NI 43-101 Technical Report

Mineral Resource Estimate

Calcatreu Gold-Silver Project, Rio Negro Province, Argentina

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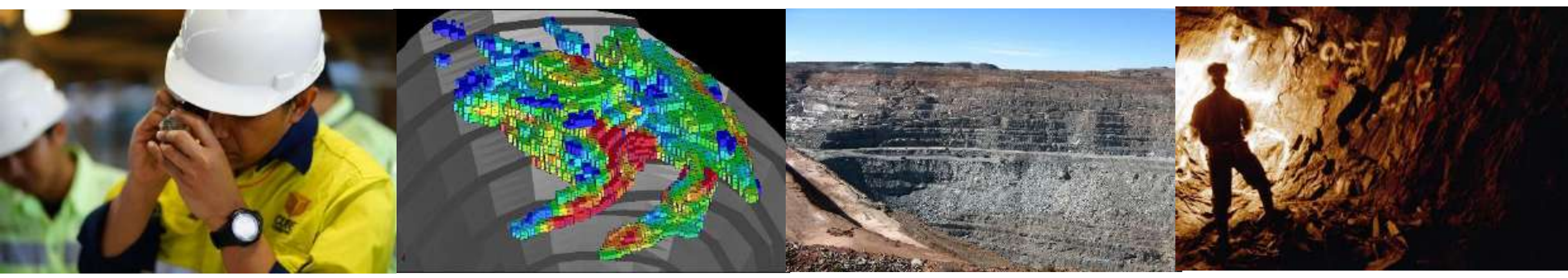

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1. Summary

Cube Consulting Pty Ltd ("Cube") has prepared this independent technical report (the "Report") for Patagonia Gold PLC ("PGD") following the drilling programs and exploration work completed in 2018 and an update of a Mineral Resource estimate ("MRE") at the Calcatreu Gold-Silver Project ("Calcatreu", or the "Project").

Calcatreu is made up of a series of a low sulphidation epithermal style gold-silver mineralisation zones located within the Rio Negro Province of Argentina, 40 km south of the town of Ingeniero Jacobacci. The Project is 100% owned by PGD as of 31 December 2018.

This report complies with the requirements of the Canadian National Instrument 43-101, "Standards of Disclosure for Mineral Projects" ("NI 43-101") for reports filed under Canadian jurisdiction. The report was prepared for PGD in contemplation of a transaction with Hunt Mining Corp. ("Hunt") which is proposed to be structured as a scheme of arrangement of PGD carried out within the requirements of the UK Takeover Code, that will result in PDG being a wholly-owned subsidiary of Hunt in 2019. As of the Effective Date of the Report, the details of the transaction and date of agreements are yet to be finalised.

This report has been compiled by Brian Fitzpatrick (the "Principal Author"), a Principal Geologist with Cube and a Qualified Person under NI 43-101. The Principal Author is independent of Hunt Mining Corp, Patagonia Gold PLC and its subsidiaries, and the property, in accordance with Section 1.5 of NI 43-101.

1.1. Property Location Access and Description

Calcatreu is a contiguous collection of prospecting licenses and mining claims comprising approximately 750 km^2 in the Somun Cura Volcanic Massif of north central Patagonia, Argentina. It is located approximately 165 km (240 km by road) southeast of San Carlos de Bariloche (Bariloche) and 1,500 km southwest of Buenos Aires. Calcatreu straddles the southern boundary of Rio Negro Province and the northern boundary of Chubut Province. The closest town is Ingeniero Jacobacci, approximately 60 km to the south, or 90 km by road. The project area covers rolling pampa and low hills, which support very low intensity sheep farming based on poor quality soil.

As of 31 December 2018 (the Effective Date of the Report), the Project is 100% owned by PGD following the completion of the acquisition of the Calcatreu Project from Pas American Silver Corp ("PAS") on 18 May 2018. As a result of a transaction with PAS, PGD through a wholly owned subsidiary, acquired Minera Aquiline Argentina SAU which owns 100% of the Calcatreu Project properties.

Surface rights in Argentina are not associated with title to either a mining lease or exploration claim and must be negotiated with the landowner. PGD has negotiated surface land agreements to conduct exploration and mining activities with landowners within the Calcatreu properties. All agreements are in place and require monthly fees payable by PGD to the landholders for 3 years from 2018, with one agreement period for 1 year.

All environmental permits necessary to carry out exploration and drilling work on the Calcatreu Project area were granted in September 2018. Mining and exploration permits are valid for two years.

1.2. Property History and Ownership

Low sulphidation, epithermal, precious metal-bearing quartz-calcite veining was discovered in the Calcatreu area by a geologist, Carlos Cuburu from La Source Compagnie Minière ("La Source") in late 1997. The geologist collected quartz float samples that he observed on the roadside while visiting a prospect further to the west. As a result of the assays received and the vein textures noted, two prospecting licenses were staked in 1997, and regional reconnaissance activities commenced the following year.

The project passed to Normandy Mining of Australia ("Normandy") when it purchased LaSource from the French Government in 1998. Normandy, through its Argentine subsidiary Minera Normandy Argentina SA ("Normandy SA"), completed most of the exploration on the property.

Follow-up work from the float samples quickly led to the discovery of vein systems at the Nabel and Nabelon prospects. Observations at Nabelon and Nabel, close examination of satellite photographs and follow up by regional geological and rock chipping traverses led to the discovery of further mineralised prospects such as Vein 49, Nelson, Castro Sur, Trinidad Viuda del Castro and others.

By this time a total of 11 significant vein systems had been delineated within the Calcatreu district. The Vein 49/Nelson system, which has a strike length of over 2 km and single system vein widths of up to 20 m, has been the most intensely investigated. Of the other prospects discovered, most have only been tested with single drill holes after field exploration including gradient array Induced Polarisation ("IP") geophysics, soil sampling, prospecting and rock chip sampling. Normandy also completed a regional stream sediment sampling program (Bulk Leach Extractable Gold ("BLEG") sampling), consisting of 429 samples collected on an average spacing of five square kilometres per sample, and a regional geological mapping program. This work has outlined a number of anomalies and zones of alteration that have a not been adequately explained or explored.

Vein 49, and its probable strike extension Nelson, was then found to be the most significant discovery at Calcatreu with its geological setting having strong similarities with the Cerro Vanguardia and El Desquite projects also located in southern Argentina. **Cautionary Statement:** Information regarding the adjacent properties or similar deposit styles is not necessarily indicative of the gold-silver mineralisation at Calcatreu.

Drilling was completed in four campaigns by Normandy SA between 1999 and 2001. A total of 65 drill holes, for 7,992.2 m, were completed on the two main deposits.

Newmont purchased Normandy in 2002 and the Project passed to it. Newmont decided that Calcatreu did not meet corporate size objectives and elected to dispose of Normandy SA in September 2002. Aquiline Resources Inc. ("Aquiline" or "AQI"), which was based in Toronto, Canada, was the winning bidder. The final agreement was signed by Aquiline in June 2003 and allowed it to purchase 100% of the property and acquire Normandy SA by paying Newmont US$2.05 million in a series of staged payments over three years. Aquiline completed a small due diligence drilling program in July 2003 after finalising the deal on the Project.

Through its acquisition of Normandy SA, Aquiline acquired a significant land position in north central Patagonia. Aquiline focussed mainly on further drilling of the Vein 49 prospect as it believed this prospect to be the most potentially economic due to the presence of significant widths of gold and silver mineralisation near surface.

In 2003, Aquiline contracted independent consultants Micon International Limited of Toronto, Canada to complete an independent MRE for the Vein 49 area. Micon (2003) collected five (5) surface chip samples from the Vein 49 deposit which independently confirmed the presence of gold and silver mineralisation.

PAS then acquired the Calcatreu properties in 2010 through the acquisition of Aquiline. PAS completed a twin hole program consisting of 30 DD drill core holes in 2011.

On 28 December 2017, the PGD announced that it had entered into a Definitive Agreement with PAS to acquire the Calcatreu properties for a total consideration of US$15 million. Patagonia Gold made an initial payment of US$5 million. On 18 May 2018, Patagonia Gold paid the balance of US$10 million to PAS, corresponding to the second and final payment for the acquisition of the Calcatreu Project. As a result of the transaction, Patagonia Gold, through a wholly owned subsidiary, acquired Minera Aquiline Argentina SA which owns 100% of the Calcatreu Project.

1.3. Geological Setting and Mineralisation

Regional Setting

Southern Argentina is composed of several distinct geological terranes which host both precious and base metal deposits of varying ages. Along the western margin of the country, near the Chilean border, lies the Andean Cordillera, a belt of volcanic mountains. These were developed as a result of continued subduction since Jurassic time, the subduction having produced a series of pulses of volcanic and intrusive magmatic activity. The town of Bariloche is located in this region on the eastern edge of the mountains. The principal economic mineralisation of the Andean area consists of a north-south striking belt of epithermal gold mineralisation and sub-volcanic porphyry copper-gold deposits located in both Chile and Argentina.

To the east of the Andean Cordillera are two large volcanic massifs separated by younger sediment-filled valleys containing major rivers draining the eastern slopes of the Andes Mountains. These features are known as the Somun Cura Massif, which is located in the north, and the Deseado Massif in the south. The Calcatreu Project is hosted in the calc-alkaline, bimodal Jurassic Taquetren Formation volcanic rocks within the Somun Cura Massif

Local Geology and Mineralisation

The geology and mineralisation in the Project area is interpreted to be associated with a complex of intrusives and breccias emplaced at the end of the final bimodal volcano-sedimentary cycle.

The mineralisation is hosted in altered (silicified and clay-altered) brecciated host rock. The host rock is interpreted to be porphyritic andesite lava. The highest grades of mineralisation appear to be related to the zones of multiple brecciation and polyphase quartz-carbonate clay healing. Mineralisation trends (in the form of vein quartz) associated with the host units for Vein 49, Belen and Nelson.

Generally, the mineralised system is very low in sulphide content with minor pyrite and lesser galena and sphalerite. The mineralisation has been oxidised to an average depth of approximately 75 m. The surrounding host rocks have been oxidised to an average depth of approximately 30 m.

Gold occurs as electrum and as free gold. Mineralisation is largely restricted to quartz and calcite veins and stockwork between 1 m to 5 m width. The zones of veining can be up to 20 m wide. Surrounding the quartz veining is a zone of argillic (altered) andesite.

1.4. Status of Exploration and Development

A number of exploration programs and drilling campaigns had been conducted at the Calcatreu Project with the information used to assist with the compilation of the 2018 MRE completed by Cube. These are summarised as follows:

- La Source/Normandy SA conducted four programs between 1999 and 2002. The drilling comprised reverse circulation ("RC") holes and RC pre-collars with diamond drill ("DD") core tails. All quartz vein intercepts were drilled using DD core;
- Aquiline completed a small due diligence program in 2003, with follow up programs of drilling at increasingly closer spacing up to 2007. Drilling comprised RC or combined RC drilling to the water table then changing to DD to complete the hole;
- PAS completed a due diligence twin hole drilling program consisting of 30 DD holes in 2011; and
- PGD completed a small due diligence drilling program on Vein 49 in 2017. This program consisted of six PQ DD core drill holes for 379.5 m;
- PGD initiated exploration work at Calcatreu shortly after acquiring the project at the end of January 2018. The 2018 program consisted of a 30-line kilometre Pole-Dipole Inverse Polarisation ("PDP-IP") geophysics survey, mapping and geochemical sampling program; and
- PGD also conducted a diamond drilling program in 2017 for due diligence drill testing of the main zone in Vein 49. Further diamond drilling was conducted in 2018, which focussed on testing geophysical anomalies at several targets along strike from the main gold-silver mineralisation trends at Calcatreu.

Data Supplied

PGD provided Cube with data files containing drilling databases, survey data, interpretations of the mineralised domains and geological boundaries and project area topography.

Cube has completed a site visit to the Project in February 2017 and again in March 2019 and carried out data verification and data validation on all the drilling data supplied for the current MRE. Cube considers the drill data to be appropriate for the current MRE.

1.5. Summary of Drilling and Sampling

PGD completed two drilling programs since purchasing the property. In 2017 a twin hole program consisting of six holes was drilled using PQ size diamond drilling. From October 2018, PGD carried out HQ core size diamond drilling in several prospects within the Calcatreu properties. The hole targets were designed to test sub-parallel, north east trending structural lineaments interpreted from the IP-

PDP survey conducted earlier in 2018. A total of 31 DD holes for 6,495 m of HQ core were completed by the end of 2018.

Following the author's site visit review of the sampling protocols, chain of custody and security, and laboratory sample preparation and analytical methods, the following conclusions have been made:

- Samples are stored prior to transportation to the laboratory by PGD employees in the dedicated field office and secure sample preparation facility, with minimal risk of sample tampering;
- The chain of custody is supported by the PGD site staff sample logbook and sample reports from the laboratories;
- Samples were transported from the Ingeniero Jacobacci field office by courier truck, under supervision of independent personnel, to the ASA laboratories in Mendoza and as such the risk of sample tampering is low;
- The nature, quality and appropriateness of the laboratory sample preparation protocols is considered suitable for grain sizes of the material expected and is consistent with industry standard practice;
- The appropriateness of the assaying and laboratory methods is considered a total measure of gold and silver for the Calcatreu Project.

The significant results from the 2017 due diligence drilling by PGD were able to confirm the presence of high-grade gold and silver mineralisation in the Vein 49 Prospect identified from previous drilling campaigns. The drill holes acted as twin holes for earlier drilling completed by Aquiline and correlated well with the intersection location and true width of the gold-silver mineralisation envelope initially defined by the older drilling programs.

The 2018 drilling program was designed to test geophysical anomalies identified from the 2018 IP-PDP survey conducted by PGD and also test potential extensions to the mineralisation in the area between Vein 49/Belen and Castro Sur. Results indicated anomalous gold and silver values along strike from the Vein 49 and Castro Sur gold-silver mineralisation trends, but testing of geophysical anomalies in other prospects not previous drilled did not intersect any significant values.

1.6. Data Verification

Collar, survey, assay, geology and other relevant drilling data were provided to in MS Access and MS Excel file format. Validation and verification of drill hole data was assessed for the entire Calcatreu drilling database. Verification of supplied electronic drill hole data with hard copy drill hole logs and assay certificates was completed and with data deemed to be acceptable for Mineral Resource estimation.

1.7. Estimation Methods

A brief summary of the estimation process is described as follows:

- The Calcatreu Mineral Resource area covering Vein 49, Nelson and Belen Prospects, has a combined dimension of 2.5 km (total strike length from Nelson to Vein 49) by 550 m (width of all mineralisation domains combined). The Castro Sur Mineral Resource area extends over a strike length of 1.7 km by 100 m width. The maximum depth known to date for the deepest mineralisation is 370 m vertical depth below surface;

- Mineralisation domain boundary analyses clearly show sharp (or hard) boundary between the main mineralisation domains for each prospect and the waste material. The analysis provides confidence that the mineralisation domains in each prospect created can be used as hard boundaries to constrain the sample data during the sample compositing process;
- The drill hole sampling information was composited to a 1.0 m composite interval in order to reduce the variability inherent in raw samples or a smaller composite length relative to estimation resource model block dimensions. The selection of a suitable support for the Calcatreu proved problematic due to the variable sample lengths and the narrow nature of some mineralisation domain widths and the problems associated with core loss;
- The block models were generated in Surpac and flagged with the appropriate estimation domains and topographical surfaces. The block dimensions select for the estimation process was 5 mX x 10 mY x 10 mRL and sub-celled to 1.25 mX x 2.5 mY x 2.5 mRL;
- Cube selected Local Uniform Conditioning ("LUC") as the preferred method estimation of Au and Ag grade for the major mineralisation domains. This method is used to define a recoverable resource at a single mining unit ("SMU") scale, and is ideally suited to variables that have a diffusive character;
- Ordinary Kriging ("OK") was used to produce the reported estimates for the other minor domains at the panel resolution of 2.5 mX x 15 mY x 15 mRL and with a Y axis rotation of 50° east of north. The panel estimates were devolved into the SMU block model for compatibility with the block size used for the LUC estimates, and for ease of insertion into the final Surpac block model;
- Search ellipse geometry and size was determined from the experimental variograms generated for mineralised domain; and
- Cube carried out the several validation methods for the Calcatreu Au and Ag grade LUC and OK estimates. The correspondence between mean grade composite samples and block grade estimates is good, as demonstrated by the visual inspection in cross sections, global comparisons of volume and mean grade statistics, and semi-local comparisons on sections and levels.
- The mineral resource classification for Calcatreu is mainly based on data quality, drill data spacing, kriging parameters and the number of composites used for the estimation. Blocks have been classified as Indicated or Inferred only.

1.8. Mineral Resource Estimate

The Calcatreu Mineral Resource as at 31 December 2018 is suitable for public reporting in compliance with the NI 43-101 and the CIM Definition Standards (May 2014).

The Calcatreu Mineral Resource is reported at a base-case 0.5 g/t Au cut-off grade within the interpreted mineralised domains to a maximum vertical depth of 365 m. The MRE appropriately reflects the Competent Person's view of the resource.

The input drill data is comprehensive in its coverage of the gold and silver mineralisation at Calcatreu and does not misrepresent the mineralisation. Knowledge of the geological controls on mineralisation has been used to develop the overall resource estimate.

For the December 2018 Mineral Resource statement, the Au, Ag and Au equivalent ("Au_equ") are reported as per tabulated in (Table 1-1).

Table 1-1 Calcatreu Mineral Resource by Project Area (as at 31 December 2018)

Zone	INDICATED RESOURCES						
	kTonnes	Grade (g/t)			Contained Metal (kOz)		
		Au	Ag	Au_equ	Au	Ag	Au_equ
Vein 49	6,447	2.45	21.01	2.71	512	4,568	568
Nelson	1,383	1.51	16.94	1.72	67	753	76
Belen	-	-	-	-	-	-	-
Castro Sur	2,010	1.40	14.77	1.58	90	954	102
TOTAL-Indicated	**9,841**	**2.11**	**19.83**	**2.36**	**669**	**6,275**	**746**
Zone	**INFERRED RESOURCES**						
	kTonnes	**Grade (g/t)**			**Contained Metal (kOz)**		
		Au	**Ag**	**Au_equ**	**Au**	**Ag**	**Au_equ**
Vein 49	2,863	1.48	13.38	1.64	136	1,231	151
Nelson	1,448	1.42	14.66	1.60	66	682	74
Belen	681	1.61	23.32	1.90	35	511	42
Castro Sur	3,086	1.12	9.81	1.24	111	974	123
TOTAL-Inferred	**8,078**	**1.34**	**13.09**	**1.50**	**348**	**3,399**	**390**

Notes:

1. Effective date of 31 December 2018;
2. Mineral Resources are estimated at a block cut-off grade of 0.5 g/t Au_equ;
3. Figures may not add up due to rounding;
4. Gold equivalent ("Au_equ") values are calculated at a ratio of 81.25:1 Ag/Au;
5. Mineral Resources are estimated using a long-term metal prices of US$1,300 per ounce (gold); and US$16 per ounce (silver);
6. A minimum mining width of two metres was used when modelling the resources;
7. Bulk densities for the mineralised zones are 2.44 t/m^3 (oxide), 2.54 t/m^3 (fresh);
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability;
9. The quantity and grade of reported inferred mineral resources in this estimate are uncertain in nature and there has been insufficient exploration to define these inferred mineral resources as measured or indicated mineral resources.

Gold Equivalent calculation:

For the MRE the Au, Ag and Au_equ grades were reported. Au_equ was calculated for each cell block grade within the Calcatreu block model. Au_equ values where determined by dividing a set Au price (US$1,300/Oz) by a set Ag price (US$16/Oz) following guidance from PGD.

The formula used was:

$$Au\_equ\ (g/t) = Au\ (g/t) + Ag\ (g/t)/81.25$$

1.9. Conclusions and Recommendations

1.9.1. Conclusions

The 2018 MRE incorporates RC and DD drilling completed since 2000 over the Calcatreu Project area, including all drilling completed by PGD up to the end of 2018. It is also informed by sampling and geological information from trenches, the surface expression of mineralised zones as indicated by geological mapping, a dataset of bulk density measurements taken from whole core samples, topographic survey files of the project, digital photos of some DD drill core, and updated geological interpretations.

The input drill data is comprehensive in its coverage of the Au and Ag mineralisation at Calcatreu and in the opinion of the QP, does not misrepresent the mineralisation. Knowledge of the geological controls on mineralisation has been used to develop the overall MRE.

The following is a summary of work and key findings from the 2018 update of the Mineral Resource estimation work along with some comments on risks and upside potential observed for the Calcatreu Project.

Risks and Mitigations

- Following the completion of the validation and verification checks, Cube has noted some concerns with the data quality in relation to the PAS drilling program conducted in 2011. Cube has not used the 2011 PAS drilling information in the December 2018 Mineral Resource estimation work in light of the concerns with data quality and lack of data to conduct data verification analysis;
- The key technical risks and uncertainties which relate to the MRE (and are generally reflected in the classification of the reported MRE), and which could impact on the viability of the project, are summarised as follows:
    - Drill Spacing - Cube considers the main concerns with Calcatreu are in the grade estimation of blocks in the deeper and more sparsely drilled zones within the main mineralisation domains. These zones have been classified as Inferred or unclassified to reflect this uncertainty.
    - Sample Quality - For both RC samples and DD core, the analysis shows that the overall quality of the core and the sample recovery is fair to poor. Some data was deemed to be not suitable for Mineral Resource estimation, i.e. PAS drilling results, based on the data verification analysis.

- Mineralisation Domain Analysis – this is a function of the data spacing, quality and variability of the input data, and the degree to which the final result is an unbiased estimate of the total contained metal. Specific areas within the modelling process where risks and uncertainties were identified included:
    - Further statistical analysis is required to validate the overall controls on the main mineralised domain and to determine whether further subdivision of the domains was required based on weathering, grade, alteration, sulphide content or lithology.
    - Review and application of grade top-cuts (to Au and Ag composite data). There are discrete but relatively very high-grade zones in the block model that may require further sub-domaining.
    - The interpretation of minor mineralised domains based on limited data – these zones will require further analysis and possible infill drilling to determine the extent and continuity of mineralisation. At the current drill spacing, the controls on mineralisation are only weakly developed. Data from further infill drilling may change this preferred direction of mineralisation continuity.
- Bulk Density Determinations - The amount of bulk density data available is limited and restricted to samples of the mineralisation zones in Vein 49 and Nelson.
- Estimation Methods - Previous estimation techniques have used an Ordinary Kriging method with hard boundary wireframes to establish the global contained metal available for open pit mining. Cube has initiated an alternative estimation approach (LUC) which will define the recoverable mineralisation and better represent the likely outcome when selectively mining the satellite deposits. Comparison of the two estimation methods has been undertaken to assess the impacts and quantify the risks associated with the resource estimates.
- Resource Classification - With the current level of knowledge, and due to the uncertainty, that may be attached to Inferred Mineral Resources, it cannot be assumed that all or part of the Inferred Mineral Resource will upgrade to an Indicated Mineral Resource as a result of continued exploration. Confidence in the estimate is sufficient to allow the meaningful application of technical and economic parameters and for evaluation of the economic viability for public disclosure. The 2018 Mineral Resources reported here do not have demonstrated economic viability.
- Geometallurgy – A metallurgical test work program reported by Aquiline in 2007 (Snowden, 2007) demonstrated that the ore is 'free milling' and that high gold and silver recoveries can be achieved using a conventional grinding and cyanidation process. More recent metallurgical test work reporting and government compliance around cyanide require consideration for ongoing PFS work.
- Mine Planning and Operating Parameter Considerations - Factors used for initial open pit mining costs and recovery factors have not been considered during the Mineral Resource estimation work, and further work is required to define the capital and operating parameters to support formal evaluation of the economic viability of the project.
- Resource Development and Exploration – The exploration model for the area, encompassing the structural framework and the mineralisation, is still under development and will need to be refined as more information is gathered and synthesised.

Other Risk Factors

Apart from resolving the acceptability of the use of cyanide, risk mitigation strategies should be incorporated into the project before a decision is made to proceed with development. In particular, the identification of additional mineral resources for conversion into mining inventory, through discovery or upgrading the confidence classification of existing mineral resources, provides an opportunity to significantly improve the project risk profile.

Industry standard mining practises would be critical to the success of an open pit operation where many operations fail to meet good practices for open pit geology, including visual control of ore boundaries, grade control and reconciliation practices, and effective blasting to control dilution and ore loss.

Environmental factors to be consider would also include assessment of hydrogeology and control over the mining and dumping of pyritic waste that may need to be exercised to manage the risk of acid mine drainage being generated.

The extent to which the estimate of December 2018 MRE could be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant issues is considered to be low at the present time. This assumption is based on the review conducted during the site visit by the Qualified Person ("QP") whereby relevant documentation with respect to mining and environmental permitting is current and relevant. PGD has land rights agreements in place with local landholders, and PGD has in place regular communication with local communities and stakeholders.

1.9.2. Recommendations

Mineral Resource Estimation

Cube recommends the following considerations for any future Mineral Resource estimation work:

- A geological matrix to be established to distinguish between higher-grade and lower-grade populations within Calcatreu mineralisation domains to assist with further delineation of higher and lower grade sub-domains. Characteristics such as vein percentage, mineral species and or alteration could be considered as part of the geological matrix.
- Improvements are required for Quality Assurance/ Quality Control ("QAQC") practices independent of the laboratories for future drilling campaigns. The QAQC work should include duplicates (field duplicates, coarse and pulp duplicates). Other enhancements that should be considered include check sampling (umpire laboratory checks) and regular wet screening and grind size analysis by the laboratory during lab audits. Certified Reference Material ("CRM" or standards) for Ag should also be acquired for insertion into the sample stream.

Mineral Resource Upgrades

All the prospects at Calcatreu have potential upside where mineralised structures have not been closed off, and/or structural and mineralisation trends are not well understood at the present time. Below is a summary of the current understanding of each of the main Calcatreu prospects:

- Vein 49/Nelson: The Nelson quartz vein system appear to be the along strike continuation of Vein 49, split into separate veins and showing slightly lower grades and levels of alteration. The veins have not conclusively been demonstrated to connect between Nelson and Vein 49 and are open both along strike to the northeast and down dip.
- Belen: The Belen mineralisation has been identified from RC drilling and is not as well understood in a mineralogical sense but is oriented parallel to Vein 49 mineralisation with a lower Au-Ag grade tenor and less continuity noted from the drill section interpretations;
- Castro Sur: As with Belen, the Castro Sur mineralisation is not as well understood in a mineralogical sense. The mineralisation zone follows a similar strike trend to the main mineralisation south at Vein 49 but appears to be structurally offset. Interpretation of very narrow domains has shown by steeply dipping NW and SE oriented mineralisation structures. Data spacing and geological information is generally poorer in quality than for Vein 49 and Nelson, and there was no DD core drilling information to assist with geological and mineralisation interpretations.

Exploration and Resource Development

Calcatreu is located in a highly prospective district within the Somun Cura Massif which hosts several occurrences of low sulphidation, epithermal vein-hosted, precious metals deposits defined by several regional structural lineaments.

Cautionary Statement: Information regarding the adjacent properties is not necessarily indicative of the gold-silver mineralisation at Calcatreu.

PGD has acquired the Calcatreu Project which contains numerous Au and Au-Ag occurrences scattered over a regional structural corridor, with a strike length of approximately 30 km.

It is Cube's view that further resource development work, including drilling definition work on the Vein 49/Nelson and Castro Sur Prospects is warranted.

Based on the results for the 2018 Mineral Resource model completed on four of the prospects at Calcatreu, Cube believes that there is significant precious metal resource potential at Calcatreu and that follow up district scale exploration programs are warranted.

Future Work Programs

PGD plans to actively drill and conducting geophysical surveys within the Calcatreu Project prospect areas. An exploration program estimated at 4,700 m of drilling over two stages has been planned, targeting a prospective zone between Castro Sur and Vein 49

The drilling and costing estimates for phase 1 and 2 are based on approximate budget estimates by PGD. Cube supports a planned phase 1 campaign of 2,400 m of drilling for the resource upgrades for a costing estimate of US$240,000. The phase 2 work includes follow up to further drill test some targets from phase 1, and dependent on the findings and success of the initial drilling campaigns (2,300 m for a cost of US$230,000). In addition, there are exploration drilling targets included in phase 2.

Surface geochemical sampling and mapping has also been planned in phase 2 for prospects further afield from the current prospects along strike from the current Mineral Resource area.

2. Introduction

Patagonia Gold Plc is an AIM-listed mining company, with the head office based in Buenos Aires, Argentina (Minera Aquiline Argentina SAU) and a registered office in London, UK (Patagonia Gold Plc). Minera Aquiline Argentina SAU is a 100% owned subsidiary of Patagonia Gold Plc.

The company, through its subsidiaries or under option agreements, has the mineral rights to gold and silver projects in the Patagonia region of Argentina, and to properties in Chile and Uruguay.

The Calcatreu Gold-Silver Project is made up of a series of a low sulphidation epithermal style gold-silver mineralisation zones located within the Rio Negro Province of Argentina, 40km south of the town of Ingeniero Jacobacci.

The Project is 100% owned by PGD as of 31 December 2018, following the completion of the acquisition of the Calcatreu Project from Pas American Silver Corp ("PAS") on 18 May 2018. As a result of the transaction completed on 31 January 2018, PGD through a wholly owned subsidiary, has acquired Minera Aquiline Argentina SAU which owns 100% of the Calcatreu Project.

2.1. Terms of Reference

This Independent Technical Report (the "Report") has been prepared by Cube at the request of Patagonia Gold ("the Issuer") following a site visit conducted by the Qualified Person for this report (Brian Fitzpatrick, B.Sc., MAusIMM CP (Geo)) from 14 to 17 March 2019. The site visit involved a review of the exploration work, drilling and sampling carried out during 2018.

The Report has been prepared for the purposes of presenting technical information relevant to the Project and the results of the Mineral Resource estimate update following a review of results based on the exploration work and drilling completed in 2018.

This report is to comply with the requirements of the Canadian Securities Administrators' National Instrument 43-101, "Standards of Disclosure for Mineral Projects" - ("NI 43-101") for reports filed under Canadian jurisdiction.

This report was prepared for Patagonia Gold in contemplation of a transaction with Hunt Mining Corp ("Hunt") which is proposed to be structured as a scheme of arrangement of PGD carried out within the requirements of the UK Takeover Code, that will result in PDG being a wholly-owned subsidiary of Hunt.

2.2. Sources of Information

In addition to the site visit, PGD provided Cube with data files containing drilling databases, survey data, interpretations of the geological and mineralisation domains, and structural and weathering boundaries, and recent project area topography surfaces.

All drilling data was entered into a Cube formatted MS Access database and validated prior to review and updating the interpretations for the mineralised domains. Grade estimation for Au and Ag was undertaken using both Isatis Software v.14 ("Isatis") and Surpac Mining Software v.6.8.0 ("Surpac").

The Principal Author has also relied on several sources of information on the Project area, including relevant published and unpublished third-party information, and public domain data. Reference documents are cited in the text as appropriate and listed in Section 27 of the Report.

A number of discussions and correspondence were carried out with PGD staff, who have provided project specific information which has assisted with the preparation of this report.

2.3. Qualified Persons

This report has been prepared by Brian Fitzpatrick, B.Sc., MAusIMM CP (Geo) ("Principal Author"), a Principal Geologist with Cube Consulting Pty Ltd and a Qualified Person as defined by NI 43-101. Mr Fitzpatrick is responsible for all sections of this report.

Mr Fitzpatrick has worked as a professional geologist for more than 33 years. Relevant experience has been gained from working in the gold and base metal mining and exploration industry in various provinces throughout Australia and other countries. This includes exploration, open pit and underground mining experience in greenstone hosted gold deposits, epithermal gold deposits and Volcanogenic Massive Sulphide ("VMS") poly-metallic deposits.

Both Cube and Mr Brian Fitzpatrick are independent from Patagonia Gold Plc and its subsidiaries. The relationship is solely one of professional association between client and independent consultant. This report is prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

2.4. Site Visits and Scope of Personal Inspection

The Principal Author visited the Project from 14 to 17 March 2019. The site visit activities included the following:

- Review of exploration and drilling activities conducted during 2018;
- Data verification and documentation of 2018 drilling, sampling and QAQC protocols,
- Verify sample preparation and transport protocols from site to assay laboratories;
- Collating and review of all 2018 exploration and drilling results;
- Check logging of significant intervals in drill core remaining from 2018 drilling programs;
- Field inspection of Project area, and verification of 2018 hole locations; and
- Site visit discussions with PGD staff.

The Principal Author previously conducted a site visit from 16 to 18 February 2017. The main purpose of the 2017 site visit was to ascertain the geological setting, review core samples and core sample processing facilities, inspect and verify the drilling data that had been completed by previous owners and to verify the sample preparation and transport protocols from site to the laboratory.

The Principal Author has not inspected any of the assay laboratories that have been used by PGD. These include ASA Laboratory in Mendoza, Argentina, ALS Chemex in Mendoza, and ALS Chemex in Chile.

2.5. Abbreviations for Units and Measurements

Units of measurement used in the report conform to the metric system, unless noted otherwise (Table 2-1). All costs in this study are expressed in US dollars ($) unless noted otherwise.

Table 2-1 List of Abbreviations for Units of Measurement

Units	Description	Units	Description
a	annum	L	litre
A	ampere	lb	pound
Arg $	Argentina Peso	L/s	litres per second
bbl	barrels	m	metre
btu	British thermal units	M	million
bcm	bank cubic metre	Ma	Millions of years
°C	degree Celsius	m^2	square metre
cal	calorie	m^3	cubic metre
cfm	cubic feet per minute	µm	microns
cm	centimetre	MASL	metres above sea level
cm^2	square centimetre	µg	microgram
d	day	m^3/h	cubic metres per hour
dia	diameter	ml	millilitre
dmt	dry metric tonne	mi	mile
dwt	dead-weight ton	min	minute
°F	degree Fahrenheit	µm	micrometre
ft	foot	mm	millimetre
ft^2	square foot	mph	miles per hour
ft^3	cubic foot	Mt	Million tonnes
ft/s	foot per second	Mtpa	million tonnes per annum
g	gram	MVA	megavolt-amperes
G	giga (billion)	MW	megawatt
Gal	Imperial gallon	MWh	megawatt-hour
g/L	gram per litre	oz	Troy ounce (31.1035g)
g/m^3	gram per cubic metre	oz/st, opt	ounce per short ton
Gpm	Imperial gallons per minute	P80-75µ	80% passing 75 µm
g/t	gram per tonne	%	Percentage
gr/ft^3	grain per cubic foot	ppb	part per billion
gr/m^3	grain per cubic metre	ppm	part per million
ha	hectare	psia	pound per square inch absolute
hp	horsepower	psig	pound per square inch gauge
hr	hour	RL	reduced level
Hz	hertz	s	second
" or in.	inch	st	short ton
in^2	square inch	stpa	short ton per year
J	joule	stpd	short ton per day
k	kilo (thousand)	t or T	metric tonne
kcal	kilocalorie	t/m^3	tonnes per cubic metre
kg	kilogram	tpa	metric tonne per year
kg/t	kilogram per tonne	tpd	metric tonne per day
km	kilometre	$ or US$	United States dollar
km^2	square kilometre	USg	United States gallon
km/h	kilometre per hour	USgpm	US gallon per minute
koz	Thousand ounces	V	volt
kPa	kilopascal	W	watt

Units	Description	Units	Description
kVA	kilovolt-amperes	wmt	wet metric tonne
kW	kilowatt	wt%	weight percent
kWh	kilowatt-hour	yd^3	cubic yard
		yr	year

3. Reliance on Other Experts

The Qualified Person ("QP") for the Report has not independently investigated the mineral tenure status and title conditions of the Project and has not independently verified the legal status and ownership, including property agreements, joint venture terms, environmental permits, and mining and exploration permits.

The QP has fully relied upon and disclaims responsibility for information provided by PGD pertaining to company ownership and agreements, mineral tenement status, current environmental permits, and other information relating to exploration expenditure and community relations.

The QP has taken reasonable care to review the information supplied by PGD and has no reason to believe that the information supplied is inaccurate.

A listing of documentation forwarded by PGD and reviewed by the QP is summarised below. The listing includes the title of the report, memo, or email correspondence, a description of the contents, and the date reported or date received by Cube.

Company Ownership and Agreements

- Document 1 – Disposal of COSE and Option to Acquire Pan American Silver's Calcatreu Deposit, press release from PGD website, ref. number 2173D, dated 25 April 2017;
- Document 2 – Option to Acquire Pan American Silver's Calcatreu Deposit, press release from PGD website, ref. number 8936Y, dated 11 December 2017;
- Document 3 – Acquisition of Calcatreu Deposit, press release from PGD website, ref. number 5611D, dated 01 February 2018;
- Document 4 – Final Payment of Calcatreu Project, press release from PGD website, ref. number 6498O, dated 21 May 2018;
- Document 5 - Calcatreu TR - Summary Section Change (Description of Transaction).PDF, Email correspondence and attachment explaining transaction details between PGD and Hunt agreement, received 04 February 2019.

This information is used in Sections 2.0 and Section 6.1 of the Report.

Mineral Tenure Status

- Document 1 - Estado actualizado Aquiline y Leleque al 12.11.18.pdf; File containing mineral tenure status for all Calcatreu properties, received 20 March 2019;
- Document 2 – Email correspondence containing listing of new additions to Calcatreu properties, plus image attachment showing plan of all property boundaries (Propiedades_M Aquiline 2019.jpg), received 8 January 2019.

This information is used in Sections 4.2 and 4.3 of the Report.

Land Access Agreements

- Document 1 – Convenios Libre circulación 2018-2021.pdf; Property Access Agreements with Landowners for 2018 to 2021; dated 06 July 2018;

This information is used in Sections 4.4 and 4.5 of the Report.

Environmental Reports and Permits

- Document 1 – Resoluc.1277-18 DPA Permiso Rebequita.pdf; Water permit granted for Expediente No. 92389-IGRH-18, by the province of Rio Negro for the 2018 Calcatreu drilling campaign; dated 8 September 2018;
- Document 2 – INFORME DE ACTUALIZACIÓN AÑO 2016 DE LA DECLARACION JURADA AMBIENTAL Y PROXIMA ETAPA DE EXPLORACION - MANIFESTACION DE DESCUBRIMIENTO "REBEQUITA"- EXPTE. Nº 28.130-M-03; Environmental report for Exploration activity for the property Rebequita (expt. # 28.130-M-03); dated June 2016;
- Document 3 – INFORME DE ACTUALIZACIÓN AÑO 2016 DE LA DECLARACION JURADA AMBIENTAL Y PROXIMA ETAPA DE EXPLORACION - MINA "NABEL 4" EXPTE. Nº 23.017-M-98 ; Environmental report for Exploration activity for the property Nabel (expt. # 23.017-M-98); dated June 2016;
- Document 4 – DIA CERRO MOJON.pdf; Environmental permits (DIA) for property – Cerron Mojon; dated 03 October 2018;
- Document 5 – DIA NABEL 4.pdf; Environmental permits (DIA) for property – Nabel 4; dated 01 October 2018;
- Document 6 – DIA NABEL.pdf; Environmental permits (DIA) for property - Nabel; dated 03 October 2018;
- Document 7 – DIA REBECA.pdf; Environmental permits (DIA) for property -Rebeca; dated 03 October 2018;
- Document 8 – Resolución 1156 MD REBEQUITA 14-10-16.pdf; Environmental permits (DIA) for property - Rebequita; dated 14 October 2016;
- Document 9 – Resolución Ambiental Nº1770-18 VIUDA DE CASTRO hoja 1.jpeg; Environmental permits (DIA) for property – Viuda de Castro Part 1; dated 12 December 2018.

This information is used in Section 4.4 of the Report.

Exploration Expenditure for 2018

- Document 1 – Detalle Exploracion Calcatreu.xlsx; Email correspondence containing MS Excel file attachment listing of exploration items and expenditure (in Arg$) for Drilling conducted in 2018; received 19 March 2019.

This information is used in Section 9.1 of the Report.

Community and Stakeholder Relations

- Document 1 – Linea de Base Calcatreu INFORME FINAL septiembre 2018.pdf; Socio-economic Base Line Report, Ingeniero Jacobacci, by Universidad Nacional de Rio Negro, Informe Final CAT No. 07, 2018, received 20 March 2019
- Document 2 – Community issues - Summary for reports.docx; Memo by PGD to Cube Consulting summarising local community and stakeholder engagement conducted by PGD; received 19 March 2019.

This information is used in Sections 4.5 of the Report.

4. Property Description and Location

4.1. Location

The Calcatreu Gold -Silver Project straddles the southern boundary of Rio Negro Province and the northern boundary of Chubut Province in central Argentina It is located approximately 165 km (240 km by road) southeast of San Carlos de Bariloche (Bariloche) and 1,500 km southwest of Buenos Aires (Figure 4-1). The project is located approximately 60 km to the south of the town ship of Ingeniero Jacobacci along the unsealed but maintained, two lane route (ruta) 73, which connects Ingeniero Jacobacci with Paso Del Sapo in Chubut Provence to the south.

Figure 4-1 Location of the Calcatreu within the Rio Negro Province, Argentina (Aquiline, 2007)

All coordinates in this report are in the Gauss Kruger Projection UTM system and are expressed in metric units. The coordinates of the centre point of the Project area are 2,460,000E, 5,370,000N as defined in the Gauss Kruger Projection, Zone 2 with the Campo Inchauspe Datum. All locations illustrated in the Report are defined in this projection and datum.

4.2. Land Tenure System

The principal means of securing mineral rights in Argentina are summarised as follows:

- **Cateo**: The 'Cateo' is an exploration permit for a parcel of land measure in units of 500 ha and can vary in size from a single unit to a maximum of 20 units (10,000 ha). The holding of a cateo is associated with relinquishing ground based on a formula varying from 300 to 700 days and reduction in ground held to 50% of that originally claimed;
- **Manifestación de Descubrimiento** ("MD"): A Cateo can be converted after discovering a mineral occurrence of interest within a cateo, the owner can apply for an MD around his discovery at any time within the period of the corresponding cateo. The maximum area of an MD is 3,000 ha and remains in force until such time as the property is legally surveyed, an essential prior step to the longer term granting of a 'minas'; and
- **Minas**: Minas are mining concessions or leases which permit mining on a commercial basis. The area of a mina is measured in 'Pertenencias' (mining claims) and will vary in size according to the distinction between vein and disseminated targets believed to occur on the property. Individual mining authorities (the provinces) may determine the number of pertenencias required to cover the geological extent of the mineral 'deposit' in question. Once granted, minas have an indefinite term assuming exploration, development or mining is in progress. Pertenencias are granted for an unlimited term but may lapse if the claim holder does not complete the specified expenditures and work program submitted to the government at the time of application, or if the annual exploration fee ('Canon') is not paid.

The exploration fees ('Canones') for a Cateo are US$400 per unit of 500 ha, payable to the government on registration ($0.80 per ha. The Canon for a Pertenencia is US$800/yr for disseminated claims.

All mineral rights described above are considered forms of real property and can be sold, leased or assigned to third parties on a commercial basis.

The mining code contains environmental and safety provisions, administered by the provinces. Prior to conducting operations, operators must submit an environmental impact report to the provincial government, describing the proposed operation and the methods to be used to prevent undue environmental damage.

The Project areas which are the focus of the Calcatreu MRE update for the December 2018 have are contained within the Nabel 4 (Vein 49, Nelson Prospects) and Rebecca (Castro Sur Prospect) Minas.

4.3. Nature and Extent of Mineral Title Status

PGD through its subsidiary, Minera Aquiline Argentina has 100% ownership of the Calcatreu properties. The obligations to be met in order to retain each type of property are described in Section 4.2. As at 31 December 2018, the status of the properties are summarised as follows:

- 12 MDs – 11 are approved and current; 1 is pending resolution but not located within the area subject to the 2018 MRE work;
- 4 Cateos – 2 are approved and current; 2 are pending resolution but not located within the area subject to the 2018 MRE work;

- 3 Minas – All Minas are approved and current to October 2020, with Nabel 4 and Rebeca combined making up 100% of the property areas subject to the 2018 MRE;
- 2 Properties with Status Pending – new property additions in 2018 with current status pending approvals, but not located within the area subject to the 2018 MRE work.

The details of each mineral tenure property are provided in Table 4-1.

