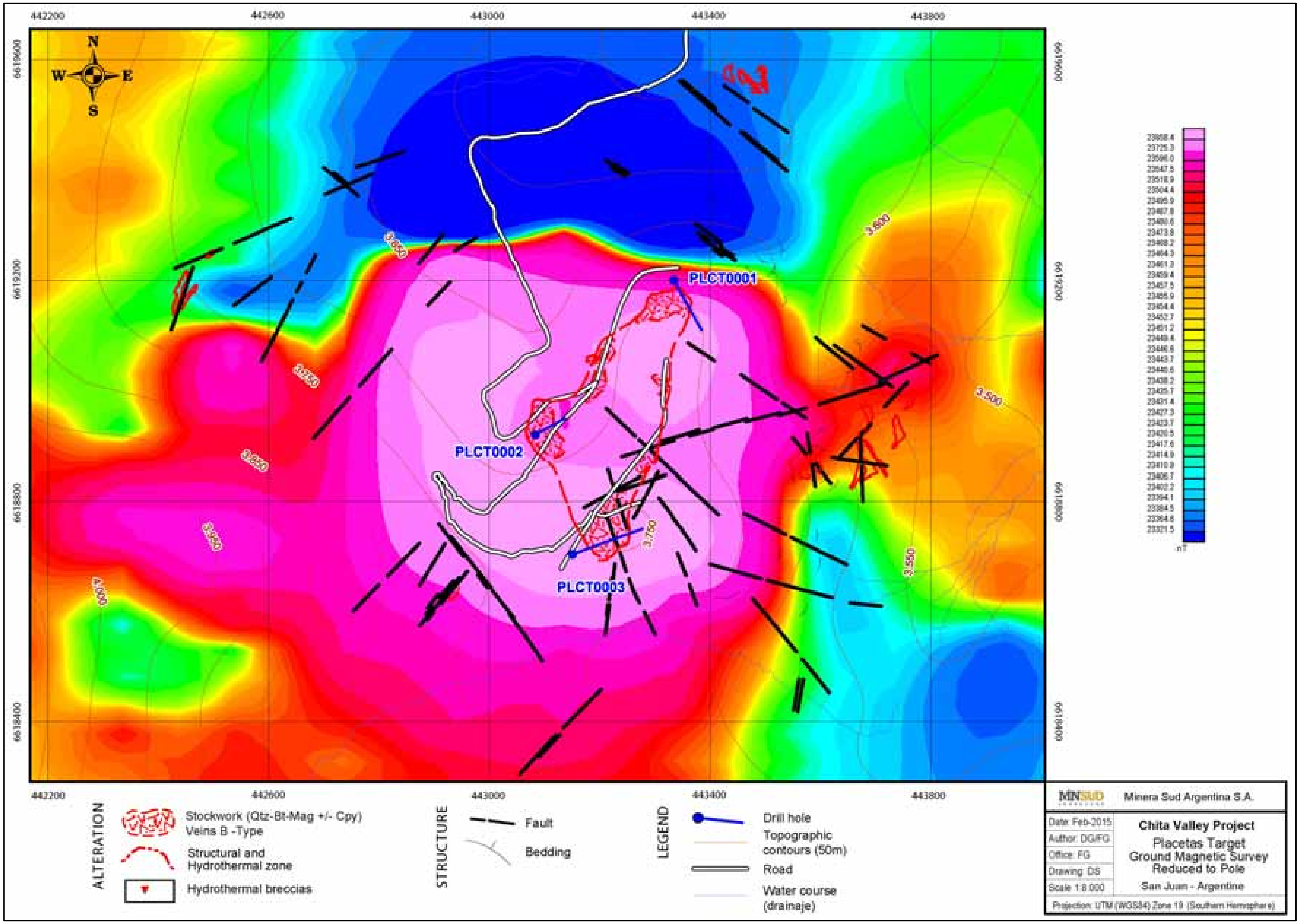
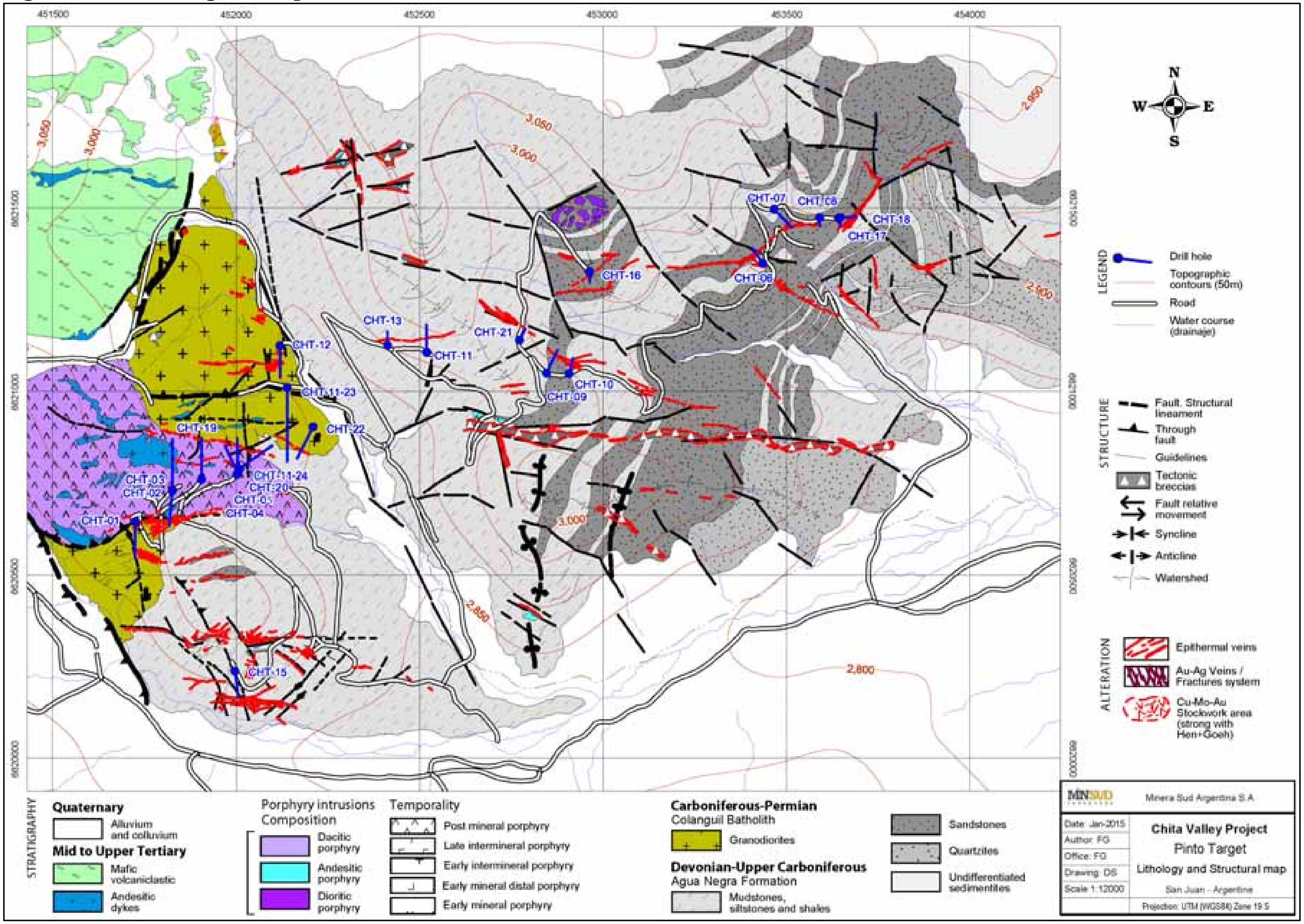


Figure 9.28 Geological Map Minas de Pinto Area



termed; the Barba, Amparo, Fatima, Fatima Sur, Branca, Maria, Carmen and Carmen Sur vein assemblages. Other vein corridors located in the eastern and southern parts of the Minas de Pinto sector (Candela, Johanna, Esperanza, Josephina, Argentina, Glenda and others) will be the subject of planned future investigations.

The following tables show selected highlight results of historical (Silex) and the 2011 (Minsud) diamond drill hole (Table 9.7) and surface grab/channel sampling (Table 9.8) programs. These are presented to illustrate the general nature of the mineralization and for comparison with current results. Due to the large number of Au-Ag geochemically anomalous surface samples presentation herein is impractical. It is noted that there is wide variation in gold and silver values within and between mineralized sections that is indicative of 'nugget effect' which is a ubiquitous characteristic of the great majority of auriferous vein type deposits. This is clearly illustrated in the twinned holes where the Fatima Vein intersections are probably separated by only a few meters but the values are very different. It is also clear that the widely scattered holes indicate a variety of narrow or broader mineralized sections that require additional exploration.

Complete records of the historical Silex sampling were turned over to the property owner upon termination of the option agreement. These were subsequently presented to Minsud upon acquisition of the Pinto Property.

TABLE 9.7
MINAS DE PINTO PREVIOUS DRILLING HIGHLIGHTS

Prospect	Drill Hole	Drill Hole Intersection				Assay	
		From (m)	To (m)	Length (m)	True Thickness (m)	Au g/t	Ag g/t
Porphyry w. Sulphidation	CHT-11-23	23.00	35.00	12.00	unknown	0.20	24.30
Fatima Vein	CHT-11-23	250.00	251.00	1.00	0.7	0.34	4.10
Fatima Zone (Twin CHT-04)	CHT-11-24	73.00	76.00	3.00	2.1	0.31	19.20
(includes vein)		73.00	75.00	2.00	1.4	0.47	14.40
Fatima Zone (Twin CHT-11-24)	CHT-004	77.72	82.50	4.78	3.0n	3.73	31.00
(includes vein)		78.20	79.80	1.60	1.2	10.58	88.33
Fatima Zone	CHT-005	90.00	94.00	4.00	2.8	0.63	32.10
(includes vein)		91.70	93.20	1.50	1.0	1.48	83.83
Fatima Zone	CHT-019	56.00	58.00	2.00	unknown	14.98	12.4
Fatima Zone	CHT-020	87.00	99.00	12.00	unknown	0.29	97.76
Fatima South Zone	CHT-002	169.00	170.50	1.50	0.7	15.90	6.9
Fatima South Zone	CHT-005	92.2	93.2	1.00	unknown	2.11	117.70
Fatima South Zone	CHT-019	53.00	66.20	13.20	unknown	2.38	4.08
Fatima South Zone	CHT-020	15.60	17.40	1.80	1.3n	2.71	51.61
Candella	CHT-018	28.50	45.00	16.50	unknown	1.29	34.4
Candella	CHT-006	69.00	73.00	4.00	unknown	2.18	63.24
Candella	CHT-008	23.80	25.75	1.95	1.3	0.79	58.04
Argentina	CHT-010	72.00	75.90	3.9	unknown	1.49	122.0
Argentina	CHT-009	99.50	100.50	1.00	unknown	5.32	590.00
Barba	CHT-012	129.50	130.50	1.00	0.7	4.43	738.00
Johana	CHT-013	42.40	47.00	4.60	unknown	6.93	22.5
Amparo	CHT-022	130.00	131.00	1.00	unknown	8.42	204.00

TABLE 9.8 PINTO PREVIOUS GRAB AND CHANNEL SAMPLING HIGHLIGHTS (>8 G/T AU)									
Prospect	**Sample No.**	**Easting m**	**Northing m**	**True Width (m)**	**Au g/t**	**Ag g/t**	**Cu ppm**	**Pb ppm**	**Zn ppm**
Argentina	4991	2,452,805	6,621,543	grab	22.12	32.3	142	1,097	519
Argentina	4137	2,452,947	6,621,917	grab	30.83	1,917.9	1,447	28,671	3,372
Argentina	8554	2,452,943	6,621,919	0.70	9.50	1,283.7	1,364	1,325	9,534
Argentina	7969	2,452,955	6,621,927	grab	28.53	200.1	136	2,398	3,704
Candela	8714	2,453,775	6,622,316	1.10	9.70	46.5	39	1,044	145
Candela	8871	2,453,856	6,622,405	1.10	9.27	200.1	465	2,577	1,843
Candela	8873	2,453,878	6,622,424	2.00	12.53	200.1	154	1,747	331
Candela	7112	2,453,957	6,622,474	grab	27.24	105.6	67	241	804
Candela	7110	2,454,080	6,622,487	grab	19.95	115.1	50	1,273	730
Candela	7111	2,454,061	6,622,502	grab	12.38	69.4	26	229	172
Carmen	10059	2,452,116	6,620,950	grab	10.88	26.8	244	1,473	828
Carmen	8938	2,452,176	6,621,003	grab	58.19	26.8	113	709	42
Carmen	10106	2,451,901	6,621,072	grab	15.61	8.4	135	887	631
Carmen	70005	2,452,261	6,621,103	grab	22.93	45.0	31	1,469	45
Carmen	70006	2,452,261	6,621,104	grab	9.38	7.4	34	16	87
Carmen	8992	2,452,242	6,621,142	0.40	10.21	132.2	133	1,373	631
Carmen	8942	2,451,833	6,621,146	grab	8.35	176.4	792	6,044	541
Esperanza	4938	2,453,622	6,622,070	grab	18.28	123.6	42	252	46
Esperanza	8862	2,453,619	6,622,072	0.80	8.49	46.9	21	68	154
FajaAustral	9588	2,450,899	6,619,509	grab	8.32	82.2	2,517	10,000	676
FajaAustral	10858	2,450,904	6,619,826	grab	20.16	40.6	2,504	4,156	1,111
Fátima	4901	2,452,250	6,621,659	grab	9.78	160.1	199	6,745	1,262
Fátima	8958	2,452,066	6,621,668	0.70	8.95	33.1	60	278	314
Fátima	7967	2,452,049	6,621,669	grab	8.18	25.1	128	331	88
Fátima	7932	2,452,208	6,621,685	2.00	58.29	38.8	92	2,104	339
Fátima	7335	2,451,833	6,621,705	0.40	139.76	200.1	663	3,560	541
Johana	10192	2,452,457	6,621,957	1.00	12.76	198.9	105	432	1429
Johana	10191	2,452,474	6,621,962	1.00	10.16	102.6	62	502	992
Johana	10186	2,452,591	6,621,964	0.50	17.82	183.7	85	824	376
María	10030	2,451,887	6,621,258	grab	14.96	6.0	49	2,732	895
María	10029	2,451,857	6,621,348	grab	25.35	200.1	1,026	163	74
María	4121	2,451,861	6,621,353	grab	12.49	149.9	702	228	57
María	10024	2,451,789	6,621,373	grab	106.43	200.1	541	1261	79
Pulenta	10168	2,453,040	6,622,108	1.50	20.72	42.7	52	307	109
Pulenta	10148	2,453,050	6,622,110	0.40	11.21	200.1	349	537	1,541
Pulenta	10045	2,453,091	6,622,118	grab	12.15	200.1	4,686	7,663	1,241
Pulenta	8842	2,453,394	6,622,171	0.25	11.15	154.8	53	257	244
Pulenta	7151	2,453,359	6,622,172	grab	13.88	43.6	97	1,402	251
Pulenta	7138	2,453,566	6,622,263	grab	9.04	200.1	46	109	293
Pulenta	4122	2,453,649	6,622,275	grab	44.88	110.9	45	192	687
Pulenta	8681	2,453,612	6,622,281	0.40	13.21	55.0	45	79	262
Pulenta	8679	2,453,617	6,622,281	0.20	67.86	200.1	99	229	359

9.6.2 Alteration

The distribution of alteration features (Figure 9.29) is summarized as follows:

- Agua Negra Formation units are characterized by weak silicification with areas of moderate to strong argillic alteration in the vicinity of epithermal vein systems.

- Colanguil Batholith granodiorite is exposed in two areas. The southern exposure is characterized by moderate argillic alteration while the northern area is weakly to strongly silicified with an area of moderate argillic alteration near the northern property boundary.

- The Chita Valley Complex andesite porphyry units are moderate to strongly silicified with localized argillic alteration bordering vein systems. The mafic volcaniclastics in the north-western corner of the map area are typified by moderate propylitic alteration.

9.6.3 Mineralization

The gold-silver mineralization in the Minas de Pinto sector is associated with multiple episodes of Tertiary hydrothermal activity. The generally WNW oriented extensional vein system comprises a series of discrete veins, brecciated veins, sheeted parallel veins and vein stockworks that are typified by widespread elevated Au, Ag, As, Ba, Cu, Fe, Mn, P, Pb, S, and Zn values as well as localized elevated Mo and Sb concentrations. The polymetallic veins range from intermediate depth (mesothermal) to shallow (epithermal) in style in all areas examined. The superimposed and overlapping veins include quartz-sulphide (Au-Cu) type, carbonate (base metals-Au) and epithermal quartz or quartz-sericite (Au-Ag). The veins in general have the sinuous geometry and sigmoidal anastomosing patterns that typify multiple episodes of mineralization.

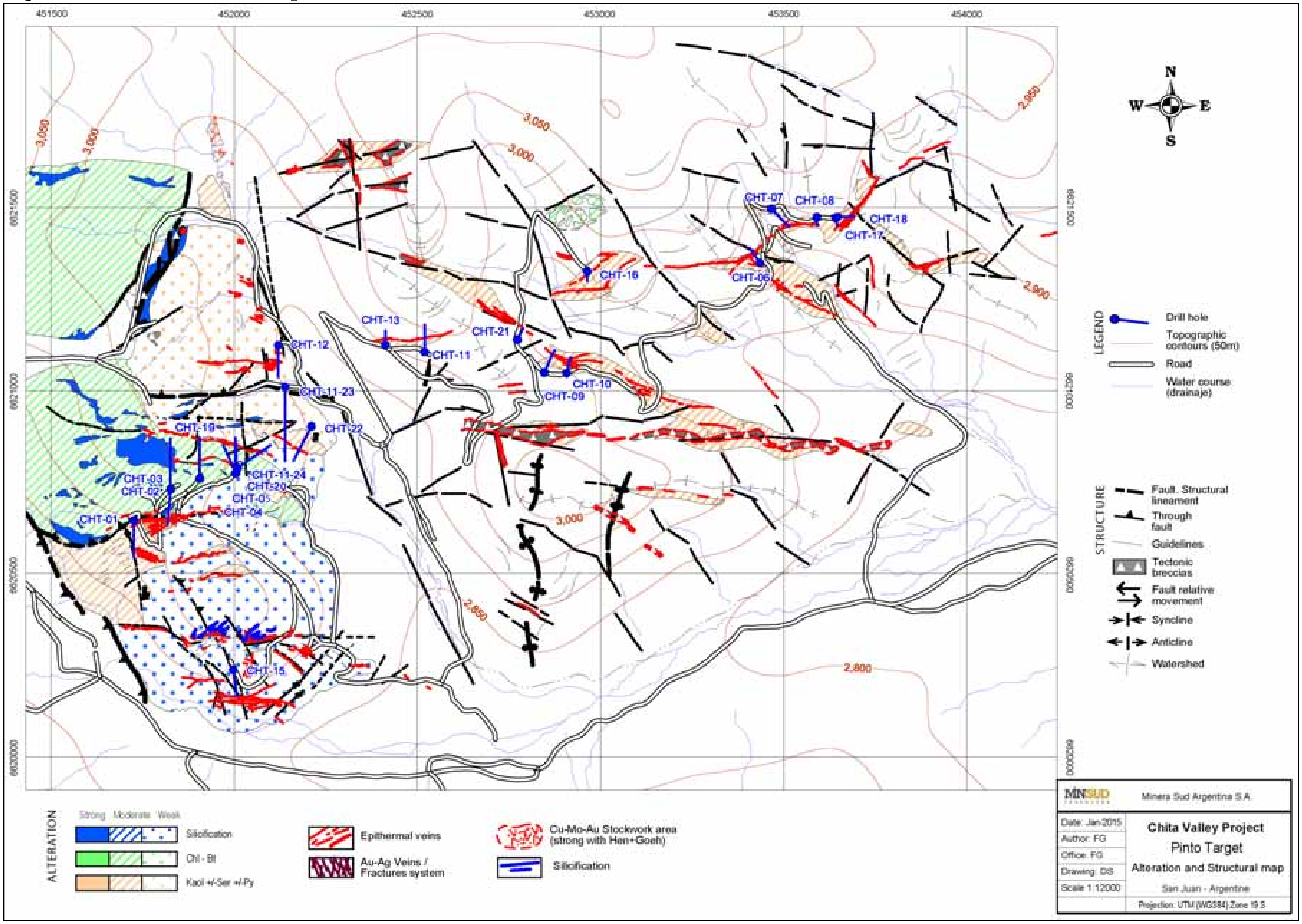
A key parameter with respect to the possible location of potential commercial concentrations of vein or lode-style precious and/or base metal deposits is a suitable host rock and structural setting combination. The empirical concentration of veining, without consideration to key element grade, is considered for the various lithological units. Depending on host rock, potentially mineralized veins vary from a few millimetres to approximately 10 metres in width:

The Agua Negra Formation sedimentary sequence contains extensive tracts of veins and stockworks with associated argillic or silica alteration. It is noteworthy that in the finer-grained thin-bedded shales and siltstones vein structures including the alteration borders rarely exceed two metres hickness. On the other hand more brittle sandstone/quartzite interlayers may be altered and mineralized over widths up to 10 metres.

Structural features in the Colanguil Batholith granodiorite host sub-parallel narrow veins, very open small breccias and stockworks, accompanied by strong argillic alteration and bleaching.

Chita Complex porphyritic andesites typically host narrow veins, breccias and stockworks accompanied by late sericitization and silicification overprinted on propylitic alteration.

Figure 9.29 Alteration Map Minas de Pinto Area



Fault contacts within or juxtaposing lithologic units host complex tightly confined mineralized areas.

Mineral paragenesis based on field evidence indicates a paleotectonic setting overlapping the porphyry and epithermal environments. The stages are as follows:

1st Quartz-chalcopyrite-pyrite,
2nd Quartz-pyrite-chalcopyrite-sphalerite (Au-Ag),
3rd Carbonate-quartz-sphalerite-galena (Ag-Au).

The texture of the quartz varies from low temperature drusiform crystalline to higher temperature incipient banded milky quartz. Silica is present in each stage of mineralization progressively infilling dilational openings. Veins can also be carbonate, especially rhodochrosite.

9.6.4 Geochemistry

The 2013 geochemical sampling program consisted of 19 sawn channel sample sections for a cumulative total of 310 samples. Sampling highlights including all sections averaging > 1 g/t Au or >30 g/t Ag are shown in Table 9.9. Part of the current work entailed a thorough assessment of the historical Silex data and the 2012-13 Minsud surface channel sampling data. By coincidence both data sets were analysed at the same internationally accredited laboratory by similar preparation and analysis techniques.

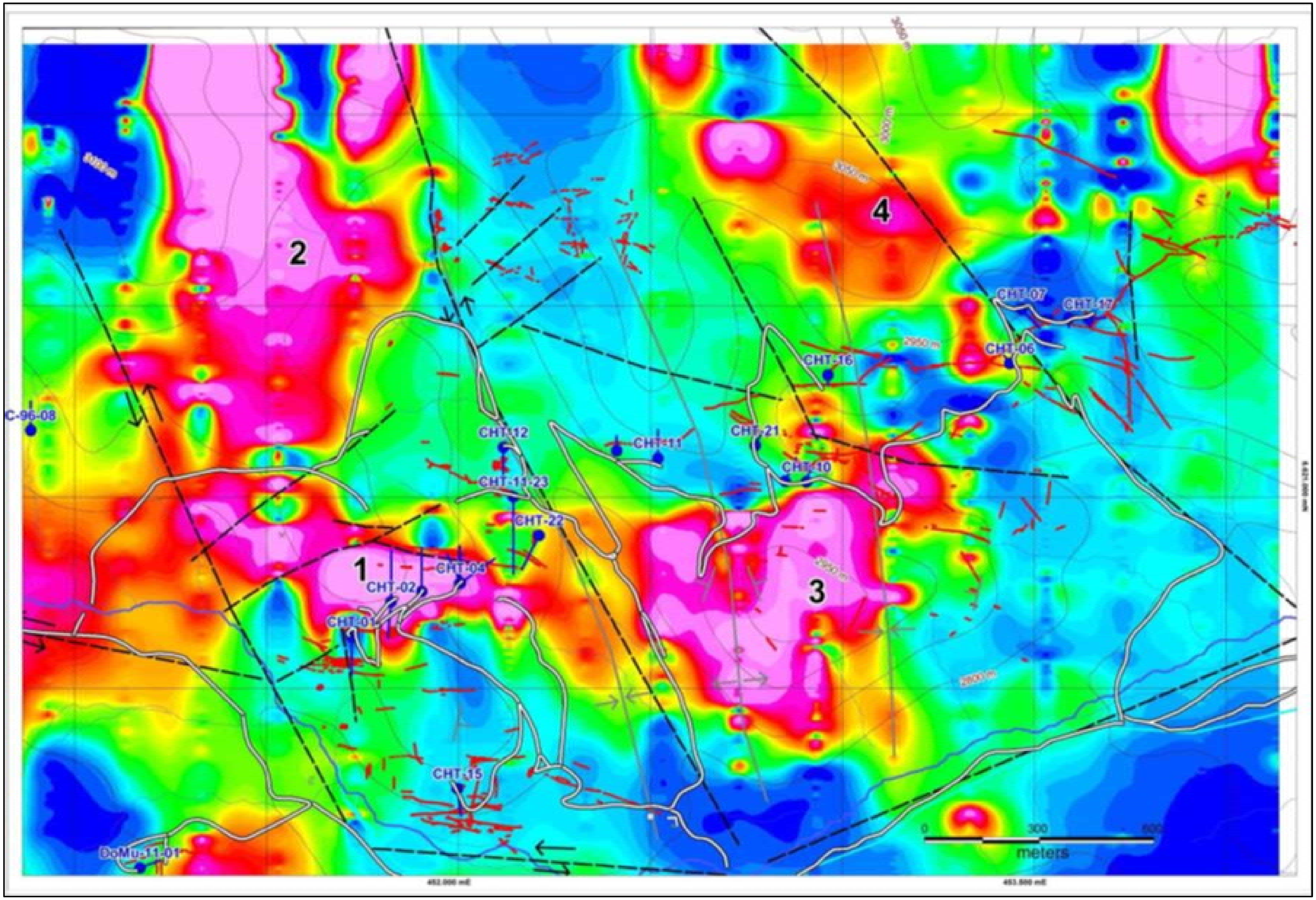
TABLE 9.9
MINAS DE PINTO 2013 CHANNEL SAMPLING HIGHLIGHTS (>1 G/T AU, >30 G/T AG)

Vein	Trench ID	From (m)	To (m)	True Thickness (m)	Au g/t	Ag g/t	As %	Cu %	Pb %	Zn %
Amparo Vein	AMP-13-16	1.00	4.00	3.00	3.71	69.4	0.041	0.008	0.204	0.116
Barba Vein	BAR-13-17	0.00	1.00	1.00	1.61	34.9	0.126	0.031	0.211	0.005
Branca Vein	BRA-13-06	8.00	10.00	2.00	0.79	131.8	0.049	0.035	0.162	0.006
Branca Vein	BRA-13-07	6.00	9.00	3.00	3.08	25.9	0.058	0.013	0.056	0.007
Carmen Vein	CAR-13-02	1.00	4.00	3.00	11.69	23.4	0.275	0.005	0.081	0.013
Carmen Vein	CAR-13-03	2.00	4.00	2.00	7.01	21.3	0.548	0.011	0.186	0.020
Carmen Sur Vein	CARS-13-01	27.00	28.00	1.00	1.06	20.2	0.039	0.006	0.157	0.007
Carmen Sur Vein	CARS-13-01	42.00	43.00	1.00	1.44	15.6	0.053	0.003	0.058	0.016
Fátima Vein	FAT-13-11	16.40	17.40	1.00	1.99	20.0	0.041	0.003	0.011	0.002
Fátima Vein	FAT-13-14	0.00	2.00	2.00	1.44	82.8	0.016	0.029	0.202	0.055
María Vein	MARY-13-10	10.00	12.00	2.00	1.74	79.0	0.044	0.019	0.060	0.003

9.6.5 Geophysics

Magnetics: The 2012 Minsud magnetic survey has covered about one half of the Minas de Pinto area (Figure 9.30). Even at relatively wide 200 metre line spacings, the magnetic data clearly illustrates the main structural directions as well as several important lithological/alteration features. The magnetic high feature in western part of the map shows the eastern part of the previously described Chita South and North porphyry sectors.

Figure 9.30 Pinto Sector Magnetic Survey, Reduction to Pole Contours



Proceeding eastward a group of additional magnetic highs (indicated by numbers 1 to 4 on the Figure 9.30) are discussed as follows:

- This feature is coincident with outcropping Tertiary post-mineral dacitic porphyry near the Fatima Vein.

- This feature coincides with outcrops of Tertiary andesitic volcaniclastic rocks intruded by post-mineral andesitic dykes, so it could indicate a porphyry body at depth.

- Anomaly 3 likely indicates a hitherto unknown Tertiary or possibly Permo-Carboniferous intrusive body at depth beneath Agua Negra Formation cover rocks. This anomaly, like others in the Chita valley, occupies the core of a prominent cylindrical or concentric-fold feature herein termed the Pinto Anticline Hill anticline. Further evidence for a buried intrusion here is localized porphyry dykes and extensive areas of spotted and banded hornfels in Agua Negra sediments.

- Sector 4 shows several localized magnetic high features that have not been investigated.

The main inference to be drawn from the magnetic data is that the Chita Valley complex continues to be traceable eastward to the limits of current data.

10.0 DRILLING

This section will concentrate on diamond and reverse circulation ("RC") drill holes specific to an estimation of global and conceptual pit constrained Indicated and Inferred Mineral Resources in the Chita Porphyry area. Various historical and Company drilling programs conducted in other parts of the greater Chita Valley Project will also be described but in less detail

10.1 NATURE AND EXTENT OF WORK

A total of eleven exploratory drilling campaigns have been completed on the greater Chita Valley Project area between 1969 and 2017 (Table 10.1). In all 129 boreholes have been put down on the properties, including 119 diamond drill holes and 10 reverse circulation drill holes for a combined length of 21,023.2 metres. All historical and MSA drill hole programs are listed by company, year and target areas in Table 10.1.

TABLE 10.1
CHITA VALLEY PROJECT LIST OF DRILLING CAMPAIGNS

Company	Year	Target Areas	Number of Holes	Combined Length (m)	Core Size RC diameter (mm)
DGFM	1969	Chita Porphyry N & S.	5	942.3	AQ (27.0)
DGFM	1976	Chita Porph. S	3	267.9	AX (23.8)
MASA	1996	Chinch. East, Granodiorite, Chita Porph. N & S	10	1,545.0	RC (133)
Rio Tinto	2006	Placetas Porph.	3	879.75	HQ (63.5)
Silex	2008	Various Veins	22	2,631.25	NTW/BTW
MSA	2008	Chinch. Porph. & Breccia, Chinch S Veins	3	846.75	RC/HQ/NQ
MSA	2011	Chinch. S, Romina, Munoz, Fatima Veins; Chita S	16	3,355.0	HQ (63.5)
MSA	2014	Chita Porphyry N & S.	25	3,312.0	HQ (63.5)
MSA	2015	Chita Porphyry N & S.	22	4,088.0	HQ (63.5)
MSA	2016	Chita Porphyry S	12	1,700.0	HQ (63.5)
MSA	2017	Chita Porphyry S	8	1,036.0	HQ (63.5)
MSA	2017	Chita Porphyry S (extend 7 existing holes)		419.0	HQ (63.5)
Total			**129**	**21,022.95**	**metres**

The first program was conducted in 1969 by the Argentine government organization Direccion General de Fabricaciones Militares ("DGEM") and included five AQ core boreholes in the Chita Porphyry area in search of Cu-Mo porphyry type deposits.

In 1976 DGFM completed a second program of three AX core boreholes also in the Chita Porphyry sector.

In 1996 Minas Argentina S.A. ("MASA") drilled ten reverse circulation drill holes (13.3 cm diameter) to test geophysical anomalies. The holes were designed to explore for epithermal gold mineralization in Tertiary lithologies in the Chinchillones East and Chita Porphyry South and North areas, as well as the Permo-Carboniferous Colanguil Granodiorite.

Rio Tinto Mining and Exploration ("Rio Tinto") drilled three HQ diamond drill holes in the Placetas Porphyry area during 2006.

In 2008 Silex Argentina S.A. ("Silex") completed twenty-two NTW/BTW diamond drill holes in the Minas de Pinto area in search of low sulphidation epithermal gold/silver mineralization. Several outcropping vein systems with previous artisanal mining sites were tested including the Maria, Fatima, Branca, Candela, Chita Centro, Argentina, Johana, Barba, Glenda, Carmen, Pulenta and Amparo vein structures.

In 2008 Minsud's, Minera Sud Argentina S. A. ("MSA") completed three drill holes in the Chinchillones area in search of epithermal gold/silver mineralization. The holes were pre-collared by reverse circulation and cored (HQ with reduction to NQ if and as required). The Chinchillones Porphyry A and Breccia areas and the Chinchillones South Veins were tested in the program.

In 2011 MSA drilled sixteen HQ diamond drill holes in search of epithermal gold/silver mineralized veins in various parts of the Chita Valley Project area. Five holes were drilled in each of the Chinchillones South and Romina Vein areas, with 3 holes at the Chita Porphyry area, and finally three holes in the Minas de Pinto area, including two holes in the Fatima Vein and one hole in the Munoz-Dora Vein.

Two drilling campaigns were conducted by MSA in 2014 in the Chita Porphyry South sector including six HQ diamond drill hole completed in May and a further eighteen HQ holes completed in September-October. The latter program included one HQ hole as a preliminary test of the Chita Porphyry North sector. Both campaigns tested a substantial zone of Cu-Ag-Mo-Au mineralized overlapping multi-stage vein systems, hydrothermal breccias and porphyry style mineralization.

In the fourth quarter of 2015 MSA completed a 22 hole, 4,088 metre HQ diamond drilling program predominantly in the Chita Porphyry South sector of the Chita Valley Project. Twenty drill holes tested a substantial zone of Cu-Ag-Mo-Au mineralized multi-stage vein systems and hydrothermal breccias in the southeastern border zone of the sector. Two drill holes, completed in the Chita Porphyry North sector, also returned interesting Au and Ag values.

A 12-hole HQ Diamond Drilling program with a total of 1,700 metres was completed in the fourth quarter of 2016. All holes were drilled in the Chita Porphyry South area.

In the fourth quarter of 2017 the Company completed a 1,455 metres HQ diamond drilling program in the Chita South Porphyry sector of the Chita Valley Project. The program included 8 new holes together with deepening of 7 existing holes.

10.2 TOPOGRAPHIC CONTROL

At present there are no public domain topographic maps available that have a suitable level of accuracy for detailed exploration work such as small-scale interpretive work or advanced resource estimations. DGPS surveying has been used in the past to locate historical drill collars, topographical features etc., and was employed again in later years to accurately locate all drill holes completed during subsequent drilling campaigns.

In 2011, Minsud acquired high resolution Ikonos colour and panchromatic satellite imagery for use in detailed exploration mapping. Topographic contours on these images provide sufficient control for routine mapping purposes and for initial inferred resources.

A higher accuracy topographic map or digital terrain model was required for resource definition areas. As a result, in May 2016, the Company retained Buenos Aires based company, droneXplora-ConsultoresGIS, to utilize a UAV (or drone) platform to construct a georeferenced orthophotograph mosaic map for detailed field work (Figure 10.1) and a high resolution digital terrain model for resource estimation and preliminary pit design purposes. In a sparsely vegetated region like the Chita Valley it was not a problem to retrofit historical site locations into a digital terrain model. All Minsud work is located by the international UTM coordinate system WGS84 Zone 19 (Southern Hemisphere) as well as the Gauss Kruger Faja 2 POSGAR system used locally.

The Property has no systematic conventional picket/stake grid. An exception is the 2015 IP/Resistivity survey lines and stations that are marked by approximately 0.5 m stakes with Gauss Kruger Faja 2 POSGAR coordinates.

Except for the DGFM holes, drill hole collars are identified by approximately one metre square cement platforms around the drill casings. The DGFM holes have no casing left, but have been located to within a few metres by drilling detritus and anchor cables, etc.

Downhole inclination and directional surveys were not done for the historical drilling work or for the 2008 and 2011 MSA programs. The 2014 to 2017 drill holes were surveyed at approximately 50 metre intervals with a Reflex EZ-TRAC instrument with the following specifications:

• Azimuth (direction)	Range	0-30 degrees
• Accuracy	+/- 0.35 degrees	
• Dip (inclination)	Range	+/- 90 degrees from horizontal
• Accuracy	+/- 0.25 degrees	
• Total Magnetic Field	Range	0- 100,000 nT
• Accuracy	+/- 50 nT	
• Magnetic Dip	Range	+/- 90 degrees from horizontal
• Accuracy	+/- 0.25 degrees	

10.3 CHITA VALLEY PROJECT DRILLING PROGRAMS

Table 10.2 provides collar coordinates (UTM WGS84 Zone 19S), hole direction (azimuth at collar), hole inclination (at collar) and hole length (metres) for all historical and MSA holes throughout the Chita Valley Project area. Drill collar locations are shown in Figure 10.2.

It is reiterated that the emphasis of this report is the Chita South Porphyry area where updated pit-constrained Indicated and Inferred Resource estimations are being reported. Early stage exploration and stratigraphic drilling results from outside this area; including Placetas Porphyry, Chinchillones, Chita North, Minas de Pinto Veins, Romina and Munoz Veins, etc. are summarized in Section 9 Exploration under the relevant multidisciplinary work programs.

Figure 10.1 Chita Porphyry Area Georeferenced Orthophotograph Mosaic Map

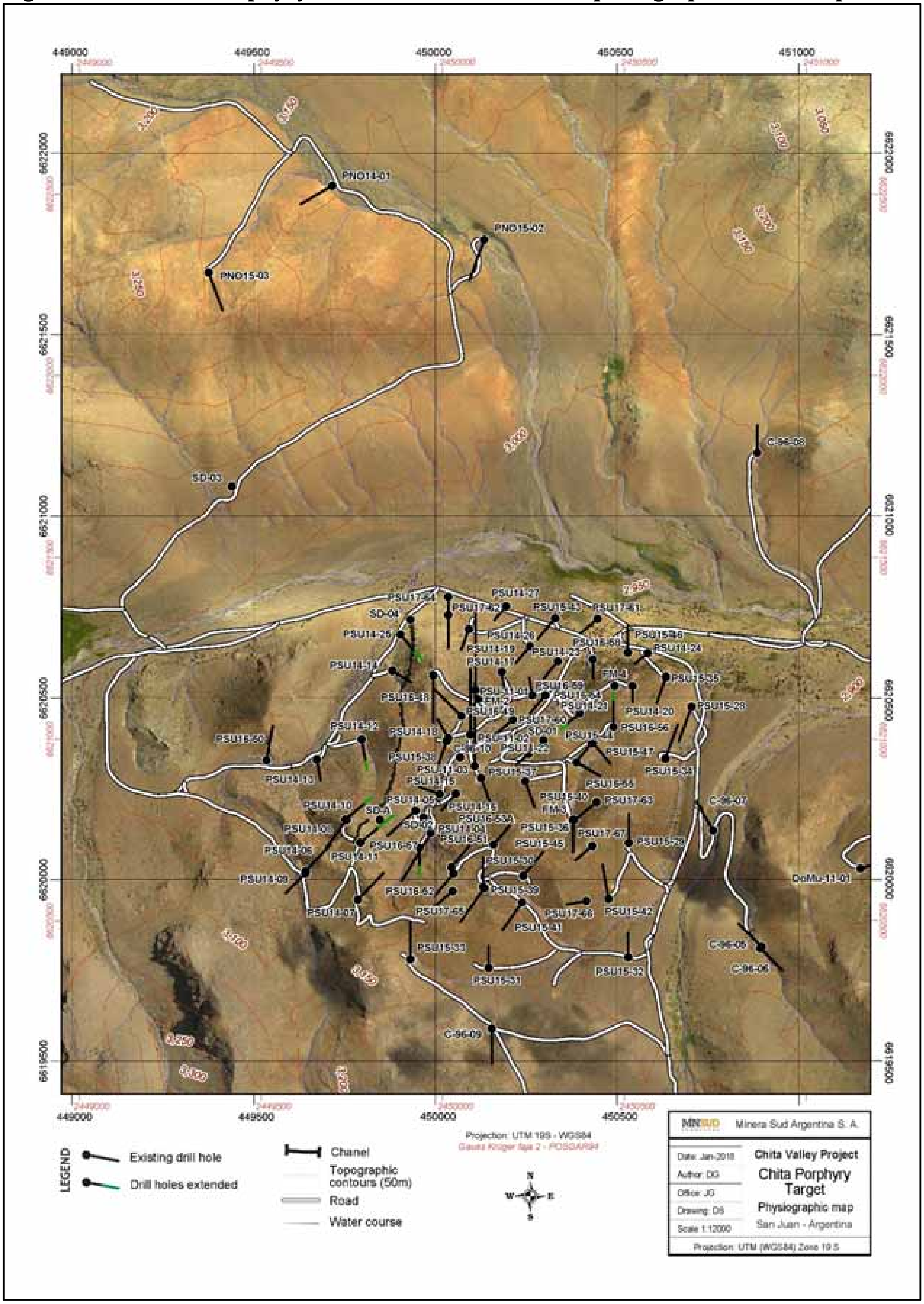


TABLE 10.2
CHITA VALLEY PROJECT LIST OF DRILL HOLE COORDINATES

Company	Year	Target Area	Hole No.	UTM WGS84 Zone 19S		Elevation (m)	Azimuth degrees	Inclination degrees	Length (m)
				Northing m	Easting m				
DGFM	1969	Chita S Porph.	SD1	6620386	450300	2479	vert	-90	299.80
DGFM	1969	Chita S Porph.	SD2	6620160	449967	2540	vert	-90	246.00
DGFM	1969	Chita N Porph.	SD3	6621082	449442	2530	vert	-90	152.50
DGFM	1969	Chita S Porph.	SD4	6620609	449951	2482	vert	-90	183.00
DGFM	1969	Chita S Porph.	SDA	6620167	449846	2607	vert	-90	61.00
Total									**942.30**
DGFM	1976	Chita S Porph.	FM2	6620495	450118	2477	vert	-90	67.50
DGFM	1976	Chita S Porph.	FM3	6620160	450374	2535	vert	-90	68.05
DGFM	1976	Chita S Porph.	FM4	6620532	450494	2467	vert	-90	132.35
Total									**267.90**
MASA	1996	Chinch. East	C96-01-1A	6620332	447714	3050	0	-60	142.00
MASA	1996	Chinch. East	C96-02	6619599	447634	3145	180	-60	136.00
MASA	1996	Chinch. East	C96-03	6620160	447648	3070	135	-50	180.00
MASA	1996	Chinch. East	C96-04	6619705	447519	3140	135	-60	169.00
MASA	1996	Granodiorite	C96-05	6619811	450896	2960	135	-60	174.00
MASA	1996	Granodiorite	C96-06	6619815	450900	2960	315	-60	180.00
MASA	1996	Granodiorite	C96-07	6620170	450747	2930	330	-50	144.00
MASA	1996	Chita N Porph.	C96-08	6621175	450888	2930	0	-50	118.00
MASA	1996	Chita S Porph.	C96-09	6619588	450158	3050	180	-50	152.00
MASA	1996	Chita S Porph.	C96-10	6620337	450071	2980	vert	-90	150.00
Total									**1545.00**
Rio Tinto	2006	Placetas Por.	PLCT-0001	6619200	443334	3685	151	-70	300.00
Rio Tinto	2006	Placetas Por.	PLCT-0002	6618920	443082	3600	62	-80	352.55
Rio Tinto	2006	Placetas Por.	PLCT-0003	6618705	443150	3600	70	-60	227.20
Total									**879.75**
Silex	2008	Maria Vein	CHT-01	6620635	451724	2920	180	-50	156.00
Silex	2008	Fatima Vein	CHT-02	6620726	451827	2943	0	-50	210.50
Silex	2008	Branca Vein	CHT-03	6620726	451827	2943	185	-50	150.00
Silex	2008	Fatima Vein	CHT-04	6620776	452008	2903	0	-50	120.00
Silex	2008	Fatima Vein	CHT-05	6620776	452008	2903	335	-50	129.00
Silex	2008	Candela Vein	CHT-06	6621350	453439	2890	325	-50	78.00
Silex	2008	Candela Vein	CHT-07	6621492	453469	2908	136	-51	127.50
Silex	2008	Candela Vein	CHT-08	6621468	453593	2912	180	-65	55.50
Silex	2008	Chita Centro	CHT-09	6621042	452854	2933	25	-65	160.15
Silex	2008	Argentina V.	CHT-10	6621040	452909	2930	15	-65	105.00
Silex	2008	Johana Vein	CHT-11	6621102	452523	2930	0	-50	115.50
Silex	2008	Barba Vein	CHT-12	6621130	452120	2835	180	-55	147.00
Silex	2008	Johana Vein	CHT-13	6621122	452415	2917	0	-50	63.00
Silex	2008	Glenda Vein	CHT-14	6619340	452337	2944	175	-50	65.50
Silex	2008	Carmen Vein	CHT-15	6620238	452000	2901	172	-56	138.00
Silex	2008	Pulenta Vein	CHT-16	6621320	452965	2952	180	-70	81.10
Silex	2008	Candela Vein	CHT-17	6621466	453644	2912	166	-70	63.00
Silex	2008	Candela Vein	CHT-18	6621466	453644	2912	86	-50	72.00
Silex	2008	Fatima Vein	CHT-19	6620754	451907	2920	0	-50	174.00
Silex	2008	Fatima Vein	CHT-20	6620776	452008	2903	55	-50	170.00
Silex	2008	Chita Centro	CHT-21	6621135	452776	2944	27	-70	99.00
Silex	2008	Amparo Vein	CHT-22	6620900	452213	2851	207	-50	151.50
Total									**2631.25**
MSA	2008	Chinch. Porph.	MSA-08-A	6620264	446584	3125	vert	-90	300.45
MSA	2008	Chinch. Brec.	MSA-08-B	6620002	446370	3152	103	-70	246.15
MSA	2008	Chinch. S Veins	MSA-08-C	6619750	446433	3231	120	-60	300.15
Total									**846.75**

TABLE 10.2 CHITA VALLEY PROJECT LIST OF DRILL HOLE COORDINATES									
Company	**Year**	**Target Area**	**Hole No.**	**UTM WGS84 Zone 19S**		**Elevation (m)**	**Azimuth degrees**	**Inclination degrees**	**Length (m)**
				Northing m	**Easting m**				
MSA	2011	Chinch. S Veins	ChS-11-01	6619823	446417	3236	160	-45	185.00
MSA	2011	Chinch. S Veins	ChS-11-02	6619631	446475	3320	160	-45	152.00
MSA	2011	Chinch. S Veins	ChS-11-03	6619675	446554	3282	160	-45	192.00
MSA	2011	Chinch. S Veins	ChS-11-04	6619753	446431	3259	160	-45	237.00
MSA	2011	Chinch. S Veins	ChS-11-05	6619573	446369	3335	150	-45	146.00
MSA	2011	Romina Veins	RoW-11-01	6619111	450626	3093	205	-45	180.00
MSA	2011	Romina Veins	RoW-11-02	6619229	450525	3105	205	-45	240.00
MSA	2011	Romina Veins	RoW-11-03	6619277	450255	3148	205	-45	200.20
MSA	2011	Romina Veins	RoW-11-04	6618886	450819	3114	25	-45	198.90
MSA	2011	Romina Veins	RoW-11-05	6618696	451114	3218	45	-45	223.40
MSA	2011	Munoz-D Vein	DoM-11-01	6620030	451170	2948	70	-45	80.00
MSA	2011	Chita S Porph.	PSU-11-01	6620522	450110	2993	0	-45	311.00
MSA	2011	Chita S Porph.	PSU-11-02	6620402	450097	2990	0	-45	252.00
MSA	2011	Chita S Porph.	PSU-11-03	6620299	450095	2998	0	-45	321.00
MSA	2011	Fatima Vein	CHT-11-23	6621000	452143	2865	180	-45	286.00
MSA	2011	Fatima Vein	CHT-11-24	6620774	452003	2903	0	-50	150.50
Total									**3355.00**
MSA	2014	Chita S Porph.	PSU-14-04	6620128	449990	3029	215	50	240
MSA	2014	Chita S Porph.	PSU-14-05	6620188	449948	3019	230	60	210
MSA	2014	Chita S Porph.	PSU-14-06	6620021	449648	3065	45	60	201
MSA	2014	Chita S Porph.	PSU-14-07	6619943	449793	3117	45	60	201
MSA	2014	Chita S Porph.	PSU-14-08	6620165	449756	3091	220	50	150
MSA	2014	Chita S Porph.	PSU-14-09	6620019	449640	3071	225	50	120
MSA	2014	Chita S Porph.	PSU-14-10	6620158	449754	3088	50	60	141
MSA	2014	Chita S Porph.	PSU-14-11	6620095	449794	3091	50	60	132
MSA	2014	Chita S Porph.	PSU-14-12	6620381	449794	2995	170	60	129
MSA	2014	Chita S Porph.	PSU-14-13	6620324	449676	2990	170	60	117
MSA	2014	Chita S Porph.	PSU-14-14	6620569	449885	2966	120	60	120
MSA	2014	Chita S Porph.	PSU-14-15	6620228	450011	2995	290	60	72
MSA	2014	Chita S Porph.	PSU-14-16	6620229	450056	2996	220	60	117
MSA	2014	Chita S Porph.	PSU-14-17	6620565	450186	2945	170	60	96
MSA	2014	Chita S Porph.	PSU-14-18	6620381	450036	2985	330	60	129
MSA	2014	Chita S Porph.	PSU-14-19	6620680	450091	2947	200	60	117
MSA	2014	Chita S Porph.	PSU-14-20	6620525	450541	2937	180	60	81
MSA	2014	Chita S Porph.	PSU-14-21	6620460	450401	2936	230	60	90
MSA	2014	Chita S Porph.	PSU-14-22	6620345	450256	2956	230	60	90
MSA	2014	Chita S Porph.	PSU-14-23	6620598	450336	2927	220	60	102
MSA	2014	Chita S Porph.	PSU-14-24	6620620	450586	2913	230	60	90
MSA	2014	Chita S Porph.	PSU-14-25	6620672	449904	2948	140	60	126
MSA	2014	Chita S Porph.	PSU-14-26	6620645	450254	2926	220	60	120
MSA	2014	Chita S Porph.	PSU-14-27	6620751	450194	2923	220	60	120
MSA	2014	Chita N Porph.	PNO-14-01	6621910	449718	3040	240	60	201
Total									**3312**
MSA	2015	Chita S Porph	PSU15-28	6620494	450698	2938	200°	60°	201
MSA	2015	Chita S Porph	PSU15-29	6620120	450526	2988	0°	60°	160
MSA	2015	Chita S Porph	PSU15-30	6619999	450126	3070	0°	60°	162
MSA	2015	Chita S Porph	PSU15-31	6619776	450141	3062	0°	60°	120
MSA	2015	Chita S Porph	PSU15-32	6619805	450525	3002	0°	60°	133
MSA	2015	Chita S Porph	PSU15-33	6619800	449925	3121	0°	60°	204
MSA	2015	Chita S Porph	PSU15-34	6620351	450627	2954	20°	60°	201
MSA	2015	Chita S Porph	PSU15-35	6620577	450629	2932	200°	60°	150
MSA	2015	Chita S Porph	PSU15-36	6620181	450373	3011	180°	60°	180
MSA	2015	Chita S Porph	PSU15-37	6620298	450121	2999	160°	60°	198

