

TECHNICAL REPORT AND MINERAL RESOURCE ESTIMATE ON THE SAN ROQUE PROJECT, RIO NEGRO PROVINCE, ARGENTINA



PRESENTED TO
Marifil Mines Limited

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ACRONYMS & ABBREVIATIONS

| Acronyms / Abbreviations | Definition |
|--------------------------|--------------------------------------------------|
| % | Percent |
| ° | Degree (degrees) |
| °C | Degrees Celsius |
| Asl | Above Sea Level |
| Ag | Silver |
| Au | Gold |
| Cm | Centimetre |
| GPS | Global Positioning System |
| g/t | Grams per tonne |
| Ha | Hectares |
| HCL | Hydrochloric Acid |
| ID ² | Inverse Distance Squared |
| ID ³ | Inverse Distance Cubed |
| In | Indium |
| Kg | Kilogram |
| Km | Kilometre (100 metres) |
| KV | Kilovolt (1000 volts) |
| Lb | Pound |
| M | Metre |
| Mm | Millimetre |
| MFM | Marifil Mines Ltd. |
| MIM | Mount Isa Mines |
| NN | Nearest Neighbour |
| NQ | A drill bit size of 47.6mm, inside core diameter |
| P.Eng | Professional Engineer |
| P.Geo | Professional Geoscientist |
| Pb | Lead |
| QA/QC | Quality Assurance-Quality Control |
| T | Tonne (100kg) |
| UTM | Universal Trans Mercator |
| Zn | Zinc |

1.0 SUMMARY

Marifil Mines Limited (“Marifil”) has retained Tetra Tech Inc. (Tetra Tech) to produce a National Instrument 43-101 (NI 43-101) Technical Report which includes a maiden Mineral Resource Estimate for the San Roque Project (The “Property” or “Project”), which consists of the Del Indio/Griselda Zone, along with Zone 25, Zone 34, and Zone 51. The effective date of this report is July 22, 2019. This Technical Report has been prepared in accordance with NI 43-101 and the Canadian Institute for Mining Metallurgy and Petroleum (CIM) Best Practice Guidelines (2003), and Definition Standards (2014).

The San Roque Property is located in the Rio Negro Province in Eastern Argentina and is situated approximately 73 kilometres west of the city of Las Grutas, or approximately 1,100 kilometres southwest of Buenos Aires, Argentina’s capital city. The Property currently includes twelve registered tenements with a total surface area of 73,915 hectares consisting of both cateo’s (exploration rights) and minas (mining rights) which are 100% owned by a private company, Minas San Roqe S.A., which is intern 51% owned by Marifil’s wholly owned Argentinian subsidiary Marifil S.A., and 49% by NovaGold Resource Inc.’s (“NovaGold”) wholly-owned subsidiary NovaGold Argentina Inc.

Access to the Property is via paved highway (National Route #23) from Las Grutas, and an all-weather gravel road. A standard gauge rail line runs along the southern margin of the Property, parallel to National Route #23, and contains a currently unused multi-track rail siding area which could potentially be repurposed for supporting any future mining activities. There are several regular daily flights between Argentina’s Capital of Buenos Aires and the cities of Bahia Blanca and Viedma (the capital of Rio Negro Province). The drive from Bahia Blanca to Las Grutas is approximately 5 hours, or approximately 2.5 hours from Viedma to Las Grutas.

The Deposit is hosted within the northern edge of the Somoncuro Massif, a broad uplifted zone in northern Patagonia. Locally, the mineralization is hosted within the Marifil Formation, a volcanic package contained with a proposed 2 km diameter caldera complex. Ring faults and their splays within this caldera complex are interpreted as the conduits for fluid flow and now host much of the mineralization at San Roque.

Mineralization at the San Roque deposit is interpreted as an intermediate sulphidation epithermal gold deposit with elevated concentration of gold (Au), Silver (Ag), zinc (Zn), Lead (Pb), and Indium (In). The observed mineralization at San Roque is contained within the following two styles of veins:

- Structurally-controlled, steeply dipping epithermal polymetallic veins; and
- Broad sub-horizontal dipping zones comprised of polymetallic quartz stockworks occurring at the intersection of quartz crystal tuffs and polymictic volcanic breccias with the structurally controlled vein corridors.

Sulphide mineralization at San Roque includes pyrite, sphalerite, galena, local chalcopyrite and molybdenite and sparse tennantite; oxide mineralization includes goethite and hematite, jarosite, pyrolusite and psilomelane, franklinite, malachite, chrysocolla, along with rare plumbojarosite and digenite and occasional visible gold. Gold and silver grades are typically well correlated, along with lead showing a positive correlation with zinc. Indium mineralization appears to have lesser correlation to gold, silver, and lead mineralization. Zinc is thought to exhibit a positive correlation with indium. Mineralization has been intercepted from surface to a maximum depth of 250 meters in the Del Indio and Griselda Zone, along with Zone 51, and up to 130 metres in Zone 25 and Zone 34.

The Del Indio/Griselda Zone is characterized by two sub-vertically dipping structures containing polymetallic intermediate sulphidation vein corridors. The Griselda zone strikes to the north west, and the Del Indio structure bifurcates from the Griselda veins, striking to the south west.

Zone 25, Zone 34, and Zone 51 contain both vertically dipping structurally controlled polymetallic veins, along with sub-horizontal zones of polymetallic stockwork mineralization. The steeply dipping structures are interpreted to have acted as the feeder structures for the near surface stockwork hosted mineralization.

Since 2001, 112 drill holes totaling 16,586.1 m, and 1,508.8 m of trenching has been completed on the San Roque Property.

1.1 Resource Statement

A Mineral Resource Estimate has been developed for the Del Indio and Griselda Zone, along with Zone 25, Zone 34, and Zone 51 on the San Roque Property for Marifil. The resource is based on information collected from drilling and trenching activities from 2001 to 2018 and relied upon on assay information for gold, silver, lead, zinc, and indium mineralization sampled on the Property.

The resource was developed from geological interpretation and constrained to low (0.5 g/t AuEq) and high grade (>2.0 g/t AuEq) wireframes to minimize dilution and model the interpreted nature of the mineralization. A 5 x 5 x 5 m block parent model was developed for each zone, with each parent block sub-celled to a minimum of 1 x 1 x 1 m blocks to allow for more accurate block volumes. Interpolation was completed on the parent blocks and the grades assigned to the sub-cell blocks. Inverse distance squared was selected for grade estimation on the project. The Mineral Resource Estimate is reported using a cut-off of 0.5 g/t AuEq for the oxide domain and 0.6 g/t AuEq for the sulphide domain and has been constrained to conceptual open pit shells.

The reader is cautioned that the results from the pit optimization are used solely for testing the “reasonable prospects for eventual economic extraction” by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a mineral resource statement and to select an appropriate resource reporting cut-off grade.

The results of the resource estimation study are presented in Table 1-1.

Table 1-1: San Roque Mineral Resource Estimate (effective July 22, 2019)

| Resource Classification | Zone | Cutoff (g/t) | Quantity (tonnes) | Grades | | | | | |
|------------------------------------------|---------------------------|---------------------|-------------------|-------------|-------------|--------------|-------------|-------------|--------------|
| | | | | AUEQ | AU | AG | PB | ZN | IN |
| | | | | g/t | g/t | g/t | % | % | g/t |
| Oxide | | | | | | | | | |
| Inferred (Oxide) | <i>Del Indio/Griselda</i> | 0.5 AuEq | 4,461,900 | 1.03 | 0.34 | 5.09 | 0.38 | 0.53 | 11.20 |
| | <i>Zone 25</i> | 0.5 AuEq | 308,200 | 1.45 | 0.77 | 33.62 | 0.13 | 0.22 | 2.23 |
| | <i>Zone 34</i> | 0.5 AuEq | 1,701,500 | 1.95 | 1.75 | 11.83 | 0.05 | 0.04 | 0.01 |
| | <i>Zone 51</i> | 0.5 AuEq | 649,900 | 1.24 | 0.66 | 14.37 | 0.30 | 0.28 | 6.45 |
| Total Inferred Oxide | | 0.5 AuEq | 7,121,500 | 1.29 | 0.72 | 8.78 | 0.28 | 0.37 | 7.70 |
| Sulphide | | | | | | | | | |
| Inferred (Sulphide) | <i>Del Indio/Griselda</i> | 0.6 AuEq | 19,114,500 | 1.47 | 0.33 | 8.95 | 0.46 | 1.03 | 14.92 |
| | <i>Zone 25</i> | 0.6 AuEq | 1,884,500 | 1.48 | 0.48 | 33.03 | 0.22 | 0.55 | 11.09 |
| | <i>Zone 34</i> | 0.6 AuEq | 603,000 | 1.53 | 1.09 | 25.07 | 0.06 | 0.10 | 0.10 |
| | <i>Zone 51</i> | 0.6 AuEq | 4,167,900 | 1.35 | 0.49 | 20.70 | 0.33 | 0.55 | 7.31 |
| Total Inferred Sulphide | | 0.6 g/t AuEq | 25,769,900 | 1.45 | 0.39 | 12.99 | 0.41 | 0.89 | 13.06 |
| Combined | | | | | | | | | |
| Inferred (Oxide + Sulphide) | <i>Del Indio/Griselda</i> | 0.58 AuEq | 23,576,400 | 1.39 | 0.33 | 8.22 | 0.45 | 0.93 | 14.21 |
| | <i>Zone 25</i> | | 2,192,700 | 1.47 | 0.52 | 33.11 | 0.21 | 0.50 | 9.84 |
| | <i>Zone 34</i> | | 2,304,500 | 1.84 | 1.58 | 15.29 | 0.05 | 0.05 | 0.03 |
| | <i>Zone 51</i> | | 4,817,800 | 1.34 | 0.51 | 19.85 | 0.33 | 0.51 | 7.20 |
| Total Oxide and Sulphide Combined | | | 32,891,400 | 1.42 | 0.46 | 12.08 | 0.39 | 0.78 | 11.90 |

- All numbers are rounded. Overall numbers may not be exact due to rounding.
- A cut-off value of 0.50 g/t AuEq and 0.60 g/t AuEq was used for Oxide and Sulphide based mineralization respectively.
- Gold equivalent has been calculated using the following formula: $AuEq = Au \text{ grade} + (Ag \text{ grade} / 74.5) + (Pb \text{ grade} / 19,565.2) + (Zn \text{ grade} / 15,716.3) + (In \text{ grade} / 117.3)$.
- The following metal prices were used in the AuEq calculation: Au: \$1,267/oz, Ag: \$17/oz, Pb: \$1.0/lb, Zn: \$1.2/lb, In: \$10/oz.
- Bulk density of 2.63 for mineralized domains
- Conforms to NI 43-101, Companion Policy 43-101CP, and the CIM Definition Standards for Mineral Resources and Mineral Reserves. Inferred Resources have been estimated from geological evidence and limited sampling and must be treated with a lower level of confidence than Measured and Indicated Resources.

1.2 Recommendations

It is recommended that the Project be developed into an advanced stage project rather than an exploration target. Recommendations for the Project includes conducting ongoing drilling to expand the boundaries of mineralization and attempt to connect mineralization currently constrained to Zones 34 and 51. Furthermore, exploration drilling should also be undertaken at the currently undrilled North West Vein zone. Metallurgical evaluation should also be completed for the various styles of mineralization, along with a focused hydrogeological investigation in order to locate a suitable water source for supporting potential mining and milling operations. A systematic QAQC system should be adopted along with the continuation of the collection of bulk density measurements. A database management system should be implemented in order to track and organize the large volumes of data collected

during these programs. Finally, it's recommended the project proceed to the preliminary economic assessment (PEA) stage.

None of the proposed recommendations are contingent upon the results of the other phases, and each can be carried out concurrently and independently of each other.

An estimated budget for this recommended work is presented below.

Table 1-2: Estimated Budget for Project Recommendations

| Task | Cost (CAD) |
|----------------------------------------------------------------------------|--------------------|
| In-fill and Extensional Drilling – 7,500 m | \$1,700,000 |
| Exploration Drilling – 3,000 m | \$675,000 |
| Exploration Trenching | \$50,000 |
| Assay, Geochemical, Certified Reference Materials, Cores Sawing & Shipping | \$320,000 |
| Professional & Labor Personnel | \$235,000 |
| Geotechnical, Environmental and Hydrogeological Investigations | \$200,000 |
| Permitting, Land Use Compensation, Access Cost, Claims Fees & Reclamation | \$125,000 |
| G & A - Minas San Roque S.A. | \$75,000 |
| Warehousing, Living & Travel Expenses | \$135,000 |
| Metallurgical Testing | \$60,000 |
| Preliminary Economic Assessment | \$250,000 |
| Total Estimate | \$4,000,000 |

2.0 INTRODUCTION

2.1 Introduction and Overview

Marifil Mines Ltd. (“Marifil”, or “the Company”) is a Vancouver-based Canadian public company engaged in the business of exploration and development of precious and base metals, along with industrial metals for use in batteries. Marifil is listed on the TSX Venture Exchange with trading symbol TSX-V: MFM.

The Company holds a 51% interest in the San Roque Gold Project (“the Project”, or “the Property”) located in southeastern Argentina, which is subject only to a federal underlying royalty described elsewhere in this report. Novagold Resources Inc. holds the remaining 49% interest in the Project. The San Roque Gold Project is being explored by Marifil for intermediate sulphidation gold mineralization and is progressing to an advanced stage of exploration and is located approximately 73 kilometres west of the community of Las Grutas, in the province of Rio Negro, Argentina.

Tetra Tech Canada Inc. (“Tetra Tech”) was contracted by Marifil to complete a mineral resource estimate on the 4 zones, (Zone 33 [herein referred to as Del Indio/Griselda], Zone 25, Zone 34, and Zone 51) within the San Roque Property (the “Property”) and to prepare a Technical Report written in support of the mineral resource estimate. This Technical Report will be used by Marifil in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 Standards of Disclosure of Mineral Projects (“NI 43-101”).

This Technical Report is written in support of the mineral resource estimate released by Marifil on July 22nd, 2019. The Property contains an Inferred Mineral Resource of 32.9 Million tonnes grading 1.42 g/t gold equivalent (“AuEq”) for 1,499,900 AuEq ounces at a 0.6 g/t AuEq cut-off grade. Included within this gold equivalent are 486,600 ounces of Au, 12,770,700 ounces Ag, 279,788,900 pounds Pb, 566,930,300 pounds Zn, and 12,586,000 ounces In with average grades of 0.46 g/t Au, 12.08 g/t Ag, 0.39% Pb, 0.78% Zn, and 11.90 g/t In respectively.

The mineral resource presented in this report was completed by Mr. Cameron Norton, P.Geo (the “Author” or the “QP”) of Tetra Tech. Mr. Norton is an independent Qualified Person (“QP”) as defined by NI 43-101.

2.2 Site Visits

The QP visited the property from March 11th-15th, 2019 and was accompanied by Marifil personnel. Mr. Norton examined several core holes, drill logs, and assay certificates, along with inspecting the core logging facilities, sampling procedures, and core security. Assays were examined against drill core mineralized zones. Mr. Norton also examined the collar and trenching locations, along with surface mineralization during a tour of the property geology conducted by Marifil employees Dick Walters (Vice President of Exploration) and Daniel Buffone (President, Marifil Sociedad Anónima, a Marifil owned subsidiary).

2.3 Sources of Information

The sources of information include data and reports supplied by Marifil personnel as well as documents cited through the report. An electronic database was compiled and transmitted by Marifil to Tetra Tech.

2.4 Units of Measure

The metric system has been used through this report. Tonnes are dry metric of 1,000 kg, or 2,204.6 lb. Currency is reported in American dollars (USD\$), and referenced as "\$", unless otherwise stated. Gold, silver, and indium values are reported as grams per tonne with a conversion factor of 31.1035 used to convert grams to troy ounces. Lead and zinc values are reported as percent ("%") concentration by mass. Temperatures are reported in degrees Celsius (°C). Lengths are quoted in kilometres ("km"), metres ("m") or millimetres ("mm"). Bulk Density measurements are reported in tonnes per cubic metre (t/m³). Map locations are given using the Datum POSGAR 94.

2.5 Effective Date

The effective date of this report is July 22nd, 2019.

3.0 RELIANCE ON OTHER EXPERTS

The Qualified Person (QP) has relied on information provided by other experts who are not QPs. The QP believes that is reasonable to rely on these experts, based on the assumptions that the experts have the necessary education, professional designations, and relevant experience on matters relevant to the technical report.

A list of the reports that contributed to the mineral resource estimate and Technical Report is provided in Section 20.

The portions of the Technical Report and the extent of reliance to which this information applies is provided below.

3.1 Project Background, History, Ownership, and Tenure

The QP has relied on information provided by Marifil including land ownership and tenure status, and any legal agreements. Tetra Tech has not conducted land status evaluations.

Information on these technical areas as provided by Marifil forms the basis of Sections 4 to 6 of this report.

3.2 Geological Setting, Exploration, Drilling

Tetra Tech has relied upon Marifil for information pertaining to the geological setting of the Property, along with the history of exploration and drilling. The QP reviewed the data presented in these sections to verify there is no material issues and there is a reasonable basis for reliance.

Information on these technical areas provided by Marifil forms the basis of Sections 7, 9, and 10.

3.3 Environmental Studies, Permitting and Social or Community Impact

The QP has relied on information provided by Marifil relating to any environmental studies, permitting, and social or community impact as outlined in Section 15 of this report.

4.0 PROPERTY DESCRIPTION AND LOCATION

The San Roque property is approximately centered on 46° 46' 53" South Latitude and 65° 47' 25" West Longitude (or E 3,517,105/N 5,487,077 Gauss Kruger Posgar 94 Zone 3), located in northeastern Patagonia near the Atlantic coast within the Province of Rio Negro, Argentina (Figure 4-1). The property overlies portions of San Antonio and Valcheta departments (counties) and encompasses the San Roque and Piris estancias (private property ranches).

Figure 4-1: Property Location Map



The terrain of the San Roque property is relatively flat with a general elevation of 200 m above sea level and is situated in the rain shadow of the Andes Mountains which results in a hot and dry coastal desert. Summer months typically last from late November to early March with temperatures typically fluctuating between 17°C and 31°C. The cold season occurs from mid-May to mid-August, with daily temperatures ranging between 0°C and 12°C as shown in Figure 4-2 (weatherspark.com). The highest levels of precipitation occur typically occur in the month of March, receiving an average of 29 mm of rain (Figure 4-3). Typically, this land is used for cattle and sheep ranching.

Figure 4-2: Average High and Low Temperature

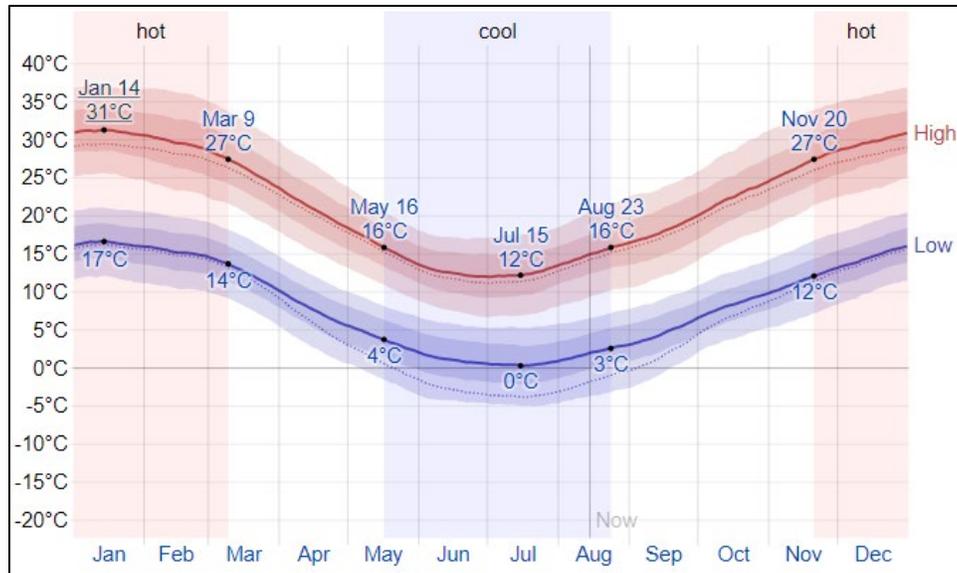


Figure 4-3: Average Monthly Rainfall



The Property is readily accessible via National Highway Route #23 from the coastal population centers of Las Grutas (73 km) and San Antonio Oeste (83 km) located to the east. The Property is located within a 100 km radius of infrastructure necessities such as seaports, airports, hospitals and labour sources with a railroad, gas pipeline, and high-tension power line crossing the property, the details of which are addressed in Section 5.

4.1 Legal Framework of Mining Rights in Argentina

Mining activities are regulated by the Argentine Constitution, the Mining Code, federal laws and regulations, as well as local legislation by the provinces in accordance with federal legislation. The Argentine Mining Code (AMC) dictates that the State (National and Provincial) is the original owner of the minerals; however, the State is not allowed to develop them as mining rights but rather, they must be granted by the State to individuals or companies incorporated under Argentine law. The National Mining Code and the Rio Negro Provincial Law No. 4,941, named the Code of Mining Procedure, regulates the exploration and mining permits of the San Roque Project.

The AMC provides for two types of mining rights: exploration permits (“cateos”) and mining concessions (“minas”), both of which are granted on a first-come, first-serve basis. Cateos are exclusive temporary authorizations to explore a specific area for certain mineral categories during the period, and to the extent provided by the AMC. Any mineral discoveries made on the cateo are granted to the applicant. The lodging of a cateo is opposable with regard to third parties, and holders of such will have exclusivity rights to apply for, and obtain, a mina within the area covered by such permit. To obtain a cateo, the interested entity needs to lodge an application including a minimum work plan, an estimate of the investments to be made and pay a one-time provisional exploration fee.

Cateos are measured in units of 500 hectares (has), with a minimum of one unit (500 has) and a maximum of 20 units (10,000 has) granted to any holder. Cateo units must be reduced over time relative to the number of units held. The holder may conduct prospecting, mapping, sampling, and geophysical surveys, and drilling and trenching after notifying the mining office of the exploration plan and obtaining environmental permits.

To obtain a mina it is necessary to first file a declaration of discovery (Manifestacion de Descubrimiento, or “MD”), which may or may not have a cateo as precedent, by submitting a sample of the minerals found and their location to the relevant mining authority. Once officially surveyed the MD becomes a mina, or mine. The extent of the area covered by a mina is divided into units of either 6 hectares or 100 hectares respectively depending on if a vein discovery or a disseminated discovery of mineralization is being claimed. Each of these units is called a pertenencia. The number of pertinencias approved within a mina depends if it is claimed by a company or an individual and as well as the type of mineral and deposit discovered (vein or disseminated).

Minas grant the title holder the right to conduct further exploration works after a discovery has taken place, and to exploit all the in-place deposits from the soil and subsurface within the boundaries of the mina as owners. The original ownership of minas is vested in the Argentine state; the minas are in the public domain. The State (mostly the relevant provincial state) grants the right of a mina to those interested in mining exploration and exploitation, and the granting of this right involves a legal concession, though still maintaining the State’s original dominion on the mines. The original public dominion pre-exists the mining property granted; coexists during the concession; and continues even after the concession becomes void.

The minerals extracted from a mina are privately owned by the concessionaire after payment of royalty to the State. Sales prices are freely established according to international prices, by the rules of supply and demand. Minas are not subject to a life term and, therefore, to the extent the title holder does not incur in any of the concession termination events set forth in the AMC, the concession will last until the extinction of the mineral reserves.

The three essential obligations to keep the title of a mina in good standing are the payment of an annual mining fee (known as a canon), the lodgment of and compliance with an investment plan, and filing an updated environmental impact assessment report every two years. Non-compliance with these obligations provides cause for the termination of the concession.

4.2 Mineral Tenure

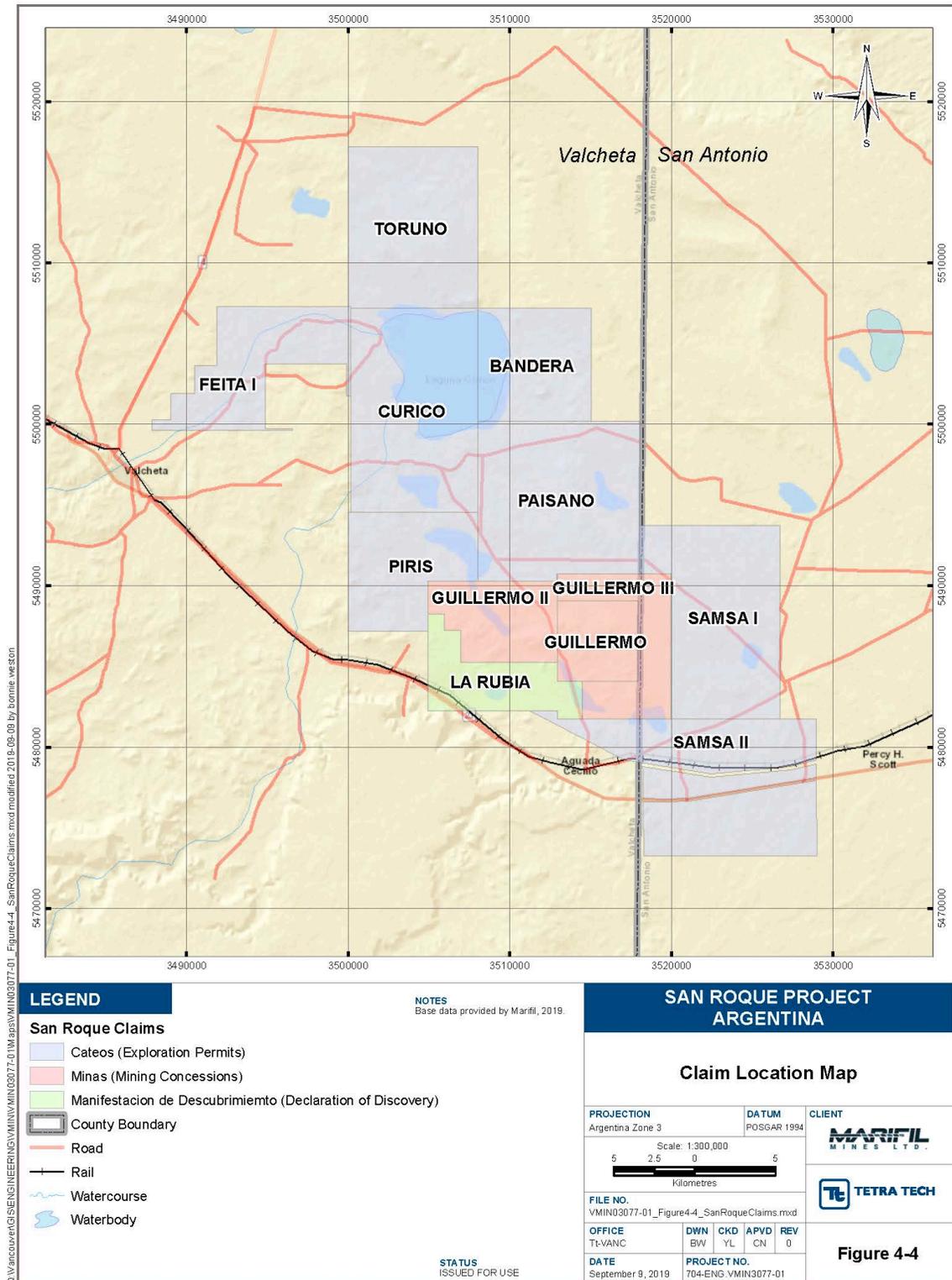
The San Roque property currently includes twelve registered contiguous tenures with a total area of 73,915 hectares (Table 4-1, Figure 4-4). This group of tenures includes both exploration rights (Cateo), and mining rights (minas). One area, La Rubia, is a manifestation of discovery (MD) and is currently in the process of being granted mining rights.

There are three title holders of these mine rights: Renzo Bonuccelli, Marifil S.A., and Minas San Roque S.A. for which all are legally affiliated with Marifil. The registered titles to all mine rights are in the process of being ceded (i.e. transferred) to Minas San Roque S.A. in compliance with established agreements at no cost. Minas San Roque S.A. is jointly owned by Marifil's wholly-owned subsidiary Marifil Mines S.A. (51%) and Novagold Resource Inc.'s ("NovaGold") wholly-owned subsidiary NovaGold Argentina Inc. (49%). Marifil S.A. is the current project operator.

Table 4-1: Mining Rights

| Instrument Number (Rio Negro Department of Mines) | Tenure Name | Type of Tenure | Pertenencias (disseminated mineral type claims) | Area (hectares) | Department (county) | Current Title Holder |
|---------------------------------------------------|---------------|---------------------------------|-------------------------------------------------|-----------------|------------------------|----------------------|
| 28016-M-03 | Guillermo | Mina | 25 | 2,495.1 | Valcheta | Marifil SA |
| 29017-M-04 | Guillermo II | Mina | 35 | 3,500.0 | Valcheta | Marifil SA |
| 29028-M-04 | Guillermo III | Mina | 35 | 3,449.4 | San Antonio & Valcheta | Marifil SA |
| Sub-Total | | 3 Minas | 95 | 9,444.5 | 2 Departments | 1 Holder |
| 36107-M-11 | La Rubia | Manifestacion de Descubrimiento | - | 3,253.7 | San Antonio | Minas San Roque SA |
| 40031-M-15 | Piris | Cateo | - | 4,966.9 | Valcheta | Renzo Bonuccelli |
| 33008-M-08 | Paisano | Cateo | - | 9,718.7 | San Antonio | Marifil SA |
| 33009-M-08 | Toruno | Cateo | - | 8,000.0 | San Antonio | Marifil SA |
| 33007-M-08 | Bandera | Cateo | - | 4,900.0 | San Antonio | Marifil SA |
| 37023-M-12 | La Feita I | Cateo | - | 5,266.3 | Valcheta | Marifil SA |
| 43035-M-18 | Samsa I | Cateo | - | 8,712.0 | San Antonio | Marifil SA |
| 43036-M-18 | Samsa II | Cateo | - | 9,697.7 | San Antonio | Marifil SA |
| 43037-M-18 | Curico | Cateo | - | 9,955.4 | San Antonio | Marifil SA |
| Sub-Total | | 8 Cateos + 1 M.D. | 0 | 64,470.7 | 2 Departments | 3 Holders |
| Totals | | 12 Mine Rights | 95 | 73,915.2 | 2 Departments | 3 Holders |

Figure 4-4: San Roque Claim Map



The mining tenures which are the subject of the estimated resources reported herein are the Guillermo and Guillermo III minas. The evolution of registration and title grants for each mina is shown in Table 6-2 (section 6 of this report). The Province of Rio Negro granted the three minas upon notice of their being published in its Boletín Oficial. These three mineral exploration and exploitation concessions do not have an effective expiry date and are valid until a mining operation is complete and all the mineral resources are extracted. Also, the concessionaire must comply with certain conditions to maintain these rights, such as paying an annual fee for development and / or exploitation activities along with filing and implementing investment plans. In the event these obligations are not fulfilled, the concessions can be revoked.

The three minas (Guillermo, Guillermo II and Guillermo III) contain a total of approximately 94.5 km² of mineral exploration and exploitation rights. These three minas are the core of the property and the focus of this document.

The size of the mina unit, a pertenencia, within the three Guillermo minas is 100 hectares each (disseminated mineralization). In Rio Negro province it is not permitted to apply for disseminated mineralization pertenencias of less than 100 hectares. If remnants of any unit area divisions of a minas area are of necessity less than 100 hectares, it can be covered by the title holder to “demasias” units, after surveying. The Guillermo and Guillermo III minas contain numerous demasias.

Annual fees, called “canons,” are payable to the province in order to maintain a Mining Exploitation concession (mina) in good standing. The amount for disseminated mineralization units is ARS\$3,200 (approximately US\$70) per year for each pertenencia and each demasias. The total annual canons for the minas of the San Roque project are amount to ARS\$304,000 (approximately US\$6,670). These canons have been paid for 2018 and will come due again in February of 2020.

As part of establishing a mining claim, corner markers are established and surveyed by a professional surveyor. Corner markers for all the San Roque minas have been examined, recorded and have been repaired as necessary. Old wooden corner stakes have been and are being replaced with iron markers in compliance with local mining regulations (Figure 4-5).

Figure 4-5: Two corner marker examples of Minas Guillermo and Guillermo II



Contiguous with these minas are one manifestation of discovery plus eight cateos that combined cover the remaining area of about 645 square kilometers of the property tenure package. There has been no drilling or trenching on these tenures and they remain largely unexplored with only some reconnaissance rock chip sampling having been accomplished.

4.3 Licenses and Permits

Both Marifil S.A and Minas San Roque S.A are registered participants in the federal Mining Investment Law (Law No. 24,196). The Province of Rio Negro accedes to the Mining Investment Law by provincial law No. 2,693. Marifil S.A.'s registration number is 382 and Minas San Roque S.A.'s number is 747 as lodged in the Argentina Ministry of Energy and Mining. The Mining Investment Law provides for various fiscal benefits in minerals exploitation with mines development.

Based on Argentinian law (Code Art. 233), miners may freely mine their minas and no other rules but security, enforcement and environmental regulations shall govern these activities.

In order to continue exploration or mining activities on the San Roque property, an Environmental Impact Assessment Report (EIA) must be submitted to the Environmental Secretary of Rio Negro province for each tenure every two years. Table 4-2 displays the current reporting requirement status for the San Roque project. Failure to timely file the EIA for any tenure can be cause for revoking the permit or concession for that tenure by the provincial mining authorities. The next reports due to be submitted are for Guillermo II and Guillermo III tenures in mid-December 2019.

Table 4-2: Environmental Impact Assessment (EIA) Reporting Status of the San Roque Project

| Tenure Name | Tenure File Number | Tenure Hectares (ha) | Date of EIA Presentation to Environmental Secretary | Technical Department Recommendation | Legal Department Resolution Number | EIA Report Expiration Date |
|----------------------|--------------------|----------------------|-----------------------------------------------------|-------------------------------------|------------------------------------|----------------------------|
| <u>MINAS</u> | | | | | | |
| Guillermo | 28.016/03 | 2,495 | 2019-02-21 | Approval | 840/SAyDS/2.019 | 2021-05-29 |
| Guillermo II | 29.017/04 | 3,500 | 2017-12-14 | Approval | 1.340/SAyDS/2.017 | 2019-12-14 |
| Guillermo III | 29.028/04 | 3,449 | 2017-12-14 | Approval | 1.339/SAyDS/2.017 | 2019-12-14 |
| <u>CATEOS</u> | | | | | | |
| La Rubia (M.D.)* | 36.107/11 | 3,254 | 2019-06-11 | Pending | | |
| Paisano | 33.008/08 | 9,719 | 2919-02-21 | Approval | 767/SAyDS/2019 | 2021-05-17 |
| Piris | 40.031/15 | 4,967 | 2019-02-21 | Approval | 815/SAyDS/2.019 | 2021-05-24 |
| Bandera | 33.007/08 | 4,900 | 2019-02-21 | Approval | 776/SAyDS/2.019 | 2021-05-21 |
| Toruno | 33.009/08 | 8,000 | 2019-03-11 | Approval | 685/SAyDS/2.019 | 2021-05-06 |
| Samsa I | 43.035/18 | 8,712 | 2019-03-11 | Approval | 684/SAyDS/2.019 | 2021-05-06 |
| Curico | 43.037/18 | 9,955 | 2019-03-11 | Approval | 682/SAyDS/2.019 | 2021-05-06 |
| Samsa II | 43.036/18 | 9,698 | 2019-03-11 | Approval | 676/SAyDS/2.019 | 2021-05-02 |
| La Feta I | 37.023/12 | 5,266 | 2019-03-11 | Approval | 689/SAyDS/2.019 | 2021-05-08 |

Mine Rights Tenures as of June 4, 2019 as submitted to the Office of the Environmental Secretary in the Ministry of Environment and Sustainable Development of Rio Negro Province, Argentina.

*Some boundary adjustments are pending as the Rio Negro mining authority cannot grant mining properties (Cateos, Discovery Manifestations or Minas) within 50 m from roads, pipelines, electrical lines or similar constructions.

4.4 Surface Ownership and Land Access Agreements

In Argentina, subsurface and surface rights are separated, with subsurface rights being the superior right. Nevertheless, surface ownership must be respected, and access permission and compensation for surface damage needs to be addressed. The San Roque project extends over portions of two private estancias (ranches): the San Roque estancia and the Piris estancia. All road, trenching and drilling work completed to date has been located on the San Roque estancia, which is also the location of the mineral resources defined in this document. Several access and surface use agreements between Mount Isa Mines, NovaGold, Inc., Marifil S.A., Minas San Roque S.A. and the San Roque estancia owners have been implemented since work began on the property. The current access and land use contract between Minas San Roque S.A. and the San Roque estancia owners will be renegotiated before another exploration campaign can be initiated. It contains provisions for monetary damage payments based on the types of ground disturbances caused by exploration activities. As for the Piris estancia, the owners have given access permission to conduct geologic mapping and reconnaissance rock chip sampling.

According to the Rio Negro Code of Mining Procedure, the mining authority may not grant mining properties (cateos, Discovery Manifestations or Minas) within 50 m from roads, pipelines, electrical lines or similar constructions. If necessary, the title-holder may access such areas with a permit from the Rio Negro Mines Department upon receipt of a satisfactory submission from an engineer which states the proposed mine activity will not adversely affect the existing infrastructure.

4.5 Royalties and Liens

In return for the exploitation of the mina, the concessionaire is to pay a royalty to the Province, as owners of the mineral resources, where the deposit is located. The royalty payment is calculated as a percentage of the pithead, or mine-mouth value of the mineral extracted. The federal Mining Investment Law ("MIL") (Law No. 24,196 as amended by Law No. 25,161) caps the royalties to be collected by the provinces at 3%. Provinces that have signed onto the MIL are legally committed not to exceed this cap. The MIL provides for project fiscal stability including 30 years of tax stabilization for projects submitted and accepted with a positive feasibility study. Rio Negro Province adheres to the MIL as ratified by Provincial Laws 2,693, 2,819, and 8,900.

There are no private held royalties at this time, nor any liens that the QP is aware of.

4.6 Environmental Liabilities

To the author's knowledge, no environmental liabilities exist on the property.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Property Access

The entrance to the San Roque property is located at the rural village of Aguada Cecilio (pop. 155) on National Highway Route #23. The mineral resource zones defined in this report are accessible via 9 km of private ranch dirt road going northward from the highway. National Highway Route #23 is a modern high-speed black-top thoroughfare connecting local settlements including Aguada Cecilio to the project logistical support center in the city of Las Grutas and further on to the sea port of San Antonio Este (Figure 4-1 and Table 5-1).

Table 5-1: Local Logistical Support Cities for the San Roque Project

| Rural & Urban Settlements | Population* | Driving Distance to Aguada Cecilio (km from project entrance) |
|---------------------------|-------------|---------------------------------------------------------------|
| Las Grutas | 4,807 | 73 |
| Valcheta | 3,867 | 34 |
| Viedma | 52,789 | 251 |
| San Antonio Este | 381 | 117 |
| San Antonio Oeste | 16,265 | 84 |

* 2010 Census, Instituto Nacional de Estadística y Censos de la Republica Argentina

5.2 Physiography

The San Roque property covers a coastal desert of relatively flat topography between 100 and 300 metres elevation, averaging about 190 m above sea level. It lies within the southern limit of the Grand Bajo del Gualicho, a large northwest-southeast physiographic depression inherently related to the Bajo del Gualicho transcontinental lineament. The Bajo del Gualicho contains alluvial fans shedding from the North-Patagonia Massif, located to the southwest. These sedimentary deposits end up within a linear series of brackish lakes or “lagunas” caused by the closure of the sub-regional fluvial system within the northwest elongated depression. A low plateau separates the depressions of the Bajo del Gualicho lineament from the Rio Negro river to the north.

Sufficient low, open and flat terrain exists on the San Roque property to support large-scale surface metal mining operations and infrastructure requirements such as including tailings storage, waste disposal and processing facilities. For this, the land will either need to be purchased or surface use agreements with the landowners need to be obtained, and the design be supported by completion of appropriate engineering studies.

On the San Roque property, drainage courses are ephemeral, containing running water only seasonally; rain water also accumulates in shallow depressions. Wind mills on the ranch produce enough water for sheep are located in fossil valleys or along narrow depressions where the water is conducted, and are attributed to regional structures which cut the Property.

Undeveloped soils typical of coastal deserts cover the San Roque property, and in some zones are best described as being regolith – unconsolidated rocky material covering bedrock. In other zones the soils are

characterized as entisols, the last order in soil taxonomy that exhibit little to no soil development other than the presence of an identifiable topsoil horizon and generally of poor fertility. A caliche horizon of more than one-metre thickness was encountered in some places while prospect trenching. Other zones of the property are covered by veneers of windblown sand.

As for flora, low evergreen scrub brush, known as jarilla or alternately as chaparral (Figure 5-1), with sparse grass dominates the San Roque terrain.

The fauna is typical of northern Patagonia and includes guanacos, pumas, javelina, hares, foxes, lizards, and a variety of small rodents and raptorial and smaller birds.

Figure 5-1: Topography and vegetation typical of the San Roque property; the scrub brush seen in this view is called jarilla or chaparral



5.3 Climate

The semi-arid climate of San Roque easily allows for year-round mineral exploration and mining operations. The summers are typically long and hot with mostly clear skies while the winters are shorter, cold and partly cloudy. It is dry and windy year-round. The average daily wind speed is 17 km/hr., and average daily temperature is around 14°C. Over the course of the year, the temperature typically varies from 0°C to 31°C and is rarely below -5°C in the southern hemisphere winter months or above 37°C in the summer months. Annual precipitation is 234 mm with monthly variances of between 10 mm to 28 mm.

5.4 Local Resources

Excellent and readily accessible local infrastructure exists at the San Roque property. The project lies in close proximity to high tension powerlines, a natural gas pipeline, a standard gauge railway, and to a modern highway network that leads to deep water ports on the Atlantic coast as well as to local airports, lodging and health facilities, and ultimately to the main population and commercial centers of Argentina.

5.4.1 Water

Water availability for the San Roque project use is undefined. Fresh water for drilling was trucked in from Valcheta. No significant groundwater was encountered by mineral exploration drilling. In 2007, a separate a five-hole 317 m hydrogeologic drilling program failed to discover shallow potable water, or other groundwater sufficient in quantity for a mining project. This limited program was, however done at the convenience of the ranch owner looking for livestock water. It did not test a potential underground water source which is the transcontinental lineament and its associated fault structures that cross the Property. Abundant surface water occurs as a string of large intermittent lakes (lagunas) of brackish water extending for more than 50 km to the northwest from San Roque. The disposition of this string of lakes is controlled by the same transcontinental fault that crosses the Property. The lakes are the result of closed fluvial systems. The closest of these is Laguna Curico, located on Marifil's Curico cateo of the property, and just 18 km north of the resource area defined in this report. Laguna Curico is 8 km in diameter with a surface area exceeding 50 km². It's unknown if Laguna Curico would be satisfactory for use in a mining and milling operation is unknown at this time. Alternatively, the Atlantic Ocean may be within a practical distance of a pipeline, 42 km straight line distance west of the property. Detailed hydrogeological studies some of which would involve long drill holes penetrating the aforementioned transcontinental lineament will be required to identify suitable water sources to support any possible future mining operations or scenarios.

5.4.2 Power & Gas

A natural gas pipeline and an electrical powerline both run alongside National Highway #23 crossing the property at its Aguada Cecilio entrance. The pipeline diameter is 15.24 cm and has a pressure of 60 kg/cm². The power line is three phase medium voltage at 33 kV and runs electricity from San Antonio Oeste to Valcheta. An extra high voltage 500 kV three phase AC electrical transmission line passes over National Highway #23 approximately 30 km west of the property. This 500kV line is part of the national power grid controlled by the federal government. The June 2018 consumer cost of electricity was ARS 1.157/kWh, or about US\$0.09/kWh, which compared favourably with the global average price of US\$0.14/kWh (GlobalPetroPrices.com). However, federal energy subsidies are now undergoing phased reductions, causing the consumer's cost of electricity to rise to the equivalency of US\$0.11/kWh (including the costs of energy, distribution and all taxes and fees).

5.4.3 Rail

The standard gauge rail runs in the same corridor as the highway, gas pipeline, and high-tension line. There is a multi-track rail siding in Aguada Cecilio that was used to service a large limestone quarry processing plant, now closed. It appears to be in very good condition (Figure 5-2). The rail distance to San Antonio Oeste is about 90 km, however the rail is 25 km short of entry to the deep-water port at San Antonio Este. The country's rail network (eighth largest in the world) does lead to the major Atlantic deep-water port at Bahia Blanca, a rail line distance of 552 km from Aguada Cecilio. Currently, oil companies are paying a rail per tonne per kilometre cost of US\$0.0225/km for moving supplies, equipment and products in and out of the port of Bahia Blanca to points inland ("Consortio del Puerto de Bahía Blanca"). Application of this rate to the Cielo Aguada to Bahia Blanca route yields a rail shipping cost of US\$12.42/t/km. The trucking distance for the same route is 485 km, but per tonne cost would be a multiple that of using trains.

Figure 5-2: Aguada Cecilio railroad siding at San Roque



5.4.4 Air

The closest operating commercial jet airport to the property is near the city of Viedma, located approximately 256 km from Aguada Cecilio. It functions as a domestic airport only, with daily round trips to Buenos Aires and serves shuttle connection flights to regional cities. A similar second option is the city of Trelew, approximately 325 km from Aguada Cecilio. There is also an airport at San Antonio Oeste 85 km away from the property capable of landing jets on a 1,800 m runway that can be used for private or charter flights. Additionally, a public airport at the city of Valcheta, 34 km away from the property has a 950 m runway that can be used by propeller driven private and charter aircraft (Table 5-2).