Table 4-1 Listing of Mineral Tenure within the Calcatreu Area (PGD, 2018)

Owner	Name	Property File #	Area (ha)	Type	Env. Permit Resolution #	Next Env. Expiration
Minera Aquiline	Aguadita	28.127-M-03	1,500.00	MD	310/15	Approved to 26/9/19
Minera Aquiline	Carnerito	28.137-M-03	1,678.93	MD	732/15	Approved to 11/8/19
Minera Aquiline	Cerro Mojón	26.055-M-01	400	MD	1121/16	Approved to 3/10/20
Minera Aquiline	Chivito	28.128-M-03	500	MD	312/15	Approved to 23/9/19
Minera Aquiline	Co. Mojon Grande	37.129-M-12	1,663.24	CATEO	044/17	Pending Resolution
Minera Aquiline	Co. Mojon Grande I	37.130-M-12	1,704.74	CATEO	043/17	Pending Resolution
Minera Aquiline	Co. Mojon Grande II	37.131-M-12	2,039.82	CATEO	1227/17	Approved to 23/11/19
Minera Aquiline	Doradito 2	28.135-M-03	2,000.00	MD	731/15	Approved to 15/8/19
Minera Aquiline	El Centinela	43.017-M-18	4,999.92	TBA	TBA	Addition in 2018
Minera Aquiline	Enlace Co. Mojon Grande	43.072-M-18	3,623.93	TBA	TBA	Addition in 2018
Minera Aquiline	La Incognita	27.032-M-02	2,200.00	MD	722/15	Approved to 11/8/19
Minera Aquiline	Nabel	22119-M-97	300	Minas	1314/16	Approved to 3/10/20
Minera Aquiline	Nabel 1 bis	27.072-M-02	400	MD	809/15	Approved to 11/8/19
Minera Aquiline	Nabel 2	28.071-M-03	1,400.00	MD	308/15	Approved to 26/09/19
Minera Aquiline	**Nabel 4**	**23.017-M-98**	**250**	**Minas**	**1313/16**	**Approved to 1/10/20**
Minera Aquiline	Onabel	29.019-M-04	5,898.34	CATEO	1157/16	Approved to 20/09/20
Minera Aquiline	Pampita	28.131-M-03	1,807.66	MD	311/15	Approved to 11/8/19
Minera Aquiline	**Rebeca**	**23.019-M-98**	**500**	**Minas**	**1154/16**	**Approved to 3/10/20**
Minera Aquiline	Rebequita	28.130-M-03	3,439.31	MD	1156/16	Approved to 19/09/20
Minera Aquiline	Trinity	28.132-M-03	400	MD	721/15	Approved to 1/8/19
Minera Aquiline	Viuda de Castro	33.063-M-08	1,265.49	MD	1153/16	Pending Resolution
TOTAL			**37,971.38**			

A plan view of the properties showing the property names , and the newly acquired areas added to the tenure listing in 2018 are illustrated in Figure 4-2.

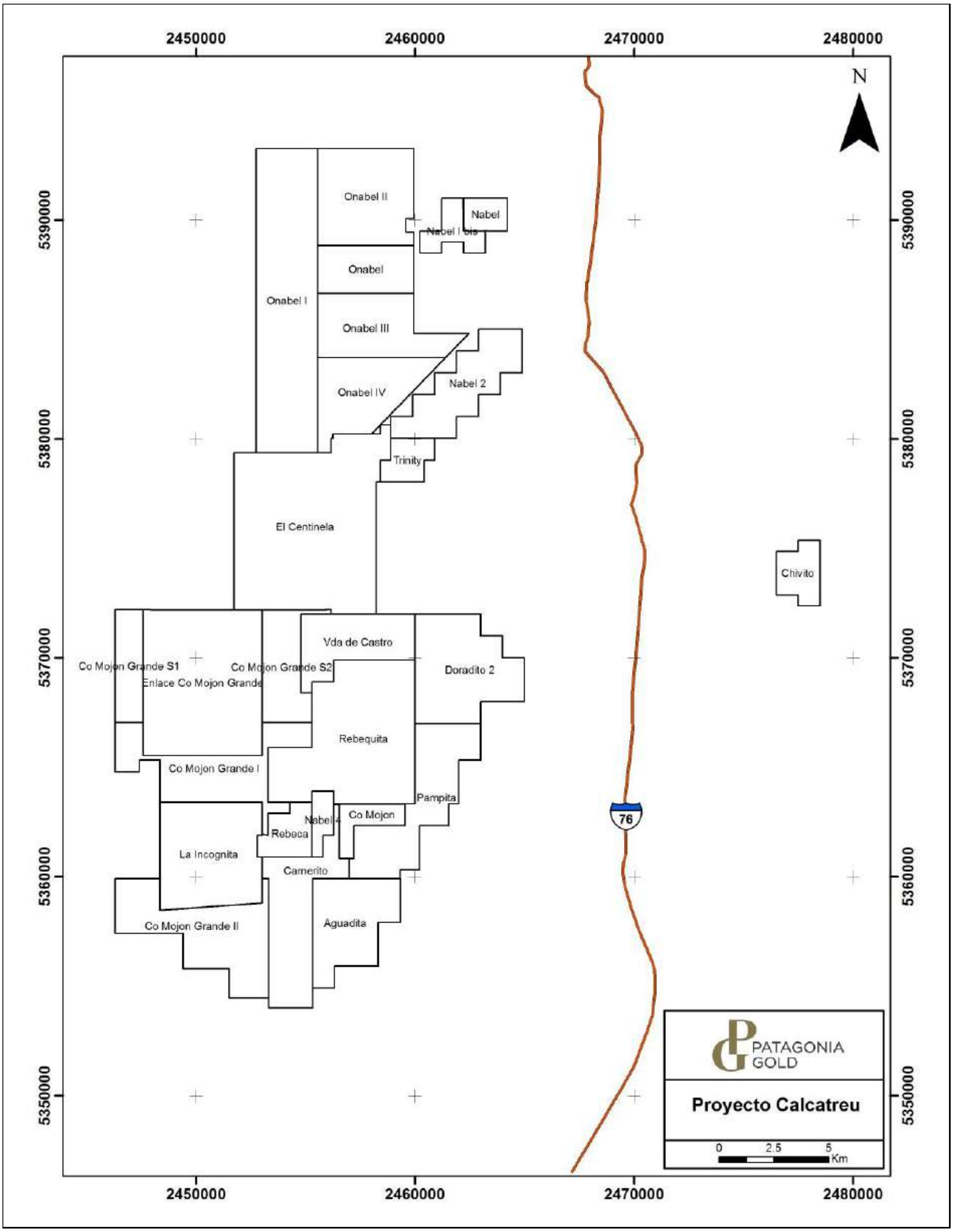


Figure 4-2 Plan View of Calcatreu Properties as at 31 December 2018 Additions (PGD, 2018)

The deposits which are the focus of the Calcatreu Project 2018 MRE (Vein 49, Nelson, Belen and Castro Sur) are contained within the Nabel 4 and Rebecca Minas.

4.4. Surface Rights, Royalties, Legal Access and Obligations

Purchase of Property in 2018

On 28 December 2017, PGD announced that it had entered into a Definitive Agreement with PAS to acquire the Calcatreu property for a total consideration of US$15 million. PGD made an initial payment of US$5 million, as reported on 1 February 2018.

After completion of due diligence and documentation, on 18 May 2018, PGD reported that the balance of US$10 million to PAS had been paid, corresponding to the second and final payment for the acquisition of the Calcatreu Project.

As a result of the transaction, PGD, through a wholly owned subsidiary, acquired Minera Aquiline Argentina SAU which owns 100% of the Calcatreu Project.

Surface Rights

Surface rights in Argentina are not associated with title to either a mining lease or exploration claim and must be negotiated with the landowner. PGD has negotiated surface land agreements to conduct exploration and mining activities with landowners within the Calcatreu properties. All agreements are in place and require monthly fees payable by PGD to the landholders for 3 years from 2018, with one agreement period for 1 year.

The agreements with the local landowners covering the Project areas include exclusive access rights to the relevant paddocks and fields covering the mineralisation. This includes an agreement that the owner would not run stock in these paddocks so as not to affect, or be affected by, exploration activities.

Royalties, Back-in Rights, Other Agreements and Encumbrances

The QP is not aware of any other royalty payments, back-in rights, or other agreements and encumbrances that may affect access, title, or the right or ability to perform work on the Property.

4.5. Permits and Environmental Liabilities

Permits Required for Proposed Work Programs

Following the completion of Environmental Impact Assessment (“EIA”) over the Calcatreu properties approvals were obtained from Mining and Environmental authorities that covered the 2018 exploration and drilling campaign.

All permits necessary to carry out exploration and drilling work on the Calcatreu Project area were granted in September 2018. Mining and exploration permits are valid for two years.

These permits include:

- Environmental Permits have been approved for all properties where drilling and exploration work has been carried out or is to be planned in 2019-2020; and
- Water permits were approved for 2018 drilling program.

Environmental Liabilities

There are no known environmental liabilities associated with the Calcatreu properties.

4.6. Other Factors and Risks

Other factors and potential risks for the project include changes of provincial government, and potential objections of local stakeholders, communities and indigenous groups at and around Ingeniero Jacobacci - the closest town to the Project and where the local PGD office is located.

PGD has specific staff involved to facilitate ongoing relationships with local institutions and stakeholders. PGD conducts regular meetings with the different stakeholders in town, the local and provincial authorities, and the nearby indigenous communities to discuss the development of the Project relating to conditions of sustainability, safety, environmental concerns and ensure compliance with regulations are communicated.

In 2011, volcanic ash falls originating from the Puyehue - Cordón Caulle eruption resulted in an ash cloud was blowing across the Rio Negro and Chubut provinces and covering vegetation in the Calcatreu areas, with evidence of the ash falls still present today. These eruptions and events are quite rare (recent history of once per decade) and are not considered a significant factor or impediment to future exploration and potential mining activities at Calcatreu. These events may hamper access for periods of several days or weeks.

Other than seasonal weather conditions, the QP is not aware of any other significant factors or risks that may affect access, title, or the right or ability to perform work on the Property.

5. Accessibility, Climate, Local Resources, Infrastructure and Physiography

5.1. Accessibility

The town of Jacobacci may be reached by unsealed, but maintained, provincial roads from Bariloche, a vehicle trip of approximately four hours. Ingeniero Jacobacci may also be reached by the railway line connecting Viedma with Bariloche. Bariloche and Viedma are served by commercial jet services from Buenos Aires and Bariloche has access to international jet services from Santiago (Chile) via Mendoza.

The Project area has easy and well-established access. The site is reached from Ingeniero Jacobacci by the wide unsealed but maintained Ruta 73 which connects Ingeniero Jacobacci with Paso Del Sapo in Chubut Provence to the south. The road distance between Ingeniero Jacobacci and Calcatreu is 90km.

Access to the Project area is gained via a track which extends to the west for approximately 30 km from the Ruta 73 road turn-off. Access around the property is by a single unsealed road and several secondary side access tracks to drilling platform areas (Figure 5-1).

In the Project area, off-highway driving around the individual exploration sites is facilitated by mostly gentle topography, mainly dry climate, and sparse vegetation that are typical characteristics of this region of the Argentine Patagonia.

Figure 5-1: Access Road to Calcatreu - Vein 49 Prospect – View Looking North (PGD, 2017)

5.2. Climate

The local climate is classified as moderately cold continental. The closest meteorological station is located at Maquinchao, some 90 km to the northeast, and is considered reasonably representative of the climate in the Project area.

Weather statistics measured at Maquinchao show the following:

- Average annual temperature: 10^{o} C;
- Average January temperature: 20^{o} C, Average July temperature: 4^{o} C;
- Principal wind direction: from NW/W to SE/E;
- Average wind velocity: 20 km/h;
- Maximum wind velocity: >100 km/h in spring; and
- Annual rain/snow fall: 200 mm.

The length of the exploration field season is capable of extending over 12 months, with only a short duration of extreme weather conditions, including very strong winds, heavy rain or snowfall

Over the course of the year the weather conditions are generally dry, with very strong winds. During the colder months, heavy rain and snowfall can occur, making for more difficult driving conditions.

The duration of the field season has typically been over the length of the warmer months from September to April, although weather conditions throughout the year are not severe enough to have prevented drilling and other exploration activities from taking place during the winter months.

5.3. Topography, Vegetation, Land Use

The Project area is predominantly covered by rolling pampa (treeless grassland or plains) in wide, poorly-incised valleys within low, rocky outcropped hills. Elevations vary from approximately 1,200 m to 1,500 m above sea level. The area includes a moderately well-developed network of slow draining creeks, streams and swampy areas.

Strong wind conditions over result in the deposition of a high loading of wind-borne dust including ash from active volcanoes located in Chile to the west (as occurred following the 2011 eruption in Chile mentioned in Section 4.6). Local swampy areas are often developed within the larger streams, sometimes as a result of the collection of the fine ash material.

Figure 5-2 to Figure 5-4 illustrate the topography and vegetation typical of the main prospect areas at Calcatreu.

The project area supports very low intensity sheep farming, but due to the poor-quality soil, no other agricultural activity occurs within the Calcatreu properties.

The dominant local land use is low intensity sheep grazing with some additional stocking of cattle and horses. The soil is not well developed and is described as skeletal in places. In addition, the ash from the volcanoes in Chile has had a deleterious effect on the quality of vegetation for the number of grazing animals.

Figure 5-2: Topography and Vegetation at Vein 49 – View Looking South (Cube site visit, 17/02/2017)

Figure 5-3: Topography and Vegetation at Nelson – View Looking South (Cube site visit, 17/02/2017)

Figure 5-4: Topography and Vegetation at Castro Sur – View Looking North (Cube site visit, 17/02/2017)

5.4. Local Resources and Infrastructure

Current Infrastructure

The Calcatreu site has no existing infrastructure except for an unsealed road between Ingeniero Jacobacci and Paso del Sapo towns, which passes close to the project site, and a small exploration camp established in 2018. An exploration camp was setup within the Nabel property to provide accommodation for contract drilling and PGD exploration staff for the 2018 drilling program.

Water

Some standing water is available throughout the district and water-trucking distances for drilling programs are less than 5 km. Many of the drill holes completed in the project area have encountered water. Several water bores have been drilled in the project area which have been used to provide water for the recent drilling and exploration camp facilities.

There is sufficient moisture in the soil for good electrical contact for Induced Polarization (IP) geophysical surveys, without the need for constant watering.

Power and Other Services

There is no local power or communications infrastructure at the project site, with the closest power and telecommunications located at Ingeniero Jacobacci. No electrical power or telephone service exists along Ruta 73 or in the immediate project area. A major east-west power transmission line is located just to the north of Ingeniero Jacobacci and the town is serviced by electrical power, telephone and the internet.

Local Resources

Ingeniero Jacobacci is the closest major population centre, comprising good support services such as transport (road, rail, and air), earthmoving, construction, commercial and banking, and emergency services.

The workforce for PGD exploration activities has primarily consisted of professional staff from major regional centres in Argentina and support staff drawn from the local communities.

Sufficiency of Surface Rights

Land access agreements with local landholders as noted in Section 4.4, allow for sufficiency if exploration and potential future mining activities. The relatively flat topography is amenable for the placement of mine infrastructure, such as potential processing sites, waste dump areas, tailings storage facilities, and heap leach pads.

6. History

6.1. Property History and Ownership

Low sulphidation, epithermal, precious metal-bearing quartz-calcite veining was discovered in the Calcatreu area by a geologist, Carlos Cuburu from La Source Compagnie Minière ("La Source") in late 1997. The geologist collected quartz float samples that he observed on the roadside while visiting a prospect further to the west. As a result of the assays received and the vein textures noted, two prospecting licenses were staked in 1997, and regional reconnaissance activities commenced the following year.

The project passed to Normandy Mining of Australia ("Normandy") when it purchased LaSource from the French Government in 1998. Normandy, through its Argentine subsidiary Minera Normandy Argentina SA ("Normandy SA"), completed most of the exploration on the property.

Follow-up work from the float samples quickly led to the discovery of vein systems at the Nabel and Nabelon prospects. Observations at Nabelon and Nabel, close examination of satellite photographs and follow up by regional geological and rock chipping traverses led to the discovery of further mineralised prospects such as Vein 49, Nelson, Castro Sur, Trinidad Viuda del Castro and others.

By this time a total of 11 significant vein systems had been delineated within the Calcatreu district. The Vein 49/Nelson system, which has a strike length of over two kilometres and single system vein widths of up to 20 m, has been the most intensely investigated. Of the other prospects discovered, most have only been tested with single drill holes after field exploration including gradient array IP, soil sampling, prospecting and rock chip sampling. Normandy also completed a regional stream sediment sampling program (BLEG) sampling), consisting of 429 samples collected on an average spacing of five square kilometres per sample, and a regional geological mapping program. This work has outlined a number of anomalies and zones of alteration that have a not been adequately explained or explored.

Vein 49, and its probable strike extension Nelson, was then found to be the most significant discovery at Calcatreu with its geological setting having strong similarities with the Cerro Vanguardia and El Desquite projects also located in southern Argentina. **Cautionary Statement:** Information regarding the adjacent properties or similar deposit styles is not necessarily indicative of the gold-silver mineralisation at Calcatreu.

Drilling was completed in four campaigns by Normandy SA between 1999 and 2001. A total of 65 drill holes, for 7,992.2 m, were completed on the two main deposits.

Newmont purchased Normandy in 2002 and the Project passed to it. Newmont decided that Calcatreu did not meet corporate size objectives and elected to dispose of Normandy SA in September 2002. Aquiline Resources Inc. ("Aquiline"), which was based in Toronto, Canada, was the winning bidder. The final agreement was signed by Aquiline in June 2003 and allowed it to purchase 100% of the property and acquire Normandy SA by paying Newmont US $2.05 million in a series of staged payments over three years. Aquiline completed a small due diligence drilling program in July 2003 after finalising the deal on the Project.

Through its acquisition of Normandy SA, Aquiline acquired a significant land position in north central Patagonia. Aquiline focussed mainly on further drilling of the Vein 49 prospect as it believed this prospect to be the most potentially economic due to the presence of significant widths of gold and silver mineralisation near surface.

In 2003, Aquiline contracted independent consultants Micon International Limited of Toronto, Canada to complete an independent MRE for the Vein 49 area. Micon (2003) collected five (5) surface chip samples from the Vein 49 deposit which independently confirmed the presence of gold and silver mineralisation.

PAS then acquired the Calcatreu properties in 2010 through the acquisition of Aquiline. PAS completed a twin hole program consisting of 30 DD drill core holes in 2011.

On 28 December 2017, the PGD announced that it had entered into a Definitive Agreement with PAS to acquire the Calcatreu properties for a total consideration of US$15 million. Patagonia Gold made an initial payment of US$5 million. On 18 May 2018, Patagonia Gold paid the balance of US$10 million to PAS, corresponding to the second and final payment for the acquisition of the Calcatreu Project. As a result of the transaction, Patagonia Gold, through a wholly owned subsidiary, acquired Minera Aquiline Argentina SAU which owns 100% of the Calcatreu Project.

As of 31 December 2018 (the Effective Date of the Report), the Project is 100% owned by PGD following the completion of the acquisition of the Calcatreu Project from PAS on 18 May 2018. As a result of a transaction with PAS, PGD through a wholly owned subsidiary, acquired Minera Aquiline Argentina SAU which owns 100% of the Calcatreu Project properties.

As of 31 December 2018, PGD is currently in negotiations with Hunt Mining Corp. that will result in PDG being a wholly-owned subsidiary of Hunt in 2019.

6.2. Previous Exploration

6.2.1. Normandy SA Exploration

The Calcatreu Project passed to Normandy when it purchased LaSource from the French Government in 1998. Normandy, through its Argentine subsidiary Normandy SA, completed most of the exploration on the property.

Normandy SA uncovered vein systems at 11 prospects delineated within the Calcatreu Project area. The Vein 49/Nelson system, which has a strike length of over two kilometres and widths of up to 20 m, has been the most intensely investigated.

Of the other prospects discovered by Normandy SA, most have only been tested with single drill holes after field exploration including gradient array IP, soil sampling, prospecting and rock chip sampling.

Mapping and Surface Sampling

Ground follow-up of the float samples quickly led to the discovery of vein systems at the Nabel and Nabelon prospects with anomalous gold values in banded quartz material within andesitic volcanics (Nabel) and visible gold within fine quartz veins hosted in rhyolite (Nabelon). Observations at Nabelon and Nabel, close examination of SPOT Images (‘Satellite Pour l’Observation de la Terre’ or Satellite for observation of Earth) and Landsat images (satellite imagery photos) and follow-up by regional geological and rock chipping traverses led to the discovery of further gold-mineralised prospects such as Vein 49, Nelson, Castro Sur, Trinidad and Viuda del Castro.

A geological map showing the location of all of the discoveries is shown in Figure 6-1.

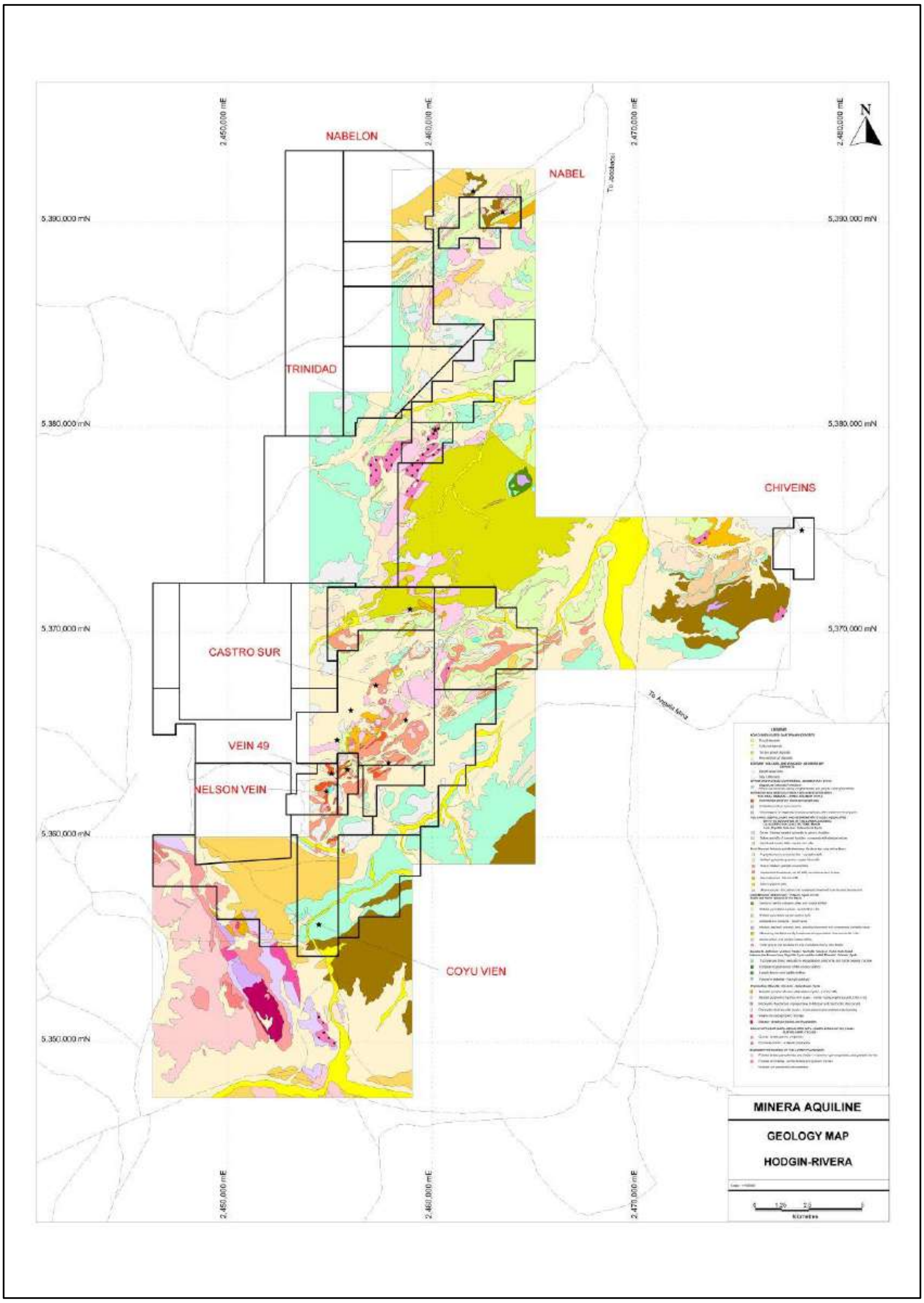


Figure 6-1: Property Geology Plan Showing Calcatreu Prospect Locations (Micon 2003)

All of the listed discoveries were then covered by tenements and detailed channel and trench sampling and geological mapping commenced over the known prospects. Vein 49 returned the best surface assays with trench samples including 40 m at 3.10 g/t Au and 10.0 m at 10.27 g/t Au (not true widths). An exploratory trench at Nelson returned 5.0 m at 30 g/t Au.

Normandy also completed regional stream sediment or BLEG sampling program, consisting of 429 samples collected on an average spacing of five km^2 per sample, and a regional geological mapping program. This work outlined a number of anomalies and zones of alteration that had not been adequately explained or explored up to that time period.

In 2000, Normandy SA commissioned aero-photogrammetric coverage of most of the Project area. This was done in order to produce 1:10,000 topographic maps suitable for regional geological mapping as there were no commercially available aerial photographs and the topographic base for the area was at 1:250,000 scale (Hodgkin and Rivera, 2001). A regional geological map at a scale of 1:25,000 was produced from this work (Figure 6-2).

In 2001 Normandy SA commissioned a major regional geological mapping project, which placed the prospects and deposits in their individual volcanic and structural settings and also identified further zones of alteration, including an area interpreted to have undergone alteration associated with high sulphidation epithermal mineralisation. Some of these anomalies have received little follow-up work since this time.

6.2.2. Aquiline Exploration

Upon receiving approval to acquire the project in 2003, Aquiline completed a series of surface geological mapping and sampling programs, geochemical sampling (Portable Infrared Mineral Analyser or “PIMA”), trench mapping and sampling, and geophysical surveys.

Geology Reconnaissance and Rock Chip Sampling

Owing to the lack of any topographic base maps at scales less than 1:250,000, the initial geological mapping was carried out using 1:50,000 and 1:25,000 Landsat and SPOT images (imagery from commercial thematic mapping satellites). In 1998, mapping and rock chip sampling led to the discovery of the Vein 49 structure and a number of smaller veins to the southwest. These latter veins were initially referred to as the ‘Guzman Veins’ but later the name was changed to the ‘Nelson Veins’. A plan view of the rock chip sampling with significant Au values is illustrated in Figure 6-3.

The Vein 49 prospect occupies the crest of a ridge, 30 m to 50 m above the valley floor, which has resulted from resistant weathering of the quartz veining and limited silicification of the surrounding host rock. The vein itself sticks up from the top of the ridge in resistant outcrops up to two metres in height. These features likely, in part, resulted in the discovery of the vein. Vein 49 dips at 65^{O} to 75^{O} to the southeast. Figure 6-4 is a plot of the northeast half, showing the Vein 49 area.

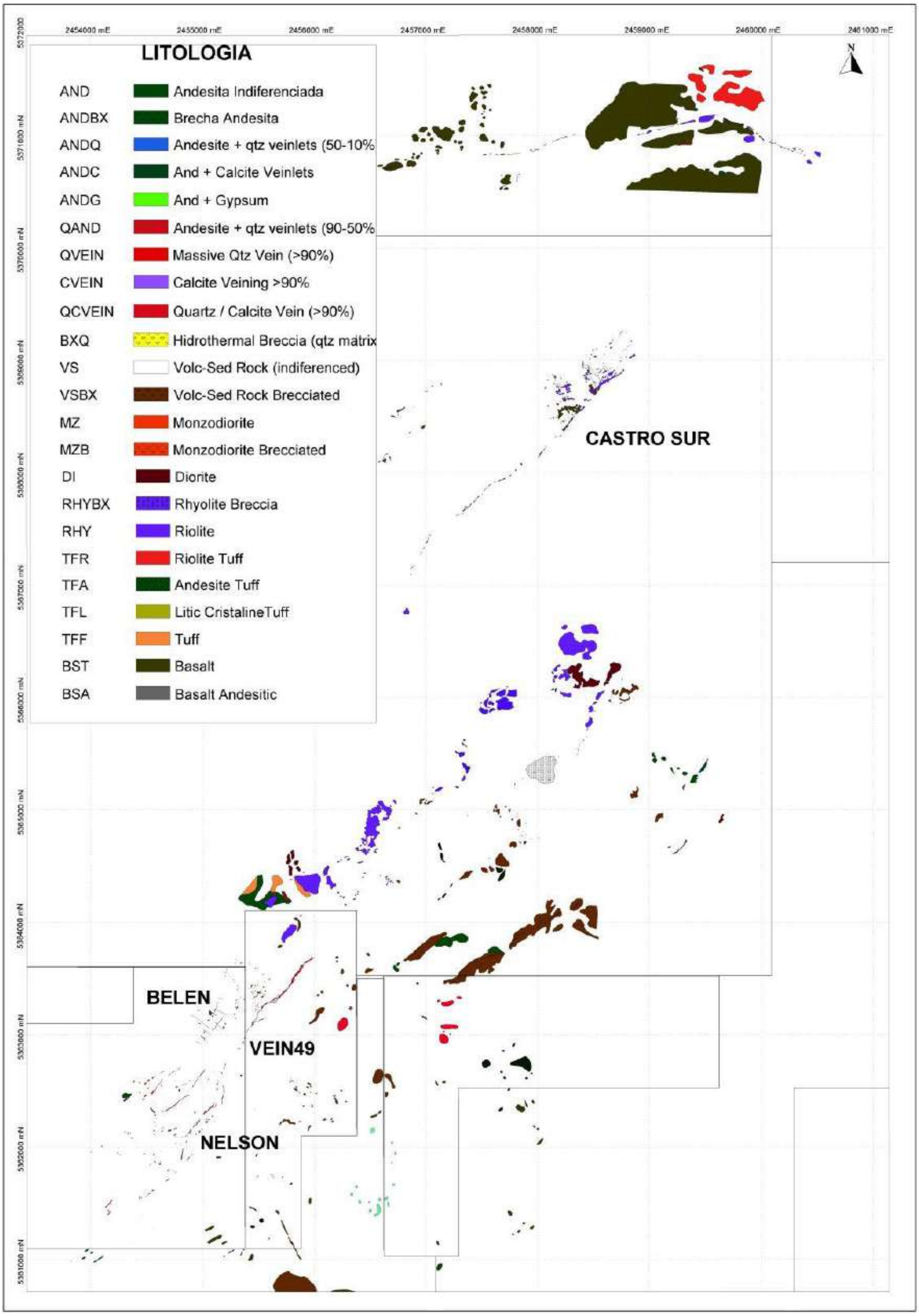


Figure 6-2: Outcrop Geology Map of Calcatreu Prospects (Micon, 2004a)

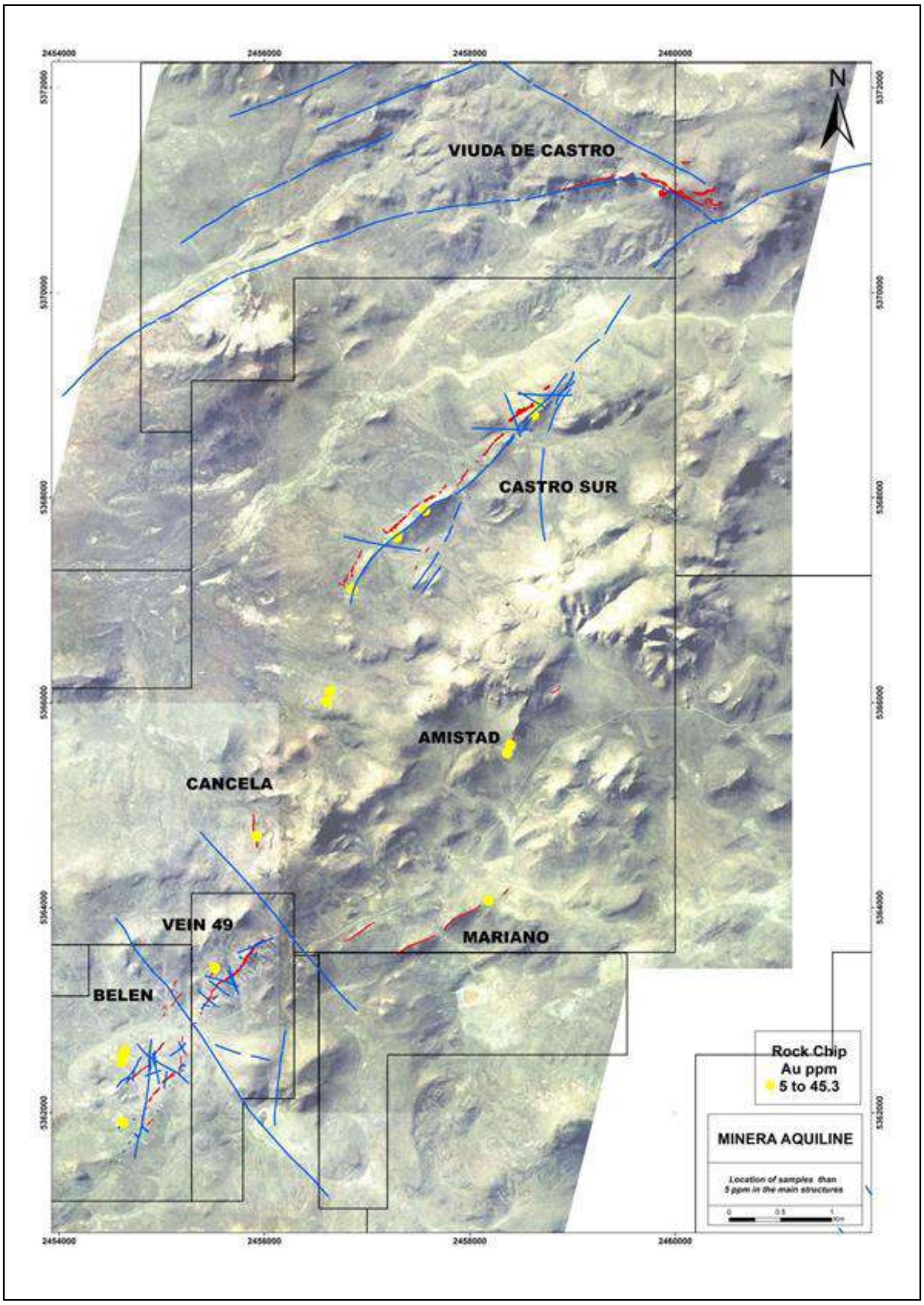


Figure 6-3: Calcatreu Prospects – Plan of Significant Rock Chip Sample Locations by Aquiline (Walter, 2007)

Detailed mapping indicated that the vein was continuous over an 800 m strike length, varied in width from five metres to 12 m and dipped at an average 80° to the southeast (drilling has since shown a slightly shallower dip). The north-eastern end of the vein system appeared to be sharply truncated, possibly by a fault. The southwestern end the vein appears to horsetail into the Nelson Veins. It was initially believed that the host rock was a rhyolitic volcanic unit, but this was later proved to be an intermediate volcanic. The veining does, however, occur close to the Cerro Fulero rhyolite dome. Figure 6-5 is a plot of the southwest half, showing the Nelson veins area.

To the south-west of Vein 49 the landform flattens and hence the Nelson veins do not crop out strongly. Initial observations seemed to indicate a number of thin veinlets. However, banded quartz vein float was encountered many hundreds of metres to the southwest.

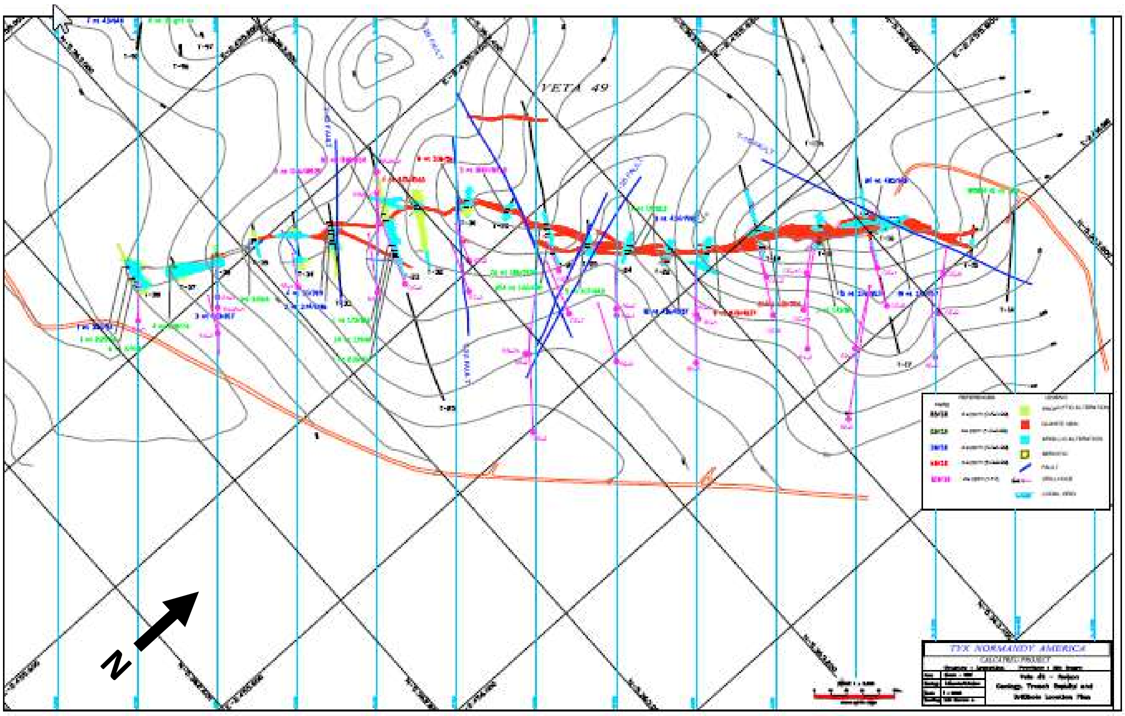


Figure 6-4: Vein 49 Geological Mapping and Sampling - NE Plot (Micon, 2004b)

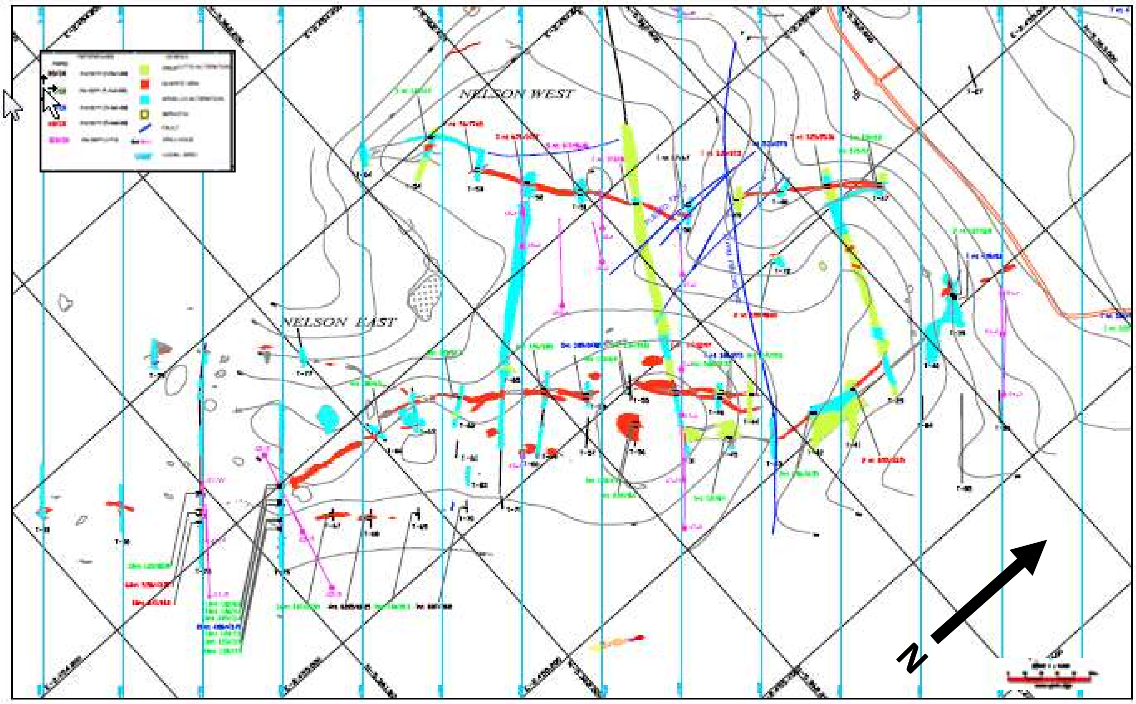


Figure 6-5: Nelson Geological Mapping and Sampling - SW Plot (Micon, 2004b)

Vein 49 PIMA Survey (2007)

As part of a doctoral thesis, a PIMA survey was carried out involving the collection of a series of samples from trenches crossing the structure and analysing them using a PIMA.

The original PIMA spectra were not available for review or verification of their interpretation. PIMA data is qualitative and not quantitative; the interpretation of spectra derived from mixed clay sources can be problematic and requires training in the use and interpretation of the analysis. The PIMA data is presented in Figure 6-6, showing the alteration mineral assemblages over a base map of the airborne photography.

The PIMA data for trench 17 (Tr17), shows symmetrical distribution of the alteration mineral assemblages surrounding Vein 49. Coincident on the vein and the surface precious metal mineralisation is kaolinite. At the margins of the vein are thin bands of what was described in the thesis work as kaolinite-smectite. Outside of this is a wider zone of montmorillonite that ends once again in the kaolinite-smectite assemblage.

PIMA data for trench 19 (Tr19) is similar to that of Tr17, immediately over the vein. However, the area to the northwest of the vein is significantly different from Tr17. On the footwall side of the vein the PIMA data indicates an alteration mineral assemblage including dickite, alunite and illite-smectite.

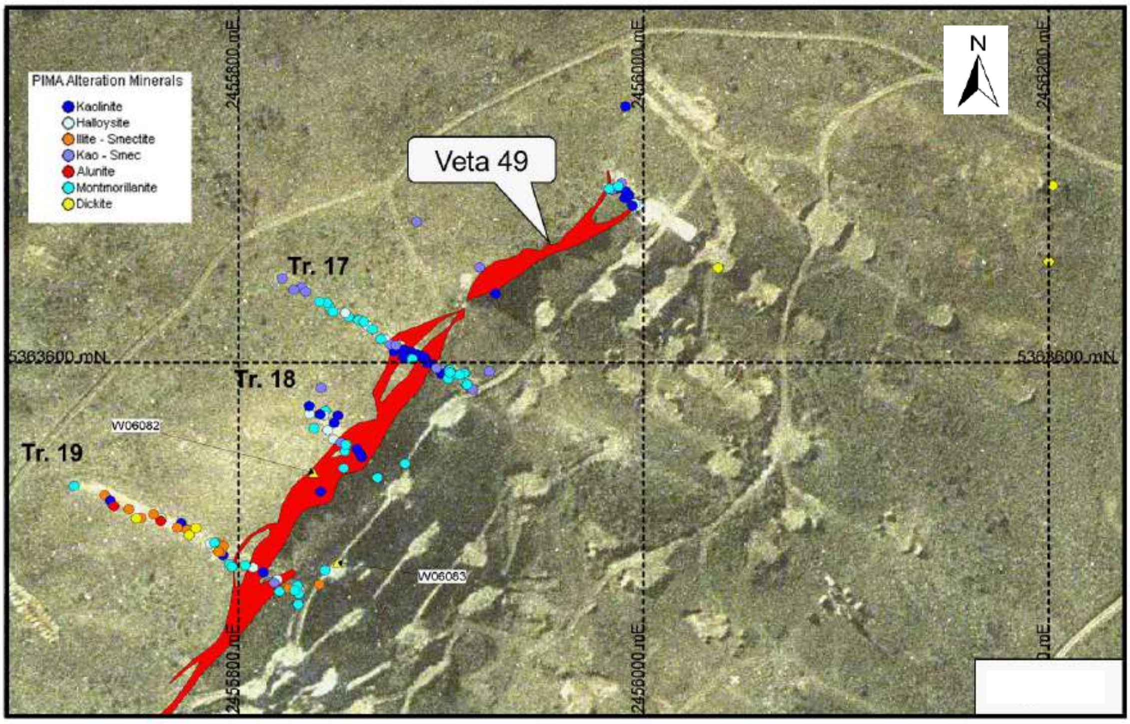


Figure 6-6: Vein 49 - Plan of PIMA Sampling Results alon Trench Lines with Mineralisation Trends (Williams, 2006)

Geochemical Sampling

Vein 49 derives its name from the discovery rock sample: the 49th rock chip sample collected on the Calcatreu Project area during the May 1998 Landsat/SPOT image-based regional prospecting program.