TABLE 10.2 CHITA VALLEY PROJECT LIST OF DRILL HOLE COORDINATES									
Company	Year	Target Area	Hole No.	UTM WGS84 Zone 19S		Elevation (m)	Azimuth degrees	Inclination degrees	Length (m)
				Northing m	Easting m				
MSA	2015	Chita S Porph	PSU15-38	6620399	450026	3003	200°	60°	183
MSA	2015	Chita S Porph	PSU15-39	6619995	450130	3071	215°	60°	228
MSA	2015	Chita S Porph	PSU15-40	6620289	450241	3002	160°	60°	150
MSA	2015	Chita S Porph	PSU15-41	6619956	450233	3045	215°	60°	186
MSA	2015	Chita S Porph	PSU15-42	6619966	450471	3002	350°	60°	192
MSA	2015	Chita S Porph	PSU15-43	6620736	450325	2942	220°	60°	150
MSA	2015	Chita S Porph	PSU15-44	6620392	450425	2973	220°	60°	150
MSA	2015	Chita S Porph	PSU15-45	6620029	450236	3056	40°	60°	171
MSA	2015	Chita S Porph	PSU15-46	6620643	450525	2934	0°	60°	150
MSA	2015	Chita S Porph	PSU15-47	6620394	450429	2971	140°	60°	150
MSA	2015	Chita N Porph	PNO-15-02	6621780	450128	3031	200°	70°	345
MSA	2015	Chita N Porph.	PNO-15-03	6621692	449370	3170	160°	70°	324
Total									**4088**
MSA	2016	Chita S Porph	PSU16-48	6620558	449994	3034	180°	50°	200
MSA	2016	Chita S Porph	PSU16-49	6620446	450071	3012	315°	50°	165
MSA	2016	Chita S Porph	PSU16-50	6620324	449536	3031	10°	50°	150
MSA	2016	Chita S Porph	PSU16-51	6620030	450044	3108	40°	60°	160
MSA	2016	Chita S Porph	PSU16-52	6620012	450050	3109	220°	60°	160
MSA	2016	Chita S Porph	PSU16-53A	6620092	450160	3092	40°	60°	135
MSA	2016	Chita S Porph	PSU16-54	6620504	450303	2964	220°	60°	132
MSA	2016	Chita S Porph	PSU16-55	6620319	450388	2987	120°	60°	150
MSA	2016	Chita S Porph	PSU16-56	6620417	450490	2984	0°	60°	150
MSA	2016	Chita S Porph	PSU16-57	6620084	449956	3066	180°	60°	99
MSA	2016	Chita S Porph	PSU16-58	6620600	450433	2948	180°	60°	100
MSA	2016	Chita S Porph	PSU16-59	6620504	450267	2969	350°	60°	99
Total									**1700**
MSA	2017	Chita S Porph	PSU17-60	6620325	450304	2980	230°	60°	141
MSA	2017	Chita S Porph	PSU17-61	6620598	450539	2941	230°	60°	124
MSA	2017	Chita S Porph	PSU17-62	6620610	450125	2971	180°	50°	142
MSA	2017	Chita S Porph	PSU17-63	6620096	450534	3013	230°	60°	147
MSA	2017	Chita S Porph	PSU17-64	6620657	450125	2962	180°	50°	117
MSA	2017	Chita S Porph	PSU17-65	6619848	450137	3113	230°	60°	128
MSA	2017	Chita S Porph	PSU17-66	6619821	450503	3033	260°	60°	111
MSA	2017	Chita S Porph	PSU17-67	6619973	450520	3034	230°	60°	126
Total									**1036**
MSA	2017	Chita S Porph	7 Pre-2017 holes extended						419
Total									**419**
Grand Total All Chita Valley Drill Holes									**21,022.95**

Figure 10.2 Chita Valley Project, Physiographic Map with Drill Hole Locations

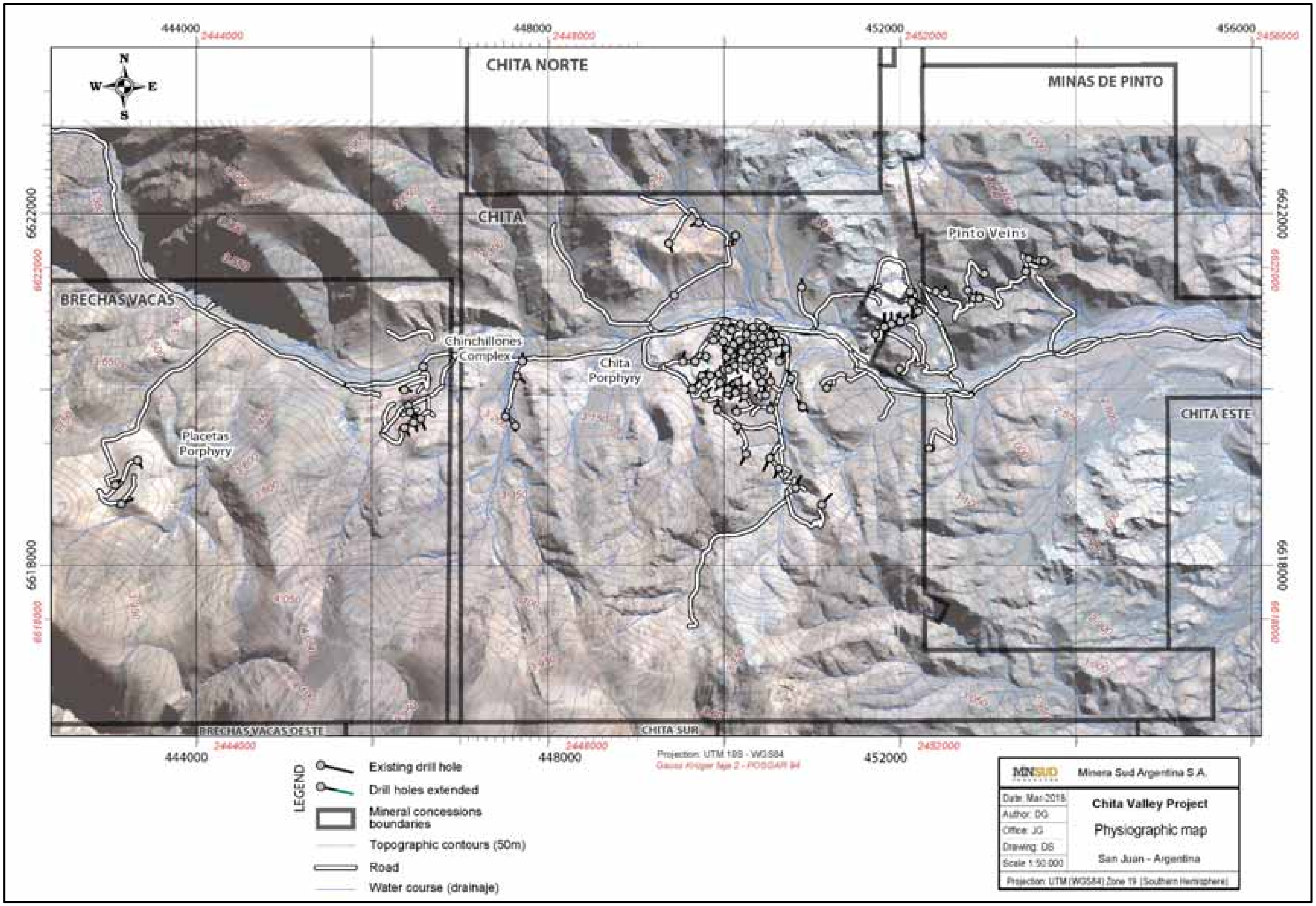


Figure 10.3 Chita Porphyry South, Geology Map with Drill Hole Locations

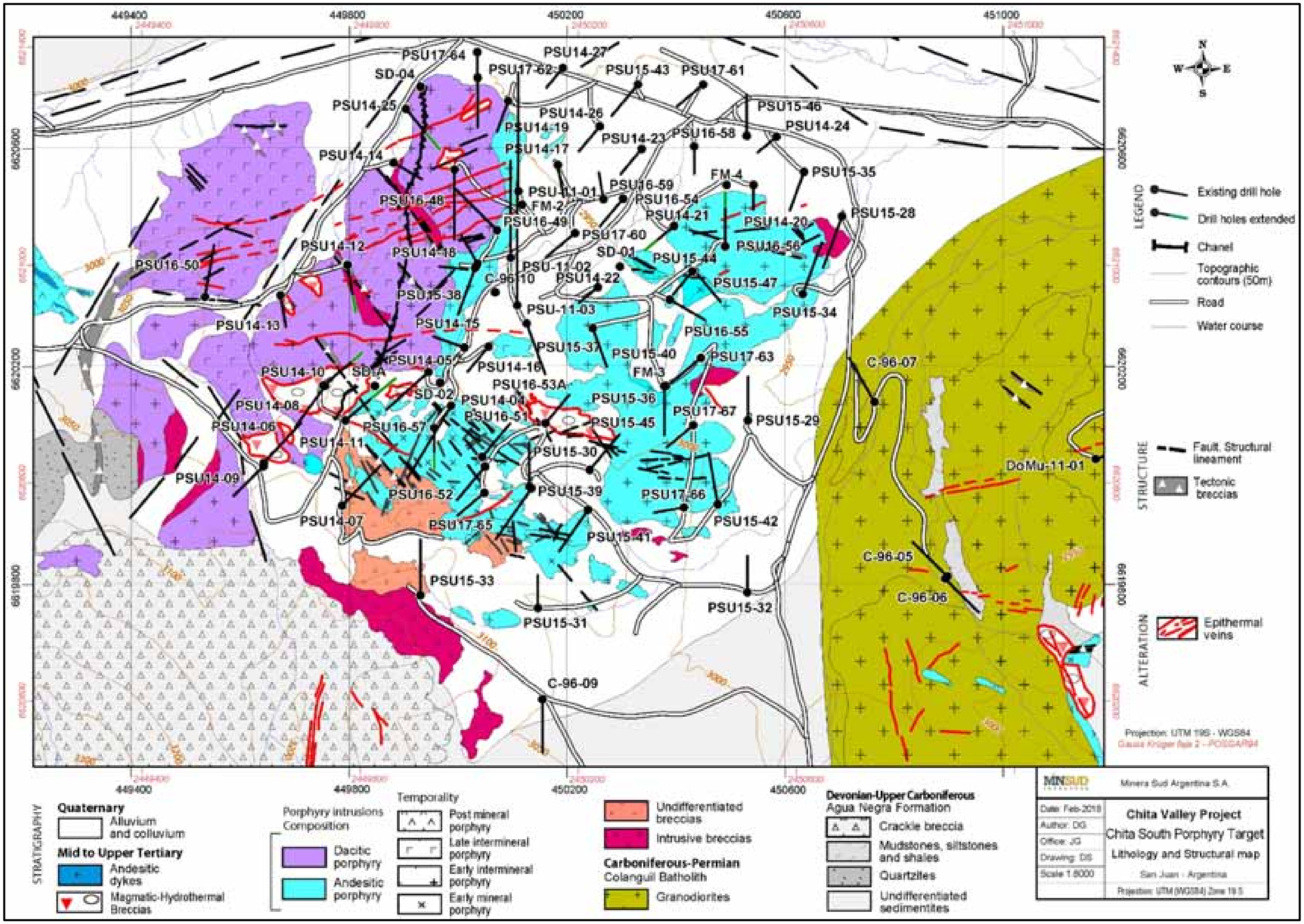


Figure 10.4 Chita Porphyry South, Alteration Map with Drill Hole Locations

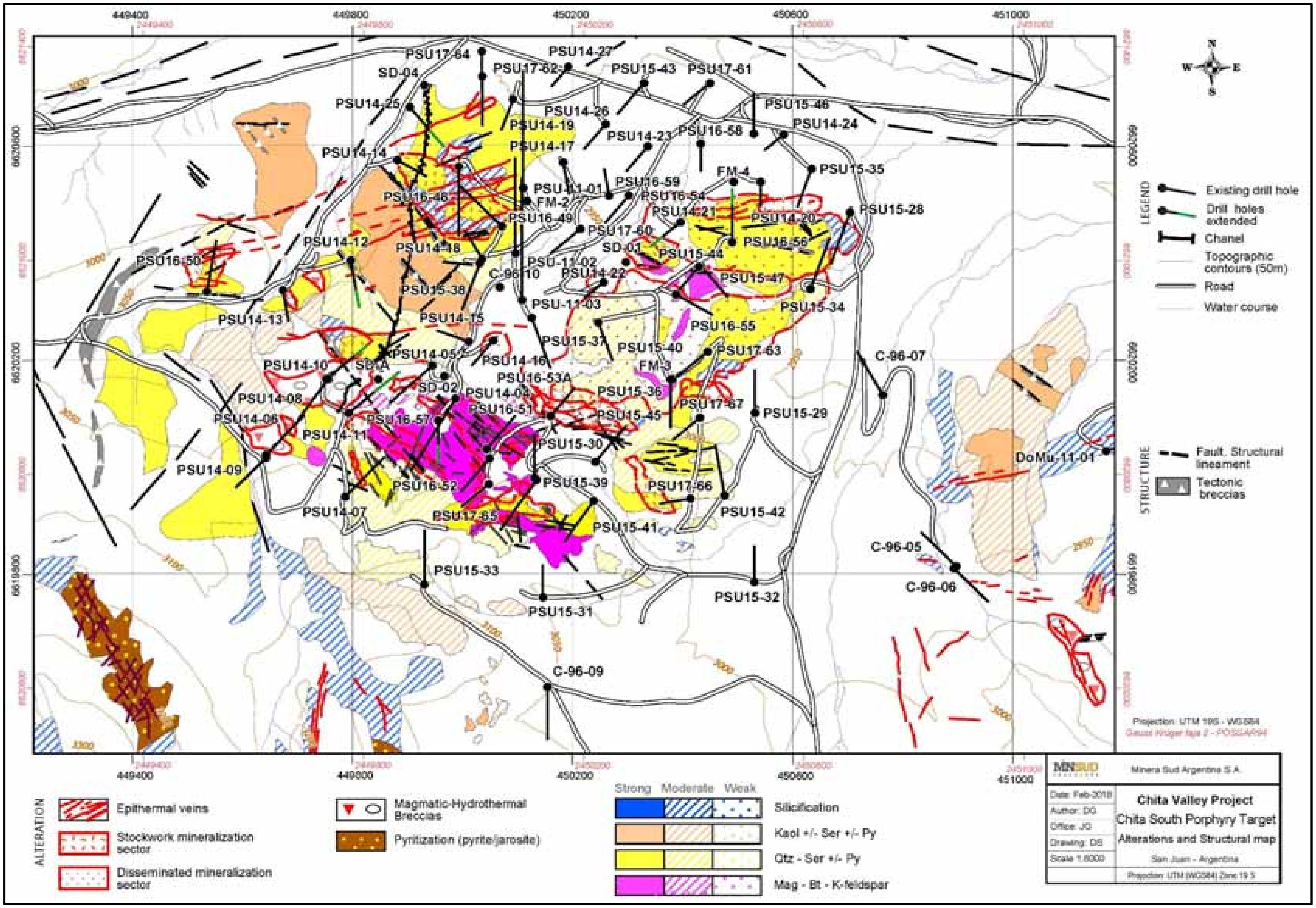
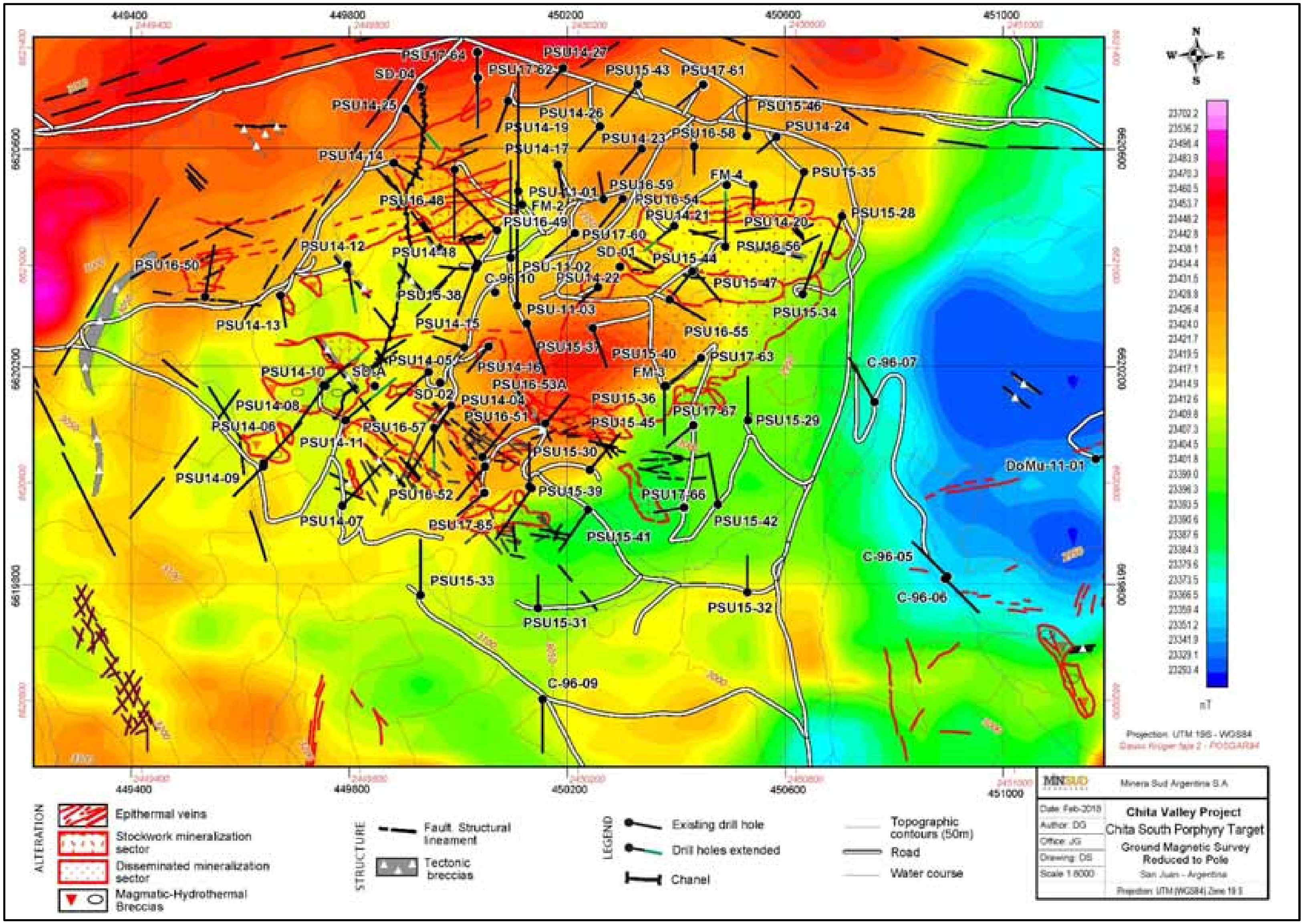


Figure 10.5 Chita Porphyry South, Magnetic Map with Drill Hole Locations



10.4 DRILLING DATABASE USED FOR RESOURCE ESTIMATES

The drilling database for the Chita Porphyry South area includes drill logs and assay data provided in the form of Excel data files by Minsud with the most updated data being received on January 30, 2018. The Gems database for this resource estimate was constructed by P&E, which consisted of 74 core holes and 1 RC hole totalling 11,725.7 m and 150 m respectively, of which 67 holes were drilled in 2011, 2014, 2015, 2016 and 2017. Four holes were completed in 1969, three holes from 1976 and one RC hole from 1996 (Table 10.3).

The drill hole locations are shown in relation to surface geology (Figure 10.3, above), surface alteration (Figure 10.4, above), and total magnetic data (Figure 10.5, above). All of the above figures show structural features such as faults, lineaments, epithermal veins and significant areas of brecciation. It is noted that the plan maps show some drill holes in basement lithologies that are outside of the Chita South Porphyry. These drill holes (C96-05, 06, 07 and 09, along with DoMu11-04) are excluded from resource estimation database.

TABLE 10.3
CHITA SOUTH DRILL HOLES USED FOR RESOURCE ESTIMATES

Company	Year	Hole Number	WGS84 Zone 19S		Elev-ation (m)	Azimuth degrees	Inclination degrees	Length (m)	Core Size RC Size (cm)
			Northing m	Easting m					
DGFM	1969	SD1	6620386	450300	2479	vert	-90	299.80	AQ (27.0)
DGFM	1969	SD2	6620160	449967	2540	vert	-90	246.00	AQ (27.0)
DGFM	1969	SD4	6620609	449951	2482	vert	-90	183.00	AQ (27.0)
DGFM	1969	SDA	6620167	449846	2607	vert	-90	61.00	AQ (27.0)
Total								**789.80**	
DGFM	1976	FM2	6620495	450118	2477	vert	-90	67.50	AX (23.8)
DGFM	1976	FM3	6620160	450374	2535	vert	-90	68.05	AX (23.8)
DGFM	1976	FM4	6620532	450494	2467	vert	-90	132.35	AX (23.8)
Total								**267.90**	
MASA	1996	C96-10	6620337	450071	2980	vert	-90	150.00	RC (13.3)
Total								**150.00**	
MSA	2011	PSU-11-01	6620522	450110	2993	0	-45	311.00	HQ (63.5)
MSA	2011	PSU-11-02	6620402	450097	2990	0	-45	252.00	HQ (63.5)
MSA	2011	PSU-11-03	6620299	450095	2998	0	-45	321.00	HQ (63.5)
Total								**884.00**	
MSA	2014	PSU-14-04	6620128	449990	3029	215	50	240	HQ (63.5)
MSA	2014	PSU-14-05	6620188	449948	3019	230	60	210	HQ (63.5)
MSA	2014	PSU-14-06	6620021	449648	3065	45	60	201	HQ (63.5)
MSA	2014	PSU-14-07	6619943	449793	3117	45	60	201	HQ (63.5)
MSA	2014	PSU-14-08	6620165	449756	3091	220	50	150	HQ (63.5)
MSA	2014	PSU-14-09	6620019	449640	3071	225	50	120	HQ (63.5)
MSA	2014	PSU-14-10	6620158	449754	3088	50	60	141	HQ (63.5)
MSA	2014	PSU-14-11	6620095	449794	3091	50	60	132	HQ (63.5)
MSA	2014	PSU-14-12	6620381	449794	2995	170	60	129	HQ (63.5)
MSA	2014	PSU-14-13	6620324	449676	2990	170	60	117	HQ (63.5)
MSA	2014	PSU-14-14	6620569	449885	2966	120	60	120	HQ (63.5)
MSA	2014	PSU-14-15	6620228	450011	2995	290	60	72	HQ (63.5)
MSA	2014	PSU-14-16	6620229	450056	2996	220	60	117	HQ (63.5)
MSA	2014	PSU-14-17	6620565	450186	2945	170	60	96	HQ (63.5)
MSA	2014	PSU-14-18	6620381	450036	2985	330	60	129	HQ (63.5)
MSA	2014	PSU-14-19	6620680	450091	2947	200	60	117	HQ (63.5)
MSA	2014	PSU-14-20	6620525	450541	2937	180	60	81	HQ (63.5)

TABLE 10.3
CHITA SOUTH DRILL HOLES USED FOR RESOURCE ESTIMATES

Company	Year	Hole Number	WGS84 Zone 19S		Elev-ation (m)	Azimuth degrees	Inclination degrees	Length (m)	Core Size RC Size (cm)
			Northing m	Easting m					
MSA	2014	PSU-14-21	6620460	450401	2936	230	60	90	HQ (63.5)
MSA	2014	PSU-14-22	6620345	450256	2956	230	60	90	HQ (63.5)
MSA	2014	PSU-14-23	6620598	450336	2927	220	60	102	HQ (63.5)
MSA	2014	PSU-14-24	6620620	450586	2913	230	60	90	HQ (63.5)
MSA	2014	PSU-14-25	6620672	449904	2948	140	60	126	HQ (63.5)
MSA	2014	PSU-14-26	6620645	450254	2926	220	60	120	HQ (63.5)
MSA	2014	PSU-14-27	6620751	450194	2923	220	60	120	HQ (63.5)
Total								**3,111**	
MSA	2015	PSU15-28	6620494	450698	2938	200°	60°	201	HQ (63.5)
MSA	2015	PSU15-29	6620120	450526	2988	0°	60°	160	HQ (63.5)
MSA	2015	PSU15-30	6619999	450126	3070	0°	60°	162	HQ (63.5)
MSA	2015	PSU15-31	6619776	450141	3062	0°	60°	120	HQ (63.5)
MSA	2015	PSU15-32	6619805	450525	3002	0°	60°	133	HQ (63.5)
MSA	2015	PSU15-33	6619800	449925	3121	0°	60°	204	HQ (63.5)
MSA	2015	PSU15-34	6620351	450627	2954	20°	60°	201	HQ (63.5)
MSA	2015	PSU15-35	6620577	450629	2932	200°	60°	150	HQ (63.5)
MSA	2015	PSU15-36	6620181	450373	3011	180°	60°	180	HQ (63.5)
MSA	2015	PSU15-37	6620298	450121	2999	160°	60°	198	HQ (63.5)
MSA	2015	PSU15-38	6620399	450026	3003	200°	60°	183	HQ (63.5)
MSA	2015	PSU15-39	6619995	450130	3071	215°	60°	228	HQ (63.5)
MSA	2015	PSU15-40	6620289	450241	3002	160°	60°	150	HQ (63.5)
MSA	2015	PSU15-41	6619956	450233	3045	215°	60°	186	HQ (63.5)
MSA	2015	PSU15-42	6619966	450471	3002	350°	60°	192	HQ (63.5)
MSA	2015	PSU15-43	6620736	450325	2942	220°	60°	150	HQ (63.5)
MSA	2015	PSU15-44	6620392	450425	2973	220°	60°	150	HQ (63.5)
MSA	2015	PSU15-45	6620029	450236	3056	40°	60°	171	HQ (63.5)
MSA	2015	PSU15-46	6620643	450525	2934	0°	60°	150	HQ (63.5)
MSA	2015	PSU15-47	6620394	450429	2971	140°	60°	150	HQ (63.5)
Total								**3,419**	
MSA	2016	PSU16-48	6620558	449994	3034	180°	50°	200	HQ (63.5)
MSA	2016	PSU16-49	6620446	450071	3012	315°	50°	165	HQ (63.5)
MSA	2016	PSU16-50	6620324	449536	3031	10°	50°	150	HQ (63.5)
MSA	2016	PSU16-51	6620030	450044	3108	40°	60°	160	HQ (63.5)
MSA	2016	PSU16-52	6620012	450050	3109	220°	60°	160	HQ (63.5)
MSA	2016	PSU16-53A	6620092	450160	3092	40°	60°	135	HQ (63.5)
MSA	2016	PSU16-54	6620504	450303	2964	220°	60°	132	HQ (63.5)
MSA	2016	PSU16-55	6620319	450388	2987	120°	60°	150	HQ (63.5)
MSA	2016	PSU16-56	6620417	450490	2984	0°	60°	150	HQ (63.5)
MSA	2016	PSU16-57	6620084	449956	3066	180°	60°	99	HQ (63.5)
MSA	2016	PSU16-58	6620600	450433	2948	180°	60°	100	HQ (63.5)
MSA	2016	PSU16-59	6620504	450267	2969	350°	60°	99	HQ (63.5)
Total								**1700**	
MSA	2017	PSU17-60	6620325	450304	2980	230°	60°	141	HQ (63.5)
MSA	2017	PSU17-61	6620598	450539	2941	230°	60°	124	HQ (63.5)
MSA	2017	PSU17-62	6620610	450125	2971	180°	50°	142	HQ (63.5)
MSA	2017	PSU17-63	6620096	450534	3013	230°	60°	147	HQ (63.5)
MSA	2017	PSU17-64	6620657	450125	2962	180°	50°	117	HQ (63.5)
MSA	2017	PSU17-65	6619848	450137	3113	230°	60°	128	HQ (63.5)
MSA	2017	PSU17-66	6619821	450503	3033	260°	60°	111	HQ (63.5)
MSA	2017	PSU17-67	6619973	450520	3034	230°	60°	126	HQ (63.5)

TABLE 10.3 CHITA SOUTH DRILL HOLES USED FOR RESOURCE ESTIMATES									
Company	**Year**	**Hole Number**	**WGS84 Zone 19S**		**Elev-ation (m)**	**Azimuth degrees**	**Inclination degrees**	**Length (m)**	**Core Size RC Size (cm)**
			Northing m	**Easting m**					
Total								**1455**	
Grand Total								**11,357.7**	

Sampling and analytical procedures are largely unknown for the DFGM drilling programs of 1969 and 1976. However, original reports, drill logs and assays are available (Mallamachi, 1976). More importantly the split core sections, pulps and rejects are available, and these have been re-logged and selectively re-sampled by MSA (Ganem 2006, 2007; Pugliese 2007). The AQ and AX drilling programs were designed to test for disseminated porphyry mineralization. However, it is believed that the combination of disseminated and epithermal vein type mineralization is more characteristic of the Chita South sector. Therefore, small diameter vertical holes are not the best method to test sub-vertical veins and structures.

The 1996 MASA drilling program utilized a truck mounted SK-25 reverse circulation drill. The drilling and sampling procedures are typical; samples taken over 1-metre intervals, by cyclone separator, followed by Jones Riffle splitter taking a 1/8 portion for analysis. Reference chip portions were taken for all sample intervals and these are in the possession of MSA. Reports, drill hole logs and assays are available (White, 1996). Sample preparation and assays were done by Bondar Clegg Laboratories facilities in Mendoza, Argentina, Santiago, Chile and Vancouver, Canada (Bondar-Clegg was acquired by ALS-Chemex Laboratories in 2001). It is believed that the MASA data is adequate for current purposes. The only minor reservation is that the hole utilized for the current database (C96-09) is vertical.

MSA's drilling and sampling procedures are described in subsequent sections of this report. Large diameter (HQ) core and inclined holes are utilized to optimize testing of epithermal veins.

The three MSA holes completed in 2011 are notable as the first inclined holes designed to test both the disseminated mineralization in the porphyry and the sub-vertical epithermal veins.

In May 2014 the Company completed a six-hole, 1,122-metre diamond drilling program in the Chita South Porphyry sector. The program tested targets identified during the systematic multidisciplinary exploration program conducted in the sector in 2013 and more detailed work conducted in the first quarter of 2014. The drill holes tested a substantial zone of Cu-Ag-Mo-Au mineralized multi-stage vein systems and hydrothermal breccias in the southeastern border zone of the sector. All six holes intersected substantial core lengths of mineralization at relatively shallow depth beneath the zone of surficial weathering and oxidation. Better Cu values are typically associated with the zone of supergene enrichment and the transition to primary mineralization at depth.

In September 2014 the Company completed a 19-hole, 2,190.1-metre HQ diamond drilling program predominantly in the Chita South Porphyry sector of the Chita Valley Project. The drill holes continued to test the Cu-Ag-Mo-Au mineralized vein systems and breccias. Highlights are broad sections including 60 metres (approximately 51 metres vertical thickness) averaging 0.59% Cu, 6.90 g/t Ag, 0.035% Mo and 0.07 g/t Au and 54 metres (approximately 46 metres vertical thickness) averaging 0.66% Cu, 0.90 g/t Ag, 0.005% Mo and 0.10 g/t Au. Another significant intersection is 10 metres core length (approximately 5 metres true thickness) averaging 2.72% Cu, 128.9 g/t Ag, 0.84 g/t Au.

In the fourth quarter of 2015, Minsud completed a 22-hole, 4088-metre HQ diamond drilling program including 20 holes in the Chita Porphyry South sector. The drill holes continued to outline the Cu-Ag-Mo-Au mineralized multi-stage vein systems and hydrothermal breccias in the southeastern border zone of the sector. Highlights are broad sections including 86 metres (approximately 73.5 metre vertical thickness) averaging 0.44% Cu, 1.7 g/t Ag, 0.017% Mo and 0.07 g/t Au and 58 metres averaging 0.56% Cu, 0.70 g/t Ag, 0.008% Mo and 0.05 g/t Au. Another notable intersection is 2 metres core length (approximately 1-metre true thickness) averaging 4.66 g/t Au, 578 g/t Ag, 0.14% Cu and 0.039% Mo. Two drill holes, completed in the Chita North Porphyry sector, also returned interesting Au and Ag values. Significant intersections from all 20 holes are tabulated below in Table 10.4.

In 2016 a 12-hole HQ Diamond Drilling program with a total of 1,700 metres was completed in Q4. The program was designed to continue outlining the Inferred Mineral Resource of Cu-Mo-Au-Ag and as a preliminary test of epithermal veins in the porphyry. Eleven of the twelve holes intersected substantial core lengths of mineralization at relatively shallow depth beneath the zone of surficial weathering and oxidation. The remaining drill hole (PSU16-50) was designed as a test of outcropping epithermal veins in post Cu mineralization host rocks. Highlights are broad sections including 132 metres (approximately 114.5 metres vertical thickness) averaging 0.44% Cu, 1.1 g/t Ag, 0.017% Mo and 0.07 g/t Au and 95 metres (82.5 m vertical) averaging 0.49% Cu, 1.0 g/t Ag, 0.009% Mo and 0.08 g/t Au.

In 2016 and 2017 detailed mapping and sampling of epithermal Au/Ag vein areas in the Chita Porphyry was conducted mostly inside the Mineral Resource wireframe model. The precious metal veins are believed to have potential complementary benefits to the deposit's economic model either as discrete high-grade areas of direct shipping material or as broader sectors of elevated Au/Ag inside the Cu wireframe. One epithermal prospect, the Condor Vein, shows extensive potential for high grade Au/Ag including a number very high or "Bonanza-type" assays, see Table 10.5.

Hole Number	From (m)	To (m)	Interval (m)	Thickness (vertical m)	Au g/t	Ag g/t	Cu %	Mo %
PSU11-01	8	10	2	1.4	16.93	27.8	0.03	0.010
PSU11-01	48	71	23	16.0	0.03	4.5	0.35	0.031
PSU11-01	114	126	12	8.4	0.69	35.7	0.21	0.035
PSU11-02	43	66	23	16.0	0.03	3.6	0.47	0.048
And	83	100	17	12.0	0.03	7.2	0.35	0.028
PSU11-03	No significant mineralization							
PSU14-04	16	92	76	59.0	0.06	6.8	0.41	0.022
incl.	36	52	16	12.0	0.00	21.7	0.59	0.020
PSU14-05	24	96	72	62.0	0.05	1.0	0.36	0.021
incl.	58	68	10	9.0	0.05	1.4	0.59	0.028
PSU14-06	28	54	26	22.5	0.04	2.1	0.34	0.016
PSU14-07	24	122	98	85.0	0.04	1.0	0.25	0.014
PSU14-08	40	96	56	43.0	0.09	3.0	0.40	0.013
incl.	54	68	14	11.5	0.13	5.8	0.46	0.016
incl.	88	96	8	6.0	0.11	3.8	0.54	0.014
PSU14-09	8	16	8	5.5	0.13	7.5	0.06	0.019
And	26	60	34	26.5	0.06	3.9	0.33	0.019
PSU14-10	86	141	55	47.0	0.03	1.1	0.34	0.016
PSU14-11	50	132	82	70.1	0.05	1.6	0.37	0.022
PSU14-12	84	106	22	18.8	0.10	1.0	0.31	0.006
PSU14-13	62	76	14	12.0	0.08	1.2	0.31	0.006
PSU14-14	68	82	14	12.0	0.02	0.7	0.37	0.020
PSU14-15	22	62	40	34.2	0.04	0.8	0.38	0.030
PSU14-16	34	82	48	41.0	0.06	1.7	0.47	0.020
incl.	34	60	26	22.2	0.08	1.9	0.66	0.020
PSU14-17	76	84	8	6.8	0.06	1.5	0.32	0.032
PSU14-18	20	80	60	51.3	0.07	6.9	0.59	0.035
incl.	32	58	26	22.2	0.06	1.7	0.69	0.040
PSU14-19	12	16	4	3.4	0.80	43.9	0.01	0.036
PSU14-19	76	78	2	1.7	3.59	139.0	0.21	0.029
PSU14-19	66	100	34	29.1	0.23	8.6	0.33	0.043
PSU14-20	54	62	8	6.8	0.03	1.4	0.45	0.004
PSU14-21	22	76	54	46.1	0.10	0.9	0.66	0.005
incl.	30	46	16	13.7	0.23	2.0	1.33	0.008
PSU14-22	30	54	24	20.5	0.08	2.5	0.48	0.015
incl.	46	54	8	6.8	0.10	1.8	0.69	0.019
PSU14-23	33	36	3	2.6	0.82	1.2	0.04	0.021
PSU14-23	54	84	30	20.5	0.06	2.7	0.36	0.018
PSU14-24	80	90	10	5.0*	0.84	128.9	2.72	0.004
PSU14-25	44	126.1	82.1	70.2	0.04	2.9	0.27	0.022
PSU14-26	26	120	94	80.3	0.09	2.7	0.35	0.023
PSU14-27	42	62	20	17.1	0.07	1.3	0.34	0.026
PSU15-28	34.0	42.0	10.00	8.6	0.06	4.6	0.45	0.007
PSU15-29	no significant mineralization							
PSU15-30	18.00	104.0	86.00	73.5	0.07	1.7	0.44	0.017

Table 10.4 Chita South Drill Holes Mineralized Sections								
Hole Number	**From (m)**	**To (m)**	**Interval (m)**	**Thickness (vertical m)**	**Au g/t**	**Ag g/t**	**Cu %**	**Mo %**
PSU15-31	no significant mineralization							
PSU15-32	no significant mineralization							
PSU15-33	104.0	106.0	2.00	1.0	1.23	28.2	0.08	0.015
PSU15-34	blank							
PSU15-35	62.0	74.0	12.0	10.3	0.09	3.9	0.43	0.002
PSU15-36	38.0	72.0	34.0	29.1	0.07	1.7	0.42	0.010
PSU15-36	102.0	106.0	4.0	2.0	0.46	63.3	0.17	0.009
PSU15-36	122.0	124.0	2.0	1.0	0.34	45.9	0.84	0.007
PSU15-37	34.0	44.0	10.0	8.6	0.04	0.4	0.35	0.022
PSU15-37	84.0	86.0	2.0	1.0	4.66	578.0	0.14	0.029
PSU15-38	no significant mineralization							
PSU15-39	32.0	72.0	40.0	34.2	0.08	1.4	0.39	0.023
PSU15-40	20.0	46.0	26.0	22.2	0.05	0.5	0.39	0.012
PSU15-40	70.0	90.0	20.0	17.1	0.07	1.3	0.37	0.010
PSU15-41	no significant mineralization							
PSU15-42	32.0	36.0	4.0	2.0	0.57	31.8	0.05	0.003
PSU15-43	56.0	86.0	30.0	25.7	0.09	4.5	0.41	0.018
PSU15-44	32.0	64.0	32.0	27.4	0.04	0.5	0.42	0.004
PSU15-45	64.0	100.0	36.0	30.8	0.17	3.4	0.46	0.017
incl.	82.0	86.0	4.0	2.0	0.64	16.1	0.60	0.014
PSU15-46	104.0	108.0	4.0	2.0	0.41	38.7	0.13	0,002
PSU15-46	112.0	116.0	4.0	2.0	0.35	36.6	0.11	0.002
PSU15-47	30.0	88.0	58.0	49.6	0.05	0.7	0.56	0.008
PSU16-48	84	114	30	25.0	0.04	2.9	0.317	0.022
PSU16-49	26.0	124.0	98.0	80.0	0.05	2.2	0.287	0.029
PSU16-50	no significant mineralization							
PSU16-51	26.0	158.0	132.0	103.0	0.07	1.1	0.439	0.017
PSU16-52	22.0	138.0	116.0	98.0	0.06	4.1	0.308	0.020
Incl.	112.0	114.0	2.0	unknown	0.28	134.9	0.436	0.018
PSU16-53A	32.0	42.0	10.0	8.0	0.08	0.9	0.343	0.019
PSU16-53A	60.0	135.0	75.0	67.0	0.09	1.5	0.462	0.013
PSU16-54	38.0	102.0	64.0	54.0	0.05	4.3	0.347	0.026
PSU16-55	44.0	62.0	18.0	12.0	0.04	0.8	0.576	0.010
PSU16-55	74.0	78.9	4.9	unknown	0.15	6.8	0.354	0.005
PSU16-55	115.7	118.0	2.3	unknown	0.44	41.3	1.022	0.025
PSU16-56	20.0	115.0	95.0	78.0	0.08	1.0	0.492	0.009
PSU16-56	138.0	148.0	10.0	8.0	0.08	1.1	0.599	0.016
PSU16-57	10.0	68.0	58.0	51.0	0.08	2.0	0.502	0.029
PSU16-57	86.0	99.0	13.0	9.0	0.05	1.4	0.540	0.087
PSU16-58	32.0	100.0	68.0	57.0	0.14	1.7	0.376	0.010
PSU16-59	60.0	88.0	28.0	23.0	0.06	1.2	0.408	0.028
PSU17-60	42.0	50.0	8.0	7.1	0.11	13.58	0.362	0.027
PSU17-60	64.0	98.0	34.0	30.0	0.06	1.12	0.377	0.049
PSU17-61	no significant mineralization							
PSU17-62	52.0	112.0	60.0	52.0	0.04	1.8	0.271	0.027

TABLE 10.4 CHITA SOUTH DRILL HOLES MINERALIZED SECTIONS								
Hole Number	From (m)	To (m)	Interval (m)	Thickness (vertical m)	Au g/t	Ag g/t	Cu %	Mo %
PSU17-63	39.15	76.0	36.85	28.0	0.07	1.0	0.407	0.012
PSU17-64	26.0	42.0	16.0	12.0	0.03	0.7	0.277	0.032
PSU17-64	56.0	64.0	8.0	6.0	0.08	1.7	0.272	0.035
PSU17-65	22.0	42.0	20.0	69.0	0.08	5.3	0.462	0.019
Incl.	39.4	40.0	0.6	0.5	3.93	73.0	1.325	0.007
PSU17-65	52.0	80.0	28.0	24.0	0.04	0.5	0.303	0.021
PSU17-66	52.0	82.0	30.0	24.0	0.08	0.5	0.500	0.028
PSU17-67	0.0	18.0	18.0	unknown	0.15	28.4	0.059	0.011
PSU17-67	18.0	104.0	86.0	70.0	0.09	6.22	0.646	0.009
Incl.	47.75	50.0	2.25	unknown	0.55	762.0	4.384	0.010
PSU14-10 ext.	86.0	148.0	62.0	50.0	0.04	1.25	0.341	0.016
PSU14-10 ext.	176.0	186.0	10.0	8.0	0.05	1.1	0.311	0.018
PSU14-11 ext.	48.0	176.0	128.0	98.0	0.04	1.2	0.327	0.020
PSU14-21 ext.	22.0	98.0	76.0	65.0	0.06	0.8	0.512	0.008
PSU14-25 ext.	44.0	138.0	94.0	78.0	0.04	3.1	0.269	0.028
SD-A	37.5	51.0	13.5	13.5	0.49	0.020	0.49	0.020
FM-02	no significant mineralization							
FM-03	34.5	43.5	9.0	9.0	0.33		0.33	
FM-04	18.0	31.5	13.5	13.5	0.58	0.010	0.58	0.010
SD-01	27.0	58.5	31.5	31.5	0.38	0.015	0.38	0.015
SD-02	15.0	52.5	37.5	37.5	0.35	0.027	0.35	0.027
And	84.0	123.0	39.0	39.0	0.36	0.027	0.36	0.027
SD-04	no significant mineralization							

TABLE 10.5 CONDOR VEIN – SURFACE CHANNEL SAMPLING RESULTS								
Sample ID	Easting m	Northing m	Elevation (m)	Strike °	Dip °	Thickness (cm)	Au g/t	Ag g/t
15043	2,450,038	6,621,344	3,012	N70°	85°N	35	0.72	75.6
15044	2,450,045	6,621,348	3,013	N70°	85°N	20	1.63	265.0
15045	2,450,048	6,621,347	3,014	N70°	85°N	30	0.15	24.8
15046	2,450,055	6,621,349	3,011	N70°	85°N	25	5.64	449.0
15047	2,450,058	6,621,352	3,011	N60°	85°N	15	1.05	80.7
15048	2,450,060	6,621,351	3,008	N55°	85°N	30	0.84	77.3
15049	2,450,067	6,621,356	3,007	N60°	75°N	30	2.58	245.0
15050	2,450,084	6,621,361	3,002	N65°	85°N	20	4.41	489.0
15051	2,450,098	6,621,370	2,993	N70°	75°N	20	42.10	2,390.0
15052	2,450,112	6,621,375	2,981	N70°	75°N	20	46.50	2,660.0
15053	2,450,114	6,621,377	2,981	N70°	75°N	20	2.54	794.0
15054	2,450,134	6,621,384	2,972	N70°	75°N	15	5.73	850.0

In the fourth quarter of 2017, a 1,455 metre HQ diamond drilling program was implemented in the Chita South Porphyry sector. The program included 8 new holes together with deepening of 7 existing holes. The main objective was to continue outlining Cu-Au-Ag-Mo mineralization and Inferred Resources at relatively shallow depth beneath the zone of surface weathering and oxidation. Highlights include 86 meters (approximately 76 meters vertical thickness) averaging 0.65% Cu, 6.2 g/t Ag, 0.009% Mo and 0.07 g/t Au from hole PSU17-67. Individual Cu values above 2.0% and Ag values above 50 g/t are capped at that those levels.

As noted above, Minsud/MSA has drilled 67 HQ boreholes in the Chita South Porphyry area between 2011 and 2014. These holes have been combined with 7 historical diamond drill holes and one historical RC drill hole to underpin the current inferred resource estimation. Significant intersections from these drill holes are presented in Table 10.4 above. The mineralized sections include disseminated sulphides as well as veins hosted by multiple stages of epizonal intrusions and hydrothermal breccias. The complex mineralization styles are not conducive to the classical concepts of true thickness measurement, so vertical thickness determinations that would conform to conceptual pit design parameters are used instead.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

A number of different analytical laboratories were utilized from time to time for different types of samples from the Properties. Most of these are certified to international standards and those that aren't or predated the use of such standards have been corroborated by re-sampling and analyses of field duplicate material. The original laboratories and where applicable the certified laboratory utilized for verification purposes are shown in Table 11.1.

TABLE 11.1
CHITA PORPHYRY DRILLING DATABASE, ORIGINAL AND REFEREE LABORATORIES

Company	Year	Number of Holes	Original Lab	MSA Referee Lab
DGFM	1969	4	DGFM (internal lab)*	Alex Stewart Argentina S.A.
DGFM	1976	3	DGFM (internal lab)*	Alex Stewart Argentina S.A.
MASA	1996	1	Bondar Clegg (now ALS Minerals)	n/a
MSA	2011	3	Alex Stewart Argentina S.A.	n/a
MSA	2014	25	ALS Minerals	Alex Stewart Argentina S.A.
MSA	2015	22	ALS Minerals	Alex Stewart Argentina S.A.
MSA	2016	12	ALS Minerals	Alex Stewart Argentina S.A.
MSA	2017	8	ALS Minerals	Alex Stewart Argentina S.A.

**Denotes lack of ISO/IEC 17025 accreditation*

11.1 LABORATORY ACCREDITATION

Two laboratories are currently utilized by MSA, ALS Minerals and Alex Stewart Argentina S.A. Both are accredited to international standards for all elements tested. A third international laboratory, Bondar Clegg Co. Ltd., merged with ALS Chemex the predecessor of ALS Minerals in December, 2001. The 1996 Bondar Clegg analytical data is believed to be of the highest standards of the time, which predates the implementation of ISO/IEC 17025 standards. A fourth lab, historically operated by DGFM a department of the Government of Argentina, also predates ISO/IEC 17025 standards.

ISO 17025 is the main standard used by testing and calibration laboratories. There are many commonalities with the ISO 9000 (9001, 9002) standard, but ISO 17025 adds in the concept of competence to the equation and it applies directly to those organizations that produce testing and calibration results. Updates to ISO 17025 have introduced greater emphasis on the responsibilities of senior management, and explicit requirements for continual improvement of the management system itself, and particularly, communication with the customer. Laboratories use ISO 17025 to implement a quality system aimed at improving their ability to consistently produce valid results. Since the standard is about competence, accreditation is simply formal recognition of a demonstration of that competence. A prerequisite for a laboratory to become accredited is to have a documented quality management system. Regular internal audits are expected to indicate opportunities to make the test or calibration better than it was. The laboratory is also expected to keep abreast of scientific and technological advances in relevant areas.

There are two main sections in ISO/IEC 17025 - Management Requirements and Technical Requirements. Management requirements are primarily related to the operation and effectiveness of the quality management system within the laboratory. Technical requirements address the competence of staff, methodology, test/calibration equipment and the test methods. Full validation of test methods and proof of proficiency set this standard apart from ISO 9001 or 9002.

CAN-P-1579 is the Standard Council of Canada's ("SCC") requirements for the accreditation of mineral analysis testing laboratories. The CAN-P-1579 document provides an elaboration, interpretation and additional requirements to those requirements in ISO 17025 that are required for laboratories involved in performing mineral analysis testing for mining, exploration and processing. The program is designed to ensure mineral analysis testing laboratories meet minimum quality and reliability standards and to ensure a demonstrated uniform level of proficiency among these mineral analysis testing laboratories. This document identifies the minimum requirements for accreditation of laboratories supplying mineral analysis testing services for the following sample types: sediments, rocks, ores, metal products, tailings, other mineral samples, water and vegetation. To obtain initial accreditation by SCC, a laboratory must successfully complete both a proficiency testing regimen and an on-site assessment.