Table 5-2: Regional Airports near the San Roque Property

| Location | Airport | IATA | OACI | FAA | Lat-Long | Elevation (Feet) | Bearing | Runway Length (m) | Surface |
|----------------|--------------------------|------|------|-----|------------------------------|------------------|---------|-------------------|---------|
| Valcheta | VALCHETA | VCF | | VAL | 40° 40'54''S 66° 10'38''W | 629 | 09/27 | 950 | Unpaved |
| Sa. Grande | SIERRA GRANDE | SGV | SAVS | | 41° 35'30''S 65° 21'01''W | 688 | 02/20 | 1,400 | Paved |
| SAO-Las Grutas | ANTOINE DE SAINT EXUPERY | OES | SAVN | SAN | 40° 45'05''S 65° 02'04''W | 85 | 12/30 | 1,800 | Paved |
| Viedma | G. EDGARDO CASTELLO | VDM | SAVV | VDM | 40° 52'09''S 65° 00'01''W | 20 | 02/20 | 1,500 | Paved |
| Trelew | ALMIRANTE MARCOS ZAR | REL | SAVT | TRE | 43° 12'35''S 65° 17'02''W | 141 | 07/25 | 2,560 | Cement |

5.4.5 Local Population

The San Roque property lies in Rio Negro province with an estimated current population of 738,000 inhabitants and straddles the county line between San Antonio and Valcheta Counties (Censo Nacional de Población, 2010, and Instituto Nacional de Estadística I Cencoc de la Republica Argentina). The property entrance at Aguada Cecilio is in Valcheta County whereas the zones of drilled resources contained herein are spread across the county line, although reconnaissance gold vein exploration extends many kilometres to the northwest well into Valcheta County. San Antonio County covers an area of 14,015 km² with a current estimated population of 36,107 citizens, including about 18,000 people residing in the Atlantic coastal city of San Antonio Oeste, resulting in a county population density of 2.6 persons/km². Valcheta County covers an area of 20,457 km², with a current estimated population of 8,393 citizens, including about 4,000 people residing in the town of Valcheta, resulting in a population density of 0.4 persons/km². The population outside of the municipal centers of San Antonio and Valcheta is represented by ranchers living at isolated ranches. The average population density in the region of the San Roque property is about 1 person/km². Agriculture, light manufacturing, and shipping are the primary commercial activities in San Antonio County whereas it is predominantly ranching in Valcheta County. There are no past or present base or precious metal mines of significance in either county, with the one exception of the failed Sierra Grande underground iron mine in southern San Antonio County, now closed.

5.4.6 Community Services

There are no available facilities for housing and feeding people on the San Roque property. Some poor-quality housing is available for rent in the village of Aguada Cecilio. Suitable motel/hotel and restaurants exist in the nearby town of Valcheta. Excellent living and support facilities of many sorts are located about an hour's drive away in the seaside resort city of Las Grutas. Good living facilities are also available in the city of San Antonio Oeste. All these places are within daily commuting distances of the property and can provide readily available skilled and unskilled labour to support mining operations. It is still likely that some technical and administrative staff may need to be brought in from other parts of the Province or the Country.

There are both public and private health services available in the immediate region surrounding the San Roque project. In Rio Negro Province public health service is much more geographically extended than private health services. It consists of a public health service net with different complexity of health services that is grouped into six zones around the province. The San Roque project falls in the Atlantic Zone which has a head hospital in the city of Viedma and a net of lower complexity health centers throughout the region. The nearest hospital to the project is in the town of Valcheta (~34 km away). There is also a health center in the village of Aguada Cecilio located at the entrance to the property.

Seasonal seaside tourism is a strong business of the region. Las Grutas, a city of 5,500 people, has the warmest waters on the Argentine Atlantic coast and accommodates about 400,000 tourists every summer season. Inland, however, the desert climate has made the zone of San Roque a relatively undeveloped territory with low population density. There, cattle and/or sheep ranching represent the main economic activities, followed by industrial minerals mining (limestone, clays, and salts) and commercial services.

6.0 HISTORY

M.I.M. Argentina Exploraciones S.A (“MIM”) is the Argentinean mineral exploration branch of parent company Mount Isa Mines Inc. of Australia. MIM discovered the San Roque mineral prospect in 1999 using satellite thematic mapping for identifying hydrothermal rock alteration and staked the first claims (cateos) known to have covered the prospect. There was no known exploration history of the prospect prior to that, and no evidence for such was found.

MIM conducted exploratory work on the San Roque property during 1999 through 2002. MIM’s work included systematic sampling of soils and rocks, geophysical, geological and structural surveys, and excavation and sampling of trenches and drill holes. More specifically, MIM completed 42-line km of terrestrial magnetometry, 70-line km of Induced Polarization (I.P.) – Resistivity survey, 19 drill holes for 2,631 m (reference Table 6-1 below), and more than 2,000 surface geochemical samples of soils, stream sediments, and rock chips, some of which were for bulk leachable extractable gold and mobile metal ion analyses. In all, MIM is estimated to have spent more than US\$1,000,000.

In June 2003, Xstrata purchased MIM, and due to differing corporate objectives, decided to liquidate MIM’s mineral exploration projects in Argentina. Marifil S.A. entered into a Letter of Intent to purchase the San Roque property from Xstrata in March of 2006 and concluded an Exploration Agreement in May of 2006. The Exploration Agreement called for Marifil S.A. to spend a minimum of US\$200,000 exploring the property over the following four years, and after which such work was completed Marifil could purchase the Property for US\$400,000 cash with no retained royalty by Xstrata. The Property at that point consisted of Manifestacion de Descubrimiento (MD) for the three Guillermo claims.

Marifil S.A. resumed exploration work on the Property in 2006 completing geochemical sampling, trenching, geophysics, geological mapping, and two drilling campaigns during 2007. This work included Quickbird image acquisition (60 cm px), 10,000 and 5,000 scale geological and hydrothermal alteration mapping, 2.5 km of mechanized trenching, 12-line km of terrestrial gravity survey and the drilling of 55 diamond drill holes totaling 5,292 m (see Table 6-1 below). Additionally, 5 wells totaling 317 m were drilled in search of livestock water for the ranch owner. Several claims (cateos) were also staked to cover the northwest trend of mineralization off of the Guillermo MDs. During this period Marifil S.A. invested approximately US\$3.2 million in exploration of the property, thereby meeting its expenditure requirements to exercise its Property purchase right from Xstrata.

In June of 2010 NovaGold Resources Inc. and Marifil Mines Ltd. entered into an Option Agreement on the San Roque property through their respective subsidiary companies, NovaGold Argentina Inc. and Marifil S.A. The complex agreement allowed for several avenues of NovaGold project earn-in including the formation of a joint venture and a subsequent conversion of that into a private shareholding company. NovaGold ultimately engaged the joint venture route of the Option Agreement whereby NovaGold could earn a 49% equity interest in the Property by spending US\$3 million on exploration and making a series of annual US\$100,000 payments to Marifil. NovaGold was the project operator and met all of its financial obligations dictated by the Option Agreement. In late 2011, NovaGold completed a corporate spin-out of many of its properties and staff. The San Roque property remained with NovaGold, and thusly became its sole exploration property. At that time there was also a board mandated change in corporate objectives where focus was to be exclusively on monetizing NovaGold’s assets in Alaska and Canada. Therefore, all physical work on the San Roque property ceased in early 2012 and the project operatorship was turned over to Marifil S.A. In March 2016, the companies entered into a Shareholders Agreement and created a private shareholding company in Argentina, Minas San Roque S.A. This private

company was owned 49% by NovaGold and 51% by Marifil S.A. The shareholders agreement provided for equity dilution of either Marifil or NovaGold should either not participate in funding an approved work budget.

During 2011, NovaGold aggressively pursued continued exploration of the San Roque property by remapping surficial geology, taking more than 800 surface samples (soil, trench, and grab samples), running an I.P. – resistivity survey of 20-line km, and the drilling of 34 diamond drill core holes in two campaigns for 7,817 m (Table 6-1). In September 2011, NovaGold provided funding to Marifil S.A to exercise the MIM purchase option, which was completed shortly afterwards giving Minas San Roque S.A. a 100% interest in the property without any non-governmental third-party royalties. NovaGold spent \$US3.5 million including the MIM purchase option.

In 2018, Marifil S.A, as operator for Minas San Roque, reinitiated field work on the San Roque property. Work consisted of drilling 4 core holes for about 847 m (Table 6-1), mechanized trenching aggregating 303 m of length for 9 trenches, and collection of 294 saw cut trench, rock float, rock outcrop, regolith and soil samples for assay. The surface exploration work resulted in the discovery of the NW Vein System more than a km away from the drilled area. This work cost about US\$0.8 million, bringing the total exploration investment, including claims purchase, at the San Roque property to approximately US\$8.5 million.

No historical resources or reserves are known to exist on the property.

Table 6-1: San Roque Drilling History to Date

| Company | Date | Drill Type | Drill Hole Annotation | Drill Hole Sequence | Number of Holes | Metres |
|--------------|-----------------|------------|-----------------------|---------------------|-----------------|-----------------|
| MIM | May, 2001 | Core | SRDD | 1-8 | 8 | 1,126.9 |
| MIM | May, 2001 | RC | SRRC | 1-4 | 4 | 428.0 |
| MIM | October, 2001 | RC | SRRC | 5 - 11 | 7 | 1,076.0 |
| MFM | March, 2007 | Core | MF-DDH | 1-28 | 28 | 2,103.5 |
| MFM | October, 2007 | Core | MF-DDH | 29-55 | 27 | 3,188.5 |
| NOVAGOLD | March, 2011 | Core | MSRDDH | 1-15 | 15 | 3,538.4 |
| NOVAGOLD | September, 2011 | Core | MSRDDH | 16-34 | 19 | 4,278.3 |
| MFM | June, 2018 | Core | MF-DDH | 56-59 | 4 | 846.5 |
| TOTAL | | | | | 112 | 16,586.1 |
| MIM | | | | | 19 | 2,630.9 |
| MARIFIL | | | | | 59 | 6,138.5 |
| NOVAGOLD | | | | | 34 | 7,816.7 |
| TOTAL | | | | | 112 | 16,586.1 |

The key asset throughout the history of the San Roque project are the mine rights of the three Guillermo minas. These three minas contain 95 pertenencias that cover all of the known mineralization. In particular, pertenencias numbers 9, 10, 13, 14, 15, and 20 of the Guillermo mina and pertenencia 20 of the Guillermo III mina cover all of the Inferred NI 43-101 resources presented in this report. Table 6-2 depicts the historical evolution of the Guillermo minas.

Table 6-2: Evolution of the Guillermo Claims

| Name of Claim (Cateo -> MD-> Mina) | Instrument No. (Expediente) | Date Applied for Manifestation of Discovery (Manifestacion de Descubrimiento) (M.D.) | Date M.D. Granted (Bulletin Date) | Public Announcement Provincial Official Bulletin No. | Date of Marifil S.A. Purchase of M.D. | Date of Legal Survey For M.D. Conversion to Mina | Date Mina Granted | Date of Mina Title Issued To Marifil S.A. |
|------------------------------------|-----------------------------|--------------------------------------------------------------------------------------|-----------------------------------|------------------------------------------------------|---------------------------------------|--------------------------------------------------|-------------------|-------------------------------------------|
| Guillermo | 28.016-M-2003 | 2003-03-25 | 2003-12-11 | 4157 | 2011-09-08 | 2012-03-28 | 2014-08-13 | 2016-11-15 |
| Guillermo II | 29.017-M-2004 | 2004-02-18 | 2005-02-07 | 4278 | 2011-09-08 | 2012-03-29 | 2014-08-13 | 2016-04-12 |
| Guillermo III | 29.028-M-2004 | 2004-02-26 | 2005-02-07 | 4278 | 2011-09-08 | 2012-03-30 | 2014-08-13 | 2016-04-05 |

The M.D. Rights holder to all three claims was MIM Argentina Exploraciones S.A.
 Transfer of claims to Minas San Roque S.A. is still in progress.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

San Roque is located in the northern edge of the Somoncuro Massif. This is a broad uplifted zone in the northern Patagonia. The late Oligocene to Miocene volcanic rocks of the Somoncuro geologic province overlie a late Precambrian to Paleozoic magmatic and metamorphic basement that is covered by a continental Triassic siliciclastic sequence named the Puesto Piris Formation and an extensive Jurassic silicic volcanic and intrusive suite of rocks belonging to the Marifil Complex (e.g. Kay et al., 1989; Pankhurst & Rapela, 1995) as well as Cretaceous to Tertiary volcanic and sedimentary rocks (e.g. Rapela & Kay, 1988; Rapela et al., 1988; Ardolino et al., 1999). In the southeastern edge of the Somoncuro Massif, and close to the Atlantic Ocean, a Silurian sedimentary sequence of sandstones-quartzite and siltstone outcrops and overlies the metamorphic basement (figure 7-2). This stratigraphic unit might be present in San Roque Project area as one of the host rocks of the gold bearing quartz vein system in the northwestern region of the Property.

Overall, the geological history of the area can be summarized as:

1. Deposition of an extensive and thick sequence of sandstones and claystones in a marine basin, undergoing regional metamorphic process, folded and faulted in the Lower pre-Paleozoic Nahuel Niyeu Fm. Deposition of the Silurian sediments into basins formed in the basement rocks.
2. Emplacement of Permian age post tectonic granite bodies within the metamorphic rocks known as Complejo Plutónico Paileman.
3. In a continental environment, Triassic to Lower Jurassic age, the fluvial conglomerate and lacustrine limestones of Puesto Piris formation were deposited.
4. In the Middle Jurassic age the extrusion of lava flows took place, as well as intrusions and pyroclastic effusions of the Marifil Complex.
5. A continental sedimentary sequence was deposited in late Cretaceous age. It is composed mostly by fluvial and lacustrine sediments bearing dinosaur fossils.
6. During Maastrichtian-Danian, the boundary between Cretaceous and Tertiary (Paleogene) periods, the sediments of Arroyo Barbudo formation were deposited as a product of a marine ingression. They consist of calcareous siltstones and fossiliferous limestones.

Figure 7-1: Regional Geology

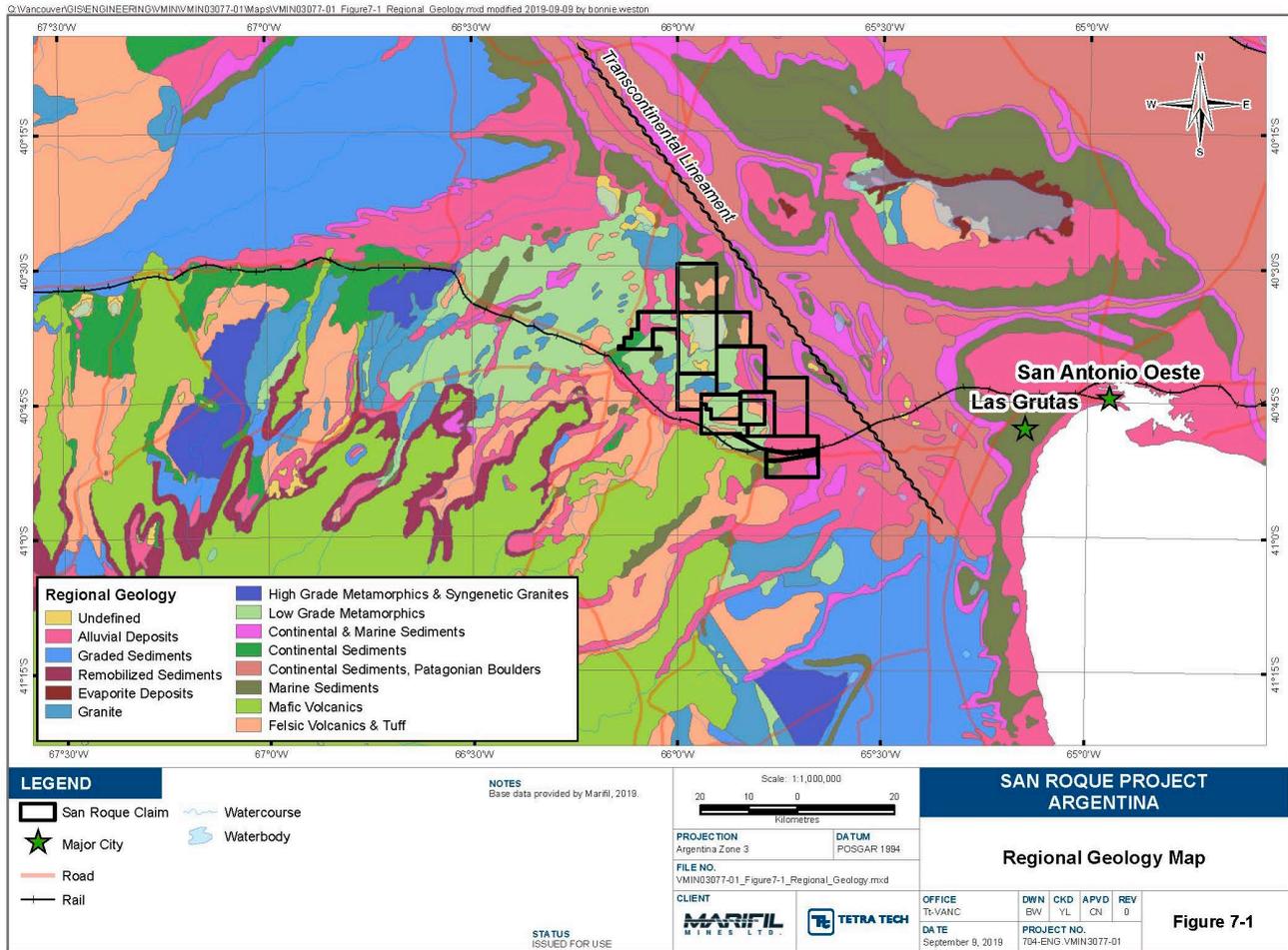
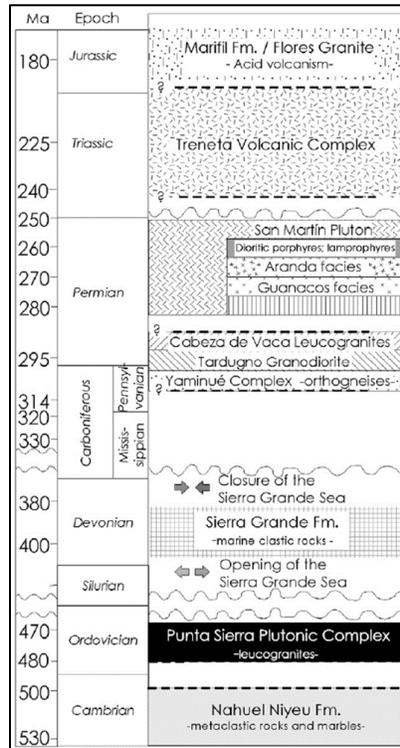


Figure 7-2: Regional Stratigraphy (López de Luchi, 2010)



7.2 Local Geology

7.2.1 Geology

Presently, there have been 4 gold zones mapped on the property (Del Indio & Griselda, Zone 25, Zone 34, and Zone 51, Figure 7-3) which are contained within a proposed approximately 2 km diameter caldera complex within the Marifil Formation. The Marifil formation is comprised of a sequence of intercalated Jurassic volcano-sedimentary units underlain by metamorphic basement sediments.

The metamorphic basement rocks consist of well foliated quartz-sericite-chlorite schists of the Proterozoic Nahuel Niyeu Formation. These rocks have been interpreted as metasediments but probably also include metavolcanic rocks. Locally the metasediments are pyritic and may have a strong IP chargeability signature. Drilling indicates that this unit forms a basement on top of which Jurassic sediments and volcanic strata were deposited in the central part of the inferred basin.

Overlying the metamorphic rocks is a relatively flat lying volcano-sedimentary package interpreted as Jurassic Marifil Formation (Figures 7-4 and 7-5). The stratigraphy envisaged include: a basal sediment-dominant package which is characterized by a lower often carbonaceous mudstone unit and oxidized coarse, conglomeritic upper sequence; a “lower ignimbrite” possibly having a clast-rich basal unit and generally strongly-welded; an upper sedimentary sequence hosting polymictic breccia and subordinate rhyolitic tuff beds in the upper part of the sequence; and an upper rhyolite tuff/ignimbrite unit, which is in general less strongly-welded relative to the “lower ignimbrite”.

The polymictic breccia, "Tuffisite" of Marifil; (Vera and Hite, 2009), is often interstratified with volcanic sediments in drilling, and has previously been interpreted as having a diatreme origin. Field relationships suggest that this unit may in part represent cross-cutting breccia bodies of hydrothermal origin, in agreement with a diatreme setting, where intrusive and volcanic breccias can appear very similar.

High-level syenite porphyry stocks which cut the basement rocks and intrude the younger volcano-sedimentary sequence (Figure 7-5), and which are spatially associated with areas of mineralization, may be broadly coeval with and genetically related to the volcanic sequence. These porphyries generally show a zonation with outer, possibly chilled, quartz-feldspar porphyry rims and inner cores of crowded syenite porphyry. The intrusive rocks commonly have a strong magnetic signature as seen on magnetic geophysical maps from a previous MIM survey.

The youngest rocks in the area of mapping are post-mineral conglomerates and sandstones of the Cretaceous Roca Formation. These rocks, often containing marine fossils, form minor, thin outcrops throughout the map area.

Figure 7-3: Property Geology

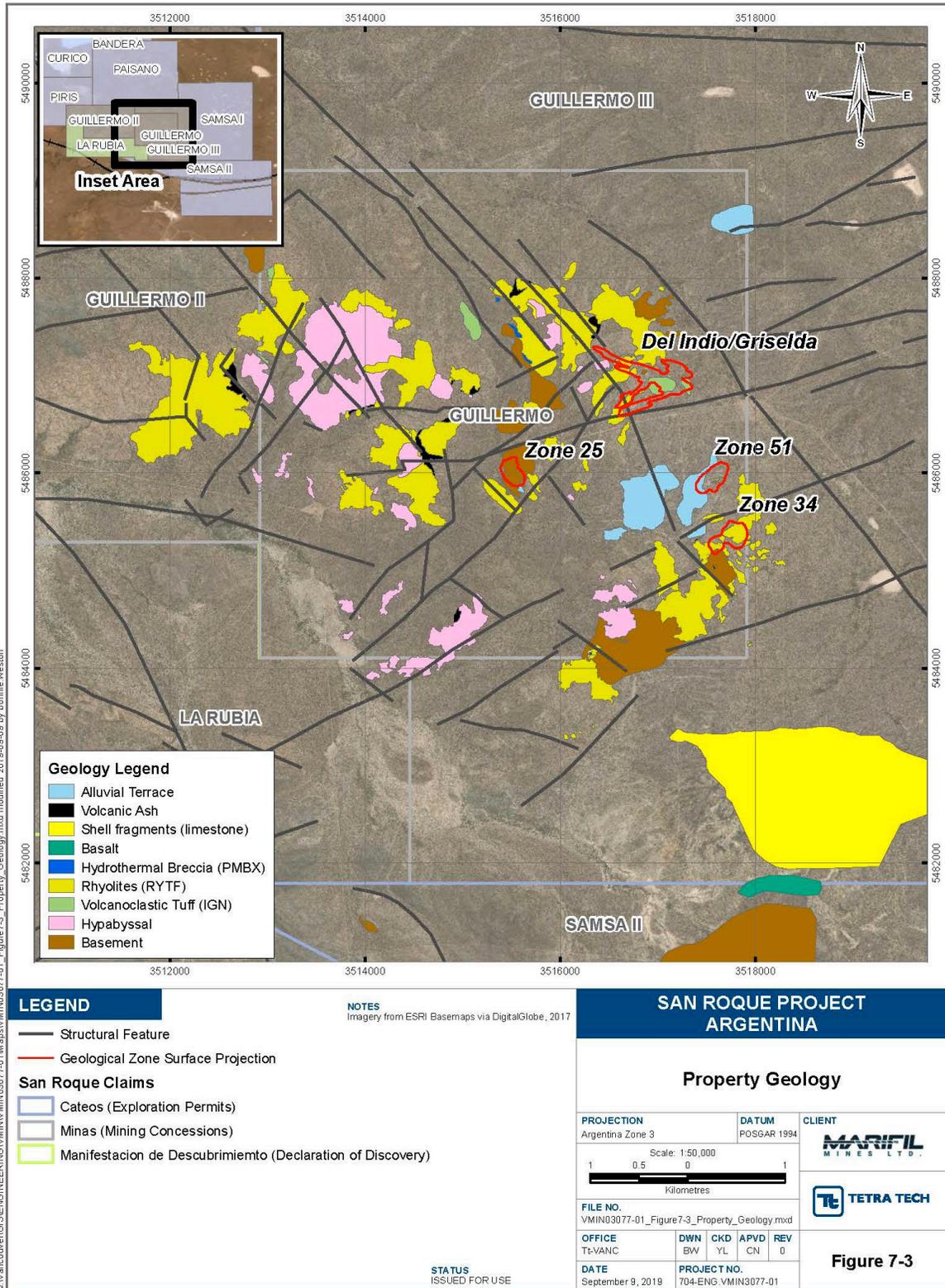


Figure 7-4: Local Geology Stratigraphic Section

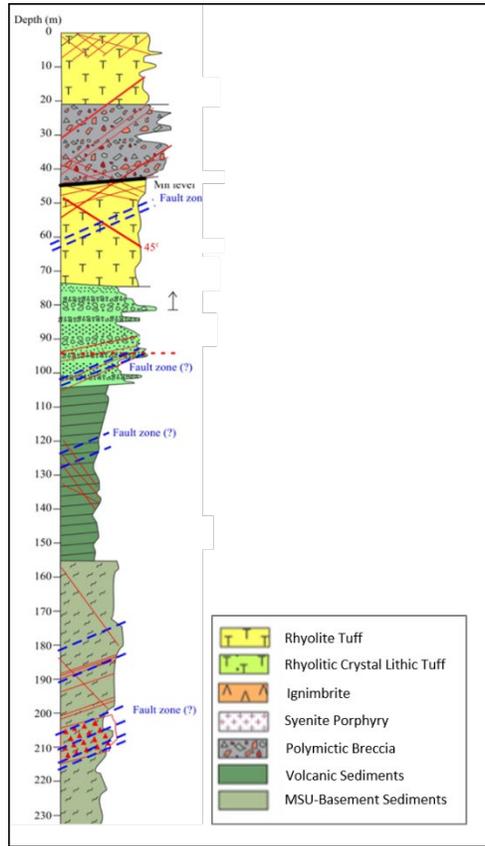
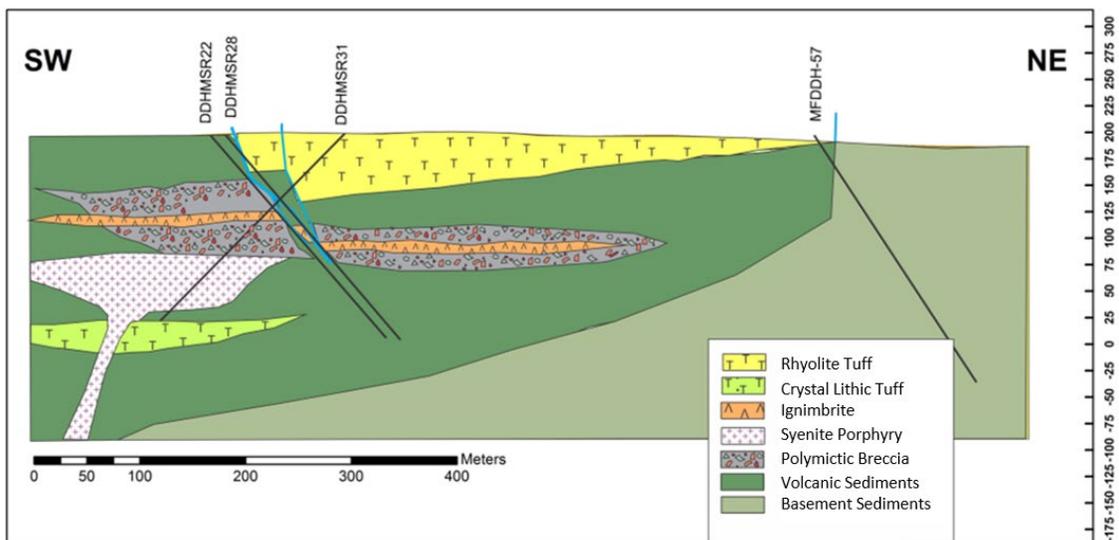


Figure 7-5: Local Geology Cross Section



7.2.2 MINERALIZATION

7.2.2.1 General

The San Roque Property hosts gold, silver, lead, zinc, and indium mineralization within two styles of vein systems. The first of these are structurally-controlled epithermal polymetallic veins (Figure 7-6), and the second are broad gently dipping polymetallic quartz stockworks within tuff units. These stockworks zones (Figure 7-7) appear to form relatively broad and gently dipping zones along the intersections of the more steeply dipping “feeder” structures, and the more porous tuff units. Structurally hosted veins range in thickness from cm scale to approximately 1-2 m in width, but can occur in succession, whereas quartz stockwork zones can be up to 25 m in thickness.

Structurally hosted veins are hosted within broad, fault-bounded structural corridors which typically contain silicified breccias and quartz-sulphide veins and disseminated sulphides. These mineralized faults are sub vertically dipping and have two principle orientations, northwesterly (320° azimuth), and north-easterly (040° azimuth) and are observed cutting all the Marifil formation volcanic units, and locally extending into the basement schist package.

Figure 7-6: Top: Structurally Hosted Vein within Marifil Formation Volcanics (Hole MF-DDH-45, Sample 11947: 4.88 g/t Au, 232 g/t Ag, 0.5 g/t In, 0.12% Pb, 0.52% Zn).



Stockwork mineralization occurs mainly in the lower ignimbrite, upper sediment-PMBX, and tuff sequence. Initial interpretations suggest that the upper rhyolitic unit may have acted as an impermeable barrier to hydrothermal fluids. This unit may therefore conceal underlying mineralization. Volcanic units and the polymictic breccia may be more abundant near the northern margin of the proposed caldera, suggesting better preservation of volcanic units in this area, and/or a more proximal setting to a hypothetical volcanic center.

Figure 7-7: Stockwork Style Polymetallic Mineralized Veins within Tuff (Hole DDHMSR-0026, Sample 7408: 0.14 g/t Au, 1.14 g/t Ag, 0.2 g/t In, 0.10% Pb, 0.38% Zn)



Several relationships have been noted with respect to mineralization from exploration results thus far:

- Gold and silver contents often, but not always, correlate with one another.
- Lead and zinc contents often, but not always, correlate with one another.
- Indium contents often are independent of gold, silver, lead, and zinc, although Indium sometimes tends to correlate positively with zinc mineralization.
- Anomalous molybdenum mineralization has also been noted.

Alteration consists primarily, but not exclusively, of sericitization in the basement schists, propylitization in the hypabyssal volcanics, and argillization/silicification in the pyroclastic rocks.

Mineral resource estimates have been stated for the Del Indio / Griselda Zones, along with Zones 25, 34 and 51.

7.2.2.2 Del Indio and Griselda

The Del Indio and Griselda zones occur within the broader region historically referred to as Zone 33, and is comprised of two structurally hosted vein zones (Figure 7-8 and 7-9). The Griselda structure strikes north-west and contains a series of structurally hosted, sub-vertically dipping, polymetallic veins with gold, silver, zinc, lead and indium mineralization. Unusually anomalous copper values have also been intersected within this zone. Splaying off of the southern contact of the Griselda structure is the south-west oriented Del Indio Structure. This structure also contains sub-vertically dipping polymetallic veins with gold, silver, lead, zinc and indium mineralization.

Figure 7-8: Del Indio Griselda Geology

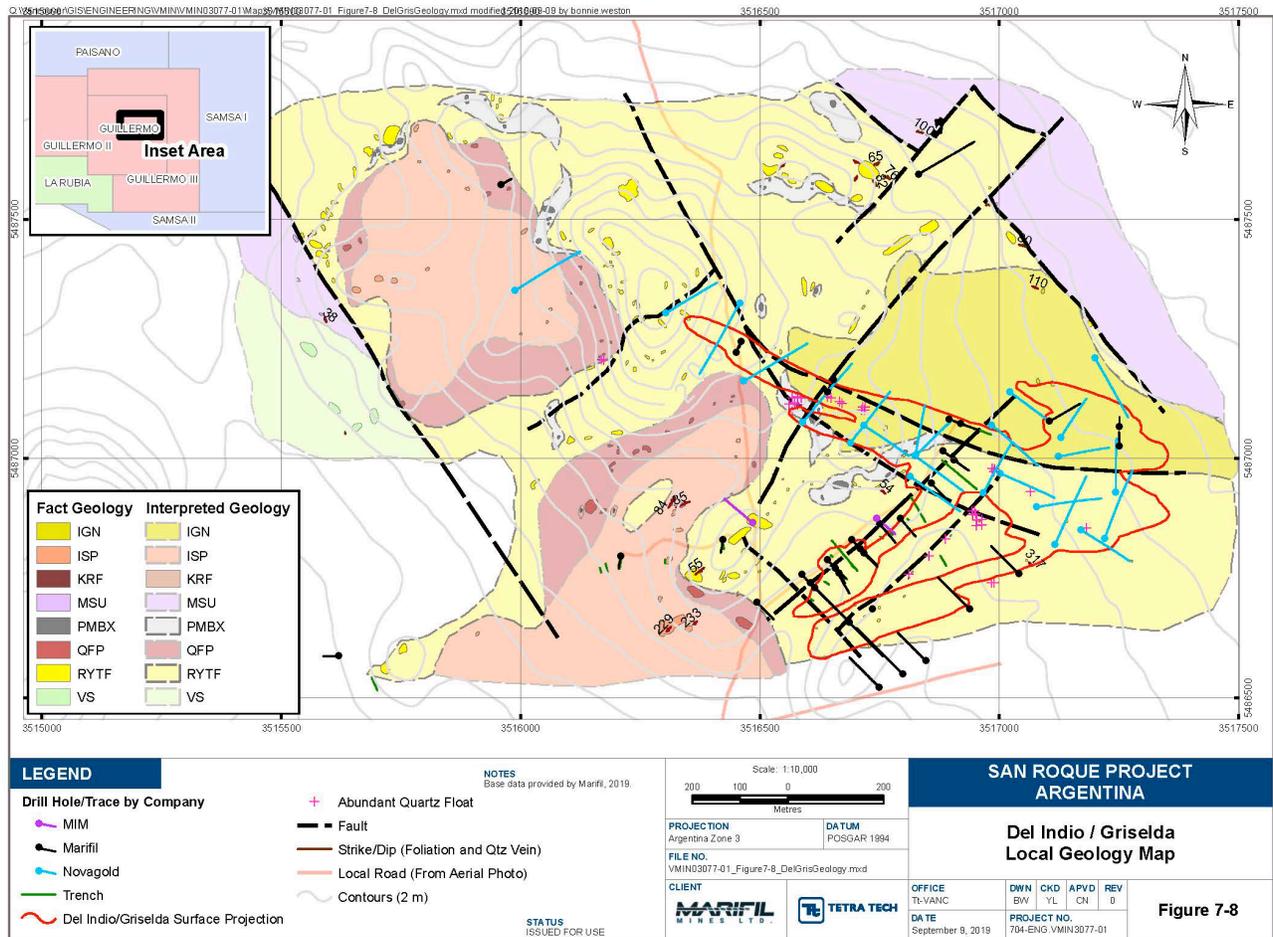
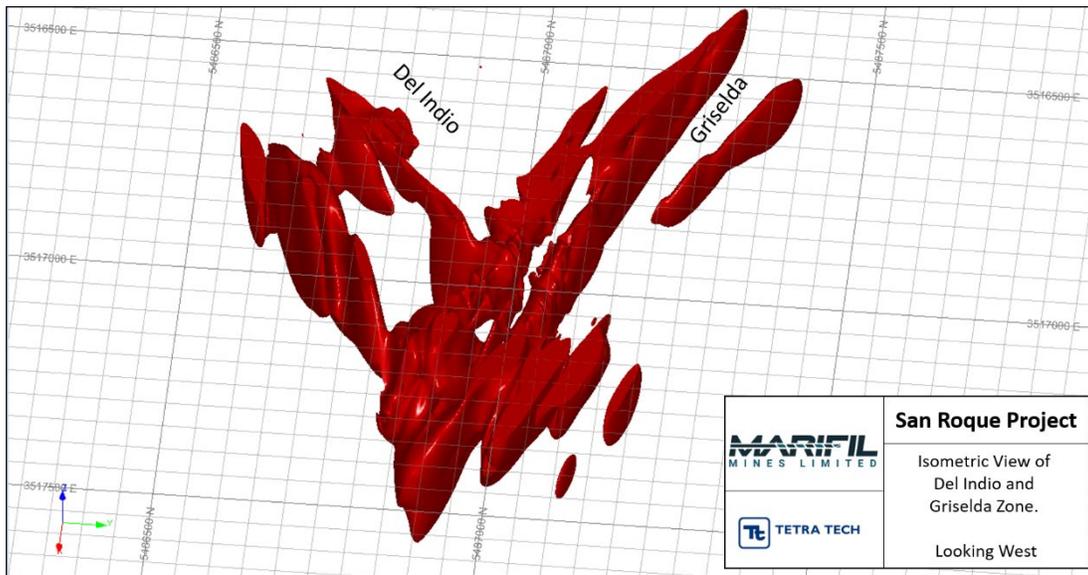


Figure 7-9: Isometric of Del Indio and Griselda Veins. Looking West

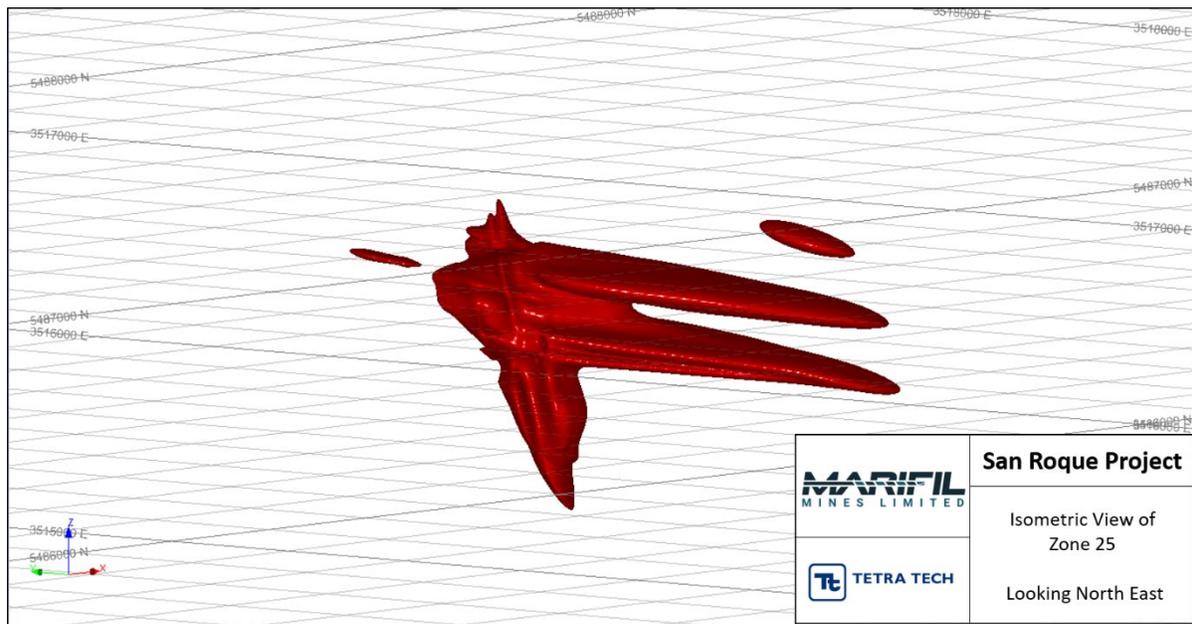


7.2.2.3 Zone 25

Located approximately 1.5 km to the south west of the Del Indio and Griselda structures, Zone 25 is interpreted to be comprised of a steeply SE dipping and NW striking structurally hosted veins. Moreover, this structure is interpreted to have acted as the conduit for a sperate stage of flat dipping, polymetallic stockwork veins which formed at the intersection of this feeder structure and favorable volcanic units such as tuffs (Figure 7-10).

Zone 25 has a similar orientation as Del Indio and may be hosted along the same structure. Like Del Indio and Griselda, veins hosted within this zone contain gold, silver, lead, zinc, and indium mineralization.

Figure 7-10: Isometric of Zone 25 Veins. Looking North East

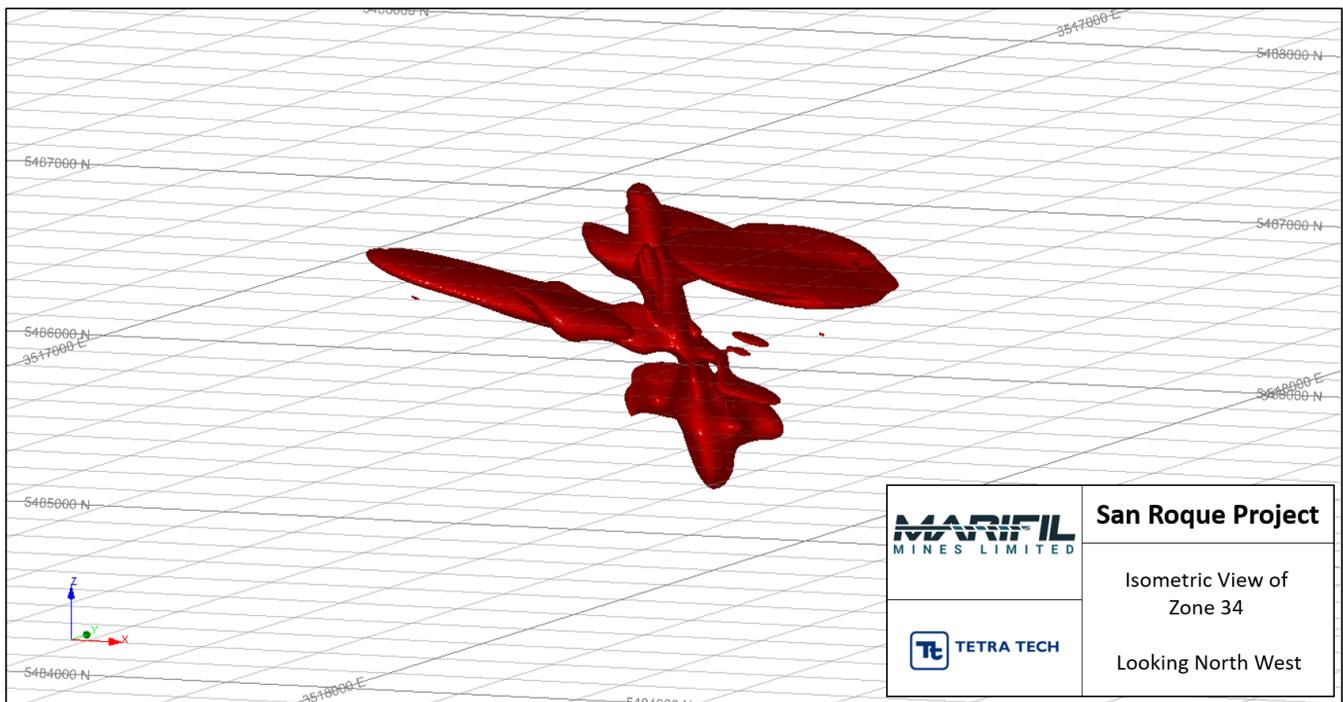


7.2.2.4 Zone 34

Zone 34 is located to the furthest south east of all the zones, and contains a central, steeply East North East dipping, North North-West striking structurally hosted vein corridor, along with bifurcations of gently dipping quartz stockworks within favorable volcanic units (Figure 7-11).

Zone 34 shows a positive correlation between gold and silver mineralization; however, veins within this zone appear to lack the same tenor of lead, zinc, and indium mineralization as the other zones.

Figure 7-11: Isometric of Zone 34 Veins. Looking West.

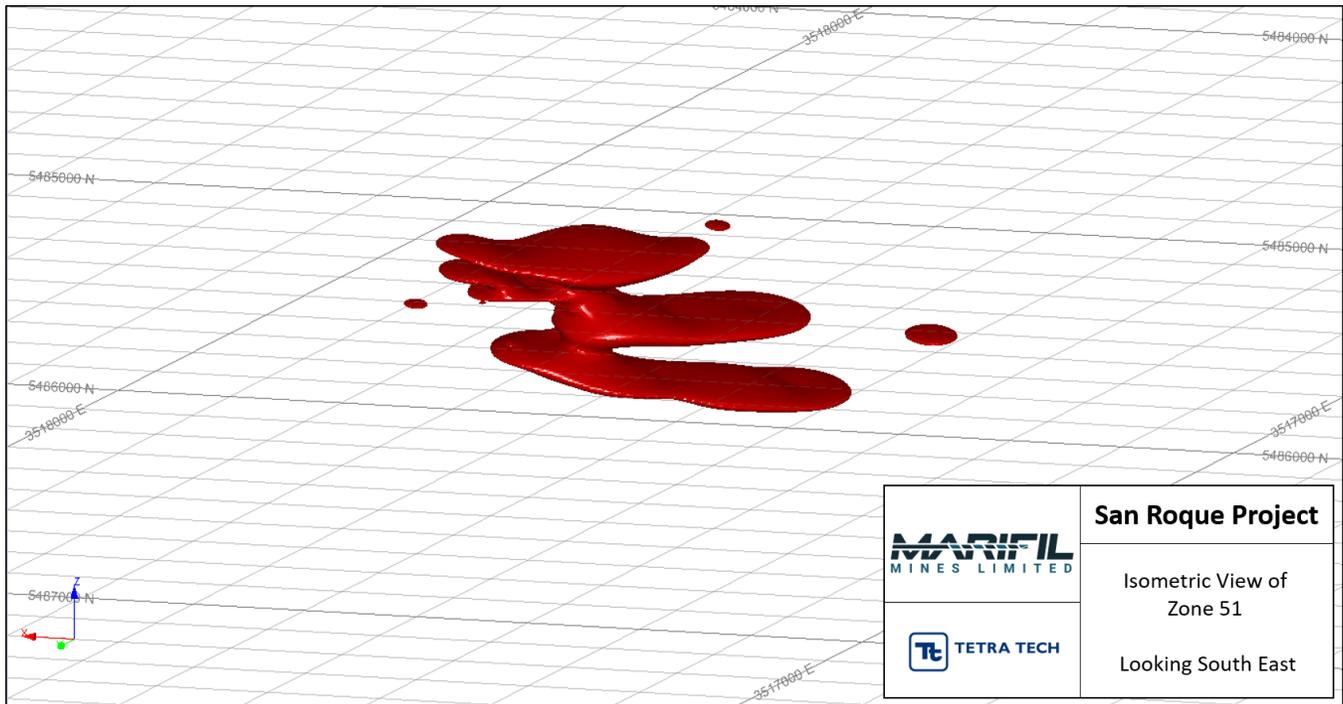


7.2.2.5 Zone 51

Located approximately 600 m to the north-west of Zone 34, Zone 51 also contains a steeply East North East dipping, North North-West striking structurally hosted vein corridor. Similar to Zones 25 and 34, gently dipping zones of polymetallic quartz stockworks are also observed splaying off of the main structure and within favourable volcanic units (figure 7-12). Unlike Zone 34, gold mineralization at Zone 51 appears to contain a more positive correlation with silver, lead, zinc, and indium mineralization.

Given their proximity and similar trends, it's possible that Zone 34 and 51 are hosted along the same structure.

Figure 7-12: Isometric of Zone 51 Veins. Looking South East.