The sample returned 6.65 g/t Au. Follow-up surface channel rock chip sampling in September 1998, at approximately 100 m spacing over the main vein, returned encouraging results as set out in Table 6-1 below.

Table 6-1: Rock Chip Sampling Results at Vein 49 (Micon, November 2003)

ID	Width	Gold (Au g/t)	Silver (Ag g/t)	Ag/Au Ratio	Comments
P 16	10.8	4.05	38	9	5.8 m at 4.7 g/t Au, 5.0 m at 3.3 g/t Au.
P 17	10	3.8	16	4	5 m at 6.4 g/t Au, 5 m at 1.2 g/t Au.
P 18	9	4.89	100	20	4 m at 6.95 g/t Au, 5 m at 3.25 g/t Au.
P 19	3.5	5.95	27	4	
P 20	8.8	2.02	50	25	3.8 m at 2.26 g/t Au, 5.0 m at 1.84 g/t Au.
P 21	5.8	4.5	25	6	
P 21	5.8	4.5	14	3	Duplicate.
P 22	11.2	17.91	160	9	6.2 m at 29.0 g/t Au, 5 m at 4.15 g/t Au.
P 23	5	26.8	125	5	
P 24	0.9	5.15	28	5	
P 25	2	6	48	8	
P 26	2.5	0.01	47		

As a result of this work it was decided to run a program of trenching activity described below. In December 1998, orientation soil sampling was undertaken over the immediate Vein 49 area. The area has a clear anomalous gold halo in soil samples up to 80 m down slope from the vein outcrop. The anomalous threshold appears to be approximately 10 ppb and the highest soil sample result received was 1.39 g/t Au.

Follow up work including a number of soil sampling grids, were established over areas away from the main veining, particularly along the trend of Vein 49 to the southwest where the terrain flattens out and the soil cover increases (the Nelson Zone). A number of soil anomalies were outlined, some of which, mostly in the Nelson area, have been followed up with trenching and some drilling. Other significant anomalies to the east were not followed up at the time.

The Vein 49 North soil grid was emplaced in an attempt to detect a north-easterly continuation of the Vein 49 system. The results did not indicate an extension, although a PDP-IP survey did. The sampling discovered a strong gold soil anomaly to the south. This anomaly, in the El Tapado area, was followed up with rock chip sampling which returned highly anomalous values.

Trenching

Following the discovery of the main Vein 49, and the program of chip sampling described above, a short trenching program was undertaken along those section lines that were proposed for drill testing.

Trenching Procedures

Trenches were numbered in the order in which they were excavated. Once excavated, all trenches were mapped and sampled. Geological mapping of trenches was performed at a 1:100 scale near mineralisation. However, some intervals away from the mineralised structures were mapped at 1:500 scale.

Sample intervals were defined by the geologist responsible for the mapping and samples were systematically collected at 1 m intervals. Occasionally, in the case of minor veins, sampling at 0.5 m lengths was conducted. Samples were collected from channels 10 cm wide by 5 cm deep by 1 m in length, that were dug using a pneumatic hammer. Minimum sample weights of 10 kg/m were required. Trenches were labelled in the field with an identification mark at the beginning of each trench and by stakes along the border, positioned at the end of each sample, and showing the sample number.

Photographs were taken of each trench and all sample and trench locations were surveyed giving their location in Gauss Krugger coordinates.

All personnel and contractors involved in trenching operations were instructed on environmentally sound field practices. After mapping and sampling was completed, all soil and rock discarded during digging of the trenches was used to fill them in.

Trenching Results

The first generation of trenches consisted of four bulldozer cuts irregularly spaced over a 700 m strike length. These were continuously chip sampled and composited over 5m lengths. The results are presented in Table 6-2 below.

The trench results reported here use a 1 g/t Au lower cut-off. For reporting two internal values of less than 1 g/t Au are carried if the resultant intersection is still above 1 g/t.

Table 6-2: First Phase Trench Sampling Results at Vein 49 (Micon, November 2003)

ID	Width (m)	Gold (Au g/t)	Silver (Ag g/t)	Comments
TR 17S	45	1.94	10	Reworked mineralised boulder.
TR 17S	5	12.6	7	Central vein.
TR 17S	40	3.1	9	Vein plus stockwork.
TR 23	5	18.3	8	Central vein.
TR 23	10	10.27	14	Vein plus stockwork.
TR 23	20	1.31	8	Stockwork zone to east.
TR 19	5	7.5	54	Central vein.
TR 19	20	5.05	40	Vein plus stockwork.
TR 21	35	1.17	14	Stockwork, no main vein.

In order to explore the poorly outcropping Nelson Zone to the southwest, two long trenches were opened, spaced about 300m apart. These were GT31 and GT29, 650m and 300m in length respectively.

The results are set out in Table 6-3 below.

Table 6-3: Trench Sampling Results at Nelson (Micon, November 2003)

ID	Width (m)	Gold (Au g/t)	Silver (Ag g/t)	Comments
GT 31	5	1.56	-	Near SE end.
GT 31	5	30	-	Qtz-calcite veining.
GT 31	20	8.42	-	Zone around above.
GT 31	5	5.75	-	Isolated vein.
GT 29	5	1.31	-	Isolated vein.

On the basis of these results it was decided to concentrate future exploration efforts on Vein 49.

The intersection of 5 m at 30 g/t Au was grab sampled for petrological description (sample number 145706). The sample assayed 19.9 g/t Au, 48 g/t Ag and 7 ppm Cu. Petrologist Graeme Corlett of Terry Leach & Co described the rock as a quartz-calcite-clay (illite and kaolinite) filled breccia with clasts of pink fine-grained quartz. Native gold and silver sulphides are associated with the primary stage of brecciation. Gold grains range from 0.2 to 6.0 micron.

Following on from the successful short trench sampling program at Vein 49 a further, more-detailed program was undertaken in 2000. This was completed using a backhoe for excavation and a pneumatic chisel for sampling. Great care was taken in cleaning the trench before sampling, and between the 1m samples. The original four trenches were cleaned out and resampled. This program resulted in trenches at semi-regular 50 m intervals along the main Vein 49, Nelson East and Nelson West structures. A number of trenches were also excavated over any significant subparallel veins.

The trenching was successful in outlining a zone of essentially continuous gold mineralisation. Some of the better intersections are set out in Table 6-4 (intersections employ a 0.5 g/t Au lower cut-off).

Table 6-4: Second Phase Trench Sampling Results at Vein 49 (Micon, November 2003)

ID	Width (m)	Gold (Au g/t)	Silver (Ag g/t)	Comments
TR 16	20	3	20	Tested by hole CE-5
including	3	11.6	33	
TR 17	27	3.6	14	Tested by holes CE-1,62-3
including	3	13.6	14	
TR 18	26	2.5	16	Tested by holes CE-10,11,61-3
including	11	4.6	20	
TR 19	24.5	5.4	34	Tested by hole CE-2,6
including	4.8	15.4	68	
TR 20	10	7.8	39	Tested by hole 60-3
TR 21	9.9	1.2	4	TR21 Tested by holes CE-3,7,58-2
and	11.5	1.5	6	
and	7.6	1.7	17	
TR 22	19	4	48	
including	3	10.4	64	
TR 23	19.5	0.9	6	Tested by hole CE-4
And	8.1	9.2	81	

ID	Width (m)	Gold (Au g/t)	Silver (Ag g/t)	Comments
TR 24	12	2.3	36	Tested by hole 59-3
TR 25	8	1.6	15	
TR 26	3.9	3.8	18	
TR 28	5	10.9	108	
including	1	38.8	325	
TR 29	4	4.1	20	
including	2	7.1	33	
TR 30	8	5.2	57	Tested by hole 57-2,57-3
including	3	11.8	113	
TR 31	7	7.4	23	
including	3	15.4	42	
and	1.2	17.3	163	
TR 32	4	6.2	46	
TR 33	6.6	2.1	8	
and	10	1.7	21	
and	5	11.1	190	
TR35	4	1.1	8	
TR36	3	4	22	Tested by hole 54-2
TR37	5	1.8	7	
TR38	7	2.2	11	Tested by hole 53-1
TR39	7	1.5	9	
TR 41	2	8.6	53	
TR 46	4	2.9	12	
TR 51	5	14.7	96	
TR 52	4	5.2	17	
TR 53	7	4.6	51	
TR 58	7.3	2.3	19	
TR 59	6	1.5	10	
TR 60	5	1.3	12	
TR 78	6	5.6	44	Tested by hole 41-4,41-5
including	3	9.3	71	
TR 87	19	2.1	5	Tested by hole 36-1
TR 90	3	4.5	42	Southern most trench
TR 91	7	4.3	64	Includes 2 m at 7.8 g/t Au, parallel structure to V49

Geophysics Surveys

In order to aid in definition of the altered areas in the Calcatreu Region, a 15,000-line km aeromagnetic survey with radiometric capability was flown over the Project. An area of 2,500 km2 was covered along north-south lines, spaced at 200 m and flown with a mean terrain clearance of 100 m. The survey was completed during February/March 1999. Project supervision, and interpretation of the data, was performed by Normandy SA staff.

The survey confirmed the strong nature of the northeast-trending structural grain to the Project area and that most of the gold anomalous areas appeared to be associated with felsic intrusions. These intrusions were marked by low magnetic and high total count radiometric signatures.

Owing to Normandy's success in using Time Domain IP surveys at Pajingo in Australia, three blocks (3 km by about 8 km) of gradient array IP were completed in June 2000 over the main Calcatreu area (Figure 6-7). Ground magnetic data was also collected for the same area but found to be of little use in aiding interpretation. The survey was carried out by Goanna Exploration and supervised by Foley. The survey employed Iris equipment along 100 m spaced gridlines and used a dipole spacing of 25 m.

The surveys produced a clear and well-constrained positive apparent resistivity anomaly with a broader and weaker chargeability anomaly associated with the best mineralisation at the northern end of Vein 49. Elsewhere, the resistivity response tracked the trend of the drilled and trenched mineralised zones, but the correlation was not exact (Figure 6-8).

The resistivity results were very useful in placing new trenches to the south of drilled positions on Nelson East and in the zone between the southern end of Vein 49 and the northern end of the Nelson systems. In addition, a number of offsets in the main veins were interpreted and some data suggested a change in the dip of the Vein 49 system towards its southern end.

This work was followed up in 2001 with eight blocks of IP over the soil-covered area to the south of Nelson, a location with very little outcrop. This later work identified only one short resistivity feature worthy of additional testing. It was drilled with hole 36-1. No significant mineralisation was encountered despite a trench above the drill hole carrying 20 m at 1.9g/t Au.

Two blocks of IP were also completed to the north of Vein 49 in an attempt to follow the structure and any possible parallel features to the east. This work clearly shows a resistivity response along strike from the end of the Vein 49 outcrop (Figure 6-9). Although the intensity of the response is lower than that seen coincident with the Vein 49 outcrop, this may be a function of burial as there is no outcrop over the resistivity feature to the north. Furthermore, if the single gradient array block is modelled by itself, the feature on strike with Vein 49 becomes a very strong response. This feature has not been tested. By drilling. There are parallel features to the east and one of these coincides with anomalous rock chip geochemistry and a significant soil anomaly as observed at El Topada in Section 9.

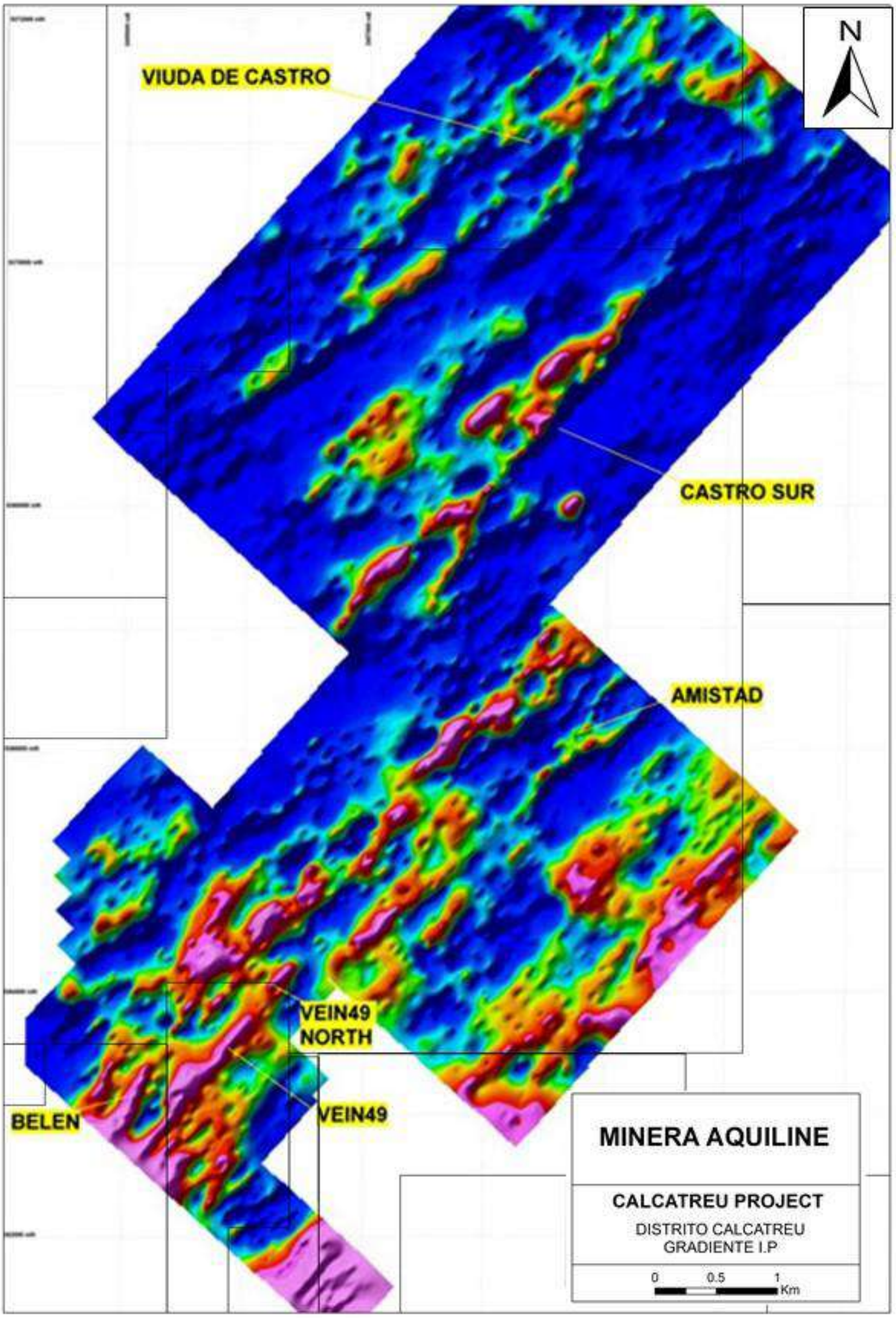


Figure 6-7: Calcatreu District - Map of IP Gradient Array Resistivity (Walter, 2007)

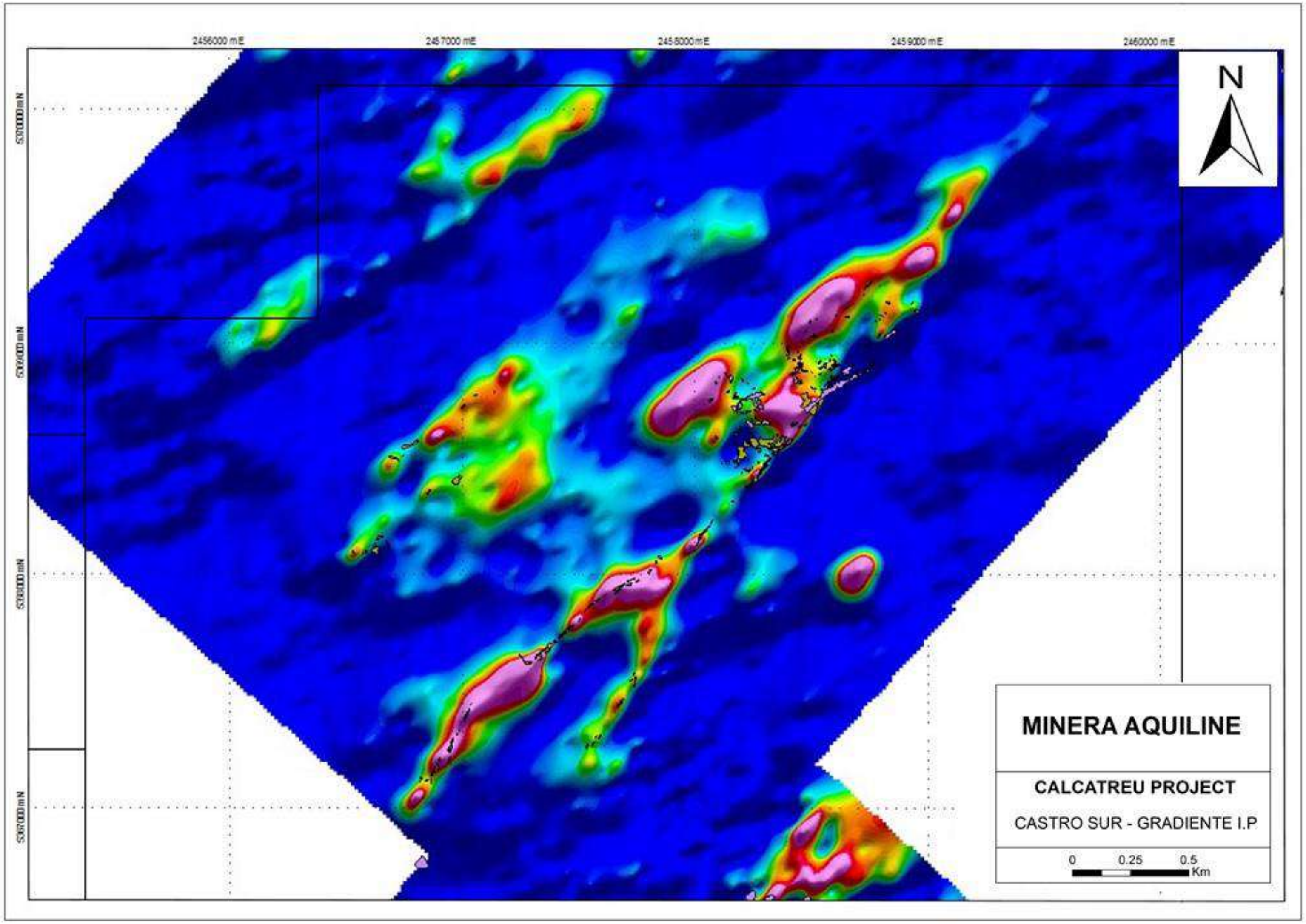


Figure 6-8: Castro Sur - Map of IP Gradient Array Resistivity with Geology Outcrop Overlay (Walter, 2007)

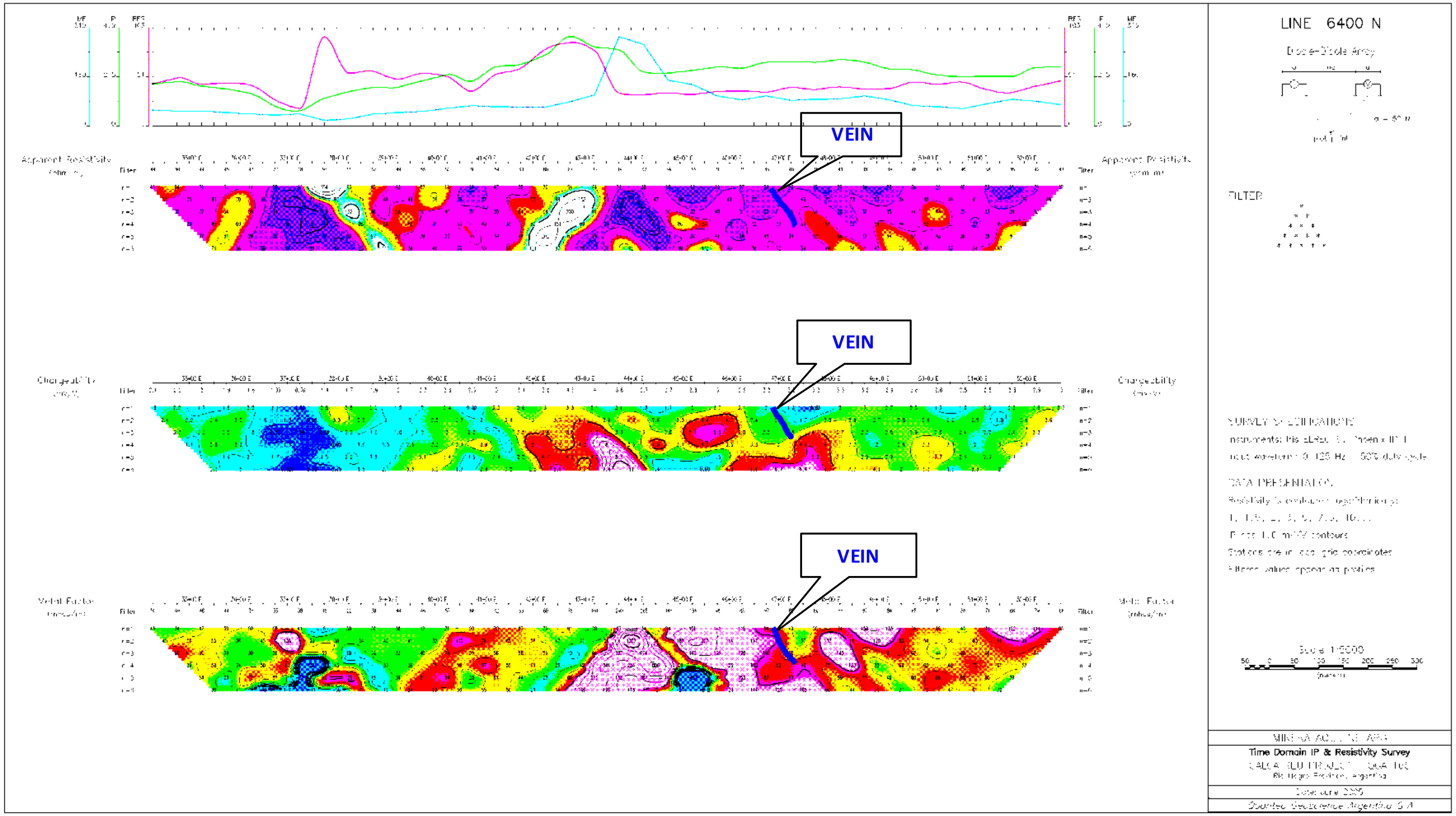


Figure 6-9: Vein 49– Cross Section Line 6400N Showing Time Domain IP-Resistivity Survey (Qantac, 2005)

6.3. Historic Mineral Resources

Listed in this section are historical mineral resource estimates that have been previously reported for the Calcatreu Gold-Silver Project.

6.3.1. Aquiline (2004)

In October 2004, an independent mineral resource estimate was completed by Micon International Limited of Toronto ("Micon"). Micon estimated a Mineral Resource for the Vein 49 and Nelson Vein zones which is described in the report – *A Preliminary Assessment and Economic Evaluation for the Calcatreu Gold-Silver Project, dated October 2004)* (Micon, 2004b). The report was filed by Aquiline with the Toronto Stock Exchange ("TSX") in October 2004.

The results are listed in Table 6-5.

Table 6-5 Calcatreu Mineral Resource Estimate, October 2004 (Micon, 2004b)

Prospect	Indicated					Inferred				
	Tonnes (kt)	Grade		Metal		Tonnes (kt)	Grade		Metal	
		Au g/t	Ag g/t	Au kOz	Ag kOz		Au g/t	Ag g/t	Au kOz	Ag kOz
Vein 49	5,020	3.26	29.8	526	4,801	1,343	2.27	20.9	98	903
Nelson	1,135	2.09	21.1	76	768	524	1.65	15.6	28	263
TOTAL	**6,155**	**3.04**	**28.1**	**603**	**5,569**	**1,867**	**2.10**	**19.4**	**126**	**1,166**

Notes:

- Mineral Resources are estimated at a block cut-off grade of 0.55 g/t Au.
- Figures may not add up due to rounding.
- Mineral resources that are not mineral reserves do not have demonstrated economic viability.
- The quantity and grade of reported inferred mineral resources in this estimate are uncertain in nature and there has been insufficient exploration to define these inferred mineral resources as measured or indicated mineral resources.
- No recent estimates or data are included in the figures reported.

Cautionary Statement: This resource has been superseded as a result of new drilling information from drilling programs conducted at Calcatreu since 2004. No recent estimates or data are included in the figures reported in Table 6-5. PGD is not treating these historical estimates as current Mineral Resources.

6.3.2. Cube (2018)

In February 2018, an independent mineral resource estimate was completed by Cube Consulting Pty Ltd of Perth, Australia ("Cube"). Cube estimated a Mineral Resource for the Vein 49, Nelson, Belen and Castro Sur zones which is described in the report - *Calcatreu Gold-Silver Project, Mineral Resource Estimate Rio Negro Province, Argentina; Prepared for Patagonia Gold Plc,* dated 28 February 2018 (Cube, 2018). The February 2018 MRE was classified and reported in accordance with the 2012

Australasian Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code"). The results are listed in Table 6-6.

Table 6-6 Calcatreu Mineral Resource Estimate, February 2018 (Cube, 2018)

Prospect	Indicated					Inferred				
	Tonnes (kt)	Grade		Metal		Tonnes (kt)	Grade		Metal	
		Au g/t	Ag g/t	Au kOz	Ag kOz		Au g/t	Ag g/t	Au kOz	Ag kOz
Vein 49	5,688	2.89	26.8	528	4,893	2,198	1.81	17.0	128	1,201
Nelson	1,400	1.64	18.6	74	839	1,477	1.48	15.5	70	736
Belen	-	-	-	-	-	681	1.59	22.1	35	483
Castro Sur	1,728	1.58	18.1	88	1,008	3,215	1.06	9.8	110	1,018
TOTAL	**8,816**	**2.43**	**23.8**	**690**	**6,740**	**7,571**	**1.41**	**14.1**	**343**	**3,438**

Notes:

- Mineral Resources are estimated at a block cut-off grade of 0.5 g/t Au equivalent.
- Gold equivalent ("Au_equ") values are calculated at a ratio of 76.5:1 Ag/Au.
- Figures may not add up due to rounding.
- Mineral resources that are not mineral reserves do not have demonstrated economic viability.
- The quantity and grade of reported inferred mineral resources in this estimate are uncertain in nature and there has been insufficient exploration to define these inferred mineral resources as measured or indicated mineral resources.

Cautionary Statement: This resource has been superseded as a result of updated modelling and estimation parameter, and new drilling information from drilling program conducted at Calcatreu in 2018. No recent estimates or data are included in the figures reported in Table 6-6. PGD is not treating these historical estimates as current Mineral Resources.

6.4. Historical Mine Production

No historical or recent mining activity has taken place at Calcatreu.

7. Geological Setting and Mineralisation

7.1. Regional Geology

Southern Argentina is composed of several distinct geological terranes which host both precious and base metal deposits of varying ages. Along the western margin of the country, near the Chilean border, lies the Andean Cordillera, a belt of volcanic mountains. These were developed as a result of continued subduction since Jurassic time, the subduction having produced a series of pulses of volcanic and intrusive magmatic activity. The town of Bariloche is located in this region on the eastern edge of the mountains. The principal economic mineralisation of the Andean area consists of a north-south striking belt of epithermal gold mineralisation and sub-volcanic porphyry copper-gold deposits located in both Chile and Argentina.

To the east of the Andean Cordillera are two large volcanic massifs separated by younger sediment-filled valleys containing major rivers draining the eastern slopes of the Andes Mountains. These features are known as the Somun Cura Massif, which is located in the north, and the Deseado Massif in the south (Figure 7-1). The Calcatreu Project is hosted in the calc-alkaline, bimodal Jurassic Taquetren Formation volcanic rocks within the Somun Cura Massif.

7.2. Property and Local Geology

The first regional geological mapping of the Calcatreu area was undertaken in the early 1960s, over the 1:200,000 Lipitren Sheet (Nullo, 1978). Nullo assigned most of the volcanic rocks in the area to the Upper Jurassic Taquetren Formation, with minor amounts of underlying Triassic Garamilla Formation and Pliocene basalt flows of the La Cabana Formation.

In 2000, Normandy SA commissioned aero-photogrammetric coverage of most of the Project area. A regional geological map at a scale of 1:25,000 was produced from this work (Hodgkin and Rivera, 2001). Hodgkin and Rivera identified five cycles of rhyolitic to intermediate volcanic activity and associated volcaniclastic sedimentation, which filled the continually developing Jurassic Calcatreu Volcano-Sedimentary Basin ("CVTB"). They further claim that these rocks are equivalent to the Taquetren and Garamilla Formations. Normandy SA believed that this appeared to be a difficult fit as they further state that age dating on the Garamilla places that formation in the Triassic at 226 to 215 Ma, whereas the oldest unit that they map in Cycle 1 (the one dated above), produced a date of 193.5 Ma, i.e. Jurassic in age.

Dating on biotite within one of the subvolcanic rhyolite domes derived a date of 193.5 Ma (million years) by the potassium/argon (K/Ar) method. In summary, it was concluded that the epithermal vein, breccia and stockwork precious metal mineralisation in the area is hosted within a bimodal volcano-sedimentary sequence of Lower Jurassic age.

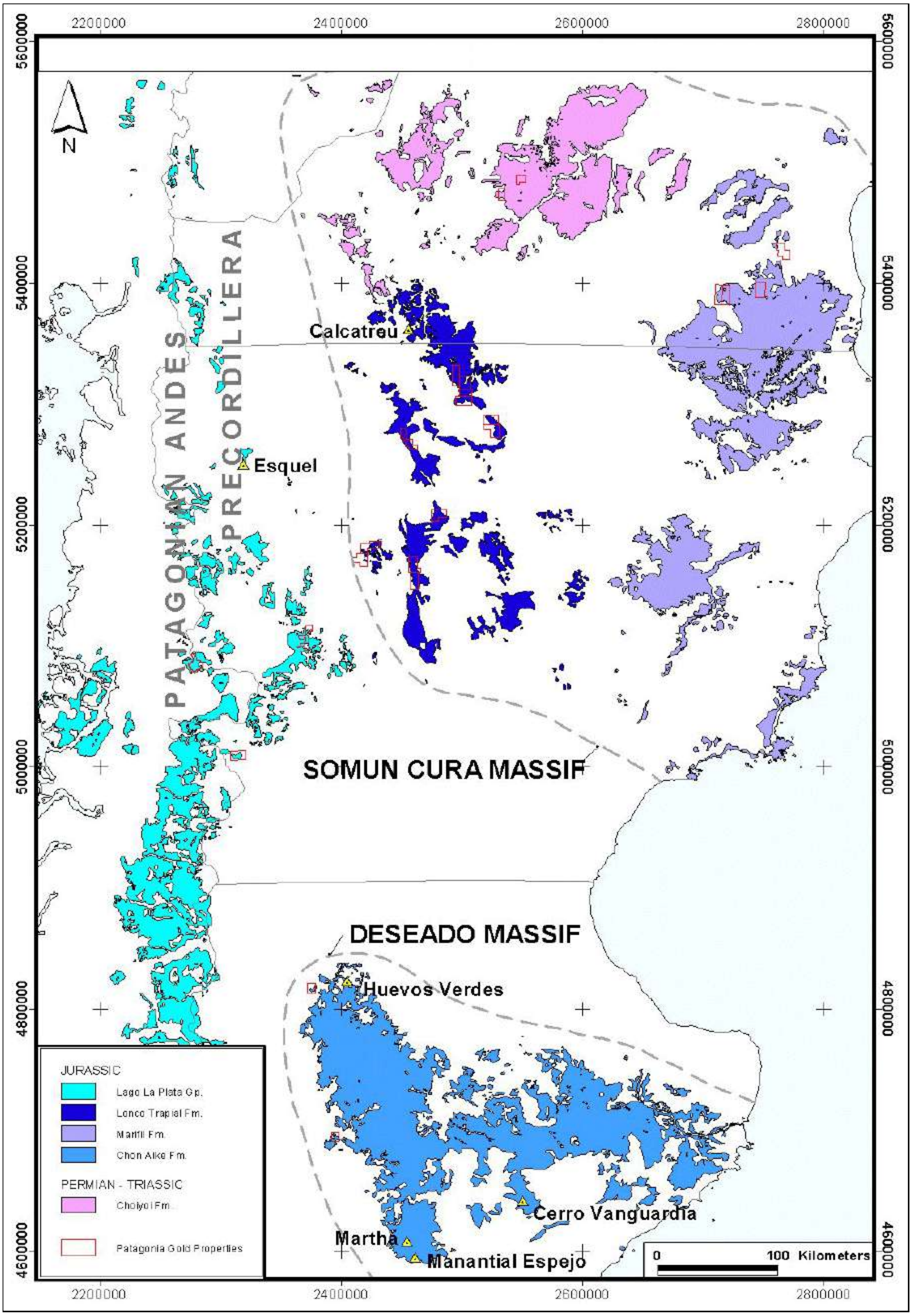


Figure 7-1: Regional Volcanic Sequences of Southern Argentina (Micon, 2003)

7.2.1. Stratigraphy

A summary of the stratigraphy as per Hodgkin and Rivera, 2001, is as follows;

- "Premonitory" Rhyolitic Volcanic - Subvolcanic Cycle:
- Welded rhyolitic pyroclastic flows;
- Rhyo-dacite domes (age date at 193.5 Ma by K/Ar on biotite);
- Associated mineral prospects: Viuda, Trinidad;
- Transitional Trachytic Volcanic Cycle (Aguada de Ambrosio Volcanic Centre):
- Porphyritic andesite and lahar flows;
- Essentially a geographically isolated small strato-volcanic event;
- No associated prospects in the Calcatreu district;
- Initial Bimodal Volcanic - Sedimentary Cycle:
- Andesite lavas and intercalated rhyolitic pyroclastic flows;
- Top marked by red sandstones and mudstones;
- Associated mineral prospects: Coyu;
- Final Bimodal Volcano - Sedimentary Cycle:
- Concentrated along axis of CVTB and products widespread;
- Andesite lavas and thin intercalated rhyolitic pyroclastic flows;
- Associated mineral prospects: Vein 49/Nelson, Amistad, Castro Sur;
- Late Rhyolitic Volcanic - Subvolcanic Cycle:
- Small rhyolite domes;
- Associated mineral prospects: Nabel/Nabelon.

The alteration and mineralisation encountered in the Project area is interpreted to be associated with a complex of intrusives and breccias emplaced at the end of the final bimodal volcano-sedimentary cycle. Small stocks of porphyritic micro-diorite, diorite, andesite porphyry and porphyritic andesite are found near the Vein 49, Nelson and Castro Sur Prospects.

In addition to mapping the Calcatreu district, Hodgkin and Rivera also collected many rock chip samples, of which 125 were assayed for a wide suite of elements and 184 were petrologically examined.

This work located a number of anomalous areas, such as Mariano, Cancela West and Cerro Bayo- Viuda together with the identification of a zone referred to as Cerro Mojón, which they claim to have high sulphidation epithermal characteristics. None of these areas are reported to have been pursued with systematic detailed exploration.

After further studies, Normandy SA believed that the rhyolite intrusion is the last in the Calcatreu Jurassic Event and is associated with the mineralisation. These intrusions are emplaced into earlier intermediate lavas, and associated pyroclastic units, which may be Triassic in age and fit with a later analyses date of 242.9 Ma.

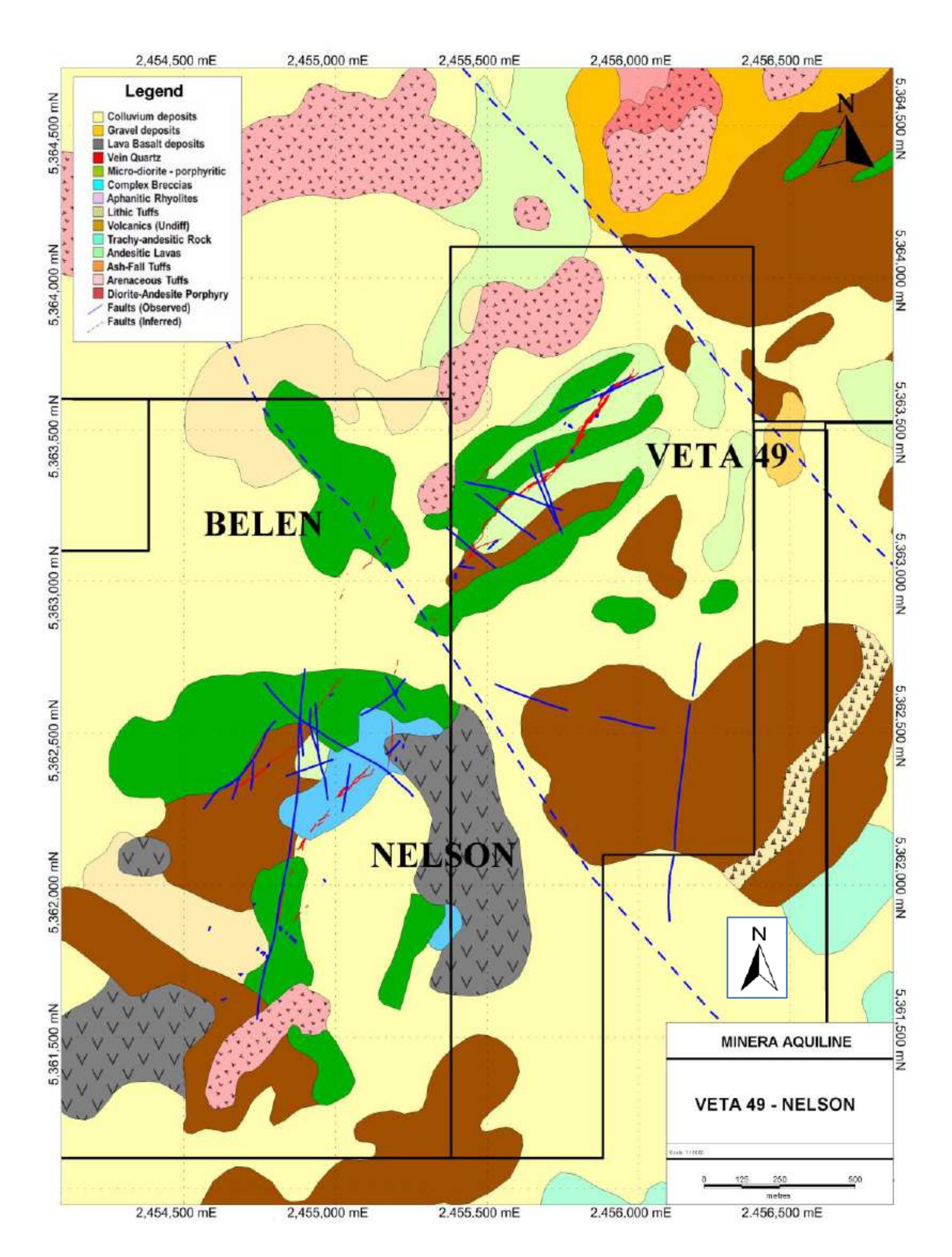


Figure 7-2: Simplified Geology Plan of Calcatreu Prospects (Walter, 2007)

7.2.2. Structure

The structural interpretation of the Calcatreu area was sub-contracted to Jose Cembrano (Hodgkin and Rivera, 2001). Cembrano interpreted the northeast-trending CVTB to be formed in an intra-arc/ back arc pull apart basin associated with oblique Late Triassic-Jurassic subduction beneath the nearby northwest-trending Gastre Shear System. This interpretation is illustrated in the Normandy SA structural model in Figure 7-3.

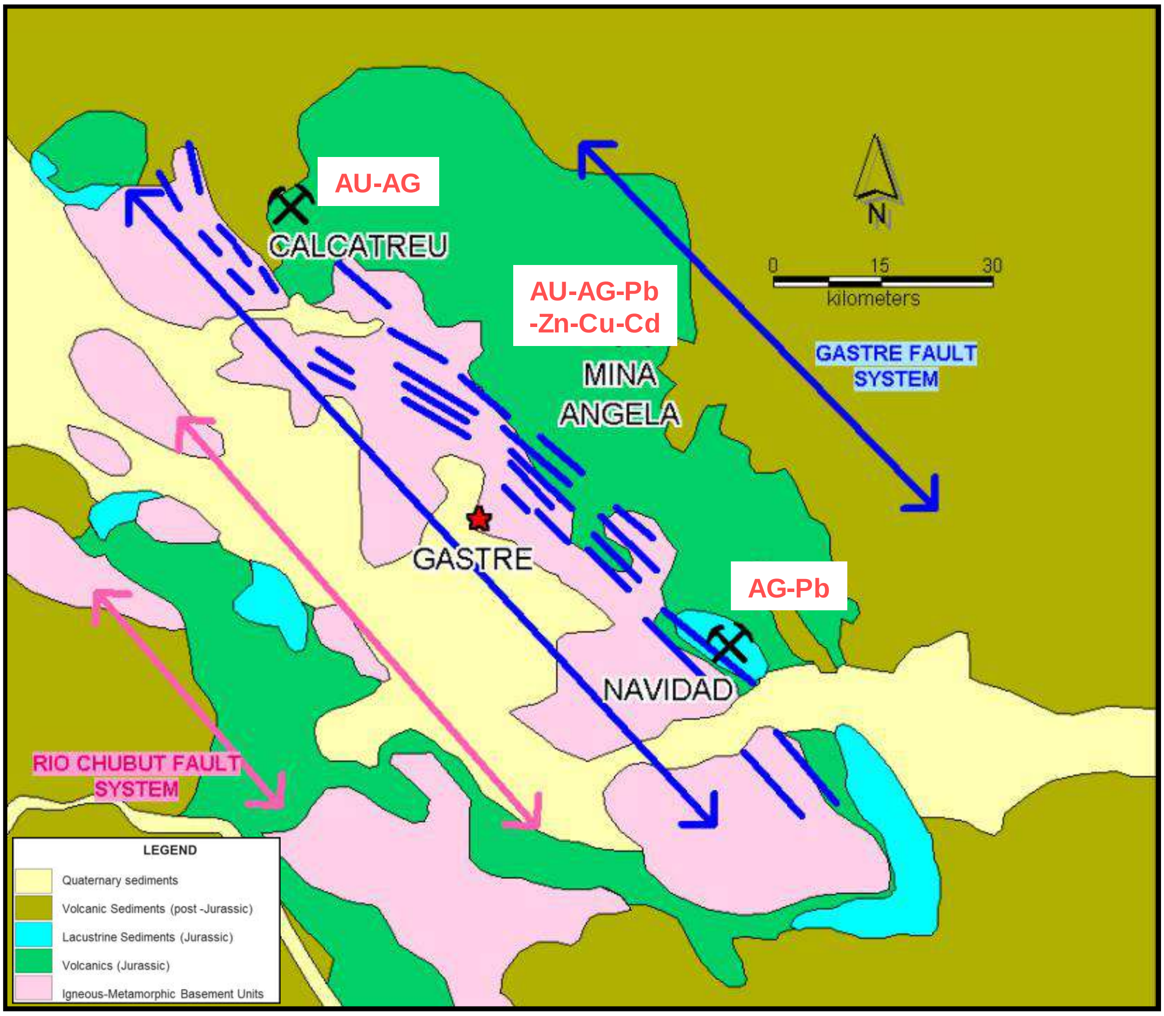


Figure 7-3: Structural Trends and Simplified Geology of Calcatreu-Navidad Region (Walter, 2007)

Known mineral showings in the Calcatreu area are closely associated with Jurassic volcanics and with structural features related to two deformational events:

- The first deformational event produced multi- km scale, tight, north-westerly trending folds as a result of north-easterly compression. The present distribution of Jurassic volcanics generally follows the limbs of these folds. Also associated with the folds are axial planar, north-westerly trending shear zones. The most prominent of these is the Gastre Shear System. This trend is referred to as the Coyu Trend after the Coyu showing on the Calcatreu property. The Coyu Trend is commonly associated with elevated levels of silver as well as gold; and
- The other important deformational event occurred during a period of weak or distal north-westerly directed compression. The main result is a series of north-easterly-trending fractures which acted as conduits for the emplacement of mineralised dykes and veins. The most notable of these are dykes associated with mineralisation at the Angela mine and most of the mineralised veins on the Calcatreu property including Vein 49. This trend is therefore referred to as the Vein 49 Trend.