11.2 SAMPLE PREPARATION

The sample preparation protocols for the various Chita Porphyry drilling programs are outlined as follows:

- DGFM 1969 and 1976: Available documents from these programs do not provide information regarding sample preparation. Split core and pulps from these programs are stored at a government warehouse in Mendoza. A total of 305 pulp samples were acquired by MSA in 2007 and submitted to the Alex Stewart Argentina S.A. laboratory in Mendoza for analysis (Ganem, 2007).

- MASA 1996: All samples were delivered to the Bondar Clegg Laboratory Group preparation facility in Mendoza where they were dried, crushed and pulverized (White, 1996). Full details are unavailable. Pulp splits were sent to Bondar Clegg laboratories in Coquimbo, Chile for Au assay and Vancouver, Canada for multi-element geochemical analysis.

- MSA 2011: All drill core samples were delivered to the Alex Stewart Argentina S.A. laboratory in Mendoza. The sample preparation procedures (Codes P-5 and P-1) for drill core, rock and chip samples are as follows:
    - Dry samples.
    - Crush to 80% passing a #10 (2 mm) sieve.
    - Split sample to obtain 1 kg.
    - The sample from step 3 is pulverized to 95% passing 106 micron or better.
    - Pulp aliquots for assaying are weighed out from step 4 and bar coded.

- MSA 2014 to 2017: All drill core samples were delivered to the ALS Minerals laboratory in Mendoza. The sample preparation procedures (Codes PREP-31 and 31B) for drill core, rock and chip samples are as follows:
    - Log sample in Laboratory Information Management System ("LIMS") and weigh.
    - Dry samples in drying ovens.
    - Crush to 70% -2mm or better
    - Crusher compressed air cleaned after each sample.
    - Split sample using Jones Riffle until up to 250 g sample (PREP-31) or 1,000 g (PREP-31B) is left.
    - The sample is packed and the reject is returned to original bag and stored.
    - The sample from step 5 is pulverized to 85% passing 75 micron or better.
    - The aliquots for assaying are weighed out from 7.
    - All checks are run on samples 7.

11.3 ANALYSES

The analytical protocols for the various Chita Porphyry drilling programs are outlined as follows:

- DGFM 1969 and 1976: Available documents from these programs do not provide information regarding the DGEM analytical procedures. The 305 pulp samples acquired by MSA in 2007 were analysed by the Alex Stewart Argentina S.A. laboratory in Mendoza.

- MASA 1996: Pulp splits were sent to Bondar Clegg laboratories in Coquimbo, Chile for Au assay and Vancouver, Canada for multi-element geochemical analysis. .

- MSA 2011: The Alex Stewart Argentina S.A. analytical procedures are described as follows:
    - Alex Stewart Geochemical Procedure – ICP-MA-39.
        - Trace level methods using conventional ICP-OES analysis for Ag, Al, As, Ba, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Tl, Ti, V, W, Y, Zn and Zr.
        - A prepared sample is digested with perchloric, nitric, hydrofluoric acids to dryness.
        - The residue is taken up in 10% hydrochloric acid.
        - The resulting solution is analysed by ICP-OES.

    - Alex Stewart Geochemical Procedure – ICP-ORE.
        - Ore grade elements by four acid digestion using conventional ICP-OES analysis for 19 elements.
        - Copper, lead and zinc results greater than 10,000 ppm were re-analyzed by a 3 acid digestion and ICP-OES detection.

    - Alex Stewart Assay Procedure – Ag4A-50.
        - Conventional silver assay by fire assay fusion, gravimetric finish.

        - Silver results greater than 200 Ag g/t were re-analyzed by fire assay with a gravimetric finish on 50-gram samples.

    - Alex Stewart Assay Procedure – Au4-50.
        - Conventional gold assay by fire assay fusion, AA finish on 50 gram samples.

    - Alex Stewart Sequential Leach Package Copper – LMCI40.
        - Sequential leach using sulphuric acid, cyanide leach and four acid digestion on the final residue. Copper analysis by AAS on all three portions.

MSA 2014 to 2017: the various ALS Minerals procedures are described below.

- ALS Minerals Geochemical Procedure – ME-ICP61.
  Trace level methods using conventional ICP-AES analysis for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sr, Ti, V, W and Zn.
    - A prepared sample (0.25g) is digested with perchloric, nitric, hydrofluoric acids to dryness.
    - The residue is taken up in a volume of 12.5 mL of 10% hydrochloric acid.
    - The resulting solution is analysed by ICP-AES.
    - Results are corrected for spectral interelement interferences.

- ALS Minerals Assay Procedure – ME-OG62.
  Ore grade elements by four acid digestion using conventional ICP-AES analysis for Ag, Al, As, Bi, Ca, Cd, Co, Cr, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, W and Zn.
    - A prepared sample (0.5g) is digested with perchloric, nitric, hydrofluoric acids and then evaporated to dryness.
    - Hydrochloric acid and demineralised water is added for further digestion.
    - The sample is heated for an additional allotted time, cooled and transferred to a volumetric flask (100 mL).
    - The resulting solution is diluted to volume with demineralised water and mixed.
    - The mixed solution is analysed by ICP-AES.
    - Results are corrected for spectral interelement interferences.

- ALS Minerals Fire Assay Procedure – Au-AA23 (30g) and Au-AA24 (50g).
  Conventional gold assay by fire assay fusion, AAS finish.
    - A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead.
    - The bead is digested in 0.5 mL dilute nitric acid in a microwave oven.
    - 0.5 mL of concentrated hydrochloric acid is then added and the bead is further digested at a lower power setting.
    - The digested solution is cooled and diluted to a total volume of 4mL with demineralised water.

  - The solution is analysed by AAS against matrix-matched standards.

- ALS Minerals Fire Assay Procedure – Au-GRA21 (30g) and Au-AA22 (50g).
  Conventional gold assay by fire assay fusion, gravimetric finish.
  - A prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents as required, inquarted with 6 mg of gold-free silver and then cupelled to yield a precious metal bead.
  - Au is separated from the Ag in the doré bead by parting with nitric acid. The gold (roasting) flake remaining is weighed gravimetrically on a micro balance for Au.

- ALS Sequential Leach Package Copper – Cu-PKG06LI.
  Sequential leach using sulphuric acid, cyanide leach and four acid digestion on the final residue. 0.5g sample weight.

11.4 SECURITY

No special security measures were taken other than routine careful marking, handling, transportation and storage of samples. Samples are delivered to the ALS Laboratories by Minsud employees. Extreme measures such as might be invoked to minimize precious metals, and diamond sample tampering are not considered warranted in this case.

12.0 DATA VERIFICATION

12.1 SITE VISIT AND DUE DILIGENCE SAMPLING

The Chita project was visited by Mr. David Burga, P.Geo., on March 24th and 25th, 2015, November 7th and 8th, 2015, and December 5th and 6th, 2017, for the purposes of completing a site visit and due diligence sampling. General data acquisition procedures, core logging procedures and quality assurance/quality control (QA/QC) were discussed during the visit.

Samples at ALS were analyzed for gold by fire assay with AAS finish and for silver by 4-Acid digestion with an ICP-AES analysis.

Mr. Burga collected 12 samples from 12 drill holes during the site visit in December 2017. A range of high, medium and low-grade samples were selected from the stored core samples. Samples were collected by taking a 1⁄4 split of the half core remaining in the core box. The samples were split with a core splitter, placed in plastic sample bags and then the samples were placed in a large polyurethane bag and delivered to ALS Laboratories in Mendoza by Mr. Burga.

Samples at ALS were analyzed for gold by fire assay with AAS finish and for silver by 4-Acid digestion with an ICP-AES analysis.

Results of the site visit due diligence samples are presented in Figures 12.1 through 12.4.

Figure 12.1 Chita Due Diligence Sample Results for Gold: December 2017

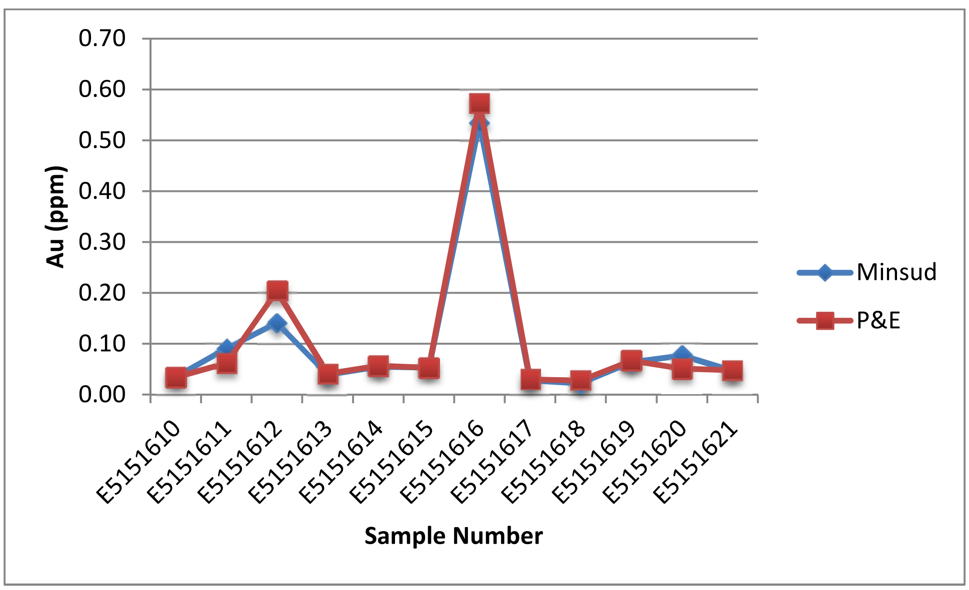


Figure 12.2 Chita Due Diligence Sample Results for Silver: December 2017

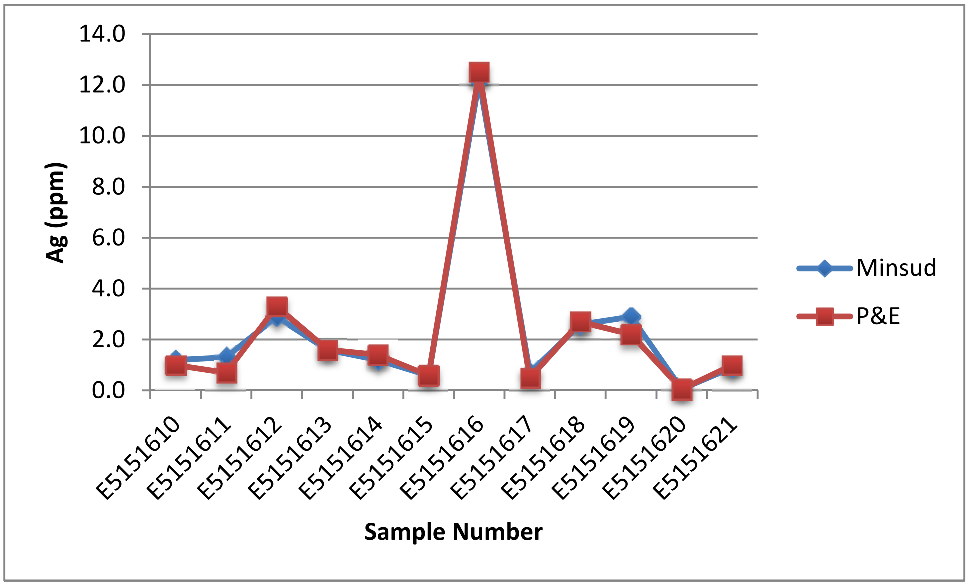


Figure 12.3 Chita Due Diligence Sample Results for Copper: December 2017

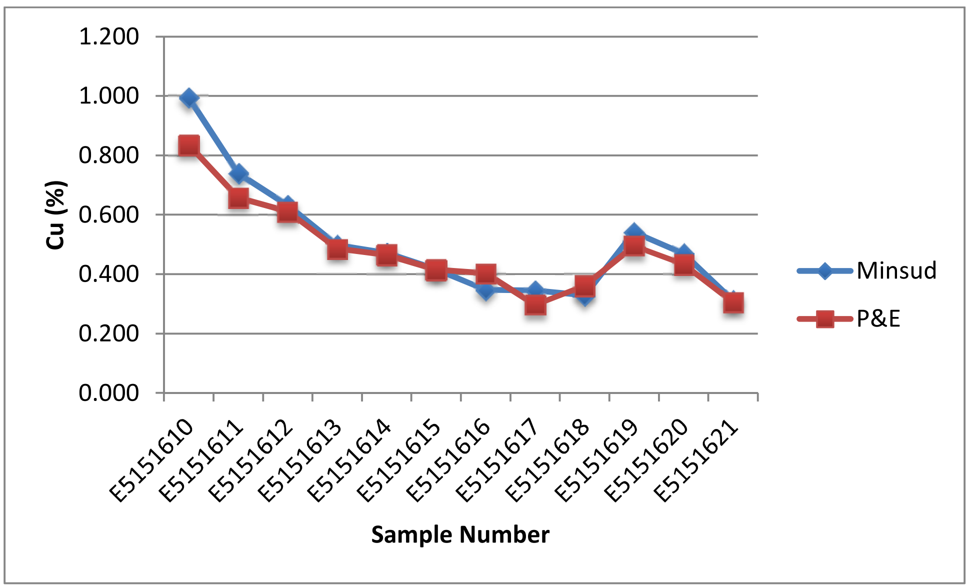
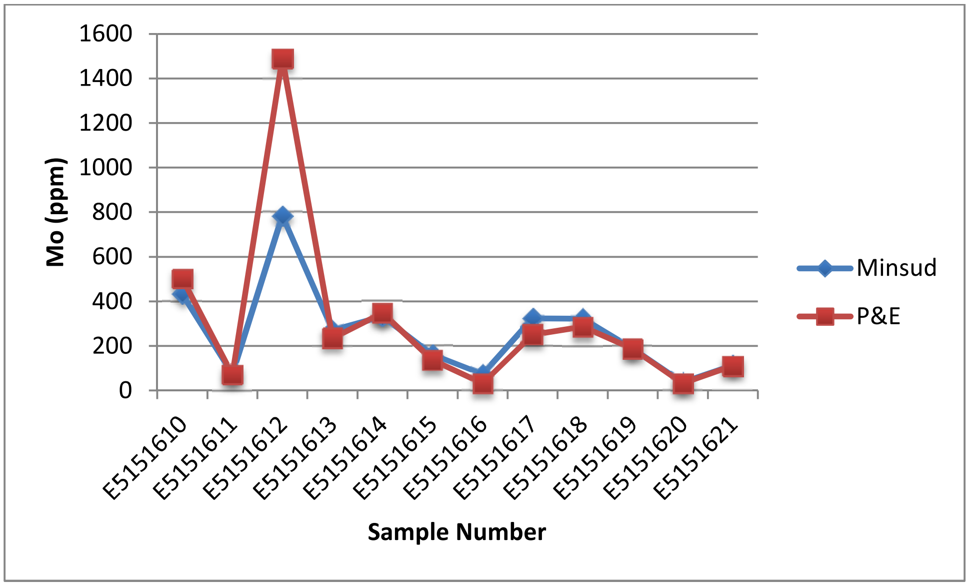


Figure 12.4 Chita Due Diligence Sample Results for Molybdenum: December 2017



12.2 QUALITY ASSURANCE/QUALITY CONTROL PROGRAM

Details of the review of Minsud's QA/QC program prior to 2017 is summarized in the 2016 P&E report.

Minsud implemented and monitored a thorough quality assurance/quality control program ("QA/QC" or "QC") for the diamond drilling undertaken at the Chita Project over the 2012-2017 period. QC protocol included the insertion QC samples into every batch of approximately 20 samples. QC samples included one certified reference material ("standard" or "CRM"), one blank and one crushed field duplicate. Check assaying is also conducted on the samples at a frequency of approximately 5%.

A total of 6,523 samples, including QC samples, were submitted during Minsud's surface drilling program at the Project in 2017, as shown in Table 12.1.

TABLE 12.1
CHITA VALLEY PROJECT QC SAMPLES

Samples	No. of Samples	Percentage (%)
Standards	184	2.8
Duplicates	160	2.4
Check Assays	36	0.6
Blanks	187	2.9
Normal	5,956	91.3
Total	**6,523**	**100**

12.3 CERTIFIED REFERENCE MATERIALS

Minsud uses commercial CRMs to monitor the accuracy of the laboratory. The CRMs were purchased from an internationally-recognized company, Ore Research and Exploration of Australia. Early in the exploration program Minsud used Geostats PTY Ltd of Australia. Each CRM sample was prepared by the vendor at its own laboratories with a certificate of analysis for each standard purchased.

In 2017 a total of 567 CRM samples were submitted at an average frequency of 1 in 20 samples. The standards were ticketed with pre-assigned numbers in order to avoid inadvertently using numbers that were being used during logging.

Two different standards were submitted and analyzed for gold, silver, copper and moly as summarized in Table 12.2. During the 2017 drilling, the two standards utilized were OREAS 501b (STD LG-2) and OREAS 503b (STD HG-2).

TABLE 12.2
SUMMARY OF CRM SAMPLES USED IN CHITA SURFACE DIAMOND DRILLING PROGRAM

Reference Standard	Reference Number	Reference Source	Reference Standard Assays (Certificate)			
			Gold (ppm)	Silver (ppm)	Cu (%)	Mo (ppm)
OREAS 501b	STD LG-2	ORE Research & Exploration	0.248	0.778	0.260	99
OREAS 503b	STD HG-2	ORE Research & Exploration	0.695	1.54	0.531	319

The Company evaluated the standards by utilizing the certified mean and standard deviation values resulting from the round robin assaying undertaken during the certification process for each of the CRMs.

Minsud's general rules for a batch failure are as follows:

- A reported value for a standard greater than 3 standard deviations from the mean is a failure.
- A blank value over the acceptable limit is a failure.
- Results of each standard are presented separately. Values for gold, silver, copper and molybdenum were found to be within the control limits, and the results are considered satisfactory. A few samples were outside the three standard deviations. One sample, 13679, was thought to be due to a mislabelled standard, which fulfills the protocol outlined above, and no further action was required. Other failures required a reanalysis of samples between standards.

Graphs of the results for each of the CRMs and blanks are presented, by element, in Figures 12.5 through 12.8 for OREAS 501b, and Figures 12.9 through 12.12 for OREAS 503b.

Figure 12.5 Performance of Standard OREAS 501 b for Gold

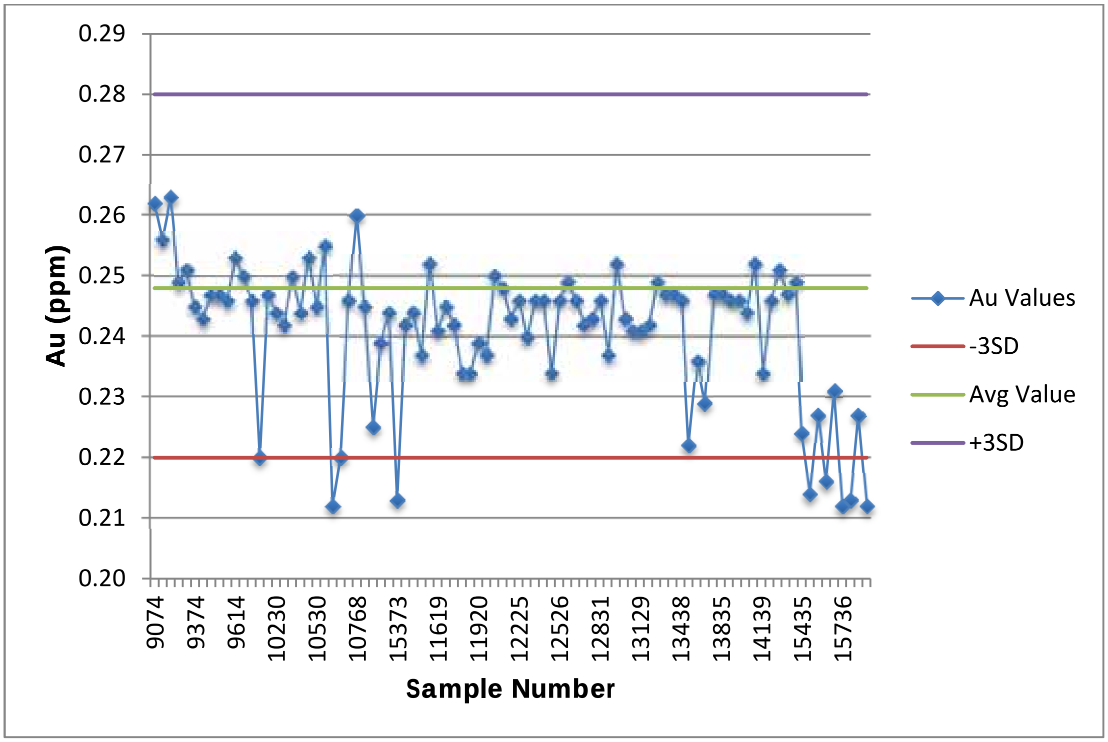


Figure 12.6 Performance of Standard OREAS 501 b for Silver

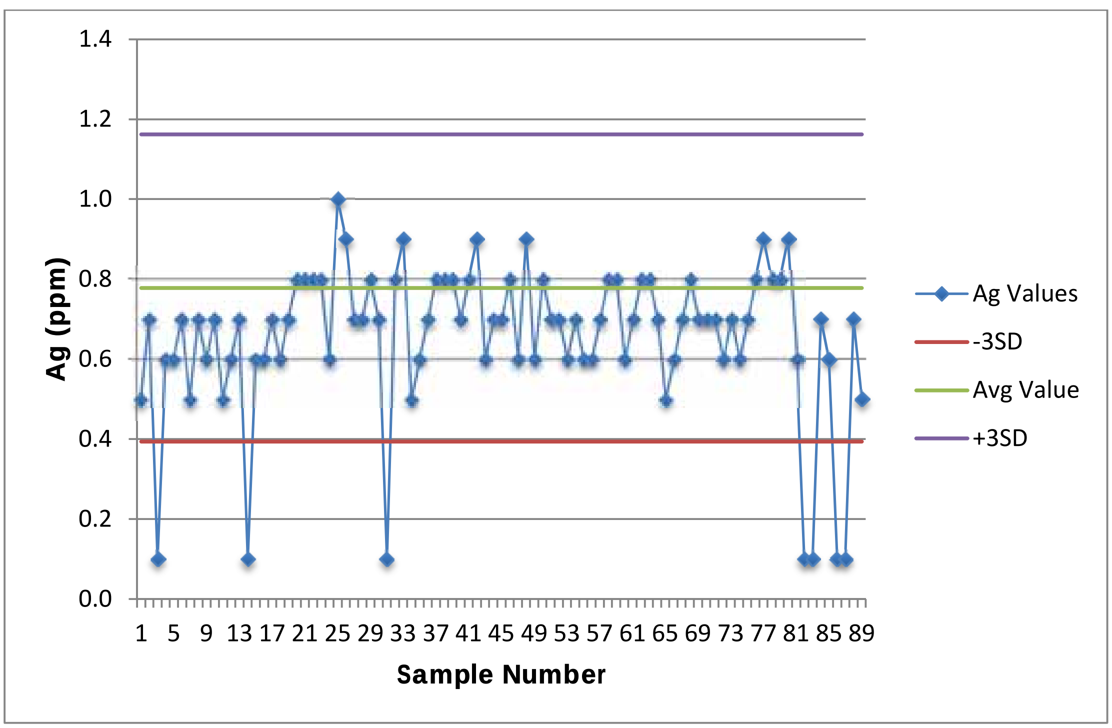


Figure 12.7 Performance of Standard OREAS 501 b for Copper

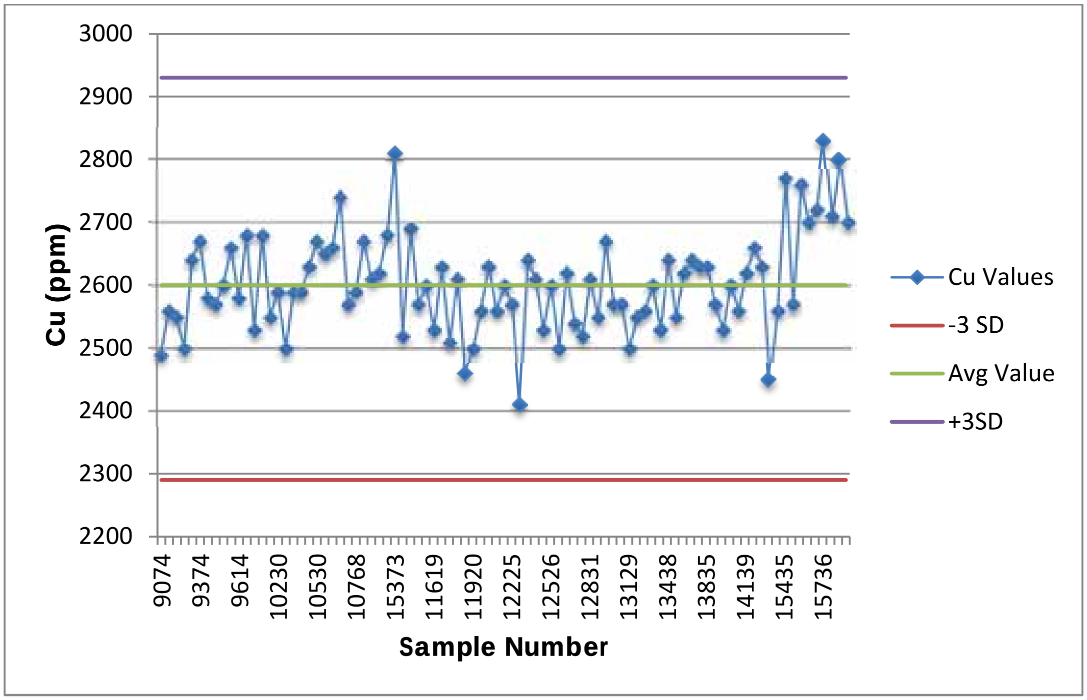


Figure 12.8 Performance of Standard OREAS 501 b for Molybdenum

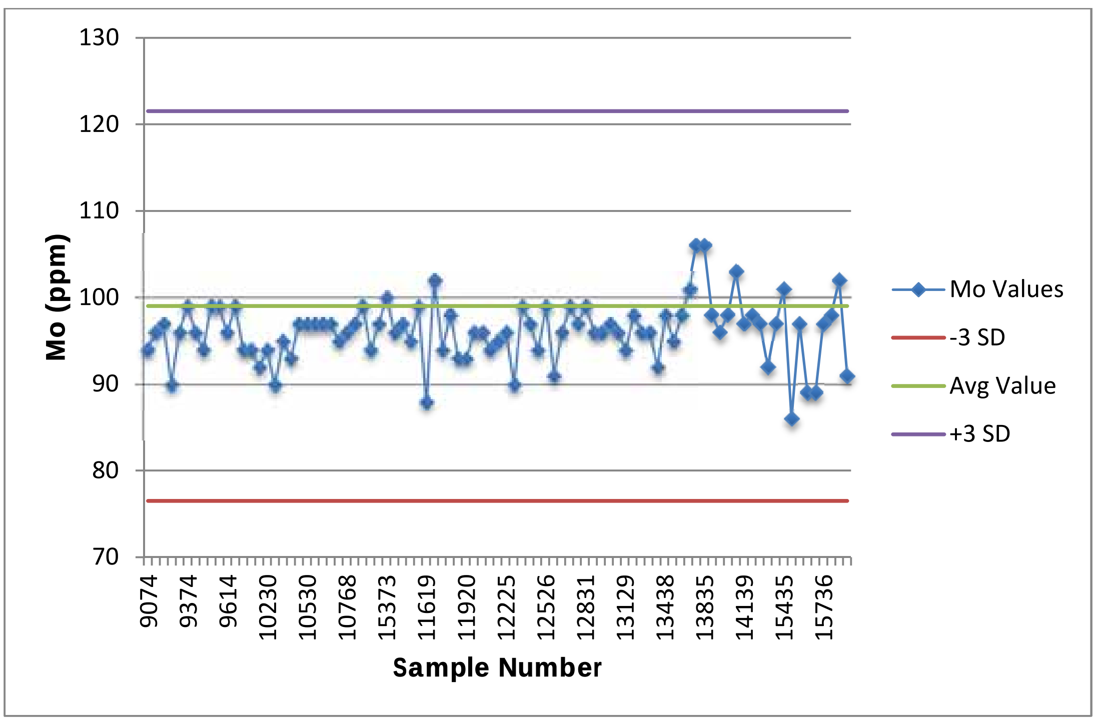


Figure 12.9 Performance of Standard OREAS 503 b for Gold

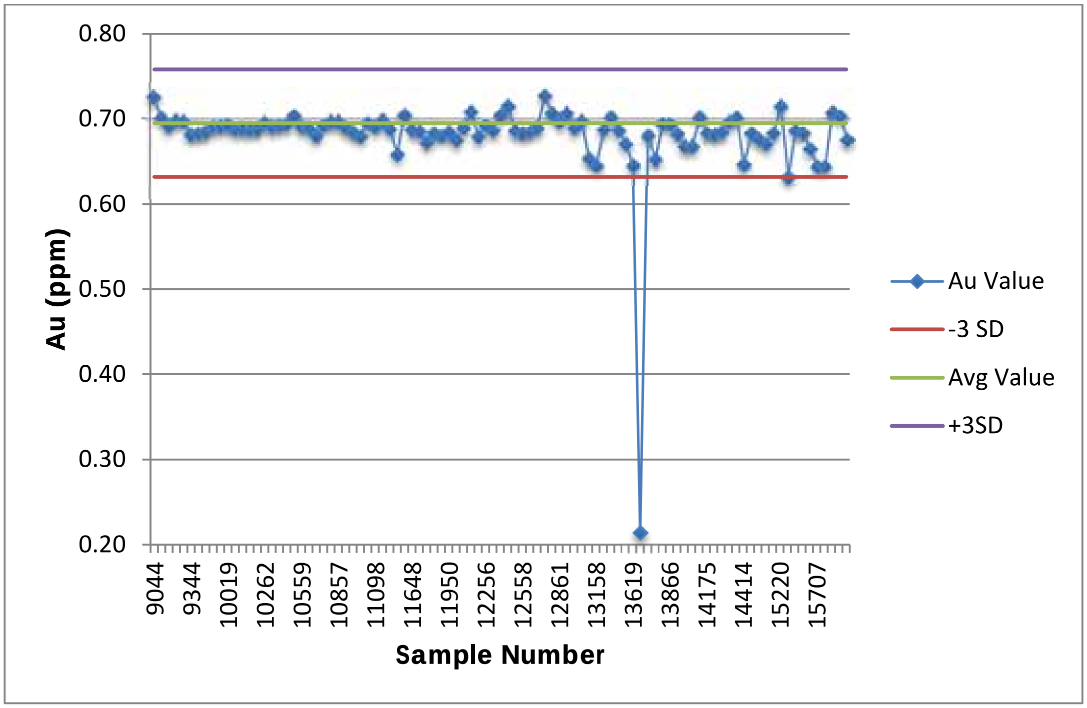


Figure 12.10 Performance of Standard OREAS 503 b for Silver

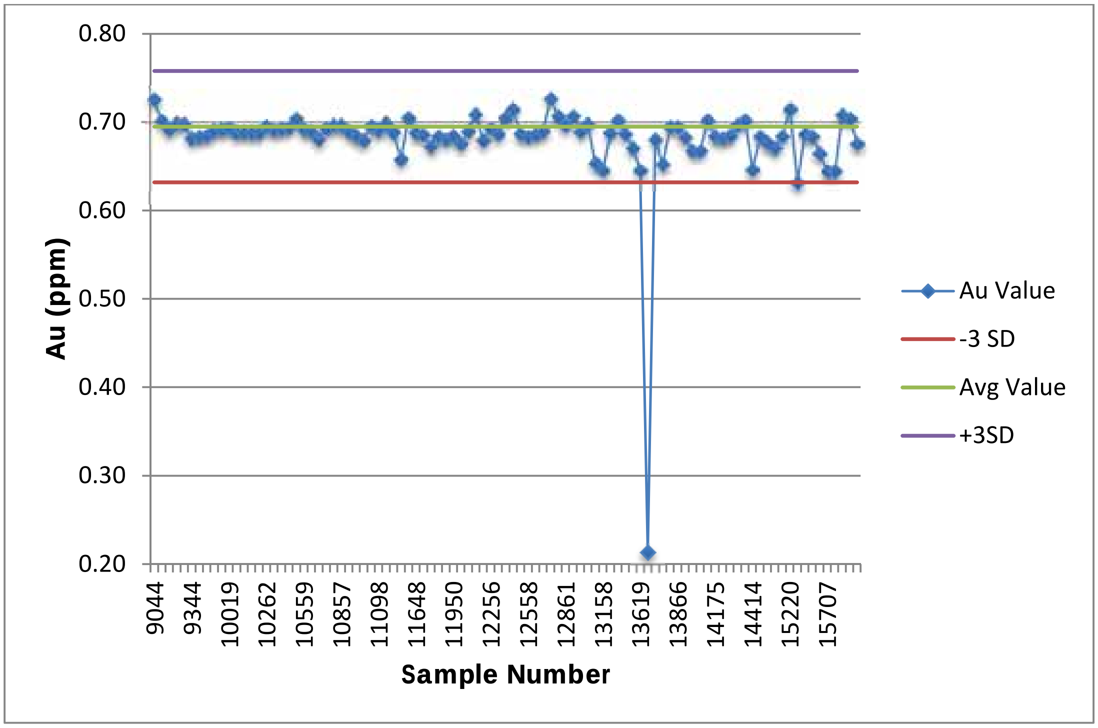


Figure 12.11 Performance of Standard OREAS 503 b for Copper

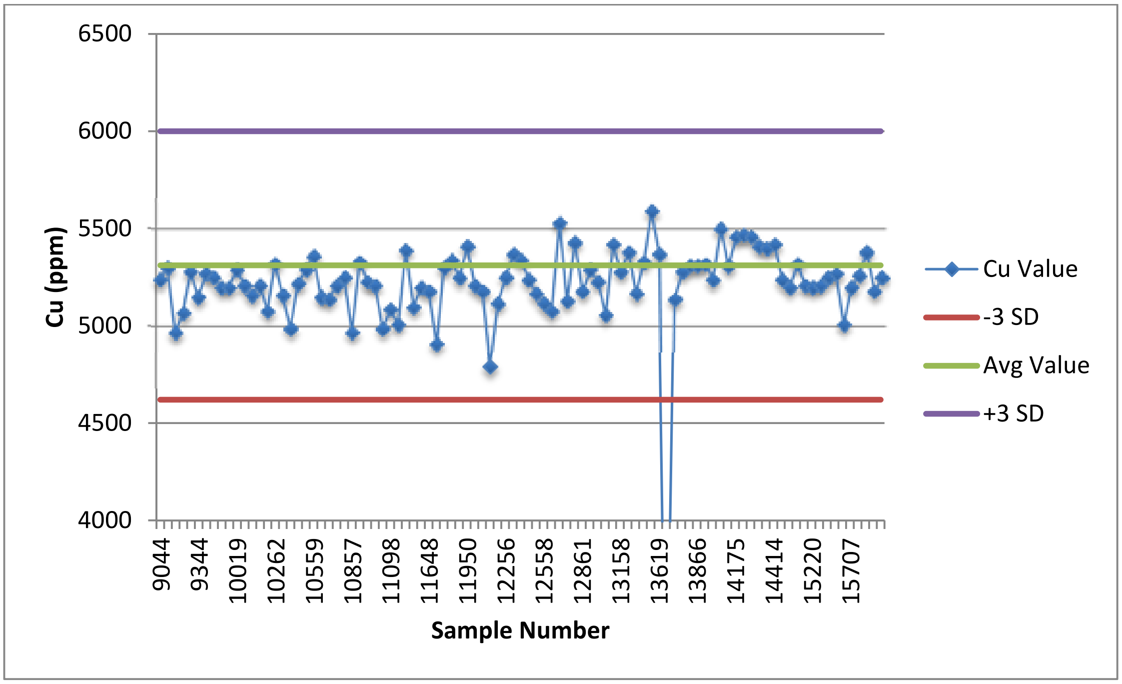
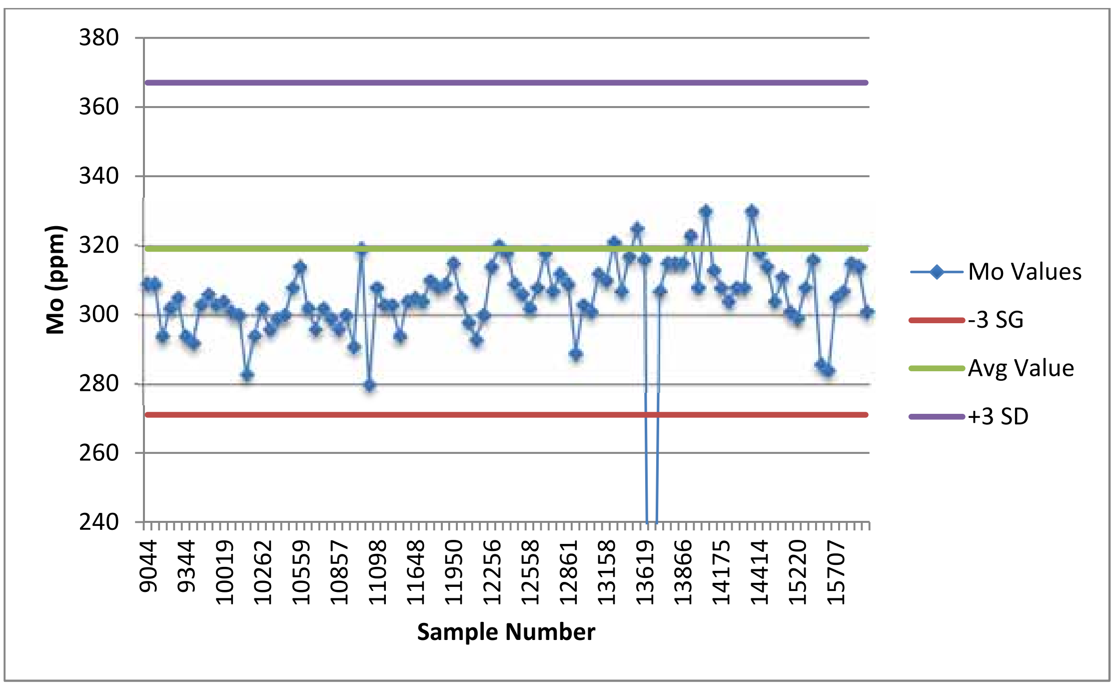


Figure 12.12 Performance of Standard OREAS 503 b for Molybdenum



12.4 PERFORMANCE OF BLANK MATERIAL

Blank samples were inserted to monitor possible contamination during both preparation and analysis of the samples in the laboratory. The blank material used was a locally sourced andesitic pillow lava from the pre-cordillera, this material was changed to a locally sourced barren mafic dyke.

Blank samples were inserted at an average rate of approximately 1 in 20 samples, with a total of 187 blank samples submitted.

The tolerance limit used for the blank samples is 10 times the lower detection limit for the corresponding assay method (gold = 0.05 ppm, silver = 2 ppm, copper = 1 ppm, and molybdenum = 1 ppm).

Graphs of the results for the blank samples are presented in Figures 12.13 to 12.16.

In 2017, the copper values were relatively high, the average values for the Blank being over 100 ppm. The samples in between standards were reanalyzed.

Figure 12.13 Performance of Blanks for Gold

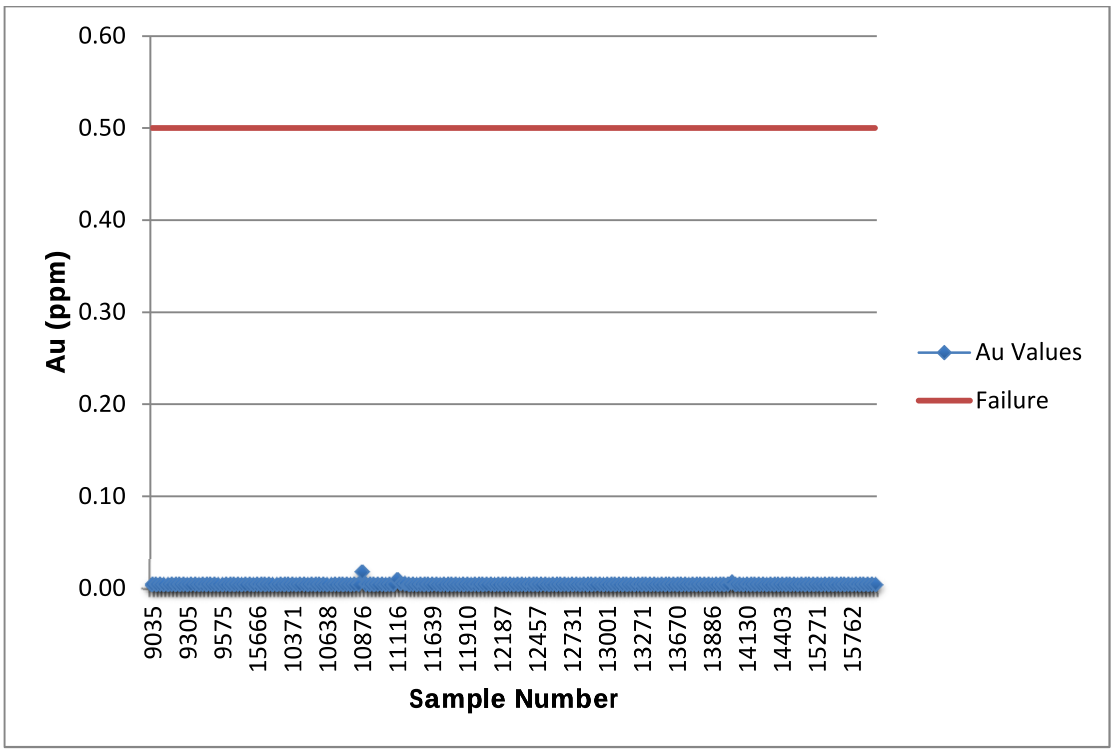


Figure 12.14 Performance of Blanks for Silver

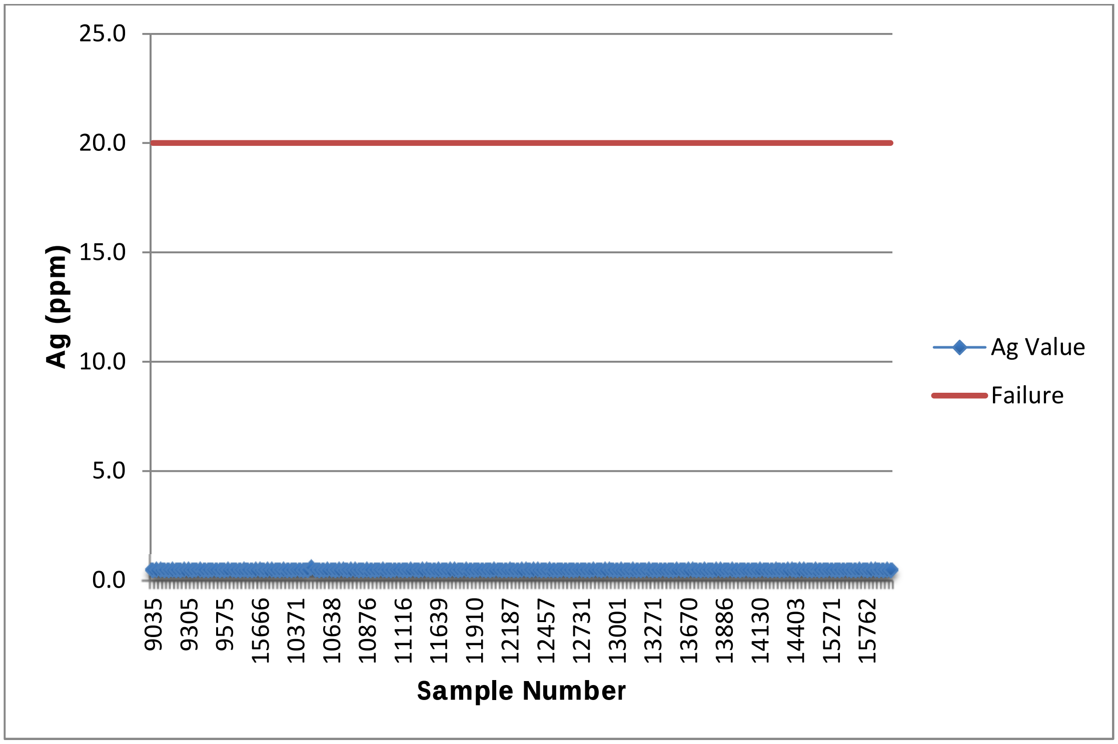


Figure 12.15 Performance of Blanks for Copper

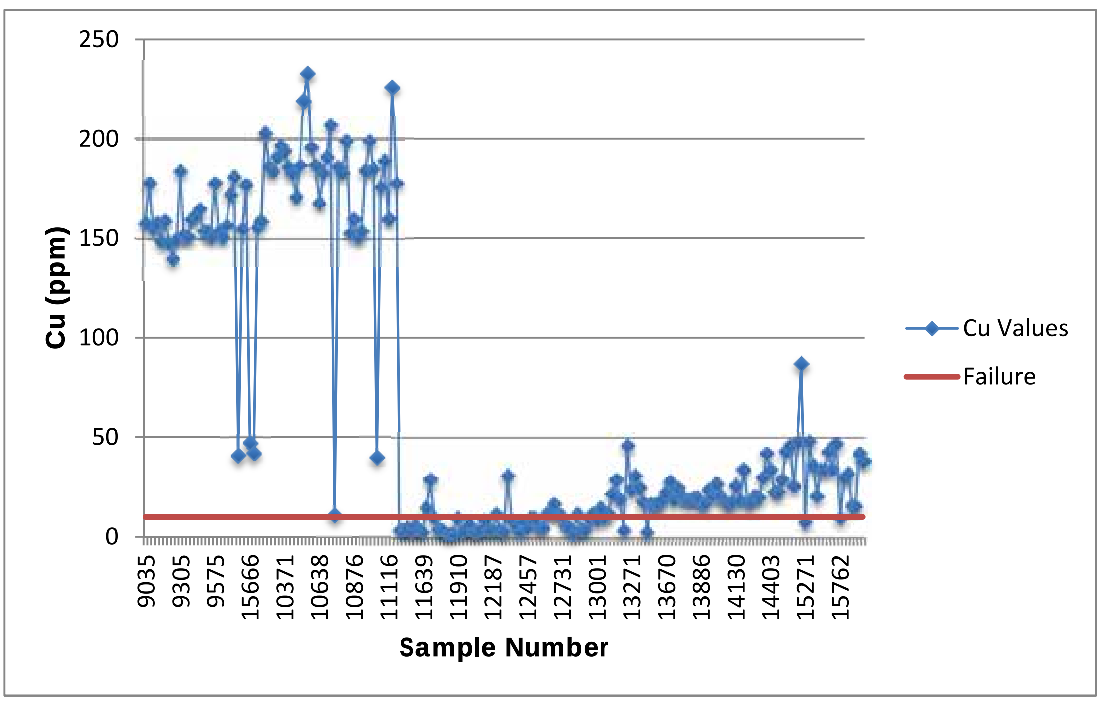
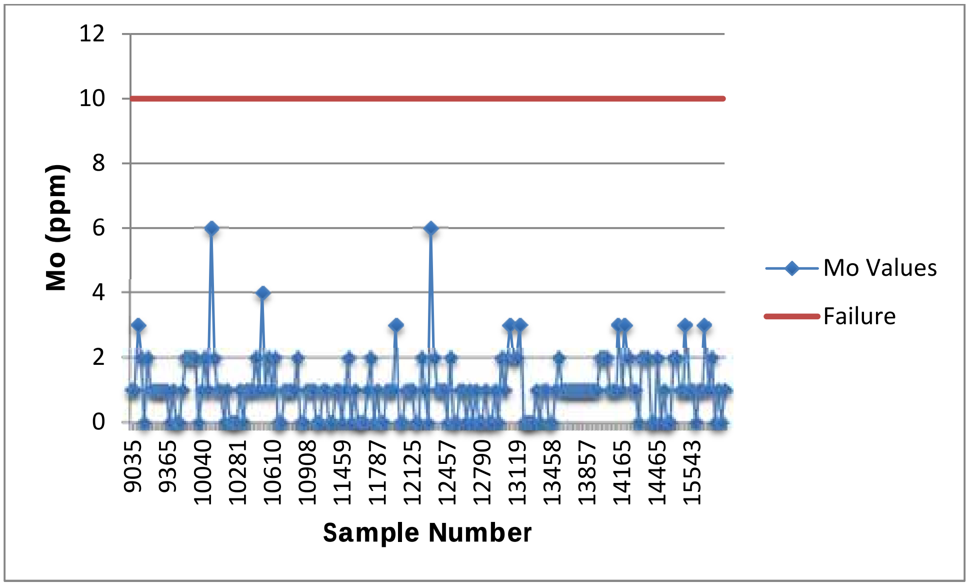


Figure 12.16 Performance of Blanks for Molybdenum



12.5 DUPLICATE SAMPLES

Crushed field duplicate samples were used to monitor the potential mixing up of samples and data precision.

Duplicate core samples were prepared by Minsud personnel at the core storage facility at the Chita Project. Preparation involved the random selection of a sample interval to be duplicated and, at the time of sampling, this interval was sawn in half using a diamond saw. This sample was cut in half again, resulting in a quarter core as the original sample and a quarter core as the duplicate. The remaining half core was returned to the core box.

The original and duplicate samples were tagged with consecutive sample numbers and sent to the laboratory as separate samples. Duplicate samples were collected at a rate of 1 in 20 samples.

A total of 160 duplicate samples were taken, representing 2.4% of the total samples.

The results of the duplicate sampling are shown graphically in Figures 12.17 to 12.20.