7.2.2.6 North West Vein Zone

The North West Vein zone located approximately 1.5 km to the north west of Zone 25 (figure 9-1) is an early stage exploration prospect that has been sampled by both trenches and surface grab samples. From this early work, two vein systems of interest have been identified and have been named the Clupe and Encuentro Veins. Prospecting of sparse outcroppings in this area have traced these veins for approximately 1.5 km with widths varying from 0.3 m to 1.5 m (Figure 7-13). Initial geochemical analysis of these veins indicates mineralization of economic interest is mainly limited to gold and silver mineralization.

Figure 7-13: Example of Veins with NW Vein Zone



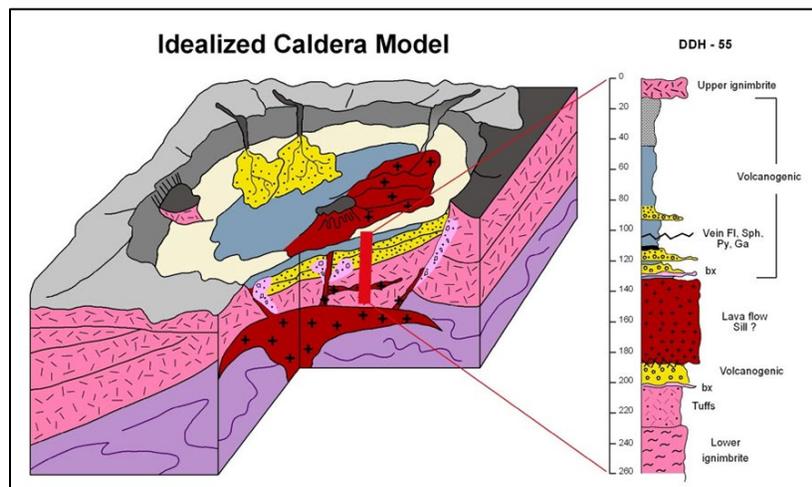
8.0 DEPOSIT TYPES

The interpretation of San Roque favours an intermediate-sulphidation epithermal deposit within a caldera related complex (Figure 8-1).

Epithermal deposits are characterized as forming within subduction-related arc settings, post-collisional orogenic belts, or back-arc settings (Wang et al, 2019), and at depths less than 1.5 km. Epithermal deposits can typically be classified into three categories primarily based upon their proximity to an intrusive heat source, and the interaction from meteoric vs. magmatic fluids. High sulphidation deposits form within closer proximity to an intrusive body where they are subjected to increased magmatic fluid interaction; low sulphidation deposits are more distal from the intrusive body and contain increased influence from meteoric fluids. Intermediate sulphidation deposits result from the interaction of both magmatic and meteoric fluids.

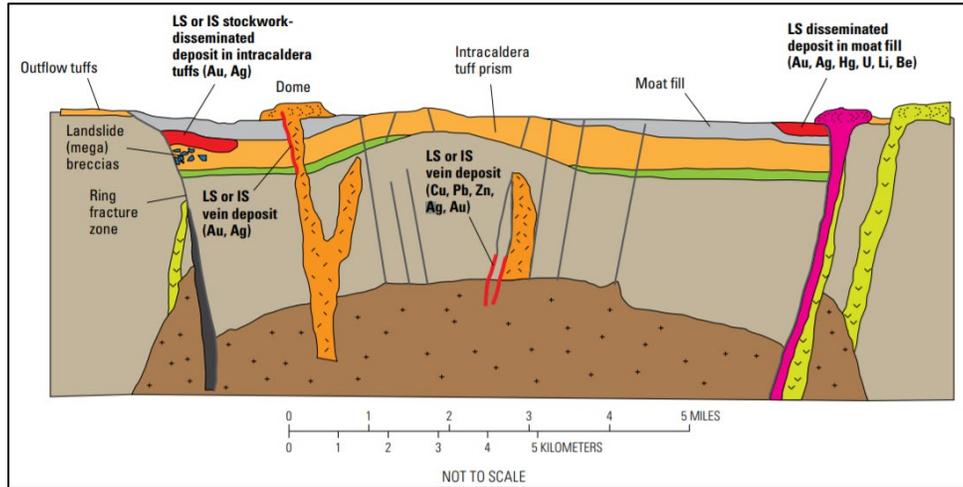
Following a period of active volcanism, a once highly pressurized magma chamber is no longer able to support the weight of the volcanic units above, and subsequent inward collapse occurs. These geological environments are typified by Tertiary or Quaternary volcanic packages comprised of flow-domes, flows, breccias, ignimbrites, tuffs, and various other volcanic units which vary from basalt to rhyolite (Figure 8-2).

Figure 8-1: Idealized Caldera Model



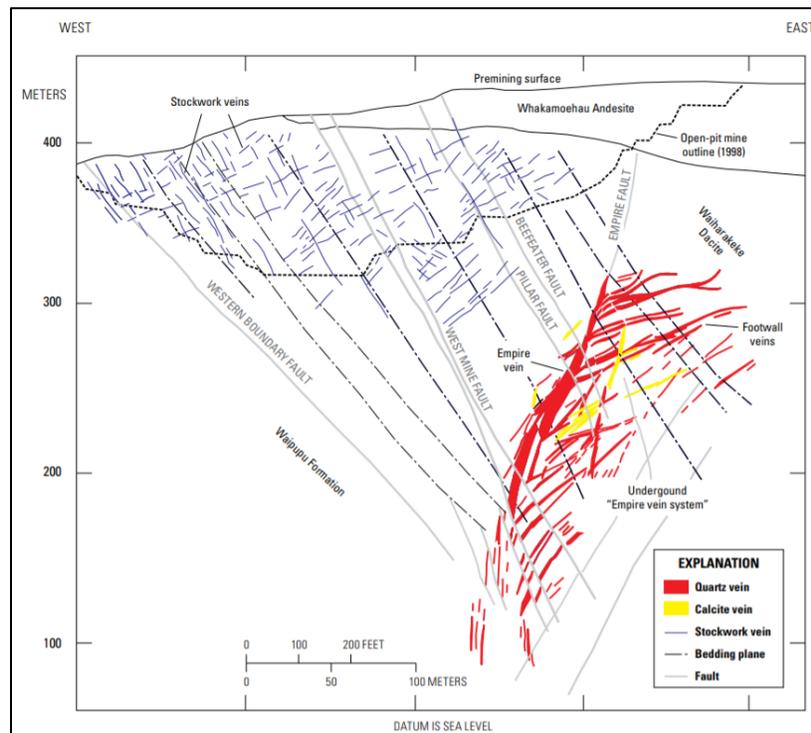
Mineralization events can occur shortly after the collapse of the caldera (Figure 8-2), or several million years post collapse along reactivated faults. Faulting, typically normal, strike slip, or ring, allows for the primary conduit for fluid flow. At the shallow depths associated with this style of volcanism, rapid boiling of the mineralizing fluids occurs within a few hundred meters of surface resulting in the precipitation of any ore bearing metals. The generation of typical epithermal mineral textures such as bladed calcite, colloform quartz, and adularia also occurs during this phase rapid fluid ascent. Following the boiling phase, a rapid depressurization of the gasses occurs which can result in further hydraulic fracturing of the rock and generation of additional conduits for fluid flow.

Figure 8-2: Intermediate Sulphidation Deposit Model Schematic (John et al, 2018)



The result of the fluid migration, boiling, and depressurization events is a combination of structurally hosted veins focused along the primary faults, and later stage stockwork veins infilling the depressurization fractures. Both vein types typically endowed with polymetallic gold, silver, lead, zinc, and copper mineralization and their sulphide constituents of pyrite, chalcopyrite, sphalerite, galena, and tetrahedrite / tennantite (Wang et al, 2019). Figure 8-3 presents a schematic cross section of the vein distribution observed at the Golden Cross deposit in New Zealand, which represents a possible analog to San Roque’s vein orientation and distribution.

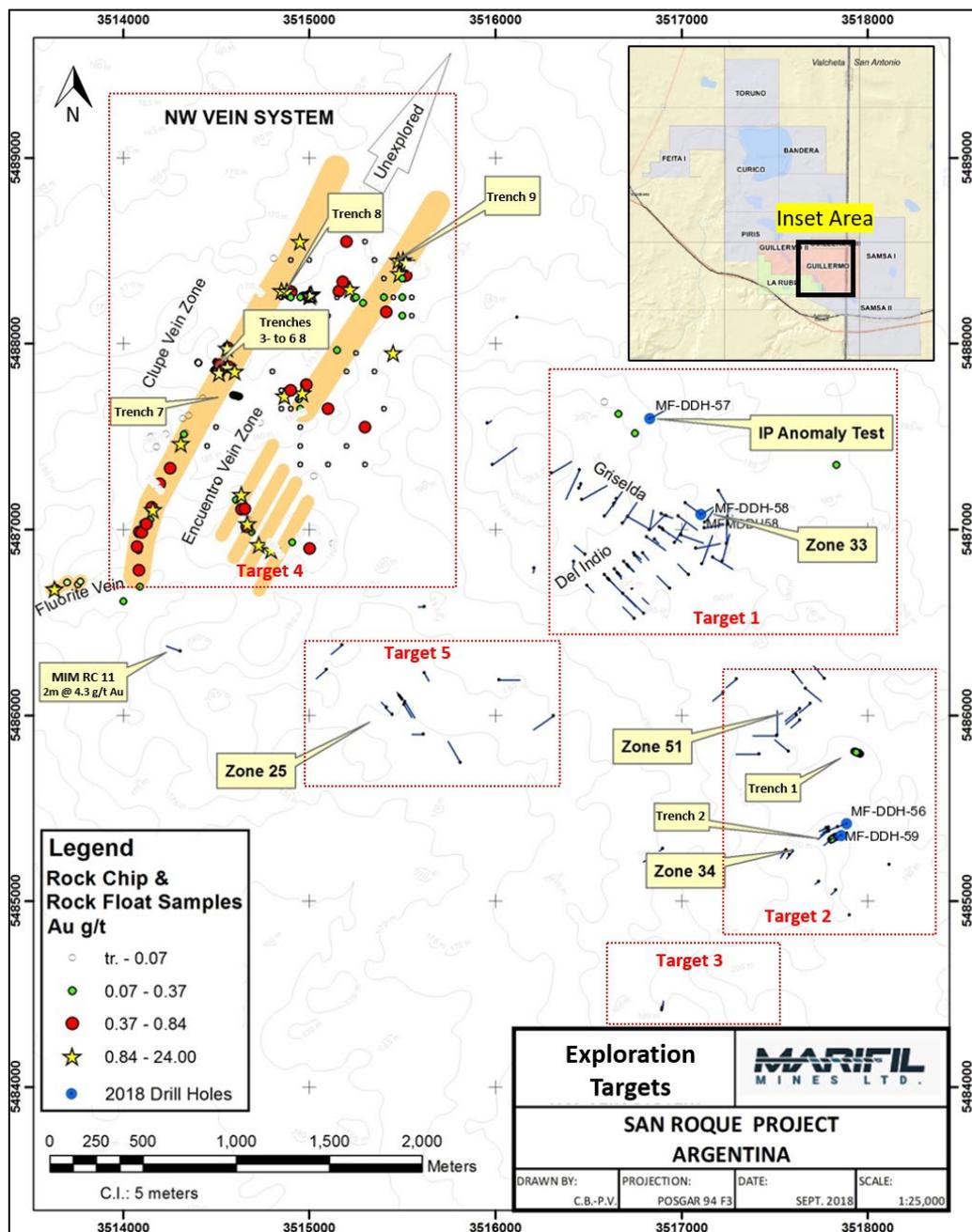
Figure 8-3: Schematic Cross Section of Intermediate Sulphidation Vein distribution at Golden Cross Deposit, New Zealand (John et al, 2018)



9.0 EXPLORATION

Mount Isa Mines (MIM) was the first group to stake claims based on regional-scale satellite imagery. During the early phases of exploration, 5 primary targets (targets 1-5) were identified on the property. Of these 5 targets, three (targets 1,2 and 5) have been advanced to the mineral resource phase, and target 4 now contains a zone referred to as the “NW vein system” which hosts the Clupe and Encuentro veins. Figure 9-1 shows the historical exploration targets, in conjunction with the currently identified zones. The exploration history is provided in greater detail based upon operator in the sections below.

Figure 9-1: San Roque Exploration Targets and Zones



9.1 Mount Isa Mines (MIM) –1999 to 2006 Operator

In 1999, Mount Isa Mines (MIM) started regional exploration in the San Roque area. After discovering gold anomalies on the San Roque property, they decided to investigate the property further in detail. MIM collected 1,018 soil and rock samples while performing geological mapping. They also carried out an IP (Induced Polarization) geophysical survey and a complementary ground magnetic survey. These surveys covered about 70-line km. The surveys delineated a circular anomaly that was interpreted as a concealed intrusive body.

Based upon the results of data compilation, MIM completed 19 diamond-drill and reverse circulation rotary drill holes totaling 2,728 m in two programs to test the targets. The first drill program targets were selected based on geology, geochemistry, and geophysics. The second drill program targets were selected based only upon geophysics. Despite the fact that significant mineralization was intercepted, the results of the drilling did not meet the expectations of management, who envisioned a bulk-mineable gold deposit. MIM stopped work on the property in 2002.

9.2 Marifil Mines Ltd. 2006-2009

Marifil acquired the San Roque Property in 2006. Prior to drilling, Marifil completed due diligence rock sampling (roughly 70 samples) in the areas of strong gold-silver-indium geochemistry. They also undertook an extensive evaluation and re-interpretation of previous work performed by MIM. A statistical analysis of MIM soil geochemical results was completed. A review of magnetic data was also undertaken where an independent geophysicist used new software to filter the data. This compilation was followed by trenching.

Following compilation of data, Marifil began a two phase trenching program, the first beginning in October 2006, and the second phase in January 2007. The first phase of trenching consisted of 27 trenches totaling 442 m. The trenches were mapped geologically, and 246 rock samples were taken. The second phase of trenching consisted of 25 trenches totaling 1,066 m. The trenches were mapped geologically, and 519 rock samples were taken. Total trenching consisted of 1,508 m and 765 rock samples. Upon completion of the programs, all trenches were backfilled and appropriately reclaimed.

The best mineralization identified through trenching was hosted in a brecciated area at least 500 m long and averaging 0.8 m wide with a maximum width of 1.8 m. One trench sample (#6489) found 14,883 grams per tonne (g/t) of indium ("In") with 2.64 g/t gold over 1.5 m. Another sample (#6483) returned 12.37 g/t Au with 289 g/t In over 0.7 m. Select trenching results are shown in Table 9-1.

Table 9-1: Key Indium and Gold results from Trenches

| Sample No. | Width (m) | In (g/t) | Au (g/t) | Gold Equivalent* (g/t) |
|------------|-----------|-----------|----------|------------------------|
| 6477 | 1.00 | 497.00 | 0.92 | 5.16 |
| 6483 | 0.70 | 289.00 | 12.37 | 14.83 |
| 6489 | 1.50 | 14,883.00 | 2.64 | 129.50 |
| 6490 | 0.20 | 1,831.00 | 0.83 | 16.43 |
| 6491 | 1.80 | 1,354.00 | 0.18 | 10.87 |
| 6497 | 0.20 | 1,794.00 | 1.13 | 16.42 |
| 6503 | 1.50 | 170.00 | 3.42 | 4.87 |
| 6535 | 0.70 | 176.00 | 0.39 | 1.89 |
| 6536 | 0.50 | 285.00 | 0.49 | 2.92 |
| 6539 | 0.80 | 50.00 | 0.04 | 0.47 |
| 6540 | 0.60 | 65.00 | 0.05 | 0.60 |
| 6551 | 1.00 | 296.00 | 0.83 | 3.35 |
| 6558 | 0.40 | 299.00 | 0.27 | 2.82 |

* Gold Equivalent (AuEq) based on the following metal value ratios to Gold: 1 (Au), 75 (Ag), 19,565 (Pb), 15,716 (Zn), and 117 (In) as calculated using three year trailing average metal prices of US\$1,267.00/oz Gold, US\$17.00/oz Silver, US\$1.00/lb Lead, US\$1.20/lb Zinc, and US\$10.80/oz Indium

9.3 NovaGold Exploration Program – 2010 & 2011

In 2010 and 2011 NovaGold, in joint-venture partnership with Marifil, carried out two phases of exploration on the San Roque property, consisting of ground geophysics and geochemical sampling.

9.3.1 Soil and Rock Geochemistry

A total of 787 soil samples were collected during the phase 2 exploration program in 2011. Samples were taken at 100 m and 200 m intervals along 200 m-spaced lines over several gridded areas on the property. Sample preparations were carried out at Acme Analytical Laboratories in Mendoza, Argentina. Analyses, completed at Acme's lab in Vancouver, B.C., Canada, involved a 30 g fire assay with AAS finish for gold and a 42 element ICP-MS package following a 4-acid digestion. Indium was analyzed by ultratrace ICP-MS following Aqua Regia digestion of a 0.5g sample.

The sampling program was designed to extend and infill an existing soil geochemical grid, previously established by MIM in the central part of the Guillermo mineral tenure. The program successfully extended the grid to cover most of the Guillermo tenure and partially extends into the surrounding Guillermo II and Guillermo III tenures.

Contoured soil geochemical plots were created and resulting maps demonstrated a roughly 2 km wide by 4 km long, semi-continuous, northwest-trending zone of elevated to high lead and zinc values, with areas of elevated, coincident gold, silver, copper and indium. This zone of elevated soil geochemistry encompasses Zones 33, 34, and 51.

Fourteen rock samples were taken on the property in 2011 program (Table 9-2). Rock samples 2951 to 2958 were taken during the soil sampling program. The majority of these samples lie within a 100 m by 200 m area, located approximately 2.5 km WNW of the Zone 33. The sampled material reportedly consisted of quartz float and subcrop. Gold soil values in this area range from below detection to 0.06 ppm. Grab sample 2954, which assayed 25.4 g/t Au, >200 g/t Ag, 0.10 ppm In, 68.8 ppm Cu, 146.3 ppm Pb and 24 ppm Zn, is described as being from an oxidized quartz vein, striking 020°. No sulphide mineralization was noted in the sample. Sample 2953 assayed 5.7 g/t Au, 56.7 g/t Ag, 0.52 ppm In, 40.2 ppm Cu, 359.4 ppm Pb and 128 ppm Zn. The sampled material is reported as oxidized, druzy quartz, hosted within an 020° striking structure in rhyolite. It was concluded that additional rock sampling is needed in the area of samples 2951-2958 in order to determine the importance of mineralization in the area.

Table 9-2: NovaGold 2011 Rock Sample Results

| Sample | Northing | Easting | Type | Material | Au (g/t) | Ag (g/t) | In (ppm) | Cu (ppm) | Pb (ppm) | Zn (ppm) |
|--------|----------|---------|-------|-----------|----------|----------|----------|----------|----------|----------|
| 2951 | 5488077 | 3514641 | grab | qz vn | 3.70 | 20.70 | 2.86 | 12.40 | 40.60 | 40.00 |
| 2952 | 5488084 | 3514599 | grab | qz vn | 1.80 | 40.70 | 0.16 | 26.80 | 382.50 | 33.00 |
| 2953 | 5488062 | 3514593 | grab | qz struct | 5.70 | 56.70 | 0.52 | 40.20 | 359.40 | 128.00 |
| 2954 | 5488034 | 3514586 | grab | qz vn | 25.40 | >200.00 | 0.10 | 68.80 | 146.30 | 24.00 |
| 2955 | 5487521 | 3514321 | grab | qz vn | 0.10 | 4.20 | 0.27 | 14.40 | 26.00 | 8.00 |
| 2956 | 5487987 | 3514562 | float | qz | 0.20 | 6.90 | 0.06 | 41.70 | 67.20 | 86.00 |
| 2957 | 5488180 | 3514640 | grab | qz struct | 2.70 | 54.40 | 0.12 | 28.60 | 98.40 | 28.00 |
| 2958 | 5488120 | 3514618 | float | qz | <0.10 | 4.90 | 0.03 | 15.90 | 26.30 | 36.00 |
| 8601 | 5510930 | 3491317 | float | qz vn | 0.10 | 2.10 | 0.05 | 8,572.00 | 824.00 | 343.00 |
| 8602 | 5510961 | 3491309 | float | qz vn | 0.08 | 6.20 | 0.07 | 4,458.80 | 1,106.50 | 276.00 |
| 8603 | 5510951 | 3491349 | grab | qz stkwk | 0.15 | 0.30 | 0.09 | 241.00 | 95.00 | 160.00 |
| 8604 | 5510962 | 3491340 | float | qz vn | 0.05 | 3.50 | 0.06 | 1,987.10 | 80.30 | 56.00 |
| 8605 | 5487258 | 3516806 | grab | qz vn | 0.30 | 44.60 | 920.24 | 206.90 | 964.80 | 787.00 |
| 8606 | 5487629 | 3515616 | grab | qz stkwk | <0.10 | 7.50 | 1.07 | 123.60 | 1,260.50 | 1,943.00 |

Grab samples 8605 and 8606 were collected during grid mapping of the Zone 33 (now referred to as Del Indio and Griselda) and surrounding areas. Sample 8605, from a sub-cropping quartz vein hosted within polymictic breccia in the Zone 33, assayed 0.3 g/t Au, 44.6 g/t Ag, 920.24 ppm In, 206.9 ppm Cu, 964.8 ppm Pb and 1,943 ppm Zn. The vein is banded, 11 cm wide and strikes 095°, with a steep dip. Malachite and fine, dark sulphides were observed in the sample. This area is underlain by a large area of elevated multi-element soil geochemistry. This style of veining is consistent with that intersected in nearby drill holes.

Grab sample 8606 was collected from quartz-stockwork veining in silicified rhyolite along the contact with intrusive syenite porphyry. The sample assayed <0.1 g/t Au, 7.5 g/t Ag, 1.07 ppm In, 123.6 ppm Cu, 1,260.5 ppm Pb and 1,943 ppm Zn. Soil samples in this area returned elevated lead and zinc values. Diamond drill holes DDHMSR-0025 and DDHMSR-0031 tested similar intrusive/volcanic contact zones elsewhere in the Zone 33 (see Section 10 Diamond Drilling). Although results from these particular holes were not significant, these potentially mineralized intrusive contact zones remain viable exploration targets.

9.3.2 Geophysics

A dipole-dipole induced polarization/resistivity survey was conducted on the property in August 2011. The survey was conducted over an area of approximately 1.2 by 3.3 km, covering the Zone 33 and Zone 51 drill areas. A total of 20.025-line km was surveyed on 13 lines, spaced 200 to 400 m apart. Grid lines were oriented approximately 060° with stations located every 75 m. This work was carried out for NovaGold by Ridgeback Geofisica Argentina S.A., Mendoza, utilizing a GDP-3211 Geophysical Data Processor (minimum 8 channels) coupled with a GGT-10, 10kW TD/FD transmitter, c/ ZMG-7 generator, and XMT-32S controller (Barrett, 2011).

The survey identified several chargeability/resistivity “highs”. In some cases, these areas can be correlated with known faults, geological contacts or areas of disseminated sulphides. Other anomalies are more difficult to explain. Several narrow northeast-trending zones of high chargeability correlate well with inferred faults.

In general the geophysics data was found to be useful in drill hole planning when used in conjunction with other geological and geochemical data.

9.4 Marifil Mines Ltd - 2007 to Present

9.4.1 2006 and 2007

The objective of the 2006/2007 trenching program was to verify the characteristics of silicified and mineralized structures identified in earlier trench campaigns.

Trenches were carried out with using a backhoe style excavator where bedrock uncovering was carefully made, separating on one side, the upper fine material (incipient soil), and on the other the sub-outcropping rocks. Rock channel samples were extracted from the floor of the trenches, and at the same time they were logged, documenting its characteristics: stratigraphic, structural, mineralogical and of alteration. Finally, the trenches were covered placing the different materials in the original order. The development of the trench works was carried out in two stages:

During the first stage 27 trenches were excavated, 442.2 m were logged, and 246 samples collected.

During the second stage 25 trenches were excavated, 1,066 m were logged, and 519 samples collected.

The trenching program produced the following conclusions:

- The “mineralized silicified structures” correspond in most of the cases to silicified “cataclastic breccias”, that is to say, structures located in faults that put in contact the Volcanic Sequences and the Metamorphic Basement Sequences.
- Mineralizing flows associated with the different silicification pulses circulated through the fault plane. At least three were identified clearly.
- The Au mineralization is directly related to the degree of silicification in the structures.
- The rocks functioning as walls of the structures, both pyroclastic and metamorphic, in general do not present mineralization but they present weak to moderate argillization.
- In the cases of pinchout of the structures, in the fault plane, if there are values of Au, they coincide with the presence of very fine quartz veinlets or stockwork, possibly corresponding to the last silicification pulse. The mylonitized volcanic box is the most receptive from this veinlet system.

- The dominant directions of the identified silicified structures are:
 - NE-SW (40°-50°)
 - NW-SE (310°-320°)
 - N-S
- The structure directions seem to have been influenced by the strike displacement movements of the NW-SE Fault, of regional character and that limits the precretaceous outcrops in the area.
- The highest values of gold mineralization are associated with crossing areas of NW-SE directions, for example T2-15 (56.85 ppm Au).
- Taking into account the geochemical results, it is assumed that three or four mineralizing phases have acted in the region, which were associated with different metals: a host phase of scarce Ag, Cu, Bi; a second host phase of Pb, Zn; a third host phase of Au, associated with Tellurium; and, a fourth host phase of Au, In. The mineralizing phases did not necessarily occur in the mentioned order, but it seems the most coherent.

9.4.2 2018 Program

9.4.2.1 Geologic Mapping

Geologic mapping was drawn at scales of 1:100, 1:150, 1:200 and 1:250 depending on the length of each trench. The better winter time sunlight trench wall was selected for the mapping which also dictated the sampling start point. Samples were routinely collected every 3 m except for quartz veins or quartz stockwork vein zones, which were sampled according to their observed widths.

9.4.2.2 Regolith Grid Sampling

A northeast trending regolith grid sampling of approximately 1,300 m x 900 m over an area that extends from Clupe vein zone to the east and Encuentro vein zone to the south was completed. This area contained some small outcrops with quartz veins and rocks crosscut by multiple quartz veinlets. It is mostly covered by soils with copious quartz vein float in some sectors, possibly indicating hidden arrays of gold-bearing quartz veins beneath the soil mantle.

A total of 186 samples were taken in 13 east-west lines spaced 100 m apart from north to south and 50 m apart from east to west.

Regolith samples were collected where possible using hand driven auger soil sample equipment, with the upper 20 cm to 110 cm thick soil horizon being discarded. Rock chip samples were taken in a random pattern from outcrops where available. That scheme yielded 146 samples of regolith, 43 samples of rock chips, and 3 samples of a combination between both types.

Regolith sampling indicated two gold anomaly areas, and anomalous Pb and Zn values on the eastern area of the sample grid. These results could indicate a geochemical boundary between a polymetallic system toward east-southeast (the drilled project) and a low sulfide epithermal precious metals system to the west.

9.4.2.3 Rock Chip and Float Sampling

New targets in 2018 included the Clupe and Encuentro vein zones. 78 rock chip and float samples were collected in three different sectors of the project featuring the two new targets.

Sixty-six rock chip and float samples were collected in the area known as Clupe-Encuentro vein zones and their extensions. Of those, only 6 samples assayed values below the gold detection limit. The average assay for the remaining 60 samples is 0.63 g/t Au. This includes 13 samples > 1 g/t Au with a peak of 8.69 g/t Au, 14 samples with assays between 0.5-1.0 g/t Au, 12 samples with assays between 0.3-0.5 g/t Au, and 9 samples with assays between 0.1-0.3 g/t Au.

From the 15 samples taken on Encuentro veins, 3 samples assayed over 1.0 g/t Au with the highest being 3.85 g/t Au, 5 samples assay between 0.5-1.0 g/t Au, and 3 samples assay between 0.1-0.5 g/t Au. Four samples assay over an ounce of silver (31.103 g/t) with a peak of almost 69 g/t Ag.

A third location was sampled about 3 km to the southeast (known as Piris). This location was previously sampled in 2008 and returned three assay samples with gold assay values ranging from 1.3 g/t Au to 1.63 g/t Au. From 7 rock chip and 2 float samples collected in this area, 2 assayed 2.09 and 2.5 g/t Au (quartz vein 0.3 m width) and 4 assayed between 0.10 and 0.5 g/t Au (a 1.5 m wide strongly silicified and crosscut by quartz veinlets zone). These include 1 sample with 74 g/t Ag, 1 sample with 0.66% Cu, 1 sample of 26 ppm Mo, 2 samples less than 400 ppm Pb, and 1 sample of less than 300 ppm Zn.

Three samples were collected close to the collar of drill hole MF-DDH-57. They were collected because there was no previous sampling in the area, and to see if there was any correlation with the mineralization seen in the top of drill hole MF-DDH-57. The results concluded there was no correlation (one sample below detection limit, and two <0.25 g/t Au).

9.4.2.4 Trenching

Mechanized trenching was carried out in two sectors of the project totaling 303.20 m (113 channel samples) in 9 trenches with variable depths between 0.80 m to more than 3 m. Trenches were dug with a backhoe/loader and the channel sampling was done using a rock saw and a hammer and chisel.

2018 trenching focused on two targets almost 2 km apart: the known Zone 34 in order to augment 2018 drilling, and the NW Vein System, a newly discovered gold zone which hosts the Clupe and Enuentro vein systems (Figure 9-1).

Trenches 1 and 2 were completed in Zone 34, an area that is based on positive results from MSRDDH0034. The resulting geochemical signature from Trench 1 ended up being quite different from Trench 2 and another previous trench done on the site, which both had comparatively very high manganese oxides content and abnormally low molybdenum content for this zone. Trench 1 ended up returning a higher molybdenum average of almost 30 ppm with a peak of 95 ppm.

Trenches 3 to 9 were located in a new area designated as the "NW Vein System". The best gold assay results in decreasing order were obtained in channel samples from trenches 8, 9 and 5. Key results are shown in Table 9-3.

Table 9-3: Trench Results

| Trench I.D. | Trench Length | Au & Ag | Includes | Includes |
|-------------|---------------|-----------------------------|-------------------|-------------------------|
| | m | m, g/t Au, g/t Ag | m, g/t Au, g/t Ag | m, g/t Au, g/t Ag |
| T-1 | 35.00 | Lower than 0.08 g/t Au | | |
| T-2 | 48.00 | 3.00, 0.22, 12 (best value) | | |
| T-3 | 45.10 | 25.70, 0.73, 5.6 | 7.70, 2.09, 18.2 | 1.70, 9.06, 82.0 |
| T-4 | 54.00 | 18.00, 0.28, 0.5 | 6.00, 0.41, <0.5 | |
| T-5 | 19.00 | 16.00, 0.50, 1.2 | 8.60, 0.80, 1.4 | 3.00, 1.73, 3.8 |
| T-6 | 32.30 | 8.30, 0.47, 4.3 | 2.30, 1.42, 15.0 | |
| T-7 | 36.80 | Colluvium, No Au | | |
| T-8 | 21.00 | 21.00, 1.17, 3.7 | 12.00, 1.46, 6.2 | 6.00, 2.27, 10.7 |
| | | | 3.00, 2.18, <0.5 | trench ends 2.18 g/t Au |
| T-9 | 9.00 | 6.00, 1.36, 5.1 | 3.00, 2.43, 9.9 | 0.20, 24.66, 77.7 |

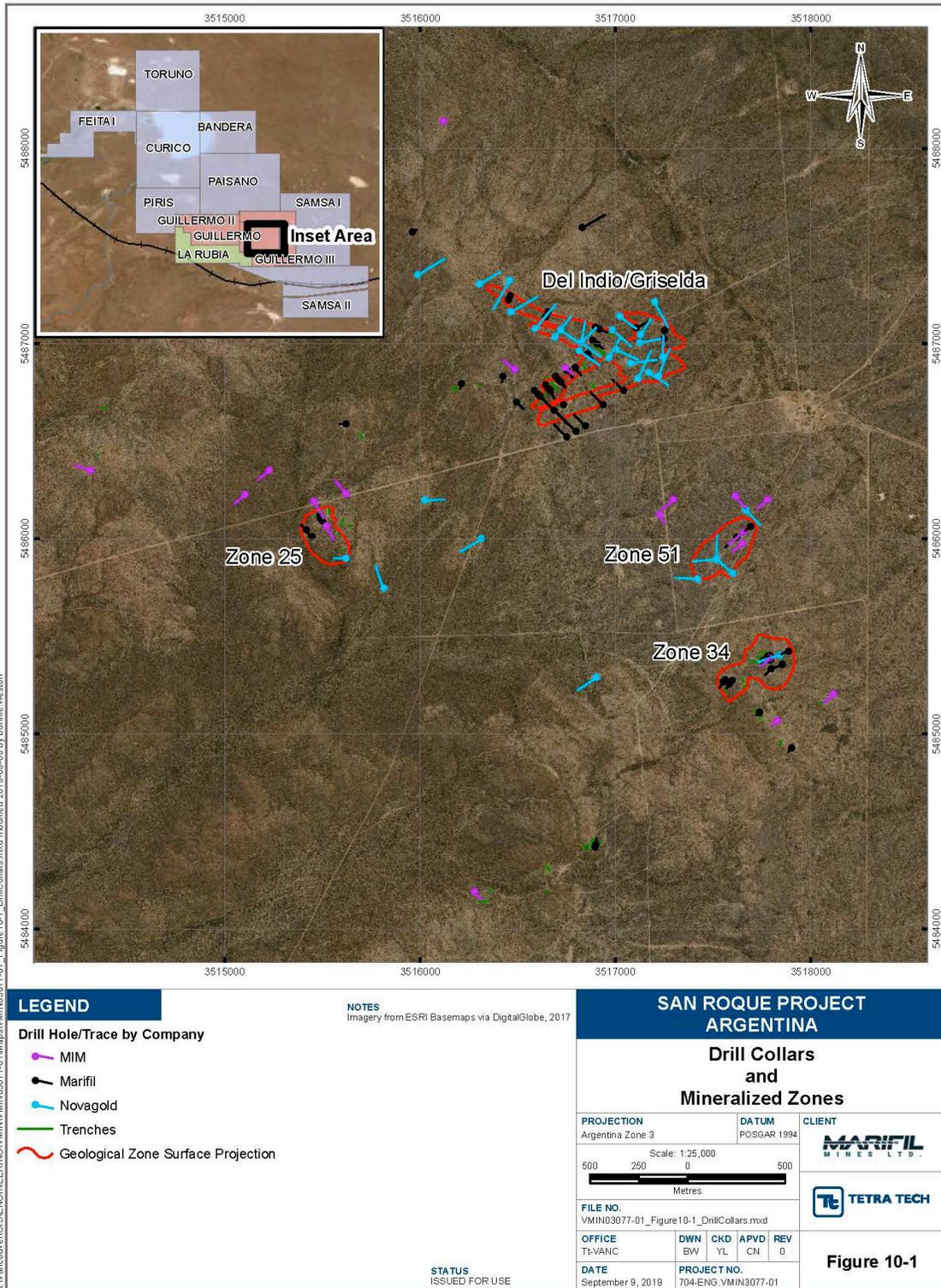
10.0 DRILLING

A total of 7 drilling campaigns have been completed at San Roque by three separate companies, with 112 drill holes completed totalling 16,683 m total depth as outlined in Table 10-1. Figure 10-1 shows all drill collars and traces to date, with detailed information following regarding each drilling campaign.

Table 10-1: San Roque Drill History

| Company | Month/Year | Drill Type | Drill Hole Annotation | Drill Hole Sequence | Number of Holes | Metres |
|---------------|---------------------|------------|-----------------------|---------------------|-----------------|-----------------|
| MIM | May 2001 | Core | SRDD | 1-8 | 8 | 1,124.0 |
| MIM | June 2001 | RC | SRRC | 1-11 | 11 | 1,604.0 |
| Marifil Mines | March & April, 2007 | Core | MF-DDH | 1-28 | 28 | 2,103.5 |
| Marifil Mines | Oct. & Dec., 2007 | Core | MF-DDH | 29-55 | 27 | 3,188.7 |
| NovaGold | March 2011 | Core | MSRDDH | 1-15 | 15 | 3,538.4 |
| NovaGold | September 2011 | Core | MSRDDH | 16-34 | 19 | 4,278.3 |
| Marifil Mines | June 2018 | Core | MF-DDH | 56-59 | 4 | 846.5 |
| TOTAL | | | | | 112 | 16,682.9 |
| MIM | | | | | 19 | 2,728.0 |
| Marifil Mines | | | | | 59 | 6,138.2 |
| NovaGold | | | | | 34 | 7,816.7 |
| TOTAL | | | | | 112 | 16,682.9 |

Figure 10-1: San Roque Drill Collar Map



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10.1 Mount Isa Mines (MIM) 1999-2002

MIM completed 2,728 m of drilling during two campaigns, comprising 8 diamond drill holes and 11 reverse circulation holes. Drilling targeted geological, geochemical and geophysical anomalies. Some of the significant drill intercepts reported by MIM are summarized below (Table 10-2).

Table 10-2: MIM Significant drill Intercepts

| Hole ID | From (m) | To (m) | Width (m) | Au (g/t) | Pb (%) | Zn (%) |
|---------|----------|--------|-----------|----------|--------|--------|
| SRDD1 | 26.00 | 36.00 | 10.00 | 0.45 | 0.00 | 0.01 |
| SRDD8 | 30.00 | 40.00 | 10.00 | 1.10 | 0.05 | 0.05 |
| SRDD8 | 134.00 | 158.00 | 24.00 | 0.24 | 0.94 | 2.21 |
| SRRC2 | 6.00 | 20.00 | 14.00 | 1.16 | 0.01 | 0.04 |
| SRRC3 | 54.00 | 70.00 | 16.00 | 0.47 | 0.36 | 0.91 |

10.2 Marifil Mines

Marifil conducted two diamond drill campaigns totalling 5,292.2 m in 55 HQ-size holes.

Much of the Marifil drilling was focused on the Del Indio structure, a northeast trending vein/breccia structure with a strike length of at least 400 m. Some of the better intersections from the Del Indio area are summarized below (Table 10-3). Marifil also drilled the area of MIM hole SRDD-8 (10 m of 1.10 g/t Au). Hole SRDD-8 was bracketed by Marifil holes MF-DDH-50 and MF-DDH-51 (Table 10-4).

Table 10-3: Marifil Mines – Del Indio Area (“Zone 33”) Significant Drill Intercepts

| Hole ID | From (m) | To (m) | Width (m) | Au (g/t) | In (g/t) | Zn (%) |
|-----------|----------|--------|-----------|----------|----------|--------|
| MF-DDH-3 | 15.60 | 22.70 | 7.10 | 2.46 | 8.00 | 0.14 |
| MF-DDH-4 | 42.90 | 46.00 | 3.10 | 2.91 | 370.00 | 0.10 |
| MF-DDH-4 | 74.00 | 78.50 | 4.50 | 0.37 | 499.00 | 6.64 |
| MF-DDH-33 | 15.30 | 24.00 | 8.70 | 0.68 | 61.00 | 0.39 |
| MF-DDH-33 | 39.60 | 69.40 | 29.80 | 1.72 | trace | 0.75 |

Table 10-4: Marifil Mines – SRDD-8 Area (Zone 51) Significant Drill Intercepts

| Hole ID | From (m) | To (m) | Width (m) | Au (g/t) | Ag (g/t) | Pb (%) | Zn (%) |
|-----------|----------|--------|-----------|----------|----------|--------|--------|
| MF-DDH-50 | 47.80 | 141.00 | 93.20 | 0.30 | 12.99 | 0.30 | 0.50 |
| MF-DDH-51 | 7.00 | 150.00 | 143.00 | 0.66 | 27.17 | 0.37 | 0.55 |

10.2.1 Phase 1 Drilling

The objective of the first drilling program was to delineate structurally-controlled gold and indium mineralization.

The first drilling campaign in San Roque Project was carried out between March and April 2007. The program consisted in 28 diamond drill holes (DDH) totaling 2,103.5 m (1,299 core samples were assayed).

The previous trenching program defined 5 different exploration targets. The drilling was planned to confirm the continuity of the anomalies at depth in the higher potential targets (Targets 1-3, 5).

The drilling intercepted significant intervals of zinc and indium, along with varying amounts of gold, silver, copper, lead, and zinc as veinlets cutting the volcanic rocks. The sulfide stringers are apparently unrelated to through-going quartz-breccia structures. Indium was generally associated with gold and zinc. Although the correlations between gold, zinc, and indium were not linear, the highest indium grades seemed to correspond with the high grades of zinc.

During this first round of drilling, Marifil geologists recognized that many of the drill holes also contained extensive zinc and lead mineralization that accompanied the expected gold/silver mineralization. The base metals were often hosted by hydrothermal breccias that contained milled clasts and tuffs. Marifil geologists interpreted this as indicative of a mineralized diatreme.

10.2.1.1 Target 1

The intent of the first holes on Del Indio, MF-DDH-1 to MF-DDH-11 and MF-DDH 26 to MF-DDH-28, was to intercept the gold-bearing Del Indio structure. However, holes MF-DDH-1 TO MF-DDH-11 were likely stopped prematurely, as they ended in zinc mineralization, containing very fine disseminated, stockwork, and veinlet sphalerite that was very light-colored, often almost white. Despite the prematurely terminated drill-holes, some significant mineralization was still encountered.

As drilling continued, geologists became familiar with the styles of mineralization and holes were planned deeper, thus more zinc mineralization was found in drill holes MF-DDH-26 to MF-DDH-28.

In this target, drilling delineated a zone of mineralization about 250 m in strike length based upon the below highlighted samples:

- 7.92 g/t Au over 0.80 m (MF-DDH-3)
- 66 g/t Ag over 1.50 m (DDHMSR-0023)
- 3.11% Cu over 0.70 m (MF-DDH-6)
- 4.72% Pb over 0.60 m (MF-DDH-7)
- 2,435.0 g/t In over 1.0 m (MF-DDH-2)

Successful drilling of Target 1 has resulted in the discovery and ongoing delineation of the present day mineralized Del Indio and Griselda structures / Zone.

10.2.1.2 Target 2

The intent of the first holes on this target was to intercept high-grade epithermal gold/silver mineralization. The best values in this target intercepted in Phase One drilling were 43.22 g/t Au (MF-DDH-14, 12.2-13.1 m) and 676 g/t Ag

(MF-DDH-15, 96.0-97.0 m). Significant amounts of base metals were not present. Anomalous amounts of antimony, barium, strontium, and manganese correlated positively with gold and silver, suggesting a shallow, low-temperature environment of emplacement.

In Target 2, drill holes MF-DDH-12 to MF-DDH-21 intercepted high-grade epithermal mineralization of gold and silver. Elevated grades amounts of copper, lead, zinc and indium were not present in this zone.

The best values received were 43.27 g/t Au over 0.90 m (MF-DDH-12) with 35 % of the samples containing more than 0.35 g/t gold and 676 g/t silver with several samples ranging above 65 g/t silver.

Drilling campaigns on Target 2 has culminated in the discovery of Zones 34 and 51.

10.2.1.3 Target 3 (Trahuil)

Target 3 was tested with drill holes MF-DDH-22 and MF-DDH-23. This zone was trenched giving several gold values higher than 10 g/t with several high-grade samples above 20 g/t and a single sample of 56.85 g/t (the highest gold value in the project). However, no such values were intercepted by drilling at depth, and only low-grade anomalies were cut in these two holes. The area remains open for exploration taking in account the extremely high values at surface. A “nugget effect” cannot be discounted since visible gold has been identified on several surface samples.

10.2.1.4 Target 5

Drill holes 24 and 25 were located in Target 5. This target was selected based on the presence of strong anomalies of gold and silver in rock samples and trenches. On the surface showings, this target yielded rock sample assays of up to 19.0 g/t Au and >200 g/t Ag. When drill-tested by MIM, the holes SRDD-3, SRDD-4, and SRRC-4. SRDD-3 intercepted 2.19 g/t Au from 16.0-18.0 m and 1.40% Zn with minor Au content from 126 to 128 m. The two Marifil drill holes intercepted continuous low-grade lead/zinc mineralization with some gold and silver. For example, hole 24 contained 51 m averaging 0.3% Zn, 0.16% Pb, 1.01 g/t Au, and 53.4 g/t Ag. However, the total depth of the hole was 51 m, whereas other holes in this target have been drilled to approximately 200m, so this target requires more drilling.

Successful preliminary drilling of this target has resulted in the discovery of Zone 25.

10.2.2 Phase 2 Drilling

The intent of the second round of Marifil drilling was to delineate a low-grade, bulk-mineable sulfide deposit. It was successful in discovering a low-grade base-metal sulfide occurrence with precious metal credits. The drilling demonstrated that many of the targets are open laterally and at depth. Some of the drill holes suggest that there is a strong possibility that other untested areas could hold similar mineralization. New lithological sequences were also encountered during drilling, including a large lacustrine sedimentary sequence that was intruded by rhyolite sills. Based upon this and previously known geology, Marifil geologists contemplated that rather than a small diatreme, a more accurate geological model might favour a caldera complex interpretation.

One of the more enticing targets was the Del Indio Breccia. The second round of drilling by Marifil increased the size of the breccia body to about 600 m in length by about 300 m in width. It is elongated in a north-easterly direction. It is open to the southwest, southeast, northeast, and at depth. While higher indium values were associated with structural zones and gold-bearing quartz veins, all intervening rocks were mineralized with stockwork galena/sphalerite veins as well as disseminated sphalerite.

The gold-rich Del Indio Vein is believed to roughly mark the northwestern side of the breccia zone. This zone was tested by drill holes MF-DDH-29 to MF-DDH-43, MF-DDH-52, MF-DDH-53, and MF-DDH-55 during the second round of drilling. Drill holes MF-DDH-32 to MF-DDH-37 were planned to test an epithermal quartz vein. These holes intercepted gold and base metal mineralization. The rest of the drill holes on the Del Indio Target intercepted base metal mineralization along with gold/silver mineralization.

Drill hole 44 was located further north in an intersection of structures. Assay results were insignificant, as it cut low temperature silica indicating that it was outside the system.

Drill holes MF-DDH-45, MF-DDH-46, MF-DDH-47 and MF-DDH-54 were located in Target 5 where drill holes MF-DDH-24 and MF-DDH-25 of the first program were drilled. Drill hole MF-DDH-45 intercepted 1.4 g/t Au and 72.33g/t Ag over 15.30 m. Drill hole MF-DDH-46 intercepted 1.07% Zn over 9 m, and drill hole MF-DDH-47 intercepted 1.14 g/t Au, 130.59 g/t Ag, 0.34% Pb and 1.1% Zn over 9.0 m.

Drill hole MF-DDH-54 cut thin and low-grade gold and silver but did intersect 0.1% Pb and 0.38% Zn over 36.35 m. Elevated molybdenum was also noted at shallower depths within this hole.