Most of the field and Landsat evidence suggests that the deformation associated with north-easterly directed compression occurred first; however north-easterly-trending quartz veins in the Nabel area are conspicuously folded about axes compatible with north-westerly-directed compression. This may indicate that the two events occurred synchronously which places particular interest on the intersections of the two trends. The interpreted structural trends from the Aquiline work are illustrated in Figure 7-4.

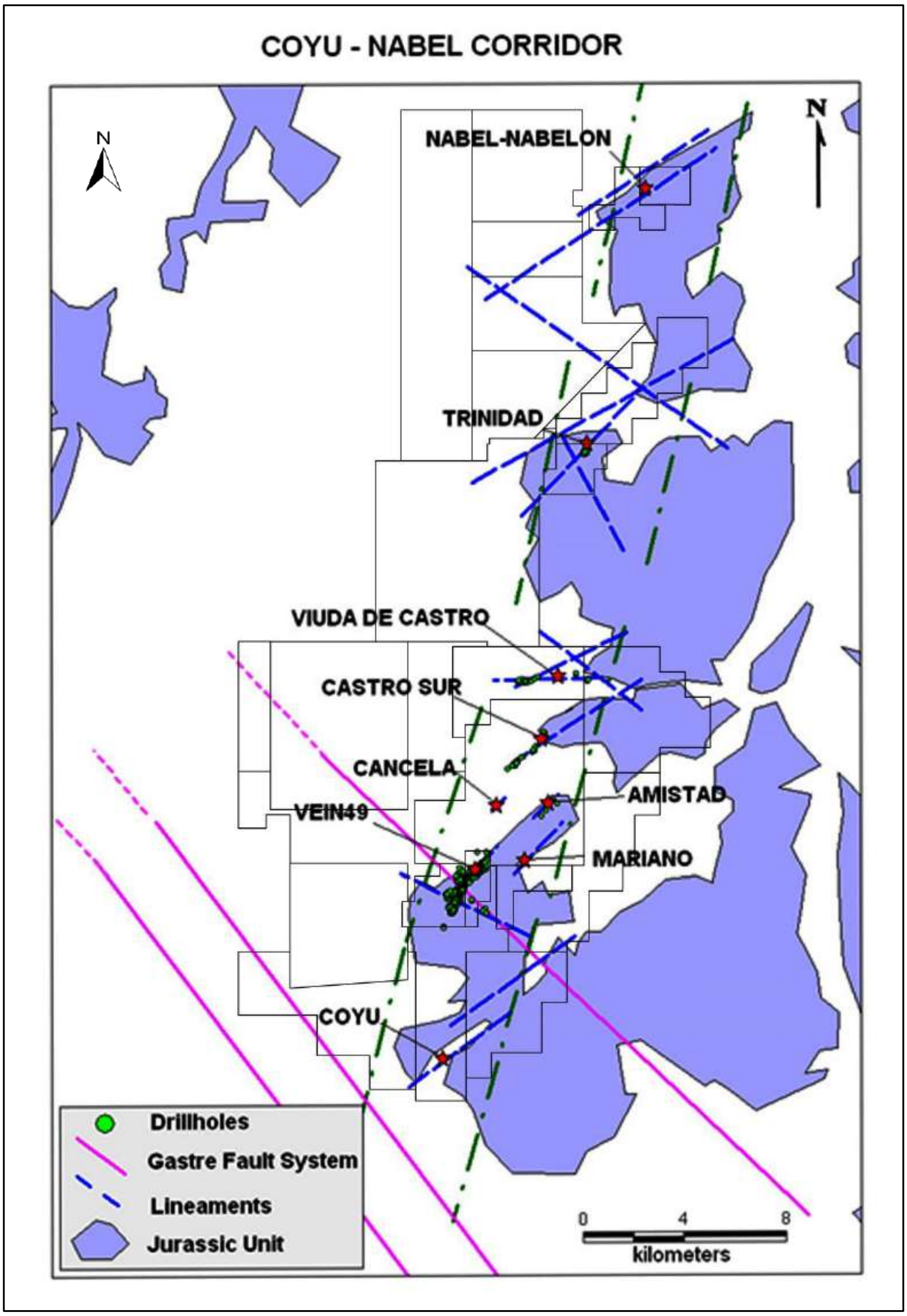


Figure 7-4: Calcatreu District – Coyu-Nabel Structural Corridor (Walter, 2007)

A structural model for Calcatreu illustrates the regional and local scale fault and vein geometry and kinematics (Figure 7-5 (i)). Hydrothermal fluids propagate from the main displacement zone ("MDZ") into the pull apart basin area through a composite network of Riedel Shear ("R") and tension fractures (T). The model suggests the ideal sites for mineralisation should be those located close to the R and T intersections.

The conceptual model shown in Figure 7-5 (ii), illustrates detailed geometry of a mineralised vein (e.g. Vein 49). Vein system propagates as a linkage of hybrid North-South striking shears (short range, narrow segments) and tension fractures (longer range, thicker segments).

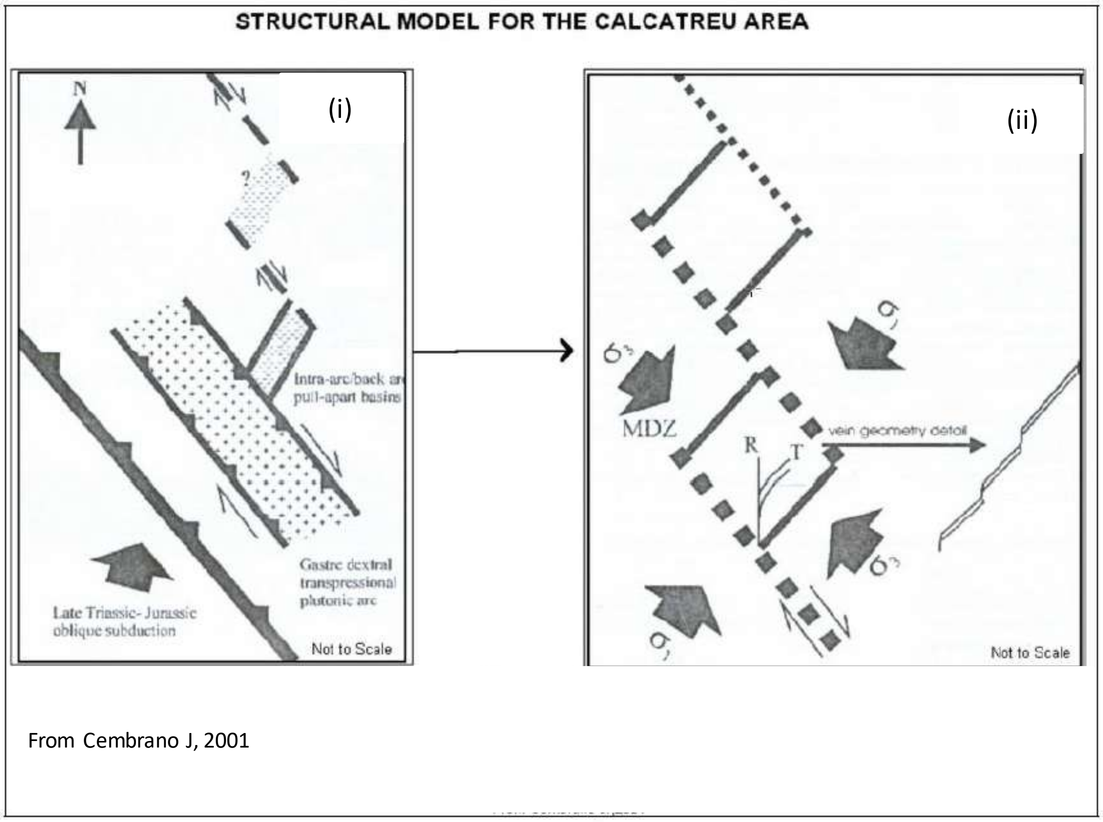


Figure 7-5: Structural Model Plan View Schematic for Coyu-Nabel Corridor by Normandy S.A. (Walter, 2007)

7.3. Mineralisation

The mineralisation is hosted in altered (silicified and clay-altered) brecciated host rock. The host rock is interpreted to be porphyritic andesite lava. The highest grades of mineralisation appear to be related to the zones of multiple brecciation and polyphase quartz-carbonate clay healing. Mineralisation trends (in the form of vein quartz) associated with the host units for Vein 49, Belen and Nelson are graphically shown in Figure 7-6.

Generally, the mineralised system is very low in sulphide content with minor pyrite and lesser galena and sphalerite. No significant concentrations of minerals containing copper, arsenic or bismuth are reported in the system. The mineralisation has been oxidised to an average depth of approximately 75 m. The surrounding host rocks have been oxidised to an average depth of approximately 30 m.

Gold occurs as electrum and as free gold. Grades average about 3 g/t Au with Vein 49 generally being higher and Nelson being lower. Individual assays were recorded as high as 60 g/t Au over widths of 1 m to 5 m. Mineralisation is largely restricted to quartz and calcite veins and stockwork. The zones of veining can be up to 20 m wide. Surrounding the quartz veining is a zone of argillic (altered) andesite. These rocks generally show low gold content, usually less than 0.5 g/t Au but locally in excess of 1.0 g/t Au, often when accompanied by silicification or quartz veinlets. The silver to gold ratio is approximately 10:1.

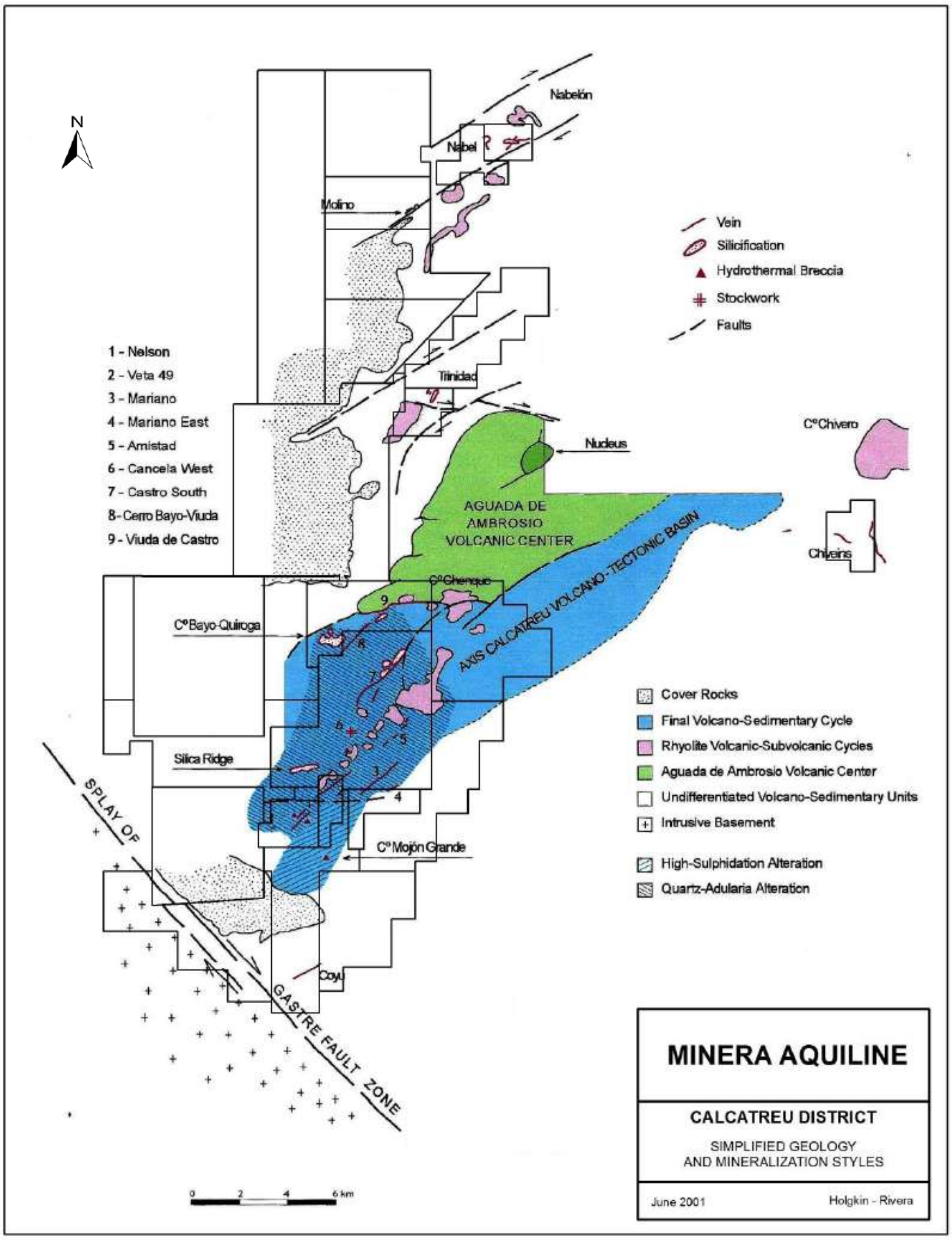


Figure 7-6: Local Geology, Structures and Mineralisation Styles, Calcatreu Prospects (Micon, 2003)

Figure 7-7 shows photos of the quartz-breccia outcropping along the Vein 49 ridge. The depth of oxidation from surface varies from 29 m to 120 m and is strongly influenced by the erosional surface. The shallowest depths to primary mineralisation occur in the valley separating the Nelson area from the Vein 49 ridge.

The mineralised zone shows illite alteration and strong weathering near surface. The main clays associated with the mineralisation are illite and smectite. Kaolinite is very well developed in the hanging wall of the main Vein 49 structure and is interpreted to be the result of supergene weathering.

Petrological examination (Corbett, A., 1998) of a typical sample from Vein 49 revealed an intensely and finely polyphase-banded, fine-grained, quartz-pyrite filled structure showing illite alteration and strong weathering near surface. Figure 7-8 shows surface outcrop containing quartz-limonite and chalcedonic quartz with typical coliform banding on the Vein 49 ridge.

In drill core, the situation becomes more complex with very little in-situ simple veining (Figure 7-9). The weathered outcrop displays good examples of fine coliform banding along with coarse bladed textures, after calcite (Figure 7-10). The quartz seen in drill core is quite variable ranging from chalcedonic to coarsely crystalline cockade structures. Adularia is unusually rare for such a system, which is interpreted to be a low sulphidation epithermal type.

Figure 7-7: Vein 49 Ridge Formation Looing South West- Oxidised Quartz Breccia Outcrop (Cube site visit, 17/02/2017)

Figure 7-8: Quartz-Adularia Colloform Veining Outcrop along Vein 49 Ridge (Cube site visit, 17/02/2017)

Figure 7-9: Hole CCT11-654 from Vein 49: Quartz Breccia Showing Chalcedony Veining (Cube site visit, 17/02/2017)

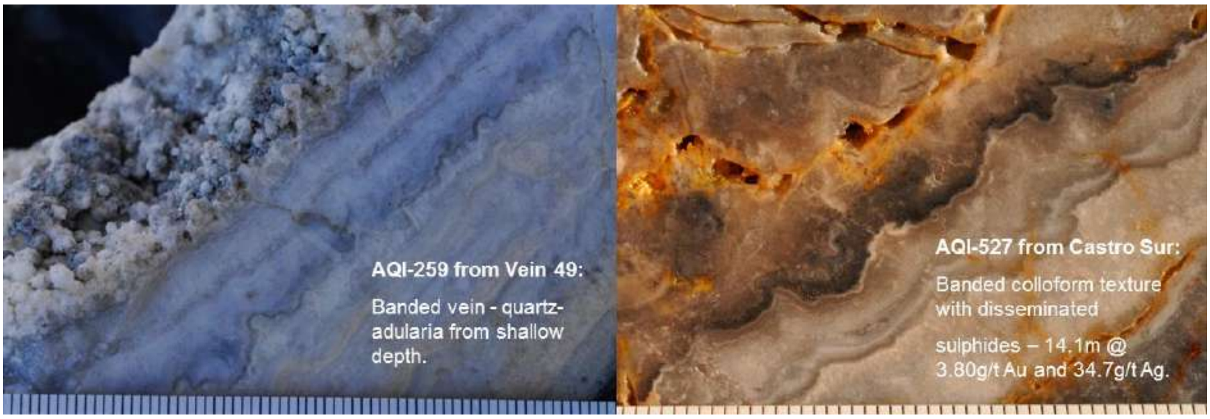


Figure 7-10: Examples of Texture and Mineralisation –Specimens from Holes AQI-259 and AQI-527 (Walter, 2007)

In summary, the Calcatreu mineralisation controls show geological and mineralisation characteristics, typical of low sulphidation epithermal deposits. To date vein systems at 11 prospects have been delineated within the project area. The Vein 49/Nelson system, which has a strike length of over two kilometres and widths of up to 20 m, has been the most intensely investigated of these and is the significant discovery at Calcatreu

The Vein 49 and Nelson mineralisation has been the most intensely investigated of these and is the most significant discovery at Calcatreu. The Vein 49/Nelson mineralisation has been identified over a strike length of 2.5 km, to a maximum vertical depth of 370 m. Mineralisation widths vary from two metres to 20 m, averaging at 10 m width for the main mineralisation zones identified by drilling and outcrop trench mapping and sampling. For the Castro Sur prospect, mineralisation has been interpreted over a strike length of 1.7 km, down to a maximum vertical depth of 300 m. Mineralisation true width typically varies from one metre to 10 m thick.

8. Deposit Types

All of the prospects at Calcatreu, including the Vein 49, are epithermal gold or gold-silver bearing vein occurrences of the low sulphidation type. Lindgren (1933) classified a number of precious metals, base metal, mercury, and stibnite deposits as epithermal deposits. He also suggests that these deposits are formed by the discharge of hydrothermal fluids from magmatic sources at low temperatures (< 200° C). Sillitoe (1987) states that it is now generally accepted that precious metal deposits forming from meteoric waters with temperatures between 200 to 300°C are classified as epithermal deposits.

White and Hedenquist (1995) note that epithermal deposits are found in a variety of geological environments where the type of deposit depends on various combinations of igneous, tectonic and structural settings. Most epithermal districts worldwide occur in younger Tertiary-age volcanic rocks associated, on a continental scale, with subduction zones at plate boundaries. Sillitoe (1987) notes that older epithermal deposits are less common probably because many have been destroyed by erosion and/or overprinted by metamorphism.

It is also generally accepted that epithermal deposits are classified as either adularia-sericite type (low sulphidation) or acid-sulphate type (high sulphidation). Sillitoe (1987) further describes the differences between the two:

- "The two types of deposits appear to form under similar pressure-temperature conditions but in different geological and geochemical environments in ancient geothermal systems. The acid-sulphate type deposit forms in root zones of volcanic domes from acid waters that contain residual magmatic volatiles. The adularia-sericite type deposit forms in a geothermal system where surficial waters mix with deeper, heated saline waters in a lateral flow regime, high above and probably offset from a heat source at depth; neutral to weakly acidic, alkali chloride waters are dominant."

Since the early 1980's, there have been several new discoveries in the Pacific Rim Basin, which have significantly increased the number of such deposits. During the 1990's many junior and major mining companies concentrated their exploration budgets, exploring younger volcanic rocks along the Pacific Rim. Notable successes include Barrick's Pierina and Alto Chicama acid-sulphate or high sulphidation deposit types. Meridian Gold's El Peñón Mine located in Chile is an adularia-sericite type deposit. This was a grassroots discovery and now is considered one of the world's most profitable mines.

The known economic precious metal mineralisation at Vein 49 is best described as a low sulphidation banded quartz-adularia epithermal system. Characteristics of these systems are summarised in Figure 8-1 and in greater detail in Figure 8-2 (both from Williams, 2006).

Mineralisation at Vein 49 is assigned to the low sulfidation type, based on the presence of colloform to crustiform banding of quartz and adularia, the general lack of sulphides, the fine-grained nature of the sulphides present, and the alteration mineral species and their distributions.

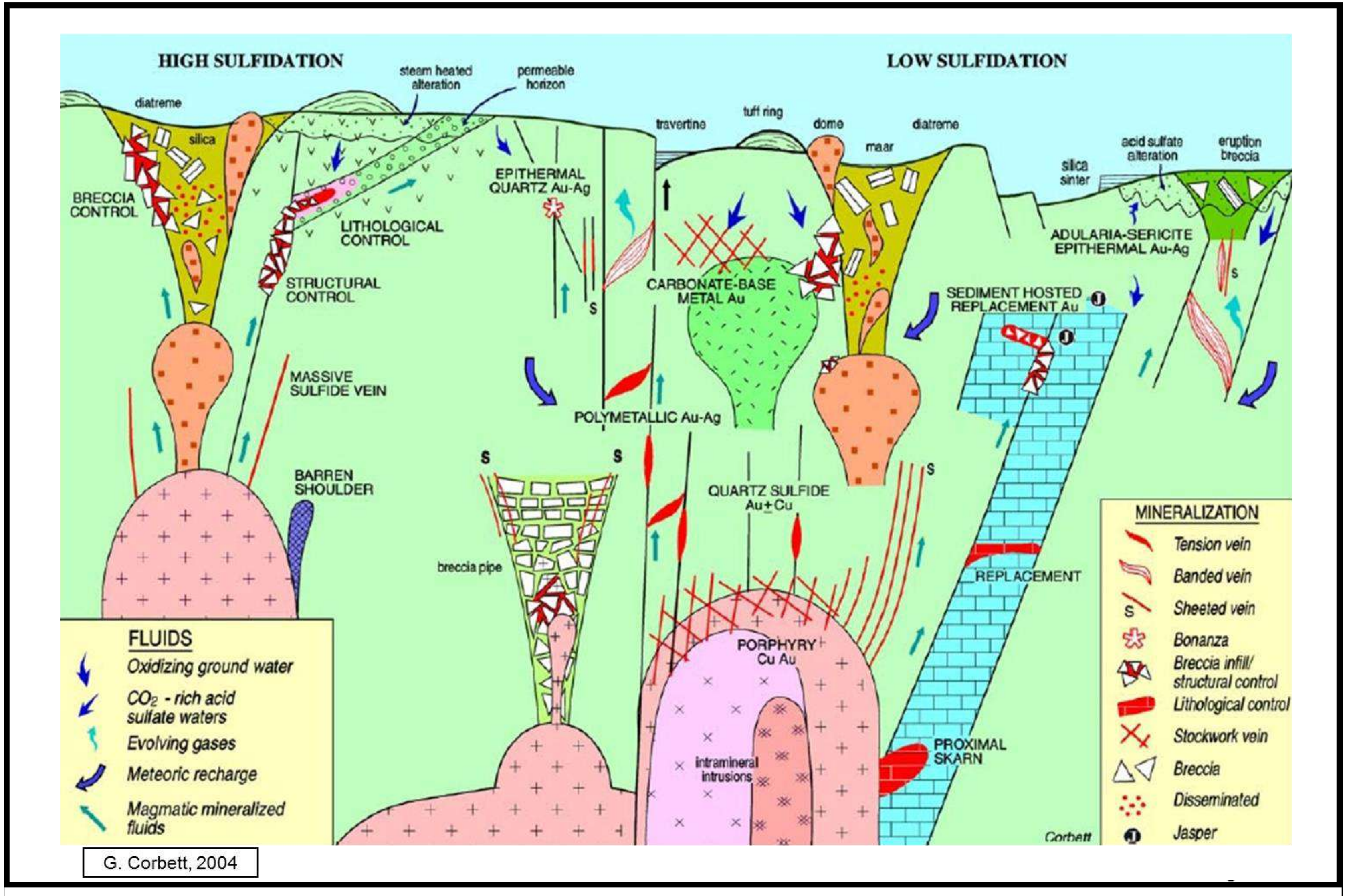


Figure 8-1: Styles of LS Hydrothermal System Containing Precious Metal Mineralisation (Williams, 2006)

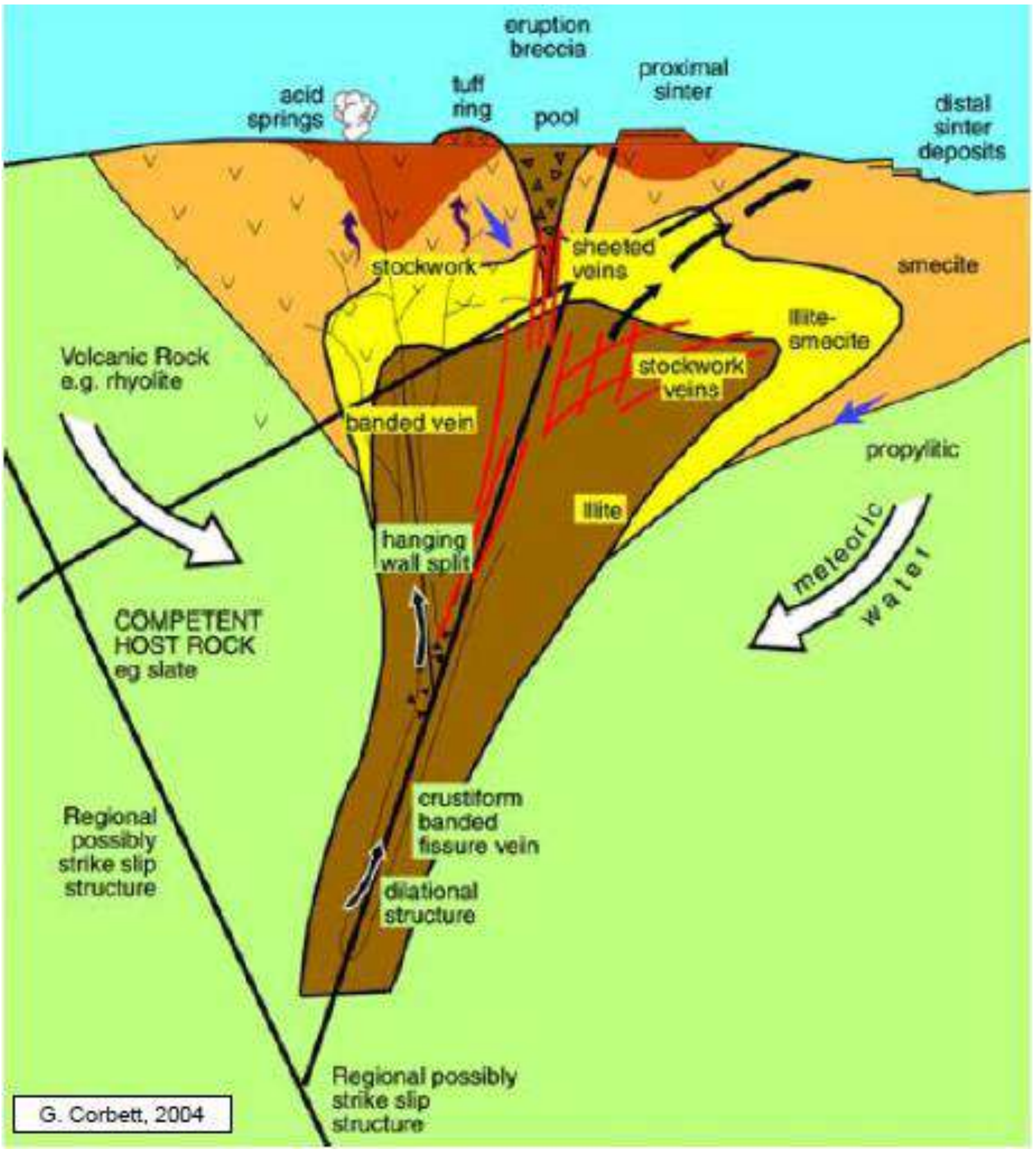


Figure 8-2: Styles of Veining within LS Banded Quartz-Adularia Epithermal System (Williams, 2006)

9. Exploration

9.1. Summary

Exploration and drilling conducted at Calcatreu by previous owners has identified widespread system of banded low sulphidation epithermal veins, breccia and stockwork precious metal mineralisation hosted within a bimodal volcano-sedimentary sequence of Lower Jurassic age.

Analysis of previous geophysical data indicates the presence of an untested, hidden dilational structure located some 1000 m east of the Castro Sur and Cancela structures, with similar strike and dimensions of neighbouring outcropping veins. Field reconnaissance and mapping of this area confirm the existence of a fault at the surface coinciding with this feature.

Since acquiring the Project in 2018, exploration undertaken by PGD at Calcatreu has initially targeted northern extensions to gold-silver mineralisation from the Vein 49, Nelson and south of the Castro Sur Prospect.

9.2. Geophysical Surveys

Pole Dipole IP Survey

A detailed pole-dipole induced polarisation “(PDP-IP”) geophysical surveys was completed by PGD in 2018 and consisted of 17 lines totalling 40 km-line, using a 25 m dipole configuration (Figure 9-1).

The PDP-IP survey aim was to provide proper target definition of potential blind mineralised veins. The survey was conducted on an oblique north-east trending grid lines at 200 m dipole spacings

The equipment used and specifications for the IP-PDP survey are listed as follows:

Instrumentation

- IP Receiver: IRIS Elrec-Pro
- IP Transmitter: IRIS VIP 4000
- IP Power Supply: Honda EM6500 C240V, 1phase 50Hz
- Electrodes: Ground contacts using stainless steel rods

Survey Specifications

- Configuration: Pole - Dipole
- Movement Interval: 25 m
- Number of lines: 10
- Dipole length: 1500 m

Configuration: Modified Pole-Dipole

- For each current position, 10 MN dipoles with variable width (4 x 25 m and 6 x 50 m); the electrode at the infinite was positioned along a direction as much as possible orthogonal to the line’s orientation and at approx. 1.5 km away from the first station. Rover current electrode was always on the south-west side.

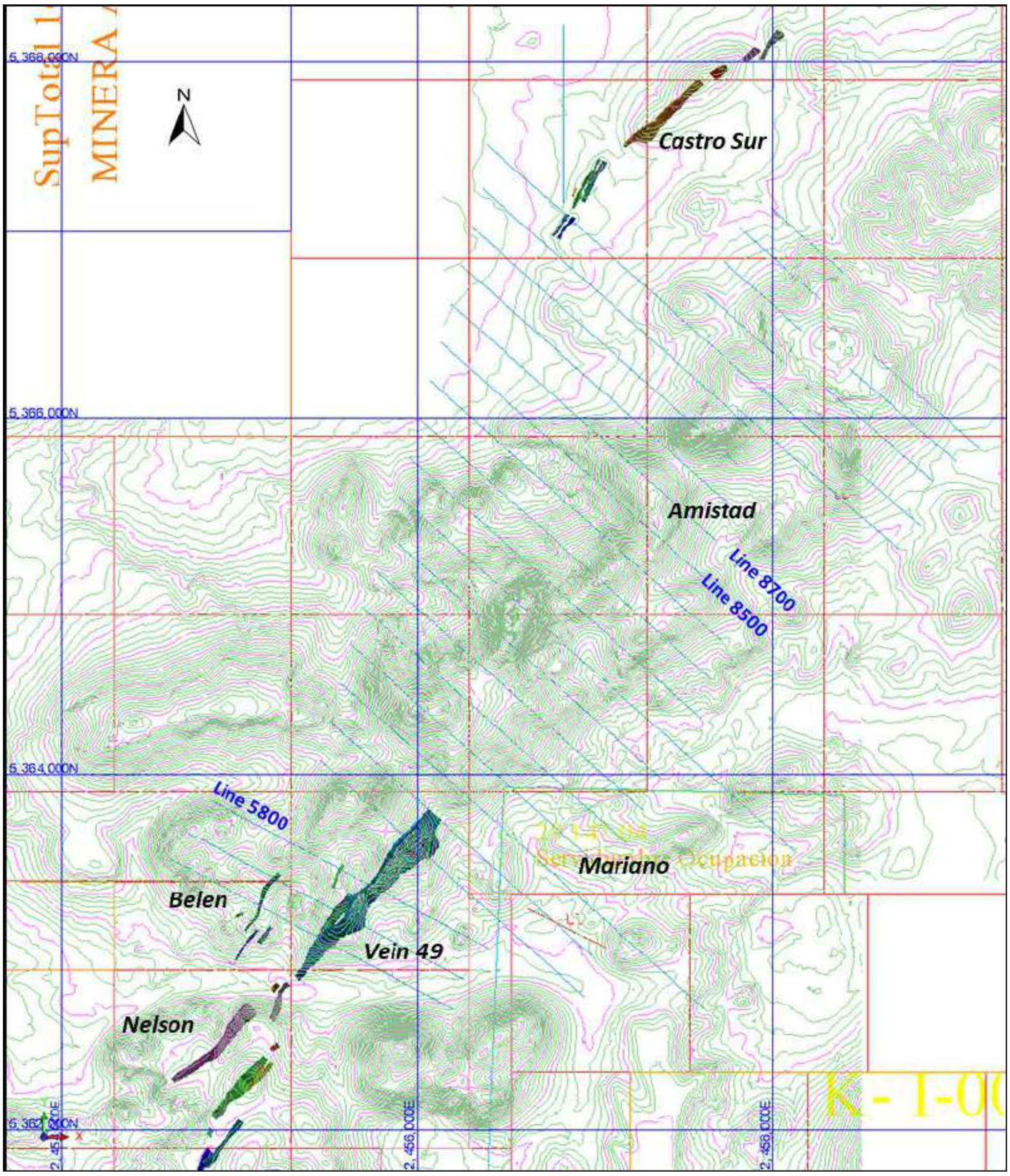


Figure 9-1: Plan View of Topography Showing Location of IP-PDP Lines and Main Prospects (Cube, 2018)

The chargeability anomaly occurs broadly along steep boundaries between chargeability highs and lows and correlates with the occurrence of quartz-chalcedony breccia veins trending toward the north-east

Figure 9-2 depicts pole-dipole chargeability and resistivity survey results by PGD along Section Line 5800. There is an apparent correlation of the principal zone of high resistivity with Belen (pale blue-white) with the vein structures present for both the Belen veins and Vein 49 mineralisation structure

Figure 9-3 depicts a zone of high apparent resistivity which correlates with a Castro Sur mineralisation trend to the north-west is apparent close to where previous drilling was carried out by Aquiline. The survey results are shown in these sections with the drill hole traces and hole numbers overlain. As with the Belen example the section is interpreted to indicate the presence of quartz-chalcedony breccias that may include gold-silver mineralisation.

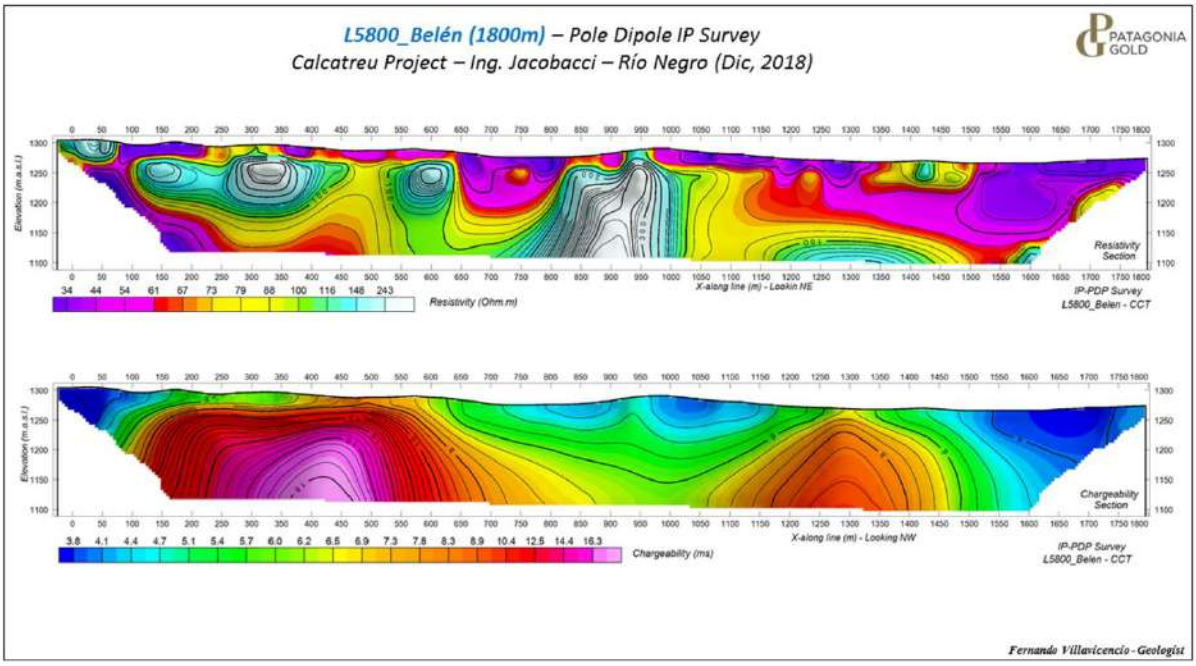


Figure 9-2: Belen Prospect IP-PDP Survey - Cross Section View of Resistivity and Chargeability at Line 5800 (PGD, 2018)

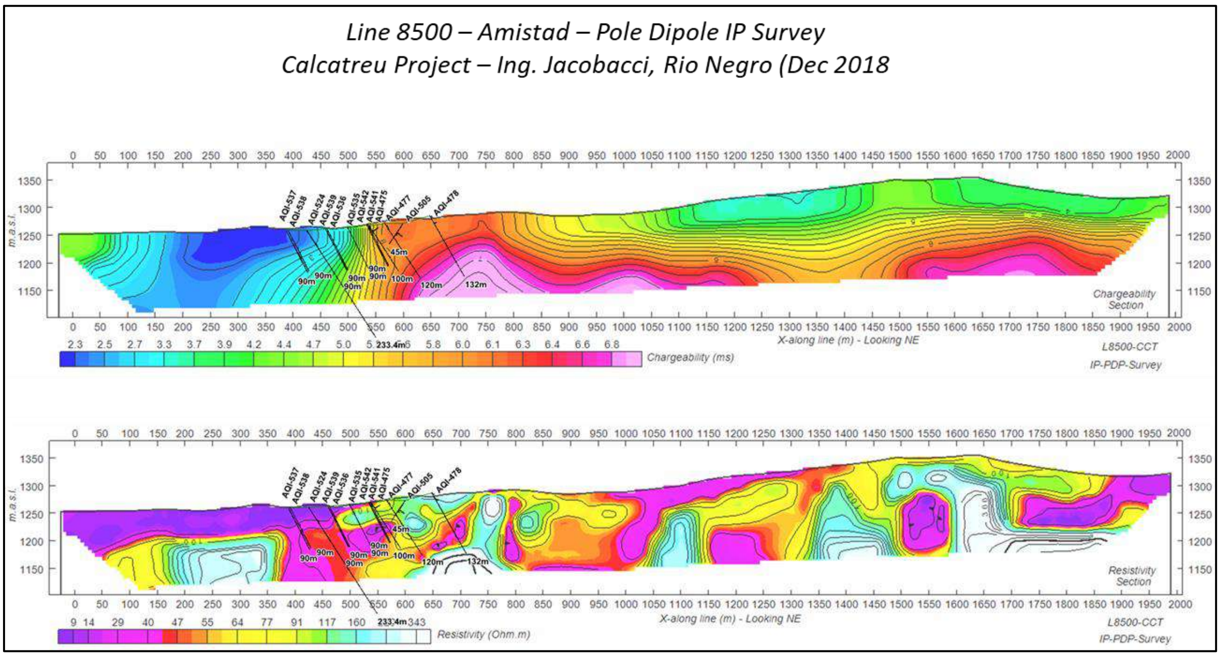


Figure 9-3: Amistad Prospect IP-PDP Survey - Cross Section View of Chargeability and Resistivity at Line 8500 (PGD, 2018)

As a result of this program of work, several significant gold-silver targets were defined along a series of sub-parallel, north east trending structural lineaments and was later drill tested in October 2018 as well as other potentially mineralised blind structures, within the area of the geophysical survey.

9.3. Geological Mapping

In 2018, PGD also undertook geological mapping and rock-chip sampling of surrounding prospects immediately to the north and east of Vein 49 and other prospects in order to identify any potential non-outcropping, epithermal mineralised structures. The area of surface mapping and sampling is outlined in Figure 9-4.

As this program is ongoing in 2019, no further information or results of the mapping and sampling program was available for review at this time.

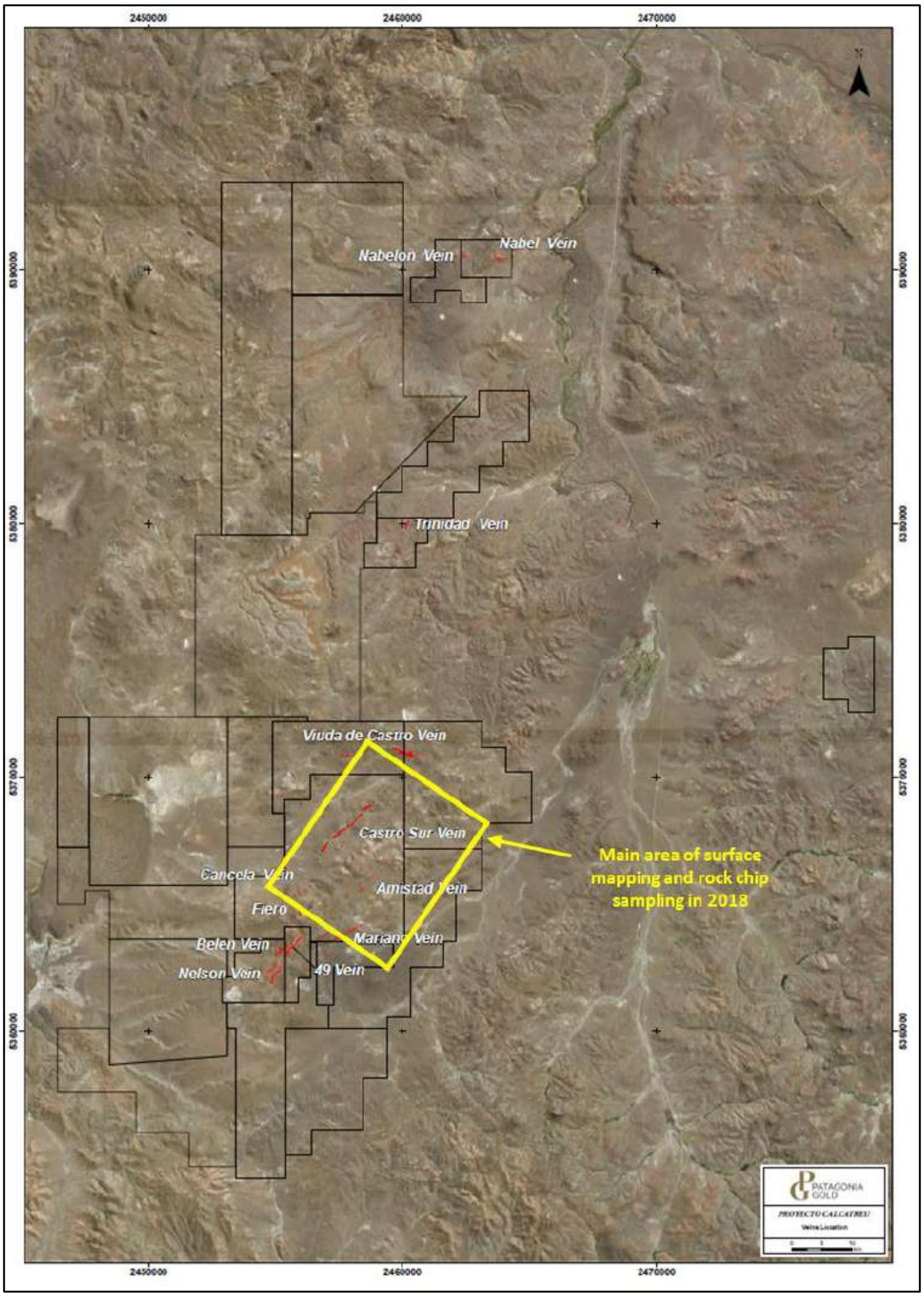


Figure 9-4: Styles of Veining within LS Banded Quartz-Adularia Epithermal System (Williams, 2006)

10. Drilling

10.1. Summary

To December 2018, numerous drilling campaigns had been conducted at the Calcatreu Project and were used in the compilation of the December 2018 MRE completed by Cube:

- La Source/Normandy SA conducted four programs between 1999 and 2002. The drilling comprised RC holes and RC pre-collars with DD tails. All quartz vein intercepts were drilled using by diamond drilling methods;
- Aquiline completed a small due diligence program in 2003, with follow up programs of drilling at increasingly closer spacing up to 2007. Drilling comprised RC or combined RC drilling to the water table then changing to DD to complete the hole;
- PAS completed a twin hole program in 2011 consisting of 30 DD holes for 2,932 m. This drilling information was not used for the current MRE work due to lack of information on drilling and sampling information from PAS documentation, and concerns with sample quality; and
- PGD has completed two drilling programs since purchasing the property. In 2017 a twin hole program consisting of 6 holes was drilled using PQ size diamond drilling. From October 2018, PGD carried out HQ core size diamond drilling in several prospects within the Calcatreu properties. The hole targets were designed to test sub-parallel, north east trending structural lineaments interpreted from the IP-PDP survey conducted earlier in 2018. A total of 31 DD holes for 6,495 m of HQ core were completed by the end of 2018.