Figure 12.17 Performance of Crushed Field Duplicates for Gold

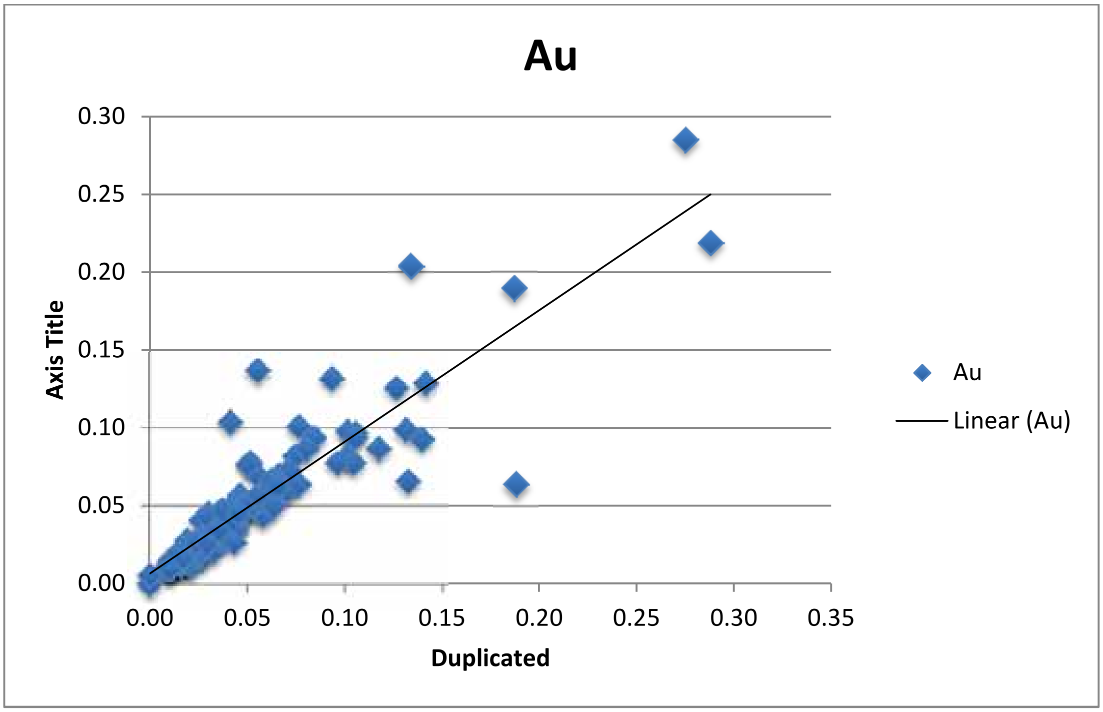


Figure 12.18 Performance of Crushed Field Duplicates for Silver

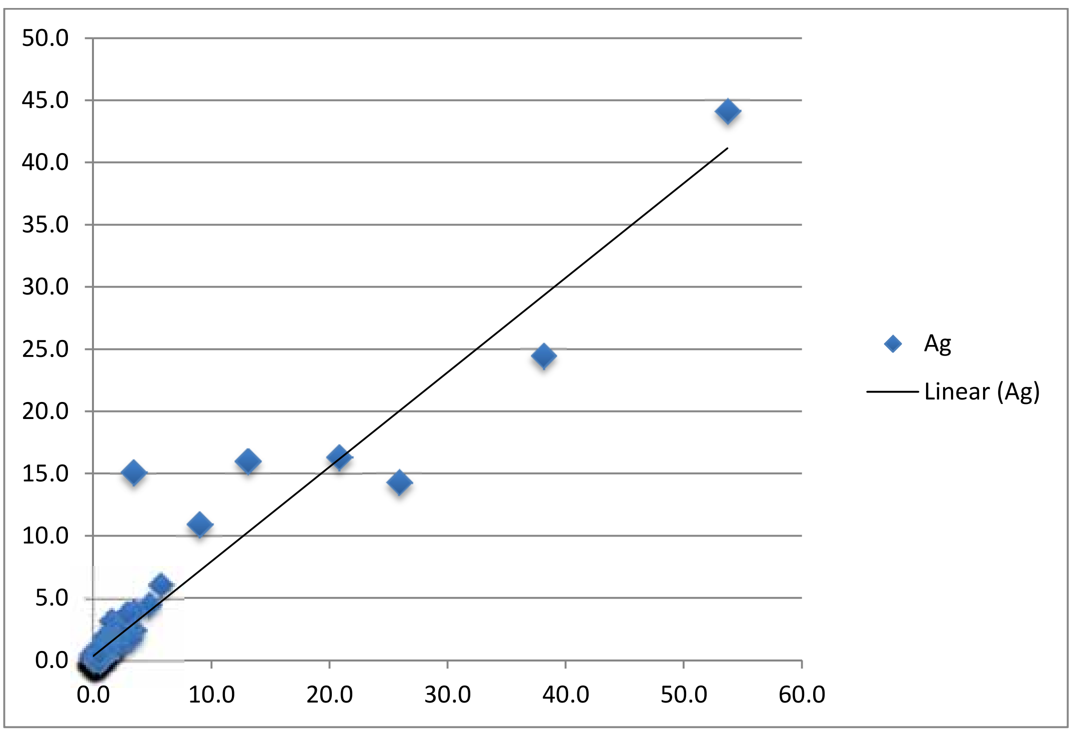


Figure 12.19 Performance of Crushed Field Duplicates for Copper

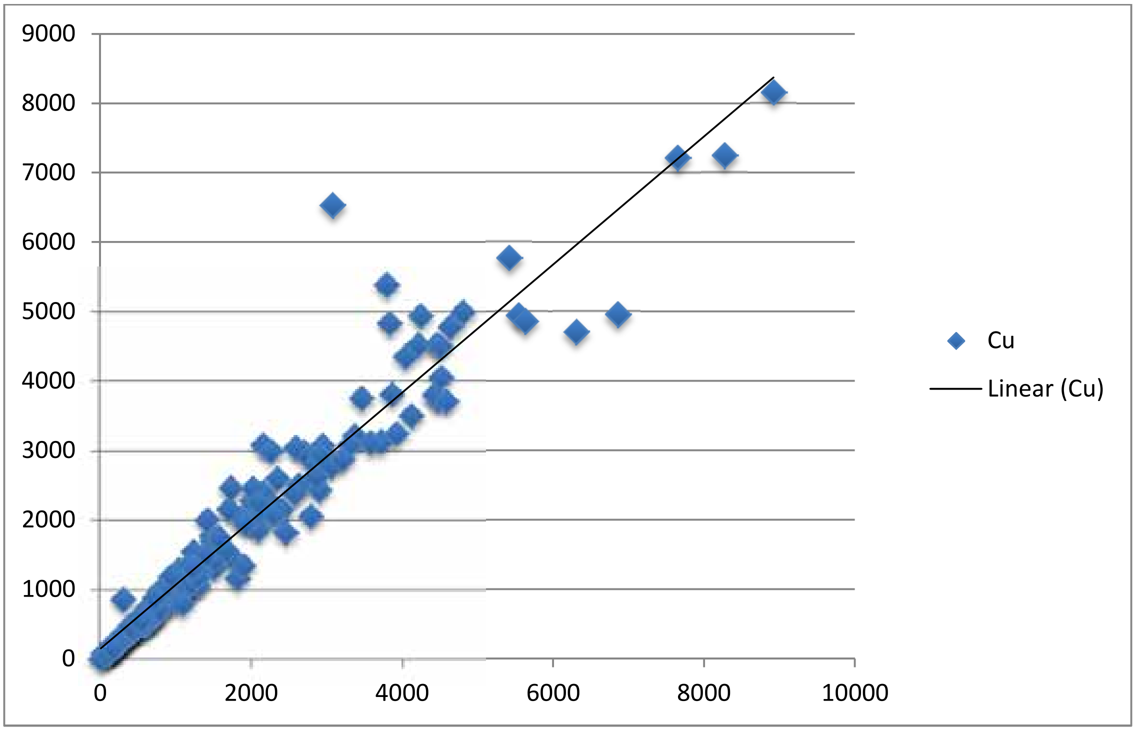
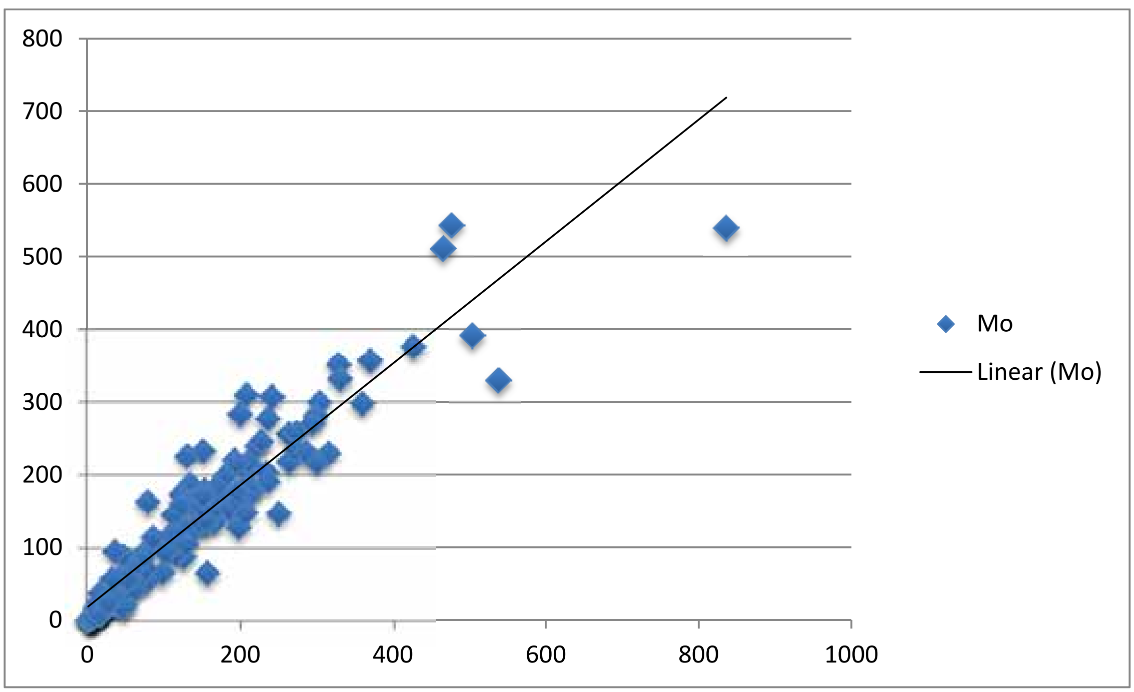


Figure 12.20 Performance of Crushed Field Duplicates for Molybdenum



Variation in gold and silver mineralization in a core sample could account for the variation seen.

12.6 CHECK ASSAYS

Minsud conducted 36 check assays in their QA/QC program by sending 36 duplicates to be analyzed under similar routines by a secondary laboratory, Alex Stewart. Samples at Alex Stewart were analyzed for gold by fire assay with AAS finish and for silver by 4-Acid digestion with an ICP-OES analysis The results of the check assays are presented in Figures 12.21 to 12.24. Correlation in results between the two laboratories was strong.

Figure 12.21 Performance of Check Assays for Gold

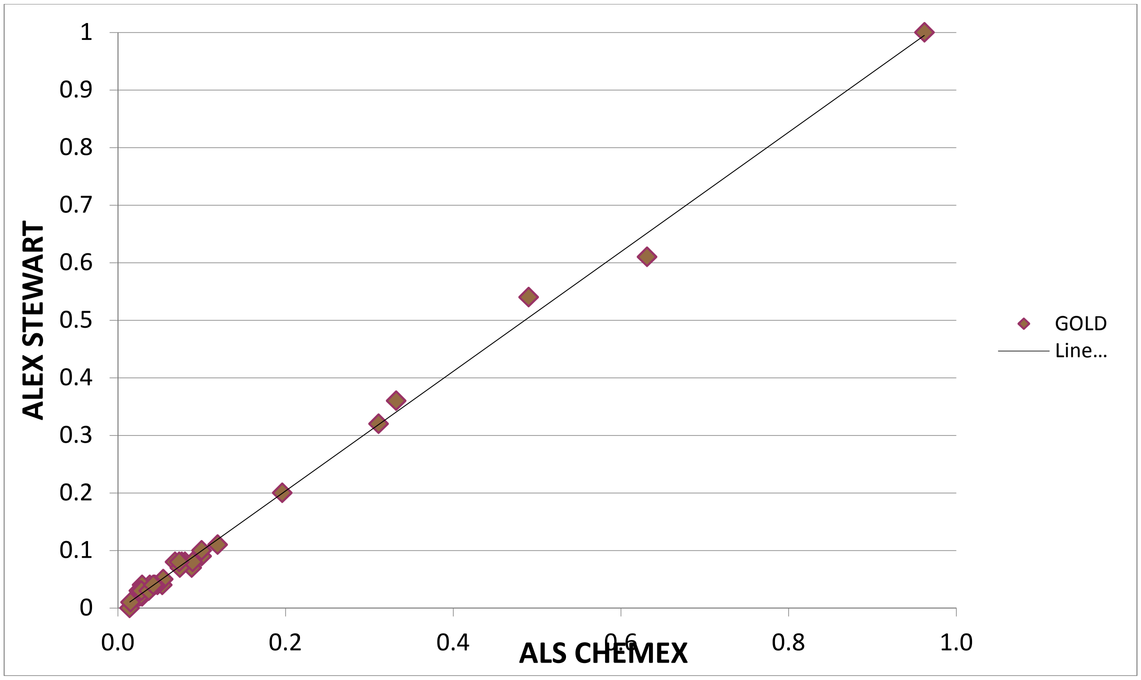


Figure 12.22 Performance of Check Assays for Silver

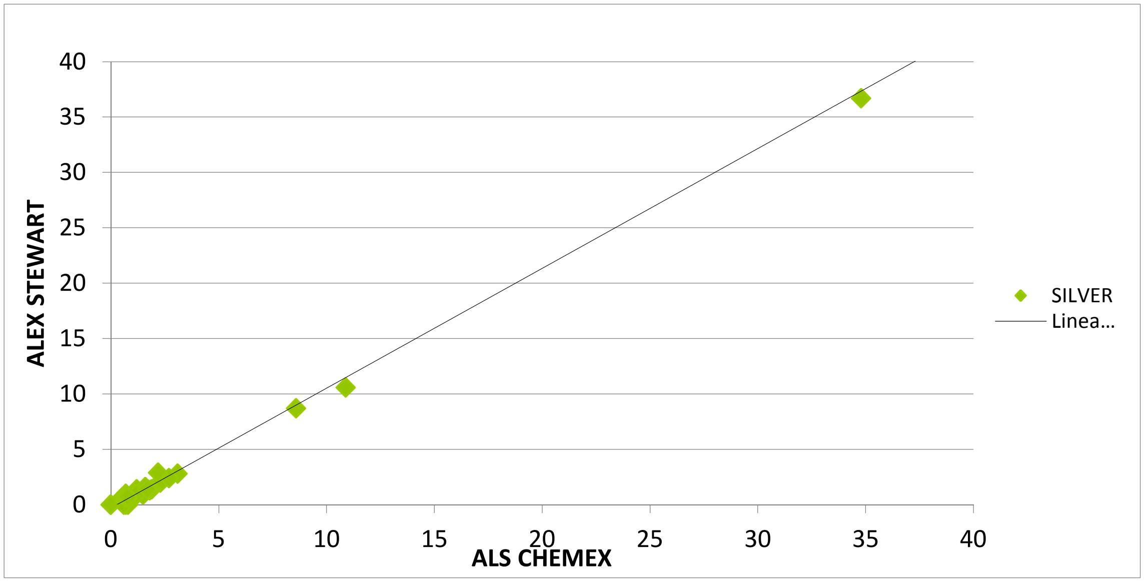


Figure 12.23 Performance of Check Assays for Copper

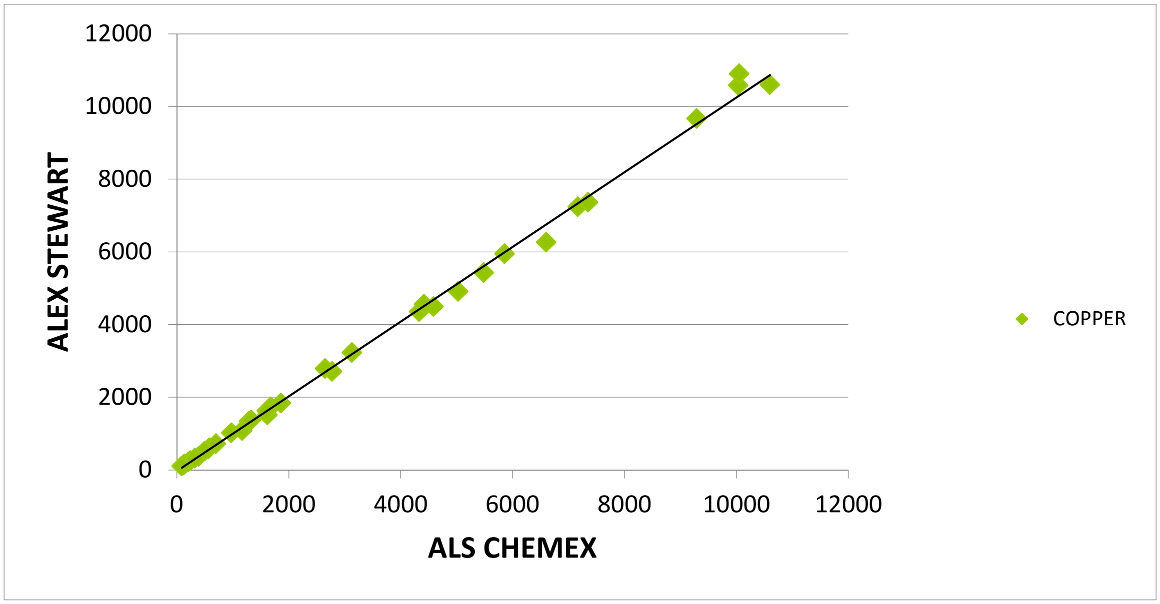
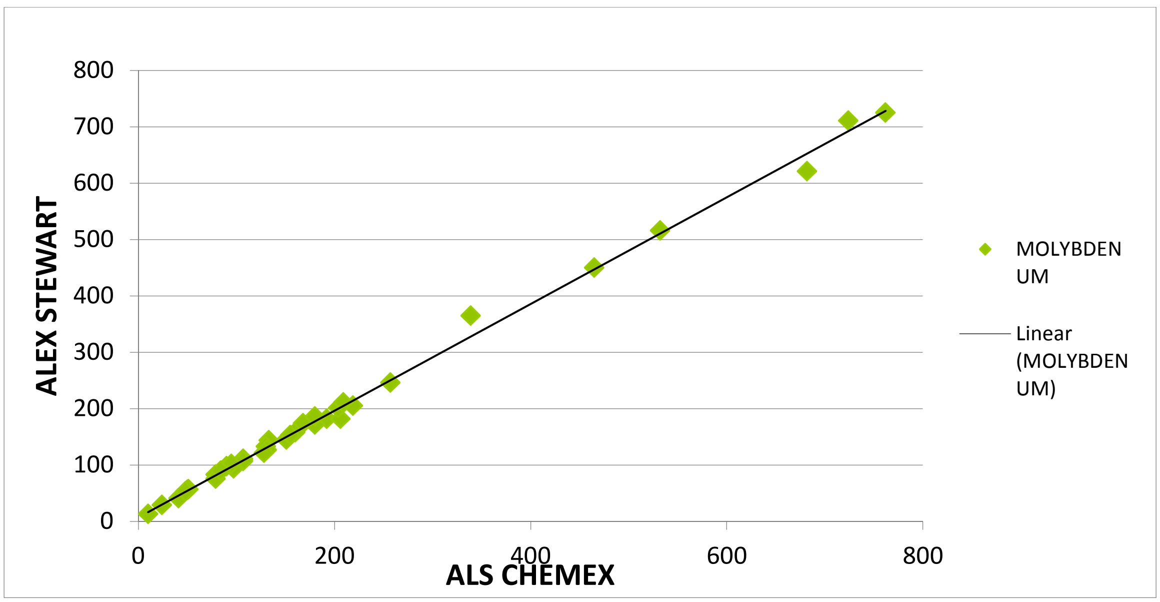


Figure 12.24 Performance of Check Assays for Molybdenum



12.7 RECOMMENDATIONS AND CONCLUSIONS

Minsud implemented a comprehensive QA/QC program for 2017 at the Chita Valley Project. Recommendation is made to source new blank material for future drilling at the Minsud project.

Based upon the evaluation of the QA/QC program undertaken by Minsud, as well as P&E's due diligence sampling, it is P&E's opinion that the results are suitable for use in the current Mineral Resource Estimate.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

In January 2017, the Company submitted six representative drill core samples to CodelcoTech. All six samples were evaluated for bioleaching potential by Selective Copper Extraction Tests (“S. E. T.”) with values ranging between 80 and 95% of the total contained Cu. Samples Met1, Met2 and Met4 S.E.T, test values were 82, 80 and 83%, respectively. Three of the six samples (Met1, Met2 & Met4) were then evaluated by bioleaching tests in columns of 60 cm height and 4 kg capacity to verify the Cu recovery value delivered by the S.E.T. tests, primarily to determine the dissolution kinetics of copper. The 85 day column tests results for samples Met1, Met2 and Met4 test values were closely similar to the S.E.T. tests at 80, 79 and 80%, respectively. In the opinion of CodelcoTech the introduction of a secondary wash stage at the end of the bioleaching cycle can increase the extraction value by 3 to 4%. The Cu recovery test results are summarized in Table 13.1.

TABLE 13.1
SUMMARY OF COPPER RECOVERY DATA

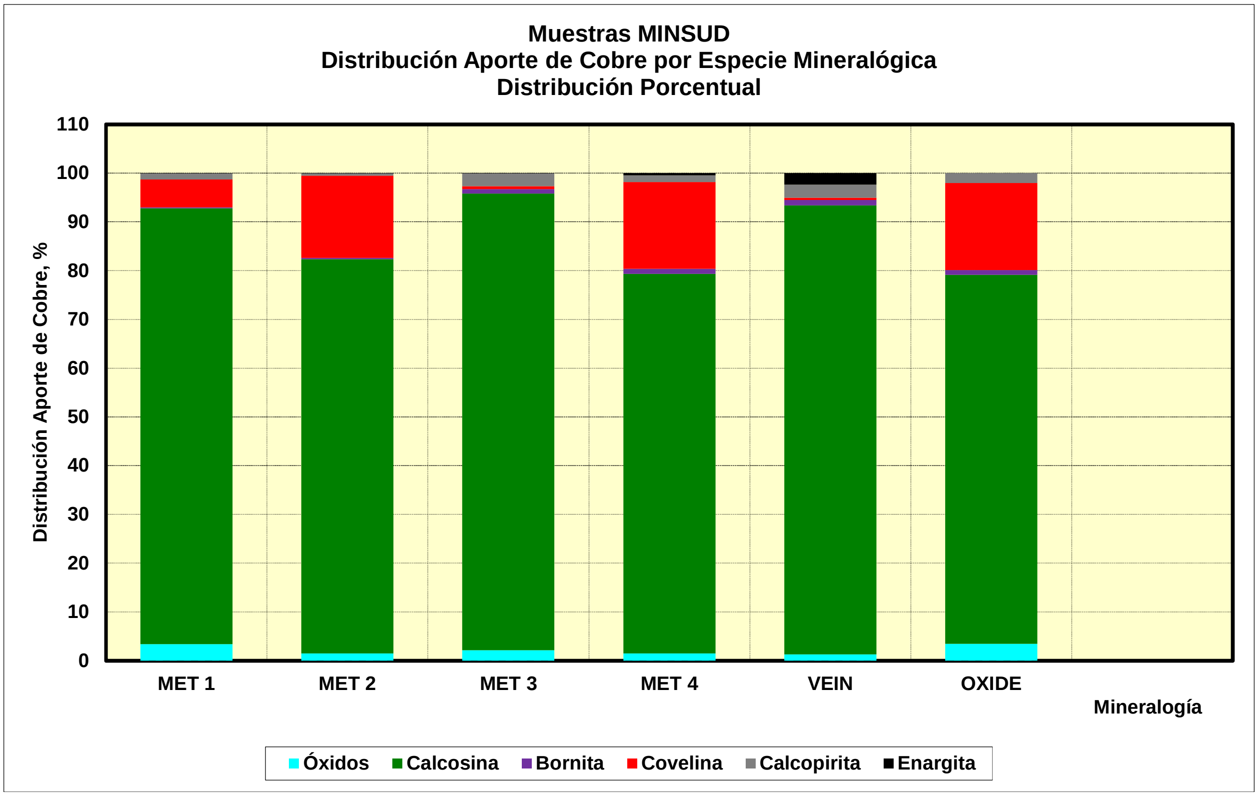
Sample	Drill Hole	Interval (m)	Assay Cu%	SET Cu Recovery %	Coulmn Test Cu Recovery %
Met 1	PSU14-04	20-64m	0.386	82	80
Met 2	PSU14-18	36-56m	0.674	80	79
Met 3	PSU14-21	30-46m	0.928	95	
Met 4	PSU15-45	72-86m	0.598	83	80
Vein	PSU14-24	78-90m	1.703	92	
Oxide	PSU14-04	12-20m	0.288	89	

The six core samples have undergone mineralogical characterization (see Figure 13.1 below) using QEMSCAN with observations as follows:

- For all samples, the contribution of copper from copper oxide ores is low and ranges from a minimum of 1.29% of the “Vein” sample to a maximum of 3.47% of the “Oxide” sample.
- For all samples, the main copper contributing species is Chalcocite (Digenite), from a minimum of 75.7% for the "Oxide" sample up to a maximum of 93.7% of sample "Met 3".
- The second species in abundance as copper contributor is Covellite, with a minimum reported value as low as 0.5% in the "Vein" sample up to 17.8% in the "Oxide" sample.
- The copper contribution from Chalcopyrite varies from 0.5% in sample "Met 2" up to a 2.7% in the "Vein" sample.

- Finally the copper contribution from Enargite is the lowest between all copper minerals and varies from negligible (0%) in "Oxide" sample up to 2.4% in "Vein" sample.

Figure 13.1 Distribution of Copper Bearing Minerals in Test Samples



From data obtained both in the procedures of the Selective Extraction Test (S.E.T.) on six ore samples from Chita Sur ore body and the metallurgical information collected from bioleaching tests in columns for three of the six samples of minerals, it is concluded that the BioSigma bioleaching technology of copper sulfide minerals may be a viable technical alternative for copper recovery for the six samples evaluated by the S.E.T. test, which results were validated for the three samples evaluated by bioleaching in columns under conditions of the BioSigma technology. All tests performed returned similar copper extractions. BioSigma technology offers the following advantages:

1. Generation of ferric iron, by dissolution of iron from the ore assisted by action of iron oxidizing bacteria, which are harmless to the health of human beings, and sufficient to supply the ferric iron requirement for oxidation of the copper sulphides, making BioSigma technology sustainable by regeneration of the oxidizing agent.

2. Generation of acid which reduces the ore raw acid consumption during the bioleaching process.
3. Generation of bacterial activity, harmless to human's health, for oxidizing iron and sulfur in sufficient quantity and necessary to make viable the bioleaching of copper sulfides by the generation of acidic ferric solutions.

14.0 MINERAL RESOURCE ESTIMATE

14.1 INTRODUCTION

The purpose of this report section is to update the Chita Valley Deposit Mineral Resource Estimate with drill holes completed in 2017 on the Chita Valley Cu-Au-Ag-Mo Deposit ("Chita") of Minsud Resources Corp. ("Minsud") in San Juan Province, Argentina. The Mineral Resource Estimate presented herein is reported in accordance with the Canadian Securities Administrators' National Instrument 43-101 and has been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral Resource Estimates are not Mineral Reserve Estimates and do not have demonstrated economic viability. There is no guarantee that all or any part of the Mineral Resource Estimate will be converted to a Mineral Reserve Estimate. Mineral Resource Estimates may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource Estimates.

This Mineral Resource Estimate was undertaken by Antoine Yassa, P.Geo. and Eugene Puritch, P.Eng., FEC, CET of P&E Mining Consultants Inc. of Brampton, Ontario, both independent Qualified Persons in terms of NI 43-101, from information and data supplied by Minsud. The effective date of this Mineral Resource Estimate is February 7, 2018.

14.2 DATABASE

All drilling and assay data were provided in the form of Excel data files by Minsud with the most recent updated database received on December 14, 2017. The GEMS database for this Mineral Resource Estimate was constructed by P&E, which consisted of 77 core holes and 1 reverse circulation ("RC") hole totaling 12,639 m and 150 m respectively, of which 8 core holes totaling 1,039 m were drilled in 2017 for this Mineral Resource Estimate update. Four holes were completed in 1969, three holes from 1976 and one RC hole from 1996 (Table 14.1). A drill hole plan is shown in Appendix I.

TABLE 14.1
DRILL HOLE DATABASE SUMMARY

Drilling Type	No. Drill Holes	Metres of Drilling	No. Cu Assays	No. Au Assays	No. Ag Assays	No. Mo Assays
Historical Drill Holes*	8	1,196	875	279	105	800
2011 Drill Holes	3	880	877	290	369	875
2014 Drill Holes	25	3,111	1,785	1,784	1,466	1,742
2015 Drill Holes	22	3,423	1,854	1,821	1,112	1,666
2016 Drill Holes	12	1,691	920	920	781	912
2017 Drill Holes	8	1,039	481	481	379	478
Total	**78**	**11,340**	**6,792**	**5,575**	**4,212**	**6,473**

***Note:* *** *historical holes were drilled between 1969 and 1996*

The assay table of the database contained 6,792 Cu, 5,575 Au, 4,212 Ag and 6,473 Mo assays. The samples collected in 2011, 2014, 2015, 2016 and 2017 have been analyzed for 30 other elements and compounds. All drill hole survey and assay values are expressed in metric units, while grid coordinates are in the WGS84, Zone 19S UTM system.

14.3 DATA VERIFICATION

Verification of assay database records was performed by P&E against independently acquired, original laboratory electronically issued certificates from ALS Argentina S.A. and Alex Stewart Argentina S.A. As shown in Table 14.2, 90% of the constrained assays tested in 2011, 2014, 2015, 2016 and 2017 were checked. No errors were discovered in the assay database. Assays from the historical drill holes (drilled in 1969-1996) were not checked due to laboratory certificates not being available to P&E during the course of this Mineral Resource Estimate.

P&E typically validates a Mineral Resource Estimate database by checking for inconsistencies in analytical units, duplicate entries, interval, length or distance values less than or equal to zero, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations and survey, and missing interval and coordinate fields. A few minor errors were found and corrected. P&E believes the supplied database is suitable for Mineral Resource Estimation.

TABLE 14.2
ASSAY DATABASE VALIDATION

Data Sources	No. of Constrained Assays	No. of Checked Assays	% of Validated Assays	Year of Verification
Historic Assays	138	0	0	
2011 Assays	181	167	92	2015
2014 Assays	507	502	99	2015
2015 Assays	303	284	94	2015
2016 Assays	433	433	100	2016
2017Assays	188	188	100	2017
Total	**1,750**	**1,574**	**90**	

14.4 DOMAIN INTERPRETATION

Four (4) mineralization domain wireframes were developed with a minimum four drill holes for each domain during this updated Mineral Resource Estimate. The mineralized domain wireframes were generated from successive sectional polylines on 100 m spaced cross sections oriented perpendicular to the strike of the mineralization of the deposit. Mineralization domains were defined by continuous mineralized structures along strike and down dip, and assay intervals equal to or greater than 0.25% Cu. In some cases, mineralization somewhat below the above-mentioned cut-off interval was included for the purpose of maintaining zonal continuity. On each section, polyline interpretations were digitized from drill hole to drill hole but not typically extended more than 30 metres into untested territory. Minimum constrained sample length for interpretation was 2 metres. The post-mineralization, late-intermineral stage dacite porphyry

(“LIM”) area is located at the mid-west portion of the property and was excluded from the model area since Minsud had identified it as being non or low-level mineralization. The boundary of the LIM area was digitized from the "Chita South Porphyry Target Alterations and Structure Map" provided by Minsud.

The main mineralization domain (Minz1) was intersected by 63 drill holes, and modelled up to 900 metres along strike (140^o) and 1,090 metres width down dip (dip about -10^o to $+50^o$) with true thickness up to 98 metres. This domain contains 91% of total volume of all the wireframes.

The resulting domains were used as hard boundaries during the Mineral Resource Estimation, for rock coding, statistical analysis and compositing limits. The 3D domains are presented in Appendix II. A topographic surface was created using high resolution topographic DEM data provided by Minsud.

14.5 ROCK CODE DETERMINATION

A unique rock code was assigned for each mineralized domain solid in the Mineral Resource model. The domain volumes and rock codes utilized for the Mineral Resource Estimate model are exhibited in Table 14.3.

TABLE 14.3
BLOCK MODEL ROCK CODE DESCRIPTION AND DOMAIN VOLUME

Domain	Model Code	Domain Volume (m^3)	% of Total Volume
Minz1	100	23,977,579	81.3%
Minz2	200	2,789,110	9.5%
Minz3	300	1,624,751	5.5%
Minz4	400	1,102,948	3.7%
Air	0		
Waste	99		

14.6 COMPOSITING

The basic statistics of all constrained assays and sample lengths are presented in Table 14.4.

Approximately 79.1% of the constrained sample lengths were 2 m, with an overall average of 1.83 m. In order to regularize the assay sampling intervals for grade interpolation, a two-metre compositing length was selected for the drill hole intervals that fell within the constraints of the above-mentioned mineralized domains. The composites were calculated for Cu, Au, Ag and Mo over 2.0 metre lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D zonal constraint. The compositing process was halted upon exit from the footwall of the aforementioned constraint. Un-assayed intervals and below detection limit assays were set to a value of 0.01 for Cu, Au and Ag and 0.001 for Mo. Any composites that were less than 0.50 metres in length were discarded so as not to introduce any short sample bias in the grade interpolation process. The constrained composite data were extracted to GEMS point files for a grade capping analysis. The composite and capping statistics are summarized in Table 14.5.

TABLE 14.4 **BASIC STATISTICS OF ALL CONSTRAINED ASSAYS AND SAMPLE LENGTHS**					
Variable	**Cu %**	**Au g/t**	**Ag g/t**	**Mo %**	**Length (m)**
Number of Assays	1,843	1,634	1,484	1,837	1,843
Minimum Value	0.01	0.01	0.01	0.001	0.20
Maximum Value	8.11	3.93	1,610.00	0.358	2.40
Mean	0.40	0.07	5.14	0.021	1.83
Median	0.36	0.07	27.18	0.018	1.99
Variance	0.15	0.03	2,279.53	0.001	0.13
Standard Deviation	0.38	0.16	47.74	0.022	0.36
Coefficient of Variation	0.97	2.19	9.28	1.027	0.20

TABLE 14.5 **COMPOSITE AND CAPPING SUMMARY STATISTICS**								
Variable	**Cu Comp**	**Cu Cap Comp**	**Au Comp**	**Au Cap Comp**	**Ag Comp**	**Ag Cap Comp**	**Mo Comp**	**Mo Cap Comp**
No. of Samples	1,673	1,673	1,551	1,551	1,409	1,409	1,667	1,667
Min. Value %	0.02	0.02	0.01	0.01	0.01	0.01	0.001	0.001
Max. Value %	6.85	2.00	3.05	1.01	656.00	200.00	0.281	0.192
Mean %	0.39	0.38	0.07	0.07	3.77	3.09	0.022	0.020
Median %	0.37	0.34	0.06	0.05	11.16	3.55	0.017	0.017
Variance %	0.11	0.05	0.01	0.01	614.86	148.35	0.001	0.001
Standard Deviation %	0.32	0.21	0.12	0.09	24.80	12.18	0.017	0.017
Coefficient of Variation	0.82	0.55	1.75	1.31	6.58	3.95	0.858	0.829

14.7 GRADE CAPPING

Grade capping was investigated on the 2.0m composite values within the constraining domains to ensure that the possible influence of erratic high values did not bias the database. Cu, Au, Ag and Mo composite Log-normal histograms were generated for each mineralized domain and the resulting graphs are exhibited in Appendix III. The Cu, Au, Ag and Mo grade capping values are detailed in Table 14.6. A total of 6 Cu composites, 3 Au composites, 5 Ag composites and 1 Mo composite were capped. The capped composites were utilized to develop variograms and for block model grade interpolation.

TABLE 14.6
GRADE CAPPING VALUES

Variable	Domains	Total Number of Composites	Capping Value	Number of Composites Capped	Mean of Composites	Mean of Capped Composites	Coefficient of Variation of Composites	Coefficient of Variation of Capped Composites	Capping Percentile
Cu	Minz1	1,357	2.0 %	3	0.40	0.39	0.64	0.56	99.8
	Minz2	163	No Cap	No Cap	0.33	No Cap	0.49	No Cap	100
	Minz3	80	1.0 %	3	0.55	0.39	1.81	0.59	96.3
	Minz4	73	No Cap	No Cap	0.33	No Cap	0.34	No Cap	100
Au	Minz1	1,264	1.0 g/t	1	0.07	0.06	1.33	1.25	99.9
	Minz2	152	No Cap	No Cap	0.06	No Cap	0.88	No Cap	100
	Minz3	65	1.0 g/t	1	0.14	0.11	2.81	1.81	98.5
	Minz4	70	0.16 g/t	1	0.07	0.05	2.10	0.61	98.6
Ag	Minz1	1,148	200 g/t	2	3.36	2.22	6.63	2.46	99.8
	Minz2	143	50 g/t	2	3.43	2.82	3.54	2.24	98.6
	Minz3	58	100 g/t	1	14.52	7.37	4.66	2.50	98.3
	Minz4	60	No Cap	No Cap	1.97	No Cap	2.03	No Cap	100
Mo	Minz1	1,353	No Cap	No Cap	0.020	No Cap	0.796	No Cap	100
	Minz2	162	No Cap	No Cap	0.026	No Cap	0.977	No Cap	100
	Minz3	80	No Cap	No Cap	0.021	No Cap	0.674	No Cap	100
	Minz4	72	0.06	1	0.020	0.018	1.335	0.700	98.6

14.8 SEMI-VARIOGRAPHY

A semi-variography analysis was performed as a guide to determining a grade interpolation search strategy. Semi-variograms were attempted using capped Cu composites for domain Minz1, and reasonable Semi-variograms were developed along strike, down dip and across dip. Selected semi-variograms are attached in Appendix IV.

Based on the analysis of the resulting experimental semi-variograms, continuity ellipsoids were subsequently generated using the observed ranges. The ellipses were utilized as the basis for estimation search ranges, distance weighting calculations and Mineral Resource classification criteria. Anisotropy was modeled based on an average strike direction of 140°, -10° NE down dip.

14.9 BULK DENSITY

A total of 396 bulk density measurements from 56 drill holes drilled from 2014 to 2017 were undertaken by Minsud. 127 of the 396 samples were utilized from within the mineralized domains. The bulk density measurements were performed by selecting core samples of 8-15cm in length from the mineralization zones, preparing solid drill core cylinders and weighing once dried. Average bulk density within the mineralized domains was 2.63t/m^3 with a range of 2.23t/m^3 to 3.09t/m^3.

David Burga, P.Geo. of P&E collected 39 core samples during his site visits, which were tested for bulk density by Alex Stewart Argentina S.A. These bulk densities were averaged at 2.61t/m^3 with a variation from 2.1t/m^3 to 3.0t/m^3.

For this Mineral Resource Estimate update, only bulk densities which were measured by Minsud which fell within the mineralized domain wireframes were selected for block model density interpolation using a simple spherical search interpolation method. The resulting average bulk density of the mineralized grade blocks was 2.63t/m^3.

14.10 BLOCK MODELING

The Chita Valley Mineral Resource block model was constructed using Geovia GEMS V6.7.4 modelling software and the block model origin and block size are tabulated in Table 14.7. The block model was rotated 50^o clockwise in order to orient the X axis parallel to the strike trend of the domains. The block model consists of separate models for estimated grades (Cu, Au, Ag and Mo), rock type, volume percent, bulk density and classification attributes.

TABLE 14.7 **BLOCK MODEL DEFINITION**			
Direction	**Origin**	**No. of Blocks**	**Block Size (m)**
X	449,026.627	126	10
Y	6,620,161.680	168	10
Z	3,325	260	2
Rotation	50° Clockwise		

All blocks in the rock type block model were initially assigned a waste rock type of 99, corresponding to the surrounding country rocks. All mineralized domains were used to code all blocks within the rock type block model that contain by volume at least 1 % or greater volume within each mineralized domain. These blocks were assigned their appropriate individual rock type as indicated in Table 14.3. The topographic surface was subsequently utilized to assign rock type 0, corresponding to air, to all blocks 50 % or greater above the surface.

A volume percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside the constraining domains. As a result, the domain boundary was properly represented by the volume percent model ability to measure individual infinitely variable block inclusion percentages within that domain. The minimum inclusion percentage of the mineralized blocks was set to 1%.

The bulk density data within the domain wireframe was selected to interpolate the bulk density of the domain block model using a simple spherical search method with a single pass. The average bulk density of all mineralized blocks was 2.63 t/m^3.

The Cu and Mo grade block models were interpolated with Inverse Distance Squared ($1/D^2$), while Au and Ag grade were interpolated with Inverse Distance Cubed ($1/D^3$) using the capped composites. Two passes (Indicated and Inferred) were utilized for the grade interpolation to progressively capture the sample points to avoid over smoothing and preserve local grade variability. Search ellipse ranges were based on the variograms and search directions which were aligned with the strike and dip directions of each domain respectively. Grade blocks were interpolated using the following parameters in Table 14.8.

TABLE 14.8 **GRADE BLOCK MODEL INTERPOLATION PARAMETERS**						
Pass	**Dip Range (m)**	**Strike Range (m)**	**Across Dip Range (m)**	**Max No. of Samples per Hole**	**Min No. Samples**	**Max No. Samples**
I - Indicated	75	75	25	2	3	20
II - Inferred	500	500	150	2	1	20

Selected cross-sections and plans of the Cu grade blocks are presented in Appendix V.

14.11 RESOURCE CLASSIFICATION

In P&E's opinion, the drilling, assaying and exploration work of the Chita Valley Deposit supporting this Mineral Resource Estimate are sufficient to indicate a reasonable potential for economic extraction and thus qualify it as a Mineral Resource Estimate under the CIM definition standards. Resources were classified in the Cu Indicated and Inferred categories based on the geological interpretation, semi-variogram performance and drill hole spacing. Selected cross-sections and plans of the classification blocks are presented in Appendix VI.

14.12 MINERAL RESOURCE ESTIMATE

The Mineral Resource Estimate was derived from applying a 0.25% Cu cut-off grade to the block model and reporting the resulting tonnes and grade for potentially mineable areas within a constraining open pit shell. The following calculation demonstrates the rationale supporting the Cu cut-off grade that determines the open pit constrained portion of the mineralization.

Open Pit Cu Cut-Off Grade Calculation

Cu Price	US$2.46/lb based on two year trailing average at Nov 30/17
Cu Recovery	78%
Process Cost (5,000 tpd)	US$8.0/tonne processed
General & Administration	US$2.5/tonne processed
Cu Refining US$/lb	US$0.08
Cu Smelter Payable	97%

Therefore, the Cu cut-off grade for the open pit Mineral Resource estimate is calculated as follows:

Process and G&A costs per ore tonne = ($8 + $2.5) = $10.5/tonne
($10.5/[(($2.46 -$0.08) x 22.046 x 78% Recovery x 97% Payable)] =0.264, **<u>Use 0.25% Cu</u>**

14.12.1 Pit Optimization Parameters

An open pit Mineral Resource model was further investigated with apit optimization to ensure a reasonable assumption of potential economic extraction could be made (see optimized pit shell in Appendix VII). The following parameters were utilized for the pit optimization:

Cu Price	US$2.46/lb.
Cu Recovery	78%
Mineralized Material Mining Cost	US$2/tonne mined
Waste Rock Mining Cost	US$2/tonne mined
Process Cost (5,000 tpd)	US$8.0/tonne processed
General/Administration	US$2.5/tonne processed
Cu Refining $/lb	US$0.08
Cu Smelter Payable	97%
Pit Slopes	45 degrees

14.12.1.1 Mineral Resource Estimate

The resulting Mineral Resource Estimate is tabulated in Table 14.9. P&E considers the mineralization of Chita Valley Deposit to be potentially amenable to Open Pit extraction.

TABLE 14.9
PIT CONSTRAINED MINERAL RESOURCE ESTIMATE (1-3)
at 0.25% Cu Cut-off

Classification	Tonnage M	Cu %	Contained Cu M lb	Au g/t	Ag g/t	Mo %
Indicated	33.02	0.43	310.8	0.07	2.28	0.018
Inferred	8.59	0.40	75.4	0.07	1.73	0.016

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
(2) The Inferred Mineral Resource in this estimate has a lower level of confidence that that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.
(3) The Mineral Resource Estimate in this report was estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

14.12.1.2 Mineral Resource Estimate Sensitivity

Mineral Resource Estimates are sensitive to the selection of the reporting Cu cut-off grade. The sensitivities of the Cu cut-off are demonstrated in Table 14.10 for the Chita Valley Deposit pit constrained Mineral Resource Estimate sensitivity.

TABLE 14.10 CHITA PIT CONSTRAINED MINERAL RESOURCE ESTIMATE SENSITIVITY							
Classification	**Cut-Off Cu %**	**Tonnage M**	**Cu %**	**Cu M lb**	**Au g/t**	**Ag g/t**	**Mo %**
Indicated	0.50	6,313,807	0.65	90.6	0.11	4.13	0.018
	0.45	9,822,048	0.59	127.3	0.10	3.50	0.018
	0.40	15,296,438	0.53	178.4	0.09	3.03	0.018
	0.35	23,128,708	0.48	242.7	0.08	2.64	0.019
	0.30	30,005,291	0.44	292.4	0.07	2.39	0.018
	0.25	33,015,996	0.43	310.8	0.07	2.28	0.018
	0.20	33,707,323	0.42	314.3	0.07	2.26	0.018
	0.15	33,847,699	0.42	314.9	0.07	2.26	0.018
	0.10	33,870,401	0.42	315.1	0.07	2.26	0.018
	0.05	33,872,411	0.42	315.1	0.07	2.26	0.018
	0.001	33,872,411	0.42	315.1	0.07	2.26	0.018
Inferred	0.50	1,053,071	0.59	13.8	0.12	2.92	0.021
	0.45	1,907,959	0.54	22.7	0.10	2.67	0.018
	0.40	3,229,746	0.49	35.0	0.09	2.37	0.016
	0.35	5,630,506	0.44	54.6	0.08	2.03	0.016
	0.30	7,817,677	0.41	70.5	0.07	1.81	0.016
	0.25	8,594,576	0.40	75.4	0.07	1.73	0.016
	0.20	8,660,961	0.40	75.6	0.07	1.72	0.016
	0.15	8,664,491	0.40	75.6	0.07	1.72	0.016
	0.10	8,664,491	0.40	75.6	0.07	1.72	0.016
	0.05	8,664,491	0.40	75.6	0.07	1.72	0.016
	0.001	8,664,491	0.40	75.6	0.07	1.72	0.016

14.13 CONFIRMATION OF MINERAL RESOURCE ESTIMATE

The Mineral Resource Estimate block model was validated using several industry standard methods including visual and statistical methods.

- Visual examination of composite and block grades on successive plans and sections on-screen to confirm that the block model correctly reflects the distribution of sample grades.

- Review of estimation parameters including:
  - Number of composites used for estimation;
  - Number of holes used for estimation;
  - Mean Distance to sample used;
  - Number of passes used to estimate grade;
  - Mean value of the composites used.

A comparison of Cu composite statistics within the Cu block model at a 0.001% Cu cut-off grade are presented in Table 14.11.

TABLE 14.11
STATISTICAL COMPARISON OF COMPOSITES WITHIN BLOCK MODEL

Data Type	Cu% Mean	Variance	Standard Deviation	Coefficient of Variation
Constrained Assays	0.40	0.15	0.38	0.97
Composites	0.39	0.11	0.32	0.82
Capped Composites	0.38	0.05	0.31	0.55
Block Model	0.37	0.01	0.12	0.33

The comparison above shows that the average grades of all the Cu blocks in the block models agree well with the capped composites used for grade estimation.

- A volumetric comparison was performed with the block model volume versus the geometric calculated volume of the domain solids and the differences are shown in Table 14.12.

TABLE 14.12
VOLUME COMPARISON OF BLOCK MODEL WITH DOMAIN SOLIDS

Geometric Volume of Wireframes	29,494,388 m^3
Block Model Volume	29,486,123 m^3
Difference %	0.028 %

15.0 MINERAL RESERVE ESTIMATE

This section is not applicable to the report.

16.0 MINING METHODS

This section is not applicable to the report.

17.0 RECOVERY METHODS

This section is not applicable to the report.

18.0 PROJECT INFRASTRUCTURE

This section is not applicable to the report.

19.0 MARKET STUDIES AND CONTRACTS

This section is not applicable to the report.

20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

It is always prudent to consider environmental and water resources aspects of a potential mining property at an early stage of its exploration. In this instance the property is not a greenfields situation because the Minas de Pinto and to a lesser extent the Brechas Vacas and Chita Properties have been the site of exploration and localized artisanal mining activities intermittently from the at least the early 20th century to the present. Minsud has initiated baseline studies in key areas including:

- Glaciers,
- Archaeology,
- Water Quality, and
- Weather recording.

The type of work that was done on most parts of the current properties typically results in some land disturbance (for example drill access roads, grid lines, drill sites and surface trenches), but usually does not generally create significant pollution problems such as acid drainage and metal leachate. However, some very localized historical artisanal mine/waste rock sites (examples; Fatima, Carmen, Barba, Argentina and Romina veins) do have such pollution risks, albeit modest.

There are no conventional mine, processing plant or tailings/waste rock sites on the Chita Valley properties. The basic task at this time is to define baseline parameters so that the environmental situation can be documented in its semi-natural state prior to potential major mining/processing activities.

20.1 GLACIERS

In 2010 the previous Argentina federal government enacted the Glaciers Law, which aims to preserve glaciers and periglacial areas for strategic water reserves, the protection of biodiversity and for scientific and tourism interests. The areas primarily affected by the legislation, southern Patagonia and the mountainous terrain along the Andean border with Chile, are also the country's richest sources of mineral resources. Godoy (2011) states “Under the Glaciers Law, resources companies (and others) are prohibited from building any architectural or infrastructural works or undertaking any industrial works on glaciers. They also cannot release any contaminants, chemical products or waste of any nature or volume on glaciers or periglacial areas. The most significant restriction on resources companies, however, is the prohibition against undertaking oil and gas and mining exploration or exploitation activities on glaciers or periglacial areas.”

For the practical purpose of conducting exploration work requiring heavy machinery, such as drilling equipment, etc., a glaciological report verifying the absence of ice and rock glaciers and permafrost areas must be completed. In February 2013, Minsud retained Argentine glaciological consultants UMAconsult to complete a report on the Chita mining concessions. This study has shown that no active glaciers, rock glaciers or permafrost areas are present on the Chita concessions.