Drill holes MF-DDH-48 and MF-DDH-49 were located in Target 2. Only some discontinuous anomalies were intercepted in base and precious metals.

Drill holes MF-DDH-50 and MF-DDH-51 were located between Target 1 (Del Indio) and 2 (San Roque), near MIM's holes SRDD-8 and SRRC-3. Holes 50 and 51 were drilled to test a gold, silver, lead, and zinc target cut by MIM Drill Holes. Hole MF-DDH-50 was located 67 m northeast of SRDD-8 and Hole MF-DDH-51 is located 40 m southwest of SRDD-8. All three holes were drilled to the southwest and are sub-parallel.

Drill hole MF-DDH-50 contained a 93.2 m intercept averaging 0.30 g/t Au, 13 g/t Ag, 0.30% Pb, and 0.50% Zn. Drill hole MF-DDH-51 contained a 126 m intercept averaging 0.74 g/t Au, 29.3 g/t Ag, 0.40% Pb, and 0.57% Zn. Those two holes bracketed SRDD-8, which contained a 172 m intercept averaging 0.23 g/t Au, 9 g/t Ag, 0.18% Pb, and 0.47% Zn. These results indicated this target required additional follow-up.

Key observations from the 2007 campaign include:

- The unit of volcanic rocks and phreatic-magmatic breccias occupy an elongated basin of NW–SE direction, limited by tensional faults. The western border of the caldera is in contact with porphyritic rocks, while the eastern border is pinching out as marginal lateral facies.
- In MF-DDH-38 and MF-DDH-43 the NW border of the basin was observed as a faulted contact with metamorphic basement rocks. A vein of cataclastic silicified breccias, with different silica pulses and mineralization of copper, lead and zinc sulphides, is emplaced in this contact.
- The corridor of the basin is open toward the SE and to depth, since the deepest drill holes, MF-DDH-31 (269 m depth) and MF-DDH-39 (270 m depth), did not reach basement rocks.
- The mineralization observed in the entire series of drill holes and beneath a general level of 50 m, in veinlets and disseminated, includes sphalerite, galena, pyrite and, subordinately, chalcopyrite. Also, there are quartz–alunite veinlets.

10.3 NovaGold 2011 Drilling

A two-phase diamond drill program, consisting of 34 HQ holes (7,816.7 m), was conducted by NovaGold, in joint-venture agreement with Marifil, on the property in 2011. This drilling outlined an area of semi-continuous gold-silver-indium-lead and zinc mineralization covering approximately 0.3 x 0.9 km in the Zone 33. Individual drill holes intersected zones averaging as high as 1.16 g/t Au, 10.3 g/t Ag, 39.0 g/t In, 0.43% Pb and 2.04% Zn over 120 m (hole DDHMSR-0009).

Significant results were also encountered in the Zone 51, located approximately 1.0 km to the southeast of the Zone 33, and in hole DDHMSR-0034, located 1.9 km southeast of the Zone 33. Together, these areas define a >3 km-long, NW-SE trend, which parallels a major structural corridor crossing the property to the northeast. The Zone 33, Zone 51 and DDHMSR-0034 area (San Antonio area) are the locations of previous drilling by MIM and Marifil which also encountered mineralization.

10.3.1 Phase 1

In March and April of 2011 NovaGold conducted a phase 1 drill program consisting of 15 HQ diamond drill holes, totalling 3,538.4 m, on the San Roque property. Drilling was conducted for NovaGold by Major Drilling, South America. Core was logged and sampled at NovaGold's drill core warehouse facility in Las Grutas and samples were sent for preparation to ALS Minerals in Mendoza, Argentina, and finally to ALS's laboratory in North Vancouver, Canada for analysis. Core samples were analyzed for gold by fire assay with AA finish and for 48 elements by ICP-MS.

Several of the 2011 drill holes targeted gradient IP anomalies, identified in a previous survey conducted by MIM, while other holes were designed to follow up on mineralized zones previously identified in drilling by Marifil.

The results from drilling the MIM IP anomalies were poor and indicated that the anomalies mainly reflected disseminated pyrite and pyrite veining within the basement schists rather than precious-base metal mineralization.

Another area targeted was the Zone 51, named for Marifil hole DDH-51 (143 m of 0.66g/t Au, 27.17 g/t Ag, 0.37% Pb and 0.55% Zn). NovaGold drilled several holes surrounding Marifil holes MF-DDH-50 and MF-DDH-51, intersecting broad zones of veining/mineralization. The best results were seen in drill holes DDHMSR-0002 and DDHMSR-0003 (Table 10-5).

Table 10-5: NovaGold Zone 51 Significant Phase 1 2011 Drill Intercepts

| Hole ID | From (m) | To (m) | Width (m) | Au (g/t) | Ag (g/t) | In (g/t) | Pb (%) | Zn (%) |
|-------------|----------|--------|-----------|----------|----------|----------|--------|--------|
| DDHMSR-0002 | 37.00 | 135.00 | 98.00 | 0.31 | 12.60 | 5.30 | 0.29 | 0.44 |
| | 165.00 | 219.50 | 54.50 | 0.29 | 10.30 | 2.82 | 0.13 | 0.28 |
| DDHMSR-0003 | 25.00 | 134.00 | 109.00 | 0.28 | 11.80 | 6.80 | 0.23 | 0.34 |
| | 186.00 | 201.00 | 15.00 | 0.18 | 53.20 | 64.00 | 1.17 | 0.69 |

The third target area of the 2011 program was the Zone 33, named for Marifil hole DDH-33 (29.8 m of 1.72 g/t Au). This hole is located at the NE end of the Del Indio trend, to which Marifil dedicated much of their drilling.

NovaGold hole DDHMSR-0009 was designed to twin and extend hole MF-DDH-33. The hole was drilled to a depth of 257 m and intersected a broad mineralized zone extending well beyond the depth of hole MF-DDH-33

(Table 10-6). Diamond drill hole DDHMSR-0013 is a 200 m step out to the southeast from DDHMSR-0009. This hole also confirmed the mineralized zone.

Table 10-6: NovaGold Zone 33 Significant Phase 1 2011 Drill Intercepts

| Hole ID | From (m) | To (m) | Width (m) | Au (g/t) | Ag (g/t) | In (g/t) | Pb (%) | Zn (%) |
|-------------|----------|--------|-----------|----------|----------|----------|--------|--------|
| DDHMSR-0009 | 31.0 | 61.0 | 30.0 | 0.36 | 6.30 | 7.35 | 0.34 | 0.66 |
| | 69.0 | 189.0 | 120.0 | 1.16 | 10.30 | 39.0 | 0.43 | 2.04 |
| DDHMSR-0013 | 21.0 | 54.7 | 33.7 | 0.30 | 7.70 | 6.90 | 0.70 | 0.92 |
| | 61.0 | 205.5 | 144.5 | 0.20 | 25.50 | 5.10 | 0.65 | 1.25 |

10.3.2 Phase 2

A follow-up drill program was conducted in September and October of 2011. Nineteen HQ diamond drill holes totalling 4,278.3 m were drilled. Most of the drilling was carried out in the Zone 33, where holes DDHMSR-0009 and DDHMSR-0013 previously intersected significant mineralized intervals.

Table 10-7 shows some of the significant intersections from the 2011 drilling. Several holes were drilled in the vicinity of the phase 1 2011 holes DDHMSR-0009 and DDHMSR-0013 to expand and further define mineralization in this area. It is believed that two, major, steeply dipping mineralized structures intersect in this area, the northeast-striking Del Indio and northwest-striking Griselda structures. Both structures were targeted, with the majority of holes directed at the Griselda structure.

Hole DDHMSR-0016 was a 100 m step-out to the southwest of hole DDHMSR-0009. The hole intersected 1.28 g/t Au, 16.49 g/t Ag, 3.59 g/t In, 0.17% Pb and 0.40% Zn over 33 m.

Hole DDHMSR-0029 was one of many holes drilled across the Griselda structure. The hole intersected 0.51 g/t Au, 14.5 g/t Ag, 80.44 g/t In, 1.71% Pb, and 3.64% Zn over 50 m. Mineralization occurred in banded quartz-carbonate-sulphide veins up to 50 cm wide hosted within ignimbrite.

Two holes, DDHMSR-0025 and DDHMSR-0031, tested for sulphide mineralization in areas where syenite porphyry stocks intruded Marifil volcanics. Although some veining and mineralization was encountered in these contact zones, the assay results were not significant.

Hole DDHMSR-0033 targeted the northwest-trending fault contact between Proterozoic basement metasediments and Marifil volcanics in the eastern part of the Zone 33. The hole intersected 0.85 g/t Au, 9.15 g/t Ag, 2.67 g/t In, 0.31% Pb and 0.63% Zn over 81.0 m. Mineralization consisted of a series of narrow, mainly northwest-striking quartz-sulphide veins within ignimbrite, with a zone of stockwork quartz-sulphide veining just above and within the faulted contact zone with the metasediments. Relationships observed in drill core suggest that mineralization formed broadly contemporaneously with fault activity. Marifil intersected a similar style of mineralization in nearby hole MF-DDH-43 (0.32 g/t Au over 35 m).

Table 10-7: NovaGold Phase 2 Significant 2011 Drill Intercepts

| Hole ID | From (m) | To (m) | Width (m) | Au (g/t) | Ag (g/t) | In (g/t) | Pb (%) | Zn (%) |
|-------------|----------|--------|-----------|----------|----------|----------|--------|--------|
| DDHMSR-0016 | 130.00 | 163.00 | 33.00 | 1.28 | 16.49 | 3.59 | 0.17 | 0.40 |
| | 175.00 | 191.00 | 16.00 | 0.52 | 20.42 | 9.71 | 0.16 | 0.51 |
| DDHMSR-0017 | 185.00 | 218.00 | 33.00 | 0.15 | 4.05 | 6.59 | 0.58 | 0.89 |
| DDHMSR-0018 | 44.00 | 66.00 | 22.00 | 0.79 | 6.70 | 10.55 | 0.24 | 0.96 |
| | 118.60 | 156.00 | 37.40 | 0.62 | 8.05 | 75.42 | 0.39 | 2.42 |
| | 242.00 | 252.00 | 10.00 | 0.32 | 51.69 | 1.93 | 0.42 | 0.71 |
| DDHMSR-0019 | 47.00 | 57.00 | 10.00 | 0.72 | 6.68 | 9.58 | 0.22 | 1.06 |
| | 116.90 | 133.00 | 16.20 | 1.45 | 6.64 | 114.19 | 0.28 | 3.17 |
| | 144.80 | 186.00 | 39.20 | 0.89 | 3.41 | 19.44 | 0.18 | 1.14 |
| DDHMSR-0020 | 5.00 | 20.00 | 15.00 | 0.25 | 3.38 | 24.64 | 0.34 | 1.16 |
| | 44.00 | 93.00 | 49.00 | 0.26 | 14.33 | 1.17 | 0.48 | 1.08 |
| | 101.00 | 153.20 | 52.20 | 0.93 | 19.05 | 6.08 | 0.63 | 1.16 |
| DDHMSR-0021 | 33.50 | 47.00 | 13.50 | 1.72 | 32.22 | 6.45 | 0.42 | 0.14 |
| DDHMSR-0022 | 78.00 | 131.80 | 53.80 | 0.14 | 8.25 | 30.75 | 0.63 | 1.97 |
| | 221.40 | 236.00 | 14.60 | 0.18 | 24.12 | 5.79 | 1.86 | 3.27 |
| DDHMSR-0023 | 136.00 | 156.40 | 20.40 | 0.61 | 22.91 | 71.45 | 2.19 | 2.97 |
| DDHMSR-0026 | 32.00 | 47.00 | 15.00 | 0.15 | 48.42 | 2.89 | 0.12 | 0.21 |
| | 115.40 | 134.00 | 18.60 | 0.92 | 50.35 | 3.18 | 0.43 | 0.79 |
| | 148.00 | 160.50 | 12.50 | 0.57 | 11.00 | 2.96 | 0.28 | 0.53 |
| DDHMSR-0027 | 137.00 | 151.00 | 14.00 | 0.05 | 4.13 | 1.38 | 0.65 | 1.15 |
| DDHMSR-0028 | 106.00 | 144.00 | 38.00 | 0.31 | 5.46 | 16.39 | 0.37 | 1.05 |
| DDHMSR-0029 | 30.00 | 45.00 | 15.00 | 0.17 | 1.99 | 10.31 | 0.57 | 0.99 |
| | 87.00 | 137.00 | 50.00 | 0.51 | 14.50 | 80.44 | 1.71 | 3.64 |
| DDHMSR-0030 | 14.00 | 34.00 | 20.00 | 0.12 | 1.74 | 20.50 | 0.45 | 0.87 |
| | 142.00 | 179.00 | 37.00 | 0.73 | 11.08 | 0.56 | 0.20 | 0.44 |
| DDHMSR-0032 | 44.00 | 88.00 | 44.00 | 0.08 | 4.28 | 1.53 | 0.57 | 1.06 |
| | 108.00 | 203.00 | 95.00 | 0.14 | 6.46 | 6.30 | 0.68 | 1.11 |
| DDHMSR-0033 | 10.10 | 23.00 | 12.90 | 0.48 | 8.17 | 9.95 | 0.30 | 0.29 |
| | 55.00 | 136.00 | 81.00 | 0.85 | 9.15 | 2.67 | 0.31 | 0.63 |
| DDHMSR-0034 | 0.00 | 35.00 | 35.00 | 2.27 | 42.62 | 0.08 | 0.03 | 0.08 |
| | 155.50 | 193.00 | 37.50 | 1.12 | 15.30 | 0.12 | 0.11 | 0.18 |

A single hole, DDHMSR-0034, was drilled approximately 1.9 km SE of the Zone 33. Here gold-silver mineralization was previously exposed in surface trenches. Marifil drilled holes MF-DDH-12 to 15 to test beneath the trenches. Results were favourable, including 9.21 g/t Au, 8.86 g/t Ag over 4.2 m in hole MF-DDH-12. NovaGold hole DDHMSR-0034 was designed as a 50 m step back from MF-DDH-13. The hole intersected two gold-silver rich mineralized zones. The upper zone, from 0 to 35 m, graded 2.27 g/t Au, 42.62 g/t silver, 0.08 g/t In, 0.03% Pb and 0.08% Zn over 35.0 m. This appears to be the same zone intersected in the trenches and Marifil drilling. A second, deeper zone was intersected from 155.5 to 193.0 m. The interval graded 1.12 g/t Au, 15.3 g/t Ag, 0.12 g/t In, 0.11% Pb and 0.18% Zn over 37.5 m. Mineralization in hole DDHMSR-0034 is associated with variably silicified felsic tuffs and volcanic sediments. Very little veining and sulphide mineralization was observed.

Knowledge gained from surface mapping and examination of phase 1 and 2 drill core suggests that hole DDHMSR-0009 probably lies at the approximate intersection of the northeast-trending Del Indio structure/vein and the west-northwest trending Griselda structure/vein. This is reflected in the DDHMSR-0009 drill core, with some mineralized veins running sub-parallel to the core axis and others crossing the core axis at steeper angles. Vein orientations observed in hole DDHMSR-0013 suggest that veining/mineralization in this hole is related to the Griselda structure.

10.4 Marifil-2018 Drilling

The 2018 drilling program was the seventh at the San Roque project and included four diamond drill holes totalling 846.5 m targeted at Zones 33 and 34.

10.4.1 2018 Targets

Drill holes MF-DDH-56 and MF-DDH-59 were planned to continue delineation of the gold Zone 34 as step-outs off of DDHMSR0034 which was the last hole drilled on the property prior to this program. It intercepted 35 m of 2.27 g/t Au with 42.6 g/t Ag. The true width of this cored mineralization is unknown. MF-DDH-56 is 50 m from DDHMSR0034 perpendicular to the strike of the mineralization positioned as a downward extension or down dip test, and MF-DDH-59 is 50 m from DDH-MSR0034 along the structural strike of the mineralization. Both new holes intercepted mineralization expanding the tonnage potential of this zone.

Drill hole MF-DDH-57 was located along a linear geophysical (induced potential (I.P.)) anomaly approximately 600 m to the North of Zone 33, a gold bearing base metal zone. While the first 69 m of the hole intersected zinc mineralization, the cause of the IP anomaly remains ambiguous

Drill hole MF-DDH-58 was drilled 50 m away from DDHMSR0033 and shows two intercepts with a weighted average of 93.9 m at 0.80 g/t Au, 9.0 g/t Ag, 0.31% Pb and 0.58% Zn. The present hole shows an intercept of 83 m of a half gram per ton gold. The mineralization in the Zone 33 area is open for extension in several directions.

10.4.2 2018 Results

The 2018 drill holes helped in the understanding of the geological model, the continuity of mineralization and distribution of minerals in different lithologies. The program produced the following conclusions:

- Four HQ-size (core diameter of 63.5 mm) core drill holes were completed for a total of 846.5 m. Three of the four holes (MF-DDHs 56, 58 and 59) increased the bulk of two known zones of mineralization, while the far reaching fourth hole (MF-DDH-57) tested a geophysical anomaly with negative results.
- Drill holes MF-DDH-56 and MF-DDH-59 continued the delineation of the Zone 34 gold zone as step-outs from previously drilled DDHMSR0034. Both intercepted several intervals of mineralization which continued to confirm

the presence of mineralization (table 10-8) within these zones, and indicate that they remain open on strike and at depth.

- Drill Hole MF-DDH-57 aimed to hit an IP anomaly. Only minor gold values were intersected within the first 5 m, and 0.23% zinc was intersected over the first 69 m of the hole. The IP anomaly remains unexplained
- Drill hole MF-DDH-58, which was cored in the sulphide rich Zone 33 also continued to confirm the presence of mineralization (Table 10-8), with recent drilling continuing to indicate the zone remains open in all directions.

Table 10-8: Marfil Significant 2018 Drill Intercepts

| Hole ID | From (m) | To (m) | Width (m) | Au (g/t) | Ag (g/t) | Pb (%) | Zn (%) |
|-----------|----------|--------|-----------|----------|----------|--------|--------|
| MF-DDH-56 | 24.00 | 44.50 | 20.50 | 1.13 | 1.66 | 0.03 | 0.01 |
| MF-DDH-58 | 37.50 | 48.00 | 10.50 | 0.80 | 3.54 | 0.22 | 0.48 |
| | 79.50 | 97.50 | 18.00 | 0.62 | 5.55 | 0.36 | 0.97 |
| | 111.80 | 129.50 | 17.70 | 0.56 | 7.25 | 0.28 | 0.55 |
| MF-DDH-59 | 8.00 | 20.00 | 12.00 | 2.95 | 3.52 | 0.03 | 0.04 |

11.0 SAMPLE PREPARATION, ANALYSIS AND SECURITY

11.1 Sample Collection

Little is known regarding the sampling method and approach undertaken by MIM during their drilling program. The results of the MIM drilling campaign correlate well with more recent drill campaigns, along with the mineralization which outcrops nearby on surface, and as such are deemed to be reliable for Inferred category resources.

For drilling programs completed by NovaGold and Marifil the core samples were sawn along their long axis at their cutting facility. Each interval to be sampled was defined by a senior geologist based upon megascopic differences in mineralization and alteration. One-half of the cores were placed in sealed, tamper proof bags, and appropriately marked while the other half was retained in core boxes for posterity.

11.2 Sample Preparation

Bagged core samples intended for the assay lab were kept in the secured core shed in the town of Las Grutas to await transport to the analytical laboratory. The shed is secured by a padlock and is kept locked at all times when not in use. Once a sufficient number of samples had been collected they were transported to the analytical lab.

NovaGold opted to send their samples to ALS' laboratory in Mendoza for preparation, and then to ALS's North Vancouver, Canada, lab for final analytical analysis, while Marifil sent their sample to Alex Stewart labs in Mendoza.

11.2.1 ALS Labs

Samples were transported to the lab via a commercial carrier or by the site employees. ALS and Alex Stewart labs are both ISO 9000:2000 certified laboratories.

Samples which were sent by NovaGold to ALS were prepared using the following procedure:

- Dry sample;
- Crush sample to 70% <2mm;
- Riffle split sample; and
- Pulverize sample to 85% <75 microns.

11.2.2 Alex Stewart Labs

Samples which were submitted by Marifil to Alex Stewart labs in Mendoza were prepared in accordance with the following protocols:

- Dry sample;
- Crush sample to 70% <2mm;
- Riffle split sample; and
- Pulverize sample to 85% <75 microns.

11.3 Analytical Methodology

11.3.1 MIM

Database review indicates that samples were shipped to ALS’s North Vancouver laboratory for analyses. Gold values were analyzed via 50-gram aliquots in accordance with ALS method code PM209. Multi-element analysis was performed via Aqua Regia digestion and ICP-MS detection in accordance with ALS method code G102 for Ag, As, Cu, Pb, Zn, Bi, and Mo mineralization.

11.3.2 NovaGold

Samples submitted by NovaGold to ALS were analyzed at ALS’s North Vancouver, Canada laboratory via two separate methods in order to complete both gold and multi-element analysis on the samples. Gold was analyzed with a fire assay fusion procedure and Au-AA23 method. All other elements were analyzed with HF-HNO₃-HClO₄ acid digestion and HCl leach using the ME-MS61 method. For high grade copper, silver, lead and zinc values an additional four acid digestion using the AA62 method was completed.

11.3.3 Marifil

Assays were completed by Alex Stewart (International) Argentina S.A. (ASI) (ISO 9001 and 14001 certified) in Mendoza, Argentina. Gold was analyzed by fire assay using the Au4-30 method (30-gram aliquots), and multi-elements by aqua regia using the ICP-AR-39 method.

11.4 QA/QC Program

The QA/QC programs employed for each of the seven drilling programs were unique, therefore each are addressed and commented on separately below.

11.4.1 2001 – MIM Diamond Drilling

The MIM diamond drilling program was completed in May 2001 and included a total of 8 drill holes. A total of 561 assay samples were collected, along with 3 standards, 3 blanks, and 14 duplicates (Table 11-1). It is unknown if the duplicates were collected from the coarse reject or pulp portion of the original samples.

Table 11-1: 2001 MIM Diamond Drilling QA/QC Sample Type Summary

| Sample Type | Number of Samples | Percent of Total Assayed Samples |
|------------------------------|-------------------|----------------------------------|
| Standards | 3 | 0.5 |
| Blanks | 3 | 0.5 |
| Duplicates | 14 | 2.4 |
| Total QA/QC | 20 | 3.4 |
| Regular Samples | 561 | 96.6 |
| Total Assayed Samples | 581 | |

11.4.1.1 Standards, Blanks, and Replicates

Of the three standards submitted, one was not analyzed, the standard ID of another is listed as 'unknown' in the database provided, and the ID of third standard listed is a combination of letters and numbers not identifiable enough to match with an accompanying standard certificate. Consequently, no standards are present to validate this drill program.

Three blanks were submitted to the laboratory, and the results do not indicate that the samples had been contaminated during collection, transport, preparation or analysis.

11.4.2 2001 MIM RC Drilling

The MIM RC drilling program was completed in June 2001 and included a total of 11 holes. 748 assay samples were collected, along with 14 standards, 0 blanks, and 30 duplicates (Table 11-2). It is unknown if these duplicate samples represent field, coarse reject, or pulp duplicates.

Table 11-2: 2001 MIM RC QA/QC Sample Type Summary

| Sample Type | Number of Samples | Percent of Total Assayed Samples |
|------------------------------|-------------------|----------------------------------|
| Standards | 14 | 1.8 |
| Blanks | 0 | 0 |
| Duplicates | 30 | 3.8 |
| Total QA/QC | 44 | 5.6 |
| Regular Samples | 748 | 94.4 |
| Total Assayed Samples | 792 | |

11.4.2.1 Geochemical Standards

Fourteen standards were included in the MIM RC drill program (Table 11-3), however only seven of them have assay data. Three of those seven have standard ID's that are a combination of letters and numbers not identifiable enough to match with an accompanying standard certificate. As a result, only two of the standards are available for review.

Table 11-3: 2001 MIM RC Drilling Standards

| Standard ID | Au (ppm) | 95% Confidence Interval | Cu (ppm) | 95% Confidence Interval | Pb (ppm) | 95% Confidence Interval | Zn (ppm) | 95% Confidence Interval | Number Used | Lab |
|-------------|----------|-------------------------|----------|-------------------------|----------|-------------------------|----------|-------------------------|-------------|-------|
| OREAS 42P | 0.09 | 0.088 | 389.00 | 376.00 | 150.00 | 146.00 | 615.00 | 597.00 | 5 | OREAS |
| OREAS 43P | 0.07 | 0.071 | 443.00 | 432.00 | 149.00 | 144.00 | 441.00 | 429.00 | 2 | OREAS |

Both standards used report +/- 95% confidence intervals, which are not able to be used the same way as standard deviation to report the success or failure of a standard. Also, both standards have very low gold values (reported initially as ppb) which do not fully test the average reported gold values of the samples collected from drilling.

Figure 11-1: OREAS 43P Au Standard Performance

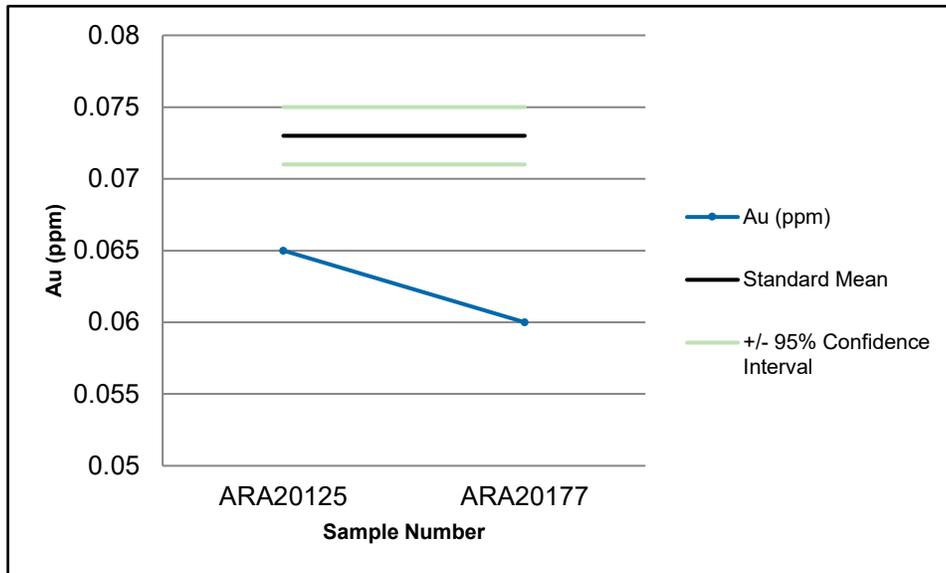
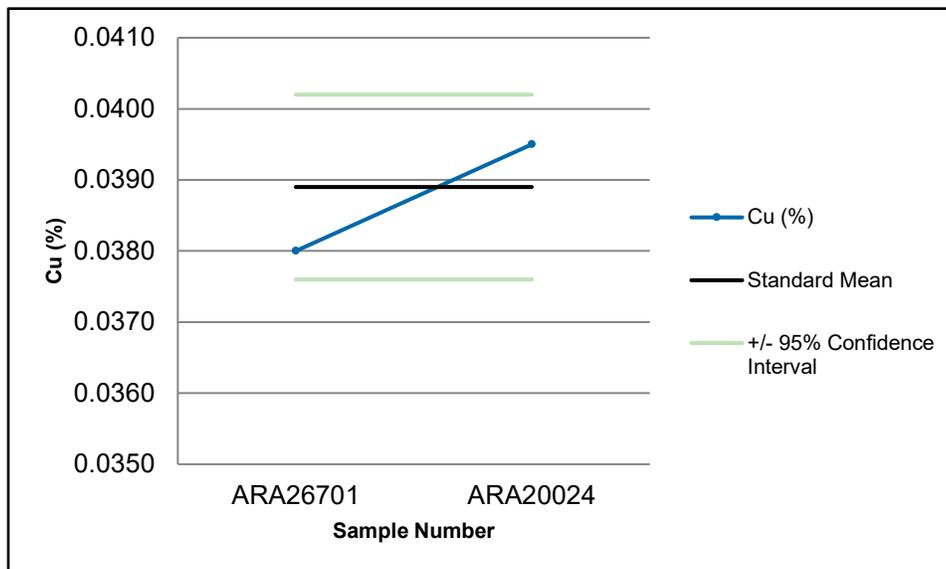


Figure 11-2: OREAS 42P Cu Standard Performance



Results from the four reported standards do not all fall within acceptable performance limits but considering the small sample size and particularly the very low (ppb-level) Au values used for the gold standards, the results of this QAQC program can be deemed inconclusive.

Given that more recent drilling has occurred within the vicinity of these holes which support the presence, style and tenor of mineralization the results of the MIM drilling are deemed to be commensurate to an inferred level of mineral

11.4.4 2011 NovaGold Diamond Drilling Phase I

The 2011 Phase I NovaGold 15 hole drilling campaign included 1,690 assay samples, 97 standards, 95 blanks, and 99 coarse reject duplicates (Table 11-4). An insertion rate of one in twenty was used for standards, blanks, and duplicates.

Table 11-4: 2011 Phase I QA/QC Sample Type Summary

| Sample Type | Number of Samples | Percent of Total Assayed Samples |
|------------------------------|-------------------|----------------------------------|
| Standards | 97 | 4.9 |
| Blanks | 95 | 4.8 |
| Duplicates | 99 | 5.0 |
| Total QAQC | 291 | 14.7 |
| Regular Samples | 1,690 | 85.3 |
| Total Assayed Samples | 1,981 | |

A complete QAQC report was provided from NovaGold for this phase of drilling (Brown, 2011).

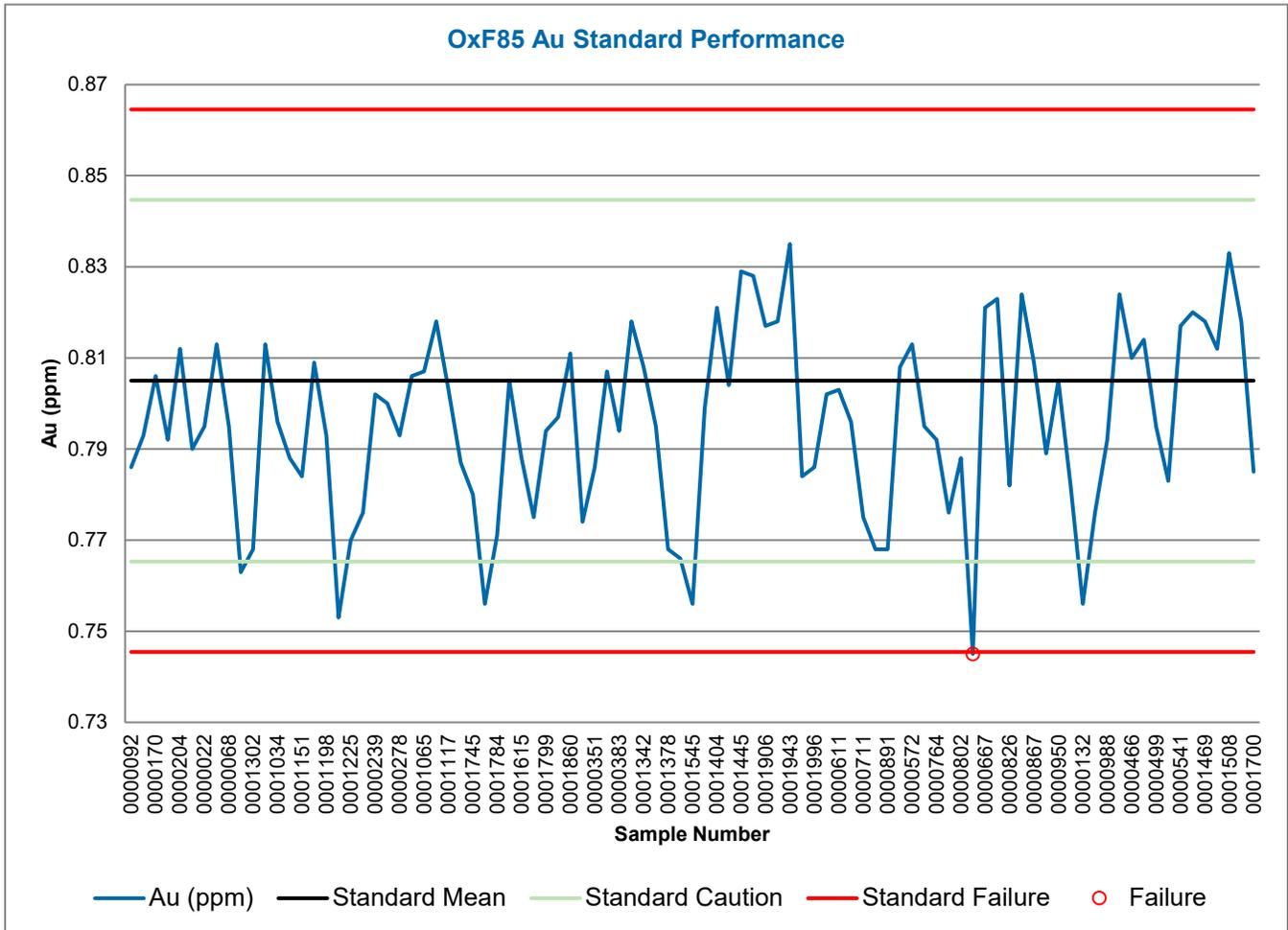
11.4.4.1 Standards

A single standard was used for the 2011 phase I program, OxF85 from ROCKLABS Ltd. This standard has a recommended gold concentration of 0.805 ppm Au, with a 95% confidence interval of +/- 0.008 ppm. The standard is not certified for any base metals. Since the 95% confidence interval is not a statistical threshold for reviewing standard performance, NovaGold calculated their own standard deviation of the standard based on reported results (minus three outliers as described below). This standard deviation is what was used to generate the caution and failure thresholds shown in Figure 11-4.

The following summary was taken from Brown, 2011, regarding performance of the standard.

- Overall the standard OxF85 performed well. Initially several outliers were apparent, but after careful checking of the assay certificates, logs and sample books it's likely that these are mislabeled samples. For sample 1275, a much smaller weight than usual core was recorded on the assay certificate and the ICP values resemble the blank material. Sample 1265, within the same batch, has values resembling a standard so these two samples were likely mixed up during sampling. Samples 1840 and 1963 have no weight recorded on the assay certificate and their ICP values resemble those of their preceding sample, indicating they are likely duplicates. These three outliers were removed for proper analysis of the standard.

Figure 11-4: Standard OxF85 Au control Chart



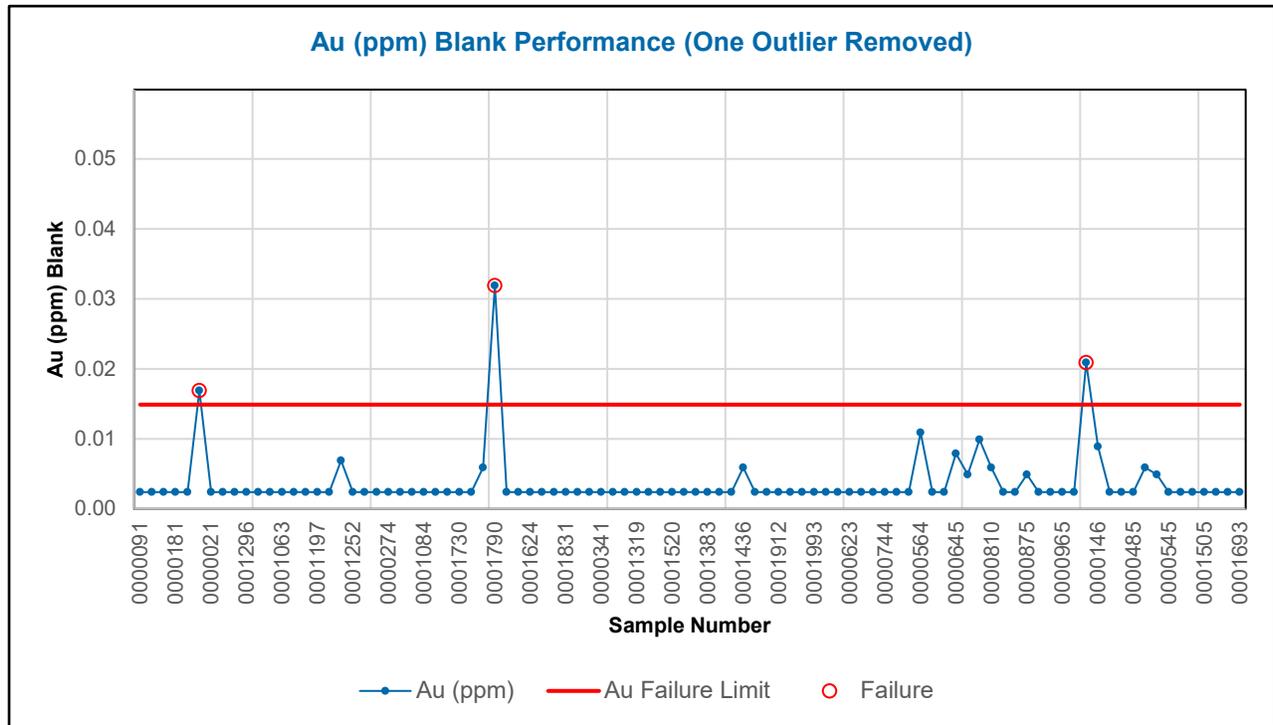
11.4.4.2 Blanks

One type of blank material was used during the 2011 program; a Cenozoic post-mineral basalt flow found locally near the property. Each blank was analyzed for Au (Figure 11-5), Ag, Cu, Pb and Zn.

The following summary was taken from Brown, 2011, regarding performance of the blanks.

- 4 blanks failed for Au, but one was likely a mislabeled standard as can be seen in the full ICP similarity to the standard OxF85. Excluding this mislabeled sample, there is a 3% failure rate for blanks for Au, which is acceptable. No apparent follow-up was completed on these failures.
- At 3x detection limit for Ag (0.03 ppm), Cu (0.6 ppm), Pb (1.5 ppm) and Zn (6 ppm) virtually all the blanks failed for each element. More appropriate cut-off values were generated at 0.5 ppm Ag, 80 ppm Cu, 15 ppm Pb and 135 ppm Zn. At these cut-offs, the minimum required 80% of samples would pass for each element.
- No major trends were visible in the Smear Charts for Au, Ag and Cu, but both Pb and Zn showed moderately sloping trend lines indicating possible smear at the lab during analysis.

Figure 11-5: Gold Blank Control Chart



11.4.4.3 Replicates

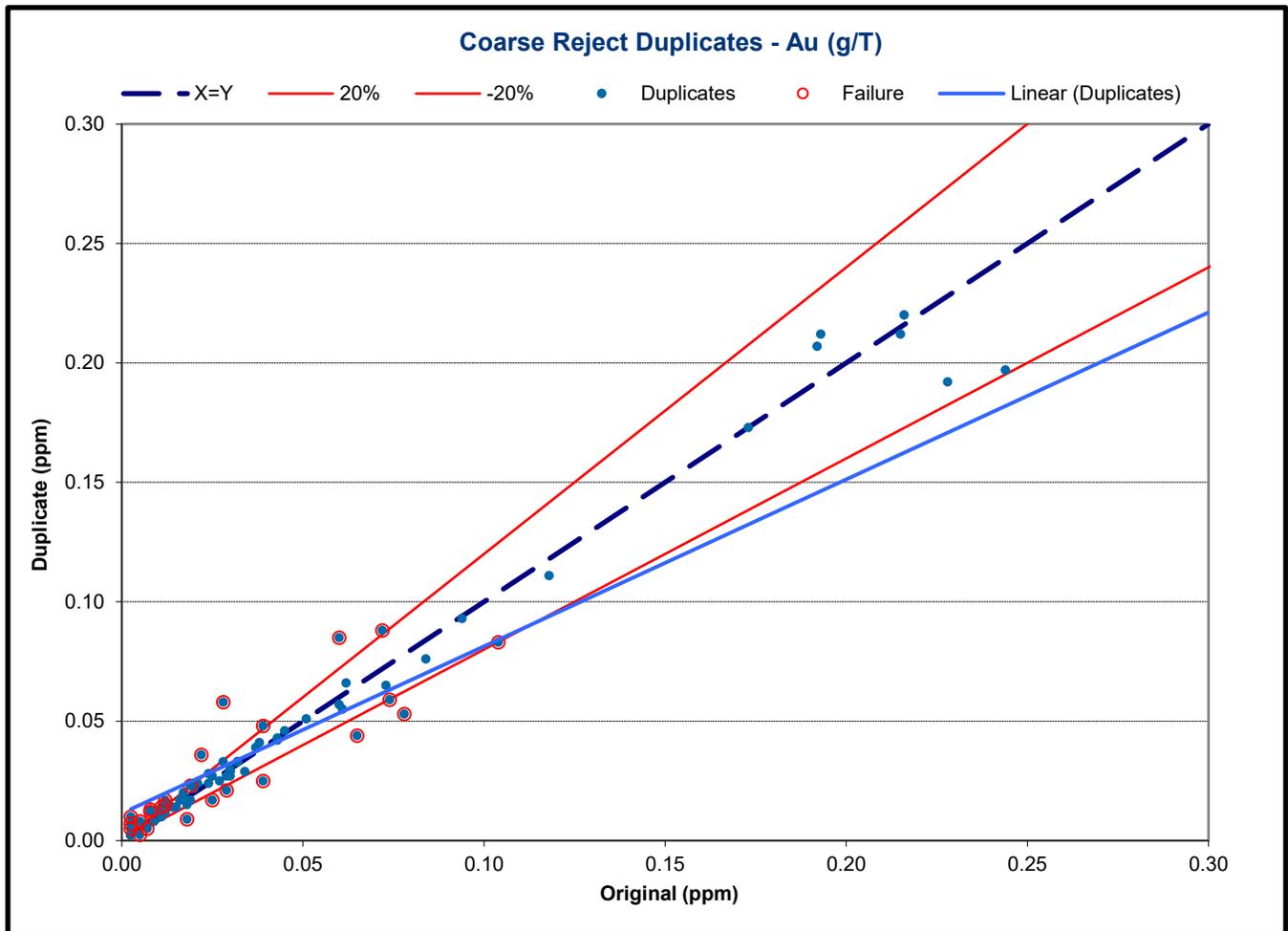
99 coarse reject duplicates were evaluated from Phase I drilling. NovaGold evaluated “passing” duplicates by calculating the Absolute Relative Difference (ARD), where the ARD must be <0.22 for 90% of the pairs, and if the Pair Mean is <15 (detection limit), the Pair Difference must be ≤ 3 (detection limit) to pass.

The following summary was taken from Brown, 2011, regarding performance of the replicates.

- Duplicate pairs performed well under the ARD analysis with 96% passing for Au, 99% passing for Cu and 100% passing for Ag, Pb and Zn.
- Examining the Min/Max charts for all the elements of interest shows that aside from a few values that plotted just outside the 20% Pass/Fail lines for Au, Ag and Cu, most of the Min/Max pair plotted close to the $y=x$ line on each chart. The chart for Pb is an exception as most of the pairs plot well below the $y=x$ line, indicating a possible low bias effect.

Figure 11-6 shows coarse reject duplicate results for Au using a standard $\pm 20\%$ threshold to assess reproducibility. Unfortunately, most of the duplicates were randomly selected in low grade material, which does not help evaluate the performance of the analyses in the grade range of interest.

Figure 11-6: Gold Duplicate Performance



11.4.5 2011 NovaGold Diamond Drilling Phase II

The 2011 Phase II NovaGold 19 hole drilling campaign included 2,175 assay samples, 124 standards, 129 blanks, and 124 coarse reject duplicates (Table 11-5). An insertion rate of one in twenty was used for standards, blanks, and duplicates.

Table 11-5: 2011 Phase 1 QA/QC Sample Type Summary

| Sample Type | Number of Samples | Percent of Total Assayed Samples |
|------------------------------|-------------------|----------------------------------|
| Standards | 124 | 4.9 |
| Blanks | 128 | 5.0 |
| Duplicates | 124 | 4.9 |
| Total QAQC | 377 | 14.8 |
| Regular Samples | 2,177 | 85.2 |
| Total Assayed Samples | 2,554 | |

A complete QAQC report was provided from NovaGold for this phase of drilling (Brown, 2011).

11.4.5.1 Standards

Six reference standards were used for the Phase II drill program, as detailed below in Table 11-6. Four standards were gold only (84), one was silver only (18), and one was multi-element (Ag, Cu, Pb, Zn) (21). Figures 11-7 and 11-8 show gold performance for standard G308-8 and copper performance for standard GBM310-13, respectively.

Table 11-6: 2011 NovaGold Drilling Standards

| Standard ID | Au (ppm) | Std. Dev. | Ag (ppm) | Std. Dev. | Cu (ppm) | Std. Dev. | Pb (ppm) | Std. Dev. | Zn (ppm) | Std. Dev. | Number Used | Lab |
|-------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|-------------|----------------------------------------|
| OxF85 | 0.805 | 0.025 | - | - | - | - | - | - | - | - | 5 | ROCKLAB Ltd. |
| PM1133 | - | - | 757.4 | 18.848 | | | | | | | 18 | WCM Sales Ltd. |
| SH13 | 1.315 | 0.034 | - | - | - | - | - | - | - | - | 45 | Malcolm Smith Reference Materials Ltd. |
| GBM310-13 | - | - | 30.8 | 1.9 | 334 | n/a | 2,1599 | 856 | 10,8471 | 4,824 | 21 | Geostats Pty Ltd. |
| G910-2 | 0.9 | 0.05 | - | - | - | - | - | - | - | - | 17 | |
| G308-8 | 2.45 | 0.12 | - | - | - | - | - | - | - | - | 17 | |

The QAQC Report prepared by Brown, 2012, included review of five of the above standards. OxF85 was not included in that discussion, however review of the data shows acceptable performance for the standard.

The following summary was taken from Brown, 2012, regarding performance of the standards.

- Overall, the standards performed well. Only SH13 showed a small cluster of low biased values. This could be a lab calibration issue, but there were not enough of the other standards used to observe a trend over that time period for all the standards.