A summary of the drilling by company and year is presented in Table 10-1. The information tabulated also includes statistics for all trenching/channel sampling completed to date.

Table 10-1 Summary of Drilling Statistics by Company and Period (Cube, as at 31/12/2018)

Company	Type	Years	# of holes	Metres	Ave depth
Normandy	**Trench**	1999-2000	74	5,399.30	72.96
	Channel	-	-	-	-
	RC	2000	1	79.00	79.00
	RCDD	2000-2002	22	3,523.65	160.17
	DDH	1999-2002	34	3,678.15	108.18
	Sub-TOT	**1999-2002**	**131**	**12,680.1**	**96.8**
Aquiline	**Trench**	2006-2007	62	6,767.00	109.15
	Channel	2004	26	130.22	5.01
	RC	2003-2007	326	26,594.00	81.58
	RCDD	2003-2007	170	28,349.30	166.76
	DDH	2005-2007	59	6,686.05	113.32
	Sub-TOT	**2003-2007**	**643**	**68,526.6**	**106.57**
PAAS	**TR**	-	-	-	-
	CH	-	-	-	-
	RC	-	-	-	-
	RCD	-	-	-	-
	DDH	2011	30	2,932.00	97.73
	Sub-TOT	**2011**	**30**	**2,932.0**	**97.73**

Company	Type	Years	# of holes	Metres	Ave depth
PGD	Trench	-	-	-	-
	Channel	-	-	-	-
	RC	-	-	-	-
	RCDD	-	-	-	-
	DDH	2017-2018	37	6,874.50	185.80
	Sub-TOT	**2017-2018**	**37**	**6,874.5**	**185.80**
TOTAL			**841**	**91,013.2**	**108.22**

Most of drilling has been focused on the Vein 49, Nelson, Belen and Castro Sur prospects, with only of small number of holes drilled to date on the other prospects within the Calcatreu Project area. The economic potential of these other prospects has not been considered in this assessment

Table 10-2 lists a summary of the drilling statistics for each prospect area within the Calcatreu Project.

Table 10-2: Summary of Drilling Statistics by Zone (Cube, as at 31/12/2018)

Zone	Type	# of holes	Metres	Ave depth
Vein 49	Trench	28	5,236.30	187.01
	Channel	-	-	-
	RC	65	4,820.00	74.15
	RCDD	71	13,658.25	192.37
	DDH	88	10,772.20	122.41
	Sub-TOT	**252**	**34,486.8**	**136.85**
Nelson	Trench	71	4,894.40	68.94
	Channel	-	-	-
	RC	75	5,610.50	74.81
	RCDD	38	4,946.90	130.18
	DDH	32	2,918.90	91.22
	Sub-TOT	**216**	**18,370.7**	**85.05**
Belen	Trench	7	348.70	49.81
	Channel	-	-	-
	RC	27	2,485.00	92.04
	RCDD	7	1,036.60	148.09
	DDH	3	590.00	196.67
	Sub-TOT	**44**	**4,460.3**	**101.37**
Castro Sur	Trench	-	-	-
	Channel	22	118.42	5.38
	RC	49	4,040.50	82.46
	RCDD	65	10,453.50	160.82
	DDH	9	1,326.55	147.39
	Sub-TOT	**145**	**15,939.0**	**109.92**
Other Zones	Trench	30	1,686.90	56.23
	Channel	4	11.80	2.95
	RC	111	9,717.00	87.54
	RCDD	11	1,777.70	161.61
	DDH	28	4,563.05	162.97
	Sub-TOT	**184**	**17,756.5**	**96.50**
TOTAL		**841**	**91,013.2**	**108.22**

Table 10-3 lists details of other miscellaneous holes drilled at Calcatreu for geotechnical work, water monitoring and metallurgical test work.

Table 10-3: Miscellaneous Drilling at Calcatreu (Cube, as at 28/02/2018)

Type	Company	# of holes	Metres
Geotechnical holes	AQI	16	1,172
Water monitor holes	AQI	26	2,749
Metallurgical holes	AQI	14	1,441
Metallurgical holes	PAS	3	255

Drill coverage and hole type for the Vein 49 and Nelson prospects is shown in Figure 10-1. Drill coverage and hole type for Castro Sur is shown in Figure 10-2.

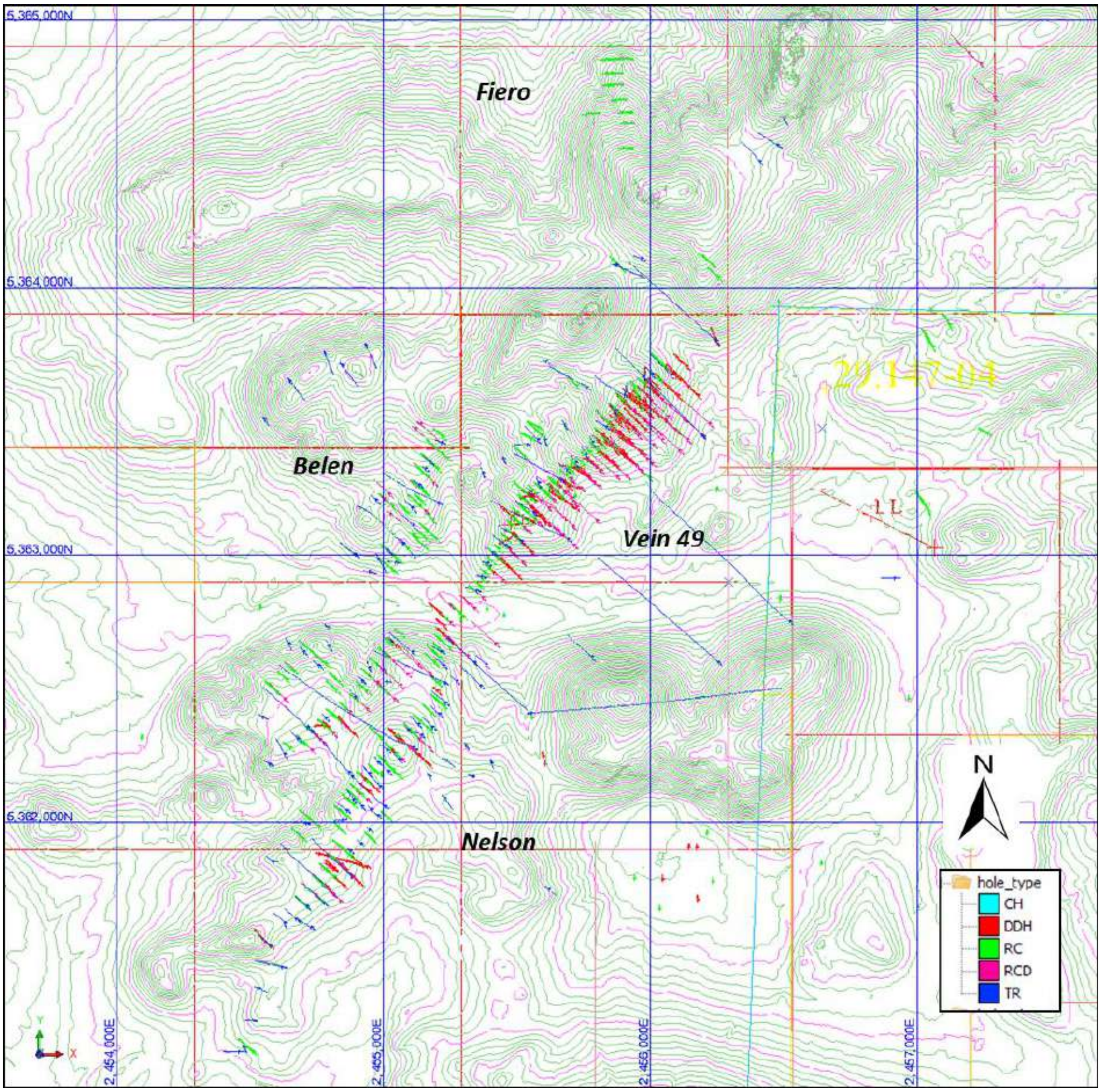


Figure 10-1: Vein 49/Nelson Drill hole Location Plan by Drill Type (Cube, as at 31/12/2018)

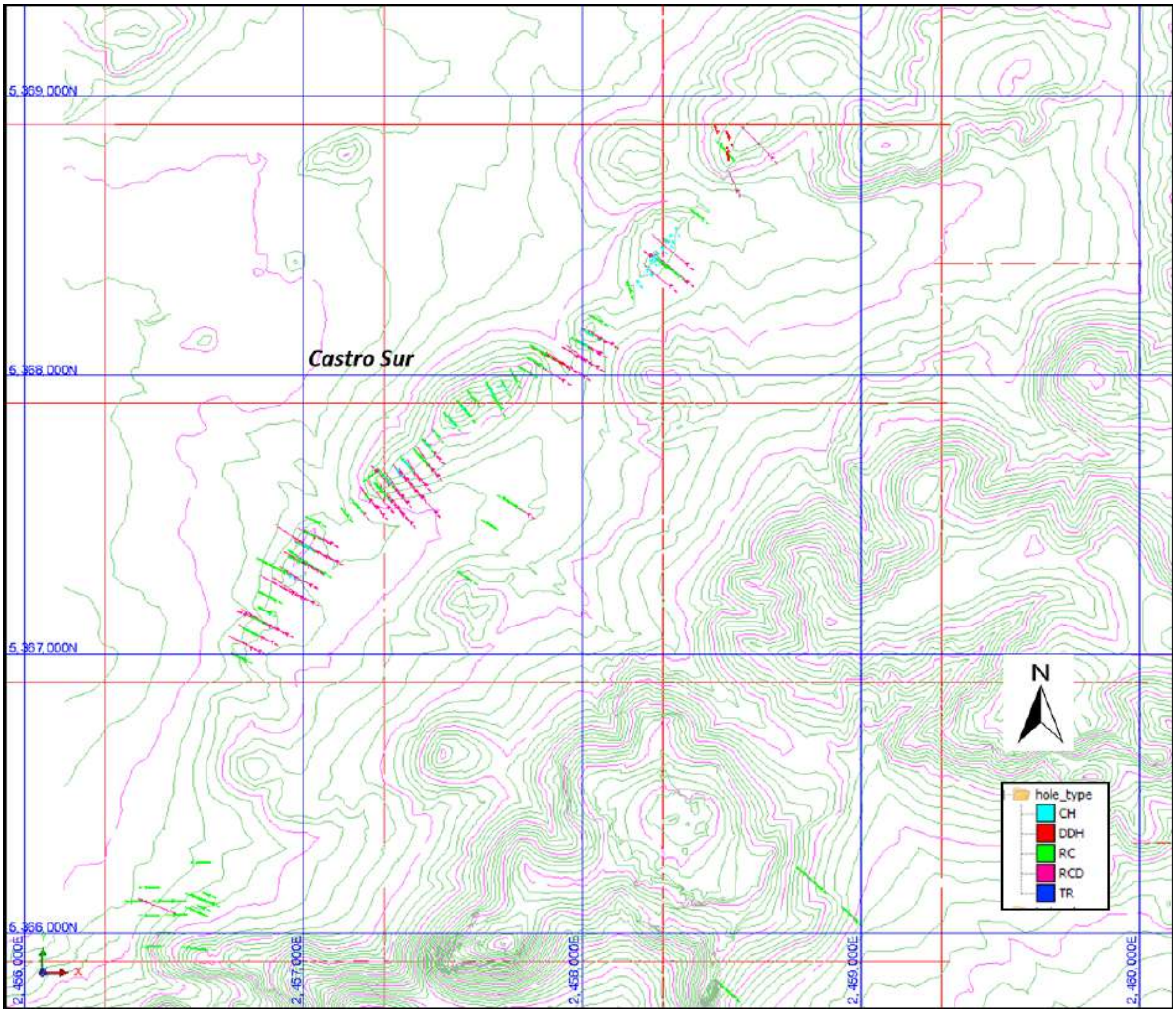


Figure 10-2: Castro Sur Drill hole Location Plan by Drill Type (Cube, as at 31/12/2018)

The dimensions of the drilling for the Calcatreu mineralised zones used for the 2018 resource update areas are tabulated in Table 10-4.

Table 10-4: Dimensions of the Drill Coverage for Calcatreu Resource Areas with Average Drill Spacing (Cube, as at 28/02/2018)

Resource Area	**Strike length (m)**	**Max. Width (m)**	**Max. Depth (m)**	**RC/DD Drill spacing** (along strike x across strike)
Vein 49	1200	100	320	25m x 20m
Nelson	1150	320	160	25m x 20m
Belen	550	180	150	50m x 20m to 25m x 20m
Castro Sur	1700	70	250	25m x 30m

All plan showing the location of all drilling carried out in 2018, and in relation to Calcatreu Prospect locations is in Figure 10-3.

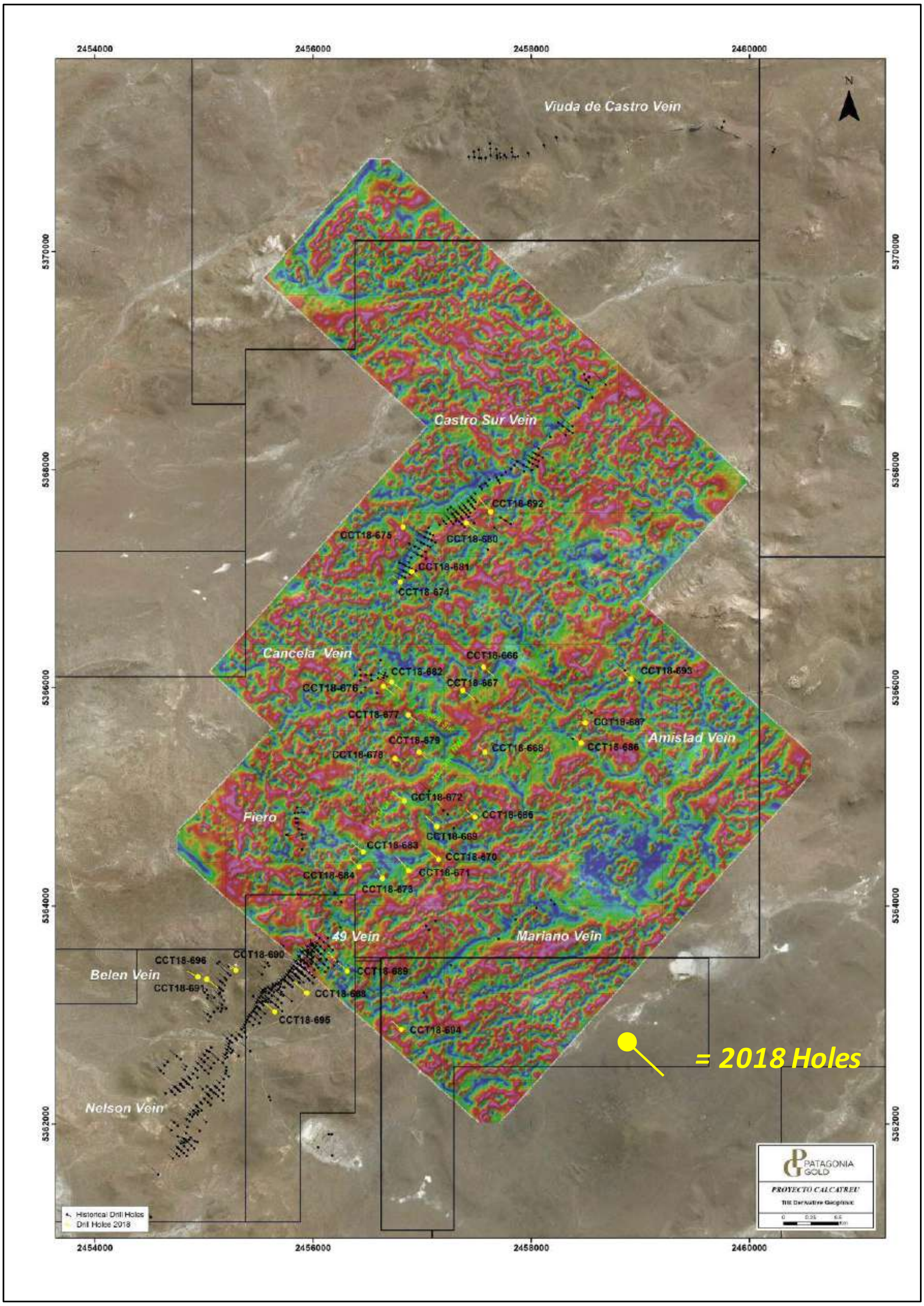


Figure 10-3: Calcatreu Topography and Drill hole Location Plan with Ground Magnetics (Cube, as at 31/12/2018)

10.2. Normandy SA - Drilling and Sampling Methods (1999 to 2001)

Normandy SA completed in four campaigns between 1999 and 2001. A total of 65 drill holes, for 7,992.2 m, were completed over this period within the Calcatreu Project areas.

A short diamond drilling program of 11 holes was completed over the northern end of Vein 49 in 1999 with significant intersections in all drill holes results including 24.6 m at 4.15 g/t Au in hole CE5 and 15.0 m at 6.15 g/t Au in hole CE2.

Single DD holes were completed on vein systems at Nabel, Nabelon, Trinidad and Viuda del Castro. Castro Sur was tested with four drill holes. Gradient array IP, and to a lesser extent soil sampling, were utilised in order to detect further mineralised veining under cover, particularly south of Nelson.

10.2.1. Drilling Methods

Drill holes were planned using surface structure and dip defined from the previous drilling and trench mapping. Preliminary interpretations were done in cross section to determine total hole length and dip to intersect the structure at the desired depth.

Drill hole collars were positioned in the field using the local grid coordinate system. The hole position was located by measuring with a tape from the survey-established local grid. A geologist aligned the drill for azimuth and checked the head inclination, both by compass. After drilling, holes were surveyed in Gauss Krugger coordinates (official Argentine coordinate system), by an electronic total station survey instrument.

After ensuring that the drill rig was properly set up, drill operations were allowed to commence. The rig was visited regularly and inspected when engaged in diamond drilling. In the case of RC drilling, personnel were on the rig at all times. A drill monitoring sheet was maintained for each hole and on it was recorded:

- The geologist or field assistant’s name, date, time and shift of inspection;
- Hole number and depth;
- Geology in a brief log and comments for each run;
- Any driller’s comments that are related to ground conditions, cavities, pressures, loss of return fluids etc.;
- Rock quality designation (“RQD”) and recovery for each run interval; and
- In RC holes, the sample number and weight were recorded for each run interval.

All DD core drilling at Calcatreu was completed using HQ-sized core (63.5 mm diameter). RC drilling was performed with 5 ½” bits.

All holes were down hole surveyed at 50 m intervals with a Sperry Sun instrument. The azimuths have been corrected for magnetic declination by adding 6º to the instrument reading.

A geological log sheet recorded the following details for each hole:

- Lithology;
- Supergene and hydrothermal alteration; and

- Structure and mineralisation in a graphic log format.

The geological logs were at a scale of 1:100. Sample log sheets, at the same scale, included all sampled intervals, sample numbers and assay results.

Geotechnical log sheets included measurements of recovery and RQD in each core run (made in the field immediately after core recovery). A photographic record of each drill hole was made in the field or later at the logging facility. No core photo records have been located to verify the drilling quality and lithological features for the 2018 Mineral Resource estimation work.

10.2.2. Sampling Methods

Core Sampling

DD core intervals to be sampled were selected and marked up by the geologist in charge, at the time of logging. Sample start and end marks were made in the box and on the core. A line, normal to vein contacts or structures, was also marked onto the core using a permanent marker. This line was the geologist's interpretation of the best orientation for splitting the core for representative sampling.

Sampling commenced about 6m before obvious veined intervals, with 2 m long samples collected outside of the vein, (LaSource used 3 m) and 1 m intervals in veining. Sample intervals containing veinlets were also sampled in 2 m intervals. Intervals of less than 1 m were permitted for thinner veins between 0.5 m and 1.0 m in width.

Samples were split using a diamond saw by following the reference line defined by the geologist.

RC Chip Sampling

The cuttings from RC drilling were automatically split at the rig's cyclone output during normal drilling operations. Split samples that were approximately 20 kg in size, were taken back to Ingeniero Jacobacci for further processing.

10.3. Aquiline - Drilling and Sampling Methods (2003 to 2007)

Aquiline completed a small due diligence drilling program on Vein 49 and two nearby veins which occur in the footwall. This program consisted of ten RC drill holes and four diamond core holes for 1,274.5 m.

Since acquisition, Aquiline focused most of its efforts on definition drilling of the Vein 49/Nelson area, although some of the other nearby prospects have been further explored. Work has concentrated on Vein 49/Nelson area because of the significant widths of gold mineralisation discovered.

10.3.1. Drilling Methods

Aquiline selected its drill hole locations in a similar manner to Normandy SA using surface structure and dip interpreted from previous drilling and trench mapping plotted on cross section and level plans. The holes were positioned using the same local and regional coordinate system.

Hole positions were located in the field by taping from the local grid. A geologist aligned the drill rig for azimuth and inclination by compass. During drilling operations, the geologist monitored the drilling for any abnormal occurrences such as poor recovery, water in the hole, slow drilling, and bit changes. These events are recorded by the geologist.

All DD core drilling was completed using HQ-sized core and the RC drilling was performed using 5 ½" diameter bits.

All DD core holes were started with RC pre-collars. All holes were down-hole surveyed using a Sperry Sun single shot camera, commencing approximately 9m after the end of RC drilling and again at the bottom of the diamond hole. The azimuth readings have been corrected for magnetic declination by adding 6° to the instrument reading.

DD core was logged at the Ingeniero Jacobacci field office on paper sheets which included the following entries:

- Geology Logging - rock type, alteration, structure, description, oxidation, weathering, sulphides/ sulphide %;
- Geotechnical Logging - breaks per metre/RQD, hardness, recovery/ recovery %.

A photographic record of each drill hole was made at the field office.

10.3.2. Sampling Methods

Core Sampling

The core to be sampled was selected and marked by the geologist in charge at the time of logging. Sample start and end marks are made in the box and on the core. The core was cut so that each half is representative of the original core, based on instruction and training by the geologist. Core was cut using a diamond saw supplied by ALS Chemex, Mendoza.

Core sampling commenced about five metres before the start of obvious vein intervals, using 2 m samples outside of the vein and one-metre samples in veined intervals. Wall rock with veinlets was also sampled on 2 m intervals. Sample intervals of less than one metre were permitted, at the discretion of the geologist.

RC Chip Sampling

The cuttings from RC drilling were collected from the cyclone output, sealed in plastic bags at the drill then transported to the Ingeniero Jacobacci field office. Prior to sealing the bags, a small sample of chips was collected, washed and stored in marked chip trays for later logging and reference.

At the field office, the samples were split down to two samples of approximately 2 kg size using riffle splitters. The remainder was sealed and stored at the field office. One 2 kg sample was designated for assaying and the other was stored for future analyses if needed. Logging of the chips was conducted at the field office with the aid of a binocular microscope.

10.4. PAS - Drilling and Sampling Methods (2011)

Drilling Methods

PAS completed a diligence drilling program on Vein 49 and Nelson in 2011. This program consisted of 30 DD holes for 2,932 m. All DD core drilling was completed using PQ-sized core for the length of the holes. The holes were positioned using the same coordinate system as previous drilling completed by Normandy SA and Aquiline.

All holes were down-hole surveyed using a Reflex single shot camera, commencing approximately 9m, and at intervals of 20 m to 50 m to the bottom of the hole. The azimuth readings have been corrected for magnetic declination by adding 6° to the instrument reading.

Core Sampling

The DD core was whole core sampled. Core sampling commenced about 6m before the start of obvious mineralisation intervals, using 2 m samples outside of the breccia zones and commonly at one-metre sample intervals within the known mineralisation core intervals. Waste zones were sampled on 2 m intervals.

10.5. PGD - Drilling and Sampling Methods (2017-2018)

PGD completed a small due diligence drilling program on Vein 49 in 2017. This program consisted of six PQ DD core drill holes for 379.5 m.

Since acquiring the Calcatreu Project in 2018, PGD carried out HQ core size diamond drilling in several prospects within the Calcatreu properties. The hole targets were designed to test sub-parallel, north east trending structural lineaments interpreted from the PDP-IP survey conducted earlier in 2018. A total of 31 DD holes for 6,495 m of HQ core were completed by the end of 2018.

The recent campaign of diamond drilling at Calcatreu in 2018 is illustrated in Figure 10-4.

10.5.1. Drilling Methods

2017 Drilling

Diamond drilling in 2017 was carried out by a drilling contractor, Major Drilling S.A utilizing a track mounted Universal UDR 200 rig. All holes were entirely drilled by surface DD core drilling, with PQ diameter core. A triple tube core barrel was utilised in order to improve the quality of the core recovery. Previous drilling by Aquiline and the PAS drilling twin hole program utilised HQ and PQ diameter with standard inner tubes. The previous drilling in the main prospect zones had shown some zones to be highly fractured or observed to be clay filled breccia zones containing washed out quartz-chalcedonic 'vuggy'. These zones often correlated with the gold-silver mineralised zones.

The triple tube setup enabled improvement in the core recovery and core quality and allowed for the core to be carefully extracted and minimise the potential for core loss and fracturing of the core during the core extraction from the barrel. All DD core drilling was completed using PQ-sized core for the length of the holes.

Figure 10-4: Recent Diamond Core Drilling at Calcatreu (PGD, 2018)

2018 Drilling

Diamond drilling in 2018 was carried out by a drilling contractor, Eco Minera of San Juan, Argentina. The rig used was a Sandvik DE710 track mounted rig. The type of rig and setup used at Calcatreu in 2018 are illustrated in the two photos in Figure 10-5.

All holes in 2018 were entirely drilled from surface producing HQ-sized drill core, using a three-metre core barrel and standard inner tube. The entire length of all holes was drilled using DD core drilling.

Drilling Orientations

The holes were positioned using the same coordinate system as previous drilling completed by the previous owners, i.e. the Gauss Kruger Projection, Zone 2 with the Campo Inchauspe Datum and expressed in metric units.

The 2018 drilling has been designed to be orientated normal to the steeply dipping mineralised structures for Vein 49, Belen and Castro Sur holes drilled.

The drilling orientations for the regional prospect zones geophysical targets were mostly drilled at shallower dips of 50° or 55° in order to intersect potentially steeply dipping gold and silver mineralisation, as is the case with more densely drilled prospect areas. The drill azimuths were aligned normal to the interpreted strike of the geophysical anomaly trends.

The known gold and silver mineralisation previous interpreted for Vein 49, Nelson, Belen and Castro Sur, as well as the geophysical trends, are known to strike at approximately 040° to 050°.

Comment on Drilling Orientations

The drilling orientations designed for the 2018 programs, along with the rig capability of drilling with shallower angled holes (to 55° dip) have allowed for the opportunity to provide a representative sample across the gold-silver mineralised structures as currently interpreted based the all available data.

For the Vein 49, Belen and Castro Sur 2018 drilling, previous drilling and information from mapping and other exploration work indicates that drilling orientations are appropriate and have not introduced any material sampling bias.

For the 2018 drilling within the regional prospects, further drilling and interpretation of the controlling gold-silver mineralisation structures is required, given that there has not been any previous drilling conducted within these prospects. These areas do not contain any mineral resources that are currently included in the 2018 MRE in the Report.

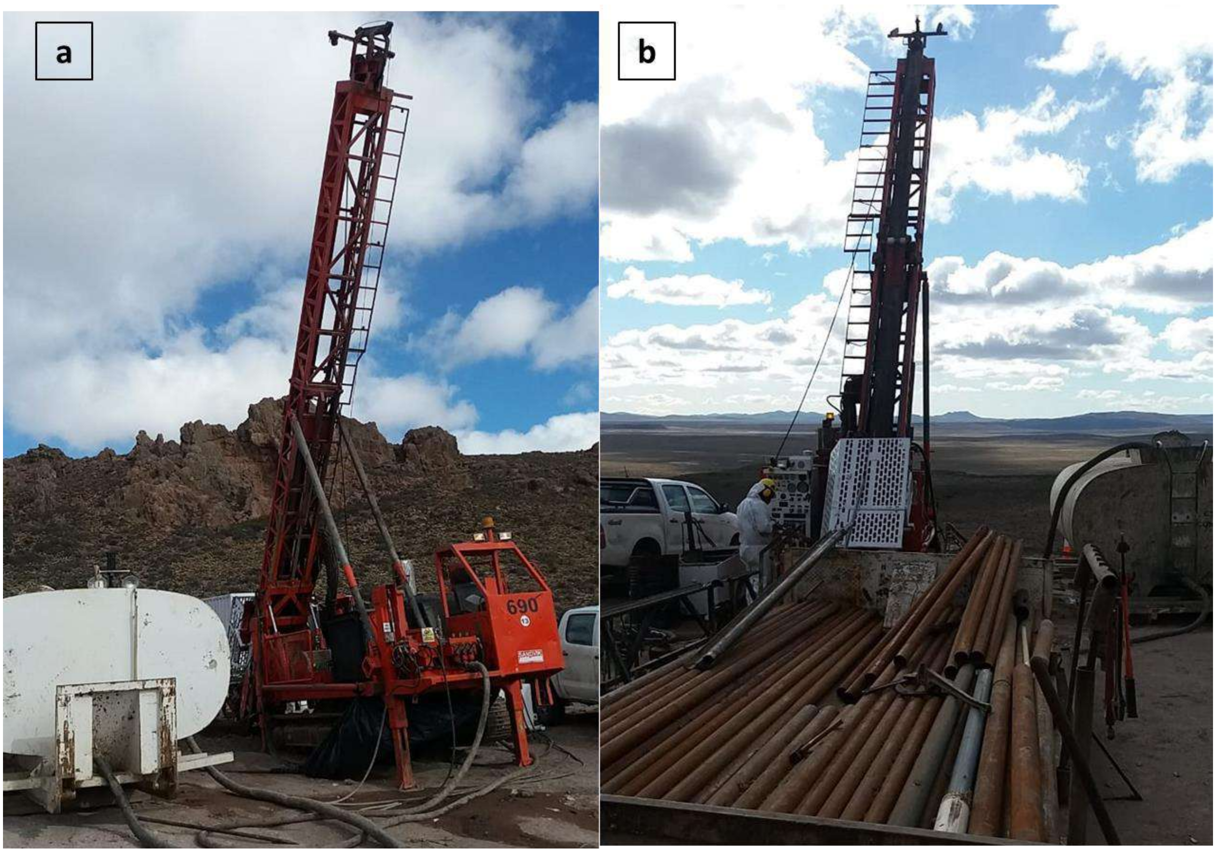


Figure 10-5: Diamond Core Drilling Rig Setup at Calcatreu (PGD, 2018)

10.5.2. Collar and Downhole Survey Methods

PGD geologists set out the collar locations using GPS instrument. The DD crew set out the rig onto the drill site and it was then aligned under the direction of PGD's geologist using front and back sights emplaced by PGD crew prior to drilling.

Upon termination of each drill hole, down hole surveys were taken by the drill contractor every 20 m or 50 m utilising a digital, single shot, FLEXIT down hole survey tool. The hole inclination, direction (azimuth), magnetic field strength, gravity roll angle, magnetic tool face angle and temperature were recorded. The azimuth readings have been corrected for magnetic declination by adding 6° to the instrument reading.

Following termination of each hole, the collars were marked with capped PVC tubing cemented in a square concrete base and surveyed.

For the 2017 drilling, surveying of drill hole locations was carried out using a differential GPS ("DGPS") instrumentation. All pre-collar casings were left in the holes, labelled and mostly capped.

Drill collars for the 2018 holes have been collar surveyed since the completion of drilling using a hand-held GPS but will be surveyed using DGPS at a later date.

10.5.3. Sampling Methods

Sampling methods are described for the drilling programs at Calcatreu conducted by PGD in 2017 and 2018.

All sample types are either PQ or HQ diameter diamond drill core samples from a surface diamond drill rig, collected from a 3m core barrel to maximise recovery and to provide a representative sample. The larger PQ size was drilled for the 2017 drilling program and was whole core samples as part a due diligence twin hole drilling program is used within the central mineralisation zone of the Vein 49 gold-silver mineralisation zone in order to obtain a larger representative sample. HQ diameter half core was sampled from 2018 drilling program for all prospect zones drilled tested.

Extracted core was placed in a core cradle, ensuring that core was maintained intact and in the correct order. Core was cleaned with segments pieced back together in order to reconstruct the in-situ position as closely as possible (Figure 10-6). Core was placed into numbered wooden core boxes in which the regular wooden blocks were inserted with drilling depth labelled on the blocks, then had lids fixed to the top of the trays to minimise disruption of the core during transportation back to the core shack at PGD's exploration camp and later transport back to the field office at Ingeniero Jacobacci.

The office includes sample preparation, core logging and core cutting machinery, and secure sample and core storage facilities. The facility includes has a storage shed in a walled yard, behind a locked gate. Samples were collected in the field, at the drill sites by geology personnel and delivered to the facility in Ingeniero Jacobacci. Diamond drill core was logged, sawn in half and sampled at this facility

All drill core was geologically logged and sampled to lithological contacts or changes in the nature of mineralisation to ensure a sample representation of lithological/alteration/mineralisation intervals. Sample intervals are typically 0.5 m to 2.0 m in length. The minimum sample length was 0.3 m, and maximum length was 3 m.

The sampling protocols are described as follows:

1. All drill core is aligned and measured prior to sampling;

2. Samples for assay are selected and marked for sampling on the basis of sulphide lithology/alteration/mineralogy/veining-sulphides;
3. Sample intervals avoid crossing geological contacts;
4. Samples are sawn in half with a diamond saw blade (2018)/ Whole core sampled (2017);
5. One half of the sample is placed in a standard, numbered transparent plastic bag with an identifying sample tag and - the remaining half returned to the core box with a corresponding tag placed at the beginning of the sample interval;
6. Samples delivered to the laboratory weighed in the range of 3-5 kg; and
7. Sample splits and half core are stored at the field office or at another locked garage in Ingeniero Jacobacci.

Samples were transported from the field office by courier trucks, under supervision of independent personnel, to the principal laboratories used for each drill program at Calcatreu.

No sample compositing of diamond drill core samples has been applied for the 2017 and 2018 diamond drilling programs.

Figure 10-6: 2018 Drilling - HQ Core Extraction from Inner Tube (a); Core Cleaned and Laid Out in Wooden Core Trays (b) (Cube Site Visit, March 2019)

Diamond drill core was used to obtain representative half core samples weighing 3 kg to 5 kg, which was sufficient to be pulverised to produce a 50 g charge for fire assay.

Figure 10-7 shows photos of the core protection lids (a), core stacking (b), core cutting equipment (c) and logging and sample mark-up (d) at the Ingeniero Jacobacci field office.

Figure 10-7: Core Cutting, Sample Preparation and Logging Areas at PGD Office in Ingeniero Jacobacci (Cube Site Visit, March 2019)

10.5.4. Drill Hole Logging

Geology Logging

Logging by PGD has been conducted both qualitatively and quantitatively for the 2017 and 2018 drilling programs. Logging records major and minor rock units (grain sizes, texture structural information: core angles of geological contacts, foliation and bedding, fractures, faults, veins, joints etc.), alteration and sulphide species, content and mode of occurrence.

Geology legend coding systems from the various company drilling campaigns used for geology mapping and logging have been compiled and tabulated in Appendix 1.

The total drill metres recorded for 2017-2018 drilling in the collar records is 6,874.5 m, and the lithology records contain 6834.5 m of core logged which shows that 99% of the drill metres have been logged.

All Drill core is digitally photographed for both dry and wet core trays with photos maintained on file in PGD's Ingeniero Jacobacci field office.

Figure 10-8 shows photos of the check logging by a PGD geologist at the Calcatreu field camp (a) and example of core presented for logging and sample mark-up (b).

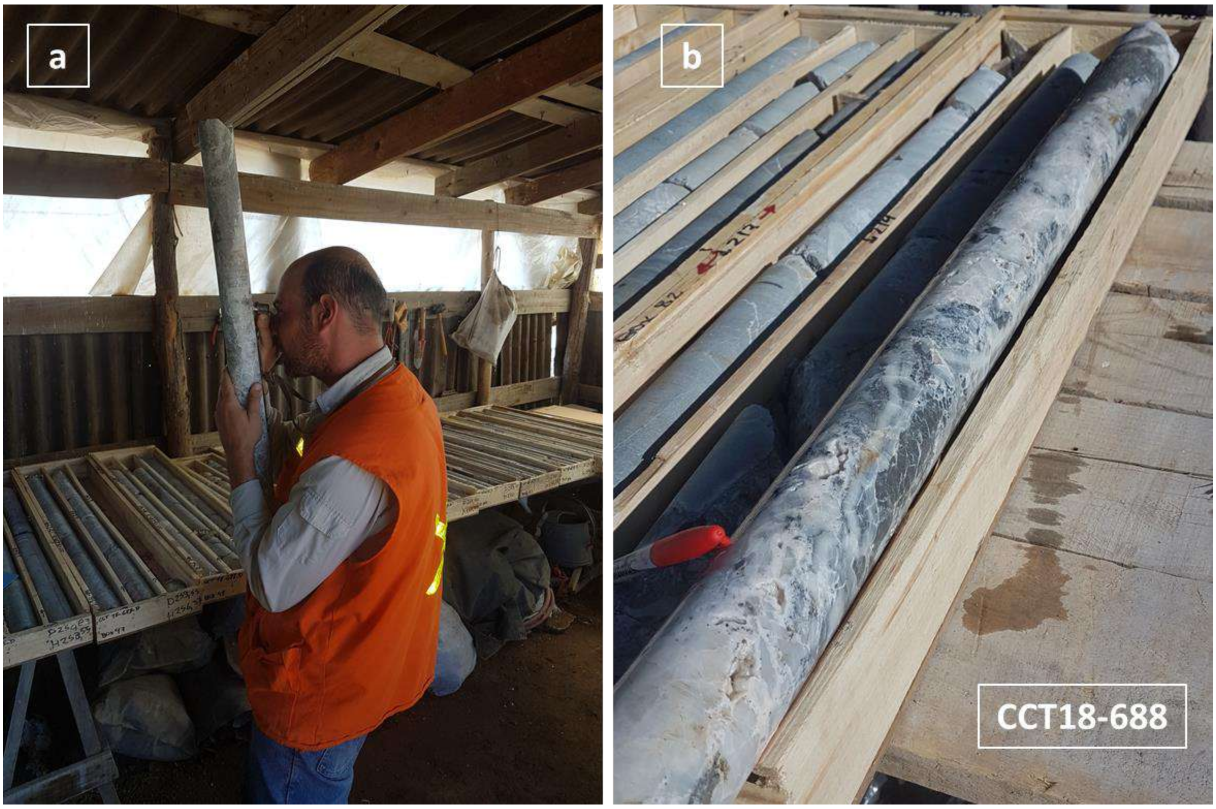


Figure 10-8: Core Logging Setup at Calcatreu Field Camp (PGD, 2018)

Geotechnical Logging

Geotechnical measurements including core recovery, RQD and fracture density were also taken. Details of the methodology used for logging and quantifying RQD and core recovery are presented in Section 10.6.3.

10.6. Drill Sample Quality

10.6.1. Aquiline Drilling Core Recovery

For the Aquiline drilling, a summary of the DD core recoveries achieved in the different oxidation zones and mineralisation types is shown in in Table 10-5.

The core recovery comparisons between mineralised and waste zones for each oxidation zone show that the mineralised zones have significantly lower recoveries. Inspection of core photos as illustrated in Figure 10-9, shows the presence of highly fractured zones (hole AQI123), and highly weathered clay-rich zones (hole AQI125), evident in the mineralised portions of the core.

It is likely that there has been core loss as a result of washing out of clay-filled cavities and in the soft, highly weathered zones. Both examples show the more compact, less weathered waste zones where core recovery percentage is much higher.

Table 10-5: DD Core Recovery for AQI Holes (Cube, as at 28/02/2018)

Material Type	Core Recovery (%)	
	Mineralised Zones	Waste Material
Oxidation Type:		
Oxide Zone	66.32	76.55
Moderate Oxide	77.56	85.97
Weakly Oxide	82.45	86.65
Fresh ("Non-Oxide")	79.67	87.23

Figure 10-9: Examples of Core Recovery from Vein 49 HQ DD Core Drilled by Aquiline (Cube site visit, 17/02/2017)

10.6.2. Aquiline Drilling RC Recovery

For the Aquiline drilling, the average recoveries for the RC drill samples were calculated for different drilling conditions (wet/dry) and geological parameters including degree of oxidation and mineralised zones, as shown in (Table 10-6).

Drilling throughout each oxidation zone showed similar lower recoveries throughout, with limited differences between mineralised zones and waste zone, apart from in the fresh zone.

With respect to the sample recoveries based on mineralisation type, the lower recoveries are likely a product of the either wet RC drill cuttings, or the loss of clay material in fracture zones in permeable rock, or in the clay-rich breccia matrix and highly fractured zones in the deeper less oxidised zones.

For RC samples, the analysis shows that the overall sample recovery for RC drilling at the both Vein 49 and Nelson prospects are fair to poor.

Table 10-6: RC Sample Recovery for Aquiline Holes (Cube, as at 28/02/2018)

Oxidation Type	Vein 49/ Belen RC Recovery (%)		Nelson RC Recovery (%)	
	Mineralised Zones	Waste Material	Mineralised Zones	Waste Material
Oxide Zone	71.85	68.89	69.74	69.52
Moderate Oxide	72.12	72.11	72.03	82.30
Weakly Oxide	80.17	80.25	73.53	76.67
Fresh ("Non-Oxide")	70.83	84.19	69.45	80.84

10.6.3. PAS Drilling Core Recovery

Core recovery information was not able to be sourced for the 2011 PAS drilling records by Cube during the 2017 site visit. A visual analysis of some PAS core was possible at the PGD core processing facility in Ingeniero Jacobacci.

Three PAS metallurgical test work holes (PQ-size) are stored as entire drill core and were inspected by Cube, with examples of the core quality in two of these holes shown in Figure 10-10. Mineralised intervals and adjacent zones show highly fractured drill core and argillised clay rock which show significant core loss in hole CCT11-653.

The overall poor quality of the three examples from the 2011 PAS drilling has led to this data not being used in the 2018 MRE work carried out by Cube.

Figure 10-10: Examples of Core Recovery from Vein 49 PQ DD Core Drilled by PAS (Cube site visit, 17/02/2017)

10.7. Bulk Density Determinations

The bulk density ("BD") determinations used for the resource work at Calcatreu was taken from measurements previously taken by Micon in 2004 and more by ALS-Chemex in Mendoza, Argentina.

10.7.1. BD Methodology

The samples were analysed using the paraffin coated core method in order to determine a true bulk density by accounting for the porosity noted in the mineralisation.

The paraffin coated core methodology for BD determinations is summarised as follows:

- Core samples are kiln dried;
- Each core sample is weighed in air = P1;
- Each core sample is immersed in liquid paraffin and weighed = P2; and
- Each core sample with paraffin coating is immersed in a container with water and weighed = P3.

The calculation used to calculate the BD of each sample is:

$$BD = P1/\left(P2 - P3 - \left((P2 - P1)/0.86^{*}\right)\right)$$

$*$ = SG of paraffin

10.7.2. BD Results

From BD determinations reported by Micon (2004b), 11 samples of varied quartz vein textures and mineralisation styles were taken in six different drill holes. Sample descriptions and the BD results are set out in Table 10-7 below.