It is also noted by UMAconsult, based on regional meteorological data, satellite imagery and field observations, that the -1 degree C isotherm (the lower limit of discontinuous permafrost) is at the elevation of approximately 4,100 m asl (Figure 20.1). This is very encouraging for potential exploration programs on the Brechas Vacas, Pinto and Chita II areas where all current target areas lie between 3,000 and 4,000 m asl.

Glaciological reports are required for the Brechas Vacas, Pinto and Chita II areas prior to conducting advanced exploration work. However, none of these areas lie above 4,000 m asl.

20.2 ARCHAEOLOGY

A common definition (Miriam Webster) of archaeology is: "the scientific study of material remains (such as tools, pottery, jewelry, stone walls, and monuments) of past human life and activities." The Chita Valley Project area is rich in archeological lore, as has been determined by Minsud, chiefly through the contracted efforts of local archeologist, Dra. C.T. Michieli (Michieli; 2014). Minsud is committed to preserving all archeological and historical sites. It is not coincidence that many sites have repeatedly attracted inhabitants or visitors over time. Dra, Michieli's has identified several historical/archeological sites within the current Chita and Minas de Pinto properties. These contain artifacts, structures other features that range in age from about 8,500 years before the present to early 20th century.

Two archaeological sites have been identified near, but outside, the Chita Porphyry South resources area. These sites contain scattered lithic material (rudimentary tools and debris made from black stone, possibly fine grained basaltic lava) thought to belong to the oldest settlement in the region that is dated to approximately 8,500 years before the present (Gambier, 1974). This type of ancient artifact is typically outside of its original location due to the various influences of gravity, wind and water. Minsud has cordoned off and placed signs at all known historical/archaeological sites, see Figure 20.2.

Figure 20.1 Chita Valley Region, -1° C Isotherm

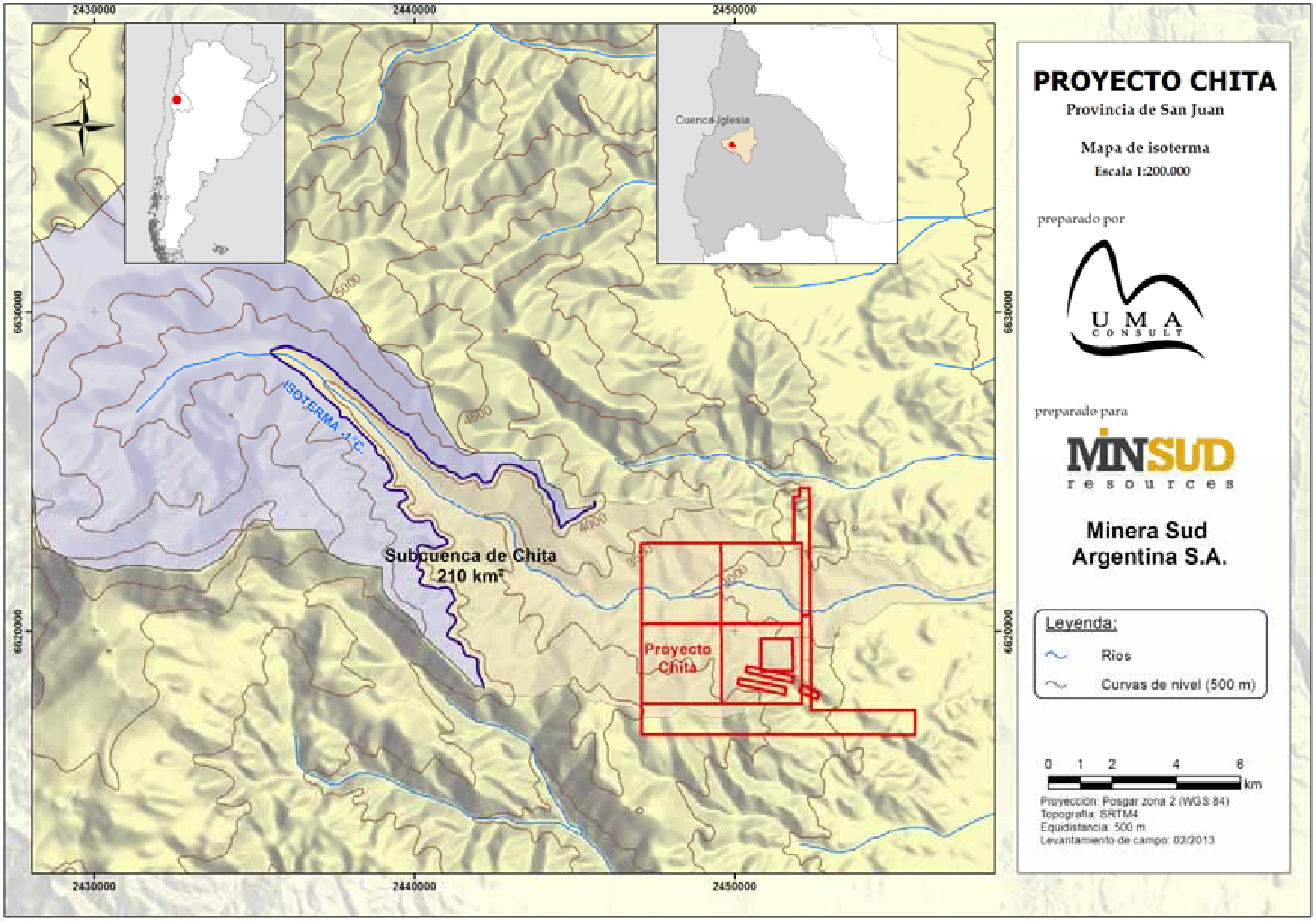


Figure 20.2 Photograph of Archaeological Site A, (Inset) Rudimentary Stone Tools

A few archaeological sites were assigned to the middle and late agricultural periods (Gambier, *op.cit*.), that date from approximately 750 to 1450 years before present. None of these lie inside the areas currently being explored.

Historical small-scale mining activities have taken place primarily in the Minas de Pinto area but also in other areas such as Brechas Ridge and southeast of Chita Porphyry. In the absence of written records, it is difficult to determine timelines for mining activities in the Chita Valley. Based on Dr. Michieli's work, some of the technology utilized dates to the mid-nineteenth century.

Also, a well constructed mud-brick building with a substantial stone corral is the ruins of an old livestock facility, probably the time of the transfer of live cattle to 19th Century nitrate mines in northern Chile. Due to the magnitude of the house and the corrals, the great economic activity that sustained this site can be appreciated. Small-scale 20th Century mining/exploration activity altered the facility.

20.3 BASELINE WATER QUALITY

The Company has been periodically collecting baseline water quality date from Arroyo Chita and one of it's small tributaries near the core logging area since 2009. The first samples were collected in 2009, then on an annual basis between 2012 and 2016. The program will resume in 2018. The sample site locations are given in Table 20.1 below. The sample locations adjacent to the Chita Porphyry area are shown in Figure 20.3. Figure 20.4 shows a typical sampling site.

Figure 20.3 Water Sampling Points 1 to 3 Located in the Chita Porphyry Area

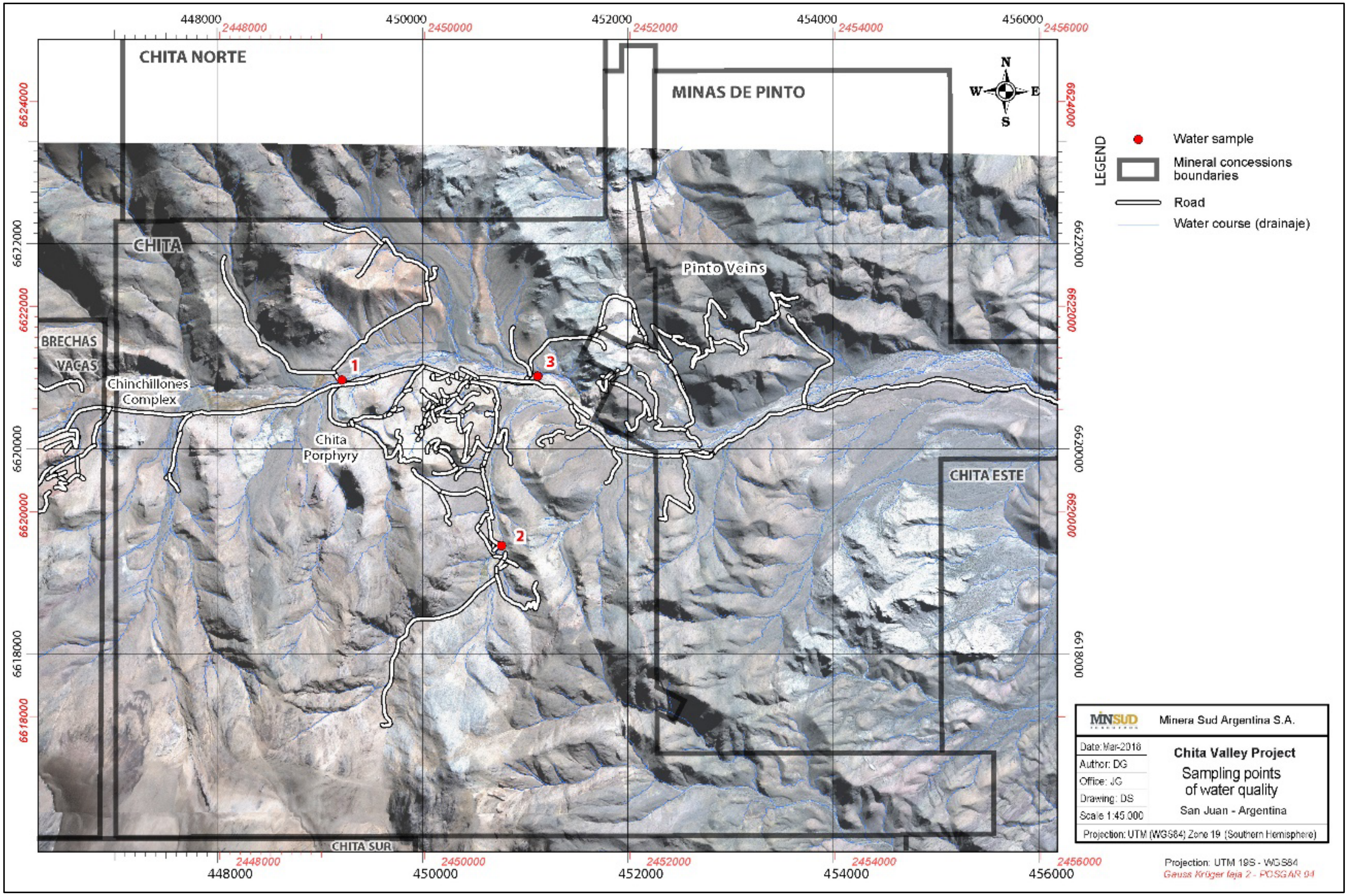


TABLE 20.1
BASELINE WATER QUALITY SAMPLE LOCATIONS

Property	Sample Site	Sample No.	UTM WGS84 Zone 19S	
			East	North
Brechas Vacas	Site 1	ACH-01	2,443,635	6,622,136
Chita	Site 2	ACH-02	2,449,284	6,621,486
Chita	Site 3	ACH-03	2,450,839	6,619,872
Chita	Site 4	ACH-04	2,451,192	6,621,524
Pinto	Site 5	ACH-05	2,452,812	6,620,805

Figure 20.4 Photograph of Water Sampling Control Point ACH-03

Table 20.2 shows the most recent (2016) set of samples compared with the standards of water quality admitted by law 25.585/95.

TABLE 20.2
BASELINE WATER QUALITY 2016 ANALYTICAL DATA

Description	ACH-01	ACH-02	ACH-03	ACH-04	ACH-05	Standard	Unit
PH Lab	8.0	8.0	7.9	8.0	8.1	6.5-8.5	UpH
Total disolved. solids at 180º C	680	500	174	486	552	10,000	mg/L
Aluminum	**0.75**	**0.46**	<0.10	**1.58**	**0.44**	0.20	mg/L
Antimony	<0.001	<0.001	<0.001	<0.001	<0.001	0.01	mg/L
Arsenic	< 0.01	<0.010	<0.010	<0.010	<0.010	0.05	mg/L
Barium	<0.10	<0.10	<0.10	<0.10	<0.10	1.00	mg/L
Beryllium	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.000039	mg/L
Boron	<0.2	<0.2	<0.2	<0.2	<0.2	*500	mg/L
Gold	< 0.01	<0.010	<0.010	<0.010	<0.010	1000	mg/L
Cadmium	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.005	mg/L
Total Cyanide	<0.01	<0.01	<0.01	<0.01	<0.01	0.10	mg/L
Zinc	0.07	0.02	<0.02	0.06	0.02	5.00	mg/L
Copper	0.006	0.004	0.002	0.009	0.004	1.00	mg/L
Total Chromium	<0.002	<0.002	<0.002	<0.002	<0.002	0.05	mg/L
Hexavalent chromium	<0.01	<0.01	<0.01	<0.01	<0.01	0.05	mg/L
Fluoride	0.7	0.6	<0.5	0.6	0.6	1.5	mg/L
Mercury	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	mg/L
Nickel	<0.010	<0.010	<0.010	<0.010	<0.010	0.025	mg/L
Nitrate	5.7	<5.0	<5.0	<5.0	<5.0	10.00	mg/L
Nitrite	<0.02	<0.02	<0.02	<0.02	<0.02	1.00	mg/L
Silver	<0.001	<0.001	<0.001	<0.001	<0.001	0.05	mg/L
Lead	<0.001	<0.001	<0.001	0.003	<0.001	0.05	mg/L
Selenium	<0.010	<0.010	<0.010	<0.010	<0.010	0.01	mg/L
Uranium	<0.010	<0.010	<0.010	<0.010	<0.010	0.1	mg/L

Note: *Chemical analysis protocol Q231838 (Laboratory: Induser). Water quality guide levels for human consumption Table 1 of Annex IV National Law No. 24585/95. In the case of the B level water quality guide for irrigation Table 5 of Annex IV of the National Law No. 24585/95.*

20.4 BASELINE WEATHER DATA

Conventional weather data has not been previously recorded in the Chita Valley area. On December 2016, the Company installed a weather station (Davis Vantage Pro2) at position W2450832; N6619917 (CAI) at an altitude of 3,100 metres asl, also known as the Minsud core logging/storage site. Meteorological parameters for the station during year 2017 are as follows:

Rainfall: The 2017 yearly median rainfall is 19.1 mm per month with the highest monthly rainfall occurring in February with 74.60 mm. During June through November, rainfall was rare. According to recorded data, the months of February and May have the highest monthly rainfall and averages over 50% of the annual total.

Temperature: The 2017 average maximum and minimum annual temperatures were 28.4°C and -4.7°C, respectively. The warmest months are January and February with an average monthly temperature of 18.6°C and 15.7°C, respectively. The coldest month is May with a monthly average temperature of 4.2°C. The absolute maximum temperatures in January is 33.2°C and the minimum is 9.5°C, while in May the maximum is 28.4°C and the minimum -11.3°C.

Wind: The 2017 annual average wind speed was 7 km/h., while the maximum wind gust speed was recorded in November at 93.3 km/h. The remarkable range of velocity is a result of the Zonda wind (Spanish: "*viento zonda*"), a wind that often occurs on the eastern slope of the Andes, in Argentina.

21.0 CAPITAL AND OPERATING COSTS

This section is not applicable to the report.

22.0 ECONOMIC ANALYSIS

This section is not applicable to the report.

23.0 ADJACENT PROPERTIES

There are no properties of significance adjacent to the Chita Valley Property.

24.0 OTHER RELEVANT DATA AND INFORMATION

This section is not applicable to the report.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 GENERAL STATEMENT

The Chita Valley Project is located in the department of Iglesia, San Juan Province on the eastern flank of the Andean range. San Juan Province is the largest producer of precious metals in Argentina.

Minera Sud Argentina has consolidated seven properties into the Chita Valley Project that cover 174 km^2 of highly prospective terrain. The project is located 30 km from the town of Bella Vista, Dto de Iglesia- Province of San Juan. At elevations between 3,000 and 4,200 m asl, the properties are easily accessible by 4WD vehicles along gravel roads and may be explored for the most part on a year round basis. Furthermore, according to initial glaciological studies the Properties will not likely be adversely affected by Argentina's recently enacted Glacial Law. The Company is conducting ongoing regional and detailed geological studies including lithological, alteration, structural and mineralization investigations, assisted by ground magnetic and IP/Resistivity surveys. This information, when integrated with historical and current surface channel sampling and drilling data, will be utilized to select priority areas for more sophisticated geophysical and/or geochemical investigations. This will lead to drilling for target testing purposes and outline/infill drilling to upgrade resource estimates in the Chita South Porphyry area.

25.2 GENERAL GEOLOGICAL INTERPRETATION CHITA VALLEY COMPLEX

The Chita Valley exploration project is primarily an early, to locally intermediate, stage prospect with widespread indications of Miocene age Porphyry Cu-Mo-Au-Ag mineralization and related High and Low-sulphidation Epithermal Au-Ag +/- base metals deposits. The mineralization is associated with a shallow (1.5-2 km) level plutonic complex emplaced in a magmatic arc at convergent plate margins. The form of emplacement is related to tectonic and structural events affecting the host rocks where the porphyry/volcanic system occurs. In the Chita Valley area, the structural controls are the generally N-S Andean thrust and folds regime and the generally E-W to WNW-ESE Chita Valley transfer fault.

The current conceptual target model covers a large tract (174 km^2) of underexplored mineral holdings. These targets run the full size range from large tonnage porphyry/epithermal deposits to small polymetallic or bonanza vein type deposits. The following sections describe the interpretive aspects and conclusions with respect to the major component sectors of the Chita Valley complex. From west to east these include:

- **Placetas Flow Dome Complex Target Model**: The Placetas target area is interpreted as a flow dome complex. **Au-Ag epithermal Veins and disseminated Au-Ag mineralization** in permeable tuffs are the principal conceptual targets. The endogenous part of the dome is a dacite porphyry and the exogene flow is characterized by a sequence of pyroclastic breccia flows (with quartzite breccia fragments) and air fall tuff. Favorable-permeable tuff is altered to illite and is cut by quartz veinlets. The carapace of the dome is cut by a late structural N30ºE veins system with development of hydrofracture quartz veins in the vein halo. Hydro-fractures in the halo follow a N30ºE structural system cutting the Placetas carapace Dome.

- **The Chinchillones Phreatic Breccia and Potential Porphyry Target Model**: The Chinchillones phreatic breccia is emplaced into an E-W structural system, which dips steeply 70º north. The breccia comprises monolithic silicified Agua Negra sandstone fragments in an hydrothermal matrix of opaline silica. The Chinchillones Breccia, the De Los Pozos and Breccias Ridge areas occur in the periphery, or annular structure, of a pre-mineralization Central Dome. Outcrops of porphyry at the Chinchillones and Breccias Ridge areas and a core section in drill hole MSA08A, indicate potential for porphyry concealed below the Chita Valley.

- **Chita Porphyry Sector Target Model**: The Chita Porphyry is multiphase in character. At least three major phases of porphyry intrusion have been recognized in surface exposures and drill core. Contacts between the porphyry phases are mainly sharp. Two main stages of alteration are recognized, Potassic silicate (quartz-biotite-K-feldspar) and intermediate argillic (sercite-clay-chlorite) with the former totally or partially over printed by the latter. The porphyry is thought initially to have been dominated by K silicate alteration, the intensity of which decreased during progressive porphyry emplacement. All quartz-magnetite vein stockwork and copper introduction accompanied the K silicate event. K silicate alteration is most widely preserved in the intermineral porphyry in the lower southern part of the Chita Valley.

  Supergene modification of the Chita porphyry system was relatively minor. Thin, immature **zone of leaching and chalcocite (digenite) enrichment, separated locally by transitional zone containing both copper-bearing oxides and sulphides** cap the mineralized parts of the system, mainly in the south Chita porphyry where extensive drilling has taken place. The overburden covered central part of the area may have additional enrichment zone potential, if not removed by Pleistocene glaciation.

  To date the depth potential of the Chita Porphyry has not been tested, nor has the central overburden covered section of Chita Valley adjacent to the major Chita Valley transfer fault. Geological characteristics discussed above strongly suggest that the upper marginal parts of a typical porphyry copper system are exposed at Chita South and North (“Chita Sur and Chita Norte”) with the two separated by the broad Chita Valley. Evidence for this, includes the presence of pyrite-rich sericitic and local intermediate argillic alteration as seen in field observations and drill core sections. A downward transition to K-silicate alteration is indicated at the southern margin the Chita Valley. In addition, magnetic data indicates the overburden covered valley area may be underlain by magnetite bearing K-Silicate alteration and by inference **possible chalcopyrite-bornite mineralization**. The outer pyrite or argillic zone remnants are preserved at the extreme north and south of Chita, where the porphyry contact is evident with the overlying Agua Negra sediments.

  Post porphyry mineralization **low-sulphidation precious metal veins** are believed to have potential complementary benefits to the deposit’s economic model either as discrete high-grade areas of direct shipping material or as broader sectors of elevated Au/Ag inside the Cu wireframe. One epithermal prospect, the Condor Vein, shows extensive potential for high grade Au/Ag including a number very high or “Bonanza-type” assays.

- **Minas de Pinto Sector**: Multiple Au-Ag +/- Base metals epithermal vein systems predominantly hosted by basement rocks. The NNE-SSW to NE-SW secondary faults are potentially important in terms of providing a favourable structural setting for **low-sulphidation epithermal Au-Ag mineralization**. While there are numerous generally E-W trending epithermal veins that border the Chita Valley fault the vast majority are narrow and discontinuous. The NE-SW trending Candela vein is up to 2 metres thick and continuously traceable for over 100 metres.

- **Other potential Sectors**: While unproven as yet due to lack of bedrock exposure, based on interpretation of magnetic data, IP/Resistivity data and alteration features, there may be additional prospective Tertiary igneous units underlying Quaternary cover. Areas of particular interest lie between the Placetas and Chinchillones sectors and also between the Chinchillones and Chita Porphyry sectors. In the Minas de Pinto area there are similar features underlying both Quaternary cover and Agua Negra Formation sediments.

The main focus of this report is an updated Resource estimation based on previous work and a fourth quarter 2017 diamond drilling program at the South Chita Porphyry area.

25.3 INTERPRETATION AND CONCLUSIONS CHITA PORPHYRY SECTOR

The first area covered by Minsud's 'back to basics' systematic multidisciplinary exploration approach to target development was the Chita South Porphyry area. Since this area had already been covered by a number of extensive exploration programs including geological mapping, geophysical and geochemical surveys and four drilling campaigns it is important to reassess the previous work in some detail to provide a framework for the current conclusions.

Most of the historic exploration, not directed toward Au-Ag bearing polymetallic veins, has concentrated on the Chita South Porphyry area. Work including geological mapping and geophysical surveying consisting of a few IP/Resistivity profiles was completed by Direcion General de Fabricaciones Militares ("DGFM") in the 1960s and 1970s. Two diamond drilling campaigns totalling 8 diamond drill holes were implemented by DGFM in 1969 and 1976. Another group, Minas Argentinas S. A. ("MASA") completed limited IP/Resistivity surveying and 10 reverse circulation drill holes on the Property in 1996. Between 2006 and 2011, Minsud completed surface mapping and sampling, limited geophysical work, and three diamond drill holes.

All of the historical and the 2011 Minsud diamond drill holes contained elevated Cu and Mo assay values throughout the entire hole lengths. It is also noted that most of the holes were terminated while still in mineralized altered porphyry and that the hole orientations were not optimized to intersect the steeply inclined vein systems. There is also a possibility of combined or overlapping porphyry and vein systems where auriferous veins have been encountered within the Cu-Mo zone in the Chita South porphyry.

DGFM made an estimate of grade and tonnage based on the 1969-76 drilling and unknown parameters (Mallamacci, 1976). Spring (2011) reports; "The following mineral resource, as reported by DGFM, was not verified by WGM, and the reader should not rely upon the estimate, it is only presented as a historical resource estimate: 'DGFM based on the drilling results estimated that the southern Chita intrusive contained a secondary enriched zone at a cutoff of

0.20% Cu of approximately 30.2 million tonnes containing an average grade of 0.27% Cu and 0.019% Mo.' However, no further work was carried out and the study was terminated due to the low contained metal grades." Minsud's main conclusion with regard to this estimation is that it is premature and probably misleading to draw any inferences with respect to grade, grade distribution, size or geometry from a few widely-spaced small-diameter poor-recovery drill holes.

The 1996 MASA reverse circulation drilling included 10 boreholes designed to test various geological and geophysical features in igneous and sedimentary lithologies mostly outside of the Chita Porphyry in the Chita Property area. These holes intersected widespread intervals of polymetallic quartz vein-style mineralization. The RC cuttings were systematically sampled and analysed for various metals although apparently not for Mo. All of the MASA RC drill holes contained elevated Cu, Ag and Au assay values , however, only two drill holes, C96-10 (Chita South) and C96-08 (Chita North) actually intersected the proximal portion of the Chita Porphyry enigmatic complex. Furthermore, based on recent mapping C96-10 is in the generally barren LIM phase.

The 2011 Minsud drilling targeted gold and silver epithermal structures emplaced in the porphyry. The initial hole PSU11-01, remarkably, intersected 2.0 metres (1.4 metres true thickness) averaging 16.93 g/t Au and 27.8 g/t Ag from 8.0 to 10.0 metres hole depth. This series of holes also highlighted the very persistent lateral and depth continuity of Mo and Cu anomalous values in the area tested. Minsud is encouraged by the multiplicity of mineralization styles. Reinterpreting the drill hole data based on more recent detailed mapping, it is apparent that drill holes PSU11-01 and 02 are characterized by EIM dacitic porphyry containing A and B type vein mineralization, while PSU11-03 is predominantly LIM dacite porphyry with breccias that may contain fragments of earlier mineralization. An empirical comparison between holes PSU11-01 and 02 and the historical DGFM holes shows a modest increase in Cu average, a significant increase in Mo, as well as elevated Au and Ag locally in the 2011 holes.

The 2012-13 work in the sector consisted mainly of detailed mapping and sampling, including a 530-metre-long semi-continuous set of sawn channel samples known as the Chita South channel.

The 2014 work was primarily diamond drilling in two separate campaigns designed to better understand the complexities of the various mineralization styles. It is concluded that the relatively large diameter HQ drill holes and -50 or -60 degree inclinations are optimal for testing the various epithermal vein sets, the disseminated mineralization, and the oxidation, supergene, transition, primary weathering profile. The 2014 program also included a petrographic/SEM mineralogical study and initial bottle-roll metallurgical tests primarily focussed on recovering Cu through H_2SO_4 leaching.

The 2015 program was highlighted by the Company's first CIMM compliant Inferred Resource estimate based on verifiable historical data and its own drilling programs. This estimate was prepared by P&E Mining Consultants Inc. ("P&E"), of Brampton, Ontario. (Burga, *et. al*. 2015). The second quarter saw the completion of an IP/Resistivity survey over 48.6 line kilometres, followed in the second half by another 22 holes of HQ core drilling totalling 4,089 metres mostly in the Chita Porphyry South sector. An updated Inferred Resource estimate including the 2015 drilling data was prepared by P&E (Burga, *et. al*. 2016).

The year of 2016 saw detailed mapping of epithermal Au/Ag vein areas in the Chita Porphyry mostly inside the Inferred Resources wireframe model. Similar detailed mapping continued to the west and east into the Chinchillones and Minas de Pinto areas, respectively. An 11-hole HQ Diamond Drilling program with a total of 1,700 metres commenced late in Q3 and was completed in Q4. The program was designed to continue outlining the Inferred resource of Cu-Mo-Au-Ag and as a preliminary test of epithermal veins in the porphyry. The precious metal veins are believed to have potential complementary benefits to the deposit's economic model either as discrete areas of high grade direct shipping material or as broader sectors of elevated Au/Ag inside the Cu wireframe. In December 2016, Minsud again retained P&E Mining Consultants Inc. to prepare an updated Mineral Resource Estimate (P&E, 2017).

In 2017, Bioleach Solvent Extraction-Electrowinning ("SX-EW") process testwork on Chita samples was completed at CodelcoTec Sp. A. laboratory in Santiago, Chile. This process results in the production of high quality LME grade copper metal typically at low capital and operating cost. In January 2017, the Company submitted six representative drill core samples to CodelcoTech. The diagnostic tests and initial bioleaching column tests results are considered to be highly promising.

- All six samples were evaluated for bioleaching potential by **Selective Copper Extraction Tests** ("S. E. T.") with values ranging between 80 and 95% of the total contained Cu. Samples Met1, Met2 and Met4 S.E.T, test values were 82, 80 and 83%, respectively.

- Three of the six samples (Met1, Met2 & Met4) were then evaluated by **bioleaching tests in columns of 60 cm height and 4 kg capacity t**o verify the Cu recovery value delivered by the S.E.T. tests, primarily to determine the dissolution kinetics of copper. The column tests results for samples Met1, Met2 and Met4 test values were closely similar to the S.E.T. tests at 80, 79 and 80%, respectively.

- In the opinion of CodelcoTech the introduction of a **secondary wash stage** at the end of the bioleaching cycle can increase the extraction value by 3 to 4%.

The latest stage of work in the Chita Porphyry sector was the Q4 2017 outline drilling program in the Chita Porphyry South area, that is a main subject of this report.

The following observations/conclusions are made regarding the historical and recent work programs as they pertain to ongoing exploration strategy:

- If one accepts that porphyry and/or epithermal deposits are better conceptual exploration targets than individual low-sulphidation Au-Ag veins, then a great deal of past work was aimed at secondary targets.

- The historical DGFM and 2011 Minsud drilling are both instrumental in helping to understand the porphyry/epithermal mineralization model. Historical DGFM and 2012-13 mapping and geochemical studies are similarly important.

- Based on geological mapping/prospecting and geochemical data the south-western and north-eastern marginal part of the Chita South porphyry appear to show the most promise in terms of host rocks (i.e. the early mineralization and inter mineral porphyries with “A”, “B” and “D-type” veinlets. This sector coincidently also has the highest vein concentrations and Cu geochemistry values in the Chita South channel.

- The 2014 drilling campaigns added a total of 24 drill holes to Chita South and 1 drill hole to Chita North. It was concluded that the 35 combined Minsud and historical drill holes, together with geological and preliminary processing studies, provided sufficient data for an initial estimation of Inferred Resources. The initial Inferred Resource estimation base case, for the Chita Porphyry South Deposit included Inferred Resources of 18.3 million tonnes at a grade of 0.44% Cu. This was the initial NI 43-101 Mineral Resource Estimate for the Property.

- The 2015 drilling and geophysical programs provided a great deal of new understanding of the Chita Porphyry sector. However, the main focus of the drilling was to continue outlining the deposit in the Chita Porphyry South area rather than to define and upgrade the known mineralization to higher confidence level resource categories. The update Inferred Resource estimation base case, with a reporting date of February 1, 2016, (31.5 million tonnes @ 0.45% Cu, 0.07 g/t Au, 2.2 g/t Ag and 0.017% Mo) represents a ~72% increase in tonnage at closely similar grade.

- The year of 2016 saw detailed mapping of epithermal Au/Ag vein areas in the Chita Porphyry mostly inside the Inferred Resources wireframe model. An 11-hole HQ Diamond Drilling program with a total of 1,700 metres commenced late in Q3 and was completed in Q4. The program was designed to continue outlining the Inferred resource of Cu-Mo-Au-Ag and also as a preliminary test of epithermal veins in the porphyry. The precious metal veins are believed to have potential complementary benefits to the deposit’s economic model either as discrete areas of high grade direct shipping material or as broader sectors of elevated Au/Ag inside the Cu wireframe.

- In December 2016, Minsud again retained P&E Mining Consultants Inc. to prepare an updated Mineral Resource Estimate. All Mineral Resources at a 0.3% Cu cut-off were classified as Inferred category based on the geological interpretation, semi-variogram performance and drill hole spacing. The Mineral Resource Estimate was 37.0 million tonnes @ 0.44% Cu, 0.07 g/t Au, 2.2 g/t Ag and 0.018% Mo. The report may be viewed under the Company’s profile at www.sedar.com.

- The year 2017 featured two important milestones. The first was the successful completion of Bioleach Solvent Extraction Electrowinning diagnostic tests and initial column leach process testwork. The second was additional drilling that resulted in upgrading a substantial portion of the Chita Porphyry South Inferred Resources to the Indicated category.

- Additional outline drilling is required to fully determine the grade/tonnage potential of the Chita Porphyry area particularly in the central and northern sectors. Subsequently a great deal of infill/definition drilling and various other detailed studies will be required before the resources can be fully upgraded to the Indicated or Measured categories. Completion of all this work would enable Minsud to conduct a NI 43-101 compliant preliminary economic evaluation regarding the deposit’s potential commercial viability as a mining project. The Company’s management believes that this work is fully warranted and justified from the technical point of view, but before incurring in such significant expenses it will intend to increase the overall resources either in the Chita Porphyry, particularly the North sector, or other early stage target such as Chinchillones.

- The various outline drilling programs have encountered a number of isolated epithermal Au-Ag+/- base metal veins or concentrations of veins containing significantly higher metal values than the overall average. For example drill hole PSU14-24 encountered 10 meters core length (approximately 5 meters true thickness) averaging 2.72% Cu, 128.9 g/t Ag, 0.84 g/t Au. Another notable intersection from hole PSU15-37 is 2 meters core length (approximately 1 meter true thickness) averaging 4.66 g/t Au, 578 g/t Ag, 0.14% Cu and 0.039% Mo. Another notable intersection from hole PSU17-67 is 2.25 m core length (unknown true thickness) averaging 0.55 g/t Au, 762.0 g/t Ag and 4.38% Cu. Targets like these may be conceptually considered as possible Direct Shipping Ore ("DSO") inside the larger lower grade mineral deposit or as stand-alone small high grade deposits for custom processing in the San Juan region. Minsud plans to conduct detailed mapping and surface sampling, Dipole-Dipole IP/Resistivity surveying and step-out drilling to test these and other area as funding permits.

Minsud concludes that the remainder of the Chita Porphyry area is prospective for at least three mineralization styles. However, until very recently, except for drill tested part of the Chita South just described, it is apparent that very little is known about the areal and vertical distribution of the various lithological, alteration, structural and mineralization parameters that might define high quality drill targets within the rest of the enigmatic assemblage. The data from the 2015 IP/Resistivity survey has provided a great deal of new information regarding structure, alteration, mineralization in the overburden covered areas that make up an estimated 75% of the Chita Porphyry sector.

With much of the prospective setting lying beneath Quaternary cover it is concluded that indirect geophysical methods such as magnetic surveying and other more sophisticated techniques like IP/Resistivity, CASAMT or electromagnetic surveys could assist with developing target areas. Magnetic surveying at 200 metre line spacing is already completed but more detail (100m lines) is required and even greater detail might be needed locally. Modern IP/Resistivity surveying has led to a much better overall 3-D understanding of the complex. Orientation surveys are required to test the suitability of other advanced geophysical surveys.

25.4 SOUTH CHITA PORPHYRY UPDATED RESOURCE ESTIMATION

This Canadian National Instrument 43-101 Technical Report containing a CIMM compliant resource estimation was prepared primarily to document what the Company considers to be a material change to resources previously published by press releases and supported by earlier Technical Reports (Burga et. al., 2014, 2015 & 2016). All earlier documents may be viewed under the Company's profile at www.sedar.com. In P&E's opinion, the drilling, assaying and exploration work of the Chita Porphyry supporting this Mineral Resource Estimate are sufficient to indicate a reasonable potential for economic extraction. All Mineral Resources at a **0.25% Cu cut-off** were classified in the **Indicated** or **Inferred category** based on the geological interpretation, semi-variogram performance and drill hole spacing. An important milestone is that the Company now has a large proportion of **Indicated Resources**, approximately 80% of the total Mineral Resources. The Mineral Resource Estimate is shown in Table 25.1 below.

TABLE 25.1 CHITA PIT CONSTRAINED MINERAL RESOURCE ESTIMATE(1-5) at 0.25% Cu Cut-Off						
Category	**Tonnes M**	**Cu %**	**Contained Cu M lb**	**Au g/t**	**Ag g/t**	**Mo %**
Indicated	33.02	0.43	310.8	0.07	2.28	0.018
Inferred	8.59	0.40	75.4	0.07	1.73	0.016

(1) Mineral Resources which are not Mineral Reserves do not have demonstrated economic viability. The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues. It is noted that no specific issues have been identified as yet.

(2) The Inferred Mineral Resource in this estimate has a lower level of confidence that that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration.

(3) Mineral Resources were estimated utilizing Gemcom software and conventional block modeling within 3D wireframes defined on a 0.25% Cu cut-off, capped composites and inverse distance grade interpolation.

(4) The Mineral Resources in this report were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.

(5) The 0.25% Cu Mineral Resource Estimate cut-off grade was derived from the Nov 30/17 two year trailing average Cu price of US$2.46/lb, 78% process recovery, US$8/t process cost, and US$2.50/t G&A cost. An optimized pit shell was utilized for Mineral Resource reporting that utilized a US$2/t mining cost and 45 degree pit slopes.

However, there is still a great deal of ongoing work required to establish resources in the Measured plus Indicated categories that can be used for economic analysis. The following observations and conclusions are made concerning the initial resource estimation:

- The primary purpose of this Technical Report and the Inferred Resource estimation therein, is to continue providing the basic foundation for advancing the Chita Valley Project in a logical and systematic manner from its present status, through the various stages of resource confidence, and the various stages of economic viability determinations. While commercial success is the obvious main objective, cutting of exploration expenditure losses is equally important in the event of unacceptable project, country or environmental risks.

- It is concluded that the drilling assay database is sufficient for current purposes. However, substantial campaigns of target testing, outline and infill drilling will be needed to fully test the whole Chita South and North Porphyry area.

- It is also believed that the preliminary mineralogical and process testwork is sufficiently encouraging to proceed to the next level, that of optimizing recoveries for H_2SO_4 leaching, while at the same time conducting tests on other potential methods.

- As noted in the previous section Company management believes that this work is fully warranted and justified from the technical point of view. However, current financial market conditions are such that outsourced work might need to be deferred.

- The Inferred resource model indicates that (up to a point) higher cut-off and average grades are possible without excessive fragmenting of the potentially open pit mineable areas. Potential stripping ratios are also favourable.

- Various other factors including a mining friendly region and province, lack of active glacial features and very low population density are positive for potential mining operations.

In general it is concluded that the Chita Valley Project is a large, very promising and underexplored region. The Chita Porphyry South area is the most advanced sector in terms detailed exploration and drilling.

25.5 INTERPRETATION AND CONCLUSIONS CHINCHILLONES SECTOR

The Chinchillones Complex is a type area that exemplifies all of the key characteristics of the Chita Valley complex. It overlaps the Brechas Vacas and Chita Properties and covers an area of approximately 2 km^2. The Agua Negra Formation basement sedimentary succession is cut by several phases of intrusive porphyries and related breccias of probable Miocene age. The sediments in the southwestern corner of the area are overlain by felsic volcaniclastics and mafic flows/dykes of probable Miocene age. The area is structurally controlled by the Chita Valley (NW striking valley associated with a regional transfer fault), at a turning point or break in orientation. In addition the Chinchillones Complex is locally characterized by radial and ring fractures around its margins that may be associated with caldera subsidence and resurgent dome phenomena.

There are a number of factors that prevented the earlier recognition (or at least documentation) of the Chinchillones Complex as a multiphase porphyry/diatreme breccia/epithermal vein complex. These include:

- The two halves of the complex were under separate ownership until 2006 when Minsud acquired the two mineral properties, Brechas Vacas and Chita.

- No systematic geological or geophysical studies covered the whole complex prior to Minsud's 2012-15 investigations.

- In retrospect, the turning point was in 2008 when Minsud completed three diamond drill holes in the Chinchillones Breccia – Chinchillones South area. The three holes encountered three separate parts of the enigmatic paleoenvironment (MSA-08-A, Cu-Mo porphyry; MSA-08-B, Au-bearing epithermal breccias; and MSA-08-C, Au-bearing polymetallic veins). Fortuitously, the access road to MSA-08-B uncovered the first outcrops of Cu-Mo porphyry in the Chinchillones Hill area. The latest pieces of the puzzle were put in place with the detailed mapping programs, the ground magnetic survey in 2012-13 and the IP/Resistivity survey in 2015.

Reviewing the various drilling programs in the complex there are twelve drill holes including four RC holes in the De los Pozos sector and eight diamond drill holes in the Chinchillones sector. Again with the benefit of hindsight, these holes are sorted in terms mineralization-style expected or encountered:

- Potentially Au - Ag bearing polymetallic veins, vein-swarms and/or stockworks are hosted by Agua Negra Formation sediments in the outer margins of the complex. Commercial deposits of this type elsewhere are usually characterized by small size and high to very high (bonanza-type) grade. Non-outcropping deposits are usually very difficult to identify. Surface sampling in the Chinchillones South area encountered some reasonable values (1.0m @ 3.54 g/t Au and 685 g/t Ag: 0.3m @ 8.76 g/t Au and 1,033 g/t Ag). Six of the twelve drill holes, all at Chinchillones South, were in this type of setting. Anomalous gold-silver values were encountered in all of the holes but no high grade sections. The potentially mineralized structures are open and untested along strike and at depth.

- Potentially Au – Ag bearing epithermal breccias, vein-swarms and/or stockworks in or proximal to the caldera/resurgent dome central part of the complex. Commercial deposits of this type are a very important source of precious metals worldwide, and nearby examples include El Indio-Tambo, Veladero and Pascua Lama. Five drill holes, including one in the Chinchillones Breccia area and four in the De los Pozos sector are in this type of setting. The single drill hole at Chinchillones was planned as an initial test of a complex and enigmatic array of breccias exposed on Chinchillones Hill. This hole, MSA08-B, a -70 degree angle hole was lost due to stuck rods at 246.15 m short of its planned target depth of 300m. A 1.0 m core section from 42.0 to 43.0 m assayed 3.40 g/t Au and 60.10 g/t Ag. The four widely spaced RC holes in the De los Pozos sector are typified by 2 to 5 % pyritic sulphides as disseminations and fracture fillings in various types of breccias. Geochemically anomalous gold, silver and base metal values were encountered in all four holes. It is concluded that the drilling completed in the Chinchillones Breccia and De los Pozos areas generally confirms the potential for epithermal mineralization but is totally insufficient to determine its nature.

- Cu-Mo +/- Au-Ag porphyry style mineralization. This type of mineralization was unknown in the Chinchillones area until 2008 when drill hole MSA08-A, designed to test the northeastern extention of the Chinchillones Breccia area, intersected nothing but porphyry beneath Quaternary overburden. The extent and nature of this mineralization is unknown beyond this hole and a small area of outcrop uncovered in the MSA08-B drill road

Minsud concludes that the Chinchillones Complex is prospective for at least three mineralization styles. However, it is apparent that very little is known about the areal and vertical distribution of the various lithological, alteration, structural and mineralization parameters that might define high quality drill targets within the enigmatic assemblage.

With much of the prospective setting lying beneath Quaternary cover it is concluded that indirect geophysical methods such as magnetic surveying and other more sophisticated techniques like IP/Resistivity or CASAMT could assist with developing target areas. Magnetic surveying at 200 metre line spacing is already completed but more detail (100m lines) is required and even greater detail might be needed locally. It is known that geophysical anomalies from a previous Schlumberger Vertical Electrical Sounding resistivity survey (a basic technique usually employed for groundwater surveying) were drilled in the area with pyritic sulphide causal sources identified. The modern Pole-Dipole IP/Resistivity surveying of 2015 has lead to a much better overall 3-D understanding of the complex, although with 400 m line spacing there is significantly less detail than at Chita Porphyry. Orientation surveys are required to test the suitability of other advanced geophysical surveys.

Minsud considers the porphyry and epithermal mineralization styles to be of prime importance and the polymetallic veins as secondary targets.

25.6 INTERPRETATION AND CONCLUSIONS MINAS DE PINTO SECTOR

The Minas de Pinto sector is an easterly trending swarm of discontinuous quartz veins containing variable concentrations of polymetallic sulphides and widespread localized Au-Ag mineralization that has been traced for 4.0 km along strike. The vein swarm cuts various lithologies including Devonian-Carboniferous sediments (Agua Negra Formation), Carboniferous-Permian granodiorite (Colanguil Batholith), and Mid to Upper Tertiary volcaniclastics and andesitic porphyry (Chita Valley Complex). Several corridors comprising multiple veins and stockworks are present. In the western sector, from north to south, these are termed; the Barba, Amparo, Fatima, Fatima Sur, Branca, Maria, Carmen and Carmen Sur vein assemblages. Other vein corridors located in the eastern and southern parts of the Minas de Pinto sector include Candela, Johanna, Esperanza, Josephina, Pulenta, Argentina, Glenda and others.

The Minas de Pinto corridor has been subjected to a significant amount of historic and recent exploration work. Various artisanal diggings including pits and tunnels attest to these early miners having some encouragement and reward. Silex Argentina S. A., optioned the Minas de Pinto Property in the mid-2000s, completing extensive geological mapping and surface grab and channel sampling for a total of 1,631 samples by 2007. In 2008 that company drilled 22 diamond drill holes totalling 2,631.25 metres. In 2011 Minsud completed two diamond drill holes totalling 435.5 metres to test the earlier results and recently completed additional channel sampling. The combined drilling and channel sampling work of the last several years by Silex and Minsud has found several areas of moderate to high Au-Ag values over narrow to moderate widths.

Recent Minsud mapping and sampling in the Carmen Vein area has identified one of the most promising intercepts obtained to date in the Pinto sector, channel sample section CAR-13-02 that encountered 3.0 metres averaging 11.69 g/t Au and 23.4 g/t Ag in strongly argillic altered, sheared and brecciated Agua Negra Formation sandstone. Tracing the sub-vertical Carmen vein structure along strike the mineralization becomes substantially weaker in outcropping Agua Negra Formation shales and siltstones. This leads to the theory that the relatively competent and brittle sandstone stratigraphic horizons are more conducive to hosting mineralized veins and breccias than the more plastic finer grained shales and siltstones. Thus it is postulated that the intersections between the various sub-vertical vein structures and the shallow to moderately dipping sandstone units might be favourable locations for economically significant Au-Ag concentrations.

It is concluded that the outcropping portion of the Minas de Pinto sector is prospective for discrete Au-Ag epithermal veins. However, much of the Pinto sector appears to be peripheral to the more prospective multiphase porphyry/diatreme breccia/epithermal vein complex settings like those at Chita Porphyry and Chinchillones.

In terms of prioritization of the various sectors, a comprehensive exploration program to develop small high-grade vein deposits in the Pinto area is of secondary importance when compared to other target areas like Chita Porphyry or Chinchillones.

One discrete Au-Ag epithermal veins prospect that deserves higher priority consideration is the above described Carmen Vein channel sample section that encountered 3.0 metres averaging 11.69 g/t Au and 23.4 g/t Ag. A modest program of very detailed mapping and a couple of carefully designed fairly shallow drill holes would be a useful test of the sandstone as a preferential host rock theory outlined above. Success here could lead to further testing of similar settings such as Pulenta, Argentina, etc.

Minsud concludes that the Pinto area may also be prospective for porphyry and/or epithermal mineralization and this is beyond the obvious overlap of portions of the Chita Porphyry Complex onto the western part of the Minas de Pinto Property. The 2012 magnetic survey covering part of the Pinto area clearly shows several important lithological/alteration features that might indicate hitherto unknown Tertiary, or possibly Permo-Carboniferous intrusive bodies, at depth beneath Agua Negra Formation cover rocks. The main inference to be drawn from the magnetic data is that the Chita Valley complex possibly continues to be traceable eastward to the limits of current data.

Like the other sectors, much of the prospective setting lies beneath Quaternary cover and/or basement stratigraphy (eg. anticlinal core areas). It is concluded that indirect geophysical methods such as magnetic surveying and other more sophisticated techniques like IP/Resistivity or CASAMT could assist with developing target areas. Magnetic surveying at 200 metre line spacing is already completed but more detail (100m lines) is required and even greater detail might be needed locally. Modern IP/Resistivity surveying might lead to a much better overall 3-D understanding of the vein structures and other potential targets. Orientation surveys are required to test the suitability of advanced geophysical surveys.

25.7 INTERPRETATION AND CONCLUSIONS PLACETAS PORPHYRY SECTOR

The Placetas Porphyry sector has not been studied by Minsud to the same level of detail as the other parts of the Chita Valley complex. This is partly due to difficulty of access (The access road was rendered impassable by flash flooding in early 2012), Minsud's prioritization of work elsewhere on the Chita Valley properties, and the less than encouraging results of the 2008 RTZ exploration program.

The general interpretation from the earlier work proposes a roughly circular intrusion with a monzodiorite core mostly surrounded by diorite flanked by monzodioritic intrusive breccias. Alteration is described as weak potassic in the core region and sericitic alteration at the margins. Three drill holes totalling 880m tested the monzodiorite/potassic core and RTZ concluded that the intrusion was adequately tested and the program was terminated. Minsud agrees with this general conclusion for that specific locality, as it pertains to porphyry-type mineralization of commercial grade and size. However, Minsud does not consider the entire Placetas sector to be written off for other potential types of hydrothermal mineralization, such as low-sulphidation Au-Ag veins and disseminations.

The Placetas area was briefly re-examined in September 2013 in the enigmatic system context of the broader Chita Valley complex. This work recognized at least four intrusive phases including

2 EM phases, 1 LIM phase and a PM dyke. Alteration features related to porphyry cupolas were recognized including potassic (magnetite + K-spar + biotite) and sodic (albite + tremolite + actinolite). Interestingly there is some evidence that a better target for porphyry type mineralization might lie underneath fractured/brecciated sediments to the immediate NE of Placetas.

Minsud concludes that a reinterpretation of the RTZ data and additional detailed mapping and surface geochemical/prospecting sampling is warranted and justified. Mechanical trenching may be possible to test some of the volcaniclastic areas. Routine ground magnetic surveying at 100 metre line spacing is also required to assist with mapping lithological units, alteration styles and structural features. Upon completion of the above early stage work it is considered likely that more sophisticated geophysical surveying (eg. IP/Resistivity) might be needed to assist with the definition of possible drilling target areas.

26.0 RECOMMENDATIONS

- **Topographic control**: DGPS surveying has been used to locate all historical and Company drill collars, as well as a variety of topographic features that may be incorporated into a digital terrain model. Downhole inclination and directional surveys have been completed for all Minsud drill holes in the 2014 to 2017 programs. All Minsud work is in the UTM coordinate system WGS84 Zone 19 (Southern Hemisphere) as well as the Gauss Kruger faja 2 – POSGAR94 system used for mineral property boundaries. The current budget provides for DGPS surveying of new drill collars, while downhole surveys are included in the diamond drilling budget.