Figure 11-7: Au Standard Control Chart, Standard G308-8

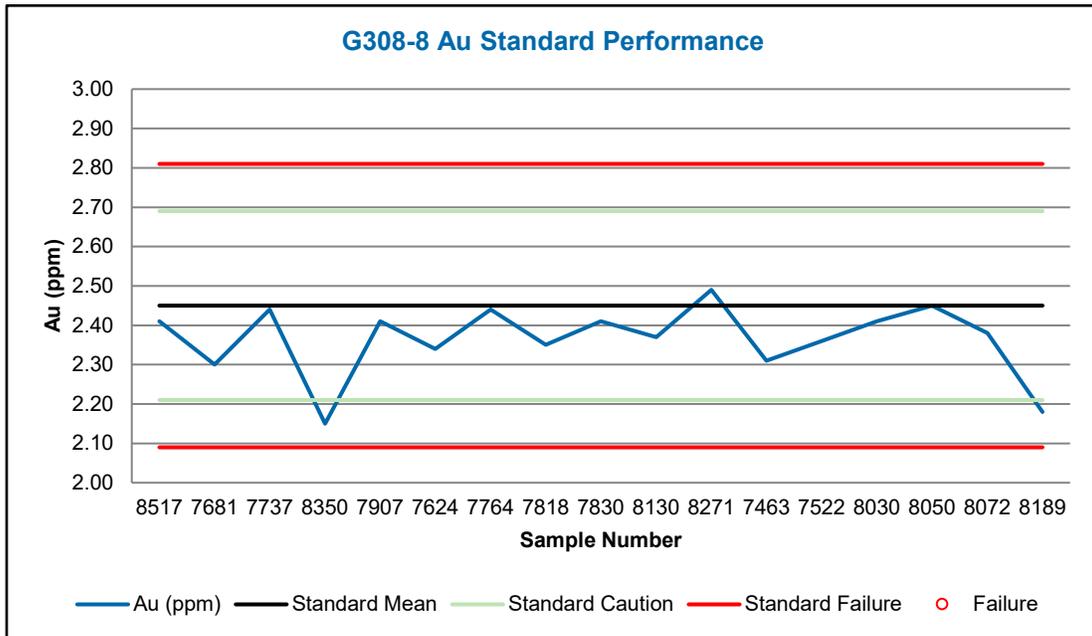
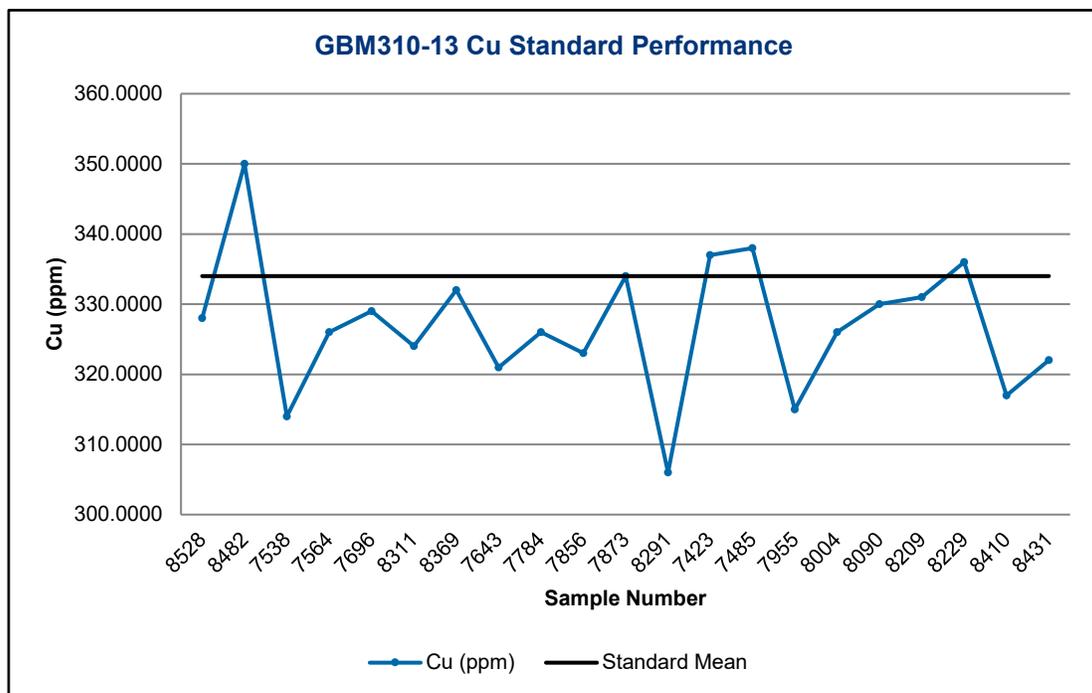


Figure 11-8: Cu Standard Control Chart, Standard GBM310-13



Note – standard not certified for Cu, so no control lines present.

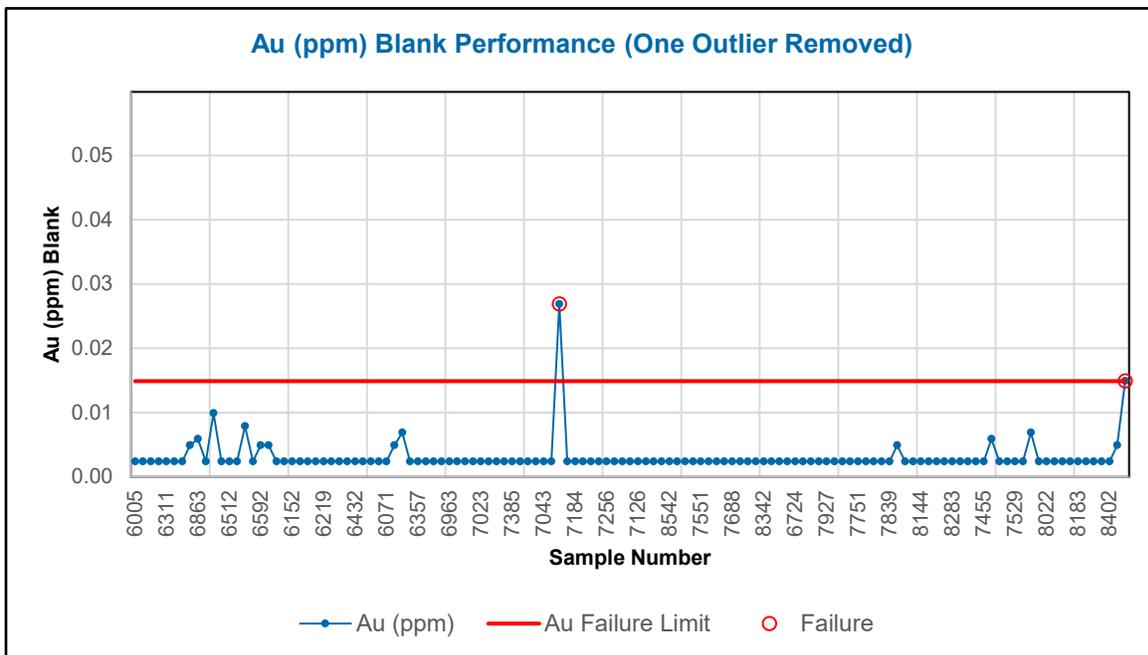
11.4.5.2 Blanks

For the phase II program, the same Cenozoic post-mineral basalt flow unit was used for blank material as phase I. Each blank was analyzed for Au (Figure 11-9), Ag, Cu, Pb and Zn.

The following summary was taken from Brown, 2012, regarding performance of the blanks.

- 2 blanks failed for Au, but one was likely a mislabeled standard as can be seen in the full ICP similarity to the standard SH13. Excluding this mislabeled sample, there is a 0.8% failure rate for blanks for Au, which is acceptable.
- At 3x detection limit for Ag (0.03 ppm), Cu (0.6 ppm), Pb (1.5 ppm) and Zn (6 ppm) many of the blanks failed for each element. More appropriate cut-off values were generated at 0.5 ppm Ag, 80 ppm Cu, 15 ppm Pb and 135 ppm Zn. At these new cut-offs, 99.2% of the blanks pass for Ag, 100% for Cu and Zn and 88.3% pass for Pb.
- No major trends were visible in the Smear Charts for Au and Ag but Cu, Pb and Zn showed moderately sloping trend lines indicating possible minor smear at the lab during analysis. This should be investigated further as it could be the precision in the assay methods and not necessarily the lab procedures.

Figure 11-9: Au Blank Performance Chart



11.4.5.3 Replicates

124 coarse reject duplicates were evaluated from Phase II drilling. NovaGold evaluated “passing” duplicates by calculating the Absolute Relative Difference (ARD), where the ARD must be <0.22 for 90% of the pairs, and if the Pair Mean is <15 (detection limit), the Pair Difference must be ≤ 3 (detection limit) to pass.

Figure 11-10 shows coarse reject duplicate results for Au using a standard +/-20% threshold to assess reproducibility. Unfortunately, most of the duplicates were randomly selected in low grade material, which does not help evaluate the performance of the analyses in the grade range of interest. Figure 11-11 shows coarse reject

duplicate results for copper using a standard +/- 20% threshold to assess reproducibility. Results correlate very well and indicate excellent reliability for copper.

The following summary was taken from Brown, 2012, regarding performance of the replicates.

- Duplicate pairs performed well under the ARD analysis with 97.6% passing for Au, 98.4% passing for Ag and 100% passing for Cu, Pb and Zn.
- The Max/Min charts for Au, Cu, Pb and Zn all show good correlation about the y=x line. The chart for Ag shows a moderately high bias for samples in the 2-10 ppm range.

Figure 11-10: Au Duplicate Performance Chart

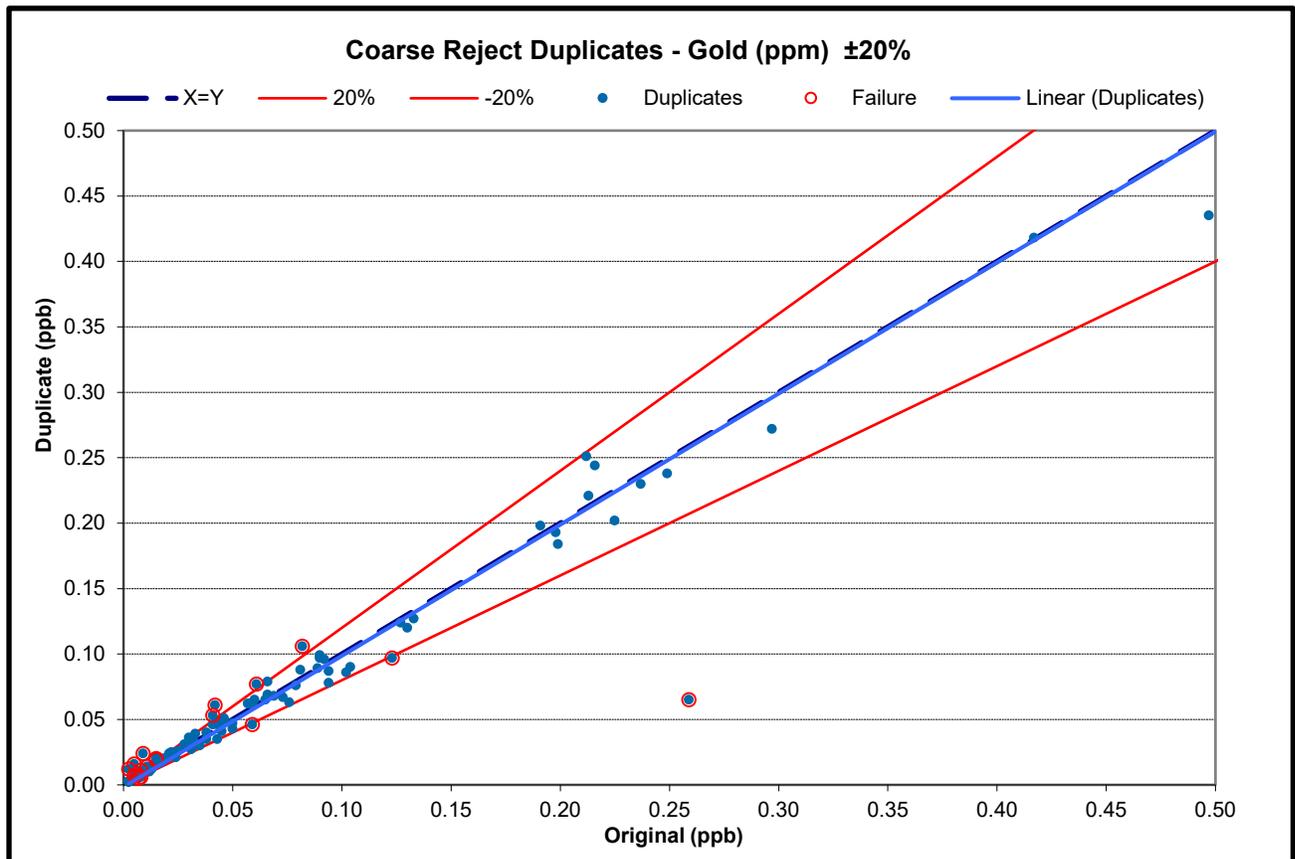
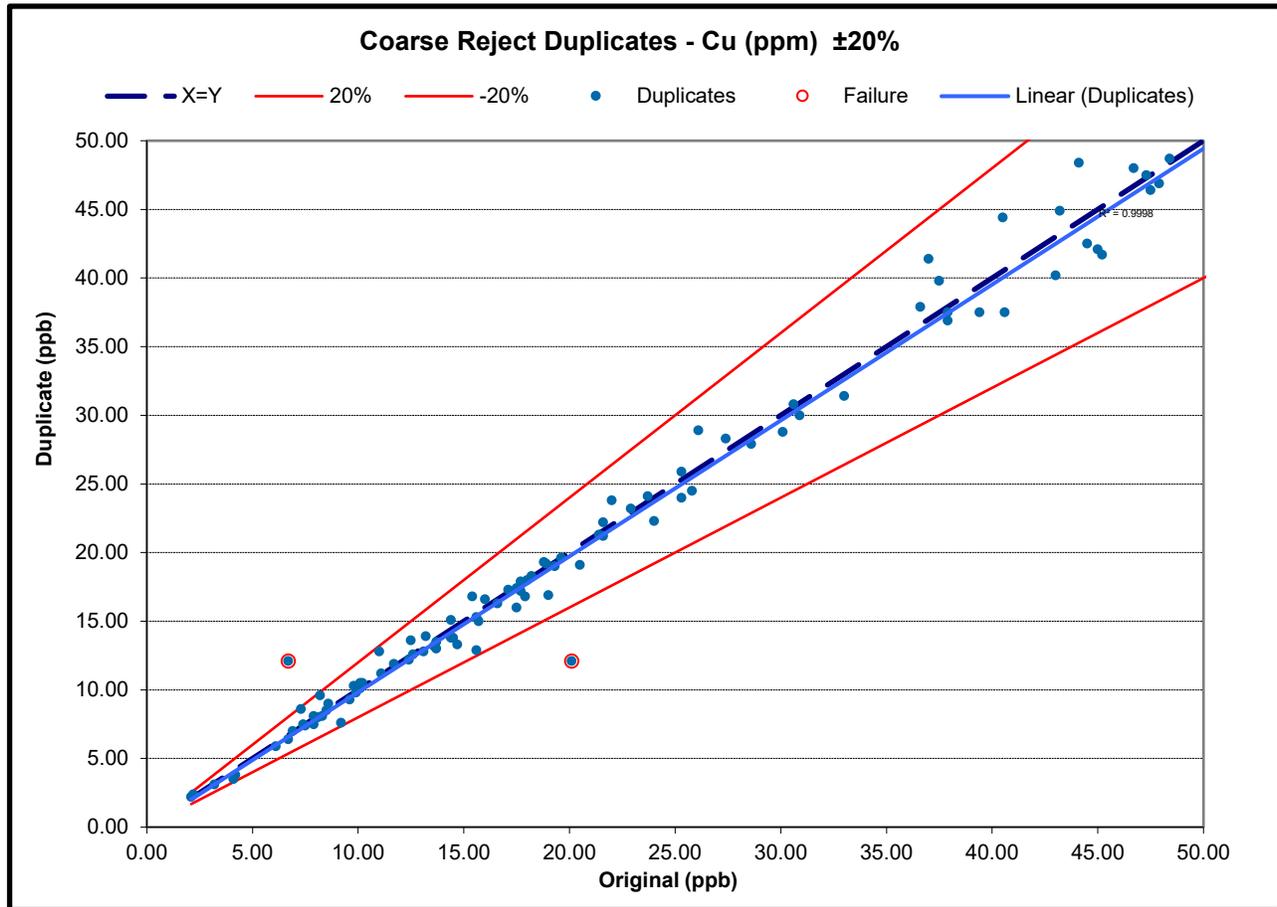


Figure 11-11: Cu Duplicate Performance Chart



11.4.6 2018 Marifil Mining Diamond Drilling

The 2018 4-hole drilling campaign included 533 assay samples, 26 standards, 11 blanks, and 12 quarter core duplicates (Table 11-7). An insertion rate of one in twenty was used for standards, blanks, and duplicates.

Table 11-7: 2018 Marifil QA/QC Sample Type Summary

| Sample Type | Number of Samples | Percent of Total Assayed Samples |
|------------------------------|-------------------|----------------------------------|
| Standards | 26 | 4.5 |
| Blanks | 11 | 1.9 |
| Duplicates | 12 | 2.1 |
| Total QAQC | 49 | 8.4 |
| Regular Samples | 533 | 91.6 |
| Total Assayed Samples | 582 | |

11.4.6.1 Standards

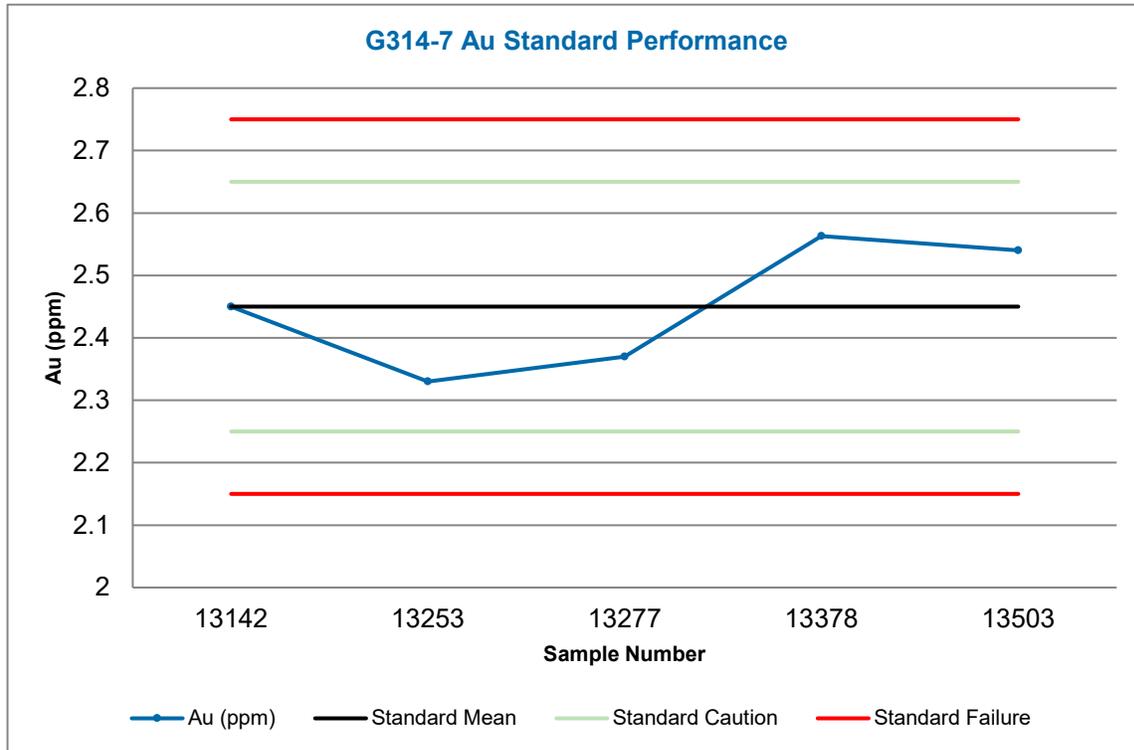
Five reference standards were used for the 2018 drill program, as detailed below in Table 11-8. Two standards were gold only, one was multi-element only, and two were Au and multi-element (Ag, Cu, Pb, Zn). Four of the five standards used were appropriate for the drilling program. Standard GLG912-2 has gold values below the lower detection limit of the lab, and therefore cannot be used as a suitable reference standard.

Table 11-8: 2018 Marifil Drilling Standards

| Standard ID | Au (ppm) | Std. Dev. | Ag (ppm) | Std. Dev. | Cu (ppm) | Std. Dev. | Pb (ppm) | Std. Dev. | Zn (ppm) | Std. Dev. | Number Used | Lab |
|-------------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|----------|-----------|-------------|-------------------|
| G314-7 | 2.45 | 0.1 | | | | | | | | | 5 | Geostats Pty Ltd. |
| GLG912-2 | 2.54 ppb | 1.48 ppb | | | | | | | | | 5 | |
| GBM310-3 | - | - | 19.4 | 1.60 | 14,443 | 597 | 10,687 | 594 | 30,935 | 1,475 | 6 | |
| OREAS 601 | 0.78 | 0.03 | 49.4 | 1.47 | 0.101 | 0.003 | 283 | 9.5 | 1,293 | 78.6 | 6 | OREAS |
| OREAS 620 | 0.68 | 0.02 | 38.4 | 1.31 | 1750 | 50 | 7,740 | 240 | 31,200 | 860 | 4 | |

Overall standard performance is acceptable except for two standards, GBM210-3 and OREAS 620, which contain mineralization grades which exceed the analytical threshold of the requested assay package. It is customary to subject these samples to a secondary “over-limit” assay in order to further determine their grade. This over-limit analysis did not occur on these two standards, and subsequently, their true Cu, Pb, and Zn grade can not be determined, thereby reducing the ability to monitor the performance of the analytical laboratory.

Figure 11-12: Au Standard Performance, Standard G314-7



11.4.6.2 Blanks

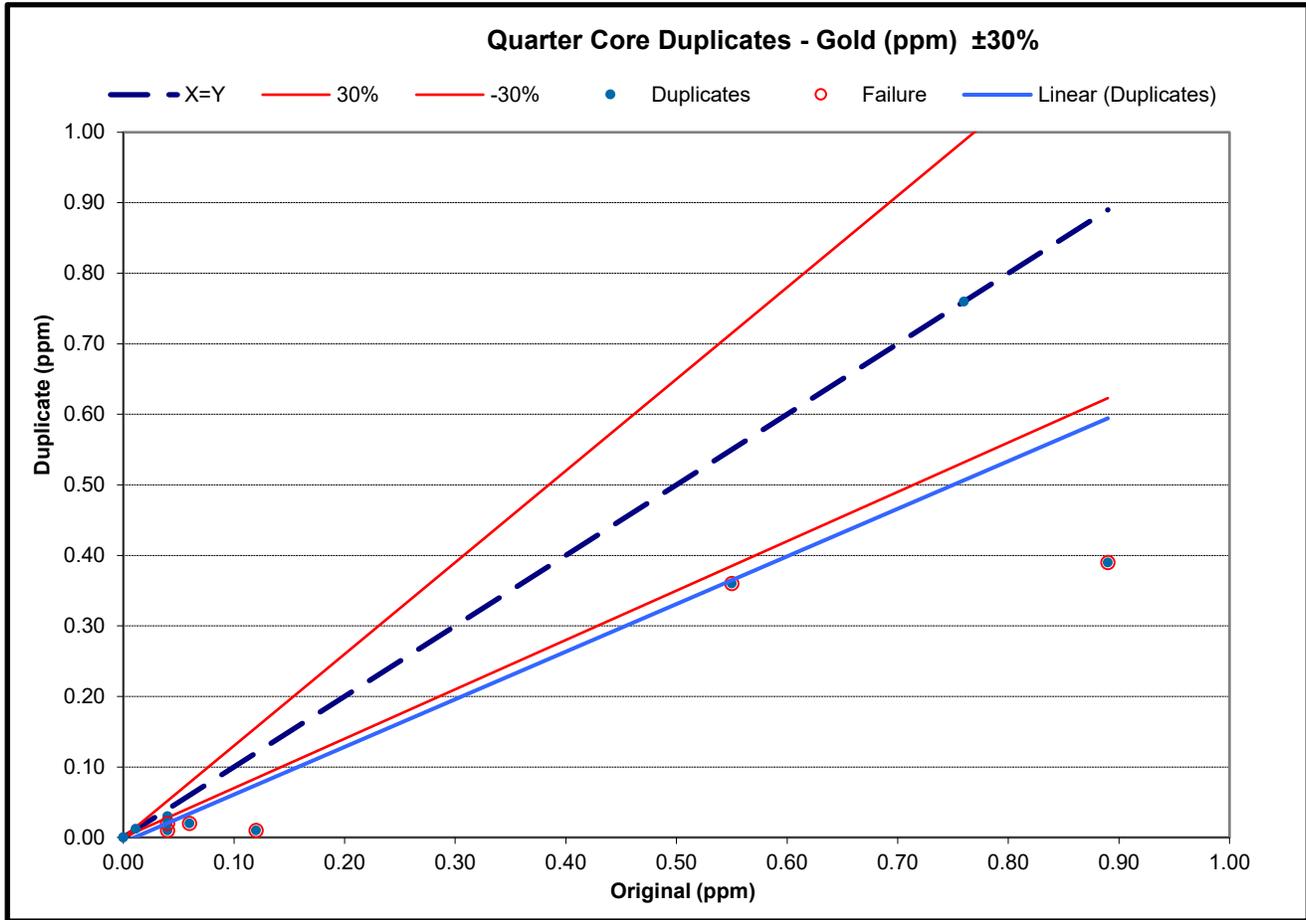
Eleven blank samples submitted to the lab all returned zero values; no evidence of smearing is present.

11.4.6.3 Replicates

Twelve replicate samples were included in the 2018 program. Based upon weights included on laboratory assay certificates, it appears that replicates were created by splitting the half core assay sample into two. This results in the original assay sample being represented by one quarter core, and the other quarter core became the replicate.

The resulting quarter core replicate results show significant variability; however it is common to have variability in quarter core comparisons (see Figure 11-13). Also, insufficient replicate samples exist to complete a thorough statistical investigation into the results.

Figure 11-13: Gold Quarter Core Duplicates



11.5 QP Opinion on Sample Collection, Preparation, and Analyses

The QA/QC program is adequate for this level of mineral resource estimation. QA/QC practices improved greatly over time, and the labs selected are recognized accredited laboratories which adhere to recognized ISO, ASTM, or internally reproducible standards.

The QP encourages Marifil to consider the recommendations below for future programs.

- Take photographs of all standard and blanks taken in the field before shipping. This allows for verification of standard ID's in case of transcription errors in the final database.
- A review of geochemical standards should be completed to ensure that standards selected cover an appropriate range of assay values (both for gold and base metal/multi-element methods), including any over limits that may be encountered.
 - Over limits are tested using a different assay method which requires QA/QC review.
 - A variety of standards should also be used which test low, mid, and high grade sample ranges present at San Roque.
- Replicates should be taken from quarter core samples, coarse rejects, and pulps to accurately review and analyse replicate data across sample type and throughout the preparation cycle.
- Select pulp samples (~5%) representing a broad range of assay values should be sent to a different lab for umpire testing.
- The QA/QC program should be continuously monitored in-house using systematic, industry standards.
 - Standard performance should be reviewed as each assay certificate is received from the lab, so that any required re-assays can be completed promptly, and any issues with any standards can be quickly identified and corrected early in the program.
 - A thorough pass/caution/fail criteria should be established for standards (i.e. outside 2 x standard deviation is a caution, outside 3 x standard deviation would be a fail). Develop company policy for how to address cautions and failures (i.e. re-assay).
 - Blank performance should also be reviewed as each assay certificate is received from the lab, to identify any issues with the sample preparation process. These issues can be discussed with the lab immediately so the whole drill program is not potentially compromised.
- Adopt a formal QA/QC sampling procedure, such as a 1 in 20 insertion rate for standards, blanks, and replicates.
- Consider adding additional blank samples in areas of known very high mineralization, as smearing is of most significant concern in these areas.

12.0 DATA VERIFICATION

12.1 Database Audit

The QP carried out an internal verification of the diamond drill hole file against the original drill hole logs and assay certificates for the San Roque datasets.

The verification of the data was completed on 22 drill holes, examining collar coordinates, end-of-hole depth, down-the-hole survey measurements, and “from” and “to” intervals (Table 12-1).

Tetra Tech imported the drill hole data into Datamine RM software version 1.2.47.0 which has a function that checks for duplicate intervals, overlapping intervals, and intervals beyond end-of-hole. The errors identified in the routine were checked against the original logs and corrected.

Table 12-1: Marifil Collar and Survey Verification Statistics

| Analysis | Total Data Set | Verified | Verification Rate (%) | Number of Errors | Error Rate (%) | Comments Regarding Error |
|----------|----------------|----------|-----------------------|------------------|----------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Collar | | 22 | 10 | 0 | 0 | |
| Survey | 366 | 48 | 14 | 0 | 0 | Marifil drilled holes did not contain scans of original reflex surveys. No Reflex surveys for MIM drill holes, or Marifil holes 1-56. |

12.1.1 Assay Database

Assay data was provided in multiple excel sheets due to the differing companies and programs completed on the project over time. Most assay certificates were provided for comparison, and random spot checks verified the assays in the excel sheets.

Issues noted from the spot checks included:

- One column of data was listed as % but was actually ppm.
- Ag over limit data was missing from one assay certificate, however over limit values were included in the excel data. It is assumed that these over limit assays were run separately from the original certificate run. The sample certificate contains 200 samples and 22 over limit values were missing, ranging from 10-77 ppm.
- For trenching data assay certificates were able to confirm that over limits were not run for Ag, Zn, and Pb (3 samples, 2 samples, and 5 samples, respectively). As a result, those assays were capped at their upper assay limit.
- It was noted that there was a sample missing from the assay database which resulted in the wrong assays being assigned to the wrong sample number. This issue affected only four samples and the impact of updating the database was not material.

These issues are all considered minor and have not detracted from the QP's confidence in the dataset used for resource estimation purposes.

12.2 Independent QP Site Visit

The QP visited the property from March 11th-15th, 2019 and was accompanied by Marifil personnel. Mr. Norton examined several core holes, drill logs, and assay certificates, along with inspecting the core logging facilities, sampling procedures, and core security. Assays were examined against drill core mineralized zones. Mr. Norton also examined the collar and trenching locations, along with surface mineralization during a tour of the property.

12.2.1 Drill Collar Verification

During the site visit, the QP Visually observed the diamond drill setups on surface. Manual GPS verification was completed using a Garmin GPSMAP® 62CS handheld device. This handheld device has a lower accuracy than the Marifil's professionally surveyed drill collars, and as such, minor collar differences are expected for each hole location surveyed (Table 12-2). Coordinates were collected using the POSGAR datum.

No issues were identified during the drill collar verification.

Table 12-2: Drill Collar Verification Results

| Hole ID | Marifil Co-Ordinates | | | Tetra Tech Co-Ordinates | | | Difference (m) | | |
|------------|----------------------|----------|-----------|-------------------------|----------|-----------|----------------|----------|-----------|
| | Easting | Northing | Elevation | Easting | Northing | Elevation | Easting | Northing | Elevation |
| MIMDDH-5 | 3516744 | 5486874 | 192.5 | 3516744 | 5486875 | 192 | 0 | 1 | 0.5 |
| MFDDH-26 | 3516751 | 5486863 | 192.7 | 3516749 | 5486863 | 192 | 2 | 0 | 0.7 |
| DDHMSR-016 | 3516814 | 5486962 | 192.1 | 3516814 | 5486961 | 193 | 0 | 1 | 0.9 |
| MFDDH-33 | 3516906 | 5486996 | 198.3 | 3516904 | 5486998 | 193 | 2 | 2 | 5.3 |
| DDHMSR-017 | 3516985 | 5487068 | 196.5 | 3516983 | 5487071 | 189 | 2 | 3 | 7.5 |
| MFDDH-51 | 3517619 | 5486004 | 193.4 | 3517617 | 5486003 | 194 | 2 | 1 | 0.6 |
| MIMDDH-08 | 3517657 | 5486035 | 192.3 | 3517656 | 5486033 | 194 | 1 | 2 | 1.7 |
| MFDDH-50 | 3517693 | 5486064 | 191.4 | 3517693 | 5486064 | 192 | 0 | 0 | 0.6 |
| DDHMSR-034 | 3517841 | 5485404 | 201.5 | 3517842 | 5485402 | 202 | 1 | 2 | 0.5 |
| MFDDH-059 | 3517857 | 5485354 | 200.3 | 3517858 | 5485353 | 200 | 1 | 1 | 0.3 |
| MIMDDH-01 | 3517828 | 5485065 | 198.6 | 3517829 | 5485063 | 198 | 1 | 2 | 0.6 |

12.2.2 Tetra Tech Verification Samples

12.2.2.1 Quartered Core

Twenty-eight ¼ NQ core samples were collected for check assays representing different mineralization grade ranges. The duplicates identified were bagged, sealed on site, and sent to ALS's preparation facility in Mendoza Argentina prior to being shipped to ALS's North Vancouver analytical laboratory.

The same analytical procedures used on the original samples were used by Tetra Tech. The procedures for the verification sampling included:

- Crush to 70% less than 2mm;
- Riffle Split off 250g;
- Pulverize split to better than 85% passing 75 microns;
- Fire assay and gravimetric finish of 30 gram sample aliquot (gold); and
- Four acid digestion with ICP-MS finish (Multi-Element analysis).

The results of the independent coarse reject verification sampling confirm the presence of mineralization. As would be expected in a polymetallic epithermal system, the grades display high variability even at a short range of a distribution of quartered core (Table 12-3).

Table 12-3: Summary of Quarter Core Duplicate Sample Analytical Results by Independent Lab

| Hole ID | From (m) | To (m) | Original Sample | Au Results (g/t) | | | Ag Results (g/t) | | | In Results (ppm) | | | Pb Results (%) | | | Zn Results (%) | | |
|-------------|----------|--------|-----------------|------------------|----------|-----------|------------------|----------|-----------|------------------|----------|-----------|----------------|----------|-----------|----------------|----------|-----------|
| | | | | Au (orig) | Au (dup) | R.P.D.* % | Ag (orig) | Ag (dup) | R.P.D.* % | In (orig) | In (dup) | R.P.D.* % | Pb (orig) | Pb (dup) | R.P.D.* % | Zn (orig) | Zn (dup) | R.P.D.* % |
| MF-DDH-3 | 17.80 | 18.20 | 7407 | 3.66 | 5.94 | 48% | 0.03 | 1.04 | 191% | 15.00 | 45.20 | 100% | 0.13 | 0.06 | -66% | 0.12 | 0.18 | 42% |
| MF-DDH-4 | 44.00 | 45.00 | 7469 | 7.20 | 3.38 | -72% | 27.00 | 26.60 | -1% | 780.00 | 548.00 | -35% | 0.55 | 0.40 | -33% | 0.11 | 0.15 | 26% |
| MF-DDH-14 | 15.10 | 16.00 | 9031 | 7.13 | 9.66 | 30% | 127.10 | 108.00 | -16% | 0.00 | 0.07 | 200% | 0.05 | 0.20 | 119% | 0.02 | 0.05 | 82% |
| MF-DDH-16 | 13.50 | 14.20 | 9093 | 7.17 | 9.89 | 32% | 6.90 | 13.00 | 61% | 0.00 | 0.04 | 200% | 0.04 | 0.04 | 20% | 0.03 | 0.03 | 7% |
| MF-DDH-25 | 30.90 | 32.00 | 9351 | 0.70 | 0.68 | -3% | 22.80 | 22.90 | 0% | 0.50 | 3.16 | 145% | 0.03 | 0.03 | -3% | 0.07 | 0.07 | -4% |
| MF-DDH-29 | 122.20 | 122.70 | 10280 | 0.27 | 0.71 | 90% | 4.36 | 3.77 | -14% | 158.41 | 369.00 | 80% | 0.05 | 0.09 | 54% | 3.77 | 9.15 | 83% |
| MF-DDH-30 | 34.10 | 34.60 | 10337 | 0.47 | 0.29 | -47% | 13.45 | 11.75 | -14% | 134.65 | 93.00 | -37% | 0.03 | 0.03 | -21% | 0.17 | 0.08 | -74% |
| MF-DDH-30 | 42.00 | 43.00 | 10345 | 0.86 | 0.40 | -73% | 5.73 | 5.70 | 0% | 213.49 | 172.00 | -22% | 0.03 | 0.04 | 8% | 0.13 | 0.20 | 40% |
| MF-DDH-30 | 46.40 | 47.20 | 10350 | 1.93 | 1.03 | -61% | 17.26 | 11.05 | -44% | 34.07 | 41.00 | 18% | 0.04 | 0.04 | 14% | 0.08 | 0.08 | -11% |
| MF-DDH-38 | 10.50 | 11.20 | 10974 | 0.55 | 0.25 | -75% | 0.25 | 0.64 | 88% | 1.00 | 6.45 | 146% | 0.25 | 0.24 | -2% | 0.34 | 0.28 | -22% |
| MF-DDH-43 | 29.00 | 30.00 | 11832 | 0.25 | 0.44 | 55% | 14.33 | 16.65 | 15% | 14.00 | 33.60 | 82% | 1.20 | 1.26 | 5% | 0.55 | 0.45 | -21% |
| MF-DDH-47 | 21.00 | 22.20 | 12068 | 1.39 | 0.80 | -54% | 153.28 | 70.30 | -74% | 1.00 | 16.30 | 177% | 0.28 | 0.15 | -60% | 1.68 | 0.89 | -62% |
| MF-DDH-49 | 67.00 | 67.80 | 12231 | 0.36 | 0.34 | -6% | 7.59 | 20.50 | 92% | 1.00 | 0.79 | -24% | 0.00 | 0.00 | 8% | 0.02 | 0.02 | -5% |
| MF-DDH-51 | 43.00 | 44.00 | 12433 | 0.79 | 0.56 | -34% | 252.00 | 116.00 | -74% | 1.00 | 10.20 | 164% | 0.29 | 0.30 | 4% | 0.41 | 0.32 | -25% |
| MF-DDH-51 | 71.50 | 72.50 | 12463 | 0.40 | 0.66 | 49% | 10.35 | 12.45 | 18% | 1.00 | 6.76 | 148% | 0.64 | 0.68 | 7% | 0.95 | 1.10 | 15% |
| MF-DDH-51 | 91.00 | 92.00 | 12482 | 0.60 | 0.59 | -2% | 27.16 | 32.30 | 17% | 1.00 | 1.22 | 19% | 0.26 | 0.39 | 39% | 0.40 | 0.52 | 26% |
| DDHMSR-0021 | 41.35 | 43.00 | 6750 | 2.37 | 0.68 | -111% | 40.30 | 35.40 | -13% | 6.85 | 4.73 | -37% | 0.36 | 0.23 | -43% | 0.16 | 0.14 | -15% |

- R.P.D = relative percentage difference.

Figure 12-1: Quarter Core Duplicate Results – Au (g/t)

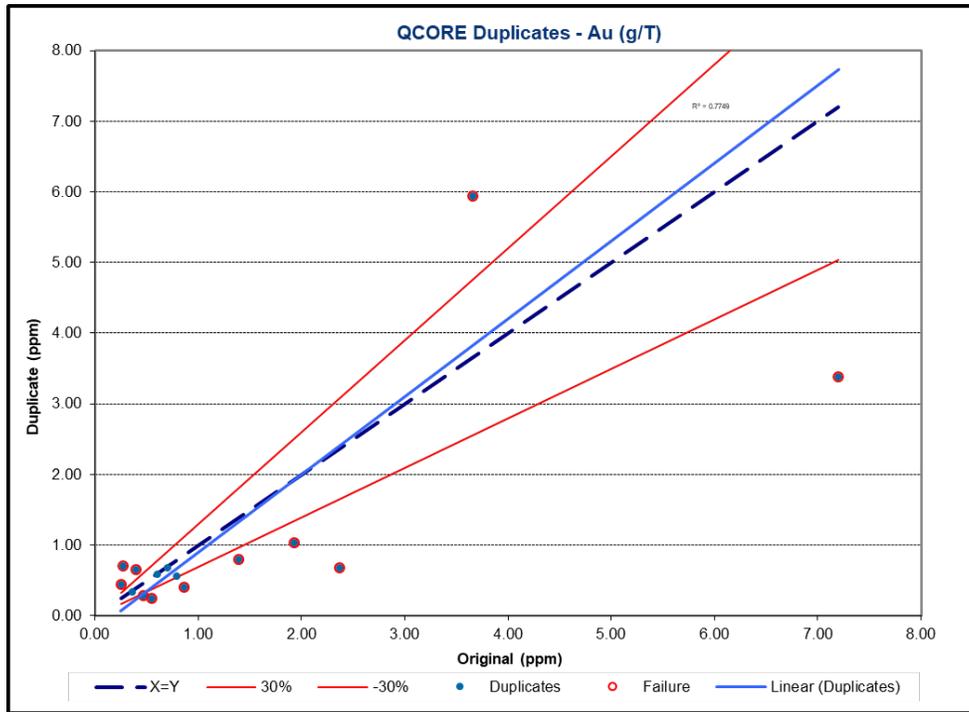


Figure 12-2: Quarter Core Duplicate Results – Ag (g/t)

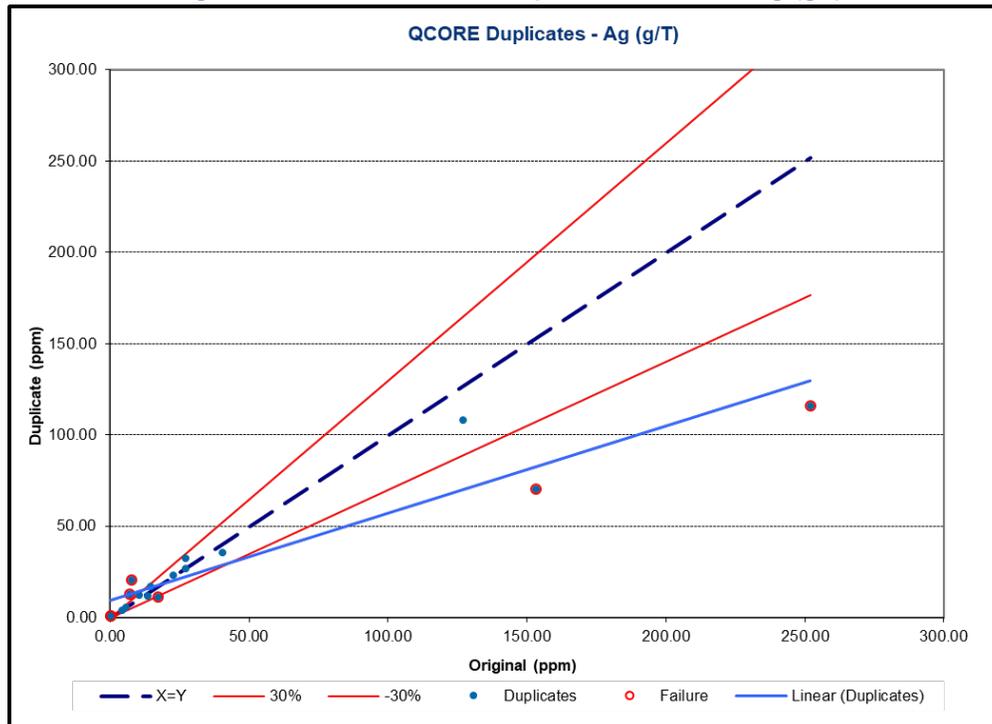


Figure 12-3: Quarter Core Duplicate Results – In (ppm)

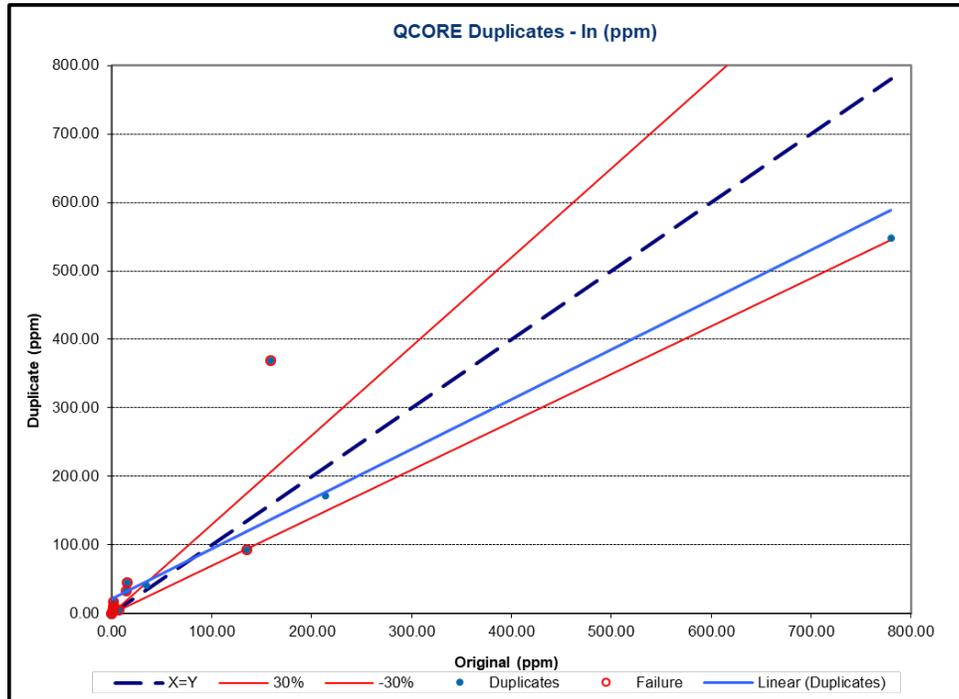


Figure 12-4: Quarter Core Duplicate Results – Pb (%)

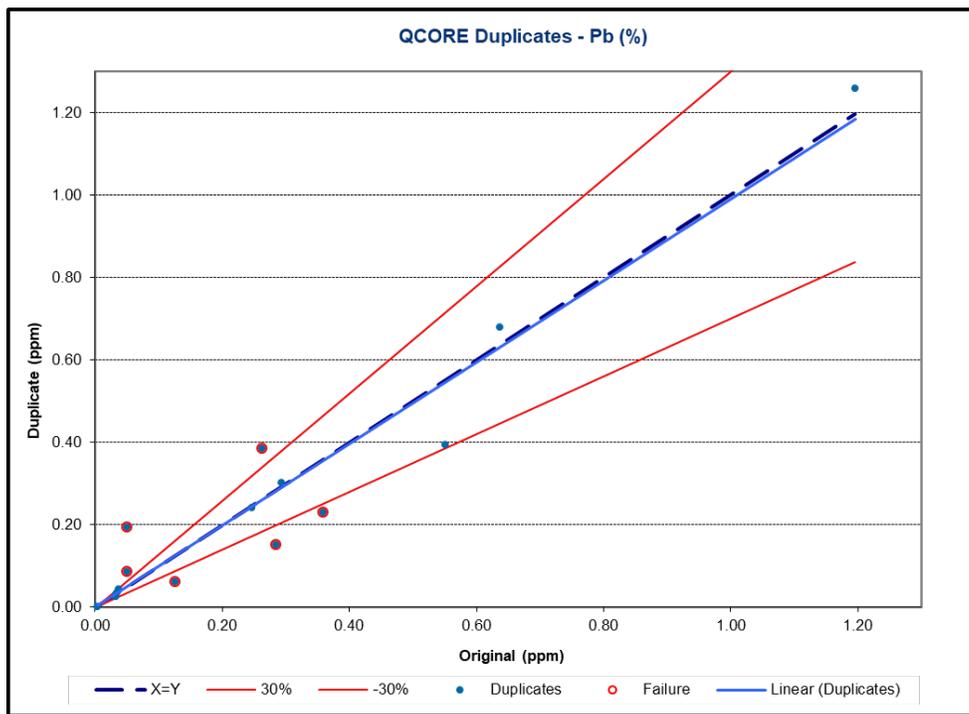
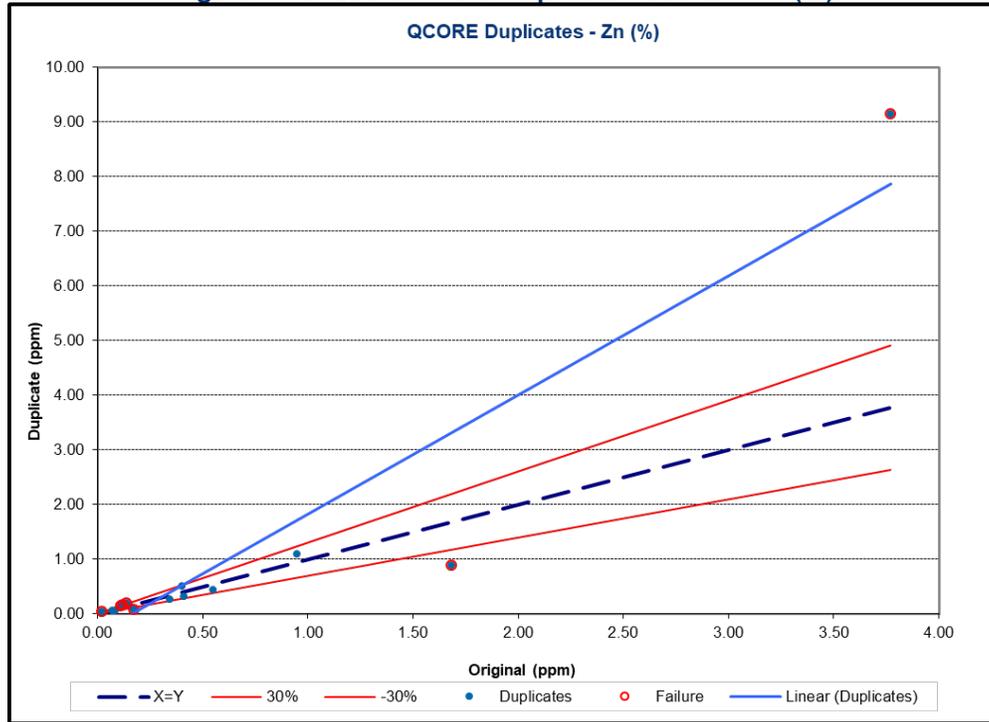


Figure 12-5: Quarter Core Duplicate Results – Zn (%)



12.2.2.2 Coarse Reject Verification Sampling

In order to test the variability of grade across the full width of a mineralized zone, 28 sequential samples from drill hole MFM-MSR-56 were selected for coarse reject duplicate test work. Results are presented below in Table 12-4.