Table 10-7: Bulk Density Values Recorded by Micon (Micon, 2003)

Hole ID	Mineralisation	Oxidation	Sulphides	Bulk Density
AQI 107	Qtz, sugary, brecciated, moderately porous	Strong	nil	2.51
AQI 107	Qtz colloform-chalcedonic-sugary	Strong	Weak	2.37
CE-5	Qtz colloform strong brecciated	Strong	Weak	2.29
CE-5	Fine breccia qtz chalcedonic	Strong	nil	2.31
CE-5	Qtz chalcedonic breccia	Strong	nil	2.22
CE-2	Qtz chalcedonic breccia	Strong	nil	2.95
CE-6	Qtz and breccia weak-moderate	Weak-mod	Moderate	2.43
CE-6	Qtz and breccia weak	Weak	Moderate	2.45
AQI 108	Fine qtz and breccia moderate	Moderate	Moderate	2.17
62-4	Qtz, banded	Fresh	nil	2.55

These results have been combined with previous BD results recorded in the database supplied to assist with assigning representative BD values for the main lithologies and oxidation types as summarised in Table 10-8.

Table 10-8: Bulk Density Values by Rock Type (Cube, as at 28/02/2018)

Rock Code	Oxidation State	# of Samples	Feb 2017 Database - BD Values (t/m^3)
Andesitic Rocks	Oxide	9	2.5
	Fresh	30	2.53
Quartz-Andalusite/ Breccia	Oxide	7	2.53
	Fresh	14	2.48

The assigned BD values based on a combination of the Micon sampling and the more recent lab results and used in the Cube 2018 block model are outlined in Table 10-9. BD values listed for the previous block model reported are shown for comparison.

Table 10-9: Bulk Density Values by Material Type (Cube, as at 28/02/2018)

Material	Oxidation State	# of Samples	Feb 2017 Database - BD Values (t/m^3)	2008 Model - Assigned BD Values	Variance (%)
Mineralised Zones	Oxide	7	2.5	2.44	2.5%
	Fresh	11	2.57	2.54	1.2%
Waste Zones	Oxide	9	2.52	2.44	3.3%
	Fresh	33	2.5	2.51	-0.4%

10.8. Significant Results for 2017–2018 Drilling

10.8.1. Summary and Interpretation

A list of the significant intersections from drilling programs conducted in 2017 and 2018 at Calcatreu are presented in Table 10-10. All drilling completed in this period is listed in the table, and where there were no significant intersections ("NSI"), these holes have been identified as such. Significant higher-grade intervals of gold and silver have been included within the lower grade intersections.

The following information relates to the reporting of the significant intersections:

- The coordinates for Easting, Northing and RL of the drill hole collars are recorded in Gauss Kruger Projection, Zone 2 with the Campo Inchauspe Datum and expressed in metric units
- Dip is the inclination of the hole from the horizontal. For example, a vertically down drilled hole from the surface is -90°. Azimuth is reported in magnetic degrees as the direction toward which the hole is drilled;
- The start of the downhole intercept, and the downhole length are reported;
- Downhole length of the hole is the distance from the surface to the end of the hole, as measured along the drill trace. Interception depth is the distance down the hole as measured along the drill trace. Intersection width is the downhole distance of an intersection as measured along the drill trace;
- Diamond drill core was cut to geological boundaries, so length weighting was used in the reporting of drilling results to ensure a logical mean grade is determined;
- The primary returned assay result was used for reporting of significant intersections in this report. No averaging with laboratory repeats was undertaken so as not to introduce volume bias; and
- No grade truncation or high-grade cutting was applied in the drilling results reported.

The significant results from the 2017 due diligence drilling by PGD were able to confirm the presence of high-grade gold and silver mineralisation in the Vein 49 Prospect identified from previous drilling campaigns. The drill holes acted as twin holes for earlier drilling completed by Aquiline and correlated well with the intersection location and true width of the gold-silver mineralisation envelope initially defined by the older drilling programs.

The 2018 drilling program was designed to test geophysical anomalies identified from the 2018 IP-PDP survey conducted by PGD and also test potential extensions to the mineralisation in the area between Vein 49/Belen and Castro Sur. Results indicated anomalous gold and silver values along strike from the Vein 49 and Castro Sur gold-silver mineralisation trends, but testing of geophysical anomalies in other prospects not previous drilled did not intersect any significant values.

10.8.2. True Widths and Orientation of Drilling Intercepts

The overall form of the gold-silver mineralised envelope of the Vein 49 zone at Calcatreu in section is planar and broadly sigmoidal with an average dip of 65° to the south-east. The confirmation holes drilled to test the zone (mostly drilled at 55^o towards the north-west), generally intersected mineralisation at relatively high acute angles of 70^o to 80^o with respect to the core axis. Although no orientated core was obtained, these overall angles correlate with those recorded in the quartz breccia and quartz-chalcedonic vein zones, relative to the core axis.

Given the consistent orientation of drill holes, the true widths of the intersected mineralisation is estimated to be approximately 80% to 95% of intersected widths.

A typical drill section from the main gold-silver mineralisation zone in Vein 49 is illustrated in Figure 10-11. The section shows the typical angle of drilling to intersect the main zone.

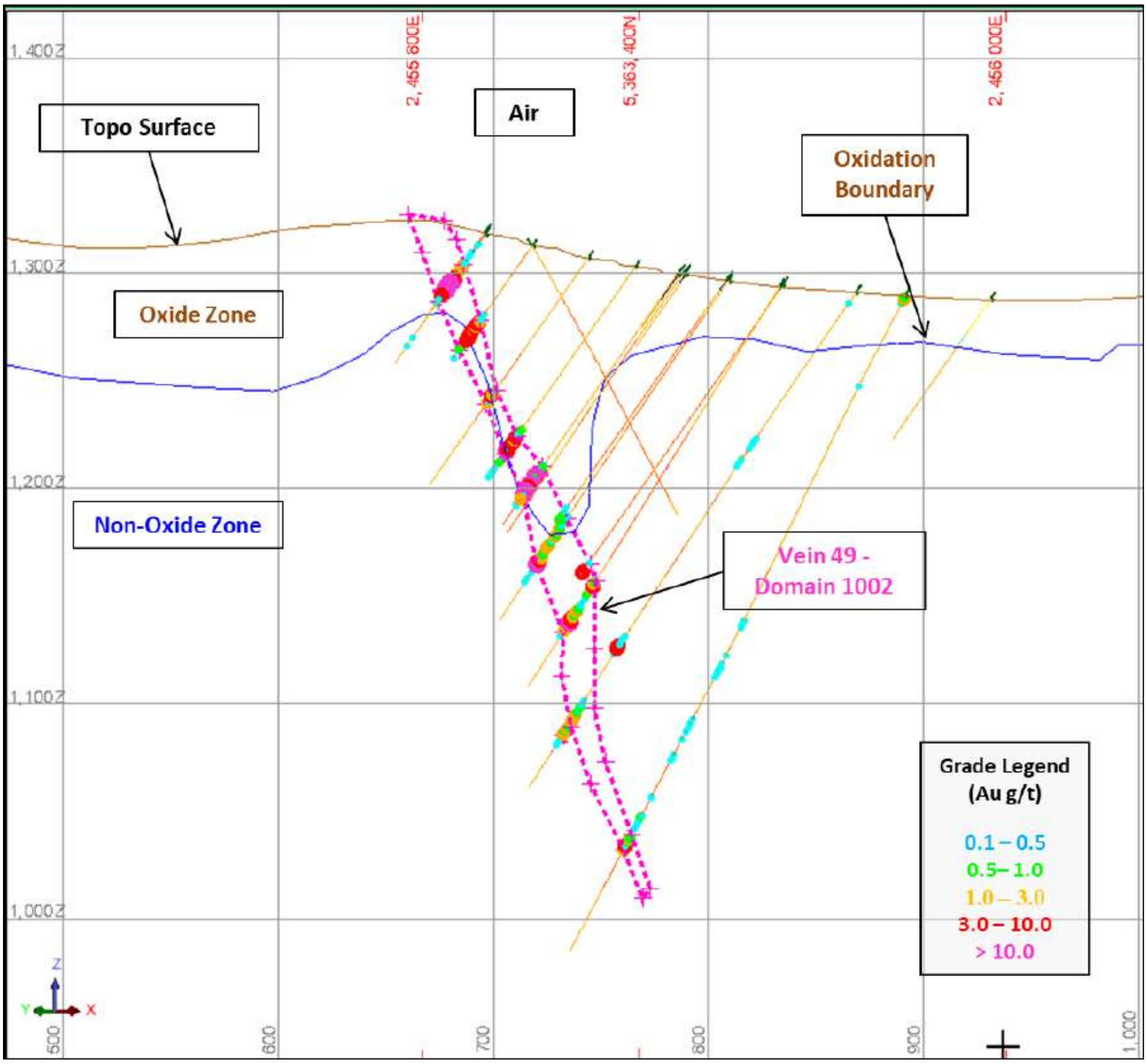


Figure 10-11: Vein 49 - Typical Oblique Section Through Main Zone of Au-Ag Mineralisation (Cube, 2017)

Table 10-10: Significant Results for Calcatreu 2018 Drilling Program (Cube, 2018)

Drill hole	Northing	Easting	RL	EOH Depth	Collar Dip	Collar Azimuth	DD Core Size	Prospect	From (m)	To (m)	Interval (m)	Grade (g/t Au)	Grade (g/t Ag)	Notes
CCT17-660	2,455,504	5,363,062	1,292	90.0	-55	90	PQ/PQ3	Vein 49	45.43	48.42	2.99	1.50	7.77	
and									50.57	51.75	1.18	1.16	9.60	
and									68.29	72.64	4.35	8.60	149.01	
incl									68.29	69.41	1.12	9.77	319.00	
incl									70.88	72.64	1.76	14.59	157.61	
CCT17-661	2,455,558	5,363,211	1,305	77.5	-66	78	PQ/PQ3	Vein 49	48.34	55.00	6.66	9.37	183.31	
CCT17-662	2,455,900	5,363,578	1,331	55.0	-55	55	PQ	Vein 49	13.00	37.00	24.00	6.45	21.05	
incl									17.50	27.30	9.80	11.76	31.62	
and									40.25	41.70	1.45	1.44	4.30	
CCT17-663	2,455,873	5,363,537	1,329	53.0	-55	53	PQ	Vein 49	14.00	38.22	24.22	7.79	37.18	
incl									33.20	38.22	5.02	21.81	107.45	
and									41.30	45.75	4.45	1.09	12.04	
incl									41.30	41.92	0.62	4.56	37.80	
CCT17-664	2,455,839	5,363,494	1,327	56.5	-55	57	PQ	Vein 49	20.56	31.78	11.22	13.46	83.73	
incl									26.20	31.78	5.58	23.04	143.50	
CCT17-665	2,455,775	5,363,384	1,306	47.5	-55	48	PQ	Vein 49	10.00	31.00	21.00	4.82	31.19	
incl									17.10	27.50	10.40	8.35	36.34	
CCT18-666	2,457,560	5,366,190	1,200	224.0	-55	224	HQ	Catrin						NSI
CCT18-667	2,457,371	5,365,975	1,257	200.0	-45	200	HQ3	Catrin						NSI
CCT18-668	2,457,575	5,365,410	1,318	143.0	-50	143	HQ	Mariano NW						NSI
CCT18-669	2,457,133	5,364,728	1,332	200.0	-45	200	HQ	Zorro Muetro						NSI
CCT18-670	2,457,149	5,364,426	1,298	245.0	-60	245	HQ	Zorro Muetro						NSI
CCT18-671	2,456,878	5,364,323	1,308	270.0	-50	270	HQ	Zorro Muetro						NSI
CCT18-672	2,456,837	5,364,962	1,348	232.0	-50	232	HQ	La Cruz						NSI
CCT18-673	2,456,634	5,364,252	1,324	171.0	-55	171	HQ	Zorro Muetro						NSI
CCT18-674	2,456,800	5,366,970	1,270	173.5	-55	174	HQ	Castro Sur	42.00	46.40	4.40	11.86	11.12	

Drill hole	Northing	Easting	RL	EOH Depth	Collar Dip	Collar Azimuth	DD Core Size	Prospect	From (m)	To (m)	Interval (m)	Grade (g/t Au)	Grade (g/t Ag)	Notes
incl									42.00	43.40	1.40	34.10	28.40	
incl									43.50	44.50	1.00	2.77	1.60	
CCT18-675	2,456,824	5,367,477	1,210	200.0	-59	200	HQ	Castro Sur Splay	127.50	128.00	0.50	5.97	14.60	
CCT18-676	2,456,642	5,366,015	1,275	199.0	-50	199	HQ	Canceta						NSI
CCT18-677	2,456,871	5,365,752	1,288	182.0	-50	182	HQ	Canceta						NSI
CCT18-678	2,456,750	5,365,352	1,304	170.5	-60	171	HQ	Catrin Sur						NSI
CCT18-679	2,456,970	5,365,410	1,310	190.0	-60	190	HQ	Catrin Sur						NSI
CCT18-680	2,457,403	5,367,514	1,275	221.5	-55	222	HQ	Castro Sur						NSI
CCT18-681	2,456,904	5,367,066	1,267	149.5	-60	150	HQ	Castro Sur						NSI
CCT18-682	2,456,721	5,366,050	1,277	155.5	-50	156	HQ	Canceta						NSI
CCT18-683	2,456,458	5,364,496	1,358	212.5	-50	213	HQ	La Cruz						NSI
CCT18-684	2,456,421	5,364,360	1,356	170.5	-50	171	HQ	La Cruz						NSI
CCT18-685	2,457,482	5,364,816	1,328	175.0	-50	175	HQ	Mariano NW						NSI
CCT18-686	2,458,457	5,365,494	1,318	176.5	-50	177	HQ	Amistad						NSI
CCT18-687	2,458,496	5,365,679	1,346	110.5	-50	111	HQ	Amistad	47.55	48.50	0.95	2.85	11.51	
CCT18-688	2,455,941	5,363,202	1,283	335.5	-55	336	HQ	Vein 49						NSI
CCT18-689	2,456,312	5,363,400	1,284	446.5	-55	447	HQ	Vein 49						NSI
CCT18-690	2,455,292	5,363,409	1,296	170.0	-58	170	HQ	Belen						NSI
CCT18-691	2,455,026	5,363,327	1,290	249.5	-55	250	HQ	Belen	152.60	153.20	0.60	1.29	8.00	
and									173.80	174.80	1.00	0.03	1,027.00	
CCT18-692	2,457,629	5,367,614	1,282	341.5	-55	342	HQ	Castro Sur						NSI
CCT18-693	2,458,914	5,366,081	1,273	125.5	-45	126	HQ	Amistad						NSI
CCT18-694	2,456,808	5,362,866	1,260	225.0	-55	225	HQ	Mariano						NSI
CCT18-695	2,455,647	5,363,031	1,284	259.5	-50	260	HQ	Vein 49	144.10	146.62	2.52	1.56	8.05	
and									157.06	159.05	1.99	1.93	11.85	
CCT18-696	2,454,942	5,363,349	1,294	170.5	-50	171	HQ	Belen	153.80	154.30	0.50	0.93	23.20	

11. Sample Preparation, Analyses, and Security

11.1. Summary

Alex Stewart Assayers Argentina S.A. ("ASA") and ALS Chemex, Mendoza, Argentina S.A ("ALS") have been the principal assay laboratories used for sample preparation and analysis for all of the drilling that has been completed at Calcatreu up to the end of 2018. Both laboratories are independent of PGD. All assaying work has been undertaken based on a commercial agreement between the client (PGD) and the supplier (ASA or ALS).

A summary of each of the laboratories used for the drilling programs and each of the laboratory's analytical methods, descriptions and lower and upper detection limits is presented in Table 11-1.

Flow sheets for the main laboratories and for each analytical method are also shown in Appendix 2.

Table 11-1: Assay Laboratories and Analytical Methods - ALS Chemex (Cube, as at 28/02/2018)

Lab Code	Lab Code	Element	Description	Lower Detection Limit (ppm)	Upper Detection Limit (ppm)
ALS Chemex - Mendoza	PM-209 (Au_AA24)	Au	50g Fire Assay gold with atomic absorption spectroscopy finish ("AAS").	0.005ppm Au	10.0ppm Au
ALS Chemex - Mendoza	G-105	Multi Element	Multi-acid digestion with AAS finish	1ppm (ME); 5ppm (As)	NA
ALS Chemex - Chile	GRA-22	Au, Ag	50g Fire Assay gold and silver with gravimetric finish	0.05ppm (Au); 0.5ppm (Ag)	NA
ALS Chemex - Chile	ICP-AES	Ag, Cu, Fe, Zn, Pb, As, Bi	Inductively coupled argon plasma atomic emission spectroscopy) method ME-ICP 41. This method uses an aqua regia digestion.	Refer Table 11-2	Refer Table 11-2
ASA - Mendoza	Au4-50	Au ppm	50g Fire Assay gold with AAS finish	0.01	(A)
ASA - Mendoza	Au4A-50; AuAg4A-50	Au ppm	50g Fire Assay gold and silver with gravimetric finish	na	(A)
ASA - Mendoza	ICP-MA-39	Au, Ag, Multi Elements	0.25g, 4 acid digests with ICP-0ES finish	0.5ppm (Ag)	200ppm (Ag)

NOTES: (A) - ASA has no upper detection limit for Au4-50, but by convention when Au results are equal or greater than 10 ppm the sample is re-analysed by gravimetry methods.

ASA is ISO Certified with ISO/IEC 65:1996 accreditation.

ALS Chemex, Mendoza and ALS Chemex, Chile are accredited to ISO/IEC 17025:2017 for specific analytical procedures.

11.2. Sample Preparation and Analysis

11.2.1. Alex Stewart Assayers Argentina S.A. ("ASA")

ASA was contracted for the geochemical analysis of the samples generated during the PAS drilling campaign in 2011 and for both drilling campaigns by PGD in 2017 and 2018.

A flow chart of the sample preparation and analysis is described as follows and also summarised in the flow charts in Appendix 2.

Samples Preparation

All samples underwent sample preparation according to ASA procedures:

1. Reception of samples in Mendoza, check of number identification; Weigh sample;
2. Dry sample at 80 – 90°C;
3. Crush all the sample in jaw crusher (primary and secondary crusher) to 80% passing 10 mesh;
4. Split the sample in riffle splitter to obtain 1.2 kg sub sample; and
5. Grind 1.2 kg sub-sample to obtain 85% passing 200 mesh.

Analysis

Gold was analysed by fire assay and Ag by aqua regia digestion with AAS finish, according to ASA procedures. ICP analyses for a suite of multi-elements (39 elements, including base metals and Ag) were performed by ASA. For samples over the detection limits, the samples were re-analysed by fire assay using gravimetric finish, for gold over limits 10 g/t, and for silver over limits 200 g/t.

A summary of the laboratories analytical methods, descriptions and lower and upper detection limits is presented in Table 11-2.

Table 11-2: Assay Laboratories and Analytical Methods - ASA Mendoza (Cube, as at 28/02/2018)

Lab Code	Element	Description	LDL ppm	UDL ppm
P1	All	Pulp Preparation – Pulp homogenisation and Bar Code assignment	-	-
P5	All	Coarse Preparation – Rock chip sample drying and crushing - #10 to >80%; Split to 25% with 95% passing 106mirconrs.	-	-
Au4-50	Au ppm	50g Fire Assay gold with AAS finish	0.01	10
Ag-AR	Ag ppm	Aqua regia digestion silver with AAS finish	0.5	200
Au4A-50	Au ppm	50g Fire Assay gold with gravimetric finish	0.1	
Ag4A-50	Ag ppm	50g Fire Assay silver with gravimetric finish	0.5	
ICP-MA-39	39 Elements	0.25g, 4 acid digests with ICP-0ES finish	Var.	Var.

- LDL = lower detection limit; UDL = upper detection limit

11.2.2. ALS Chemex, Mendoza, Argentina S.A. (“ALS”)

Normandy SA sent all samples to the ALS Geolab - Chemex Laboratory (now ALS Chemex) in Mendoza, Argentina. Samples were prepared and analysed using the following procedures.

The samples from the AQI drill programs were also processed by ALS. Initial sample preparation was undertaken in Mendoza. Final sample preparation and assaying took place in the ALS Chemex laboratory in Chile.

A flow chart of the sample preparation and analysis is described as follows and also summarised in the flow charts in Appendix 2.

Samples Preparation

Code P-022, Mechanical Preparation of Rock and DD Core Samples (Up to 12kg.):

1. Samples received and checked;
2. Dry samples at 65°C;
3. Primary crush (in jaw crusher) to 95% passing ¼ inch;
4. Secondary crush (in roll crusher) to 90% passing 10 mesh;
5. Homogenise and reduce by splitting (riffle splitter);
6. Retain 25% of original sample, up to a maximum of 3 kg;
7. Dry sample at 65°C (if necessary);
8. Pulverise the entire 25% fraction, up to 3 kg, in a Labtechnics LM5 Mill to 85% minus 200 mesh, 95% minus 150 mesh; and
9. Split sample in half. One half to chemical analysis, the other half returned to the owner.

Code P-020, Mechanical Preparation of Soil Samples (Up to 1kg):

1. Samples received and checked;
2. Dry samples at 65°C;
3. Sieve through 80 mesh screen to obtain a representative fraction; and
4. Split sample in half. One half to chemical analysis, the other half returned to owner.

Code P-021, Mechanical Preparation of Reverse Circulation Chip Samples (Up to 10kg):

1. Samples received and checked;
2. Dry samples at 65°C;
3. Secondary crush (in roll crusher) to 90% passing 10 mesh;
4. Homogenise and reduce by splitting (riffle splitter);
5. Retain 25% of original sample, up to a maximum of 3 kg;
6. Dry sample at 65°C (if necessary);
7. Pulverise the entire 25% fraction, up to 3 kg, in a Labtechnics LM5 Mill to 85% minus 200 mesh, 95% minus 150 mesh; and
8. Split sample in half. One half to chemical analysis, the other half returned to owner.

Analysis

All gold and silver assaying were performed by a fire assay method at the ALS laboratory in Mendoza. Multi-element analysis was also completed on the Normandy SA and Aquiline samples.

Code PM-209, Gold Determination by Fire Assay:

1. This analysis uses a 50 g sample for fire assay, with lead collection and flame atomic absorption spectroscopy finish ("AAS"). It has a detection limit of 0.01 ppm for gold;
2. Weigh 50 g sample into paper cup and add a predetermined quantity of flux;
3. Cover entire rack of cups with plastic, clamp tight, and tumble to homogenize;
4. Place in numbered pot in fusion furnace at 1,100°C and fuse for 45 minutes;
5. Remove from furnace and pour molten mass into iron mould and allow to cool;
6. Remove lead button from slag and shape into a cube by hammering;
7. Place cube into preheated cupel and place in cupellation furnace for 45 minutes;
8. Remove cupel from furnace and cool;
9. Remove prill from cupel and dissolve in test tube using nitric acid and aqua regia; and
10. Make up solution to final volume and determine gold content by AAS.

Code G-105, Base Metal by AAS Analysis:

This method is a geochemical level determination of base metals by multi-acid digestion (HCl-HNO3-HF-HClO4), lixiviation under special acid conditions and finish by AAS, against standards in the same conditions.

The detection limits for the method are set out in Table 11-3.

Table 11-3: Base Metal Analysis Detection Limits (Cube, as at 28/02/2018)

Element	Detection Limit	Upper Limit
Ag	0.1ppm	100ppm
Cu	1ppm	0.60%
Pb	1ppm	1,000ppm
Zn	1ppm	2%
As	5ppm	1.20%
Mo	1ppm	250ppm
Sb	1ppm	250ppm

Code GRA-22 (ALS Chemex, Chile), Gold Determination by Fire Assay:

Silver and gold were determined using, a fire assay (similar to that described for the PM-209 method), using a 50g nominal sample weight and gravimetric finish.

The method has a lower limit of detection of 0.05 ppm.

In addition, 34 other elements including Ag, Cu, Fe, Zn, Pb, As and Bi were determined by the inductively coupled argon plasma atomic emission spectroscopy ("ICP-AES") multi element method, ME-ICP 41. This method uses an aqua regia digestion.

11.3. Quality Assurance and Quality Control

11.3.1. Normandy SA - QAQC Procedures

During the course of the exploration and analytical work the Normandy SA records indicate that the following quality control procedures were implemented:

- Inclusion of one standard for every 20 samples or at least one in each batch of samples sent to the laboratory;
- Inclusion of one duplicate for every 20 samples or at least one in each batch of samples sent to the laboratory;
- Coarse rejects were recovered from the laboratory and 5% were resubmitted for check assaying at the same laboratory and 5% to an external laboratory;
- Re-sampling of higher value sections of each trench to duplicate results;
- Acquisition of data from the laboratory, and transfer to the database, electronically in order to eliminate transcription errors; and
- Restrict any modification of the database to the geologist in charge.

11.3.2. Aquiline - QAQC Procedures

For the initial due diligence program, Aquiline relied on standards, duplicates and blanks inserted into the sample stream by ALS Chemex.

For the ongoing exploration program, Aquiline developed its own routine of inserting field duplicates, field blanks and standards into sample batches for analysis by ALS Chemex, in addition to the QAQC procedures managed by ALS Chemex. A single Aquiline staff member was responsible for managing the program and analysing the results. Aquiline established an electronic database which incorporated automated querying of the data to identify erroneous entries and to identify data results of concern.

In 2003 Aquiline consultant Micon, conducted a due diligence program of check sampling and data validation as part of its consulting commission. Micon made some recommendations for improvement but concluded that the assay database presented by Aquiline was a suitable one for use in the estimation of a Mineral Resource.

11.3.3. PAS - QAQC Procedures

For the 2011 twin hole drilling program, PAS setup a routine of inserting standards and blanks into the sample stream. There were no duplicate sampling routines, including check sampling of pulps and coarse rejects, or umpire laboratory check assays results available for review.

11.3.4. PGD - QAQC Procedures

For the 2017 and 2018 drilling program, PGD setup a routine of inserting standards and blanks into the sample stream as follows:

- Inclusion of one standard for every 20 samples or at least one in each batch of samples sent to the laboratory;
- Inclusion of blank sample for every 20 samples or at least one in each batch of samples sent to the laboratory.

There were no duplicate sampling routines, including check sampling of pulps and coarse rejects, or umpire laboratory check assays carried out for the 2017 and 2018 drilling programs.

11.4. QAQC Review of Results

11.4.1. Background

For the Cube QAQC review, all gold and silver assay values are reported in ppm units and all assay values reported below the lower analytical detection limit were set to half the detection limit for the analysis.

For a QAQC review, all control samples are assessed on the basis of accuracy and precision.

The accuracy of sample results relates to how similar the results are to the known value. Accuracy is measured through the use of reference materials:

- Certified Reference Material (“CRM” or Standards);
- Blanks – either from CRM source or made up at site from known waste material source from core at the mine site.

The precision of sample results is the measure of how closely the results can be repeated. Precision is measured by the use of duplicate and replicate assays:

- Field Duplicates (RC chip samples or Core splits);
- Coarse Reject Repeats;
- Pulp Reject Repeats;
- Umpire Lab checks

Figure 11-1 graphically illustrates how it is possible to have good accuracy without good precision, and good precision without good accuracy.

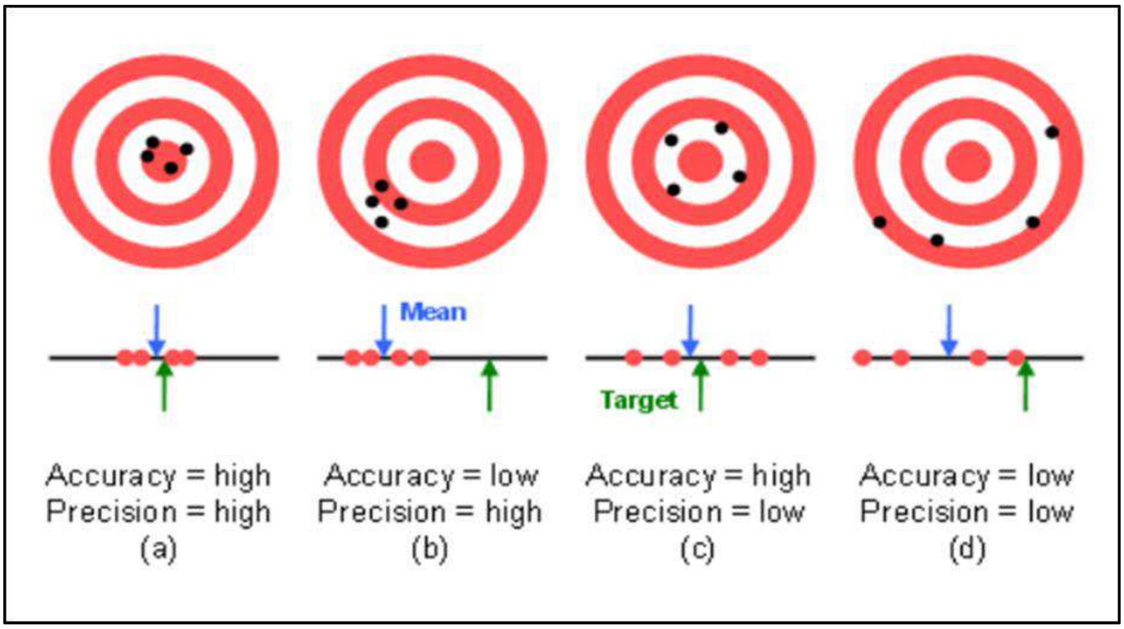


Figure 11-1 Accuracy and Precision Concept (Cube, 2017)

11.4.2. Normandy SA - QAQC Results

Records concerning the actions taken as a result of these checks are limited. Micon (2004b) reported that some 17 duplicates were included in the initial CE-1 to CE-11 batch of drill samples along with 10 analytical standards. Agreement between duplicate and original samples was reported to be reasonable. Standards were noted to have returned results within acceptable limits.

11.4.3. Aquiline - QAQC Results

Certified Reference Material (Standards and Blanks)

Cube has reviewed the supplied control assays for sample data for the period 2001 to 2006. A total of 35,988 samples containing 864 CRM at a 2.4% insertion rate, or at a rate of 1 CRM for every 41 samples.

The performances of the standards and blanks for ALS Mendoza are detailed in Table 11-4with QAQC plots located in Appendix 3.

Table 11-4: CRM Performance Summary for ALS Mendoza (Cube, as at 28/02/2018)

CRM ID	No. Samples	CRM Value (ppm)	SD	Accuracy Test	Precision Test	% Passing 3SD	% Bias	Period in Use
BG	428	0.00	0.05	PASS	PASS	99		2001-2006
GS10	129	0.82	0.045	PASS	FAIL	100	0	2003-2006
GS15	25	15.31	0.29	PASS	PASS	96	0	2006
GS1B	43	1.02	0.035	PASS	FAIL	98	-1	2005-2006
GS1C	5	0.99	0.04	PASS	PASS	100	2	2006

CRM ID	No. Samples	CRM Value (ppm)	SD	Accuracy Test	Precision Test	% Passing 3SD	% Bias	Period in Use
GS5	68	20.77	0.455	PASS	FAIL	85	4	2003-2006
GS5A	35	5.10	0.135	PASS	PASS	100	0	2005-2006
GS7	131	5.15	0.23	PASS	PASS	92	3	2003-2006
Total	**864**							

A summary of CRM Results and follow up actions are outlined below:

- BG (Blank) - Unknown source, 2 failed results reporting high;
- GS10 (0.82 ppm Au) – 5 misclassified SDs were removed; 2 re-classifieds added – re-graphed;
- GS15 (15.31 ppm Au) – 1 failed result identified reporting low;
- GS1B (1.02 ppm Au) – 2 misclassified SDs removed, 1 failed result identified reporting low;
- GS1C (0.99 ppm Au) – Re-graphed after reclassifying 5 SDs;
- GS5 (20.77 ppm Au) – 12 outliers removed - all reporting 10,000ppm upper limit method, 9 failed results - reporting high, 1 misclassified removed;
- GS5A (5.10 ppm Au) – 1 misclassified SD removed, 1 outlier removed; and
- GS7 (5.15 ppm Au) – 3 failed results identified, reporting high.

Although three CRM s failed the precision test, all CRMs passed the accuracy test for gold values. There were no silver standards used for the Aquiline drilling programs.

CRM misclassification listings are tabulated in Table 11-5 with 8 misclassified CRMs reclassified and re-graphed.

Table 11-5: CRM Misclassification Listing for Aquiline Drilling (Cube, as at 28/02/2018)

Hole ID	Sample ID	Au_ppm	CRM	Error Comment
AQI_156	12153	0.998	GS10	Could be GS1C
AQI_258	15672	1.07	GS10	Could be GS1C
AQI_361	33887	0.989	GS10	Could be GS1C
AQI_390	28397	0.992	GS10	Could be GS1C
AQI_422	53919	1.005	GS10	Could be GS1C
AQI_390	33525	0.804	GS1B	Could be GS10
AQI_442	62299	0.819	GS1B	Could be GS10
AQI_442	62299	0.819	GS1B	Could be GS10
AQI_118	10160	15.5	GS5	Could be GS15

The treatment of outlier results is summarised in Table 11-6 and summarised below:

- 14 outliers removed – possible swapped sample – check samples either side;
- 7 of these relate to the upper limit of Au method Au_AA24 – is there an alternative;
- Au value in method Au_GRA22 required further investigation follow up.

Table 11-6: CRM Outliers Removed Listing for Aquiline Drilling (Cube, as at 28/02/2018)

Hole ID	Sample ID	Au_ppm	CRM	Error Comment
AQI_219	18582	10	GS5	Check upper limit Au method or swap
AQI_219	23524	10	GS5	Check upper limit Au method or swap
AQI_262	15708	10	GS5	Check upper limit Au method or swap
AQI_264	15456	10	GS5	Check upper limit Au method or swap
AQI_276	20009	10	GS5	Check upper limit Au method or swap
AQI_384	33066	10	GS5	Check upper limit Au method or swap
AQI_136	10602	10	GS5	Check upper limit Au method or swap
AQI_176	13044	10	GS5	Check upper limit Au method or swap
AQI_194	13984	10	GS5	Check upper limit Au method or swap
AQI_197	14857	10	GS5	Check upper limit Au method or swap
AQI_233	18224	10	GS5	Check upper limit Au method or swap
AQI_238	14353	10	GS5	Check upper limit Au method or swap
AQI_405	53109	10	GS5A	Check upper limit Au method or swap
AQI_432	54693	4.27	GS5A	Reporting low check for swap

The failed CRMs for AQI Drilling are tabulated Table 11-7.

Table 11-7: CRM Failed Listing – Aquiline Drilling (Cube, as at 28/02/2018)

Hole ID	Sample ID	Au ppm	CRM ID	Lab ID	Lab job no	Error Comment
AQI_378	32843	14.4	GS15	ALS Mendoza	NA	Reporting low
AQI_418	28497	0.912	GS1B	ALS Mendoza	NA	Reporting low

Hole ID	Sample ID	Au ppm	CRM ID	Lab ID	Lab job no	Error Comment
AQI_257	15360	22.4	GS5	ALS Mendoza	NA	Reporting high
AQI_267	18718	25.1	GS5	ALS Mendoza	NA	Reporting high
AQI_271	18769	22.4	GS5	ALS Mendoza	NA	Reporting high
AQI_272	16185	23.3	GS5	ALS Mendoza	NA	Reporting high
AQI_277	20121	22.3	GS5	ALS Mendoza	NA	Reporting high
AQI_283	20510	23.4	GS5	ALS Mendoza	NA	Reporting high
AQI_287	23793	22.8	GS5	ALS Mendoza	NA	Reporting high
AQI_282	20433	5.88	GS7	ALS Mendoza	NA	Reporting high
AQI_282	20433	5.88	GS7	ALS Mendoza	NA	Reporting high
AQI_299	22404	5.92	GS7	ALS Mendoza	NA	Reporting high
AQI_425	54181	0.097	BG	ALS Mendoza	NA	Reporting high - check for swap
AQI_276	20059	0.077	BG	ALS Mendoza	NA	Reporting high - check for swap

Duplicates

The measurement of the relative precision error between paired duplicate sample data is based on the average coefficient of variation ("ACV"). Approximate guidelines for assessing analytical quality allows for a maximum ACV of around 40% for field duplicates in gold deposits with very coarse-grained nuggetty gold and 30% for coarse to medium grain gold.

A summary of the duplicate types inserted into the sample stream is summarised as follows:

- There were recorded 143 field duplicate checks on 24,035 RC samples (0.6% insertion rate) or at a rate of 1 in every 68 samples;
- There were recorded 76 quarter core duplicate samples from 11,953 DD core samples (0.6% insertion rate) or at a rate of 1 in every 157 samples;
- There were recorded 135 combined laboratories coarse and pulp duplicate samples from 35,988 core samples (0.4% insertion rate) or at a rate of 1 in every 266 samples.

A summary of the statistics relating to the duplicate sampling performances is outlined in Table 11-8.

The paired duplicate control charts for all duplicate types are listed in and Appendix 3.

Table 11-8: Duplicate Sample Performance Summary - ALS Chemex (Cube, as at 28/02/2018)

Description	Dup Type	# Sample	Period in Use	Duplicate Samples	Average Pair Mean Difference	ACV	10pc	20pc	50pc	Comments
Field Duplicate	RC	143	2003-04	50	-0.4	29.4	38	66	88	PASS
Quarter Core	DDH	76	2004	28	5.3	27	28.6	53.6	85.7	PASS

Description	Dup Type	# Sample	Period in Use	Duplicate Samples	Average Pair Mean Difference	ACV	10pc	20pc	50pc	Comments
Lab Pulp	RC & DDH	59	Unknown	69	-1.6	11.1	50	83.3	94.4	PASS
Lab Coarse Reject	RC & DDH	76	Unknown	12	15.2	**40.2**	26.1	52.2	78.3	FAIL (Abzalov*=25%)
Totals		**354**		**159**						

* Reference for Abzalov, 2006

The following points summarise the performance of the duplicates from the QAQC plots illustrated in Appendix 3:

- Duplicate assays for the RC field duplicates in the Aquiline drilling are within acceptable limits for Au with a correlation coefficient of 0.86% and an ACV of 29.4% for Au;
- For quarter core duplicates in the Aquiline drilling, the results fall within acceptable limits for Au with a correlation coefficient of 0.99% and an ACV of 27% for Au;
- For the pulp duplicate samples, the results fall within acceptable limits for Au with a correlation coefficient of 0.99% and an ACV of 11.1%; and
- For the lab coarse reject samples, the results failed, within acceptable limits for Au with a correlation coefficient of 0.83% and an ACV of 40.2%.

11.4.4. PAS Drilling - QAQC Results

Certified Reference Material

Cube has reviewed the supplied control assays for sample data for the PAS drilling carried out in 2011. A total of 542 samples containing 25 CRM at a 5% insertion rate, or at a rate of 1 CRM for every 21.5 samples was completed for the program.

The performance of the standards and blanks for ASA Laboratory is detailed Table 11-9, with plots of the 3 CRMs used illustrated in Figure 11-2 to Figure 11-4.

Comments on CRM Results:

- There are no records of where CRMs were sourced from;
- BG (Blank) – Source of the blanks is unknown;
- GS15A (14.83 ppm Au) – All CRMs failed; reported to possibly be either serious calibration issues with the analytical equipment in laboratory or possible compromised homogenous nature of CRM’s due to poor storage, ignored in tabulated data;
- GS5C (4.74 ppm Au) – 3 failed results - reporting low, although small number of samples to review, too many fails may indicate issues with laboratory equipment calibration or possible non-homogeneous sample due to poor storage.

Table 11-9: CRM Performance Summary for ASA Argentina (Cube, as at 28/02/2018)

Lab ID	CRM ID	# Sample	Cert Value (ppm)	SD	Accuracy Test	Precision Test	% Pass 3SD	% Bias	Period in Use
ASA - Argentina	BG	14	0	0	PASS	PASS	100	0	2011-2012
ASA - Argentina	GS15A	17	14.83	0.305	FAIL	FAIL	0	-14	2011-2012
Sub-Total (CRM)		**25**							

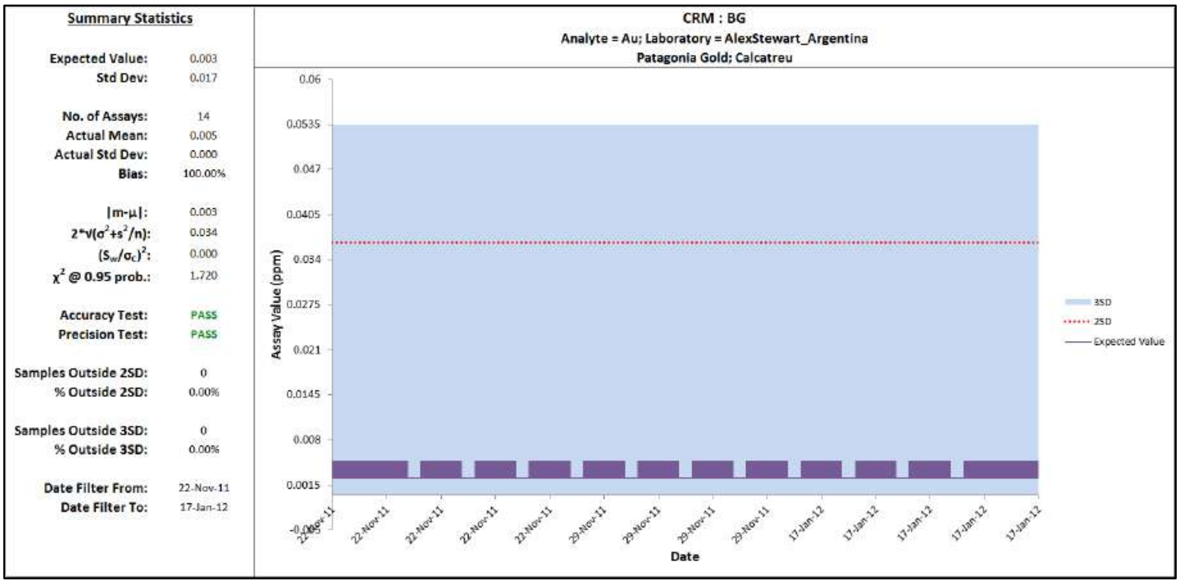


Figure 11-2 CRM: BG (Blank) – ASA Argentina (Cube, as at 28/02/2018)

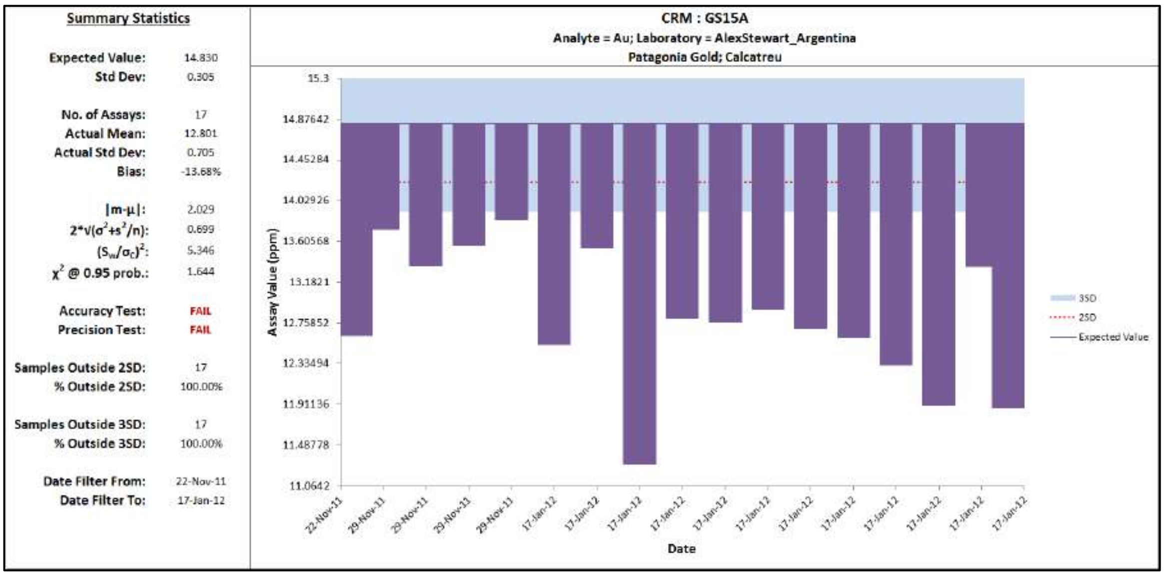


Figure 11-3 CRM: GS15A – ASA Argentina (Cube, as at 28/02/2018)

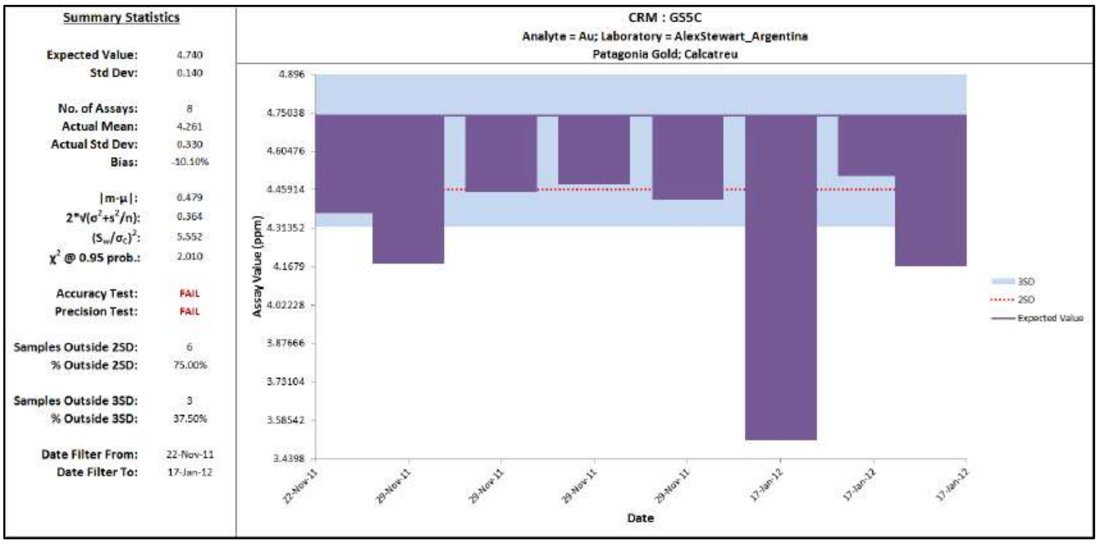


Figure 11-4 CRM: GS5C – ASA Argentina (Cube, as at 28/02/2018)

Table 11-10 lists the failed CRMs for the PAS Drilling. A total of 33 failed CRM was recorded. Cube has been unable to obtain information whether any of the batches with numerous fails per batch were automatically re-analysed.