- **Access roads, road maintenance and drill set-up sites**: The current proposal includes several sites in three general areas. While it is unlikely that all these sites can be drilled now due to likely budget constraints, it is considered prudent to construct the roads and set-ups all at once for logistical purposes. Due to the rugged terrain, access routes and individual set-ups might vary somewhat from the initial plan.

- **Geophysical surveys**: While magnetic and IP/Resistivity surveys have been completed to varying degrees of detail throughout the project area between the Placetas and Minas de Pinto, there are deficiencies for selecting certain specific drilling targets. For example, the N-S oriented magnetic and IP survey lines are inadequate for defining potential epithermal vein structures oriented in similar directions. Line spacings of 200 m in the Chinchillones and Placetas sectors are also too wide for effective detailed interpretation. A modest budget is allocated as warranted for selective infill around drill targets.

- **Diamond drilling program**: There is no specific detailed plan for new drilling at Chita Porphyry or elsewhere. However, the following conceptual plan has been formulated by Minsud management as a compromise between available funding and overall work requirements:

    - **Definition drilling at Chita Porphyry South**: This is a large budget undertaking that is not warranted of justified in the current financial market.

    - **Outline drilling at Chita Porphyry South**: This is nearing completion. A few strategically located holes are required to complete outline drilling. This is planned for initial 2018 drilling program.

    - **Exploration drilling Chita Porphyry**: This has two aspects; the first to begin testing the northern flank of Chita Porphyry for mineralization similar to that at Chita Porphyry South, and the second to begin testing the Chita Porphyry system for large primary chalcopyrite-bornite mineralization targets. This is planned for initial 2018 drilling program.

    - **Exploration drilling outside Chita Porphyry**: A number of targets areas are being considered for initial testing, including the Chinchillones Breccia/Porphyry complex, the Placetas Flow Dome Complex and selected areas of Minas de Pinto. This is provisionally planned for the second 2018 drilling program.

- **Mineralogical studies/metallurgical testwork**: Petrographic and SEM studies are planned for selected core samples from the 2018 drilling programs. The Company also plans to continue with the second stage of the CodelcoTec Bioleach SX-EW column testwork.

- **Environmental baseline study**: Water quality monitoring and weather data collection work will continue as previously planned.

- **Report**: An internal report with revisions to geological and alteration maps will be prepared by Minsud technical personnel.

The main budget items connected with this project over the next 12 months are expenditures for the following:

- Costs of administrative and technical staff and consultants/contractors to manage and implement the program.
- Support Costs for fieldwork including food, accommodations, field supplies, travel, vehicles, communications, etc.
- Topographic control costs associated with DGPS surveys.
- Obtain or renew various permits required to maintain properties and to conduct exploration/development activities.
- Access roads, road maintenance and drill set-up sites.
- Contract geophysical surveys.
- Contract diamond drilling, includes mob-demob and down-hole surveys.
- Assays/analyses.
- Metallurgical testwork.
- Environmental studies continuation.
- Fuel costs.
- Reports.
- G&A.
- VAT/HST.

A budget of approximately C$ 2.4 million is required to complete the 2018 exploration work on the Chita Valley Properties. This is a preliminary estimate for a firm or non-provisional program. Thorough program planning and cost estimations that will require tendered quotations from various contractors will need to be obtained before a final cost estimate can be made. Table 26.1 provides a preliminary summary of the total work program budget over 12-month period. In the opinion of P&E Mining Consultants Inc. this work is fully warranted and justified. Additional expenditures may be required to continue work on the Chita Valley Properties after the initial program is completed. Additional equity funding would be required for this.

Table 26.1 Recommended Program and Budget		
	US$ 1 = C$ 0.77	**Amounts in C$ Details**
Staffing		270,000
	Supervision & Consulting	115,000
	Field Geologists	88,000
	Casual Labour	62,000
	Data & maps Processing	5,000
Support Costs		130,000
	Food & Accom.	46,000
	Field Supplies & Equip.	37,000
	Exploration Permits	22,000
	Travel	12,000
	Communications	1,000
	Other	12,000
Property Acquisition Payments		162,000
	Brechas Vacas	75,000
	Minas de Pinto	87,000
Topographic Control		10,000
		10,000
Road and access construction		122,000
	Backhoe / Bulldozer	122,000
Diamond drilling		897,000
	Diamond Drilling (2500m - 1st tranche)	496,000
	Diamond Drilling (2000m - 2nd Tranche)	401,000
Assays		61,000
	1250 samples @ $27/sample	34,000
	1000 samples @ $27/sample	27,000
Metallurgical Testwork		70,000
	3 additional Column tests	70,000
Geophysics		30,000
	IP/Resistivity Surveys	30,000
Environmental Baseline Studies		20,000
NI 43-101Report (balance)		28,000
HST & VAT (IVA 21% in Argentina)		275,000
Sub-Total		**2,075,000**
	General & Admin	**240,000**
	5% Contingency	**104,000**
	Grand Total for Budget Purposes	**C$ 2,419,000**

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28.0 CERTIFICATES

CERTIFICATE OF QUALIFIED PERSON

EUGENE J. PURITCH, P. ENG., FEC, CET

I, Eugene J. Puritch, P. Eng., residing at 44 Turtlecreek Blvd., Brampton, Ontario, L6W 3X7, do hereby certify that:

1. I am an independent mining consultant and President of P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled "NI 43-101 Technical Report and Updated Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", (the "Technical Report") with an effective date of February 7, 2018.
3. I am a graduate of The Haileybury School of Mines, with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen's University. In addition I have also met the Professional Engineers of Ontario Academic Requirement Committee's Examination requirement for Bachelor's Degree in Engineering Equivalency. I am a mining consultant currently licensed by Professional Engineers and Geoscientists New Brunswick (License No. 4778), Professional Engineers, Geoscientists Newfoundland & Labrador (License No. 5998), Association of Professional Engineers and Geoscientists Saskatchewan (License No. 16216), Ontario Association of Certified Engineering Technicians and Technologists (License No. 45252) the Professional Engineers of Ontario (License No. 100014010) and Association of Professional Engineers and Geoscientists of British Columbia (License No. 42912). I am also a member of the National Canadian Institute of Mining and Metallurgy.

   I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. I have practiced my profession continuously since 1978. My summarized career experience is as follows:

   - Mining Technologist - H.B.M.& S. and Inco Ltd.,..1978-1980
   - Open Pit Mine Engineer – Cassiar Asbestos/Brinco Ltd.,..1981-1983
   - Pit Engineer/Drill & Blast Supervisor – Detour Lake Mine,......................................1984-1986
   - Self-Employed Mining Consultant – Timmins Area,..1987-1988
   - Mine Designer/Resource Estimator – Dynatec/CMD/Bharti, ...1989-1995
   - Self-Employed Mining Consultant/Resource-Reserve Estimator,..............................1995-2004
   - President – P&E Mining Consultants Inc,..2004-Present

4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for co-authoring Section 1, 14, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had prior involvement with the project that is the subject of this Technical Report. The nature of my involvement was as a co-author on technical reports titled, "NI 43-101 Technical Report and Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", effectively dated April 23, 2015 and "NI 43-101 Technical Report and Updated Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", (the "Technical Report") with an effective of December 18, 2015.
8. I have read NI 43-101 and Form 43-101F1. This Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: February 7, 2018
Signing Date: March 26, 2018

{SIGNED AND SEALED}
[Eugene J. Puritch]

____
Eugene J. Puritch, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

DAVID BURGA, P.GEO.

I, David Burga, P. Geo., residing at 3884 Freeman Terrace, Mississauga, Ontario, do hereby certify that:

1. I am an independent geological consultant contracted by P & E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled "NI 43-101 Technical Report and Updated Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", (the "Technical Report") with an effective date of February 7, 2018.
3. I am a graduate of the University of Toronto with a Bachelor of Science degree in Geological Sciences (1997). I have worked as a geologist for a total of 12 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by the Association of Professional Geoscientists of Ontario (License No 1836).

   I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

   My relevant experience for the purpose of the Technical Report is:

   Exploration Geologist, Cameco Gold....................1997-1998
   Field Geophysicist, Quantec Geoscience....................1998-1999
   Geological Consultant, Andeburg Consulting Ltd....................1999-2003
   Geologist, Aeon Egmond Ltd....................2003-2005
   Project Manager, Jacques Whitford....................2005-2008
   Exploration Manager – Chile, Red Metal Resources....................2008-2009
   Consulting Geologist....................2009-Present

4. I visited the Property that is the subject of this Technical Report on March 24 and 25, 2015, November 7 and 8, 2015 and December 5 and 6, 2017.
5. I am responsible for authoring Sections 2-12, 15-24 and co-authoring Sections 1, 25 and 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had prior involvement with the project that is the subject of this Technical Report. The nature of my involvement was as a co-author on technical reports titled, "NI 43-101 Technical Report and Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", effectively dated April 23, 2015 and "NI 43-101 Technical Report and Updated Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", with an effective date of December 18, 2015.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: February 7, 2018
Signing Date: March 26, 2018

{SIGNED AND SEALED}
[David Burga]

____
David Burga, P.Geo.

CERTIFICATE OF QUALIFIED PERSON

ALFRED S. HAYDEN, P. ENG

I, Alfred S. Hayden, P. Eng., residing at 284 Rushbrook Drive, Ontario, L3X 2C9, do hereby certify that:

1. I am currently President of:
   EHA Engineering Ltd.,
   Consulting Metallurgical Engineers
   Box 2711, Postal Stn. B.
   Richmond Hill, Ontario, L4E 1A7

2. This certificate applies to the Technical Report titled "NI 43-101 Technical Report and Updated Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", (the "Technical Report") with an effective date of February 7, 2018.

3. I graduated from the University of British Columbia, Vancouver, B.C. in 1967 with a Bachelor of Applied Science in Metallurgical Engineering. I am a member of the Canadian Institute of Mining, Metallurgy and Petroleum and a Professional Engineer and Designated Consulting Engineer registered with Professional Engineers Ontario. I have worked as a metallurgical engineer for over 40 years since my graduation from university.

   I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

4. I have not visited the Property that is the subject of this Technical Report.

5. I am responsible for authoring of Section 13, and co-authoring Sections 1, 25 and 26 of this Technical Report.

6. I am independent of the issuer applying the test in Section 1.5 of NI 43-101.

7. I have had prior involvement with the project that is the subject of this Technical Report. The nature of my involvement was as a co-author on technical reports titled, "NI 43-101 Technical Report and Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", effectively dated April 23, 2015 and "NI 43-101 Technical Report and Updated Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", with an effective of December 18, 2015.

8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.

9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: February 7, 2018
Signing Date: March 26, 2018

{SIGNED AND SEALED}
[Alfred Hayden]

____
Alfred S. Hayden, P.Eng.

CERTIFICATE OF QUALIFIED PERSON

ANTOINE R. YASSA, P.GEO.

I, Antoine R. Yassa, P.Geo. residing at 3602 Rang des Cavaliers Rouyn-Noranda, QC. J0Z 1Y2, do hereby certify that:

1. I am an independent geological consultant contracted by P&E Mining Consultants Inc.
2. This certificate applies to the Technical Report titled "NI 43-101 Technical Report and Updated Mineral Resource Estimate on the Chita Valley Project San Juan Province, Argentina", (the "Technical Report") with an effective date of February 7, 2018.
3. I am a graduate of Ottawa University at Ottawa, Ontario with a B.Sc (HONS) in Geological Sciences (1977) with more than 35 years of experience as a geologist. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No 224) and by the Association of Professional Geoscientist of Ontario (License No 1890);

   I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

   My relevant experience for the purpose of the Technical Report is:

• Minex Geologist (Val d'Or), 3D Modeling (Timmins), Placer Dome	1993-1995
• Database Manager, Senior Geologist, West Africa, PDX,	1996-1998
• Senior Geologist, Database Manager, McWatters Mine	1998-2000
• Database Manager, Gemcom modeling and Resources Evaluation (Kiena Mine)	2001-2003
• Database Manager and Resources Evaluation at Julietta Mine, Bema Gold Corp.	2003-2006
• Consulting Geologist	2006-present

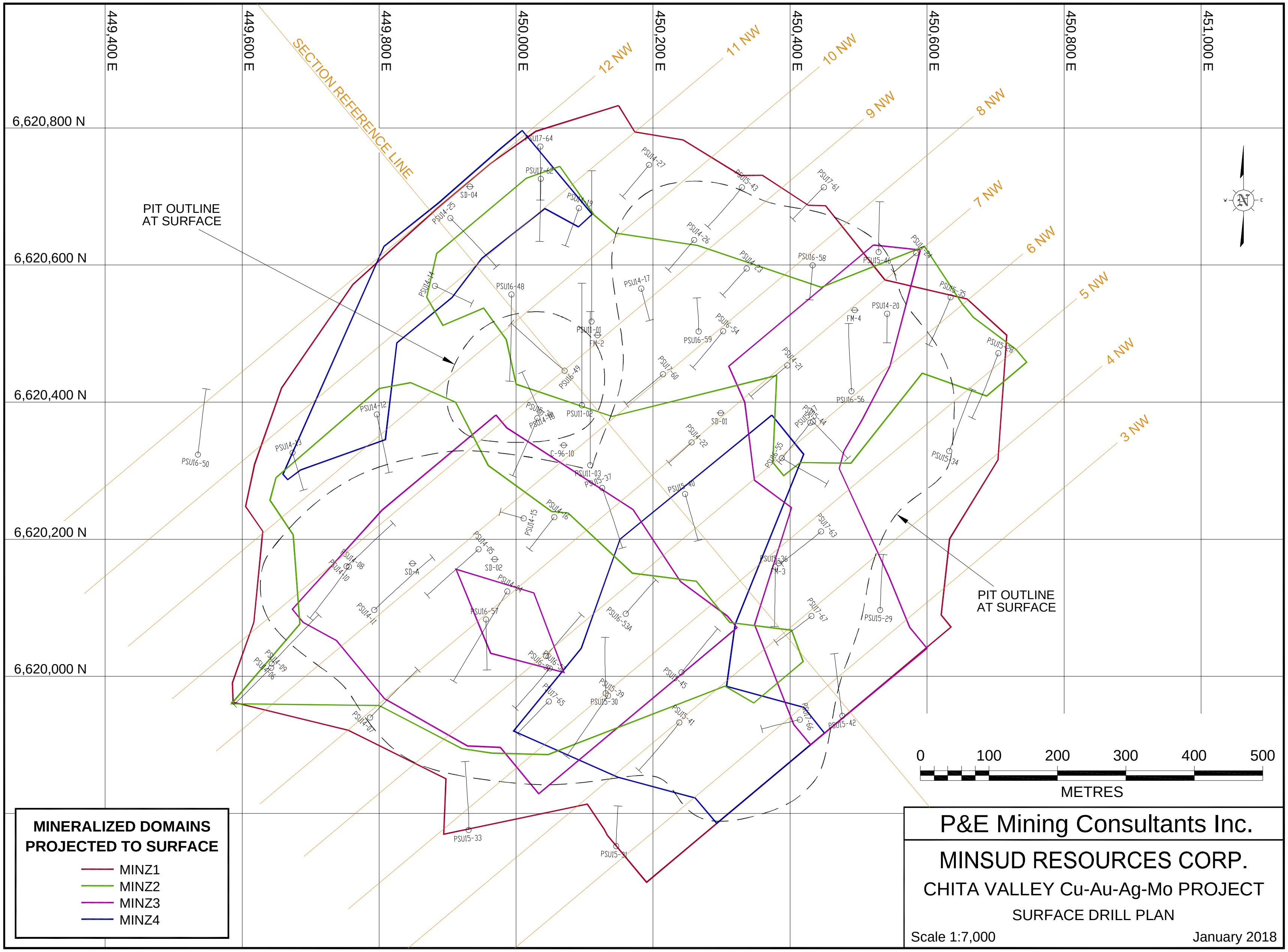
4. I have not visited the Property that is the subject of this Technical Report.
5. I am responsible for co-authoring Sections 1, 14, 25 & 26 of this Technical Report.
6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101.
7. I have had no prior involvement with the Property that is the subject of this Technical Report.
8. I have read NI 43-101 and Form 43-101F1 and this Technical Report has been prepared in compliance therewith.
9. As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective date: February 7, 2018
Signing Date: March 26, 2018

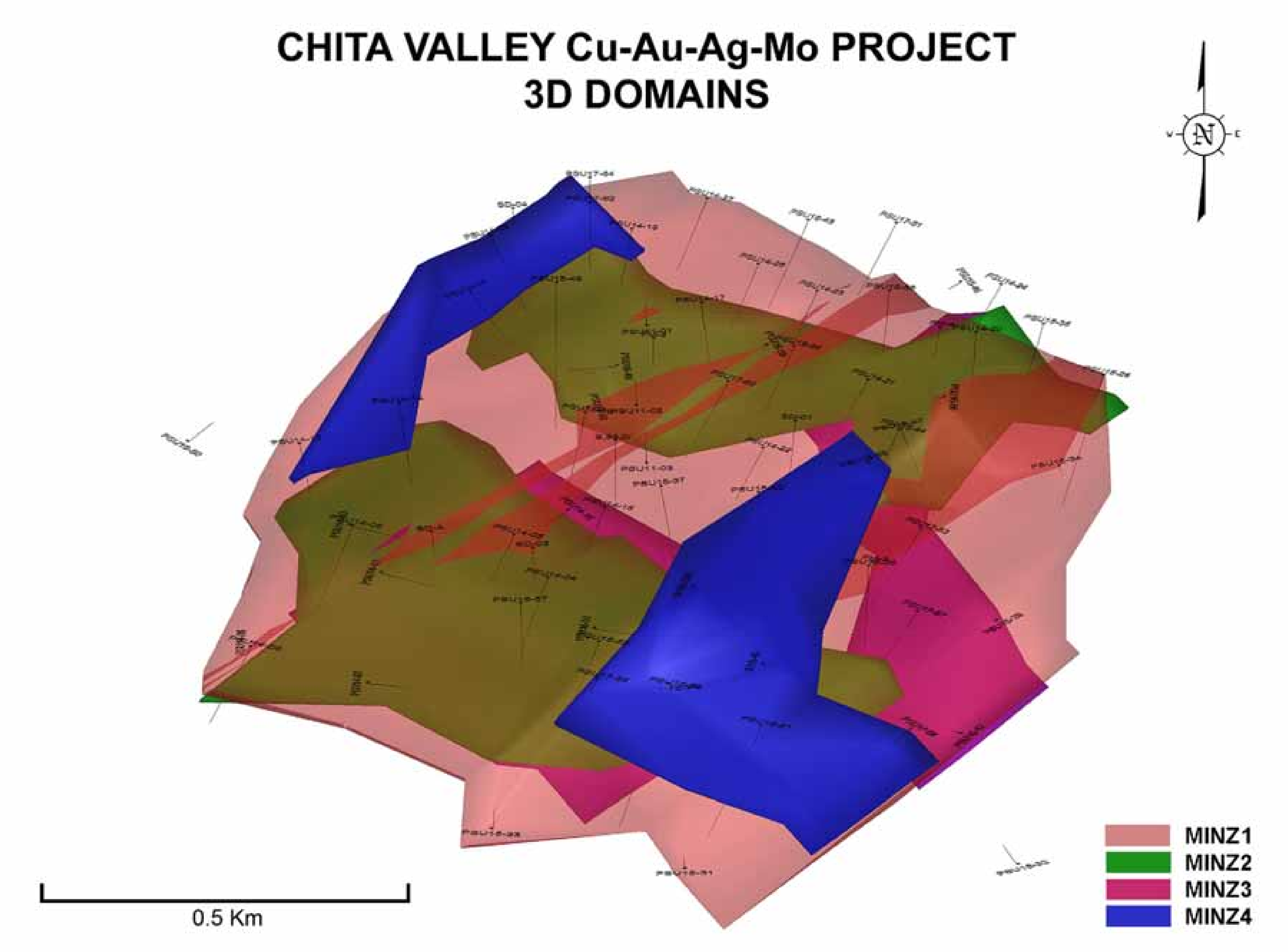
{SIGNED AND SEALED}
[Antoine R. Yassa]

____
Antoine R. Yassa, P.Geo.

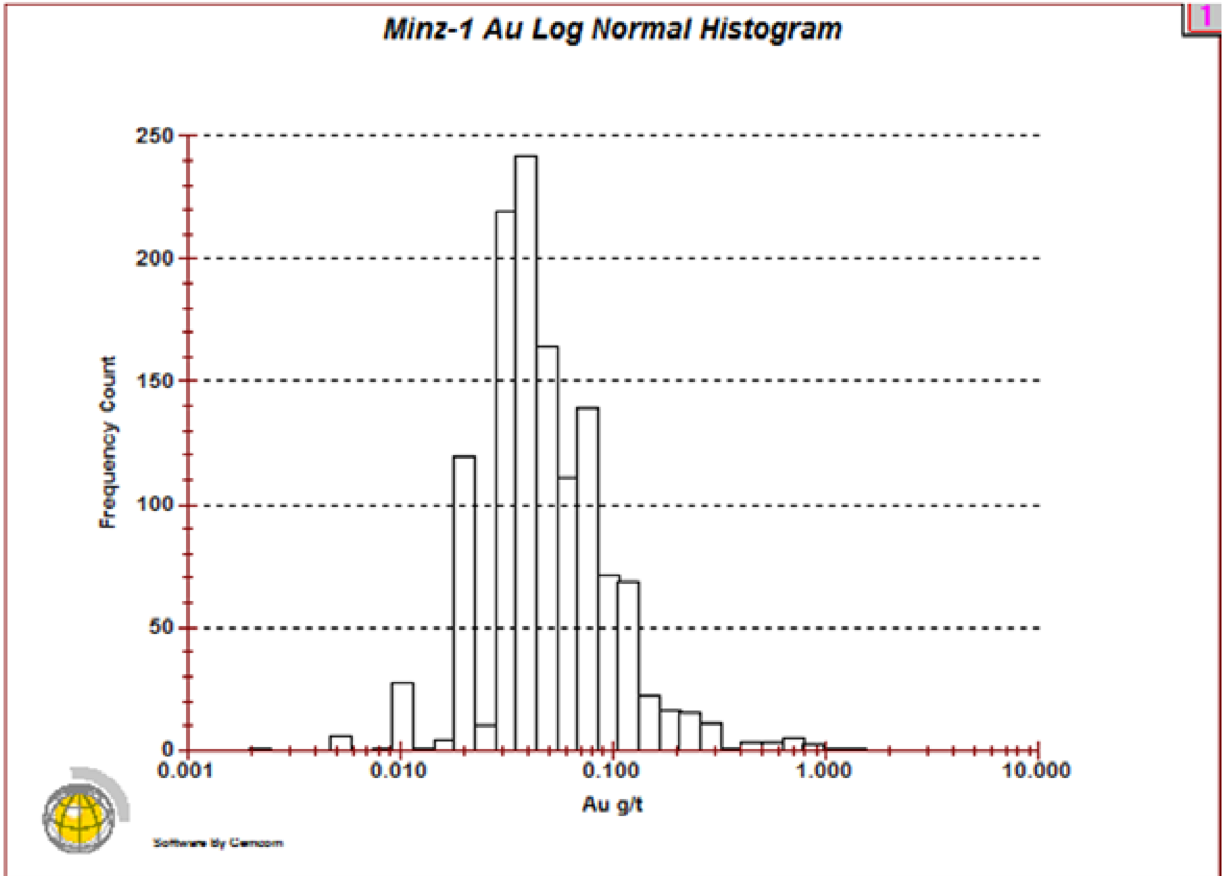
APPENDIX I SURFACE DRILL HOLE PLAN

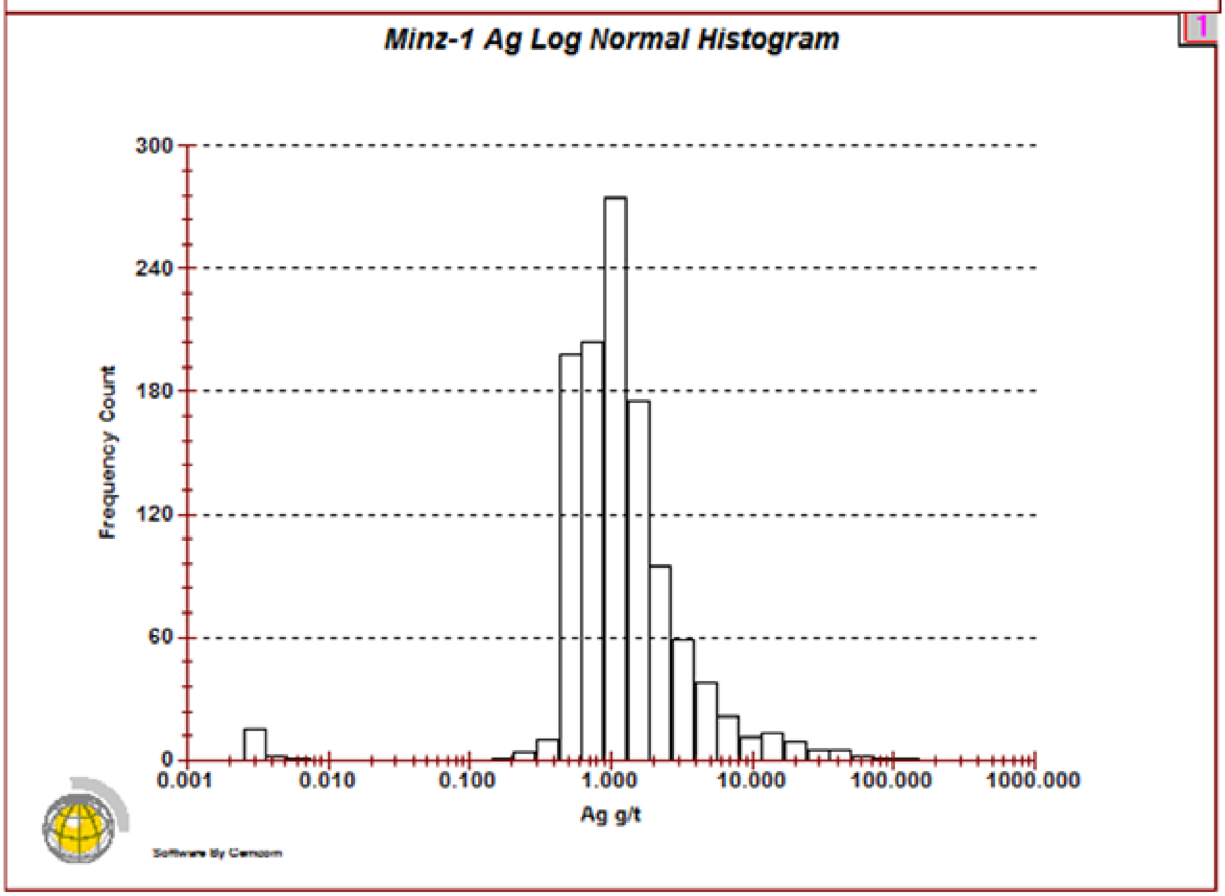

MINERALIZED DOMAINS PROJECTED TO SURFACE
MINZ1
MINZ2
MINZ3
MINZ4
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
SURFACE DRILL PLAN
Scale 1:7,000
January 2018
PIT OUTLINE AT SURFACE
SECTION REFERENCE LINE
METRES
0 100 200 300 400 500
449,400 E
449,600 E
449,800 E
450,000 E
450,200 E
450,400 E
450,600 E
450,800 E
451,000 E
6,620,800 N
6,620,600 N
6,620,400 N
6,620,200 N
6,620,000 N
12 NW
11 NW
10 NW
9 NW
8 NW
7 NW
6 NW
5 NW
4 NW
3 NW

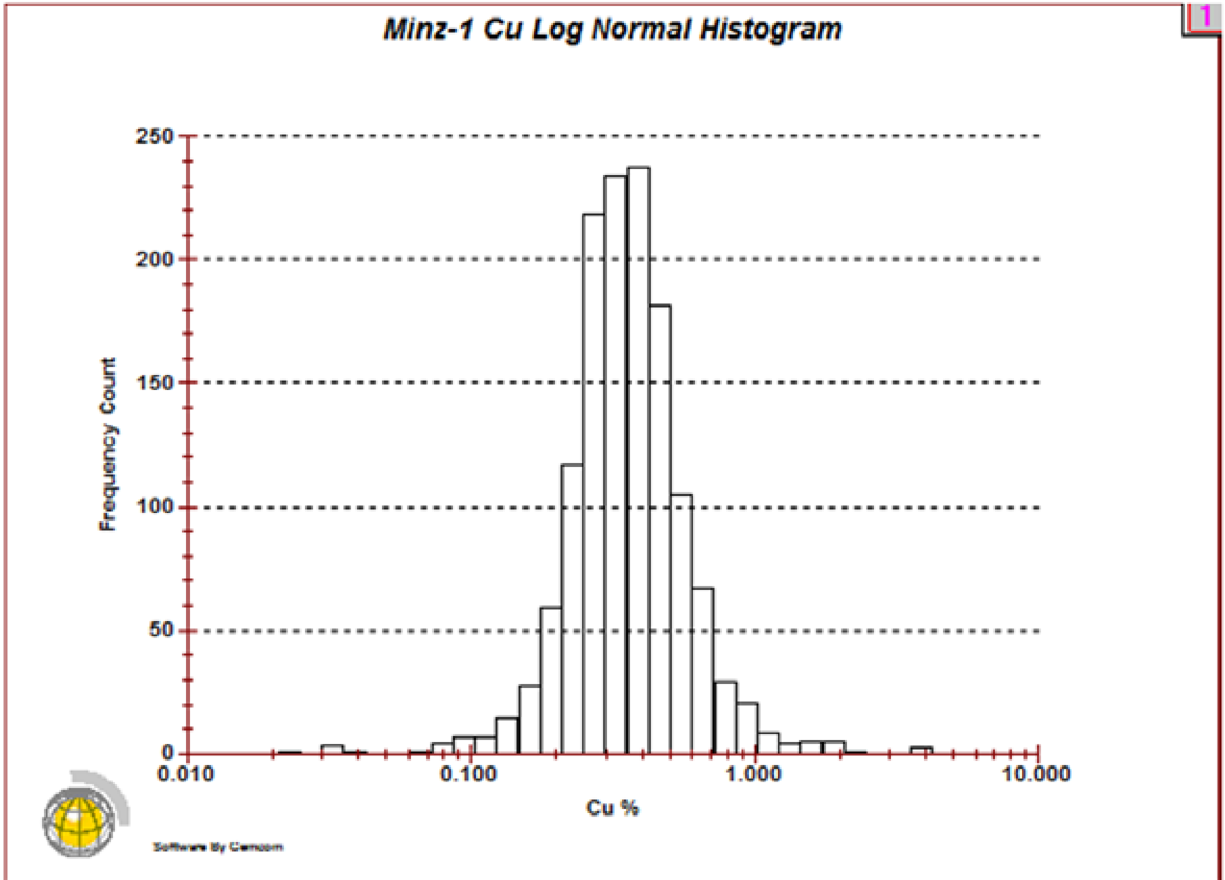
APPENDIX II 3D DOMAINS

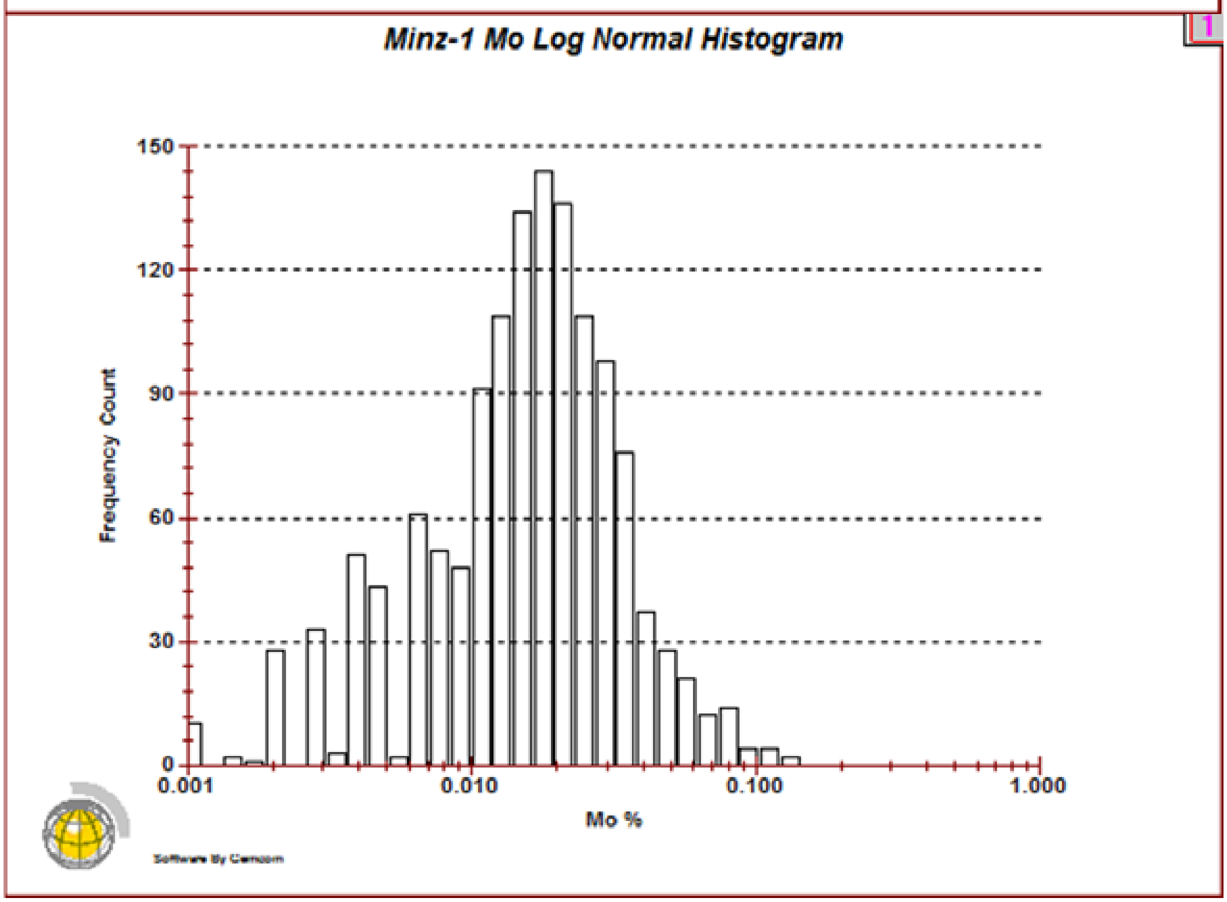

CHITA VALLEY Cu-Au-Ag-Mo PROJECT
3D DOMAINS
N
MINZ1
MINZ2
MINZ3
MINZ4
0.5 Km

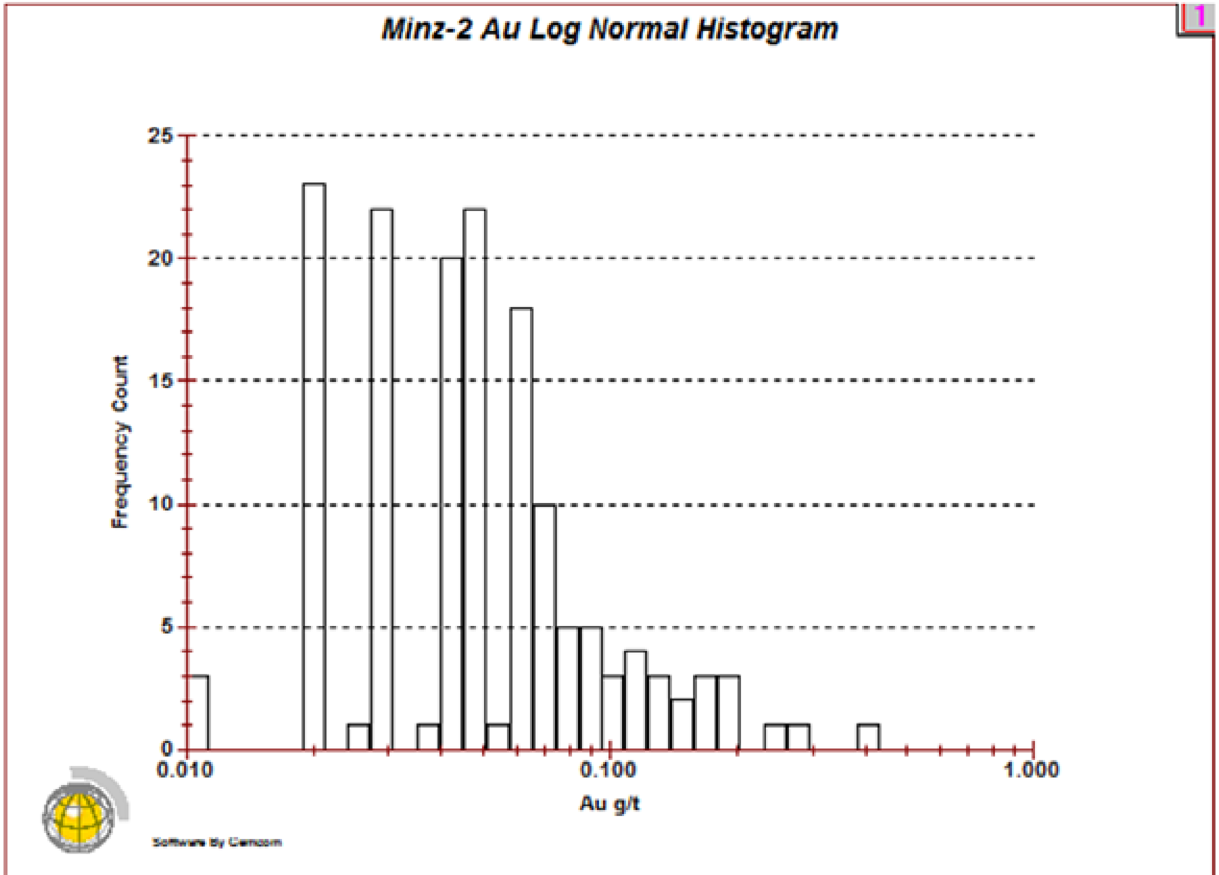
APPENDIX III LOG NORMAL HISTOGRAMS


Minz-1 Au Log Normal Histogram
250
200
150
100
50
0
Frequency Count
0.001
0.010
0.100
1.000
10.000
Au g/t
Software By Gemcom

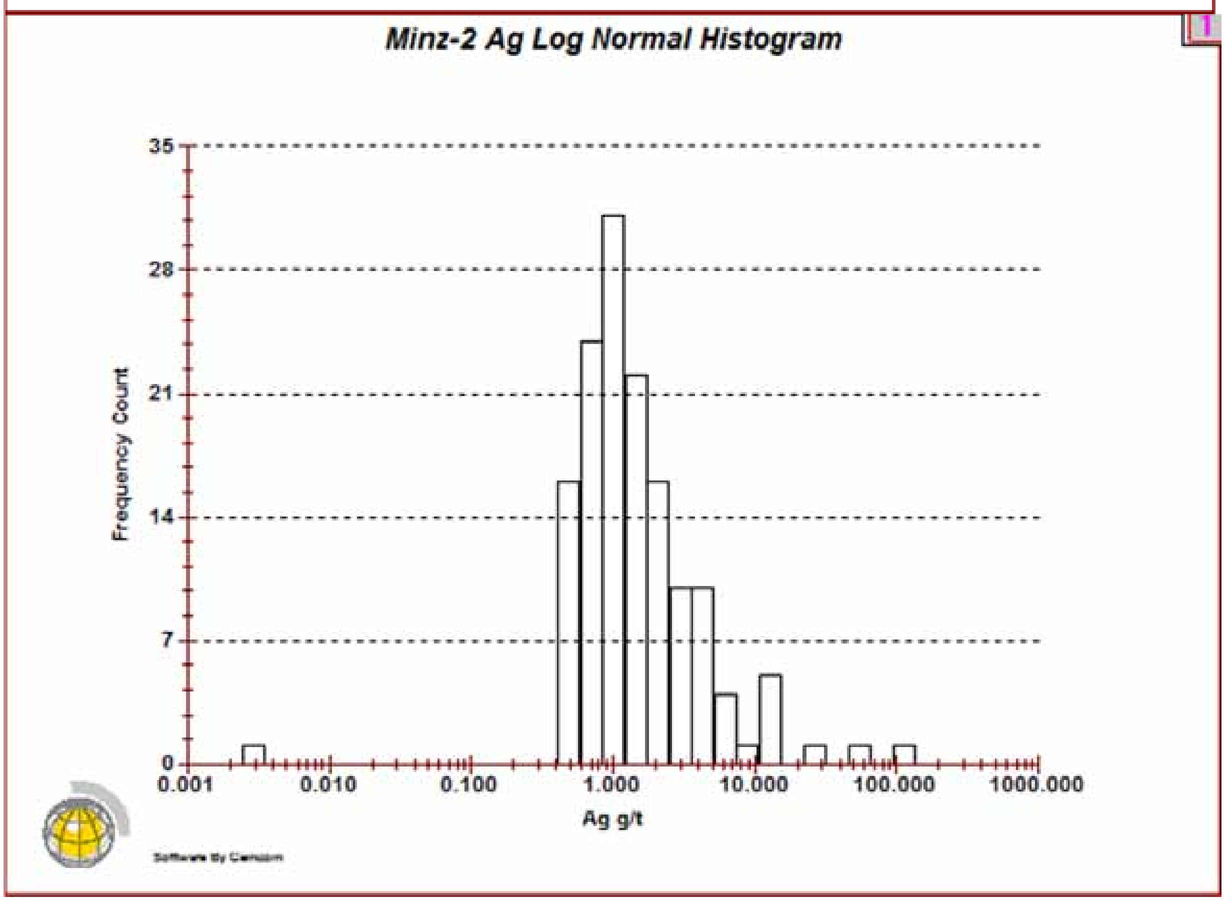

Minz-1 Ag Log Normal Histogram
300
240
180
120
60
0
Frequency Count
0.001
0.010
0.100
1.000
10.000
100.000
1000.000
Ag g/t
Software By Gemcom


Minz-1 Cu Log Normal Histogram
250
200
150
100
50
0
Frequency Count
0.010
0.100
1.000
10.000
Cu %

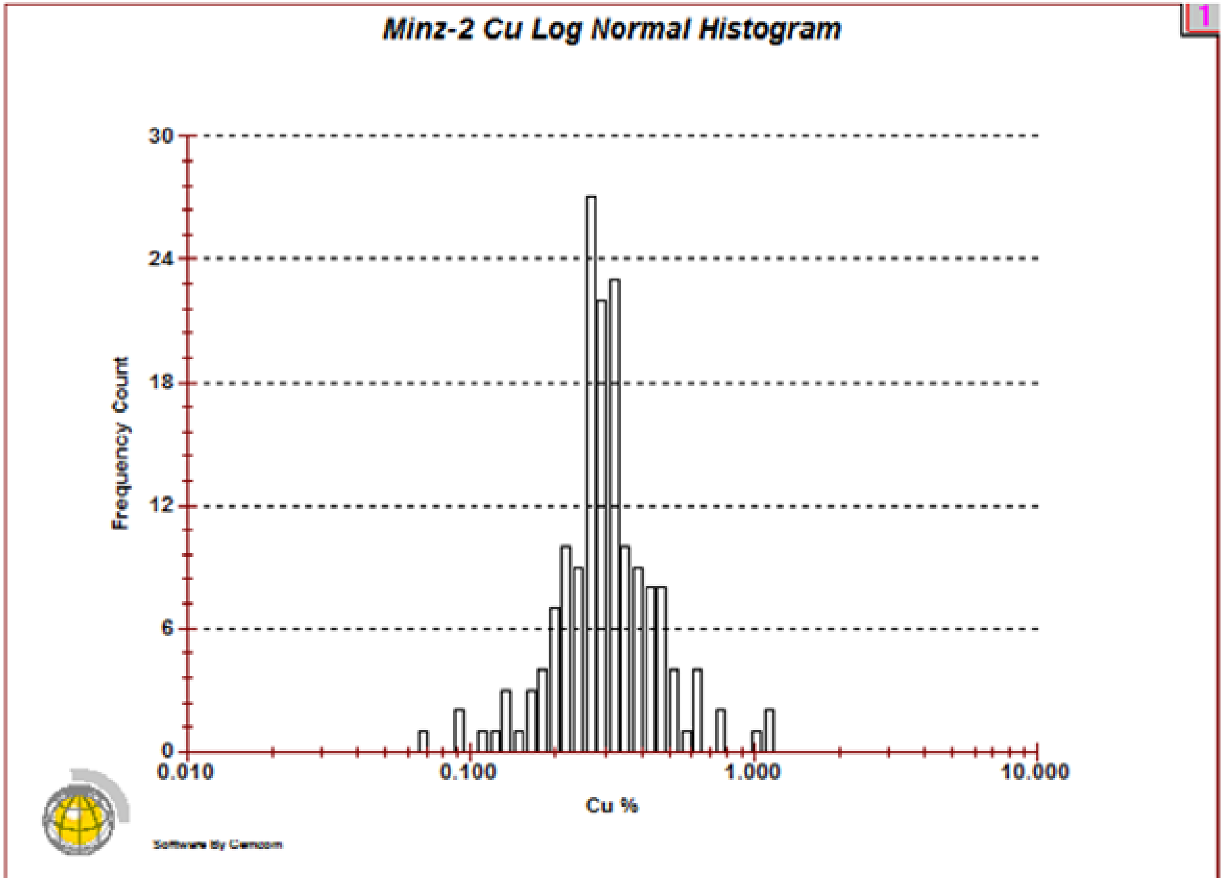

Minz-1 Mo Log Normal Histogram
150
120
90
60
30
0
Frequency Count
0.001
0.010
0.100
1.000
Mo %

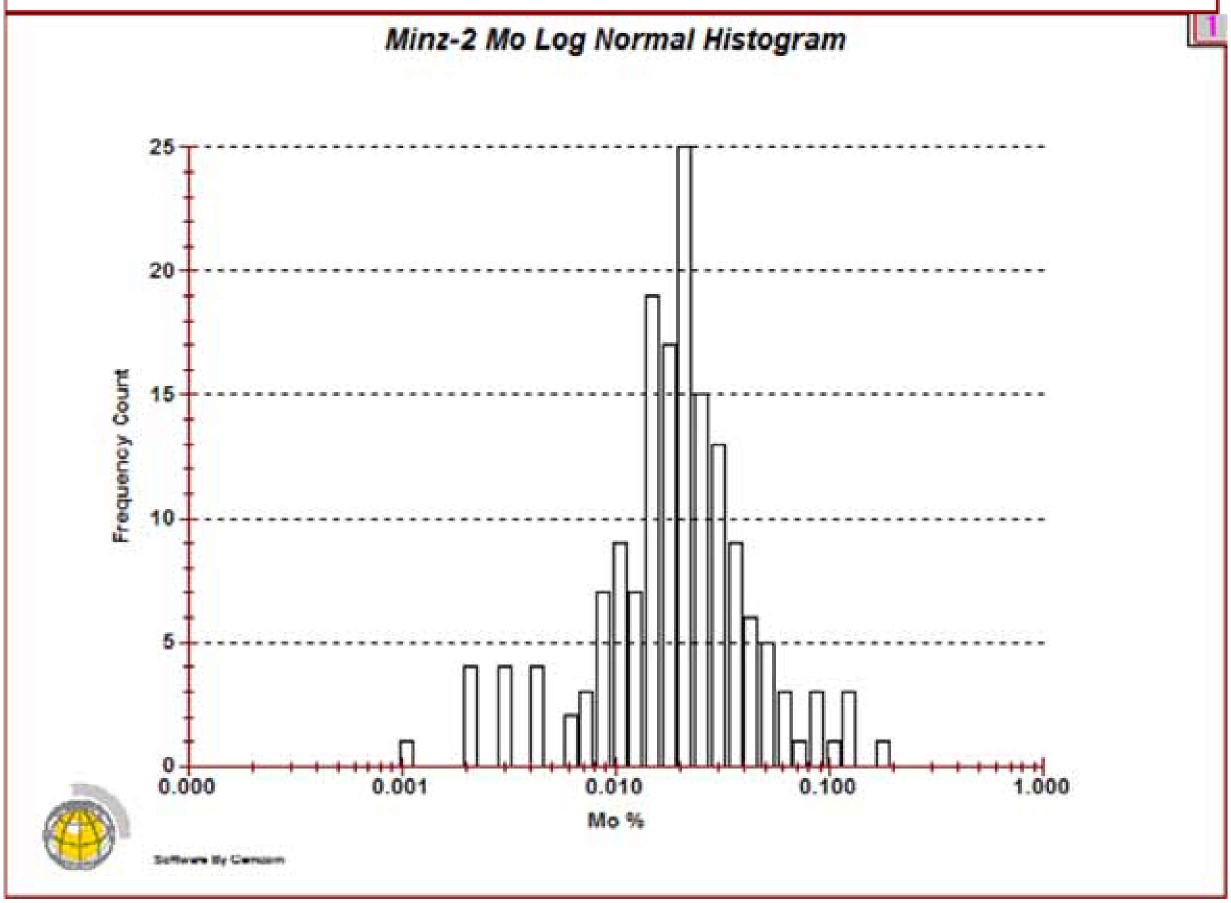


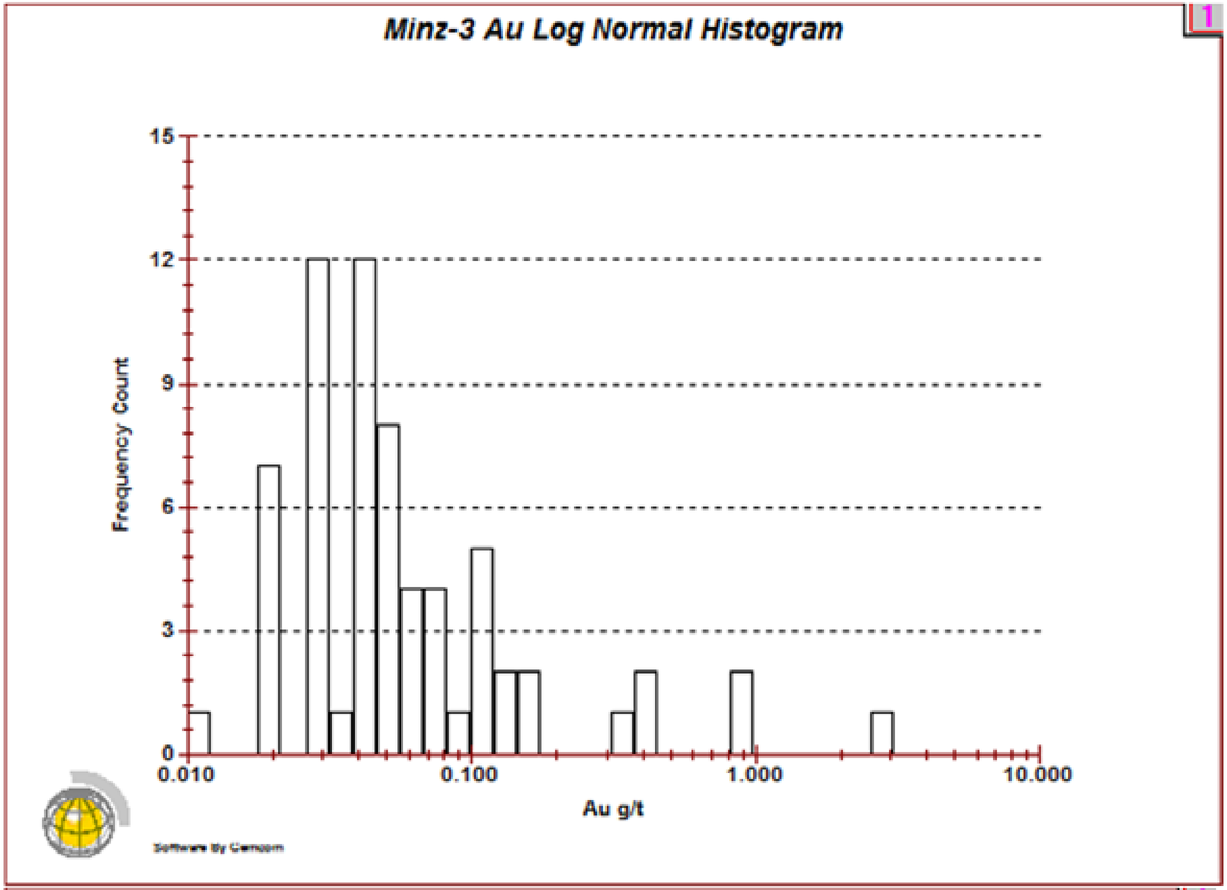
Minz-2 Au Log Normal Histogram
Frequency Count
25
20
15
10
5
0
0.010
0.100
1.000
Au g/t