Overall coarse reject duplicate results demonstrate acceptable reproducibility, with the exception of silver. Duplicate results from the umpire lab show a consistent increase in the amount of silver reported compared to original. At present, this bias is observed within a sample population with silver grades which range from trace to 10.8 g/t and as such, may not represent the broader trend at higher grades. Moving forward, additional umpire sampling should be completed by Marifil to monitor silver grades in excess of 15 g/t.

Table 12-4: Summary of Coarse Reject Duplicate Sample Analytical Results by Independent Lab

| Hole ID | From (m) | To (m) | Original Sample | Au Results (g/t) | | | Ag Results (g/t) | | | In Results (ppm) | | | Pb Results (%) | | | Zn Results (%) | | |
|------------|----------|--------|-----------------|------------------|----------|----------|------------------|----------|----------|------------------|----------|----------|----------------|----------|----------|----------------|----------|----------|
| | | | | Au (orig) | Au (dup) | R.P.D. % | Ag (orig) | Ag (dup) | R.P.D. % | In (orig) | In (dup) | R.P.D. % | Pb (orig) | Pb (dup) | R.P.D. % | Zn (orig) | Zn (dup) | R.P.D. % |
| MFM-MSR-56 | 12 | 13 | 13110 | 0.22 | 0.30 | 31% | 2.80 | 4.64 | 49% | 0.00 | 0.09 | 200% | 0.04 | 0.04 | 6% | 0.08 | 0.08 | 5% |
| MFM-MSR-56 | 13 | 14 | 13111 | 0.33 | 0.41 | 22% | 1.20 | 3.20 | 91% | 0.00 | 0.07 | 200% | 0.00 | 0.00 | 44% | 0.05 | 0.05 | 2% |
| MFM-MSR-56 | 14 | 15 | 13112 | 0.09 | 0.24 | 91% | 1.00 | 1.93 | 63% | 0.00 | 0.07 | 200% | 0.00 | 0.00 | 32% | 0.05 | 0.05 | 2% |
| MFM-MSR-56 | 15 | 16 | 13113 | 0.20 | 0.23 | 14% | 1.00 | 1.91 | 63% | 0.00 | 0.08 | 200% | 0.00 | 0.00 | 60% | 0.05 | 0.05 | 2% |
| MFM-MSR-56 | 16 | 17 | 13114 | 0.13 | 0.24 | 59% | 0.60 | 1.51 | 86% | 0.00 | 0.07 | 200% | 0.00 | 0.00 | 25% | 0.05 | 0.05 | 3% |
| MFM-MSR-56 | 17 | 18 | 13115 | 0.23 | 0.22 | -4% | 0.00 | 1.26 | 200% | 0.00 | 0.07 | 200% | 0.00 | 0.00 | 26% | 0.05 | 0.05 | -5% |
| MFM-MSR-56 | 18 | 19 | 13116 | 0.18 | 0.23 | 24% | 0.60 | 1.24 | 70% | 0.00 | 0.08 | 200% | 0.00 | 0.00 | 7% | 0.03 | 0.03 | -2% |
| MFM-MSR-56 | 19 | 20.5 | 13117 | 0.09 | 0.18 | 67% | 0.00 | 0.84 | 200% | 0.00 | 0.07 | 200% | 0.00 | 0.00 | 10% | 0.03 | 0.03 | 1% |
| MFM-MSR-56 | 20.5 | 21.4 | 13118 | 0.07 | 0.14 | 67% | 0.00 | 0.81 | 200% | 0.00 | 0.08 | 200% | 0.00 | 0.00 | 9% | 0.03 | 0.03 | 5% |
| MFM-MSR-56 | 21.4 | 22.5 | 13119 | 0.40 | 0.39 | -3% | 0.00 | 0.93 | 200% | 0.00 | 0.06 | 200% | 0.00 | 0.00 | 17% | 0.04 | 0.04 | 3% |
| MFM-MSR-56 | 22.5 | 24 | 13120 | 0.23 | 0.65 | 95% | 0.00 | 1.16 | 200% | 0.00 | 0.06 | 200% | 0.00 | 0.00 | 13% | 0.04 | 0.04 | 2% |
| MFM-MSR-56 | 24 | 25.5 | 13122 | 7.16 | 6.31 | -13% | 1.40 | 2.43 | 54% | 0.00 | 0.07 | 200% | 0.00 | 0.00 | 2% | 0.05 | 0.04 | -4% |
| MFM-MSR-56 | 25.5 | 27 | 13124 | 0.41 | 0.36 | -13% | 0.00 | 1.10 | 200% | 0.00 | 0.05 | 200% | 0.00 | 0.00 | 30% | 0.03 | 0.03 | 0% |
| MFM-MSR-56 | 27 | 28.5 | 13125 | 0.86 | 0.21 | -121% | 0.00 | 1.21 | 200% | 0.00 | 0.08 | 200% | 0.00 | 0.00 | 16% | 0.05 | 0.05 | 3% |
| MFM-MSR-56 | 28.5 | 30 | 13126 | 0.03 | 0.00 | -200% | 0.00 | 1.90 | 200% | 0.00 | 0.09 | 200% | 0.04 | 0.04 | -13% | 0.08 | 0.07 | -2% |
| MFM-MSR-56 | 31 | 32 | 13128 | 0.11 | 0.20 | 58% | 3.00 | 6.43 | 73% | 0.00 | 0.08 | 200% | 0.01 | 0.02 | 63% | 0.01 | 0.01 | 15% |
| MFM-MSR-56 | 32 | 33.5 | 13129 | 0.10 | 0.13 | 26% | 0.70 | 2.05 | 98% | 0.00 | 0.05 | 200% | 0.04 | 0.04 | -3% | 0.05 | 0.05 | 1% |
| MFM-MSR-56 | 33.5 | 35 | 13130 | 0.06 | 0.12 | 67% | 0.90 | 2.48 | 93% | 0.00 | 0.06 | 200% | 0.03 | 0.03 | -3% | 0.11 | 0.11 | 3% |
| MFM-MSR-56 | 35 | 37.5 | 13131 | 1.20 | 0.88 | -31% | 1.50 | 3.33 | 76% | 0.00 | 0.07 | 200% | 0.03 | 0.03 | 0% | 0.06 | 0.07 | 1% |
| MFM-MSR-56 | 37.5 | 38.5 | 13132 | 0.05 | 0.14 | 95% | 2.80 | 5.34 | 62% | 0.00 | 0.05 | 200% | 0.10 | 0.10 | 1% | 0.04 | 0.04 | 5% |
| MFM-MSR-56 | 38.5 | 39.5 | 13133 | 0.46 | 0.46 | 0% | 5.70 | 9.34 | 48% | 0.00 | 0.06 | 200% | 0.02 | 0.03 | 4% | 0.06 | 0.06 | -4% |
| MFM-MSR-56 | 39.5 | 40.5 | 13134 | 3.08 | 2.89 | -6% | 3.40 | 7.56 | 76% | 0.00 | 0.06 | 200% | 0.01 | 0.01 | 0% | 0.09 | 0.10 | 2% |
| MFM-MSR-56 | 40.5 | 41.5 | 13135 | 0.56 | 0.52 | -7% | 2.50 | 5.91 | 81% | 0.00 | 0.05 | 200% | 0.02 | 0.02 | 7% | 0.06 | 0.06 | 2% |
| MFM-MSR-56 | 41.5 | 42.5 | 13136 | 0.34 | 0.39 | 14% | 1.60 | 3.22 | 67% | 0.00 | 0.06 | 200% | 0.02 | 0.02 | 7% | 0.02 | 0.02 | 8% |
| MFM-MSR-56 | 42.5 | 43.5 | 13137 | 0.06 | 0.10 | 50% | 1.40 | 2.95 | 71% | 0.00 | 0.04 | 200% | 0.05 | 0.05 | 3% | 0.01 | 0.01 | 3% |
| MFM-MSR-56 | 43.5 | 44.5 | 13138 | 0.87 | 0.82 | -6% | 3.50 | 6.19 | 56% | 0.00 | 0.02 | 200% | 0.04 | 0.04 | 4% | 0.01 | 0.01 | 10% |
| MFM-MSR-56 | 44.5 | 45.5 | 13139 | 0.04 | 0.13 | 106% | 1.60 | 2.88 | 57% | 0.00 | 0.03 | 200% | 0.06 | 0.07 | 11% | 0.01 | 0.01 | 5% |
| MFM-MSR-56 | 193 | 194.5 | 13249 | 0.03 | 0.00 | -200% | 10.80 | 10.80 | 0% | 0.00 | 2.19 | 200% | 0.81 | 0.80 | -1% | 1.15 | 1.09 | -6% |

Figure 12-6: Coarse Reject Duplicate Results – Au (g/t)

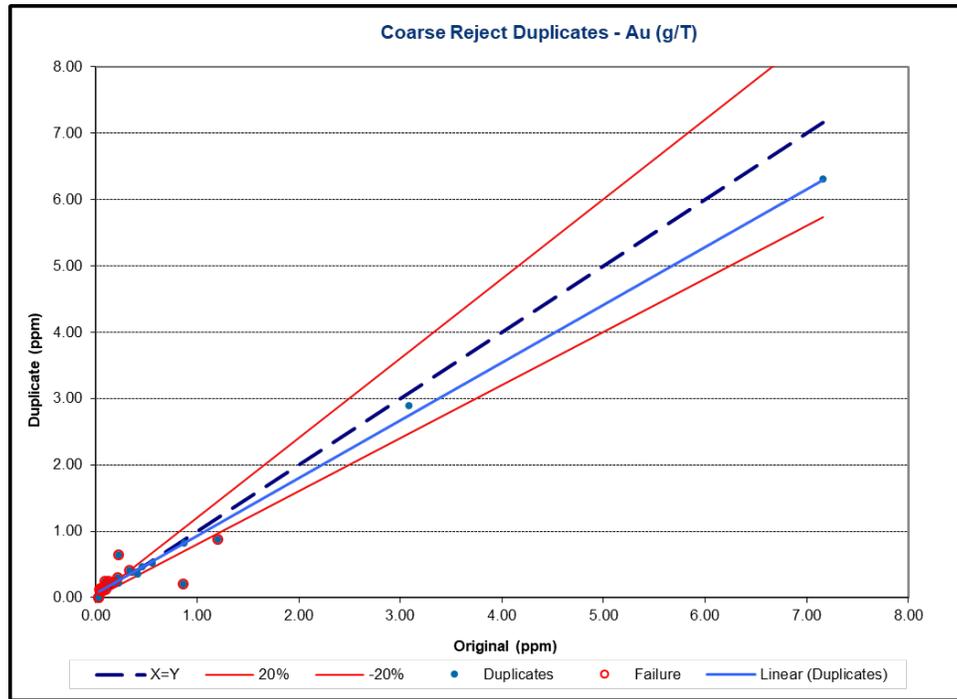


Figure 12-7: Coarse Reject Duplicate Results – Ag (g/t)

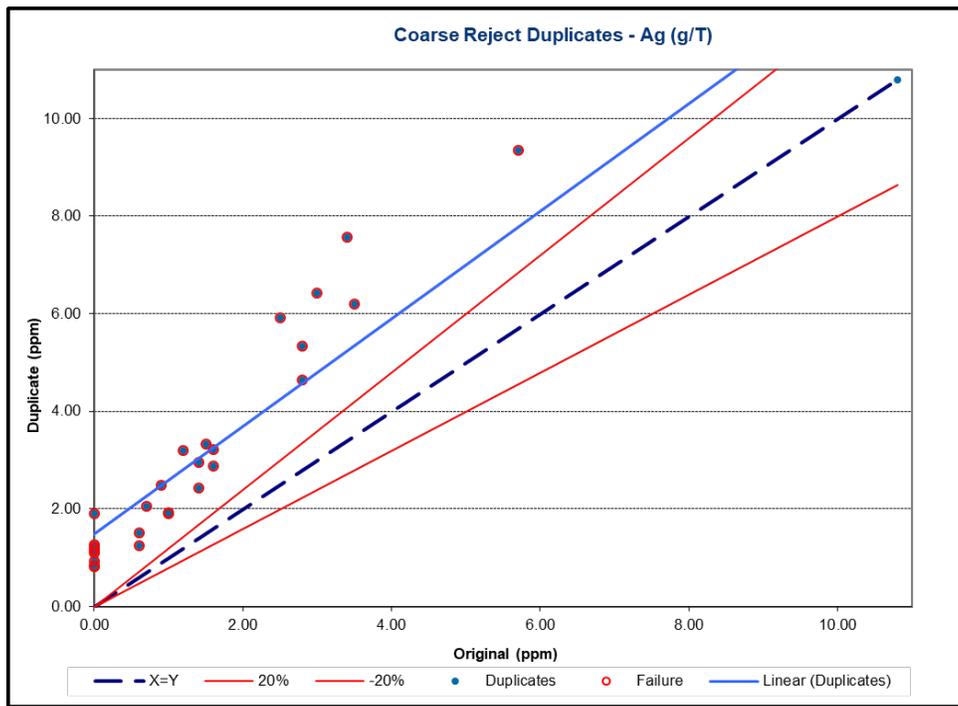


Figure 12-8: Coarse Reject Duplicate Results – Pb (%)

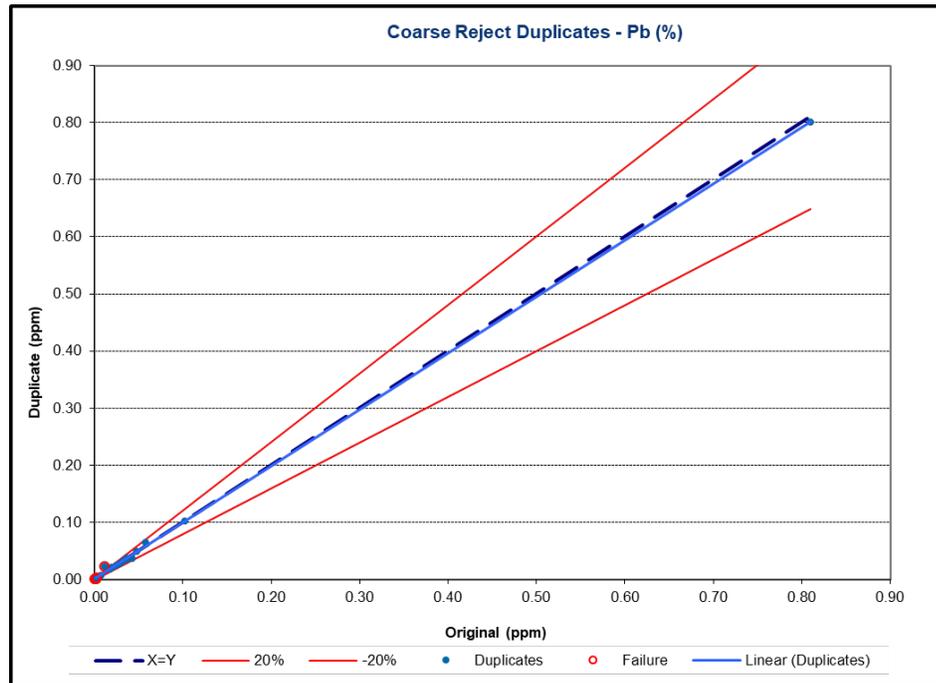
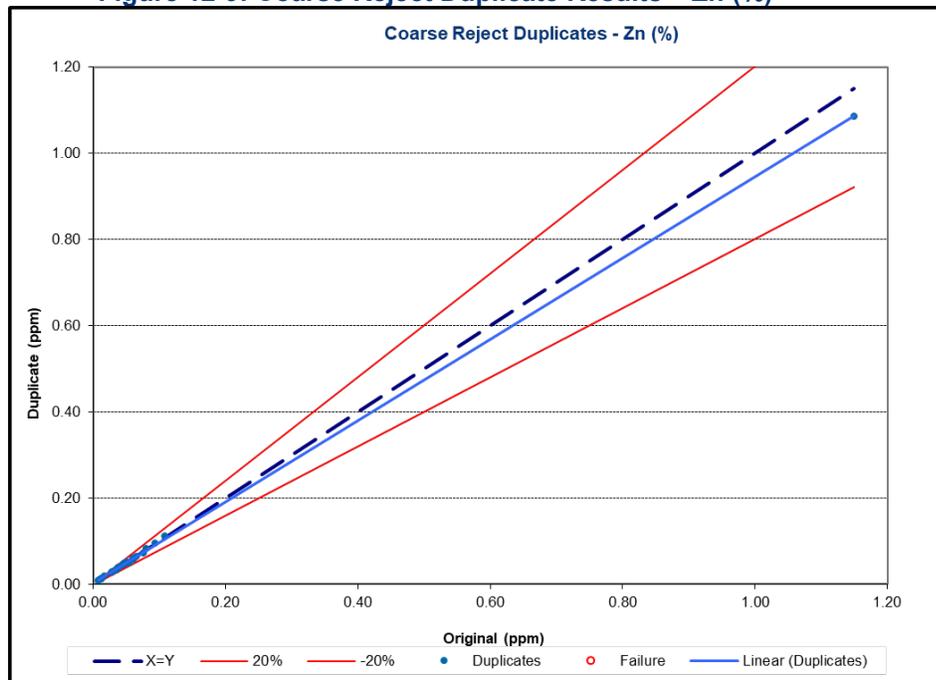


Figure 12-9: Coarse Reject Duplicate Results – Zn (%)



12.3 QP Opinion on Data Verification

Tetra Tech has conducted a review of the project database, has compared analytical certificates with reported assay results for drill core and trench samples, has visited the Property, and collected mineralized drill core samples from the Property. It is the QP's opinion that the data reported for the Project can be verified and is acceptable for mineral resource estimation. Results of the database audit have been considered in the classification of the Mineral Resource Estimate.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

The mineralization zones of the San Roque Property are mainly composed of Zone Del Indio/Griselda, Zone 25, 34 and 51 features intermediate-sulphidation polymetallic mineralization with gold and zinc as the principal economic elements of interest accompanied by silver, indium and lead.

In 2013, drill core samples from Zone 34 were collected and sent to Alex Stewart Labs in Argentina for preliminary metallurgical test work. The purpose of this test work was to determine the leachability of gold and silver via cyanidation. Tetra Tech has conducted a detailed review of this test work and has concluded that the reported data cannot be used to evaluate the leaching recoveries due to the gold and silver recoveries and residual values not being balanced in the leaching tests. To understand the cyanidation amenability of Zone 34 mineralization, Tetra Tech recommends a baseline test program including:

- A complete head assay including screen metallic analysis of gold and silver, a whole rock analysis, and the determination of total carbon and organic carbon;
- Multi-stage diagnostic leach test;
- Direct cyanide leach test to determine gold and silver extraction characteristics; and
- Alternative recovery method including gravity and flotation concentrations.

Considering that Del Indio/Griselda currently hosts the majority of the identified mineralisation on the Property, a comprehensive metallurgical test program is also recommended from this region. The test program should start with a preliminary recovery method comparison which includes gravity concentration, flotation, and cyanidation for elements of interest.

14.0 MINERAL RESOURCE ESTIMATES

14.1 Basis of Current Mineral Resource Estimate

A Mineral Resource Estimate has been defined on the 4 zones (Del Indio/Griselda, Zone 25, Zone 34, and Zone 51) within the San Roque Property using data collected from both drilling and trenching activities on the Property since 1999. The geological modelling has been completed in Seequent Leapfrog Geo 3D, and the resource block modelling has been completed in Datamine Studio RM V1.2.47.

Three-year trailing metal pricing and conceptual mining and metallurgical recovery parameter assumptions have been incorporated to calculate an AuEq cut-off of 0.6 g/t and 0.5 g/t AuEq respectively for oxide and sulphide mineralization. This is described in sections 14.6.4 and 14.7.2.

14.2 Historical Mineral Resource Estimates

This document represents the maiden mineral resource estimate on the San Roque Property; the QP is not aware of any historical Mineral Resources Estimates.

14.3 Database

Marifil maintains all geological data in a combination of Microsoft Excel® Microsoft Access® databases containing header, survey, assays, lithology, and density tables. The data received from the client required organization by Tetra Tech, which involved review and compilation of historical data, followed by validation of the updated database so that the data was suitable for Mineral Resource Estimation.

The data base contains 112 bore holes and 58 surface trenches which comprises all known surface bore holes and trenching on the property. Combined, the Property has a total of 10,015 samples from drilling and 740 samples from trenching activities.

Table 14-1: Marifil Trenching and Drill Hole Record Summary

| Type | Collar Records | Down hole Survey Records | Lithology Records | Assay Records |
|------------|----------------|--------------------------|-------------------|---------------|
| Drill Hole | 112 | 308 | 683 | 10,015 |
| Trenches | 58 | 58 | 0 | 740 |

14.4 Bulk Density

A bulk density of 2.63 t/m³ was used for the San Roque mineralized zones. This value is estimated using the results of 281 measurements of drill core taken from drilling programs throughout the program history. Additionally, Marifil has conducted initial specific gravity work on the host rocks present at San Roque. Bulk densities were calculated using the water displacement method in accordance with the following formula:

$$\text{Density} = \text{Weight In air} / (\text{Weight in Air} - \text{Weight in Water})$$

This is representative of the bulk density. The results of the bulk density testing are provided below in Table 14-2.

Table 14-2: San Roque Bulk Density Results

| Lithology | Average Value | Standard Deviation | Minimum Value | Maximum Value | Number of Samples |
|-------------------------------|---------------|--------------------|---------------|---------------|-------------------|
| Mineralized Zones | 2.63 | 0.14 | 2.36 | 3.76 | 281 |
| Hydrothermal Rocks / Breccias | 2.73 | 0 | 2.73 | 2.73 | 1 |
| Volcanic Rocks | 2.54 | 0.12 | 2.9 | 2.36 | 18 |
| Polymictic Breccia | 2.48 | 0.06 | 2.57 | 2.38 | 2 |
| Sedimentary Rocks | 2.75 | 0 | 2.75 | 2.75 | 1 |
| Basement Schist | 2.71 | 0.13 | 3.14 | 2.61 | 14 |

Tetra Tech recommends that Marifil continue to collect bulk density measurements from the various rock types and grade distributions across entire zone widths to continue to build upon the dataset. At a minimum, 2% of the dataset should have bulk density measurements.

14.4.1 Gold Equivalent Formula

Due to the polymetallic nature of the deposit, a gold metal equivalent (AuEq) was created in order to facilitate the creation of mineral zones. The following formula was used to generate the gold equivalent for each capped sample interval:

$$\text{AuEq}^* = \text{Au grade} + (\text{Ag grade} / 74.5) + (\text{Pb grade} / 19,565.2) + (\text{Zn grade} / 15,716.3) + (\text{In grade} / 117.3)$$

*All grades in the gold equivalent calculation were converted to ppm.

In lieu of metallurgical testing, the AuEq formula assumes equal recoveries of 80% for the insitu material.

The gold equivalent value is based on a three-year trailing average price for each commodity, cut off at March 2019. The following commodity prices were used:

- Au \$1,267/oz
- Ag \$17/oz
- Pb \$1.0/lb
- Zn \$1.2/lb
- In \$10.8/oz

14.5 Geological and Resource Interpretation

14.5.1 Geological Interpretation

Structurally controlled polymetallic mineralized veins and stockworks hosted within tuff and breccia units comprise the two mineralization styles observed at San Roque. The structurally controlled veins are typically sub-vertically dipping and cut all lithological units. This primary structure is also interpreted to have acted as a feeder conduit for a separate phase of polymetallic mineralization. Where this feeder system has intersected favorable units such as quartz crystal tuffs and breccias, flat lying stockwork zones hosting polymetallic mineralization are observed. Given this relationship, the QP modelled both the structures and the lithological units present at San Roque, with a specific emphasis on the tuff and breccia units. This 3D geological model was generated using Aranz Leapfrog Geo 3D.

The final geology model (Figures 14-1 and 14-2) was used to guide the interpretations made for modeling the mineralized domains.

14.5.2 Resource Mineralization Interpretation

Three-dimensional wireframe models of mineralization were developed in Seequent Leapfrog 3D for the zones based on calculated AuEq grades. Zonal three-dimensional interpretations were generated through the RBF interpolant function in Leapfrog, using a low (0.5 g/t) and high (1.0 g/t) grade domains which considered local structural and lithological trends. Manual manipulation of each zone was also undertaken to provide greater zonal control. Interpretations were not allowed to extend more than 75 m into untested territory. A minimum mineralized zone width of 1 m was also used for this interpretation.

A boundary between the oxide and sulphide alteration domains was also interpreted into the Leapfrog model using information available from the drill logs (Figure 14-2). The boundary between the two domains was based primarily upon the relative presence of jarosite and goethite versus pyrite within the drill logs. Goethite results from the weathering of iron-rich minerals, along with jarosite, a sulphate mineral originating from the oxidation of iron sulphides. While a hard boundary has been placed between the two alteration domains the nature of this contact is likely to be gradational; therefore, it is recommended that future work continues to focus on better defining the nature of this alteration boundary.

The geological, alteration, and mineralization interpretations were imported into Datamine modeling software and validated. No errors were identified in this validation.

Figure 14-1: Plan and Cross-Sectional Isometric Image of San Roque Geology and Alteration

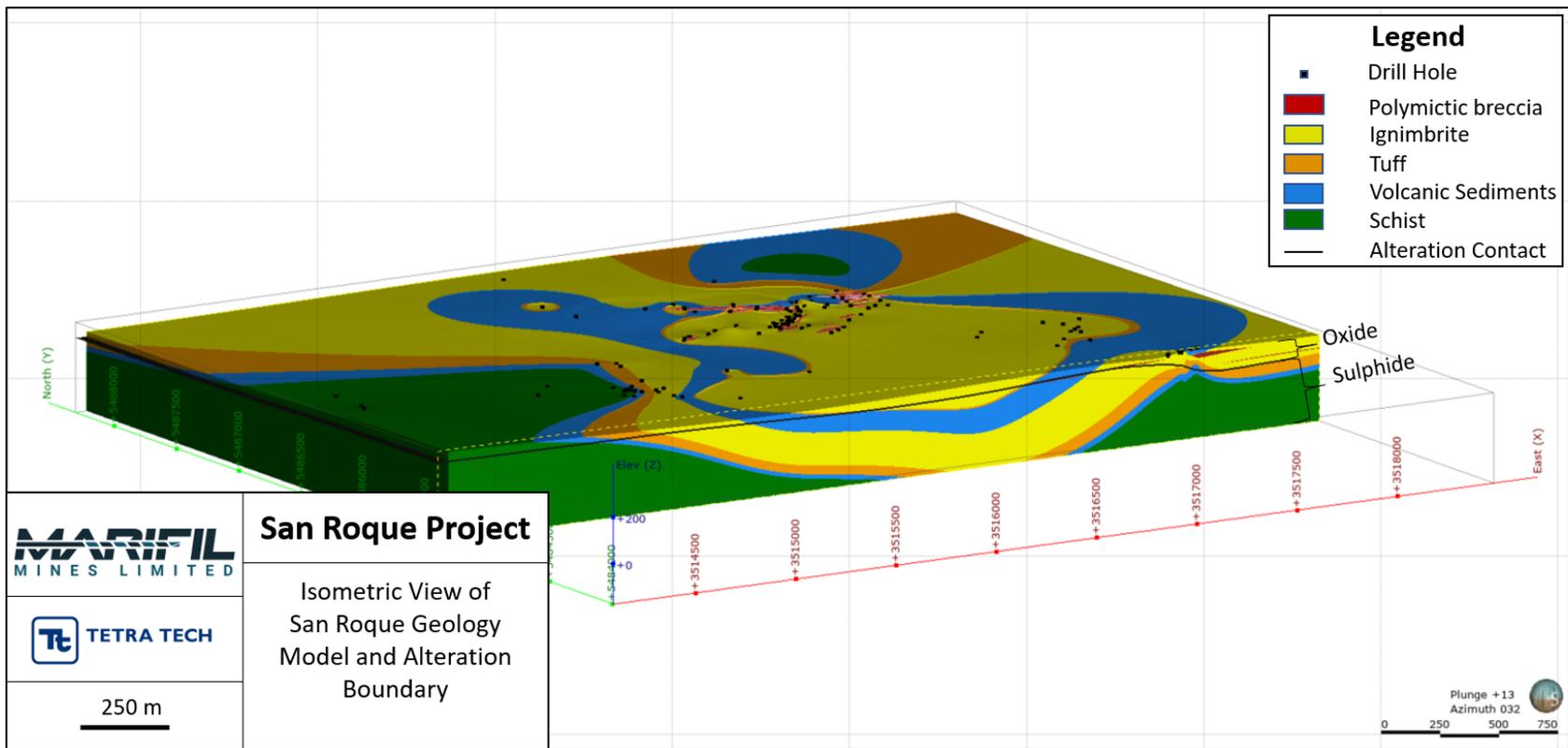


Figure 14-2: Cross Section of Final Geology, Alteration, and Mineralization Model

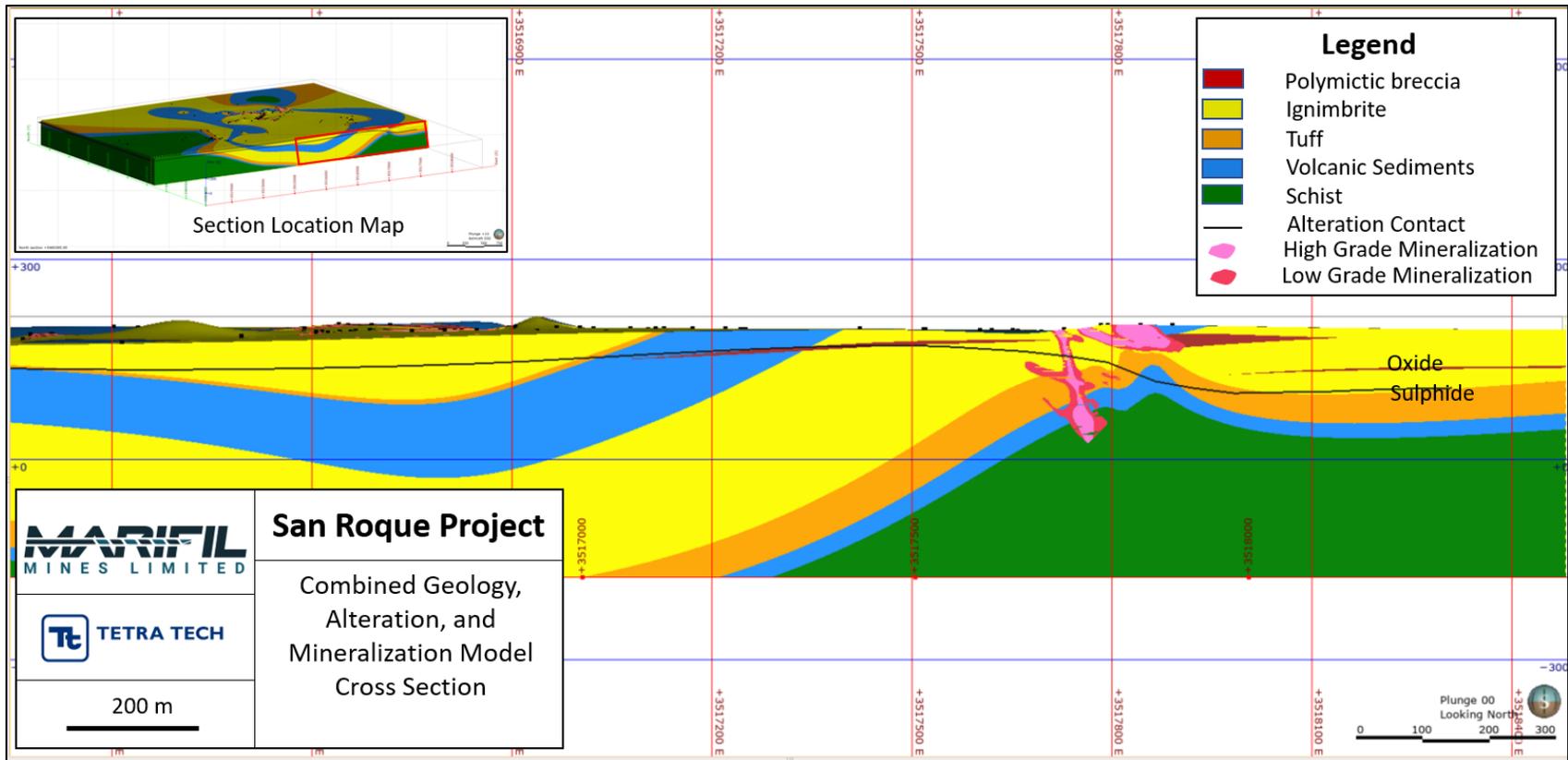
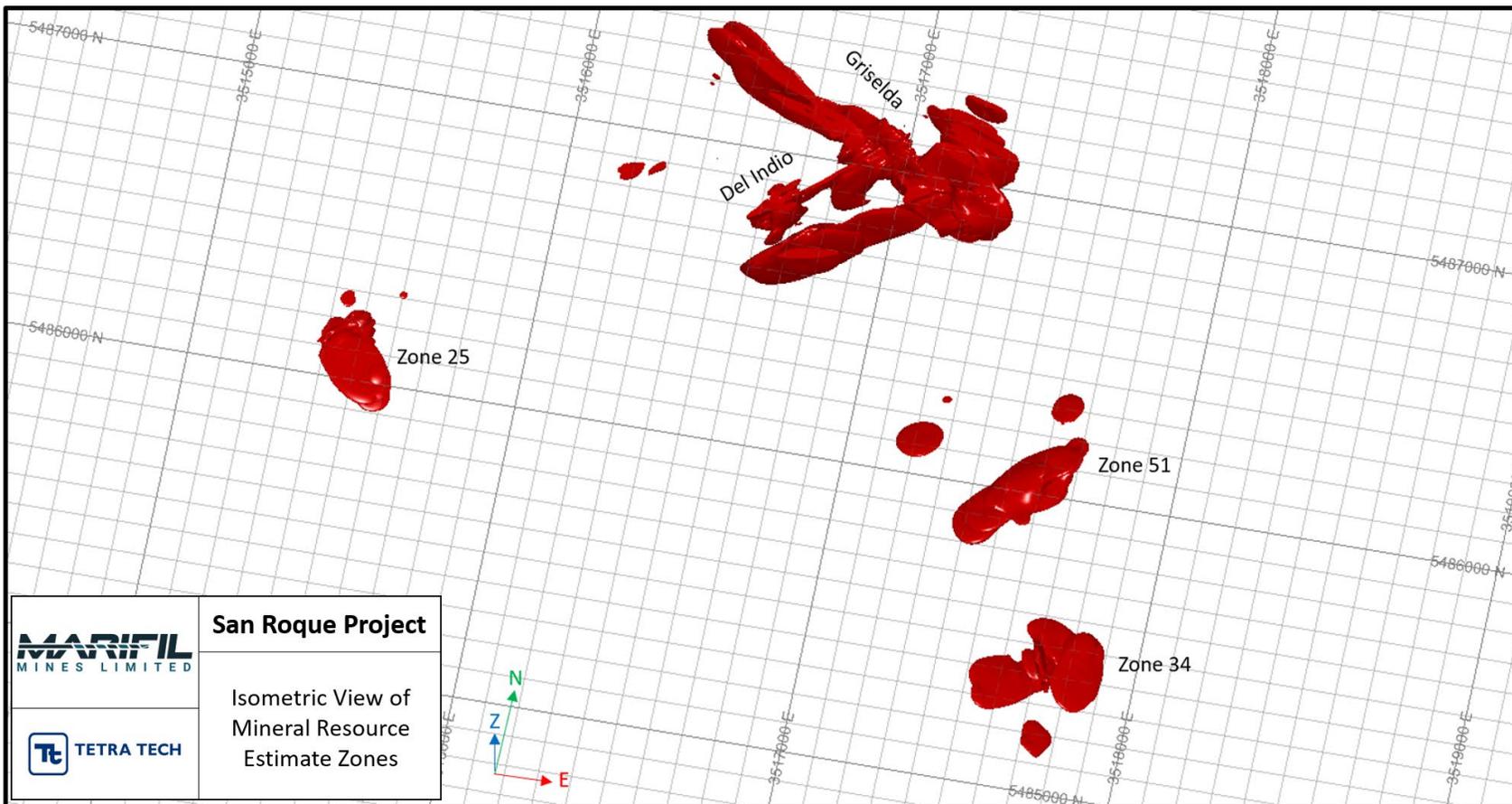


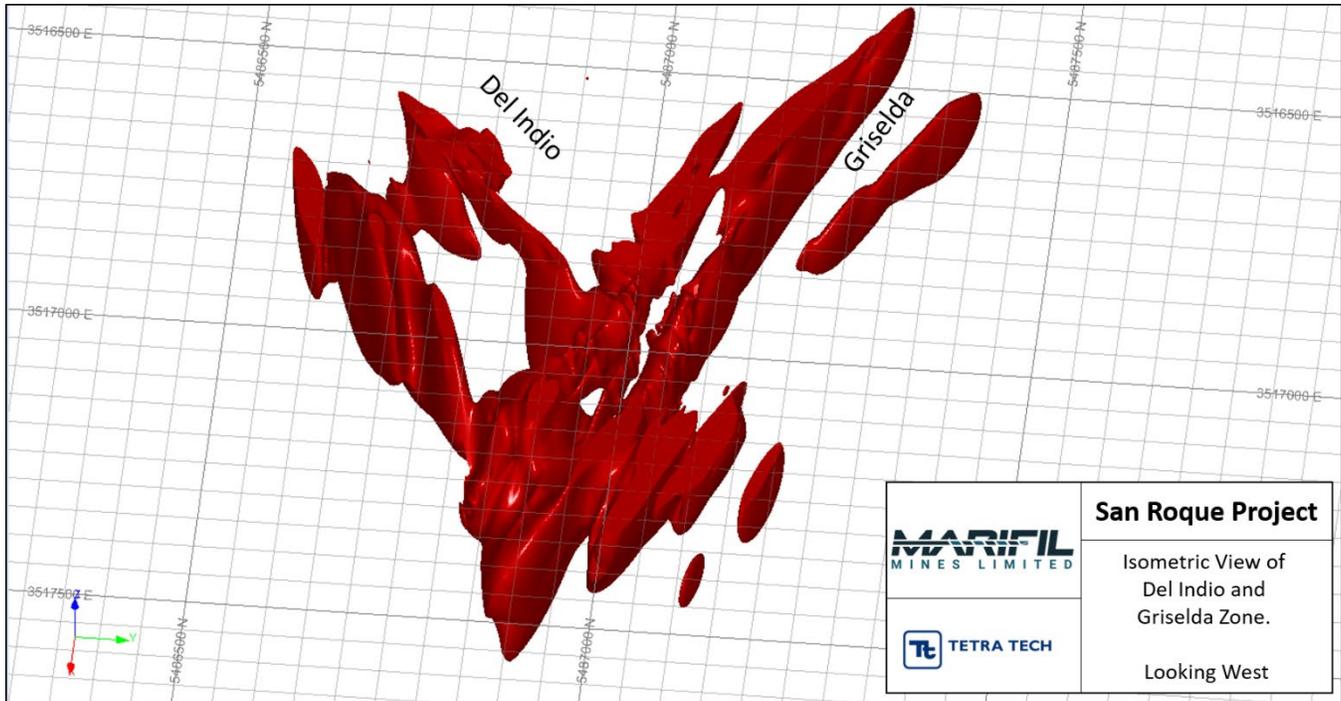
Figure 14-3: Isometric Images of Wireframe Models



An overview of the interpretation for each mineralized zone is provided below.

The Griselda zone is interpreted to occur along a north-west, south-east striking, sub-vertically dipping structure over a 1 km strike length. Bifurcating off the Griselda structure is the south-west oriented and sub-vertically dipping Del Indio structure. Soft boundaries were used between the two structures and modeled as a single domain in Datamine because these zones are mineralogically similar and are interpreted to be part of the same contiguous mineralized system (Figure 14-4).

Figure 14-4: Griselda and Del Indio Zone Isometric



Zones 25 (Figure 14-5), 34 (Figure 14-6), and 51 (Figure 14-7) generally contain long tabular, sub vertically dipping sulphide rich cm to m scale veins, along with sub-horizontal dipping zones comprised of polymetallic stockworks.

At present, these three zones are isolated from one another in the model, however, infill drilling has not yet been completed which may connect these zones. The mineralization constrained within each wireframe is generally contiguous however, the mineralized zones locally contain grades which are below the 0.5g/t AuEq threshold, but are still within the mineralizing trend.

Portions of the drill core which were not assayed and were present within the mineralized wireframes were assigned a grade of zero, thereby preventing mineralized domains from crossing non-assayed intervals and providing greater constraint.

Figure 14-5: Isometric of Zone 25

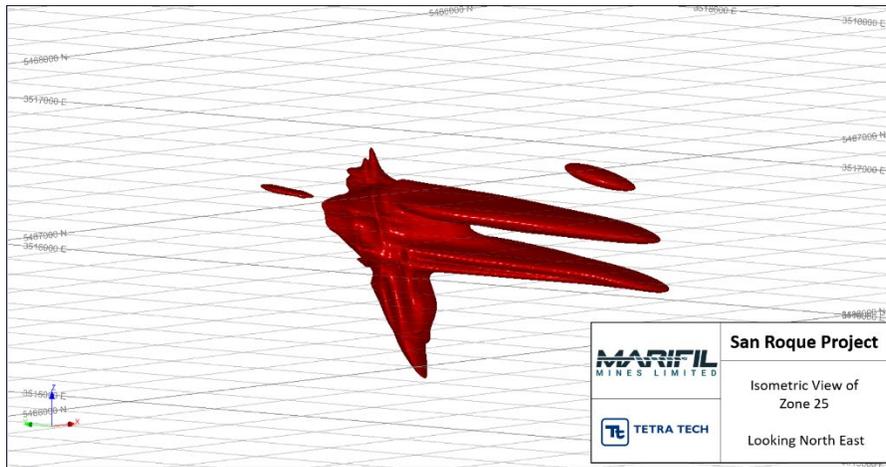


Figure 14-6: Isometric of Zone 34

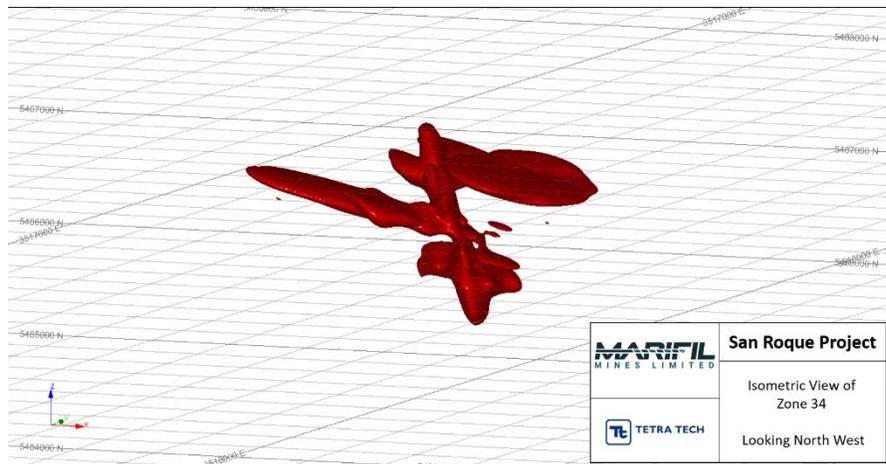


Figure 14-7: Isometric of Zone 51

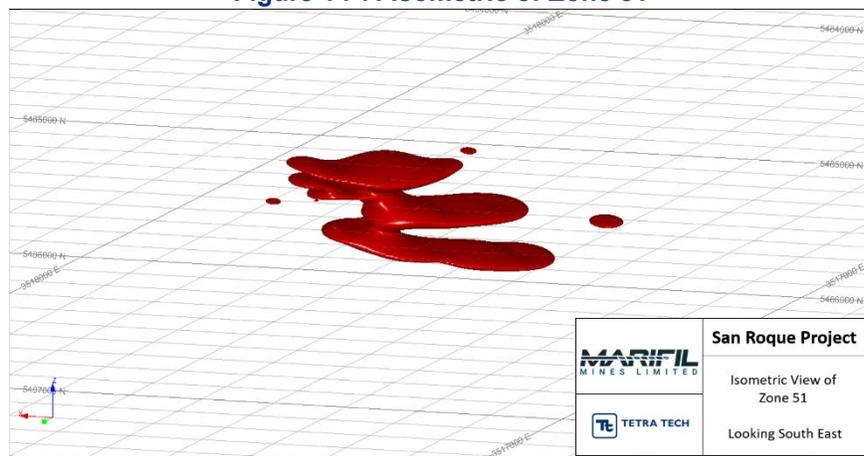


Table 14-3: San Roque Wireframe Volumes

| Zone | Domain | Volume (m ³) |
|----------------------|------------|--------------------------|
| Del Indio & Griselda | High grade | 5,239,093 |
| | Low grade | 34,097,062 |
| Zone 25 | High grade | 865,717 |
| | Low grade | 2,906,366 |
| Zone 34 | High grade | 950,093 |
| | Low grade | 3,960,427 |
| Zone 51 | High grade | 1,400,396 |
| | Low grade | 5,772,916 |

14.6 Exploratory Data Analysis

14.6.1 Assays

A total of 3,648 assays were contained within the mineralized zones and were used as the basis of the San Roque mineral resource estimate. Samples submitted to the lab were assayed for gold, silver, lead, zinc, and indium, along with trace element analysis to facilitate both local zone interpretations and interpretation of broad deposit style conclusions.