Table 11-10: CRM Failed Listing – PAS Drilling (Cube, as at 28/02/2018)

Company	Hole ID	Sample ID	Au ppm	CRM ID	Lab ID	Lab Job No.	Error Comment
PAS	CCT11-631	84722	12.63	GS15A	ASA – Arg.	M113962	Reporting low
PAS	CCT11-641	84949	13.73	GS15A	ASA – Arg.	M113963	Reporting low
PAS	CCT11-635	84876	13.35	GS15A	ASA – Arg.	M113963	Reporting low
PAS	CCT11-634	84841	13.56	GS15A	ASA – Arg.	M113963	Reporting low
PAS	CCT11-637	84913	13.82	GS15A	ASA – Arg.	M113963	Reporting low
PAS	CCT11-644	85007	12.53	GS15A	ASA – Arg.	M114785	Reporting low
PAS	CCT11-645	85031	13.53	GS15A	ASA – Arg.	M114785	Reporting low
PAS	CCT11-642	84979	11.29	GS15A	ASA – Arg.	M114785	Reporting low
PAS	CCT11-643	84993	12.8	GS15A	ASA – Arg.	M114785	Reporting low
PAS	CCT11-650	85117	12.76	GS15A	ASA – Arg.	M114786	Reporting low
PAS	CCT11-648	85083	12.89	GS15A	ASA – Arg.	M114786	Reporting low
PAS	CCT11-647	85065	12.7	GS15A	ASA – Arg.	M114786	Reporting low
PAS	CCT11-649	85091	12.6	GS15A	ASA – Arg.	M114786	Reporting low
PAS	CCT11-652	85162	12.32	GS15A	ASA – Arg.	M114787	Reporting low
PAS	CCT11-656	85174	11.9	GS15A	ASA – Arg.	M114787	Reporting low
PAS	CCT11-658	85198	13.34	GS15A	ASA – Arg.	M114787	Reporting low
PAS	CCT11-659	85224	11.87	GS15A	ASA – Arg.	M114787	Reporting low
PAS	CCT11-639	84933	4.18	GS5C	ASA – Arg.	M113963	Reporting low
PAS	CCT11-651	85132	3.51	GS5C	ASA – Arg.	M114786	Reporting low
PAS	CCT11-657	85186	4.17	GS5C	ASA – Arg.	M114787	Reporting low

11.4.5. PGD Drilling - QAQC Results

Summary

The QAQC information summarised for 2018, covers the 2018 drilling program conducted at Calcatreu.

A total of 25 sample batches, for a total of 2,167 samples were sent to ASA in Mendoza. Table 11-11summarises the QAQC sample types, number of samples and sampling ratio.

Table 11-11: QAQC Summary – PGD Drilling (PGD, 2018)

QAQC Samples	Quantity	Ratio QAQC
Batches	25	-
Drill Samples	2167	-
RC Samples	0	-
STD	111	1:20
Blank	144	1:15
Blank	144	1:15
Duplicates - pulps	0	-
Duplicates - Coarse	0	-
Check Assay - Umpire lab	0	-

CRMs which were purchased from Geostats Pty Ltd, based at Western Australia. Blank samples were sourced from amygdaloidal olivine basalt outcrops of Quaternary age located at several kilometres from Calcatreu alone Ruta 73. PGD sent eight samples for gold and silver analysis to ASA in Mendoza with all samples reporting below gold and silver detection limits.

The average sample length of the half HQ core was 1.3 m, with approximate average weight per metre being 3.4 kg. The laboratory reported the average weight of all samples analysed prior to splitting and pulverising was 4.45 kg.

A description of the QAQC analysis is summarised in Table 11-12 and ratios of QAQC samples to overall drill samples for resource drilling is summarised in Figure 11-5.

Table 11-12: Summary Statistics for QAQC Samples for 2018 Drilling

STD	QAQC Samples Sent	QAQC Samples Analysed	% Analysed	Bad Results	% Bad Results
Totals Standard	111	111	100%	0	0%
Totals Blank	144	144	100%	0	0%
Totals Duplicates	0	0	0%	0	0%
TOTAL	**255**	**255**	**100%**	**0**	**0%**

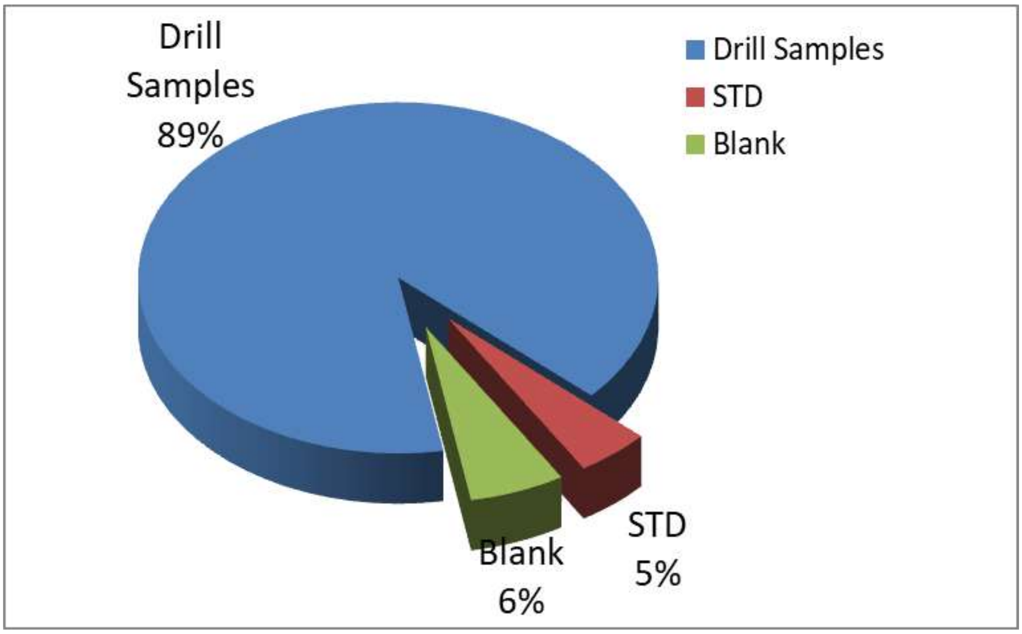


Figure 11-5 QAQC Category Ratio for the 2018 Drilling Program (PGD, 2018)

Certified Reference Material (Standards)

PGD provided Cube with all the certificates for the CRMs which were purchased from Geostats Pty Ltd, based at Western Australia.

There were nine CRMs in use for the 2018 drilling program, for a total of 111 CRMs with Au ppm ranges between 0.41 ppm Au and 6.75 ppm Au. Figure 11-6 shows a breakdown of the percentage of CRM samples analysed for each CRM value.

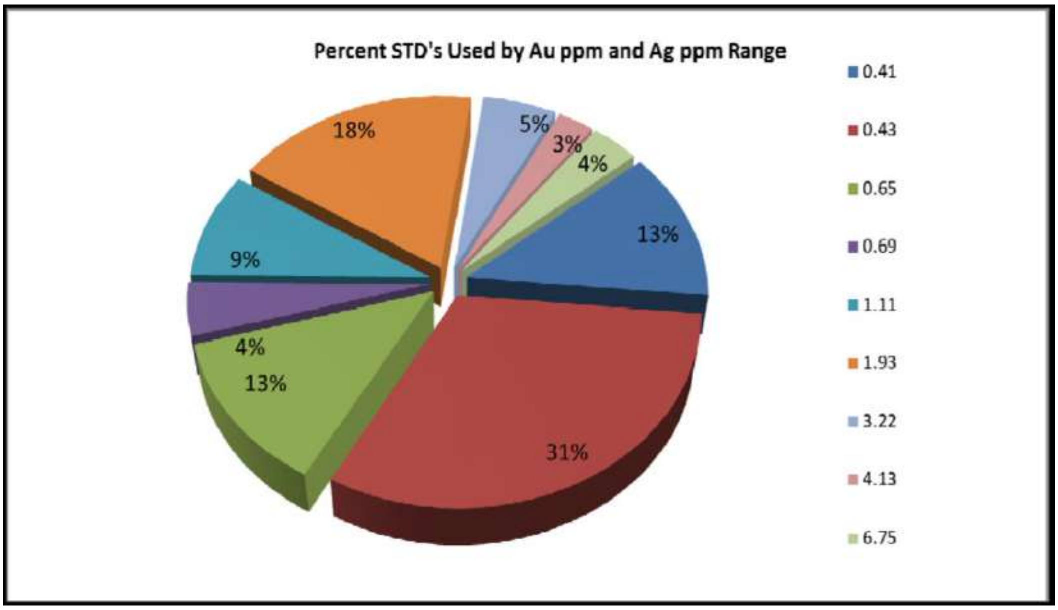


Figure 11-6 CRM Value Ranges (Au ppm) for Submissions to ASA, Mendoza (PGD, 2018)

A listing and summary of performances of all CRMs used are detailed in Table 11-13.

Table 11-13: Listing of CRMs Used for 2018 Drilling Program

CRM ID	Expected Vale (g/t Au)	Sent STD	Analysed STD	% Analysed	Bad STDs	% Bad STDs
G306-1	0.41	14	14	100%	0	0%
G308-2	1.11	10	10	100%	0	0%
G310-4	0.43	35	35	100%	0	0%
G310-6	0.65	14	14	100%	0	0%
G900-7	3.22	6	6	100%	0	0%
G901-9	0.69	5	5	100%	0	0%
G903-6	4.13	3	3	100%	0	0%
G905-10	6.75	4	4	100%	0	0%
G906-4	1.93	20	20	100%	0	0%

The performances of the CRM for ASA are shown in the selected QAQC plots for specific expected grades in Figure 11-7 to Figure 11-12.

In Summary:

- 6 CRM samples with gold values between 0.41 and 3.22 g/t Au contained sufficient results to make reasonable assessment of the lab performance;
- 100% of the results of the CRM were within the acceptance parameters expected by PGD;
- No silver CRMs were submitted for the 2018 drilling program;
- The results indicate assaying was carried out within acceptable limits for gold for the small data set.

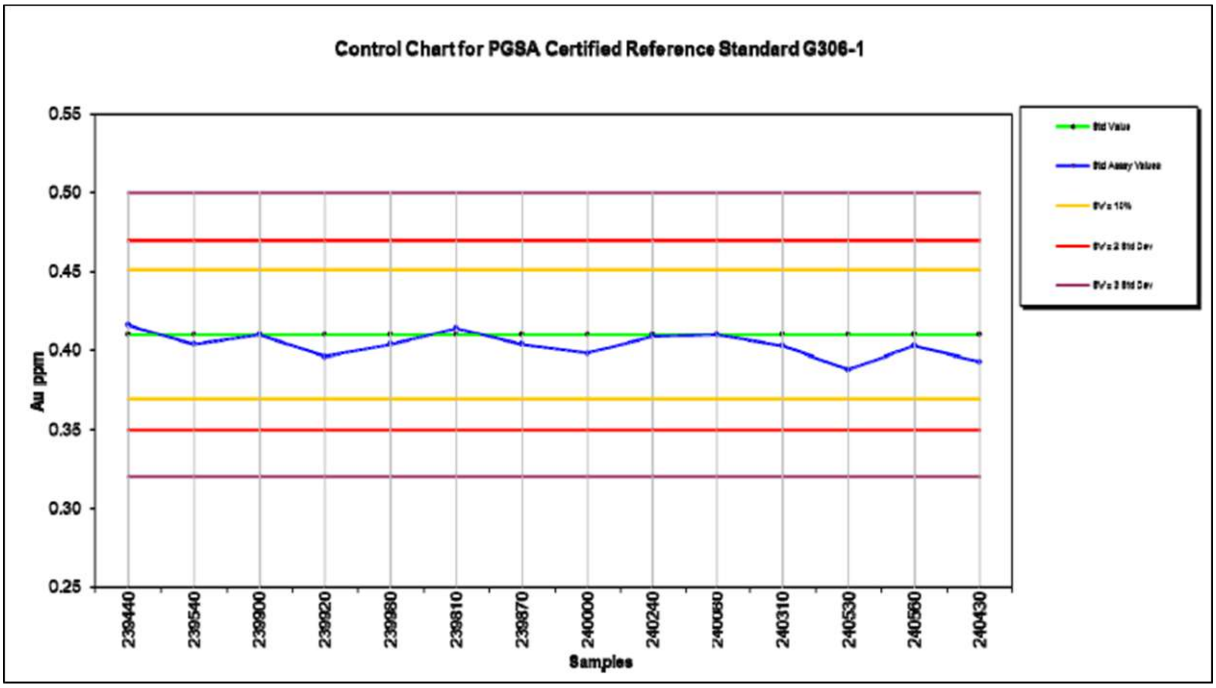


Figure 11-7 CRM Performance for G306-1 (0.41 g/t Au) for ASA (PGD, 2018)

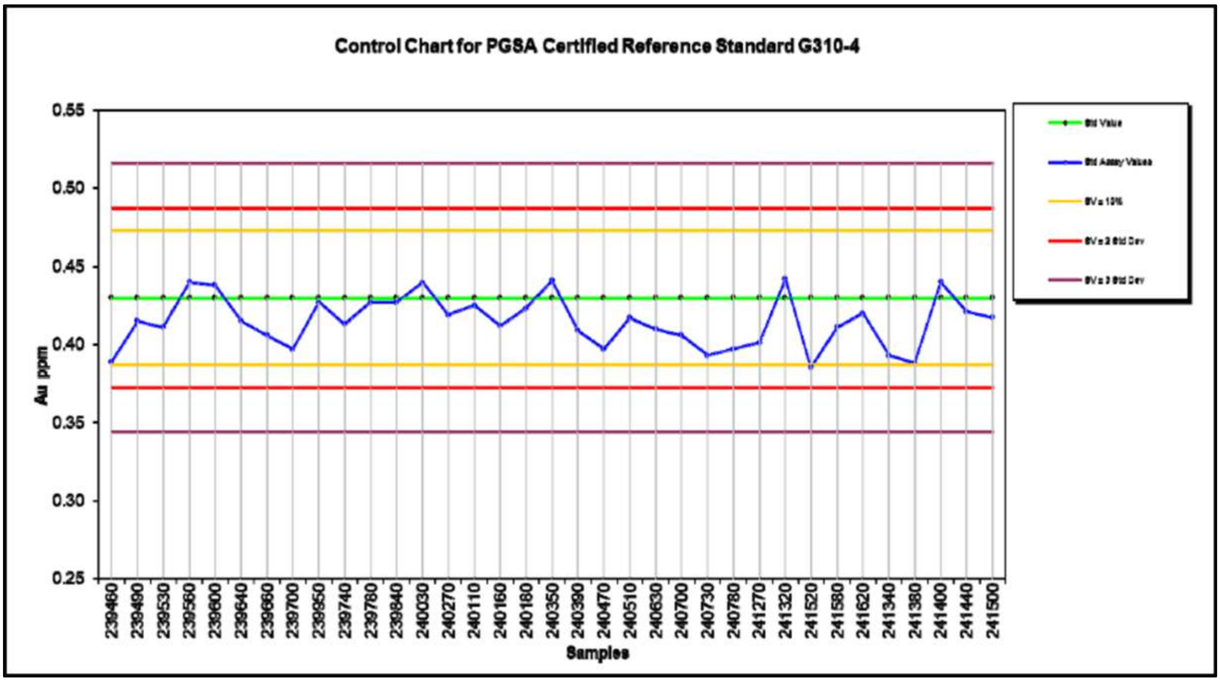


Figure 11-8 CRM Performance for G310-4 (0.43 g/t Au) for ASA (PGD, 2018)

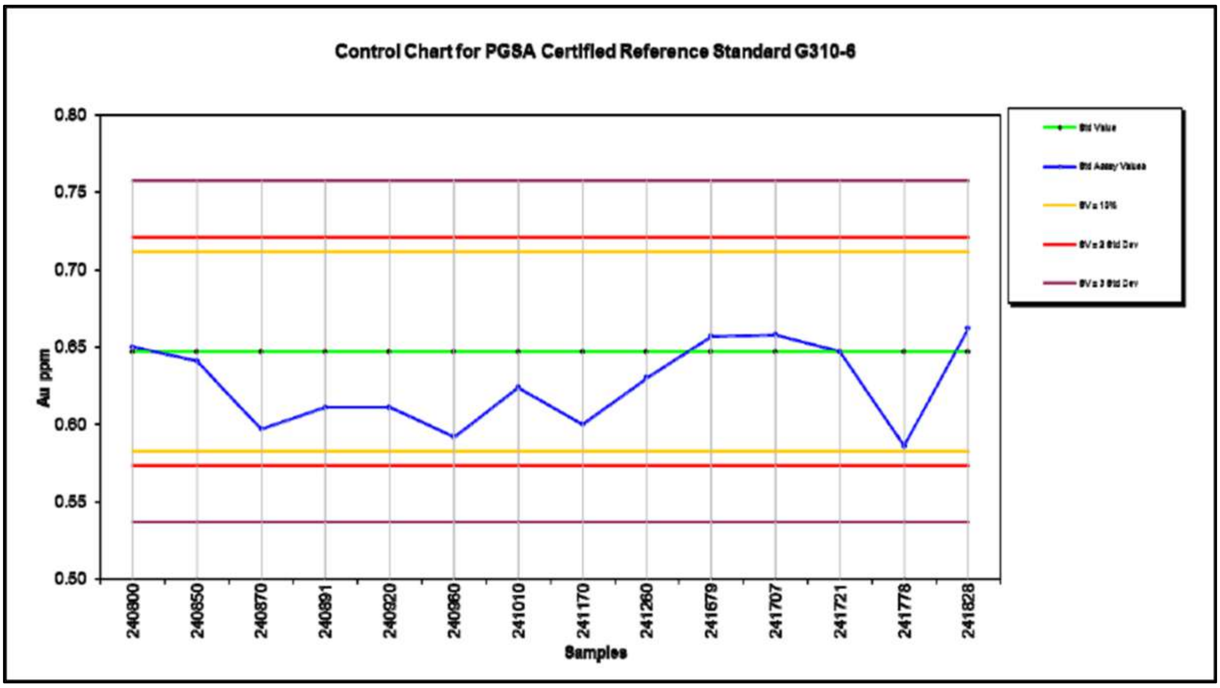


Figure 11-9 CRM Performance for G310-6 (0.65 g/t Au) for ASA (PGD, 2018)

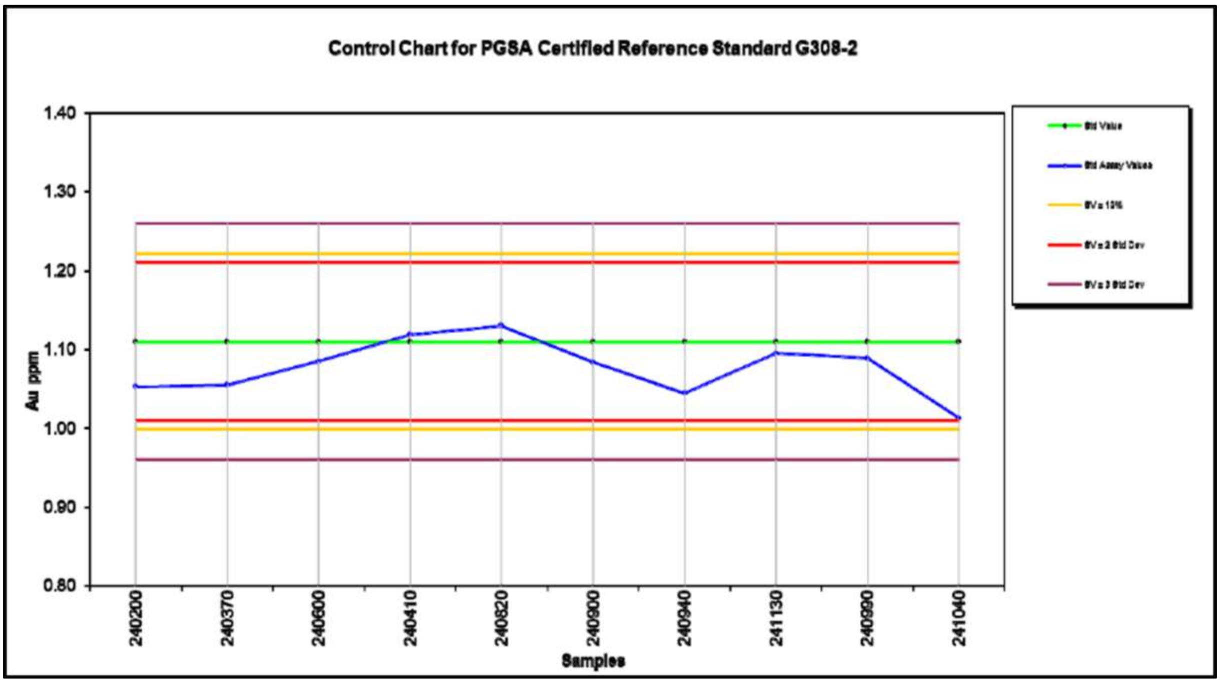


Figure 11-10 CRM Performance for G308-2 (1.11 g/t Au) for ASA (PGD, 2018)

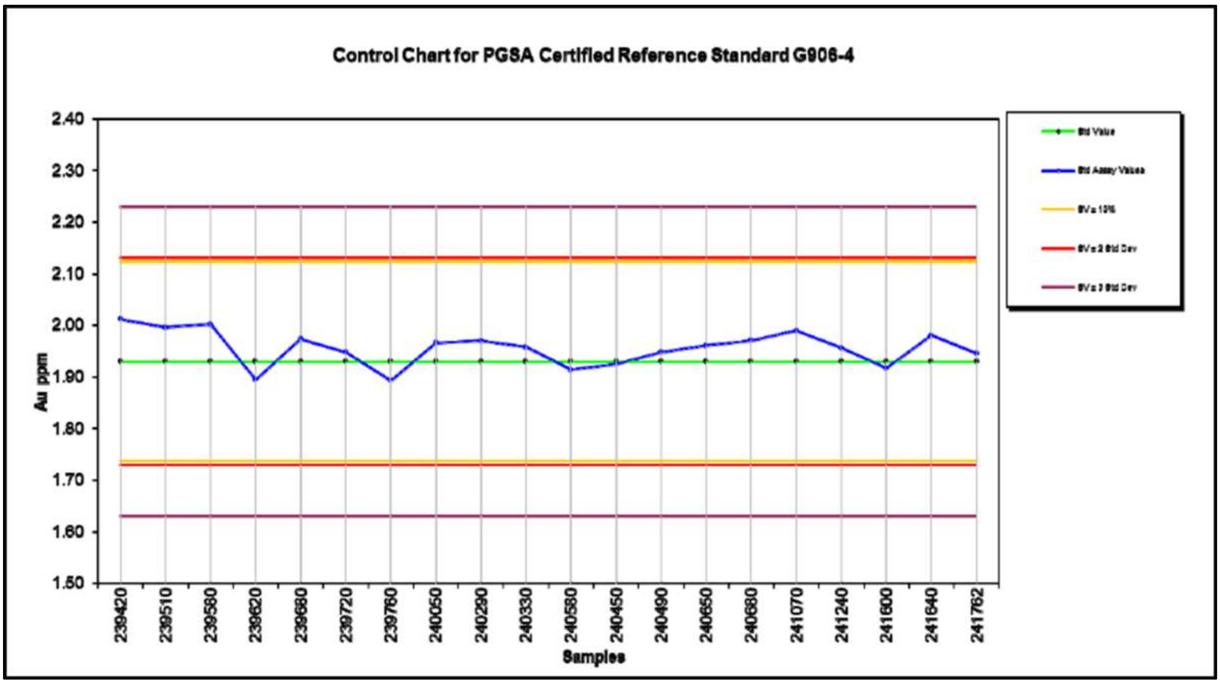


Figure 11-11 CRM Performance for G906-4 (1.93 g/t Au) for ASA (PGD, 2018)

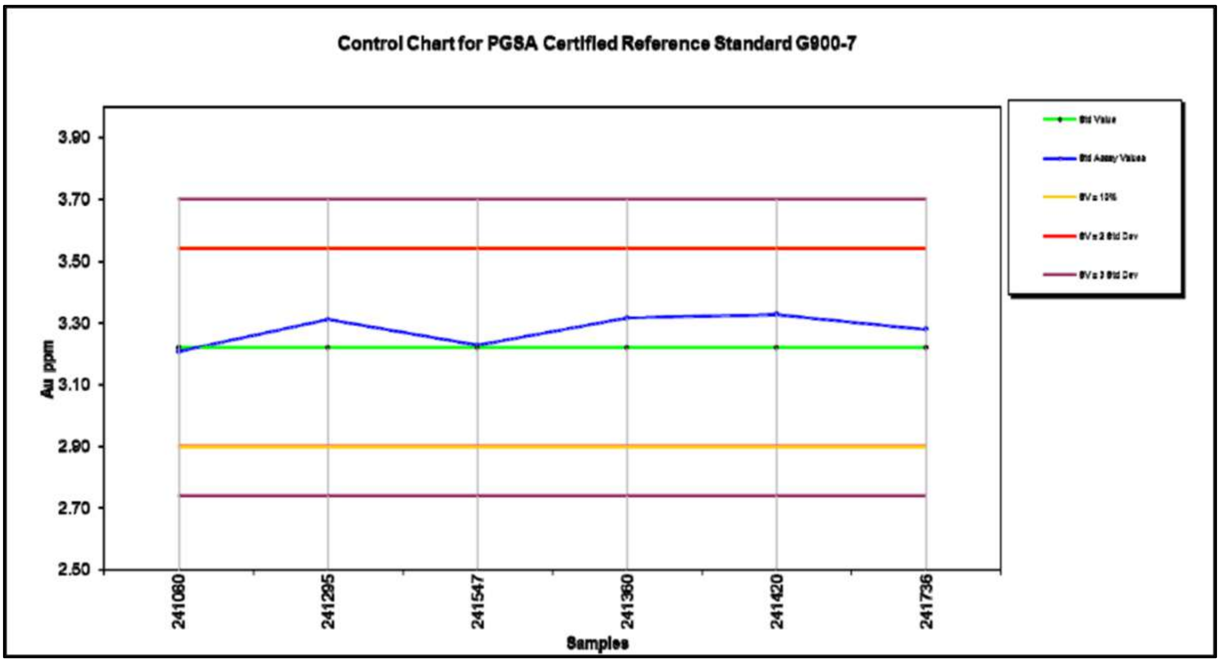


Figure 11-12 CRM Performance for G900-7 (3.22 g/t Au) for ASA (PGD, 2018)

Blanks

Two blanks were used for the 2018 QAQC work – a CRM blank purchased from Geostats Pty Ltd, based at Western Australia; the other blank (AQBLK) was made by PGD geologists from of basalt rock sourced from nearby outcrops in the Crater Formation. These samples were collected using PGD QAQC protocols for internal standards that ensure the samples sterility.

A listing and summary of performances of all CRMs used are detailed in Table 11-14.

Table 11-14: Listing of Blanks Used for 2018 Drilling Program

Blank ID	Expected Vale (g/t Au)	Expected Value (g/t Ag)	Sent BLK	Analysed BLK	% analysed	Analysed BLK	% analysed
GLG307-1	>0.1	NA	69	69	100%	0	0%
AQBLK	>0.1	>5	75	75	100%	0	0%

The performances of the blanks for ASA are shown in the selected QAQC plots for specific expected grades in Figure 11-13 to Figure 11-14.

In Summary:

- 6% of the total samples assayed for the 2018 program were blanks and, in all cases, they verified that there was no contamination of preparation and analysis;
- The PGD sourced blank (AQBLK), was assayed for both gold and silver;
- This small data set shows that there was no evidence of contamination in the sample preparation and analysis at ASA, although the drilling program results showed only a small number of significant grade intersections within the prospects tested.

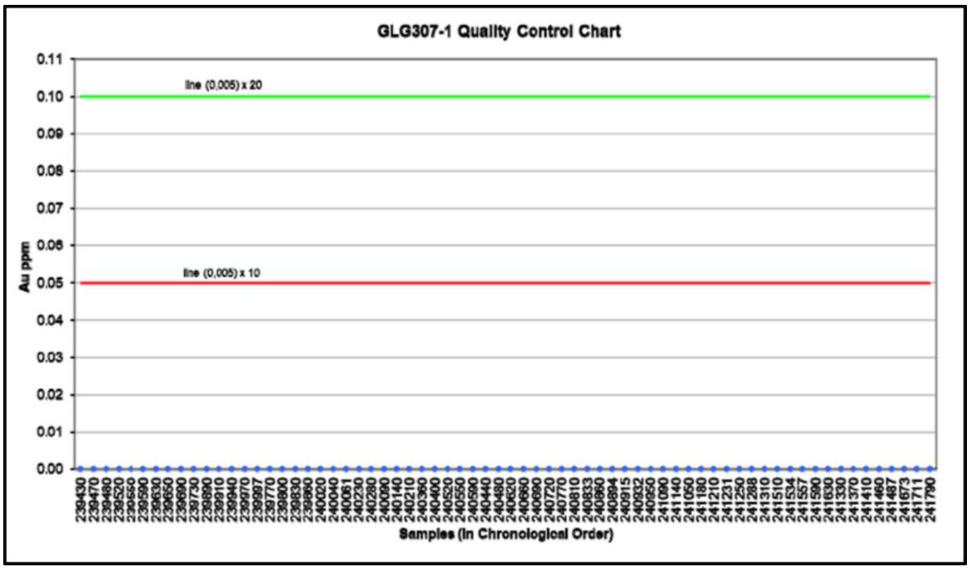


Figure 11-13 Blanks Performance for GLG307-1 (<0.1 g/t Au) for ASA (PGD, 2018)

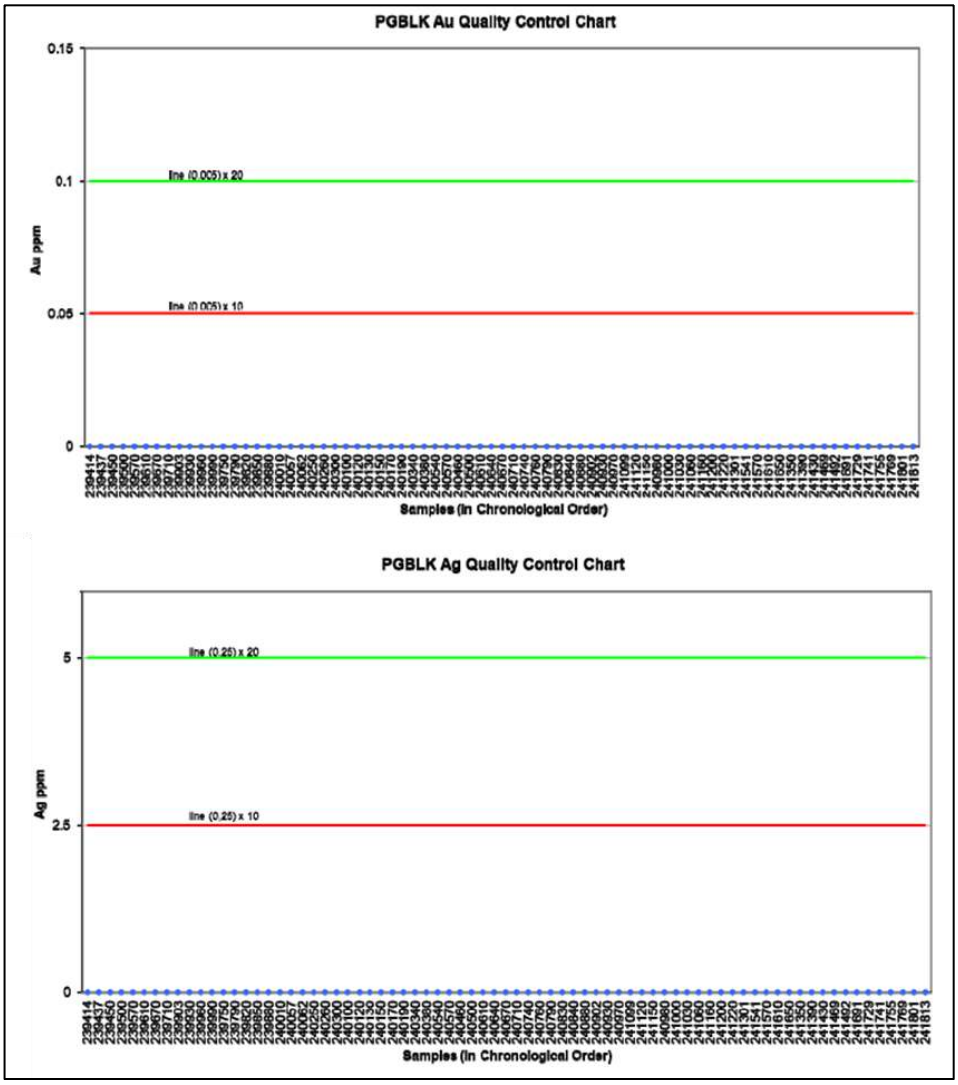


Figure 11-14 Blanks Performance for PGBLK (0.1 g/t Au; 5 g/t Ag) for ASA (PGD, 2018)

11.4.6. QAQC Summary and Recommendations

The following summary highlights the issues found during the QAQC reviews;

- For the Aquiline drilling programs, the performance of the CRMs, and duplicates was within acceptable limits;
- Aquiline failed to incorporate Ag CRM standards into the sampling stream, and the amount of duplicate sampling was very limited, unless there was missing duplicate samples that Cube did not receive for the QAQC review;
- The PAS drilling program included only 30 holes for 2,932 m of drilling, but contained only very limited QAQC information regarding QAQC protocols and no duplicate information for the Cube review; and
- QAQC performance for the PAS drilling program with CRMS shows significant concerns with regard to both precision and accuracy and implies some bias in the results.
- No QAQC data was available for review for the PGD 2017 drilling program;
- For the 2018 drilling program, the results showed that all of the control samples were within the acceptance parameter, and comply with the aims of accuracy but not precision;
- PGD did not incorporate Ag CRM standards into the sampling stream; and
- PGD did not conduct duplicate sampling checks for the 2018 program, including pulp rejects and repeat assaying, coarse reject assaying at the principal or umpire laboratories.

The following general recommendations are summarised below:

- Incorporate duplicate sampling into the QAQC protocols. Duplicate sampling includes – pulp and coarse laboratory rejects, pulp repeats, and check assaying at umpire laboratories;
- It is generally accepted that an insertion rate for duplicate samples should be in the order of 10%, and it is therefore recommended that duplicate sampling should be included to allow for more definitive analysis of the precision data in any future drilling programs;
- Cube also suggests looking at PAL or LEACHWELL analysis for future sampling campaigns – for this analysis a larger sample can be prepared and analysed without compositing the sample to avoid any dilution of grade and to ensure an impartial comparison by method;
- Cube also suggests implementing screen fire assay ("SFA") checks for future sampling campaigns covering the main zones of gold and silver mineralisation (Vein 49, Nelson) to assess the amount of coarse and fine gold and silver present, and check against the routine analysis conducted for duplicate samples;
- Regular wet screening and grind size analysis should be performed and monitored on a routine basis to provide complete quality monitoring of all laboratory processes and compliance with assay contracts. The recommended minimum rate of checking grind size is one in every 20-30 samples depending upon the established laboratory procedure. Grind checks are normally reported with every batch. The standard pulp size should be sufficient for 90% of the pulp passing through a 75-micron sieve; and
- Incorporate certified Ag standards to be inserted into the sample stream to enable analysis of standard performance for Ag as well as Au.

Cube did not inspect the principal assay laboratory during the site visit. Future drilling programs should include laboratory inspections and ongoing liaison with the laboratories to track QAQC performance.

11.5. Sample Security

Drilling and sampling were carried out in a remote, sparsely populated region. The project site is 45 km along an un-sealed road to the south of Ingeniero Jacobacci, so any unauthorised access is difficult. RC samples and DD core are securely stored and transported by company personnel from drill sites at Calcatreu back to the field office in Ingeniero Jacobacci. Whole core and half core samples were prepared for transportation to the assay laboratories by company employees in the dedicated field office and secure core yard and sample preparation facility at Ingeniero Jacobacci.

Samples were transported from the Ingeniero Jacobacci field office by courier truck, under supervision of independent personnel, to the ASA laboratories in Mendoza and as such the risk of sample tampering is low.

11.6. Primary Data Storage

Geological and geotechnical logging and all analytical results and quality control reports from recent Calcatreu drilling are stored digitally within the clients' database. Hard copies of the more recent drilling data including logging, drill plods, mapping, downhole surveys (where non-digital capture systems are used) and reports are kept at the Ingeniero Jacobacci site office.

DD core storage facilities are adequate with core stored in several sheds (Figure 11-15). RC chip trays of Aquiline drilling are stored at the site office. QAQC samples such as coarse rejects, fines and pulps are also partially stored in the site office and in the principal laboratory in Mendoza.

Electronic data is stored in the PGD database, managed by a database administrator in Esquel, Argentina.

Figure 11-15: Core Storage Facilities at PGD Office at Ing. Jacobacci (Cube Site Visit, March 2019)

11.7. Principal Authors Statement

Following the author's site visit review of the sampling protocols, chain of custody and security, and laboratory sample preparation and analytical methods, the following conclusions have been made:

- Samples are stored prior to transportation to the laboratory by PGD employees in the dedicated field office and secure sample preparation facility, with minimal risk of sample tampering;
- The chain of custody is supported by the PGD site staff sample logbook and sample reports from the laboratories;
- Samples were transported from the Ingeniero Jacobacci field office by courier truck, under supervision of independent personnel, to the ASA laboratories in Mendoza and as such the risk of sample tampering is low;
- The nature, quality and appropriateness of the laboratory sample preparation protocols is considered suitable for grain sizes of the material expected and is consistent with industry standard practice;
- The appropriateness of the assaying and laboratory methods is considered a total measure of gold and silver for the Calcatreu Project.

In summary, the sampling practises and analytical methods used are adequate for and consistent with the Principal Author's understanding of the style of gold and silver mineralisation targeted by PGD at Calcatreu.

12. Data Verification

12.1. Summary

Data verification has been carried out by the Principal Author and QP of this report - Brian Fitzpatrick (Principal Consultant – Cube Consulting) during the site visit from 14 to 17 March 2019. The 2019 site visit included the following activities:

- The site visit included inspection of current diamond drilling and sampling activities and facilities, and inspection of the sample dispatch and security at the site sampling and storage facilities;
- Examination of DD core and core logging activities on site – nature and quality of geological and geotechnical logging carried out, discussions with the on-site geologists regarding the current understanding of the nature of the host rocks and controls on the gold mineralisation;
- Inspection of outcrops, inspected the general topographic conditions in the area of the Project;
- Confirmation of location of selected hole collars in the field, and in relation to the supplied topographic surface digital terrain model;
- The lithologies, structure, alteration, and mineralisation in selected intervals of drill core were examined and compared with the descriptions presented in the drill hole logs; and
- Discussions with PGD geological staff regarding drilling and sampling methods, QAQC protocols and recommendations, and geology and mineralisation controls.

12.2. Database Validation

Data was validated utilising visual review of digital and paper files, as well as computer- aided checking systems. Validation included review of core samples from previous drilling by Aquiline and PAS, and interrogation of digital and paper data, including paper plans and sections, assay records, downhole survey records and hardcopy geology logs.

Validation checks included the following work:

- Check for Hole collar outliers for Easting, Northing, and RL;
- Any discrepancies in maximum hole depths between collar, assay, survey and geology records;
- Checks for duplicate numbering, missing data, and interval error checks using validation rules in MS Excel before importing records into MS Access;
- The survey table drill hole azimuths were checked and verified to be within the 0° to 360° expected range;
- The survey table was checked for any positive or near zero drill hole inclinations;
- The assay table was checked for overlaps of assay sample intervals;
- The assay table was checked for negative assays, missing assays, assays outside of expected ranges or evidence of smearing;
- The significant mineralised intervals were checked for un-sampled intervals close to the mineralised margins and within the mineralised zones;

- Checking drill holes using visual inspection of the drill holes in Surpac 3D workspace to identify inconsistencies of drill hole traces (un-natural hole deviations); and
- Checking in Surpac 3D workspace of drill hole collar positions to the topography.

Cube completed the data validation checks prior to exploratory data analysis for Mineral Resource estimation. The drilling data was found to be well structured and no obvious material discrepancies were detected in the collar, survey, assay or geology data. All relevant database validation queries and any adjustments to data by Cube are listed in Table 12-1 to Table 12-3.

A few queries and minor issues were noted and forwarded to PGD for review and feedback. All issues were adequately explained and did not have any material effect on the MRE.