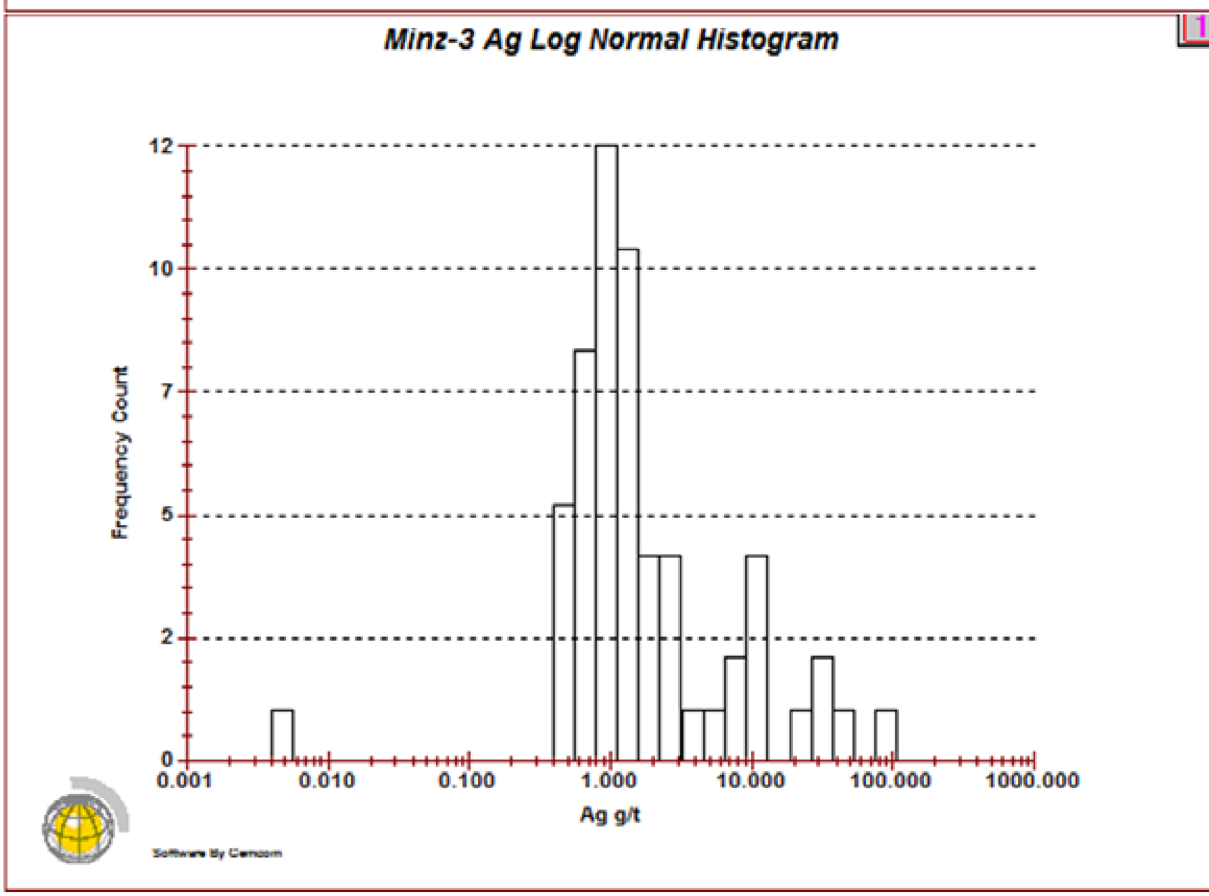
Minz-2 Ag Log Normal Histogram
Frequency Count
35
28
21
14
7
0
0.001
0.010
0.100
1.000
10.000
100.000
1000.000
Ag g/t


Minz-2 Cu Log Normal Histogram
Frequency Count
30
24
18
12
6
0
0.010
0.100
1.000
10.000
Cu %

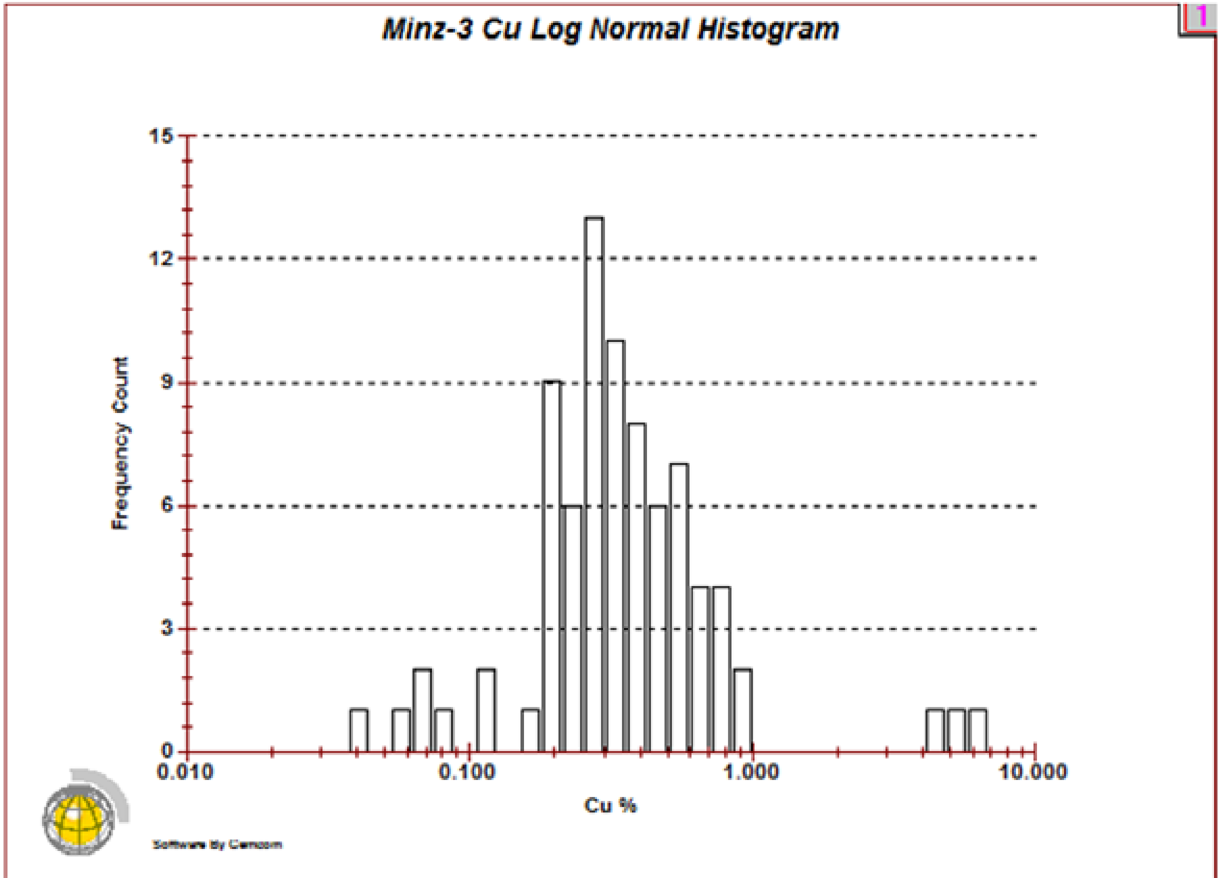

Minz-2 Mo Log Normal Histogram
Frequency Count
25
20
15
10
5
0
0.000
0.001
0.010
0.100
1.000
Mo %

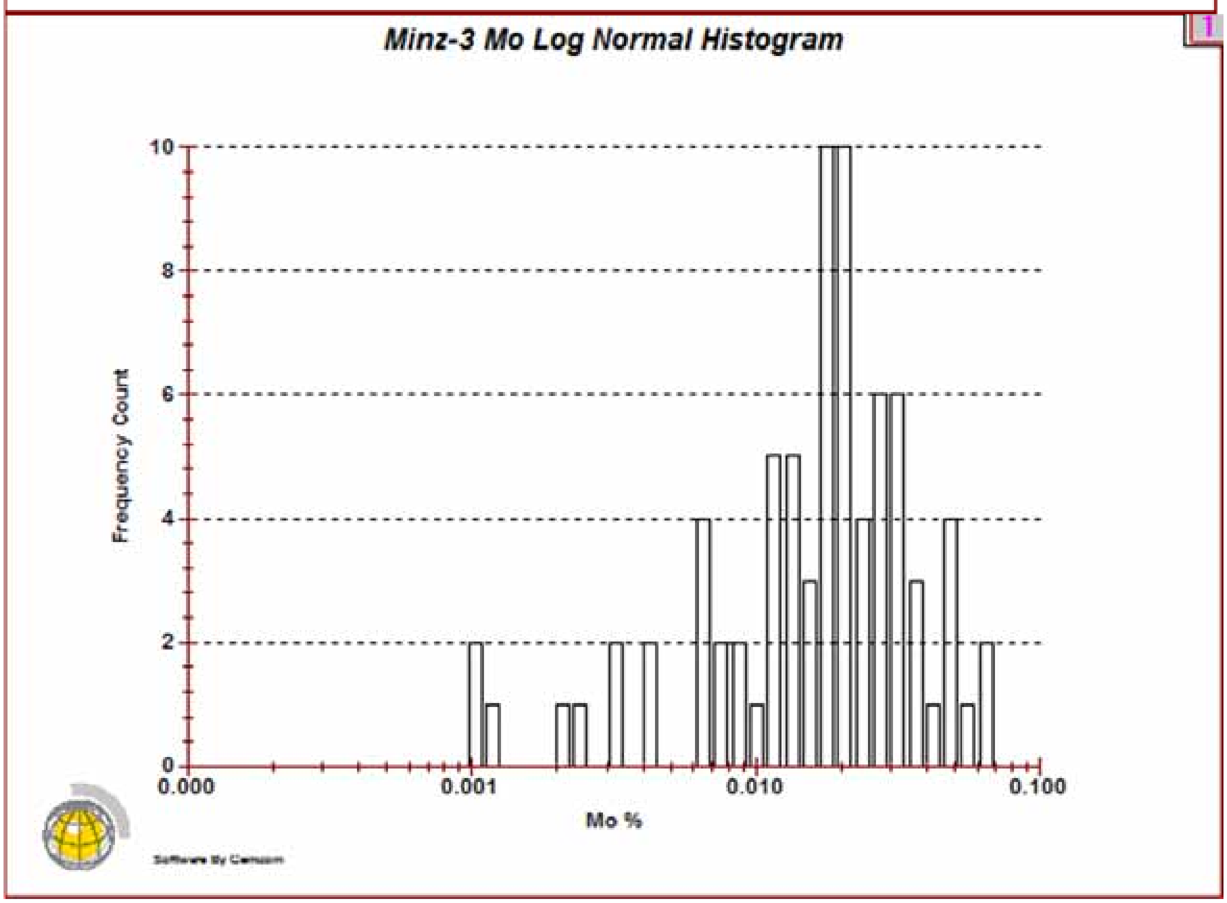


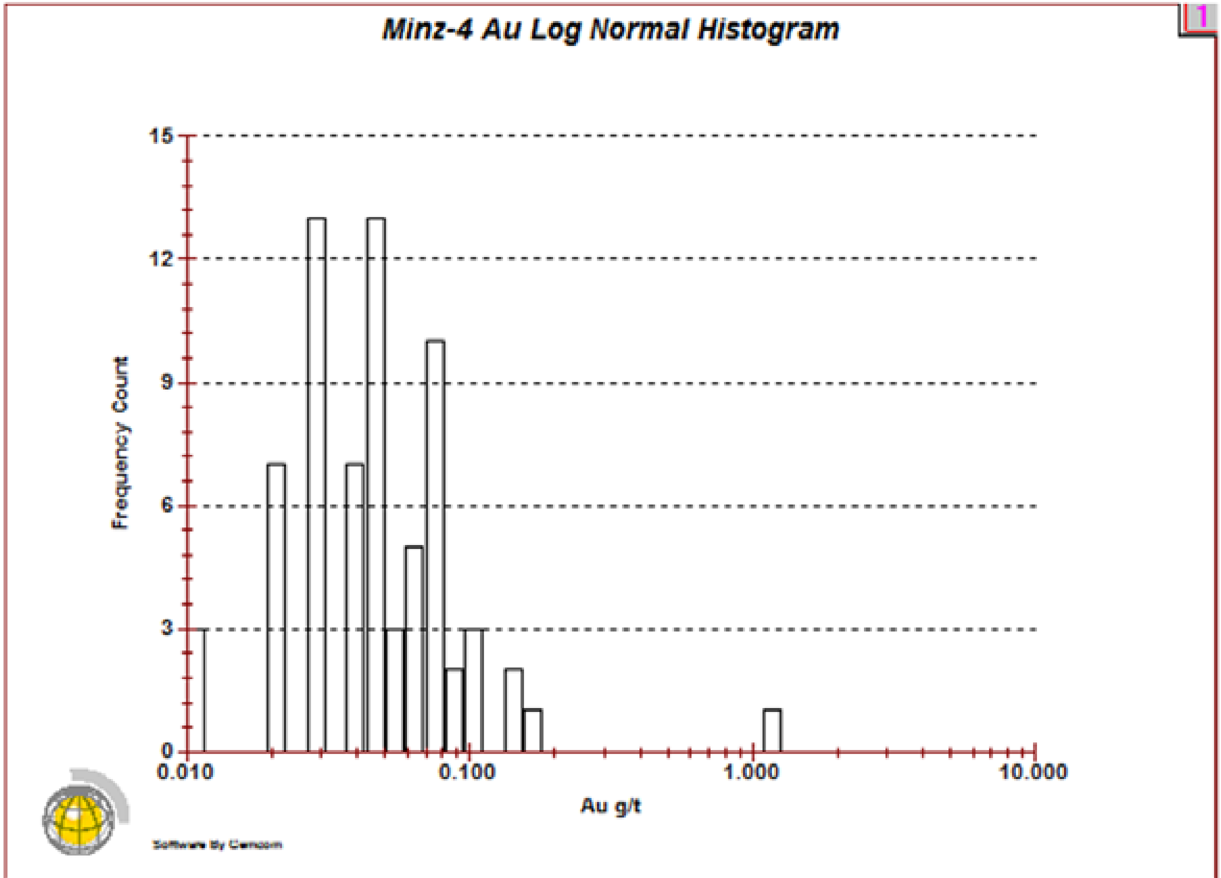
Minz-3 Au Log Normal Histogram
Frequency Count
15
12
9
6
3
0
0.010
0.100
1.000
10.000
Au g/t



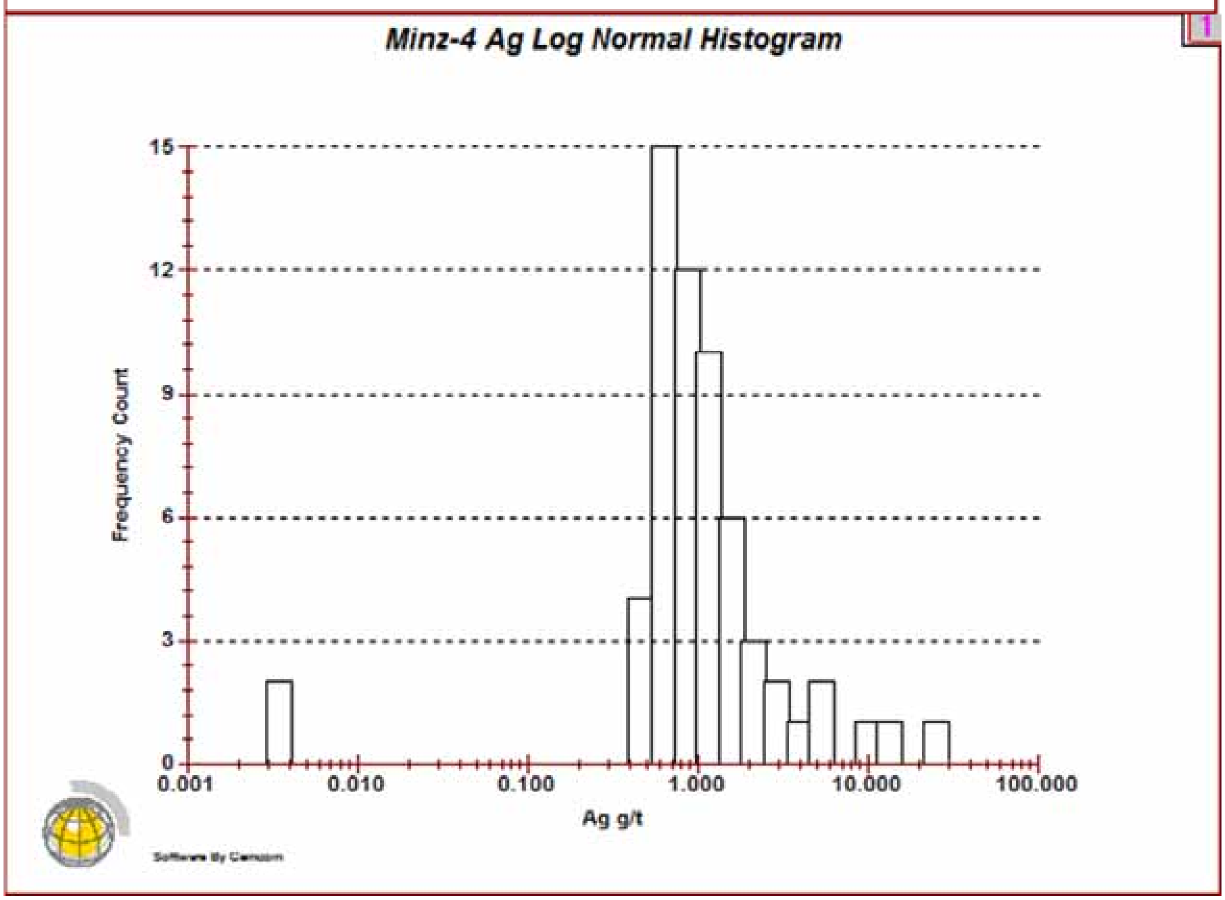
Minz-3 Ag Log Normal Histogram
Frequency Count
12
10
7
5
2
0
0.001
0.010
0.100
1.000
10.000
100.000
1000.000
Ag g/t


Minz-3 Cu Log Normal Histogram
Frequency Count
15
12
9
6
3
0
0.010
0.100
1.000
10.000
Cu %

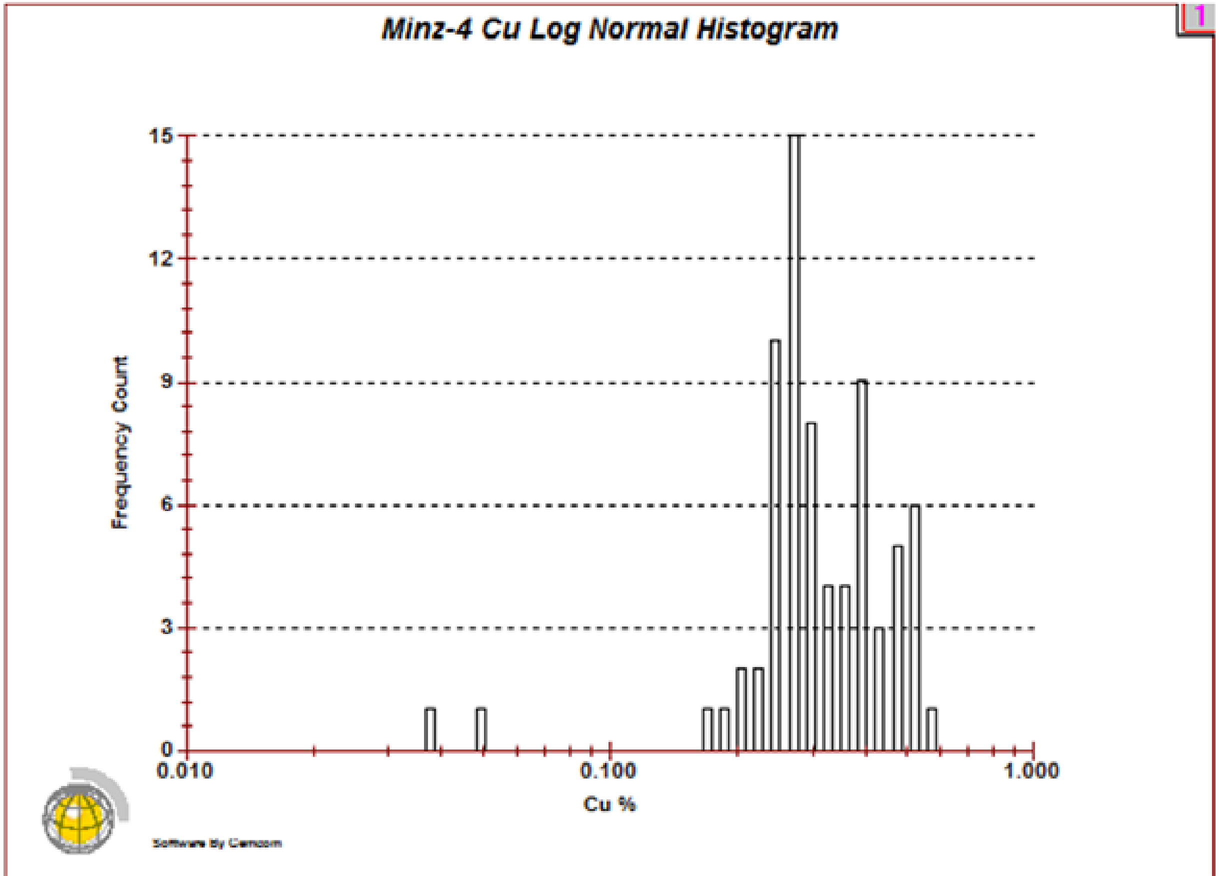

Minz-3 Mo Log Normal Histogram
Frequency Count
10
8
6
4
2
0
0.000
0.001
0.010
0.100
Mo %

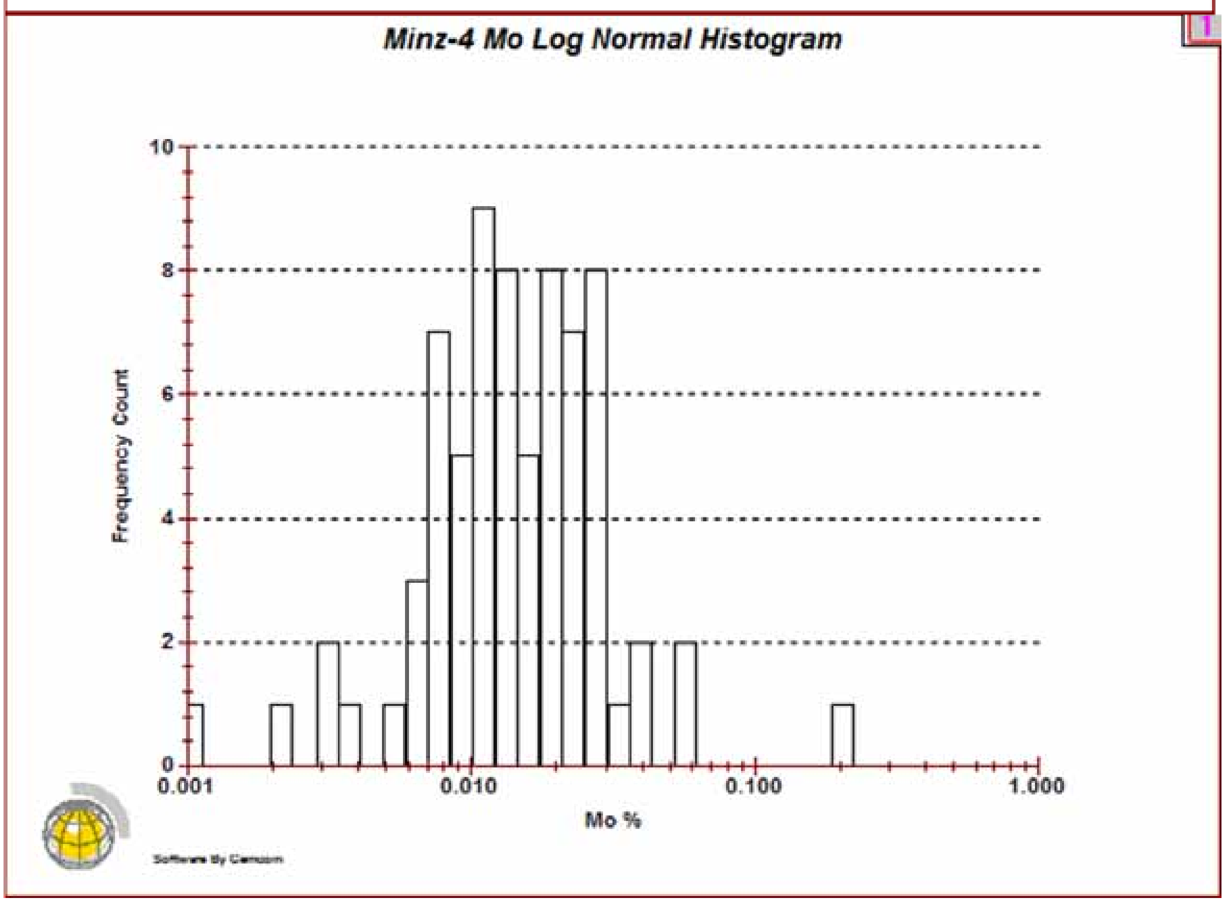


Minz-4 Au Log Normal Histogram
Frequency Count
15
12
9
6
3
0
0.010
0.100
1.000
10.000
Au g/t

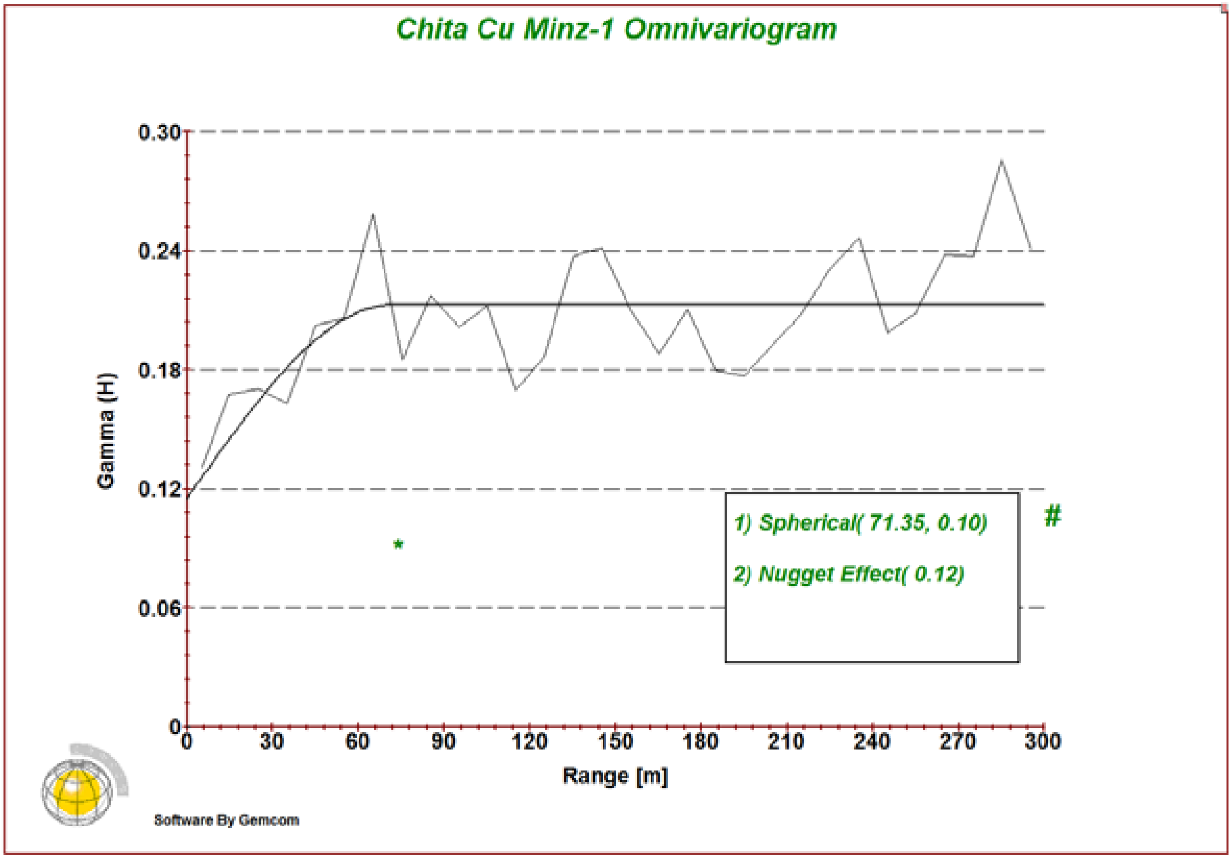


Minz-4 Ag Log Normal Histogram
Frequency Count
15
12
9
6
3
0
0.001
0.010
0.100
1.000
10.000
100.000
Ag g/t

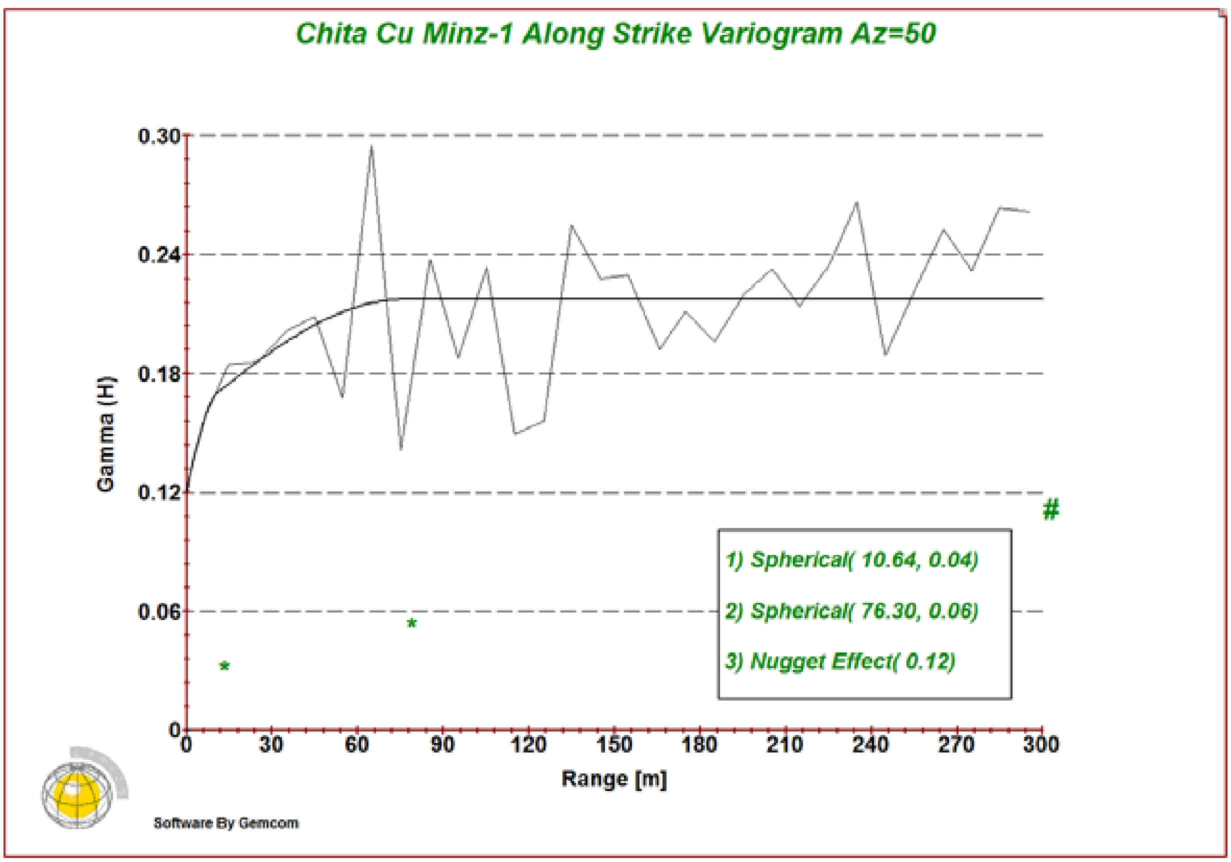

Minz-4 Cu Log Normal Histogram
Frequency Count
15
12
9
6
3
0
0.010
0.100
1.000
Cu %


Minz-4 Mo Log Normal Histogram
Frequency Count
10
8
6
4
2
0
0.001
0.010
0.100
1.000
Mo %

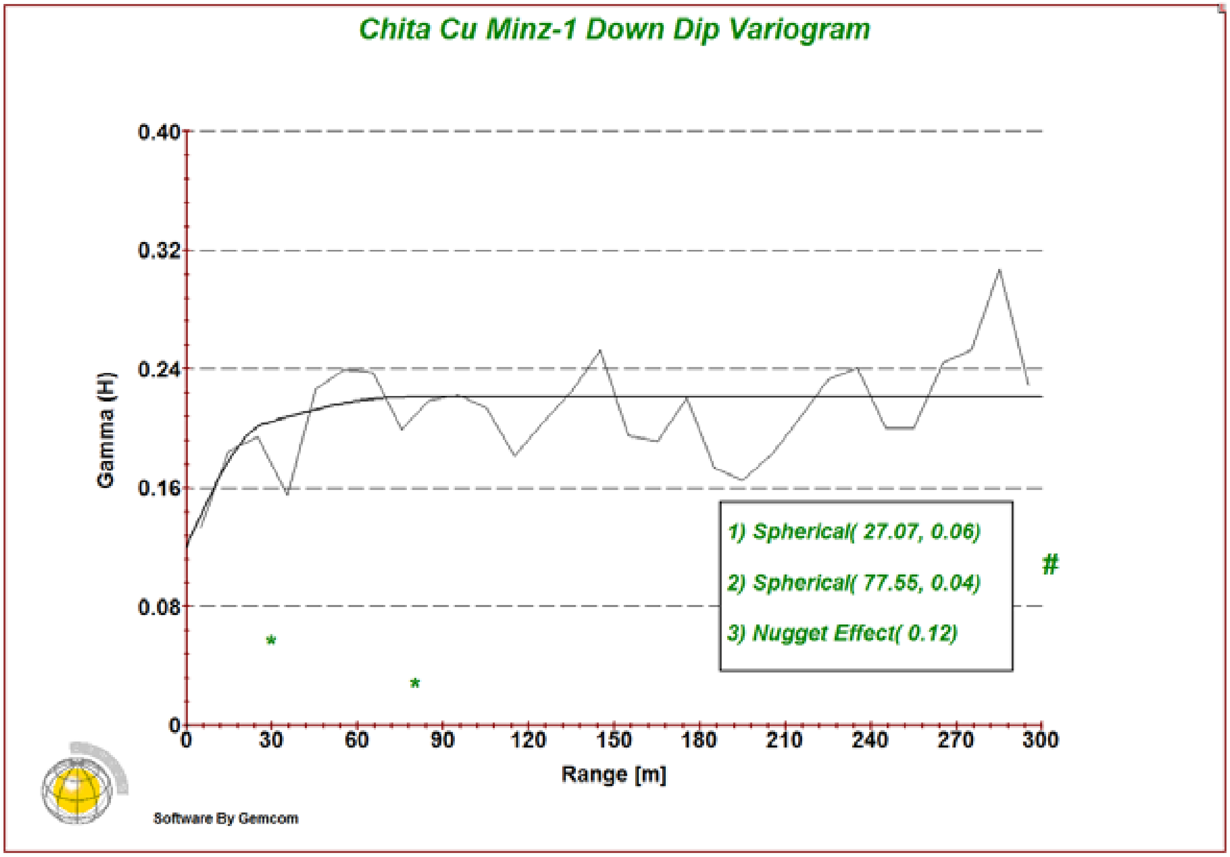
APPENDIX IV VARIOGRAM

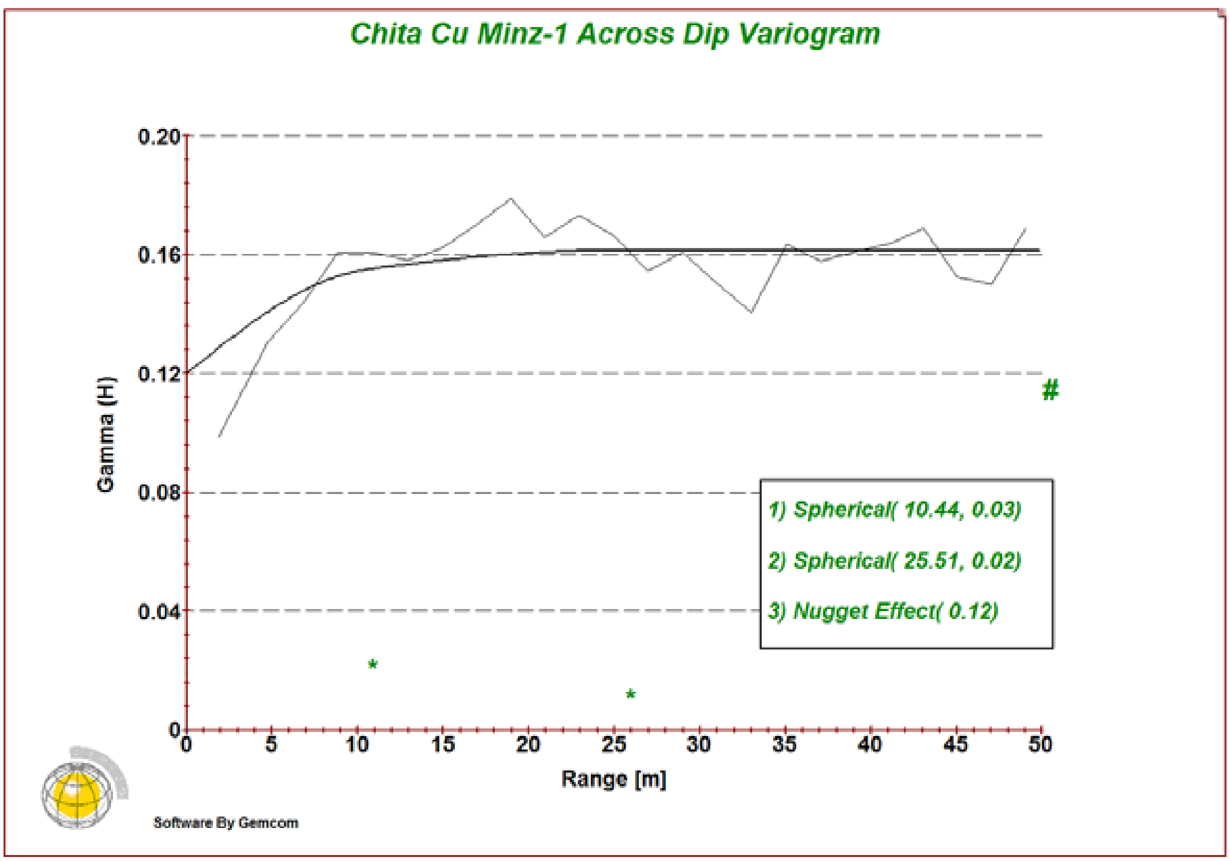


Chita Cu Minz-1 Omnivariogram
0.30
0.24
0.18
0.12
0.06
0
Gamma (H)
0
30
60
90
120
150
180
210
240
270
300
Range [m]
1) Spherical(71.35, 0.10)
2) Nugget Effect(0.12)
#
Software By Gemcom

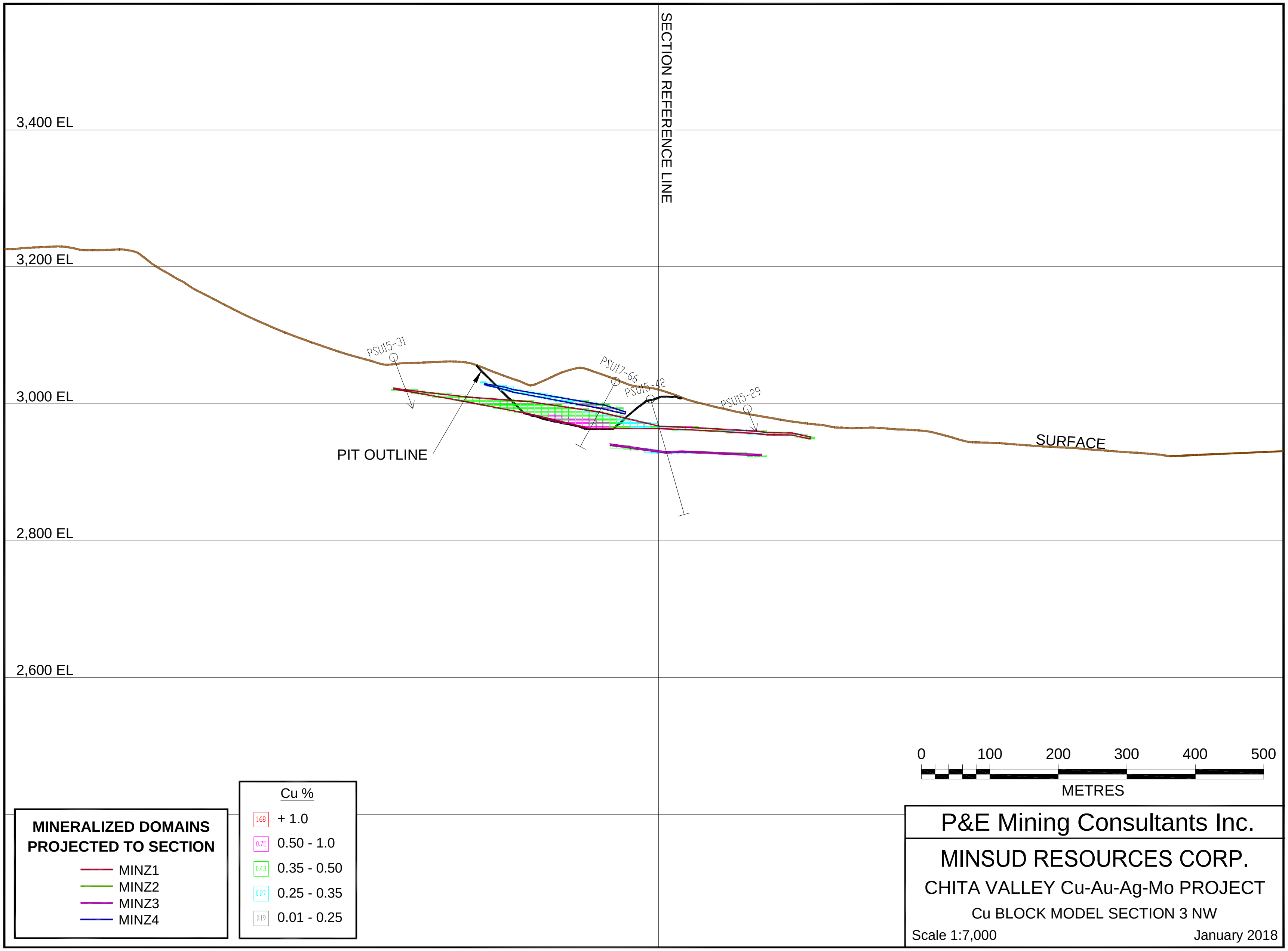


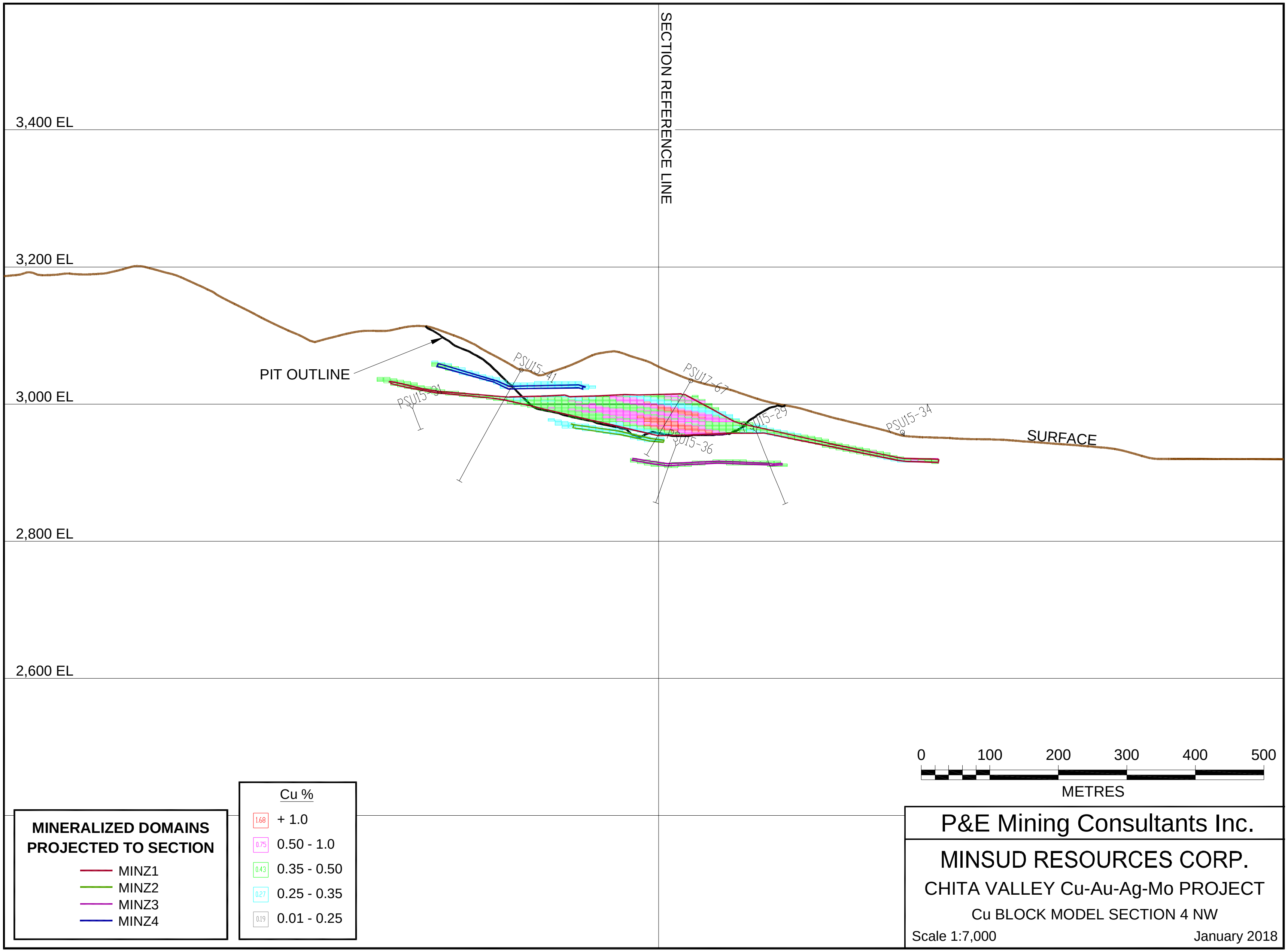
Chita Cu Minz-1 Along Strike Variogram Az=50
0.30
0.24
0.18
0.12
0.06
0
Gamma (H)
0
30
60
90
120
150
180
210
240
270
300
Range [m]
1) Spherical(10.64, 0.04)
2) Spherical(76.30, 0.06)
3) Nugget Effect(0.12)
#
Software By Gemcom


Chita Cu Minz-1 Down Dip Variogram
0.40
0.32
0.24
0.16
0.08
0
Gamma (H)
0
30
60
90
120
150
180
210
240
270
300
Range [m]
1) Spherical(27.07, 0.06)
2) Spherical(77.55, 0.04)
3) Nugget Effect(0.12)
#
*
*
Software By Gemcom