Sampling intervals within each zone were captured by clipping the boreholes to the encompassing wireframe zone and grade domain, and then translated into individual borehole files. These files were reviewed for completeness of captured assay intervals. Any un-sampled intervals were replaced with zero grades. Tables 14-4 and 14-5 summarizes the raw assays statistics contained within the high (>2.0 g/t AuEq) and low (0.5-2.0 g/t AuEq) grade domains, respectively, for each mineralized zone reported for the Mineral Resource Estimate.

Table 14-4: High Grade Domain Drill Hole Assay Statistics

| Zone | Domain | Field | Number of Samples | Min | Max | Mean | Variance | Standard Deviation |
|----------------------|------------|-------|-------------------|------|----------|-------|-----------|--------------------|
| Del Indio / Griselda | High Grade | Au | 1,058 | 0.00 | 28.30 | 0.70 | 2.97 | 1.72 |
| | | Ag | 1,058 | 0.00 | 833.00 | 12.21 | 1,602.99 | 40.04 |
| | | Pb | 1,058 | 0.00 | 13.70 | 0.60 | 1.13 | 1.06 |
| | | Zn | 1,058 | 0.00 | 23.70 | 1.35 | 5.26 | 2.29 |
| | | In | 1,058 | 0.00 | 2,435.00 | 38.19 | 19,536.59 | 139.77 |
| | | AuEq | 1,058 | 0.01 | 47.00 | 2.36 | 12.02 | 3.47 |
| Zone 25 | High Grade | Au | 123 | 0.01 | 18.04 | 1.24 | 7.18 | 2.68 |
| | | Ag | 123 | 0.00 | 517.00 | 46.48 | 6,629.79 | 81.42 |
| | | Pb | 123 | 0.00 | 1.40 | 0.15 | 0.04 | 0.21 |
| | | Zn | 123 | 0.00 | 4.03 | 0.40 | 0.45 | 0.67 |
| | | In | 123 | 0.00 | 216.04 | 9.74 | 894.52 | 29.91 |
| | | AuEq | 123 | 0.03 | 20.77 | 2.28 | 12.45 | 3.53 |
| Zone 34 | High Grade | Au | 226 | 0.00 | 56.80 | 2.55 | 34.84 | 5.90 |
| | | Ag | 226 | 0.00 | 676.00 | 22.79 | 4,780.02 | 69.14 |
| | | Pb | 226 | 0.00 | 0.69 | 0.06 | 0.01 | 0.09 |
| | | Zn | 226 | 0.00 | 1.08 | 0.05 | 0.01 | 0.09 |
| | | In | 226 | 0.00 | 0.46 | 0.01 | 0.00 | 0.05 |
| | | AuEq | 226 | 0.00 | 56.89 | 2.91 | 36.47 | 6.04 |
| Zone 51 | High Grade | Au | 242 | 0.00 | 8.01 | 0.75 | 1.66 | 1.29 |
| | | Ag | 242 | 0.25 | 252.00 | 28.31 | 1,683.04 | 41.02 |
| | | Pb | 242 | 0.00 | 10.05 | 0.48 | 0.89 | 0.94 |
| | | Zn | 242 | 0.00 | 6.63 | 0.71 | 1.11 | 1.05 |
| | | In | 242 | 0.00 | 383.00 | 10.53 | 1,962.38 | 44.30 |
| | | AuEq | 242 | 0.05 | 14.99 | 1.92 | 4.85 | 2.20 |

Table 14-5: Low Grade Domain Drill Hole Assay Statistics

| Zone | Domain | Field | Number of Samples | Min | Max | Mean | Variance | Standard Deviation |
|----------------------|-----------|-------|-------------------|------|--------|------|----------|--------------------|
| Del Indio / Griselda | Low Grade | Au | 1,512 | 0.00 | 4.41 | 0.15 | 0.13 | 0.36 |
| | | Ag | 1,512 | 0.00 | 100.00 | 4.00 | 44.51 | 6.67 |
| | | Pb | 1,512 | 0.00 | 11.62 | 0.25 | 0.18 | 0.42 |
| | | Zn | 1,512 | 0.00 | 7.54 | 0.48 | 0.36 | 0.60 |
| | | In | 1,512 | 0.00 | 590.64 | 8.58 | 1,330.17 | 36.47 |
| | | AuEq | 1,512 | 0.00 | 7.40 | 0.72 | 0.62 | 0.79 |
| Zone 25 | Low Grade | Au | 107 | 0.00 | 1.23 | 0.16 | 0.07 | 0.26 |
| | | Ag | 107 | 0.00 | 161.66 | 8.01 | 374.06 | 19.34 |
| | | Pb | 107 | 0.00 | 5.74 | 0.16 | 0.31 | 0.56 |
| | | Zn | 107 | 0.00 | 5.76 | 0.24 | 0.41 | 0.64 |
| | | In | 107 | 0.00 | 108.12 | 2.71 | 184.96 | 13.60 |
| | | AuEq | 107 | 0.01 | 10.92 | 0.53 | 1.25 | 1.12 |
| Zone 34 | Low Grade | Au | 130 | 0.00 | 8.39 | 0.53 | 0.93 | 0.96 |
| | | Ag | 130 | 0.00 | 163.50 | 5.44 | 259.85 | 16.12 |
| | | Pb | 130 | 0.00 | 0.38 | 0.04 | 0.00 | 0.06 |
| | | Zn | 130 | 0.00 | 0.56 | 0.03 | 0.00 | 0.05 |
| | | In | 130 | 0.00 | 0.42 | 0.02 | 0.01 | 0.07 |
| | | AuEq | 130 | 0.00 | 8.46 | 0.64 | 1.07 | 1.04 |
| Zone 51 | Low Grade | Au | 250 | 0.01 | 2.01 | 0.20 | 0.07 | 0.27 |
| | | Ag | 250 | 0.00 | 132.34 | 9.99 | 246.15 | 15.69 |
| | | Pb | 250 | 0.00 | 9.36 | 0.21 | 0.40 | 0.64 |
| | | Zn | 250 | 0.00 | 4.52 | 0.32 | 0.24 | 0.49 |
| | | In | 250 | 0.00 | 217.33 | 3.41 | 280.65 | 16.75 |
| | | AuEq | 250 | 0.04 | 10.93 | 0.68 | 0.79 | 0.89 |

14.6.2 Compositing

The assay data was composited to 1.0 m intervals which corresponds to approximately a quarter of the parent block size used in the modelling process. The compositing procedure was undertaken such that the composite intervals honoured the geological solids. Flexibility was allowed with the composite lengths by using the backstitching method whereby the composite lengths could be marginally adjusted for each drill hole to accommodate the last sample interval.

Tables 14-6 and 14-7 summarize the high and low grade domain sample statistics respectively for each zone. Figure 14-8 presents a histogram of the sample lengths before compositing.

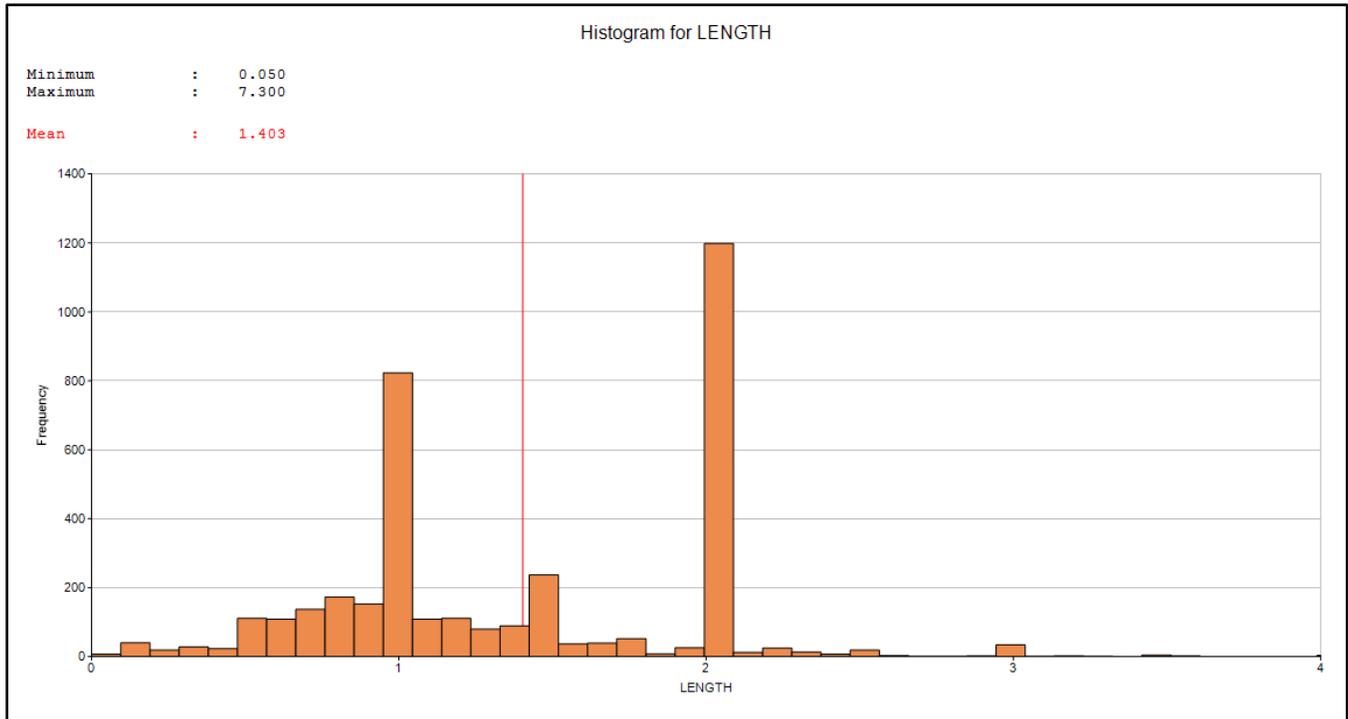
Table 14-6: High Grade Domain Composite Assay Statistics

| Zone | Domain | Field | Number of Samples | Min | Max | Mean | Variance | Standard Deviation |
|----------------------|------------|-------|-------------------|------|----------|-------|-----------|--------------------|
| Del Indio / Griselda | High Grade | Au | 1,502 | 0.00 | 28.30 | 0.70 | 2.89 | 1.70 |
| | | Ag | 1,502 | 0.00 | 833.00 | 12.73 | 1,610.96 | 40.14 |
| | | Pb | 1,502 | 0.00 | 11.14 | 0.56 | 0.76 | 0.87 |
| | | Zn | 1,502 | 0.00 | 23.70 | 1.29 | 4.07 | 2.02 |
| | | In | 1,502 | 0.00 | 2,268.20 | 29.58 | 11,201.40 | 105.84 |
| | | AuEq | 1,502 | 0.00 | 47.00 | 2.24 | 9.74 | 3.12 |
| Zone 25 | High Grade | Au | 144 | 0.01 | 15.64 | 1.11 | 4.82 | 2.20 |
| | | Ag | 144 | 0.00 | 477.06 | 41.84 | 5,312.99 | 72.89 |
| | | Pb | 144 | 0.00 | 1.40 | 0.15 | 0.04 | 0.20 |
| | | Zn | 144 | 0.00 | 3.28 | 0.37 | 0.38 | 0.62 |
| | | In | 144 | 0.00 | 152.62 | 8.92 | 589.15 | 24.27 |
| | | AuEq | 144 | 0.03 | 18.00 | 2.06 | 8.71 | 2.95 |
| Zone 34 | High Grade | Au | 343 | 0.00 | 56.80 | 2.46 | 32.97 | 5.74 |
| | | Ag | 343 | 0.00 | 676.00 | 20.26 | 4,127.96 | 64.25 |
| | | Pb | 343 | 0.00 | 0.69 | 0.06 | 0.01 | 0.09 |
| | | Zn | 343 | 0.00 | 1.08 | 0.05 | 0.01 | 0.09 |
| | | In | 343 | 0.00 | 0.46 | 0.02 | 0.00 | 0.05 |
| | | AuEq | 343 | 0.00 | 56.89 | 2.79 | 34.47 | 5.87 |
| Zone 51 | High Grade | Au | 314 | 0.00 | 8.01 | 0.72 | 1.41 | 1.19 |
| | | Ag | 314 | 0.00 | 252.00 | 26.28 | 1,408.25 | 37.53 |
| | | Pb | 314 | 0.00 | 8.17 | 0.43 | 0.53 | 0.73 |
| | | Zn | 314 | 0.00 | 6.63 | 0.68 | 1.03 | 1.01 |
| | | In | 314 | 0.00 | 374.30 | 8.55 | 1,070.60 | 32.72 |
| | | AuEq | 314 | 0.05 | 12.21 | 1.80 | 3.57 | 1.89 |

Table 14-7: Low Grade Domain Composite Assay Statistics

| Zone | Domain | Field | Number of Samples | Min | Max | Mean | Variance | Standard Deviation |
|----------------------|-----------|-------|-------------------|------|--------|------|----------|--------------------|
| Del Indio / Griselda | Low Grade | Au | 2,249 | 0.00 | 4.13 | 0.14 | 0.09 | 0.29 |
| | | Ag | 2,249 | 0.00 | 100.00 | 4.09 | 49.24 | 7.02 |
| | | Pb | 2,249 | 0.00 | 3.51 | 0.23 | 0.06 | 0.24 |
| | | Zn | 2,249 | 0.00 | 7.54 | 0.45 | 0.23 | 0.47 |
| | | In | 2,249 | 0.00 | 448.00 | 5.34 | 491.06 | 22.16 |
| | | AuEq | 2,249 | 0.00 | 6.34 | 0.65 | 0.34 | 0.58 |
| Zone 25 | Low Grade | Au | 147 | 0.00 | 2.62 | 0.17 | 0.09 | 0.31 |
| | | Ag | 147 | 0.00 | 92.65 | 6.93 | 180.55 | 13.44 |
| | | Pb | 147 | 0.00 | 3.32 | 0.12 | 0.09 | 0.29 |
| | | Zn | 147 | 0.00 | 3.38 | 0.17 | 0.15 | 0.38 |
| | | In | 147 | 0.00 | 63.68 | 1.60 | 64.69 | 8.04 |
| | | AuEq | 147 | 0.00 | 6.32 | 0.45 | 0.46 | 0.68 |
| Zone 34 | Low Grade | Au | 190 | 0.00 | 3.34 | 0.47 | 0.32 | 0.57 |
| | | Ag | 190 | 0.00 | 77.00 | 4.82 | 88.06 | 9.38 |
| | | Pb | 190 | 0.00 | 0.31 | 0.04 | 0.00 | 0.06 |
| | | Zn | 190 | 0.00 | 0.65 | 0.03 | 0.01 | 0.08 |
| | | In | 190 | 0.00 | 0.42 | 0.03 | 0.01 | 0.08 |
| | | AuEq | 190 | 0.00 | 3.39 | 0.58 | 0.36 | 0.60 |
| Zone 51 | Low Grade | Au | 385 | 0.01 | 1.46 | 0.18 | 0.05 | 0.22 |
| | | Ag | 385 | 0.00 | 132.34 | 9.96 | 223.19 | 14.94 |
| | | Pb | 385 | 0.00 | 4.75 | 0.17 | 0.09 | 0.30 |
| | | Zn | 385 | 0.00 | 2.39 | 0.29 | 0.10 | 0.31 |
| | | In | 385 | 0.00 | 108.66 | 2.73 | 111.08 | 10.54 |
| | | AuEq | 385 | 0.04 | 5.64 | 0.62 | 0.30 | 0.55 |

Figure 14-8: Sample Length Histogram



14.6.3 Capping Analysis

Composited assay data was examined to assess the impact of high-grade assays in the database which could result in possible over-estimation of the resource estimate. To determine if capping of the higher grades may be required a log histogram and cumulative probability “ragged tail” plot was generated for each of the metals being estimated. Given that some zones have limited drilling, statistical capping was not possible. Therefore, grade capping for each element was conducted globally, rather than on a zone-by-zone basis. Based upon the capping analysis, the following conclusions were gathered for each metal.

14.6.3.1 Au Capping Analysis

- The gold log probability plot (Figure 14-9) shows a linear trend until a grade of approximately 20 g/t, at which point a break or inflection in the data is observed.
- An overall log-normal distribution (Figure 14-10) is observed with a potential outlier samples above 20 g/t gold.

Figure 14-9: Au Log Probability Plot

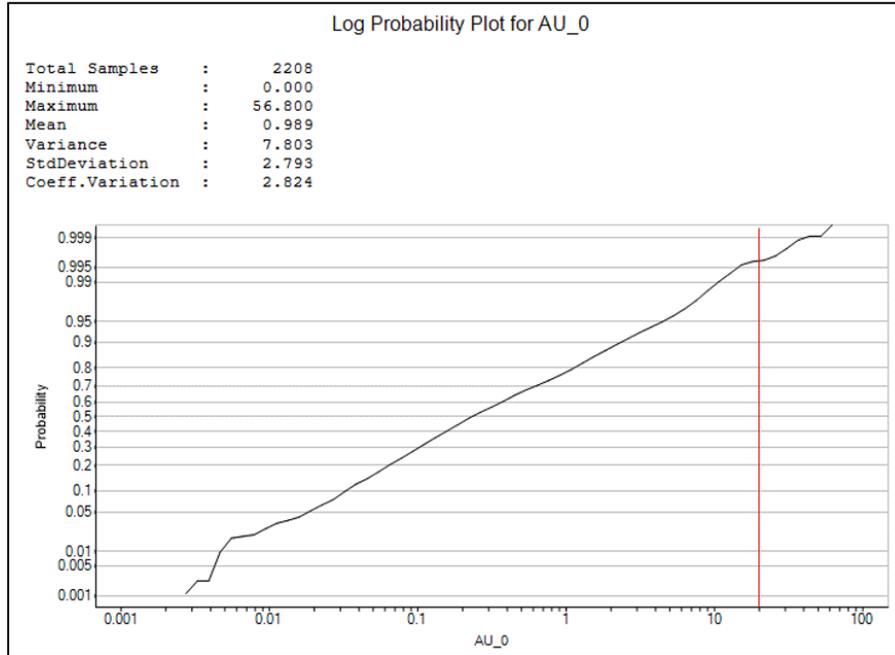
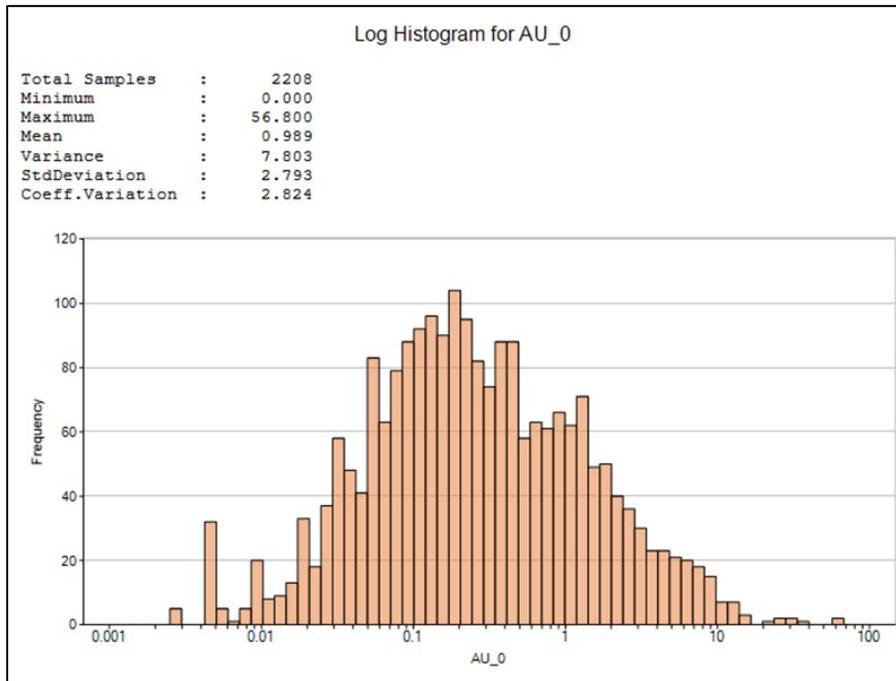


Figure 14-10: Au Log Histogram Plot



14.6.3.2 Ag Capping Analysis

- The silver log probability plot shows a linear trend until approximately 300 g/t Ag, at which point a break is observed.
- When plotted on a log histogram plot, silver grades display an overall log normal distribution with a minor positive skewness. The two histogram spikes which occur at 0.02 g/t Ag and 0.2 g/t represent variations in historical detection limits for silver assays. These are deemed non-material to the dataset.

Figure 14-11: Ag Log Probability Plot

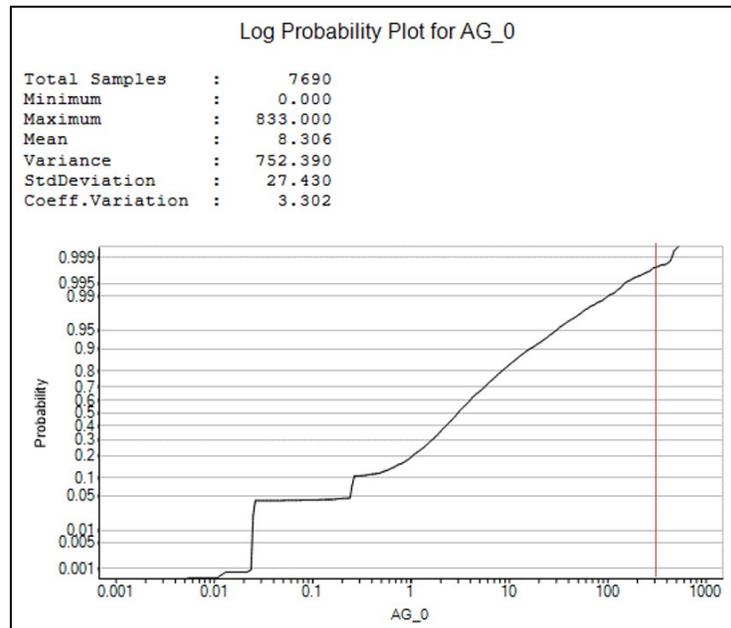
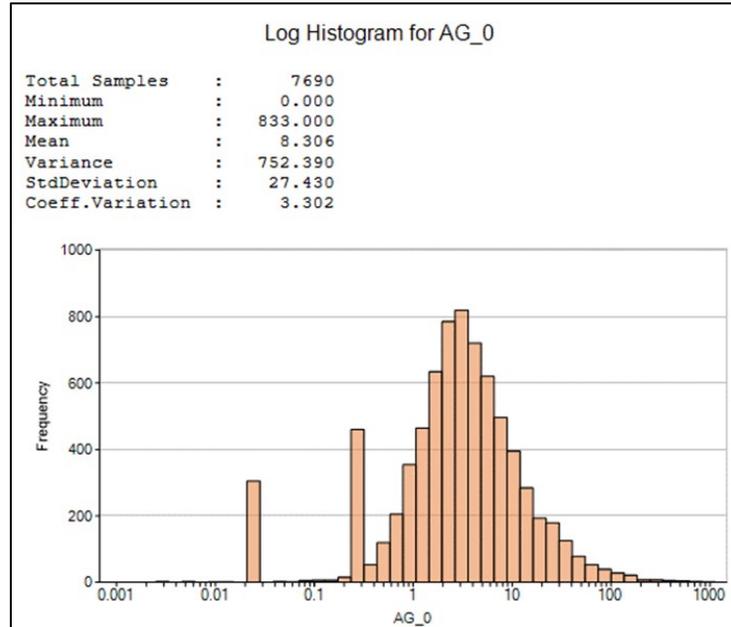


Figure 14-12: Ag Log Histogram Plot



14.6.3.3 Pb Capping Analysis

- The lead log probability plot displays a relatively linear trend with a minor inflection occurring at approximately 6% lead (Figure 14-13).
- A log histogram for lead assays display an overall log normal distribution with a minor negative skewness.

Figure 14-13: Pb Lead Probability Plot

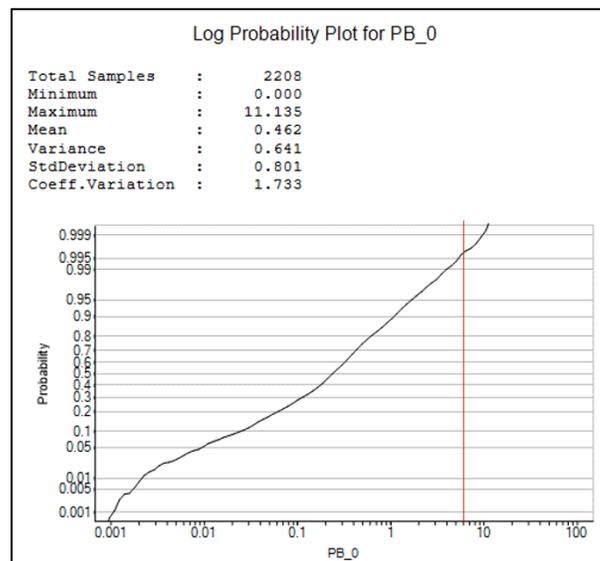
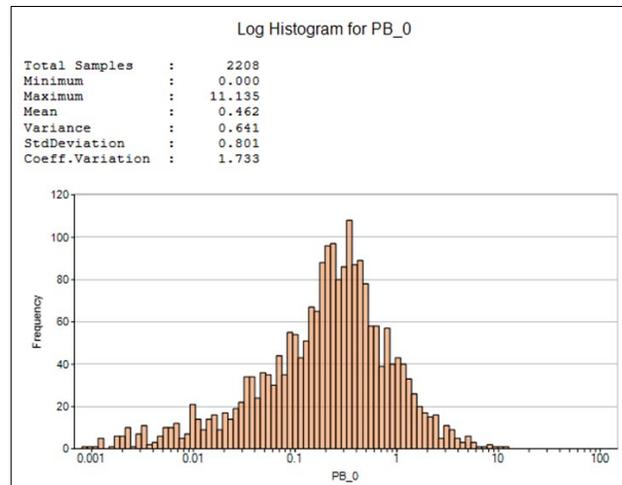


Figure 14-14: Pb Log Histogram Plot



14.6.3.4 Zn Capping Analysis

- The zinc log probability plot displays a relatively linear trend with a minor inflection occurring at approximately 15% zinc (Figure 14-15).
- A log histogram of zinc (Figure 14-16) assays shows a bimodal distribution with a negative skewness. The lower grade portion of the bimodal distribution is attributed to result from Zone 34 which is notably less endowed with zinc mineralization.

Figure 14-15: Zn Log Probability Plot

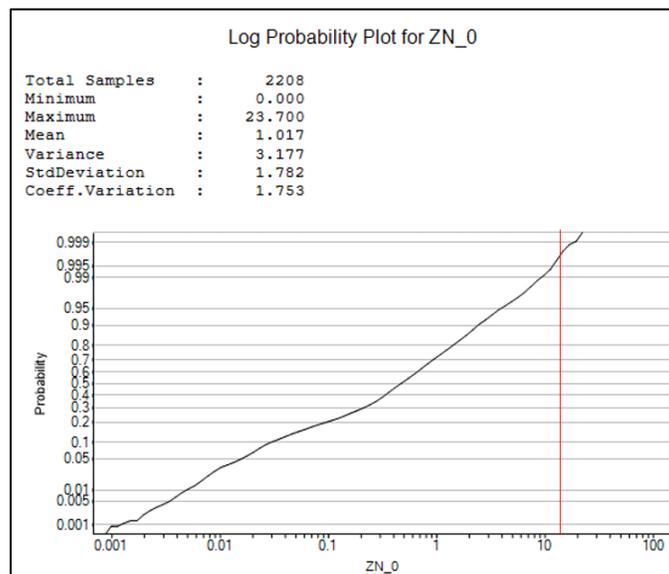
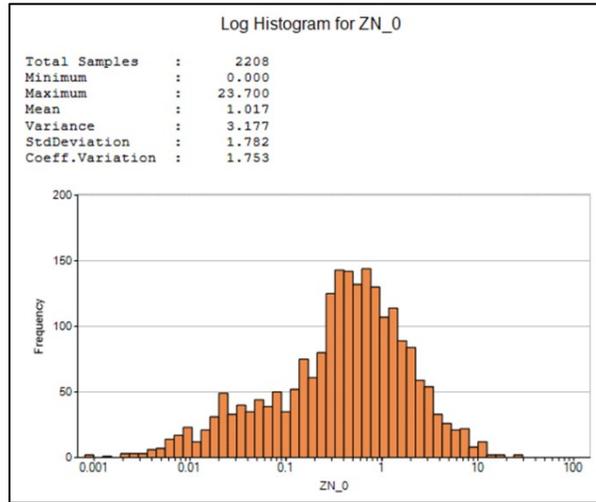


Figure 14-16: Zn Log Histogram Plot



14.6.3.5 In Capping Analysis

- The indium log probability plot displays a relatively linear trend with a notable inflection occurring at approximately 450 g/t In (Figure 14-17).
- A log histogram plot of indium (Figure 14-17) exhibits log normal distribution with a slight positive skewness and a spike at approximately 0.1 g/t In. This spike is attributed to a dataset which has been subjected to more selective indium sampling, along with advances in indium analytical detection limits over the course of the project.

Figure 14-17: In Log Probability Plot

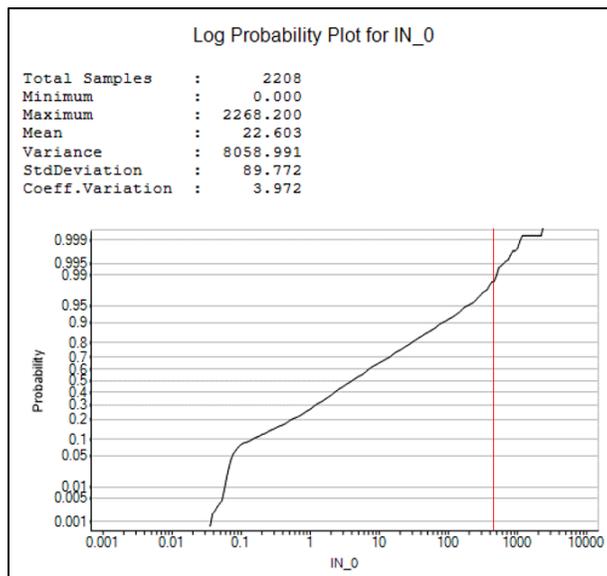
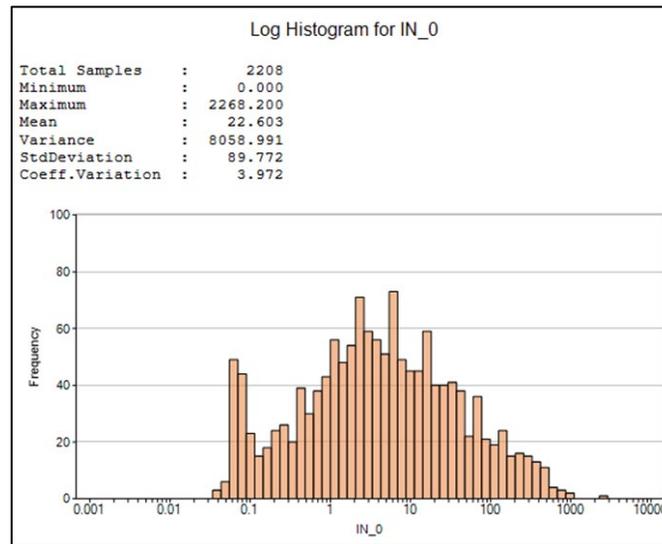


Figure 14-18: In Log Histogram Plot



In addition to the above statistical methods, the spatial distribution of the samples was reviewed to determine if the population of anomalous samples are in proximity and may represent a sub-set within the data. Based on this review, no sub-populations of samples were identified.

Table 14-8 shows a summary of the top cuts that were applied to the various metals.

Table 14-8: San Roque Grade Capping

| Field | Number of Samples | Samples Capped | Capping Value | Average Capped Value | % Capped |
|-------|-------------------|----------------|---------------|----------------------|----------|
| Au | 5274 | 8 | 20 g/t | 34.56 g/t | 0.15 |
| Ag | 5274 | 14 | 300 g/t | 485.37g/t | 0.26 |
| Pb | 5274 | 6 | 6% | 8.95% | 0.11 |
| Zn | 5274 | 4 | 15% | 0.20% | 0.07 |
| In | 5274 | 21 | 450 g/t | 684.69 g/t | 0.4 |

14.6.4 Variogram Assessment

Attempts to generate directional sample variograms were calculated along horizontal azimuths of 0, 30, 60, 90, 120, 150, 180, 210, 240, 270, 300, and 330 degrees in Datamine Studio RM. Downhole variograms were also attempted in order to determine the nugget effect. Based upon the results of the variography it was not possible to obtain any meaningful variograms. This can indicate a high degree of grade variability within the mineralization sampled on the Project, the presence of an isotropic variogram, or a result of the various orientations of the mineralized domains.

14.6.5 Block Size Determination

Individual block models were established in Datamine RM for the discreet mineral zones using one parent model as the origin. The model was not rotated.

Drill spacing varies from 5 m to 150 m within each zone, with the majority of Del Indio holes tightly spaced from 50 to 100 m. A dimension of 5 x 5 x 5 m was used to define the parent blocks. To accommodate the local wireframe anisotropies and high-grade domains, each parent block was subcelled to 1 x 1 x 1 m blocks. This sub-celling allows blocks to more accurately fill the volume of the wireframes. Estimation on each block was completed on the parent blocks and the grades assigned to the sub-cell blocks.

Locally, the trenching surveys did not match the provided topography, with trenches occasionally plotting above the topographic surface. To allow the trench data to be used in the interpolation process, trenches located above topography were captured within the zone wireframes. To avoid any overestimate of material of resources, surface “air” blocks were generated during the block modelling process and flagged with a unique identifier, prior to being superimposed over the top of the mineralization model. Once combined, any mineralized blocks located above topography also contained the “air block” identifier. Any blocks with this identifier were deleted, thereby leaving only the interpolated sub-surface mineralization.

Table 14-9: San Roque Parent Block Model Parameters

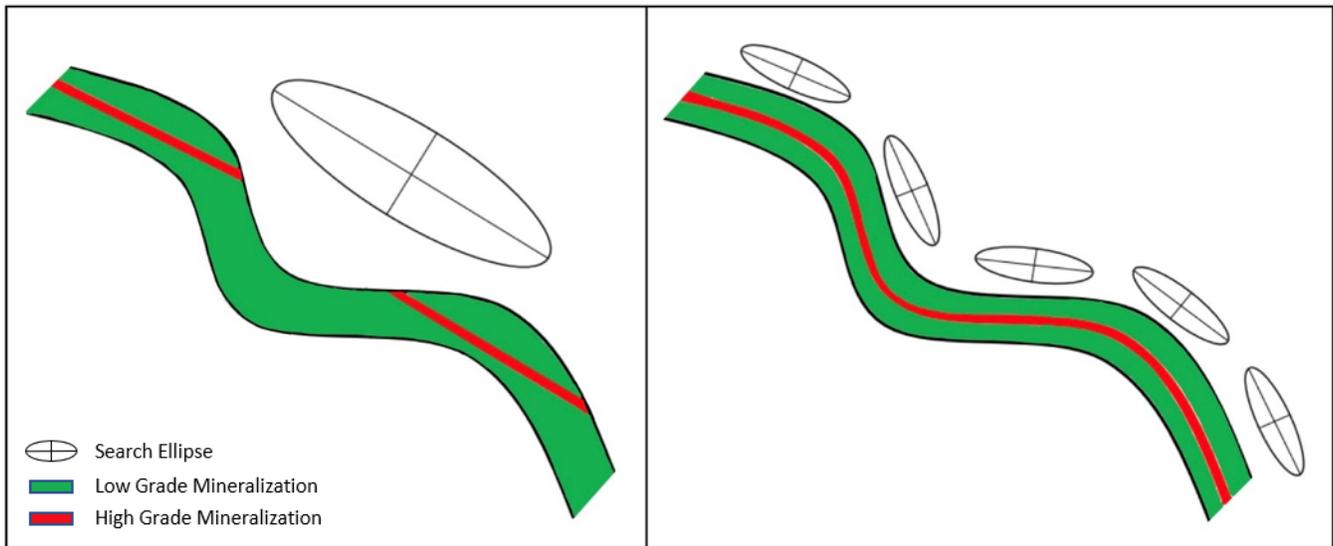
| Origin | | | Cell Size | | | Number of Cells | | |
|----------|----------|----------|-----------|------|------|-----------------|-----|----|
| X Origin | Y Origin | Z Origin | XINC | YINC | ZINC | NX | NY | NZ |
| 3514147 | 5484100 | -176.743 | 5 | 5 | 5 | 867 | 843 | 79 |

14.6.6 Dynamic Anisotropy

The interaction between the sub-vertically oriented mineralized feeder structures and localized gently dipping mineralized stock-worked tuff beds dictates that a single search ellipse would not truly reflect the distribution of mineralization within the zones. To accommodate the changing orientation of the domain, dynamic anisotropy was utilized to better represent continuous mineralization along the mineralized host rock.

Dynamic anisotropy is a function in Datamine RM that permits the search ellipse orientation to be continuously adjusted to match the tangent of the average orientation of the mineralized zone to mimic curvature or folding structures (Figure 14-9). This allows the search volume to be oriented to follow the trend of mineralization. The azimuth of the major and semi-major axes and the search dimensions remained unchanged within the search ellipse.

Figure 14-19: Schematic of Dynamic Anisotropy



14.6.7 Search Parameters

The interpolation plan of the San Roque resource estimation was completed using the following methods: nearest neighbor (NN), inverse distance squared (ID^2), and inverse distance cubed (ID^3).

The estimations were designed as a three-pass system which were run independently within each individual wireframe using the capped and composited data constrained by the wireframe. Table 14-10 below summarizes search distances and rotations for estimating a block as well as minimum and maximum number of composites required.

Table 14-10: San Roque Search Ellipse Parameters

| Pass Number | Zone | Search Distance | | | Rotation | | | Number of Composites | | |
|-------------|-----------|-----------------|----|----|----------|----|----|----------------------|-----|--------------------|
| | | X | Y | Z | Z | X | Z | Min | Max | Max per Drill hole |
| Pass 1 | Supergene | 25 | 25 | 5 | 237 | 14 | 12 | 12 | 16 | 4 |
| | Hypogene | 25 | 25 | 5 | 237 | 14 | 12 | 12 | 16 | 4 |
| Pass 2 | Supergene | 50 | 50 | 10 | 237 | 14 | 12 | 8 | 20 | 4 |
| | Hypogene | 50 | 50 | 10 | 237 | 14 | 12 | 8 | 20 | 4 |
| Pass 3 | Supergene | 75 | 75 | 15 | 237 | 14 | 0 | 4 | 20 | 4 |
| | Hypogene | 75 | 75 | 15 | 237 | 14 | 0 | 4 | 20 | 4 |

14.6.8 Mineral Resource Classification Parameters

The Inferred Mineral Resource Estimate presented in this Technical Report is prepared and disclosed in accordance with all disclosure requirements for mineral resources set out in the NI 43-101 Standards of Disclosure for Mineral Projects (2011). The classification of the updated mineral resource is consistent with CIM Definition Standards - For Mineral Resources and Mineral Reserves (2014), including the critical requirement that all mineral resources “have reasonable prospects for eventual economic extraction”.

A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth’s crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction.

The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling.

Inferred Mineral Resource

An Inferred Mineral Resource is the part of a Mineral Resource for which quantity and grade or quality are estimated on limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.

An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.

An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101.

There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource.

14.7 Mineral Resource Statement

The general requirement that all mineral resource resources have “reasonable prospects for eventual economic extraction” implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade, while accounting for possible extraction scenarios and processing recoveries. To meet this requirement, Tetra Tech considers that the San Roque Deposit mineralization is amenable for open pit extraction.

To test the economic potential of the modeled mineralization, the reported mineral resources have been analyzed by, and constrained to, conceptual pit shells generated in Whittle™ using the Lersch-Grossman algorithm. In addition to the mineralization constrained within the Whittle™ shells, the geological continuity of the zones, the near surface nature of the mineralization, and the Property’s proximity to local infrastructure has been assessed. A review of currently operating mines with similar mineralization also suggests reasonable processing recoveries can be

achieved. Based on these considerations, the pit constrained mineralization presented in Table 14-11 is deemed to have reasonable prospects for eventual economic extraction.

The reader is cautioned that the results from the pit optimization are used solely for testing the “reasonable prospects for eventual economic extraction” by an open pit and do not represent an attempt to estimate mineral reserves. There are no mineral reserves on the Property. The results are used as a guide to assist in the preparation of a mineral resource statement and to select an appropriate resource reporting cut-off grade.

14.7.1 Resource Classification

All resources calculated for the San Roque deposit are classified as Inferred, based upon the following reasons:

- The MIM portion of the database cannot be fully verified;
- A moderate to high degree of grade variability has been observed between close spaced drill holes;
- Lack of down hole surveys for many holes within the database;
- Preliminary bottle roll testing for Au and Ag which was not balanced and therefore, could not be relied upon;
- Lack of metallurgical test work for Zn, Pb and In mineralization;
- Insufficient density data for mineralized zones and density database.

Although Inferred Resources have a lower confidence than Indicated or Measured Resources, it is reasonably expected that the majority of the Inferred Resources could be upgraded to Indicated subject to rectifying the items listed above.

14.7.2 Mineral Resource Tabulation

The resource reported as of July 22, 2019, has been tabulated in terms of a gold equivalent (AuEq g/t) cut-off grade, and rounded to the nearest thousand tonnes due to the nature of the uncertainty of the resource classification.

The Mineral Resource Estimate has been constrained to a set of four preliminary Whittle pit shells and the economic potential tested using parameters outlined below. Table 14-11 presents the constrained Mineral Resource Estimate results, and Figure 14-20 visually shows the zones tabulated in the mineral resource estimate along with the conceptual Whittle pits used to constrain the mineral resource estimate.

No known environmental, permitting, legal, title, taxation, socio-economic, marketing, or other relevant issues are known to the QP that may affect the estimate of the mineral resource. Mineral reserves can only be estimated based on an economic evaluation that is used in a Preliminary Feasibility Study or a Feasibility Study of a mineral project; thus, no Mineral Reserves are estimated for the Project. As per NI 43-101, Mineral Resources, which are not Mineral Reserves, do not have to demonstrate economic viability.

Table 14-11: San Roque Mineral Resource Estimate (effective July 22, 2019)

| Resource Classification | Zone | Cutoff (g/t) | Quantity (tonnes) | Grades | | | | | |
|------------------------------------------|---------------------------|---------------------|-------------------|-------------|-------------|--------------|-------------|-------------|--------------|
| | | | | AUEQ | AU | AG | PB | ZN | IN |
| | | | | g/t | g/t | g/t | % | % | g/t |
| Oxide | | | | | | | | | |
| Inferred (Oxide) | <i>Del Indio/Griselda</i> | 0.5 AuEq | 4,461,900 | 1.03 | 0.34 | 5.09 | 0.38 | 0.53 | 11.20 |
| | <i>Zone 25</i> | 0.5 AuEq | 308,200 | 1.45 | 0.77 | 33.62 | 0.13 | 0.22 | 2.23 |
| | <i>Zone 34</i> | 0.5 AuEq | 1,701,500 | 1.95 | 1.75 | 11.83 | 0.05 | 0.04 | 0.01 |
| | <i>Zone 51</i> | 0.5 AuEq | 649,900 | 1.24 | 0.66 | 14.37 | 0.30 | 0.28 | 6.45 |
| Total Inferred Oxide | | 0.5 AuEq | 7,121,500 | 1.29 | 0.72 | 8.78 | 0.28 | 0.37 | 7.70 |
| Sulphide | | | | | | | | | |
| Inferred (Sulphide) | <i>Del Indio/Griselda</i> | 0.6 AuEq | 19,114,500 | 1.47 | 0.33 | 8.95 | 0.46 | 1.03 | 14.92 |
| | <i>Zone 25</i> | 0.6 AuEq | 1,884,500 | 1.48 | 0.48 | 33.03 | 0.22 | 0.55 | 11.09 |
| | <i>Zone 34</i> | 0.6 AuEq | 603,000 | 1.53 | 1.09 | 25.07 | 0.06 | 0.10 | 0.10 |
| | <i>Zone 51</i> | 0.6 AuEq | 4,167,900 | 1.35 | 0.49 | 20.70 | 0.33 | 0.55 | 7.31 |
| Total Inferred Sulphide | | 0.6 g/t AuEq | 25,769,900 | 1.45 | 0.39 | 12.99 | 0.41 | 0.89 | 13.06 |
| Combined | | | | | | | | | |
| Inferred (Oxide + Sulphide) | <i>Del Indio/Griselda</i> | 0.58 AuEq | 23,576,400 | 1.39 | 0.33 | 8.22 | 0.45 | 0.93 | 14.21 |
| | <i>Zone 25</i> | | 2,192,700 | 1.47 | 0.52 | 33.11 | 0.21 | 0.50 | 9.84 |
| | <i>Zone 34</i> | | 2,304,500 | 1.84 | 1.58 | 15.29 | 0.05 | 0.05 | 0.03 |
| | <i>Zone 51</i> | | 4,817,800 | 1.34 | 0.51 | 19.85 | 0.33 | 0.51 | 7.20 |
| Total Oxide and Sulphide Combined | | | 32,891,400 | 1.42 | 0.46 | 12.08 | 0.39 | 0.78 | 11.90 |

1. All numbers are rounded. Overall numbers may not be exact due to rounding.

2. A cut-off value of 0.50g/t AuEq and 0.60g/t AuEq was used for Oxide and Sulphide based mineralization respectively.

3. Gold equivalent has been calculated using the following formula: $AuEq = Au \text{ grade} + (Ag \text{ grade} / 74.5) + (Pb \text{ grade} / 19,565.2) + (Zn \text{ grade} / 15,716.3) + (In \text{ grade} / 117.3)$.

4. The following metal prices were used in the AuEq calculation: Au: \$1,267/oz, Ag: \$17/oz, Pb: \$1.0/lb, Zn: \$1.2/lb, In: \$10/oz.

5. Bulk density of 2.63 for mineralized domains

6. Conforms to NI 43-101, Companion Policy 43-101CP, and the CIM Definition Standards for Mineral Resources and Mineral Reserves.

Inferred Resources have been estimated from geological evidence and limited sampling and must be treated with a lower level of confidence than Measured and Indicated Resources.

Table 14-12: San Roque Mineral Resource Estimate, Contained Metal Summary (effective July 22, 2019)

| Resource Classification | Zone | Cutoff (g/t) | Quantity (tonnes) | Contained Metal | | | | | |
|------------------------------------------|---------------------------|---------------------|-------------------|------------------|----------------|-------------------|--------------------|--------------------|-------------------|
| | | | | AuEq | AU | Ag | Pb | Zn | In |
| | | | | Oz | Oz | Oz | lb | lb | Oz |
| Oxide | | | | | | | | | |
| Inferred (Oxide) | <i>Del Indio/Griselda</i> | 0.5 AuEq | 4,461,900 | 148,100 | 48,600 | 730,200 | 37,497,100 | 51,788,700 | 1,606,800 |
| | <i>Zone 25</i> | 0.5 AuEq | 308,200 | 14,300 | 7,600 | 333,100 | 866,300 | 1,518,700 | 22,000 |
| | <i>Zone 34</i> | 0.5 AuEq | 1,701,500 | 106,800 | 95,500 | 647,200 | 1,789,100 | 1,392,800 | 600 |
| | <i>Zone 51</i> | 0.5 AuEq | 649,900 | 25,900 | 13,900 | 300,300 | 4,243,200 | 3,987,000 | 134,700 |
| Total Inferred Oxide | | 0.5 AuEq | 7,121,500 | 295,200 | 165,600 | 2,010,800 | 44,395,700 | 58,687,200 | 1,764,200 |
| Sulphide | | | | | | | | | |
| Inferred (Sulphide) | <i>Del Indio/Griselda</i> | 0.6 AuEq | 19,114,500 | 904,700 | 204,900 | 5,497,800 | 194,945,800 | 433,820,600 | 9,168,000 |
| | <i>Zone 25</i> | 0.6 AuEq | 1,884,500 | 89,500 | 29,000 | 2,001,300 | 9,347,400 | 22,647,200 | 671,700 |
| | <i>Zone 34</i> | 0.6 AuEq | 603,000 | 29,600 | 21,200 | 486,100 | 816,500 | 1,310,200 | 1,900 |
| | <i>Zone 51</i> | 0.6 AuEq | 4,167,900 | 180,900 | 65,900 | 2,774,700 | 30,283,500 | 50,465,100 | 980,200 |
| Total Inferred Sulphide | | 0.6 g/t AuEq | 25,769,900 | 1,289,100 | 339,000 | 11,438,900 | 254,711,900 | 548,853,700 | 11,443,300 |
| Combined | | | | | | | | | |
| Inferred (Oxide + Sulphide) | <i>Del Indio/Griselda</i> | 0.58 AuEq | 23,576,400 | 1,052,800 | 253,500 | 6,228,100 | 232,442,900 | 485,609,300 | 10,774,800 |
| | <i>Zone 25</i> | | 2,192,700 | 103,900 | 36,600 | 2,334,400 | 10,213,700 | 24,165,900 | 693,800 |
| | <i>Zone 34</i> | | 2,304,500 | 136,400 | 116,700 | 1,133,300 | 2,605,600 | 2,703,000 | 2,500 |
| | <i>Zone 51</i> | | 4,817,800 | 206,800 | 79,800 | 3,074,900 | 34,526,700 | 54,452,100 | 1,114,900 |
| Total Oxide and Sulphide Combined | | | 32,891,400 | 1,499,900 | 486,600 | 12,770,700 | 279,788,900 | 566,930,300 | 12,586,000 |

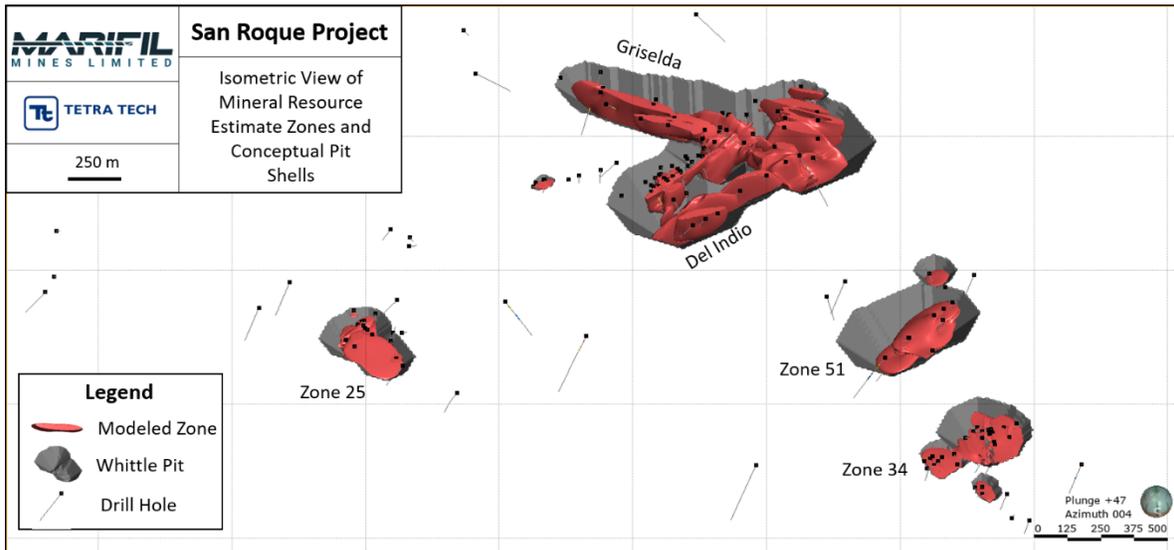
- All numbers are rounded. Overall numbers may not be exact due to rounding.
- A cut-off value of 0.50g/t AuEq and 0.60g/t AuEq was used for Oxide and Sulphide based mineralization respectively.
- Gold equivalent has been calculated using the following formula: $AuEq = Au \text{ grade} + (Ag \text{ grade} / 74.5) + (Pb \text{ grade} / 19,565.2) + (Zn \text{ grade} / 15,716.3) + (In \text{ grade} / 117.3)$.
- The following metal prices were used in the AuEq calculation: Au: \$1,267/oz, Ag: \$17/oz, Pb: \$1.0/lb, Zn: \$1.2/lb, In: \$10/oz.
- Bulk density of 2.63 for mineralized domains
- Conforms to NI 43-101, Companion Policy 43-101CP, and the CIM Definition Standards for Mineral Resources and Mineral Reserves.
Inferred Resources have been estimated from geological evidence and limited sampling and must be treated with a lower level of confidence than Measured and Indicated Resources.

The tabulated resource in Table 14-11 is reported at a 0.5 g/t cut-off for the oxide horizon, and 0.6 g/t for the sulphide horizon. The cut-off calculation utilized the following assumptions:

- Open pit with heap leaching and sulfide flotation processing;
- Mining costs of US\$1.50/t;
- Milling costs of US\$10.00/t and US\$16.00/t respectively for oxide and sulphide;
- Gold price of US\$1,267.00/oz;
- US\$5.00/t G&A;
- $AuEq = Au \text{ grade} + (Ag \text{ grade} / 74.5) + (Pb \text{ grade} / 19,565.2) + (Zn \text{ grade} / 15,716.3) + (In \text{ grade} / 117.3)$;
- AuEq calculated using three year trailing average metal prices of US\$1,267.00/oz Au, US\$17.00/oz Ag, US\$1.00/lb Pb, US\$1.20/lb Zinc, and US\$10.80/oz In;

- 70% recovery for oxide hosted metals and 80% recovery for all metals in the sulphide mineralization recognizing the lack of metallurgical recovery test results for all metals; and
- Bulk density has been applied to all materials as 2.63 t/m³.

Figure 14-20: San Roque Mineralized Zone and Conceptual Whittle Pits



14.8 Validation

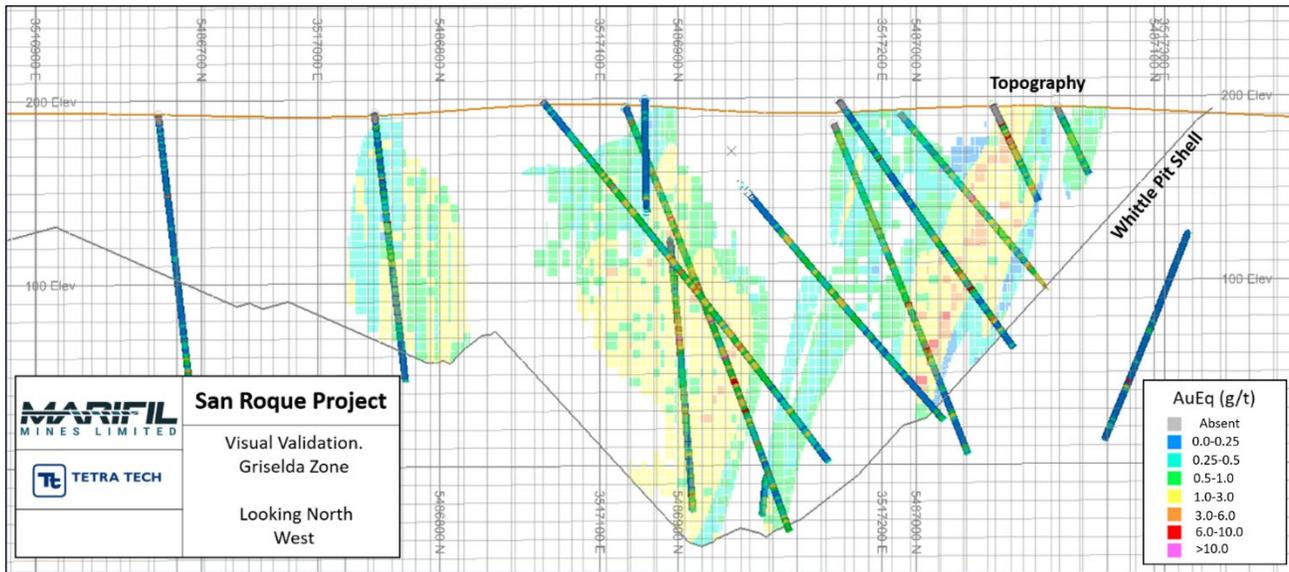
The San Roque model was validated by three methods:

- Visual comparison of colour-coded block model grades with composite grades on section and plan;
- Comparison of the global mean block grades for NN, ID², ID³ and composites; and
- Swath plots in both plan and sectional views.

14.8.1 Visual Validation

The visual comparison of block model grades against composite sample grades for each of the zones shows a reasonable correlation between the values. No significant discrepancies were apparent between the sections and plans reviewed, yet some grade smoothing is apparent (Figure 14-21).

Figure 14-21: Visual Validation of Mineral Resource Estimate



14.8.2 Global Comparison

The global block model statistics for the ID² model were compared to the global ID³ and NN values as well as the composite capped data. Table 14-13 shows this comparison of the global estimates for the three estimation method calculations. In general, there is agreement between ID² model, ID³ model, and NN model. Larger discrepancies are reflected as a result of sample declustering or lower drill density in some portions of the model. There is a degree of smoothing apparent when compared to the diamond drill statistics. Comparisons were made using all blocks at a 0 g/t AuEq cut-off.

Table 14-13: Global Estimate Comparisons

| AuEq | | | | | |
|----------------------|------------|------------------|------|------|------|
| Zone | Domain | Capped Composite | NN | ID2 | ID3 |
| Del Indio / Griselda | Low Grade | 0.65 | 0.51 | 0.57 | 0.57 |
| | High Grade | 2.24 | 1.32 | 1.64 | 1.62 |
| 25 | Low Grade | 0.45 | 0.38 | 0.46 | 0.45 |
| | High Grade | 2.06 | 0.82 | 1.37 | 1.34 |
| 34 | Low Grade | 0.58 | 0.40 | 0.52 | 0.51 |
| | High Grade | 2.79 | 1.11 | 1.67 | 1.62 |
| 51 | Low Grade | 0.62 | 0.50 | 0.56 | 0.56 |
| | High Grade | 1.80 | 1.00 | 1.24 | 1.23 |

| Au | | | | | |
|----------------------|------------|----------------------|------|------|------|
| Zone | Domain | DDH Capped Composite | NN | ID2 | ID3 |
| Del Indio / Griselda | Low Grade | 0.14 | 0.10 | 0.11 | 0.11 |
| | High Grade | 0.70 | 0.39 | 0.47 | 0.47 |
| 25 | Low Grade | 0.17 | 0.13 | 0.13 | 0.13 |
| | High Grade | 1.11 | 0.31 | 0.48 | 0.46 |
| 34 | Low Grade | 0.47 | 0.30 | 0.39 | 0.39 |
| | High Grade | 2.46 | 0.91 | 1.40 | 1.35 |
| 51 | Low Grade | 0.18 | 0.16 | 0.17 | 0.17 |
| | High Grade | 0.72 | 0.39 | 0.53 | 0.52 |

| Ag | | | | | |
|----------------------|------------|----------------------|-------|-------|-------|
| Zone | Domain | DDH Capped Composite | NN | ID2 | ID3 |
| Del Indio / Griselda | Low Grade | 4.09 | 3.79 | 3.97 | 3.95 |
| | High Grade | 12.73 | 7.74 | 10.61 | 10.48 |
| 25 | Low Grade | 6.93 | 5.07 | 6.09 | 5.93 |
| | High Grade | 41.84 | 16.65 | 30.37 | 29.81 |
| 34 | Low Grade | 4.82 | 3.80 | 5.46 | 5.35 |
| | High Grade | 20.26 | 10.54 | 15.48 | 14.73 |
| 51 | Low Grade | 9.96 | 8.01 | 8.36 | 8.36 |
| | High Grade | 26.28 | 14.00 | 18.50 | 18.22 |

| Pb | | | | | |
|----------------------|------------|----------------------|------|------|------|
| Zone | Domain | DDH Capped Composite | NN | ID2 | ID3 |
| Del Indio / Griselda | Low Grade | 0.23 | 0.19 | 0.21 | 0.21 |
| | High Grade | 0.56 | 0.39 | 0.47 | 0.47 |
| 25 | Low Grade | 0.12 | 0.10 | 0.14 | 0.13 |
| | High Grade | 0.15 | 0.13 | 0.18 | 0.17 |
| 34 | Low Grade | 0.04 | 0.03 | 0.04 | 0.04 |
| | High Grade | 0.06 | 0.05 | 0.06 | 0.06 |
| 51 | Low Grade | 0.17 | 0.14 | 0.16 | 0.16 |
| | High Grade | 0.43 | 0.24 | 0.25 | 0.25 |

| Zn | | | | | |
|----------------------|------------|----------------------|------|------|------|
| Zone | Domain | DDH Capped Composite | NN | ID2 | ID3 |
| Del Indio / Griselda | Low Grade | 0.45 | 0.37 | 0.41 | 0.41 |
| | High Grade | 1.29 | 0.82 | 0.99 | 0.98 |
| 25 | Low Grade | 0.17 | 0.18 | 0.24 | 0.24 |
| | High Grade | 0.37 | 0.29 | 0.49 | 0.48 |
| 34 | Low Grade | 0.03 | 0.04 | 0.05 | 0.05 |
| | High Grade | 0.05 | 0.05 | 0.06 | 0.06 |
| 51 | Low Grade | 0.29 | 0.24 | 0.27 | 0.27 |
| | High Grade | 0.68 | 0.42 | 0.45 | 0.45 |

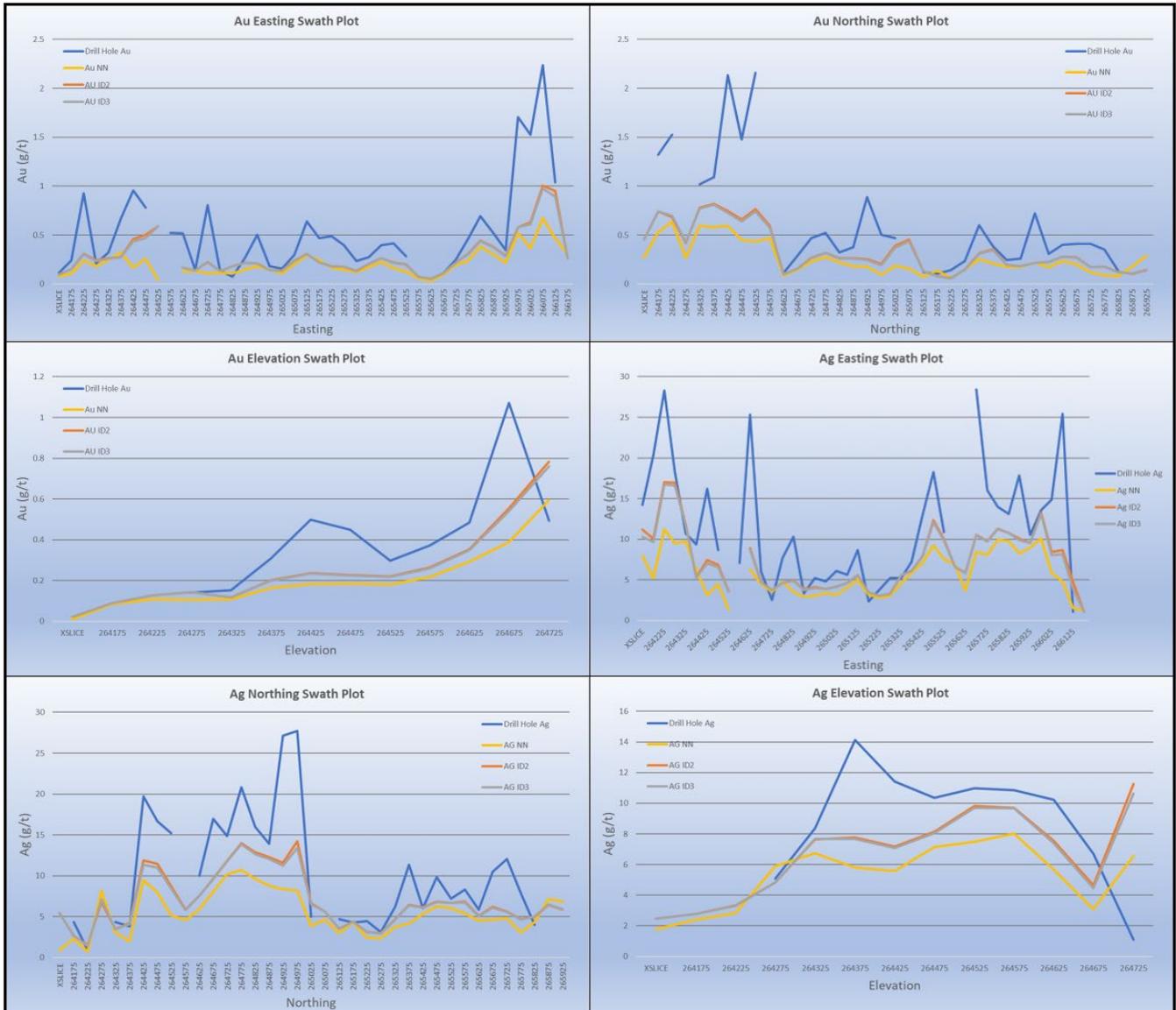
| In | | | | | |
|----------------------|------------|----------------------|-------|-------|-------|
| Zone | Domain | DDH Capped Composite | NN | ID2 | ID3 |
| Del Indio / Griselda | Low Grade | 5.34 | 2.64 | 3.62 | 3.58 |
| | High Grade | 29.58 | 12.28 | 17.65 | 17.40 |
| 25 | Low Grade | 1.60 | 1.59 | 2.86 | 2.79 |
| | High Grade | 8.92 | 3.86 | 10.17 | 9.74 |
| 34 | Low Grade | 0.03 | 0.03 | 0.03 | 0.03 |
| | High Grade | 0.02 | 0.02 | 0.02 | 0.02 |
| 51 | Low Grade | 2.73 | 1.69 | 2.58 | 2.58 |
| | High Grade | 8.55 | 4.02 | 6.19 | 6.07 |

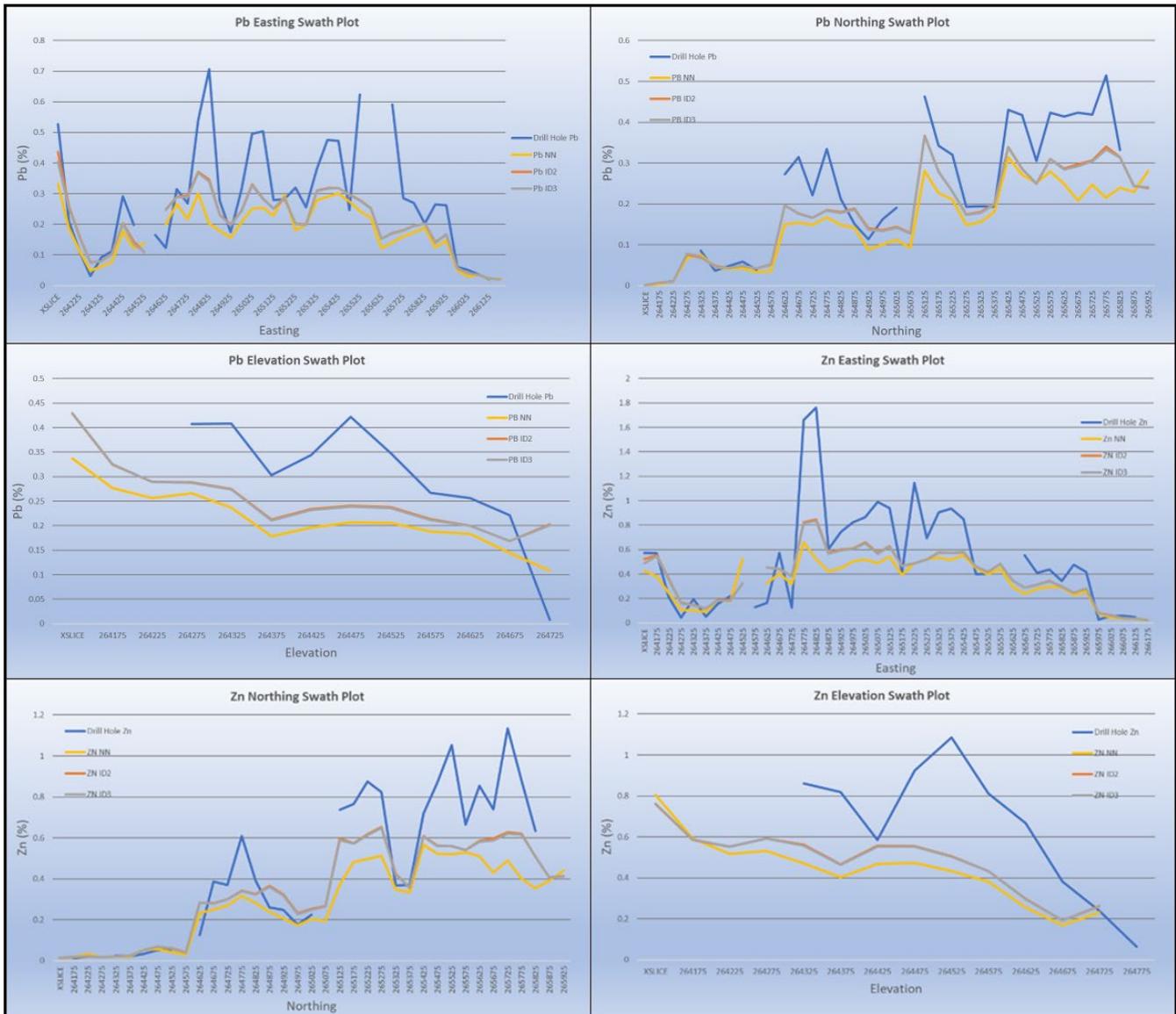
14.8.3 Swath Plots Comparison

Swath plots provide a qualitative method to observe preservation of the input composite grade trends on a spatial basis in the block model results. The data is plotted with average values along discrete intervals along the Cartesian X, Y and Z axis (i.e., easting, northing, and elevation). Input sample data used for these swath plots is composited and capped, resulting in a slightly smoother trend than raw data. However, the sample data can be clustered and may misrepresent areas of high grade mineralization that have been oversampled. The block data is based on the composited and capped data and can also appear clustered due to the creation of sub-blocks. Both datasets have been constrained to the geological and grade shell models.

The block model swaths show good correlation between the ID2, ID3, and NN models, where ID2 and ID3 are less smoothed than the NN model. Overall, all three models are somewhat smoothed in comparison to the average capped and composited grades shown for each section. This is attributed to the regional averaging of capped / composited grades into each block and is a reasonable spatial estimation for the composite sample grades.

Figure 14-22: San Roque Swath Plots

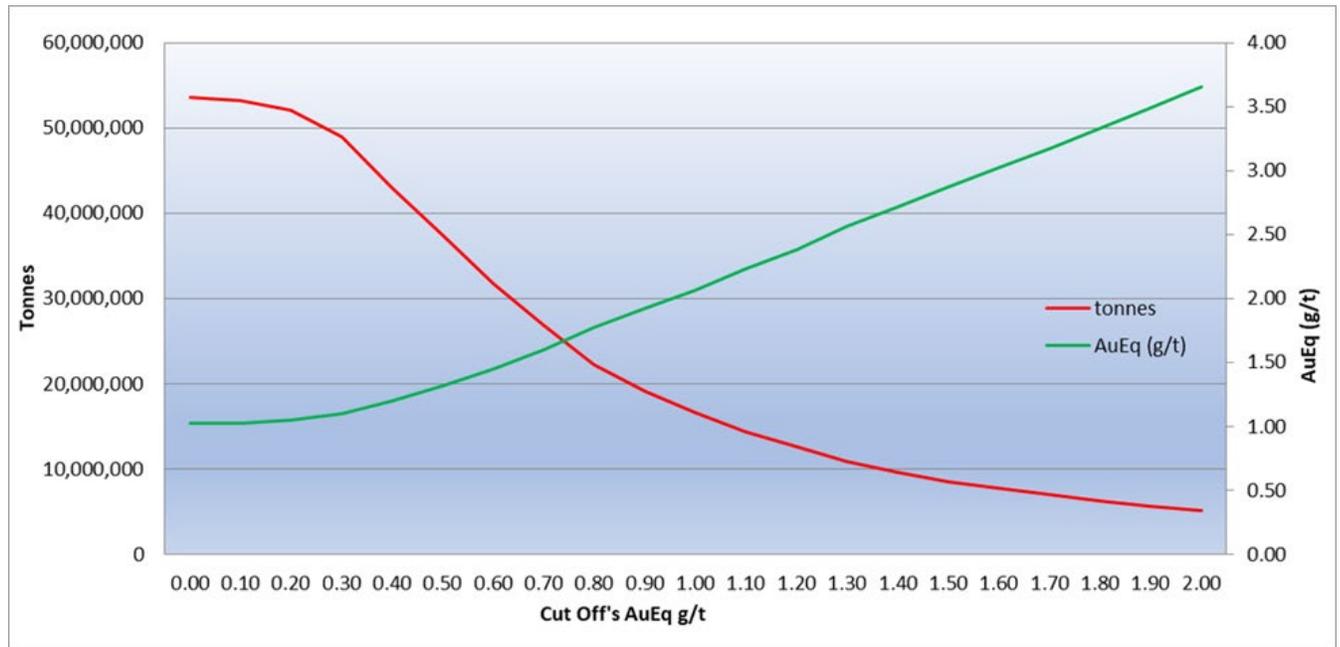




14.9 Grade Tonnage Curves

Figure 14-23 shows the grade-tonnage curves for the San Roque block model. The current mineral resources are reported at a cut-off of 0.5 g/t AuEq for Oxide, and 0.60 g/t AuEq for the Sulphide mineralization.

Figure 14-23: San Roque Grade-Tonnage Sensitivity Curve



15.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

15.1 Environmental Studies

No environmental studies have been completed by Marifil or Minas San Roque S.A. for the San Roque property. All work which has been completed to date has been via the submission of Environmental Impact Assessment Reports (EIA's) which must be submitted to the Environmental Secretary of Rio Negro province for each tenement every two years. The EIA's address surface reclamation activities associated with the exploration programs. Specifically included with the EIS submittals are time elapse photographic records of properly back filled trenches and reclaimed drill sites (before and after photos). Drill site reclamation involves the cleaning out and back filling of any drilling mud pits, and proper disposal of the extracted muck. The EIS also identifies drill hole collars that are plugged with cement, and contains information on any water courses encountered in the drilling. The areas of surface rock and soil samplings are also identified, as well as the number of people involved in the program being reported on. Additionally, the EIA's contains information on planned exploration activities that will involve ground disturbances which if approved allow the Company to proceed with those planned activities.

To the extent of the Company's knowledge, there are at this time no environmental issues that could materially impact its ability to extract the mineral resources of the San Roque property. The project setting is a low lying coastal desert hosting no known protected fauna or flora species that would require any specific environmental or ecological studies before the next phase of the project's development.

The Company has plans to start baseline water sampling throughout the immediate region of the project. It also intends to hire an independent consultant to assess the environmental conditions of the project area in order to establish numerous baseline features such as air quality and species of flora and fauna. Additionally, these studies and associated data will establish the environmental impact that intensive ranching activities has had on the project area.

15.2 Permitting

Going forward, Table 15-1 summarizes the permits that will be needed to advance the San Roque project into mine development and operational phases. The Company has every intention to dutifully follow this path of established permits requirements.

Table 15-1: Future Permit Requirements

| Permit | Permit Translated Name |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Declaración Jurada Ambiental (DJA) Aprobada - Resolución de Aprobación. | Approved Resolution of an Environmental Affidavit |
| Audiencia Pública | Completion of Public Consultation |
| Seguro Ambiental | Environmental Guarantee |
| Planos Aprobados en Colegio de Ingenieros de Rio Negro | Approval of Plans from the Rio Negro College of Engineers |
| Planos sellados Conforme a Obra en Colegio de Ingenieros de Rio Negro | Sealed/stamped plans that conform with the Rio Negro College of Engineers |
| Planos Aprobados (Apto para Construcción) de la Comisión Municipal | Plans approved for construction by the Municipal Commission |
| Certificado de Bomberos de Rio Negro de sistemas contra incendio | Certification of firefighting systems from the Rio Negro fire brigade |
| Concesión de uso de agua | Water Use Concession |
| Vuelco de efluentes | Effluent Discharge |
| Generador de Residuos peligrosos | Hazardous Waste Producer |
| Generador de Residuos domiciliarios | Household Waste Producer |
| Generador de Residuos patogénicos | Pathogenic Waste Producer |
| Certificado de Inscripción en Registro nacional de Precursores Químicos | Certificate of Registration in the National Registry of Chemical Precursors |
| Combustibles. Inscripción en el Registro de Bocas de expendio para Consumo propio | Registration as fuel supplier |
| Combustibles. Inscripción en el Registro de Empresas del Programa Nacional de Control de Pérdidas de Tanques Aéreos de Almacenamiento de Hidrocarburos y sus derivados | Registration in the Registry of Companies of the National Program for the Control of Losses of Aerial Tanks for the Storage of Hydrocarbons and their Derivatives |
| Convenios Vialidad Nacional / Provincial | National / Provincial Highway agreements |
| Permiso de Rescate del Patrimonio Arqueológico y Paleontológico | Rescue of Archaeological or Paleontological artefacts |
| Habilitación radiofrecuencia | Radio communications license |

15.3 Social or Community Impact

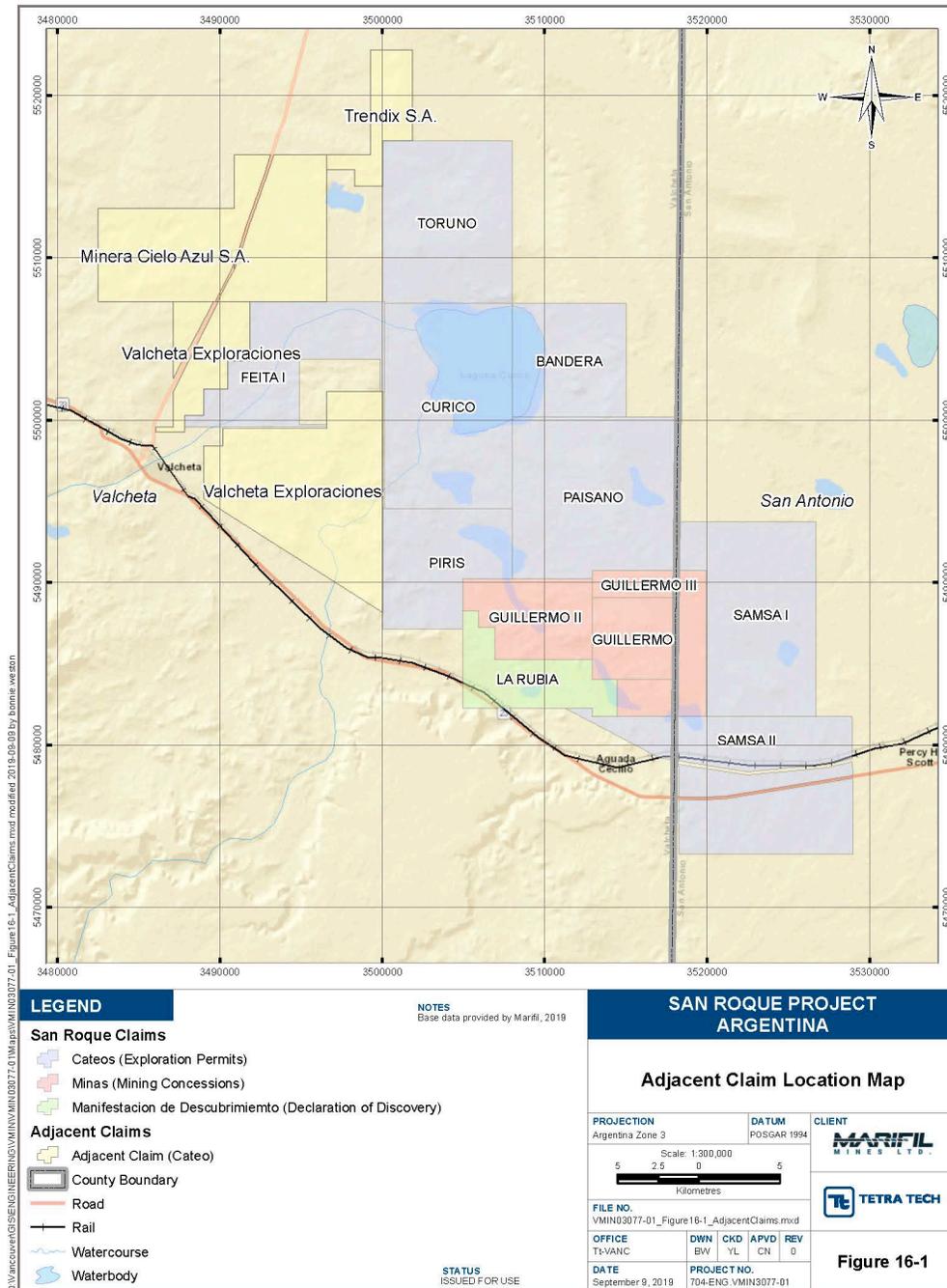
The Company is, at this time, unaware of any adverse social or community requirements which could affect the continued advancement of the San Roque project into a development phase. In past years, operative representatives for the San Roque project have held get acquainted and informational meetings with the provincial Governor, the provincial Secretary of Mines and the city mayors of Valcheta, Las Grutas and San Antonio de Oeste, and as well as nearby ranch owners. These meetings were all positive in nature, and there appears to be a broad political and populace base for support of continuance of the project.

The Company has made it a practice to hire local labor from the village of Aguada de Cecilio, which borders the project, and it has also contributed substantially to the betterment of a children's park and playground in the village.

16.0 ADJACENT PROPERTIES

Four tenements lie adjacent to the west and northwest of the San Roque Property, from three different companies. Valcheta Exploraciones owns two claims, located south and west of Marifil's FEITA 1 Cateo. Minera Cielo Azul S.A. owns a claim north of Marifil's FEITA 1 and west of TORUNO Cateo. The fourth is owned by Trendix S.A. and is north of Marifil's TORUNO Cateo. These four properties are shown below in Figure 16-1.

Figure 16-1: Adjacent Claims to the San Roque Property



17.0 OTHER RELEVANT DATA AND INFORMATION

There is no other additional information or explanation necessary to make the Technical Report understandable and not misleading.

18.0 INTERPRETATIONS AND CONCLUSIONS

The Property is host to four gold bearing mineralized zones (Zone 33 (Del Indio & Griselda), Zone 25, Zone 34, and zone 51) which are contained within an approximately 2 km diameter proposed caldera complex within the Marifil Formation. The Marifil Formation is comprised of a sequence of intercalated Jurassic volcano-sedimentary units underlain by basement schists.

The San Roque Property hosts gold, silver, lead, zinc, and indium mineralization within two styles of vein systems. The first of these are structurally-controlled epithermal polymetallic veins, and the second are broad flat dipping zones comprised of polymetallic quartz stockworks (potentially mantos) which occur as bifurcations from the structurally controlled vein zones.

Past trenching and drilling programs have been used for the delineation of a gold equivalent Mineral Resource Estimate. Zones 25, 33, 34 and 51 are interpreted to remain open on strike. Additional depth extension potential exists for zones which have not been drilled into the basement schist, along with additional potential within the schist. Drill hole MF-DDH-45 which was drilled in Zone 25, intersected gold and zinc mineralization within the basement schist, indicating that mineralized might extend beyond the previously hypothesized contact with the basement units.

The resource was estimated using three interpolation methods: nearest neighbour, inverse distance squared, and inverse distance cubed. No significant bias was observed to exist between the methods. The results of the inverse distance squared method were used for the resource tabulation.

At a cut-off of 0.6 g/t AuEq the Property contains an Inferred Mineral Resource of 0.46 g/t Au, 12.08 g/t Ag, 0.39% Pb, 0.78% Zn totalling 32.9 Million tonnes for a combined grade of 1.42 g/t gold equivalent ("AuEq") for 1,499,900 AuEq ounces. Included within the gold equivalent ounces are 486,600 oz Au, 12,770,700 oz Ag, 279,788,900 lb Pb, 566,830,300 lb Zn, and 12,586,000 oz In.

A preliminary bottle roll test was completed on mineralized drill core from Zone 34, however, the gold and silver recoveries from the cyanidation leach test could not be balanced. Consequently, additional metallurgical test work is recommended to better understand the amenability of the metals to different extraction methods.

The mining tenements which host all known mineralization on the property including the estimated resources reported herein are the three minas of Guillermo, Guillermo II and Guillermo III. These three mineral exploration and exploitation concessions have no effective expiry date and are valid until a mining operation is complete and all the mineral resources are extracted.

The project is located with close proximity to well developed and accessible infrastructure, including high voltage powerlines, a natural gas pipeline, a standard gauge railway, and a modern paved highway network that leads to deep water ports on the Atlantic coast as well as to local airports, lodging and health facilities.

There are no known environment impediments to the continued advancement of the San Roque project.

A maximum production royalty payment of 3% is held by the Rio Negro Province in return for the any future exploitation of the mineral property. The royalty is calculated as a percentage of the pithead, or mine-mouth value of the mineral extracted. Provinces such as the Rio Negro province that have signed onto the MIL (federal Mining Investment Law) are legally committed not to exceed this cap. Additionally, the MIL guarantees 30 years tax stability from the date of a positive feasibility study being presented to the mining authorities.

19.0 RECOMMENDATIONS

The San Roque Project covers a large area of high exploration potential. Intermediate Sulphidation Epithermal gold mineralization is primarily hosted within structurally controlled corridors. Where these structural corridors and mineralized fluids cross-cut permeable lithology such as a quartz-crystal tuff, relatively flat laying zones occur which contain polymetallic mineralization in quartz stockworks. The results of the drilling and trenching work completed on the property has been used to interpret the deposit model and to develop the first NI 43-101 compliant resource for the San Roque Property. The deposit model for the Inferred Mineral Resource remains open for expansion by continued drilling in all directions and at depth.

It's recommended that the San Roque project merits further work and continued focus to develop it into an advanced stage project rather than an exploration target.

19.1 Drilling and Exploration

Infill drilling is recommended to reduce the spacing between the existing collars in order to better define the shape of the mineralized bodies and increase the confidence of the Mineral Resource Estimate. Expansional drilling should also be undertaken with the aim of connecting mineralized zones together which are currently modeled as separate bodies. If possible, drilling should also focus on extending existing drill holes to greater depths, as many of these holes bottomed in mineralization. As a rule of thumb, holes should be drilled to basement sediments to ensure that holes are not prematurely terminated, and test for any additional mineralization within the basement. Holes which are stopped prior to the basement sediments should have the casing left in the hole to allow for future extending should the need arise.

Continued exploration is also recommended to expand and test the recent gold discoveries made during the 2018 trenching program at the zone currently designated as the "NW Vein System". This exploration work should include the completion of some exploratory drilling to test the continuity and mineralization of this zone along strike and at depth.

19.2 Database

It's recommended that Marifil implement a systematic QAQC system whereby a minimum of 1 in 10 samples that are submitted for laboratory assaying contain a standard, blank or duplicate sample in order to track the performance and accuracy of the analytical laboratory. Standard and duplicate samples should target representative grade ranges present at San Roque.

For future drilling programs, measurement of bulk density should be continued so that representative data from a variety of rock types and mineralization styles is obtained. Samples selected for bulk density measurements should be taken systematically across the zones to allow for a more accurate calculation of the tonnage in subsequent resource estimates. A laboratory bulk density confirmation program should be established to verify, or calibrate, in situ specific gravity measurements.

It's further recommended that Marifil implement a database management system in order to better track and organize the large volumes of data which are collected and stored for the Project.

19.3 Metallurgical Test work

It's recommended that Marifil undertake a comprehensive metallurgical evaluation for the various mineralization styles observed across the zones. This may be achieved by sampling of existing drill core in combination with additional target metallurgical drilling. Tetra Tech recommends a baseline test program including:

- A complete head assay including screen metallic analysis of gold and silver, a whole rock analysis, and the determination of total carbon and organic carbon;
- Multi-stage diagnostic leach test;
- Direct cyanide leach test to determine gold and silver extraction characteristics; and
- Alternative recovery method including gravity and flotation concentrations.

This test program should start with a preliminary recovery method comparison which includes gravity concentration, flotation, and cyanidation for elements of interest.

19.4 Environmental

Future work campaigns should involve the collection of baseline environmental data, particularly with respect to water and air quality. Furthermore, a detailed hydrogeological program should be undertaken to identify a water source which is suitable for sustaining potential mining and milling operations. Collection of this information can strongly favour future permit applications.

Environmental baseline data acquisition should be initiated with continued drilling, particularly with respect to water and air quality.

19.5 Project Development

The results of the Mineral Resource Estimate suggest that the project should be assessed at a Preliminary Economic Assessment (PEA) level to verify the input parameters used for pit constraints, and to assist in advancing future project stages. This recommendation is contingent upon the completion of metallurgical testing.

19.6 Proposed Budget

An estimated budget for this recommended work is presented below.

Table 19-1: Estimated Budget for Project Recommendations

| Task | Cost (CAD) |
|----------------------------------------------------------------------------|--------------------|
| In-fill and Extensional Drilling – 7,500 m | \$1,700,000 |
| Exploration Drilling – 3,000 m | \$675,000 |
| Exploration Trenching | \$50,000 |
| Assay, Geochemical, Certified Reference Materials, Cores Sawing & Shipping | \$320,000 |
| Professional & Labor Personnel | \$235,000 |
| Geotechnical, Environmental and Hydrogeological Investigations | \$200,000 |
| Permitting, Land Use Compensation, Access Cost, Claims Fees & Reclamation | \$125,000 |
| G & A - Minas San Roque S.A. | \$75,000 |
| Warehousing, Living & Travel Expenses | \$135,000 |
| Metallurgical Testing | \$60,000 |
| Preliminary Economic Assessment | \$250,000 |
| Total Estimate | \$4,000,000 |

20.0 REFERENCES

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APPENDIX A

QUALIFIED PERSONS STATEMENT OF QUALIFICATIONS

Cameron R. Norton, P.Ge.

I, Cameron Norton, P.Ge., of North Vancouver, British Columbia, do hereby certify:

- I am a Resource Geologist with Tetra Tech Canada Inc. with a business address at Suite 10 – 885 Dunsmuir Street, Vancouver, BC, V6C 1N5.
- I am a registered Professional Geoscientist with the Engineers and Geoscientists of British Columbia (#178541).
- Since 2010 I have worked as an exploration and resource geologist for numerous precious metal, base metal, and industrial mineral projects in Canada, Argentina, and Mongolia.
- I graduated from the University of Victoria in 2010 with a B.Sc. in Earth and Ocean Science.
- This certificate applies to the technical report Technical Report and Mineral Resource Estimate on the San Roque Project, Rio Negro Province, Argentina, with effective date of July 22, 2019 (the “Technical Report”).
- I visited the Property that is the subject of the Technical Report from March 11-15, 2019.
- I am independent of Marifil Mines Ltd., as defined by Section 1.5 of the Instrument.
- I am responsible for the contents of this Technical Report.
- I confirm that I have read NI 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with them.
- At the effective date of the 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.

Signed and dated this 10th day of September 2019 at Vancouver, British Columbia.

Original Document Signed and Sealed

Cameron R. Norton, P.Ge.
Intermediate Resource Geologist
Tetra Tech Canada Inc.