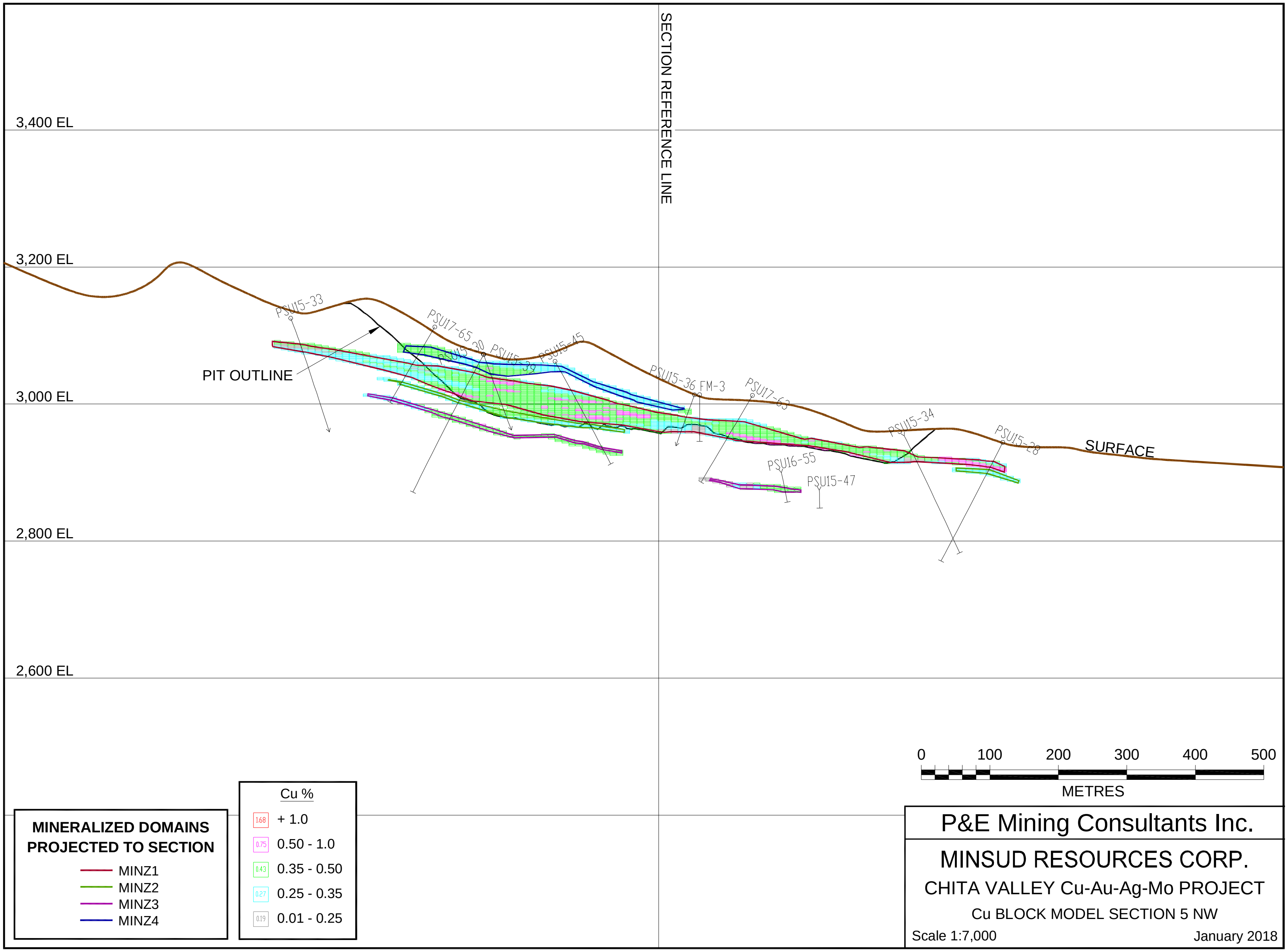

Chita Cu Minz-1 Across Dip Variogram
0.20
0.16
0.12
0.08
0.04
0
Gamma (H)
0
5
10
15
20
25
30
35
40
45
50
Range [m]
1) Spherical(10.44, 0.03)
2) Spherical(25.51, 0.02)
3) Nugget Effect(0.12)
#
*
*
Software By Gemcom

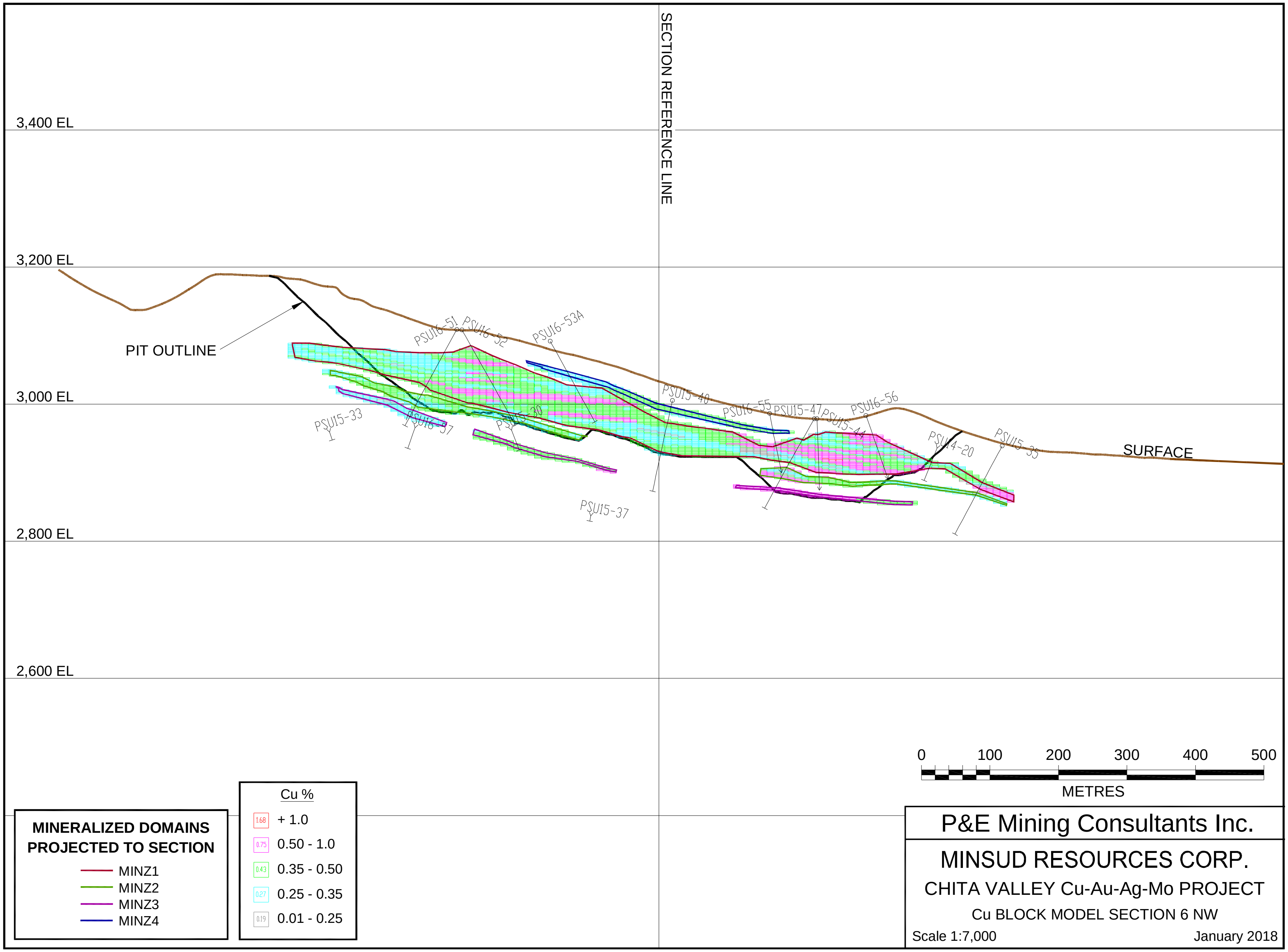
APPENDIX V CU BLOCK MODEL CROSS SECTIONS AND PLANS


SECTION REFERENCE LINE
3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
PSU15-31
PSU17-66
PSU15-42
PSU15-29
PIT OUTLINE
SURFACE
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 3 NW
Scale 1:7,000
January 2018

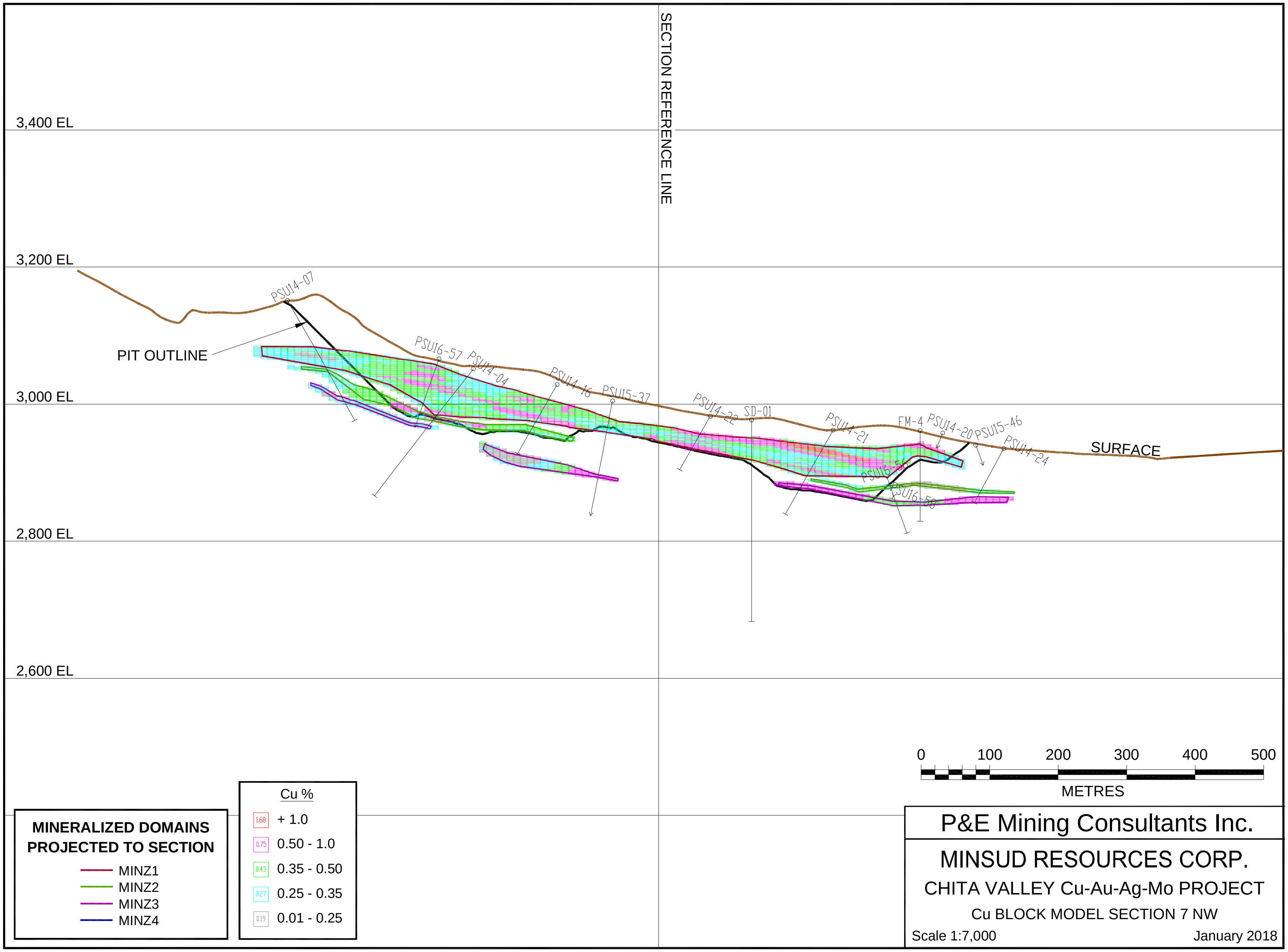


SECTION REFERENCE LINE
3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
PIT OUTLINE
SURFACE
PSU15-41
PSU15-31
PSU17-67
PSU15-29
PSU15-36
PSU15-34
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 4 NW
Scale 1:7,000
January 2018

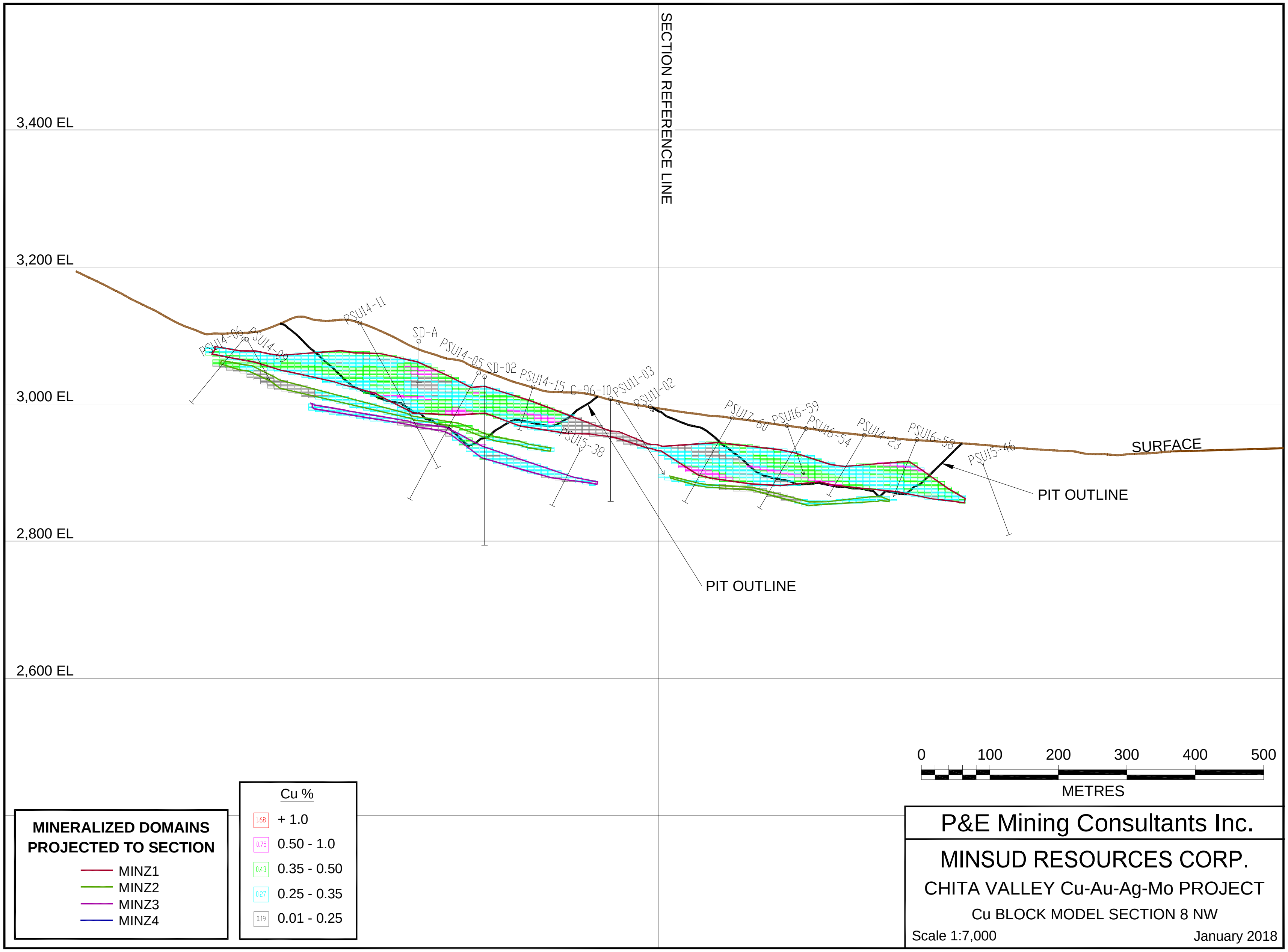

SECTION REFERENCE LINE
3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
PSU15-33
PSU17-65
PSU15-39
PSU15-45
PSU15-36
FM-3
PSU17-63
PSU15-34
PSU15-28
PSU16-55
PSU15-47
PIT OUTLINE
SURFACE
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
0
100
200
300
400
500
METRES
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 5 NW
Scale 1:7,000
January 2018

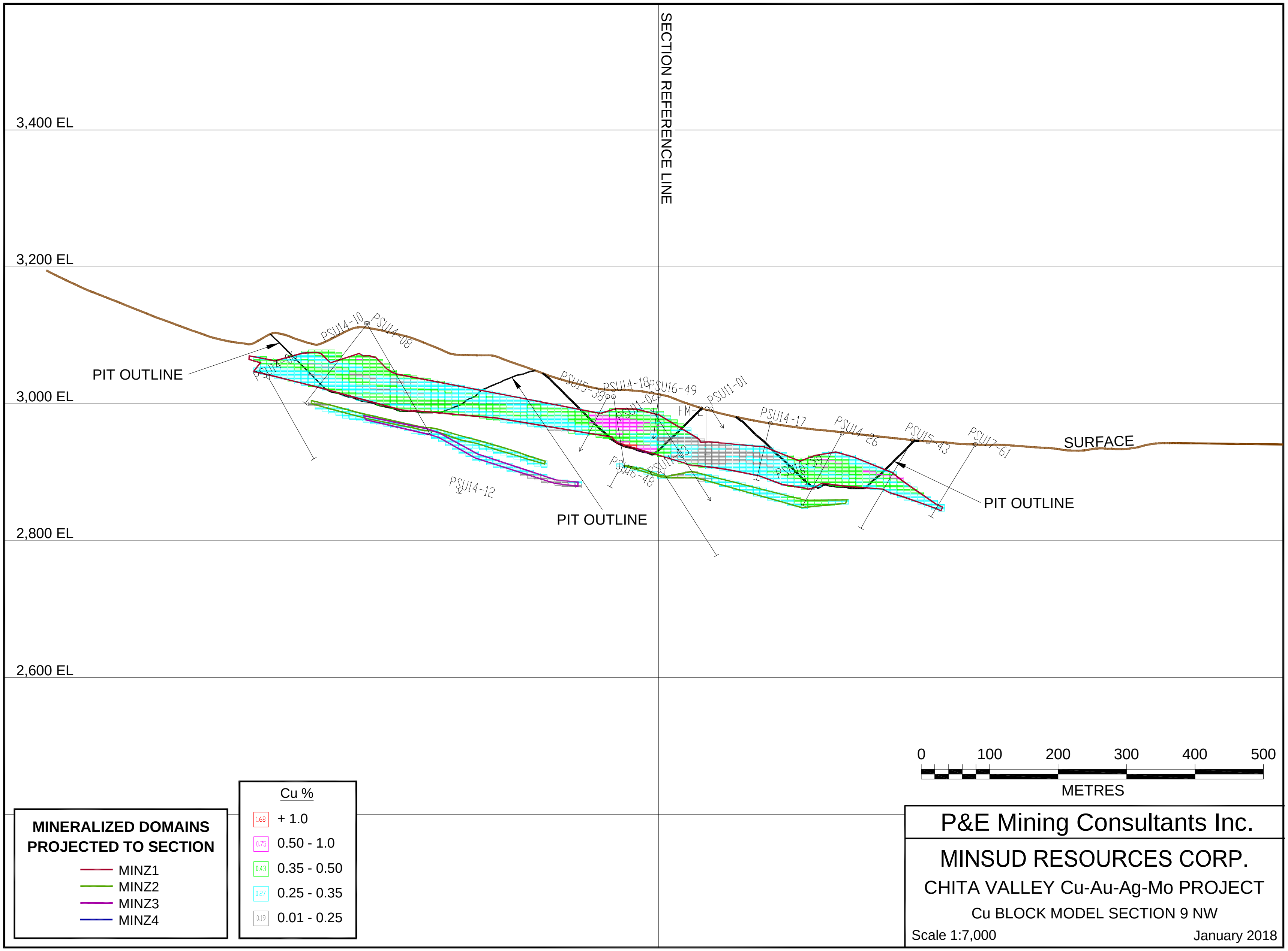


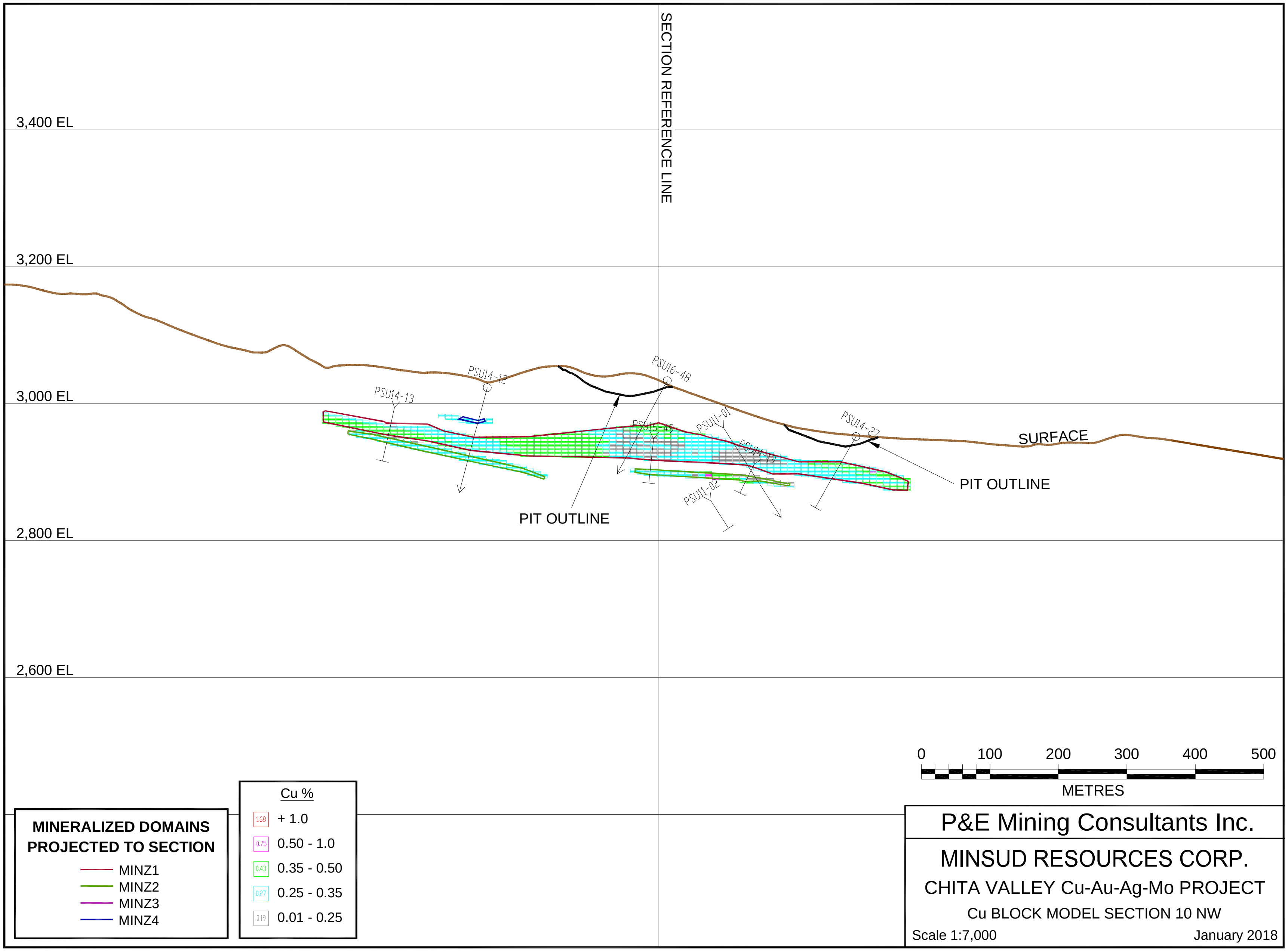
3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
SECTION REFERENCE LINE
PIT OUTLINE
SURFACE
PSU16-51
PSU16-52
PSU16-53A
PSU15-40
PSU16-55
PSU15-47
PSU15-44
PSU16-56
PSU14-20
PSU15-35
PSU15-33
PSU16-57
PSU15-30
PSU15-37
0 100 200 300 400 500
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 6 NW
Scale 1:7,000
January 2018

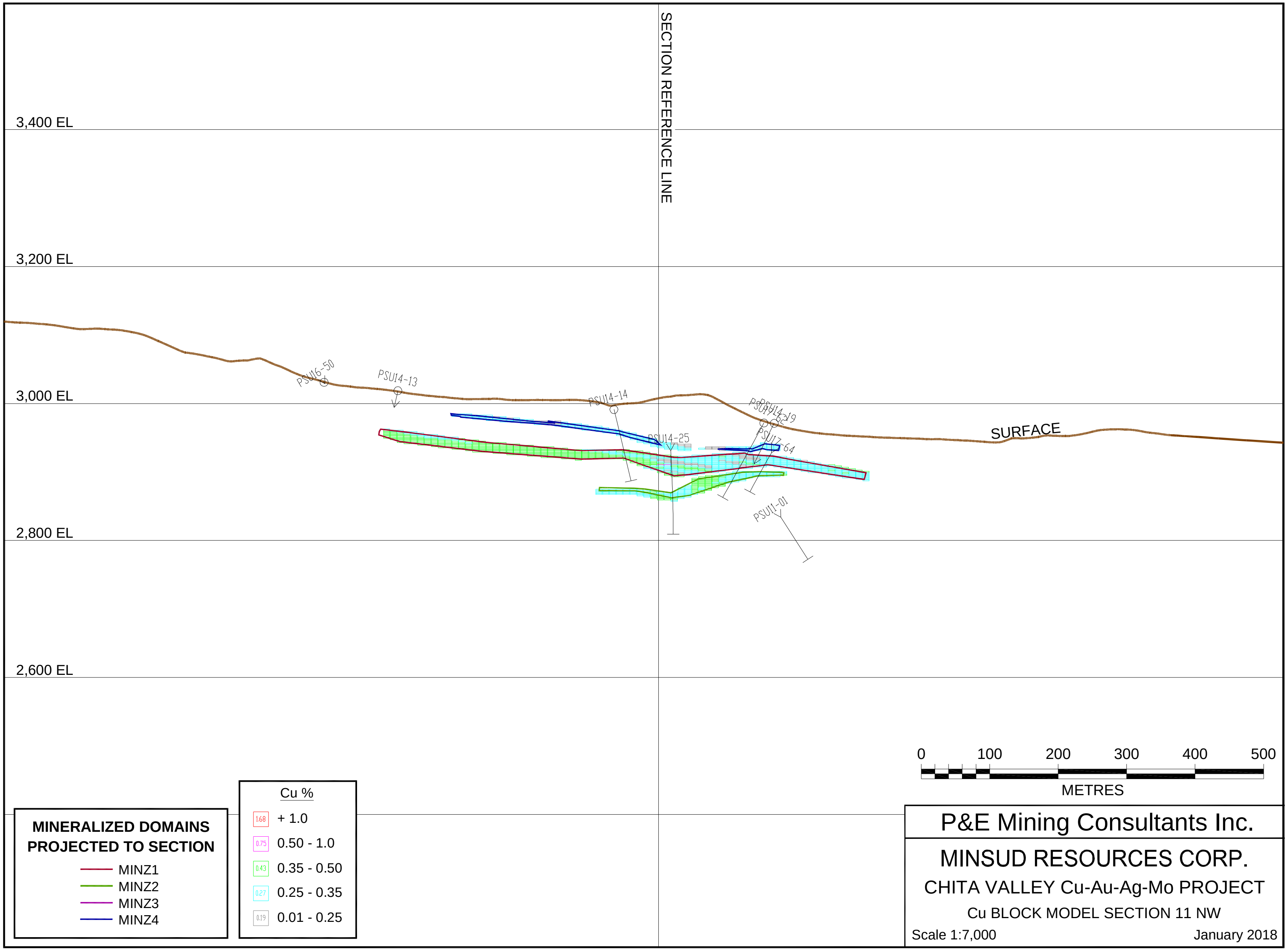


SECTION REFERENCE LINE
3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
PIT OUTLINE
SURFACE
PSU14-07
PSU16-57
PSU14-04
PSU14-16
PSU15-37
PSU14-22
SD-01
PSU14-21
FM-4
PSU14-20
PSU15-46
PSU14-24
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 7 NW
Scale 1:7,000
January 2018

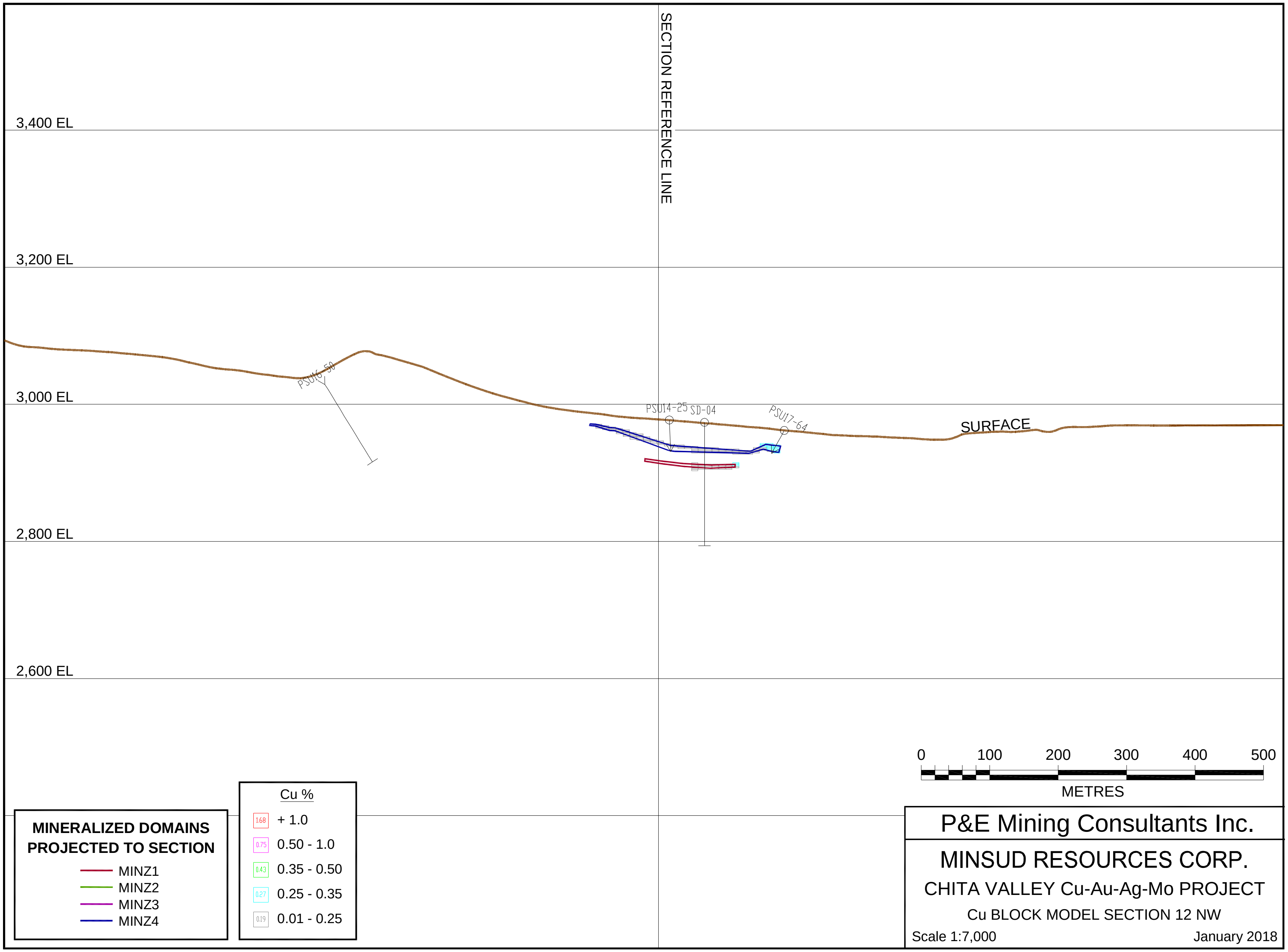

3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
SECTION REFERENCE LINE
SURFACE
PIT OUTLINE
PIT OUTLINE
PSU14-11
SD-A
PSU14-05
SD-02
PSU14-15
C-96-10
PSU11-03
PSU11-02
PSU14-06
PSU14-09
PSU15-38
PSU17-60
PSU16-59
PSU16-54
PSU14-23
PSU16-58
PSU15-46
0 100 200 300 400 500
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 8 NW
Scale 1:7,000
January 2018

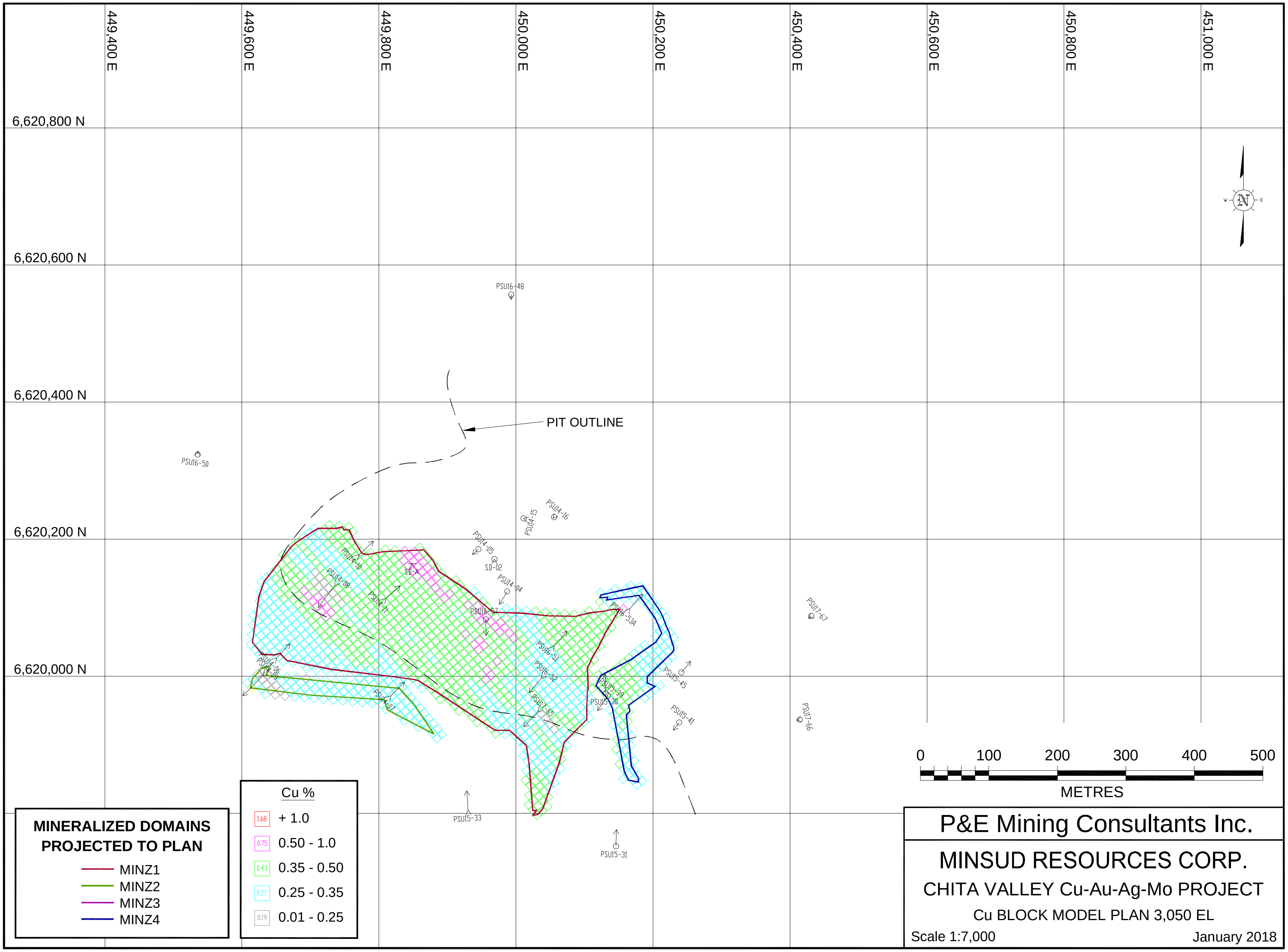

3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
SECTION REFERENCE LINE
PIT OUTLINE
PIT OUTLINE
PIT OUTLINE
SURFACE
PSU14-10
PSU14-08
PSU14-12
PSU15-38
PSU14-18
PSU16-49
PSU11-01
PSU14-17
PSU14-26
PSU15-43
PSU17-61
PSU16-59
PSU16-48
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 9 NW
Scale 1:7,000
January 2018


SECTION REFERENCE LINE
3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
PSU14-12
PSU14-13
PSU16-48
PSU16-49
PSU11-01
PSU14-19
PSU14-27
PSU11-02
SURFACE
PIT OUTLINE
PIT OUTLINE
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 10 NW
Scale 1:7,000
January 2018



SECTION REFERENCE LINE
3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
SURFACE
PSU16-50
PSU14-13
PSU14-14
PSU14-25
PSU11-01
0 100 200 300 400 500
METRES
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 11 NW
Scale 1:7,000
January 2018


SECTION REFERENCE LINE
3,400 EL
3,200 EL
3,000 EL
2,800 EL
2,600 EL
PSU16-50
PSU14-25
SD-04
PSU17-64
SURFACE
0
100
200
300
400
500
METRES
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
MINERALIZED DOMAINS PROJECTED TO SECTION
MINZ1
MINZ2
MINZ3
MINZ4
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL SECTION 12 NW
Scale 1:7,000
January 2018



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449,600 E
449,800 E
450,000 E
450,200 E
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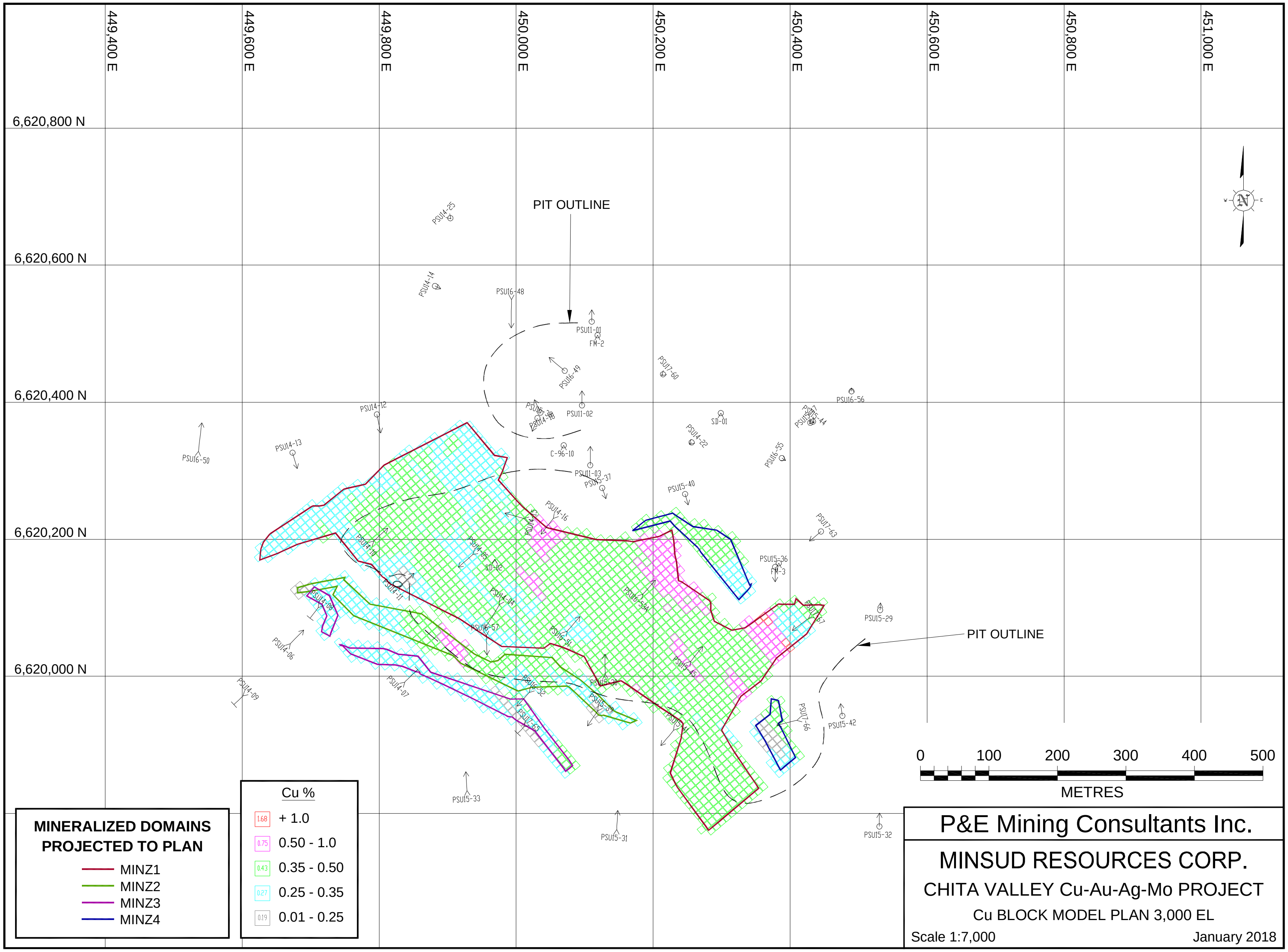
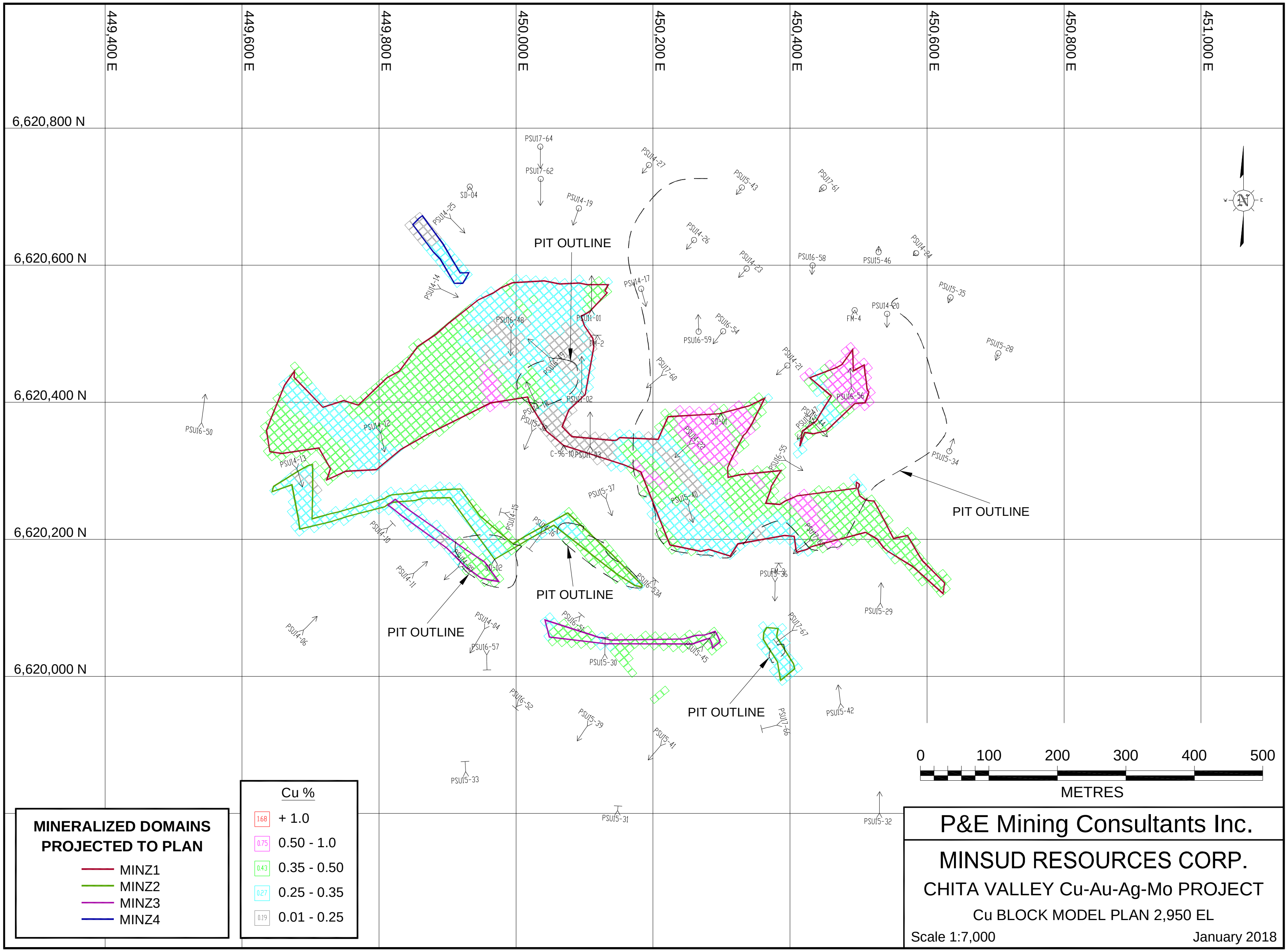
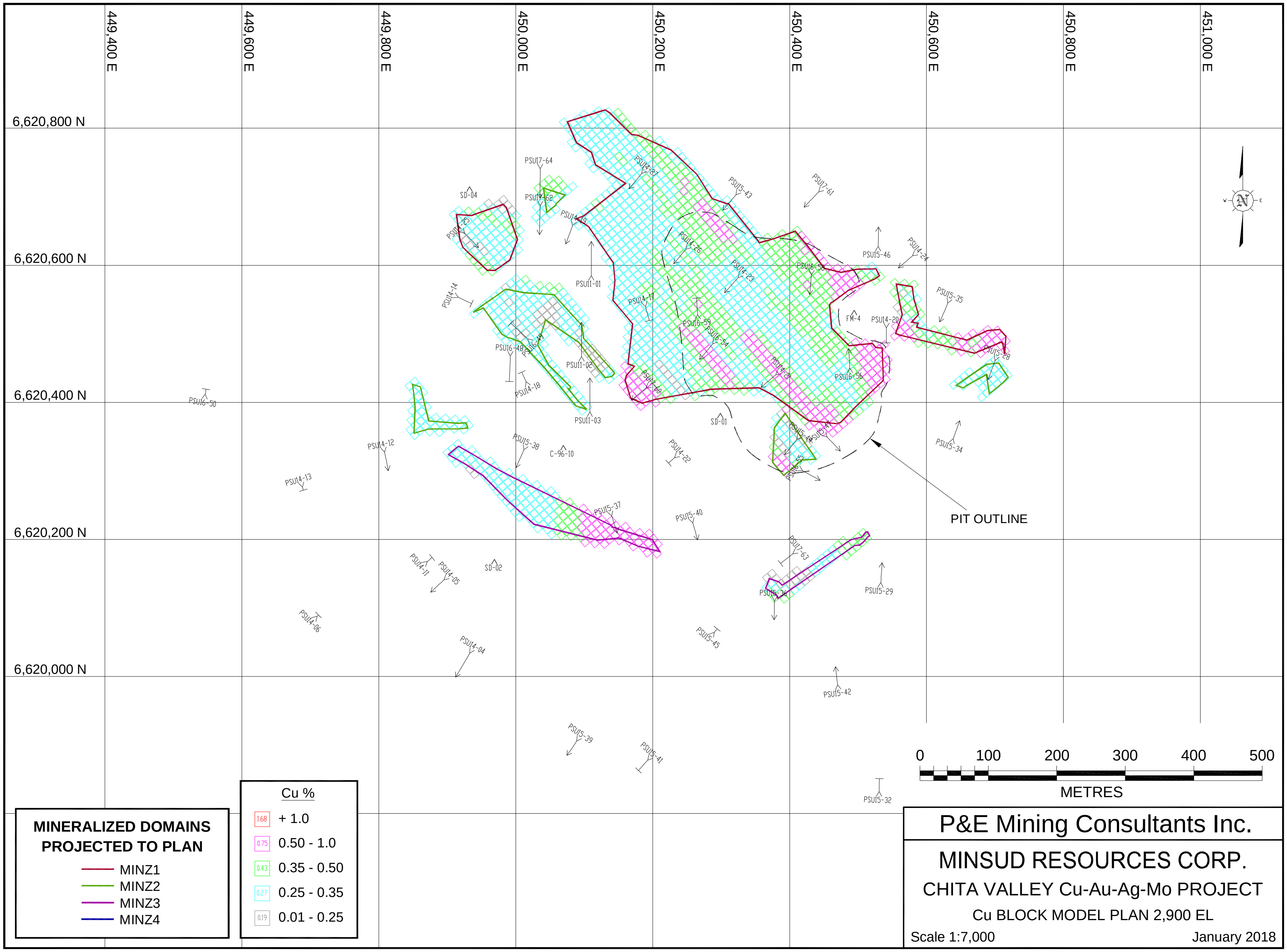
450,600 E
450,800 E
451,000 E
6,620,800 N
6,620,600 N
6,620,400 N
6,620,200 N
6,620,000 N
PIT OUTLINE
PSU16-48
PSU16-50
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO PLAN
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL PLAN 3,050 EL
Scale 1:7,000
January 2018



449,400 E
449,600 E
449,800 E
450,000 E
450,200 E
450,400 E
450,600 E
450,800 E
451,000 E
6,620,800 N
6,620,600 N
6,620,400 N
6,620,200 N
6,620,000 N
PIT OUTLINE
PIT OUTLINE
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO PLAN
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL PLAN 3,000 EL
Scale 1:7,000
January 2018


449,400 E
449,600 E
449,800 E
450,000 E
450,200 E
450,400 E
450,600 E
450,800 E
451,000 E
6,620,800 N
6,620,600 N
6,620,400 N
6,620,200 N
6,620,000 N
PIT OUTLINE
PIT OUTLINE
PIT OUTLINE
PIT OUTLINE
PIT OUTLINE
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO PLAN
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL PLAN 2,950 EL
Scale 1:7,000
January 2018


449,400 E
449,600 E
449,800 E
450,000 E
450,200 E
450,400 E
450,600 E
450,800 E
451,000 E
6,620,800 N
6,620,600 N
6,620,400 N
6,620,200 N
6,620,000 N
PIT OUTLINE
0
100
200
300
400
500
METRES
MINERALIZED DOMAINS PROJECTED TO PLAN
MINZ1
MINZ2
MINZ3
MINZ4
Cu %
+ 1.0
0.50 - 1.0
0.35 - 0.50
0.25 - 0.35
0.01 - 0.25
P&E Mining Consultants Inc.
MINSUD RESOURCES CORP.
CHITA VALLEY Cu-Au-Ag-Mo PROJECT
Cu BLOCK MODEL PLAN 2,900 EL
Scale 1:7,000
January 2018

APPENDIX VI OPTIMIZED PIT SHELL

CHITA VALLEY Cu-Au-Ag-Mo PROJECT
OPTIMIZED PIT SHELL