Table 12-1: Cube Drill hole Collar Validation Listing (Cube, as at 28/02/2018)

Hole ID	Validation Query	Action
AQI_333	Design Collar Azi minor variance from DHS readings	Not changed, not material to MRE
AQI_439	Design Collar Azi variance from DHS readings	Not changed, not material to MRE
CCT11_635 to CCT11_642	Design Collar Azi variance from DHS readings	Amended Azi to 9m reading
CCT11_644 to CCT11_656	Design Collar Azi variance from DHS readings	Amended Azi to 9m reading
CCT11_656	EOH depth past Collar EOH depth	EOH depth amended to collar EOH depth
CCT11_657 to CCT11_659	Design Collar Azi variance from DHS readings	Amended Azi to 9m reading
BELEN_1 to BELEN_2	Trench - dip reading errors	Amended Dips to match topo surface
BELEN_10	Trench - dip reading errors	Amended Dips to match topo surface
BELEN_12	Trench - dip reading errors	Amended Dips to match topo surface
BELEN_16	Trench - dip reading errors	Amended Dips to match topo surface
TR_21	Trench - dip reading errors	Amended Dips to match topo surface
TR_24 to TR_25	Trench - dip reading errors	Amended Dips to match topo surface
TR_31 to TR_32	Trench - dip reading errors	Amended Dips to match topo surface
TR_44	Trench - dip reading errors	Amended Dips to match topo surface
TR_71	Trench - dip reading errors	Amended Dips to match topo surface
TR_75	Trench - dip reading errors	Amended Dips to match topo surface

Table 12-2: Cube Drill hole Assay Data Validation Listing (Cube, as at 28/02/2018)

Hole ID	Validation Query	Action
AQI_280	Duplicate sample IDs with AQI_351 (#20400 to 20409)	Assay results differ, no action taken
AQI_351	Duplicate sample IDs with AQI_280 (#20400 to 20409)	Assay results differ, no action taken
AQI_275	No Sample Data	Ignored in MRE
AQI_304 to AQI_313	No Sample Data	Ignored in MRE
AQI_318 to AQI_331	No Sample Data	Ignored in MRE

Hole ID	Validation Query	Action
AQI_342	No Sample Data	Ignored in MRE
AQI_345 to AQI_349	No Sample Data	Ignored in MRE
CCT11_638	No Sample Data	Ignored in MRE
CCT11_640	No Sample Data	Ignored in MRE
CCT11_633	Sample gap (1m from 38m)	Coded as -2 (null in MRE)
CCT11_633 to CCT11_635	Sample gaps	Un-sampled intervals - null in MRE
CCT11_649	Sample gaps	Un-sampled intervals - null in MRE
CCT11_656	Sample gaps (8.75m)	Coded as -2 (null in MRE)
CCT11_653	No Sample Data	Metallurgical hole
CCT11_654	No Sample Data	Metallurgical hole
CCT11_655	No Sample Data	Metallurgical hole
CT_2 to CT_5	No Sample Data	Trenches - not used in MRE
CT_9, CT_20	No Sample Data	Trenches - not used in MRE
GWP_01 to GWP_02	No Sample Data	Ignored in MRE
GWP_05, GWP_08	No Sample Data	Ignored in MRE
GWP_10, GWP_12	No Sample Data	Ignored in MRE
GWP_14 to GWP_16	No Sample Data	Ignored in MRE
GWP_19, GWP_21	No Sample Data	Ignored in MRE
GWP_24 to GWP_27	No Sample Data	Ignored in MRE
MARIANO_1	No Sample Data	Trenches - not used in MRE
MFW_2	No Sample Data	Trenches - not used in MRE
NBN_1	No Sample Data	Trenches - not used in MRE
NEL_E10	No Sample Data	Trenches - not used in MRE
NL_1	No Sample Data	Trenches - not used in MRE
PUESTO_3	No Sample Data	Trenches - not used in MRE
PW_20, PW_23	No Sample Data	Trenches - not used in MRE
SCAP_5	No Sample Data	Trenches - not used in MRE
TR_84	No Sample Data	Trenches - not used in MRE
TRINI_1	No Sample Data	Trenches - not used in MRE
VDA_1	No Sample Data	Trenches - not used in MRE

Table 12-3: Cube Drill hole Geology Data Validation Listing (Cube, as at 28/02/2018)

Hole ID	Validation Query	Action
CCT11_654	Depth Overlap from 9.0m	Amended Depth From to 9.75m
38_1	No logging record	Coded as NL
42_5	No logging record	Coded as NL
GWP_19	No logging record	Coded as NL
NBN_1	No logging record	Trench - Not in MRE region
NL_1	No logging record	Trench - Not in MRE region
PW_23	No logging record	Trench - Not in MRE region
TRINI_1	No logging record	Trench - Not in MRE region
VDA_1	No logging record	Trench - Not in MRE region

12.3. Data Verification

Data verification during the Cube site visit included the following:

- Confirmation of location of collars in the field and in relation to the supplied topographic surface digital terrain model;
- Review of downhole survey information – original camera shots and digital printouts;
- Review of original assay certificates to confirm assay data in the drilling database used for the 2018 MRE;
- Review of available drill hole geology logging, both hardcopy and electronic logging files; and
- Check logging of half core from available DD core at the PGD field office.

12.3.1. Drill Hole Collar Surveys

The surface terrain where most of the Calcatreu Project drilling has occurred is mostly on flat ridges and hill slopes, with generally good access to drill sites.

Surface topography for the Vein 49 and Nelson area was provided as elevations on a 2m by 2m grid in DXF file format (Figure 12-1 and Figure 12-2). A topographic surface in DXF file format for Castro Sur was also provided but the source of the information is unclear at present. A review of the data showed that there were no significant variations between the surveyed collar positions and the supplied topographic surface digital terrain model (“DTM”).

The drill hole collar verification also included the physical re-checking (using hand held GPS provided by PGD) of field locations of several drill collars. No errors could be detected in the collar locations using a hand-held GPS with +/- 5m estimated position error.

The topography models are considered to be adequate for the purposes of Mineral Resource estimation, evaluation and reporting.

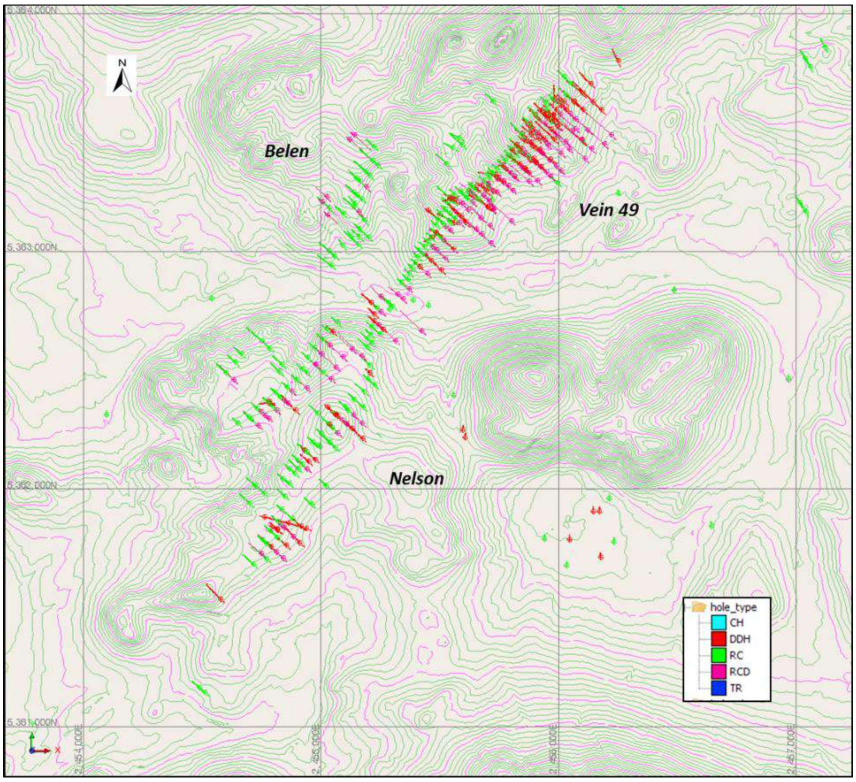


Figure 12-1: Vein 49/ Nelson – Plan View of Surface Topography Contour Overlay with All Drilling (Cube, 2018)

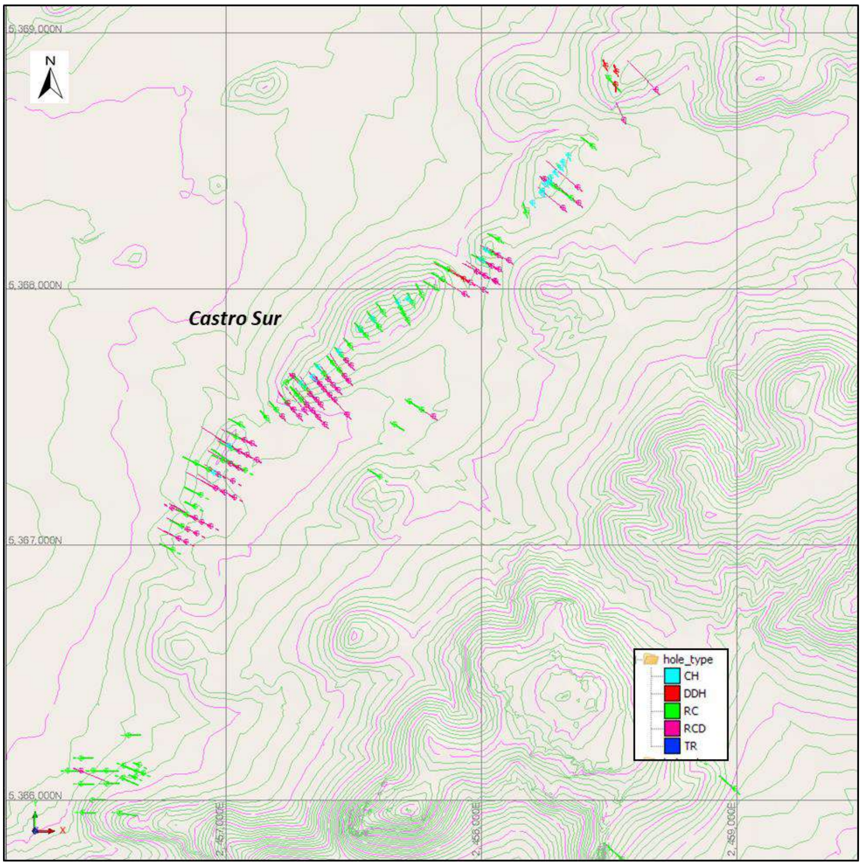


Figure 12-2: Castro Sur – Plan View of Surface Topography Contour Overlay with Drilling (Cube, 2018)

12.3.2. Downhole Surveys

Downhole surveys have been checked against original contract drillers or surveyors electronic survey data files, or transcribed information on the drill hole logs or summary sheets. As part of the validation work, Cube checked drill hole traces visually using Surpac to ensure there were no un-natural deviations.

Several corrections were made by Cube for the PAS holes as the planned collar surveys all had some significant azimuth variance (~10°) from the downhole camera reading recorded. It is unclear why this consistent error in the azimuth reading occurred.

The downhole survey method was recorded for all holes with downhole survey records. Most readings were recorded as compass ('brujula') readings (75%) of all downhole survey records. A total of 321 surveys were completed using a Sperry Sun or RELEX single shot downhole survey tool for Aquiline and PAS drilling. For the recent drilling by PGD a digital, single shot, FLEXIT down hole survey tool was used.

12.3.3. Assay Data

Cube reviewed the sample collection, submission, and data entry protocols on the site visit to the Ingeniero Jacobacci office as part of the data verification process. Cube verified supplied electronic drill hole data with hard copy drill hole logs and assay certificates and is satisfied the supplied PGD data to be acceptable for Mineral Resource estimation.

Cube verified selected intercepts within the mineralised domains using downhole compositing calculations in Surpac checked against calculations in MS Excel using the assay records for significant intersection zones.

For previous drilling completed by Aquiline, it was noted that sampling criteria was variable from regular (1 m intervals), to intervals controlled by geology. PAS drilling was generally sampled wider for intervals, mostly between 1.5-2.0 m lengths. It remains unclear the reasons for such wide intervals during sampling of PAS twin holes, but in several cases wider sampling intervals were required in zones of highly fractured core or where poor recovery occurred.

Cube has not undertaken independent sampling of material from the Calcatreu mineralised zones.

12.4. Hole Twinning Analysis

12.4.1. PAS Drilling Campaign (2011)

A total of 26 PQ diameter DD twin holes were drilled by PAS in 2011 to verify the previous Aquiline drilling data by testing the repeatability of the high-grade intersections, and to assess the grade variability.

The location of all the twin holes are spatially representative as shown in Figure 12-3 with site photos showing proximity of twin holes shown in Figure 12-4 and Figure 12-5. Appendix 3 contains the co-ordinate information detailing the proximity of the holes and separation distances calculated from the surface collar positions.

In all, there were 26 twin hole locations made up of 14 DD drilling intersections and 12 RC drilling intersections (all drilled by Aquiline), which PAS targeted for twin hole DD drilling. Most of the twin holes were drilled into the Vein 49 Prospect (22 holes), with 4 holes drilled in Nelson.

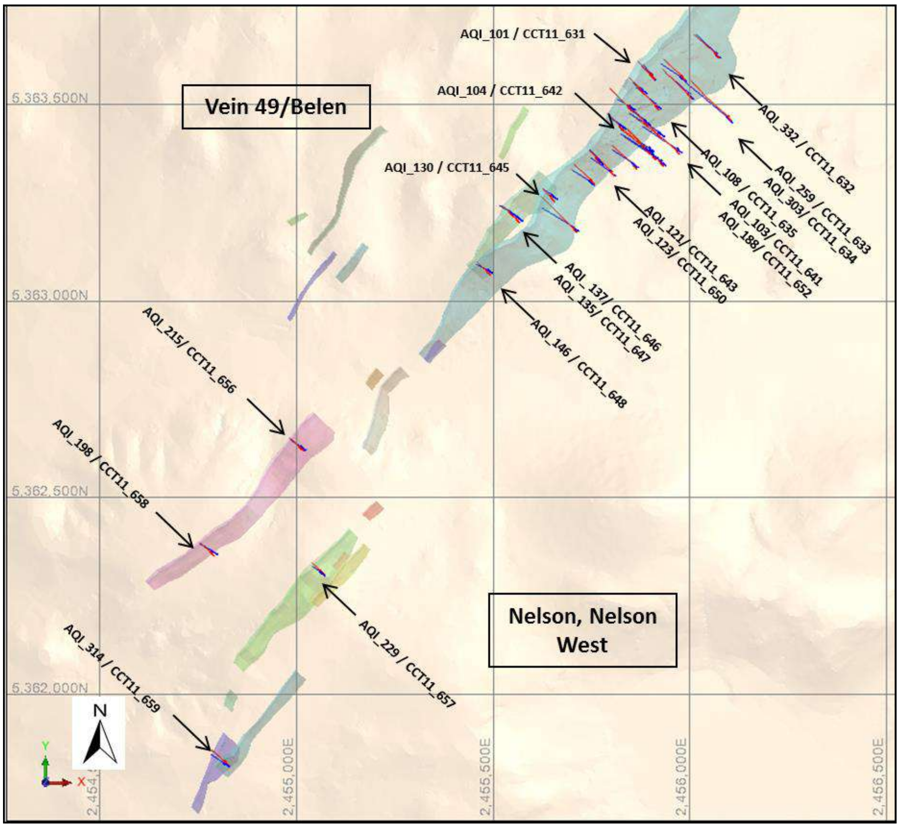


Figure 12-3 Vein 49/Nelson Twin Drill Hole Location Plan (Cube, 2017)

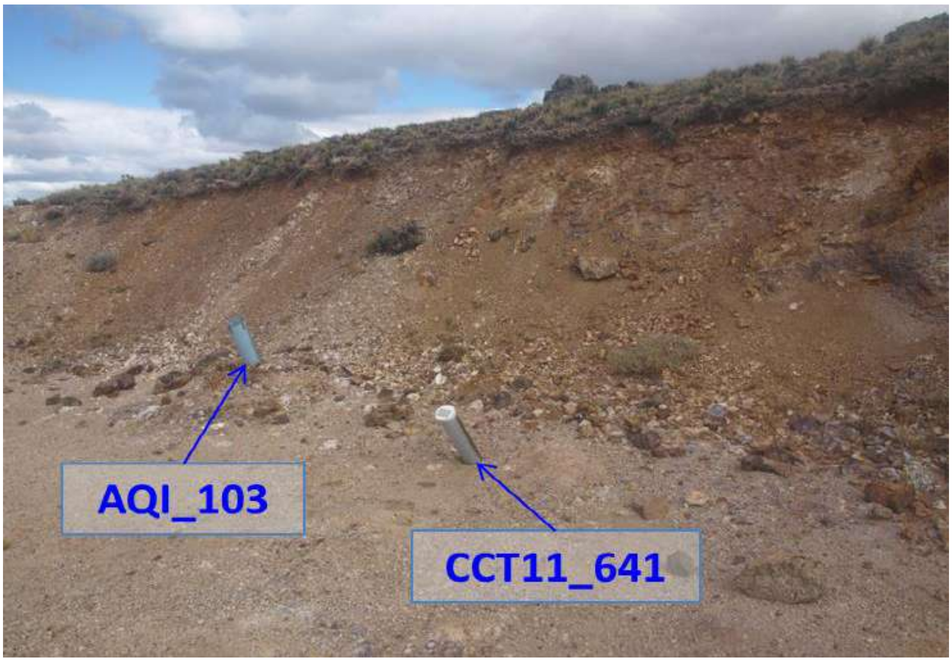


Figure 12-4 Vein 49 – Location Check of Twinned Drill Hole Locations (Cube site visit, 17/02/2017)

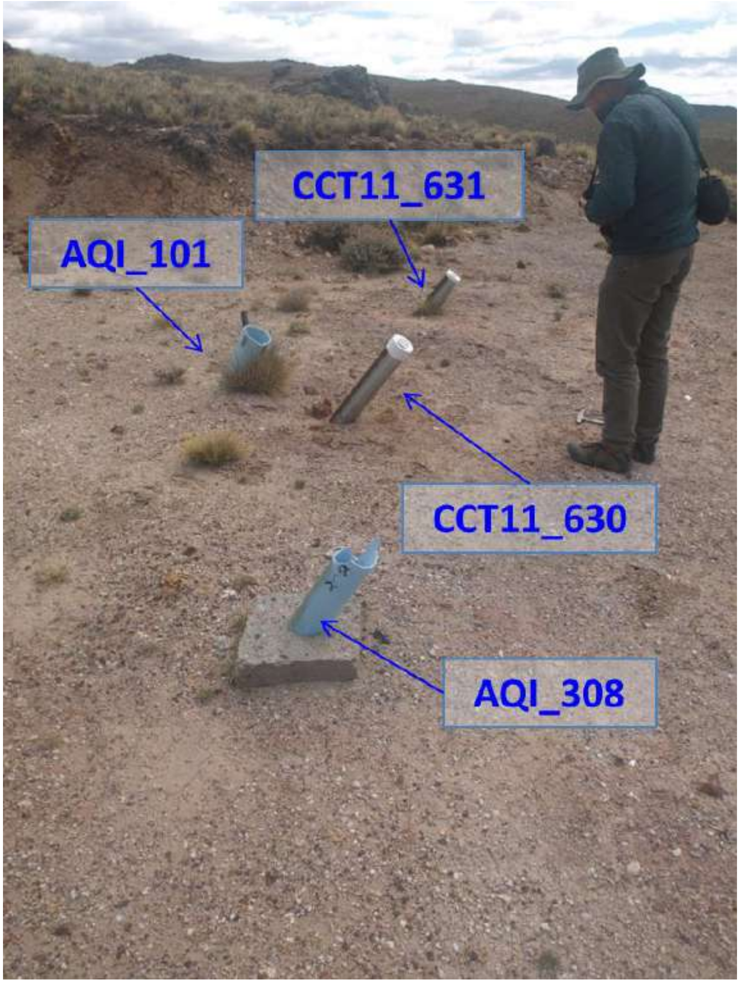


Figure 12-5 Vein 49 – Location Check of Twinned Drill Hole Locations (Cube site visit, 17/02/2017)

Comparison of the twinned drill intersections for gold and silver are summarised from the following tables, drill sections and statistical plots compiled by Cube.

Interval and Grade Comparisons

Comparison of the twinned mineralised intersections by matching intervals for the 12 PAS DD holes against their corresponding paired Aquiline RC hole assay intervals highlights the variability in gold grade and length that can occur for the same mineralised interval (Table 12-4):

- It would generally be expected that the intersected widths result in higher accuracy for diamond core sampling in defining the mineralised boundaries than those from RC drilling, i.e. narrower intersections with higher grades than the corresponding RC intervals with contained metal within the paired drill holes being comparable. The PAS DD holes have mostly narrower high-grade intersections, but the average grades are mostly much lower in 8 of the 12 cases for Au. For Ag grades, in most cases the PAS intervals had higher grade; and
- A total of 16 DD twinned holes were assessed from resource database by matching intervals for the PAS DD holes against their corresponding paired Aquiline DD hole assay intervals (Table 12-5). The PAS DD holes have mostly wider high-grade intersections, but the average grades are mostly much lower in 9 of the 14 cases for both Au and Ag.

Table 12-4 Calcatreu Twinned Aquiline RC vs PAS DD Holes – Interval and Grade Relative Difference (Cube, 2017)

Drill hole	Drill Type	Prospect	Domain No.	From (m)	Depth To (m)	Interval (m)	Au (g/t)	Rel. Diff Au (g/t)	Ag (g/t)	Rel. Diff Ag (g/t)
AQI_103	RC	Vein 49	1002	20.0	34.0	14.0	13.55	-20%	61.4	-20%
CCT11_641	DD			23.1	32.8	9.7	11.07		50.3	
AQI_104	RC	Vein 49	1002	17.0	36.0	19.0	7.76	15%	36.8	73%
CCT11_642	DD			25.0	37.1	12.1	9.06		79.4	
AQI_121	RC	Vein 49	1002	24.0	36.0	12.0	4.25	18%	44.3	49%
CCT11_643	DD			30.1	37.0	7.0	5.09		72.7	
AQI_130	RC	Vein 49	1002	41.0	44.0	3.0	7.21	-58%	19.1	15%
CCT11_645	DD			39.0	43.4	4.4	3.95		22.2	
AQI_137	RC	Vein 49	1003	12.0	28.0	16.0	9.72	-131%	48.2	30%
CCT11_646	DD			20.0	31.7	11.7	2.02		65.5	
AQI_135	RC	Vein 49	1003	34.0	43.0	9.0	7.97	-162%	94.1	-90%
CCT11_647	DD			38.4	49.0	10.7	0.84		35.8	
AQI_146	RC	Vein 49	1002	26.0	32.0	6.0	1.52	21%	16.5	52%
CCT11_648	DD			29.2	30.5	1.4	1.87		28.0	
AQI_146	RC	Vein 49	1003	42.0	47.0	5.0	14.92	-41%	225.8	-16%
CCT11_648	DD			44.5	48.5	4.0	9.89		191.7	
AQI_101	RC	Vein 49	1002	14.0	36.0	22.0	6.04	-47%	12.8	46%
CCT11_631	DD			13.2	34.4	21.2	3.73		20.5	
AQI_215	RC	Nelson	2008	27.0	33.0	6.0	5.15	-10%	19.6	65%
CCT11_656	DD			28.3	33.4	5.1	4.64		38.4	
AQI_229	RC	Nelson	2004	16.0	29.0	13.0	1.87	55%	13.9	32%
CCT11_657	DD			15.0	29.0	14.0	3.28		19.1	
AQI_198	RC	Nelson	2008	33.0	38.0	5.0	4.75	-59%	79.5	-104%
CCT11_658	DD			33.7	36.1	2.4	2.59		25.2	

Table 12-5 Calcatreu Twinned AQI DD vs PAS DD Holes – Interval and Grade Relative Difference (Cube, 2017)

Hole ID	Hole Type	Prospect	Domain	Depth From (m)	Depth To (m)	Interval (m)	Au (g/t)	Rel. Diff Au (g/t)	Ag (g/t)	Rel. Diff Ag (g/t)
AQI_332	DD	Vein 49	1002	73.0	84.8	11.8	2.36	64%	14.3	79%
CCT11_632	DD			73.0	79.0	6.0	4.56		33.1	
AQI_332	DD	Vein 49	1002	97.9	101.2	3.3	11.19	-152%	88.1	-174%
CCT11_632	DD			91.6	97.0	5.4	1.52		6.1	
AQI_259	RCD	Vein 49	1002	238.0	246.0	8.0	9.94	-117%	128.8	-131%
CCT11_633	DD			231.2	245.5	14.3	2.59		27.0	
AQI_303	DD	Vein 49	1002	129.1	143.0	13.9	5.58	7%	41.6	-1%
CCT11_634	DD			129.0	142.2	13.2	5.99		41.1	
AQI_108	RCD	Vein 49	1002	65.0	71.0	6.0	2.91	-41%	35.0	-27%
CCT11_635	DD			64.9	70.0	5.1	1.92		26.7	
AQI_108	RCD	Vein 49	1002	88.0	101.0	13.0	8.15	-45%	68.5	-9%
CCT11_635	DD			88.9	103.7	14.8	5.15		62.8	
AQI_187	RCD	Vein 49	1002	139.6	159.3	19.7	2.31	-38%	31.4	-29%
CCT11_637	DD			134.3	159.0	24.7	1.57		23.5	
AQI_344	DD	Vein 49	1002	67.7	72.2	4.5	1.10	134%	27.1	84%
CCT11_649	DD			71.7	73.9	2.2	5.61		66.2	
AQI_344	DD	Vein 49	1003	152.6	154.6	2.0	10.44	-149%	252.0	-158%
CCT11_649	DD			159.4	162.6	3.2	1.52		29.6	
AQI_123	RCD	Vein 49	1002	85.0	95.0	10.0	8.78	26%	116.3	3%
CCT11_650	DD			85.0	95.1	10.1	11.38		119.8	
AQI_197	RCD	Vein 49	1002	181.2	190.1	8.9	5.83	-73%	53.3	-71%
CCT11_651	DD			180.0	189.0	9.0	2.72		25.3	
AQI_188	RCD	Vein 49	1002	149.7	159.8	10.1	2.84	-20%	60.8	-10%

Hole ID	Hole Type	Prospect	Domain	Depth From (m)	Depth To (m)	Interval (m)	Au (g/t)	Rel. Diff Au (g/t)	Ag (g/t)	Rel. Diff Ag (g/t)
CCT11_652	DD			151.0	160.4	9.4	2.32		55.2	
AQI_314	DD	Nelson	2001	5.0	8.3	3.3	4.26	-3%	35.8	40%
CCT11_659	DD			5.9	13.5	7.6	4.12		53.6	
AQI_314	DD	Nelson	2002	23.8	35.6	11.8	1.38	-23%	7.3	15%
CCT11_659	DD			23.1	43.5	20.5	1.10		8.5	

Visual Comparisons

The local thickness and grade variations for Aquiline RC drilling versus PAS DD drilling are illustrated in three examples (Figure 12-6 to Figure 12-8). The local thickness and grade variations for Aquiline DD drilling versus PAS DD drilling are illustrated in three examples in Figure 12-9 to Figure 12-11.

The examples shown compares the matched individual Au assay intervals for the diamond twin holes on the drill cross-sections. Each section also shows the mineralisation interpretation outlines used for compositing and statistical analysis and for block model estimation domaining. The Aquiline drilling intervals were used as the primary source for interpretation to maintain consistency based on the amount of drill coverage completed by Aquiline drilling compared to the PAS drilling, and based on findings from data quality, QAQC analysis, and data verification.

Cross sections for all the other twinned holes completed by PAS in 2011 are illustrated in Appendix 3.

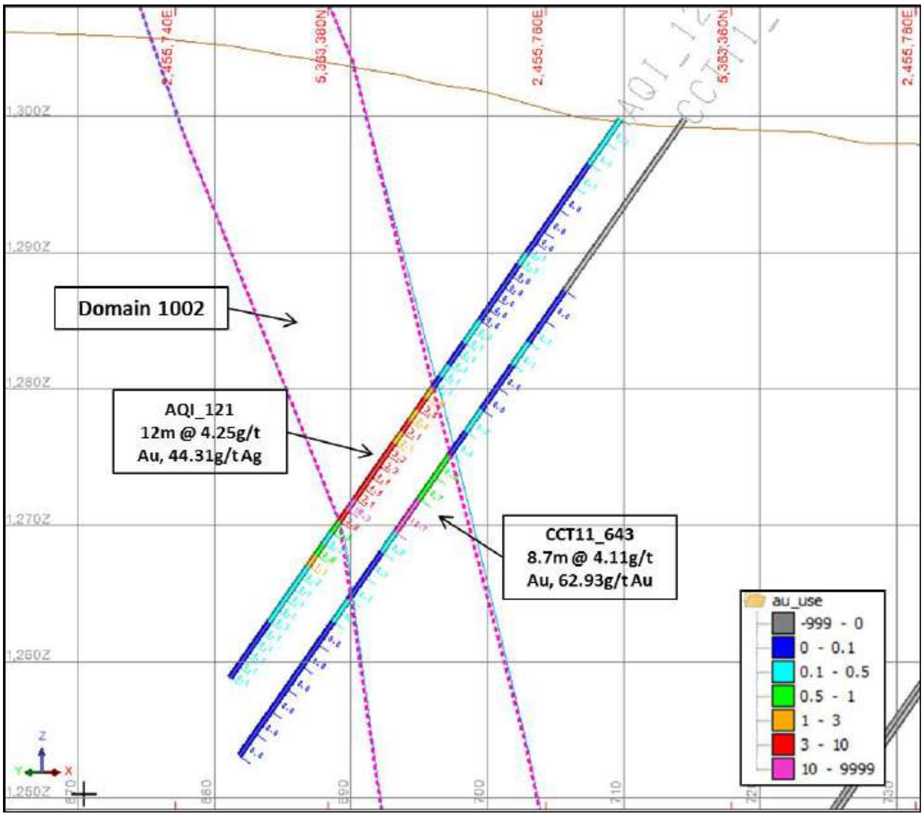


Figure 12-6 Vein 49 Twin Hole Comparison – Aquiline RC Hole vs PAS DD Hole (Cube, 2017)

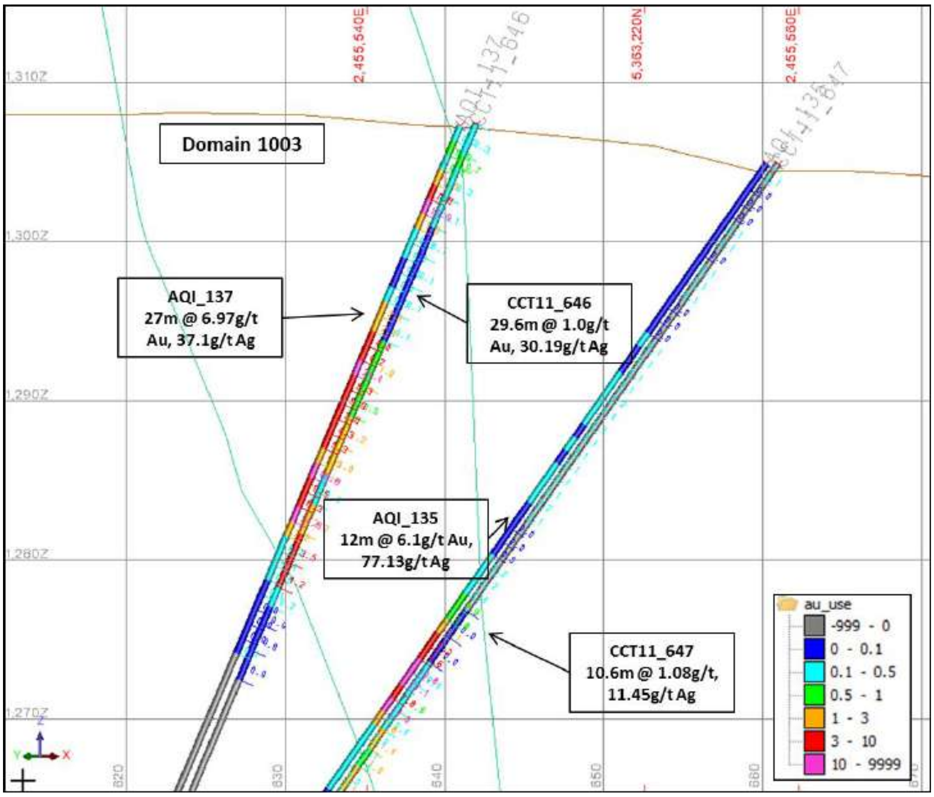


Figure 12-7 Vein 49 Twin Hole Comparison – AQI RC Hole vs PAS DD Hole (Cube, 2017)

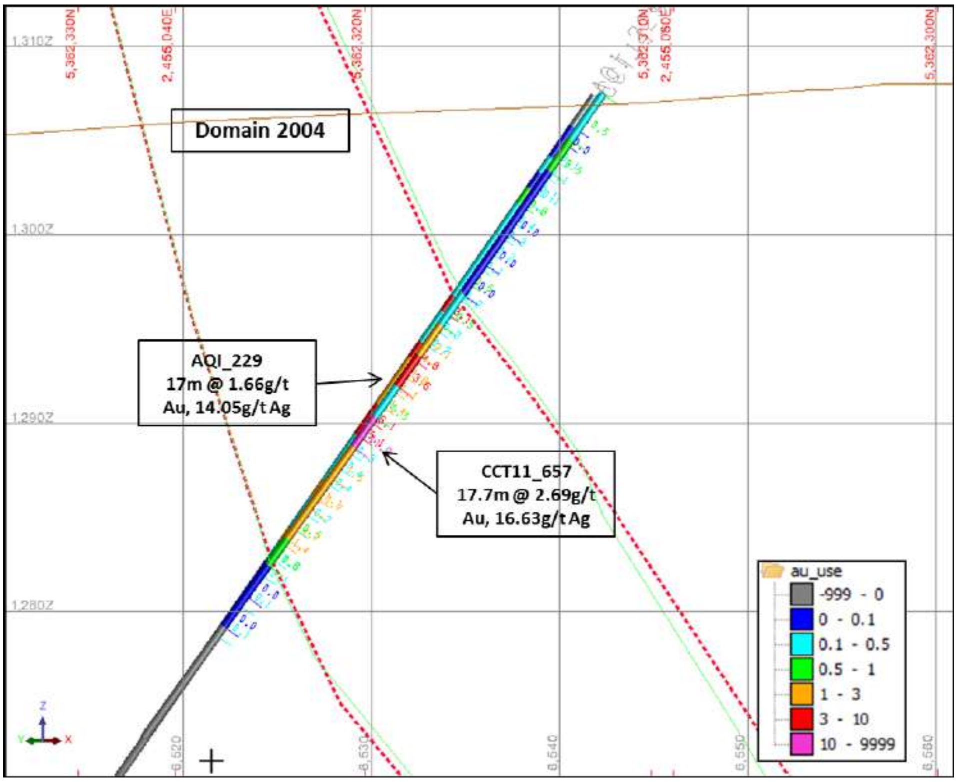


Figure 12-8 Nelson Twin Hole Comparison – AQI RC Hole vs PAS DD Hole (Cube, 2017)

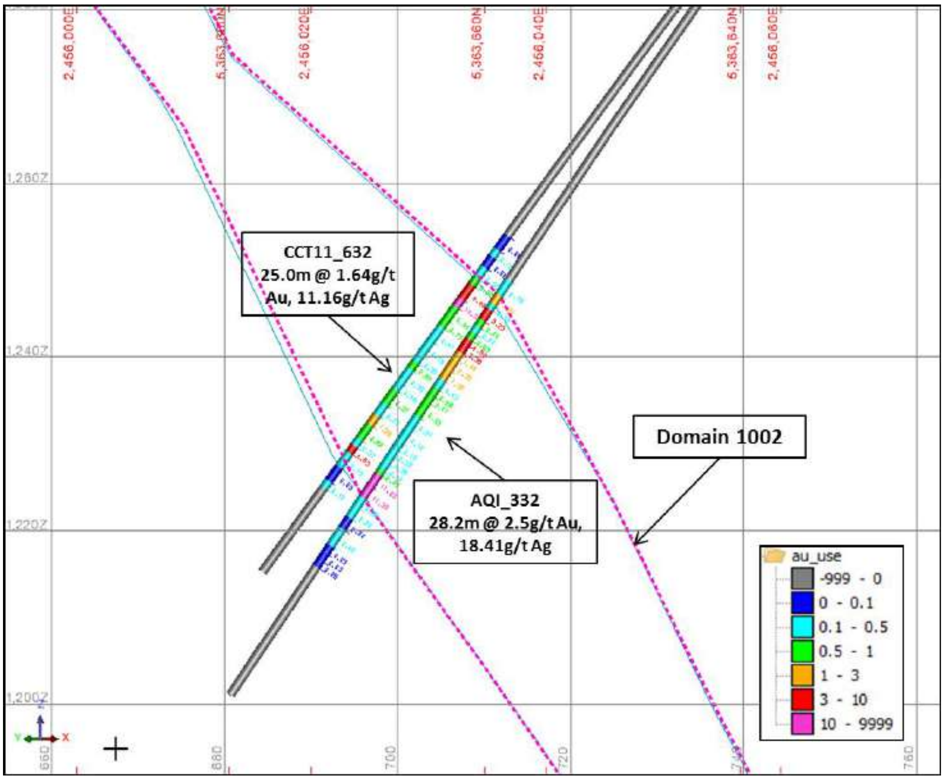


Figure 12-9 Vein 49 Twin Hole Comparison – AQI DD Hole vs PAS DD Hole (Cube, 2017)

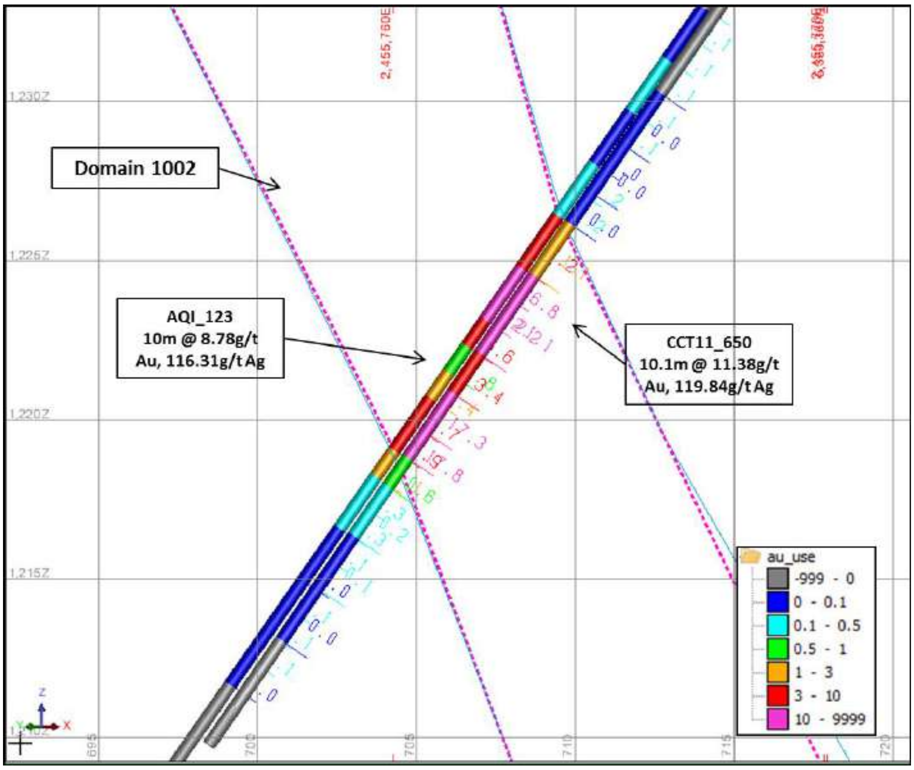


Figure 12-10 Vein 49 Twin Hole Comparison – AQI DD Hole vs PAS DD Hole (Cube, 2017)

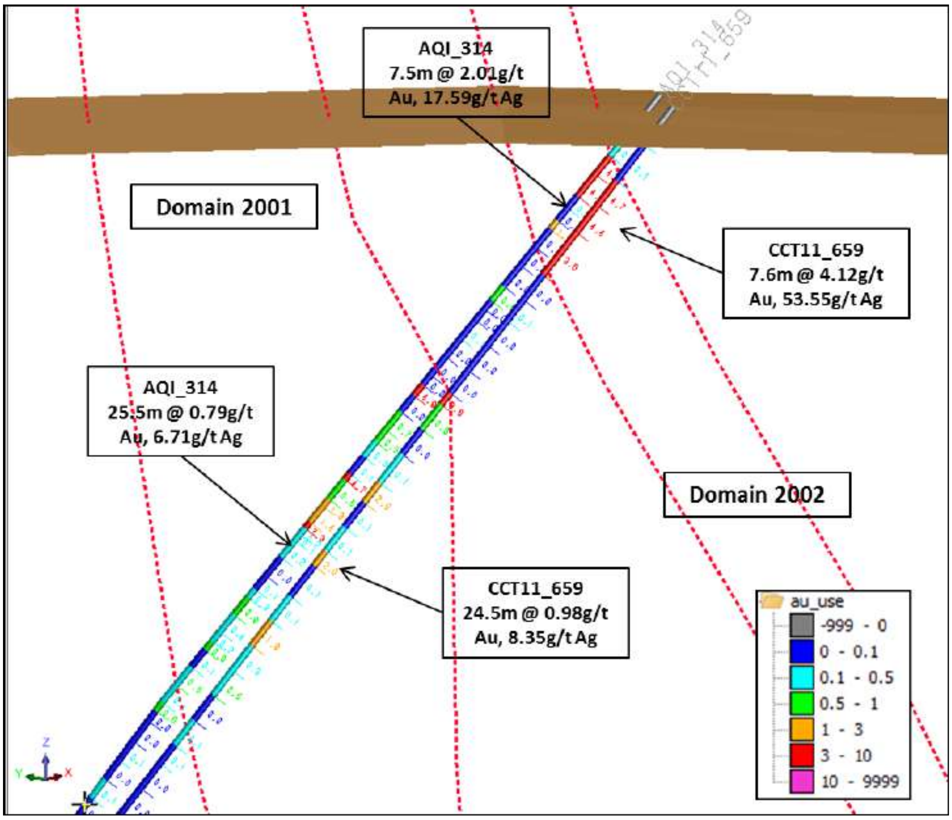


Figure 12-11 Nelson Twin Hole Comparison – AQI DD Hole vs PAS DD Hole (Cube, 2017)

Statistical Plots Comparisons

Quantile-quantile plots ("Q-Q" plots) and Relative Mean Paired Difference ("RMPD") plots showing overall comparisons of the twinned drill intersections for Au and Ag grades for the all combined data sets are listed as follows:

- QQ plots for Au grades for sample data sets, for Aquiline RC v PAS DD and for Aquiline DD v PAS DD - Figure 12-12 to Figure 12-14;
- QQ plots for Ag grades for sample data sets, for Aquiline RC v PAS DD and for Aquiline DD v PAS DD - Figure 12-15 to Figure 12-17; and
- RMPD plots for Au grades for sample data sets, for Aquiline RC v PAS DD and for Aquiline DD v PAS DD - Figure 12-18 to Figure 12-20;

The Q-Q or scatter plots were created to show any evidence of grade bias through 25% percentiles. A summary of the plots is described as follows:

- For Au the plots of the total twinned dataset clearly show an overall low bias for the PAS twinned holes. The ACV for all data is 0.44, with RC v DD drilling showing less biased results (0.67), compared to DD v DD results (0.12);
- For Ag the Q-Q plots, there is a similar overall bias, with a C-C of 0.48, although RC v DD drilling produced relatively un-biased results (0.85), compared to DD v DD results (0.10).

Interpretation of the data needs to consider that it may be difficult to gauge if any actual bias is present given the problems of assay reproducibility with gold mineralisation characterised by high short-range (local) variability.

The RMPD plots show the repeatability (precision) of the twinned mineralised intervals was quantified by the ACV of the paired data which is a universal measure of the relative precision error (Abzalov, 2008).

A summary of the RMPD plots is described as follows:

- For the combined twinned paired intervals, the Au grade has a 54% ACV and Ag grade has a 50% ACV;
- For the Aquiline RC vs PAS DD twinned paired intervals, the Au grade has a 49% ACV and Ag grade has a 39% ACV, indicating poor repeatability of grades for the data set;
- For the Aquiline DD vs PAS DD twinned paired intervals, the Au grade has a 58% ACV with Ag grade also having a 58% ACV. Although there are significant local variations in the relative difference of the Au and Ag grades on a hole by hole basis, overall the variability is acceptable for all the 14 twinned holes. An ACV of 50-100% is considered to represent average variability for Au distributions; and
- The level of variation between the twinned hole data pairs is considered unacceptable despite the variability between sample sizes/hole diameter, and the nuggety nature of Au mineralisation.

The twinned drilling dataset statistical breakdown by the different drilling types for the Calcatreu dataset is summarised in Table 12-6.

Table 12-6 Summary Comparison of Twinned Hole Statistics (Cube, as at 28/02/2018)

Dataset		Number of Intersection Intervals	Relative Difference		Average Coefficient of Variation (ACV)		Correlation Coefficient (C-C)	
Original	Twin		Au Grade	Ag Grade	Au Grade	Ag Grade	Au Grade	Ag Grade
AQI - RC	PAS - DD	12	-40%	9%	49%	39%	0.67	0.85
AQI - DD	PAS - DD	14	-31%	-31%	58%	58%	0.12	0.1
AQI - ALL	**PAS - ALL**	**26**	**-33%**	**-11%**	**54%**	**50%**	**0.44**	**0.48**

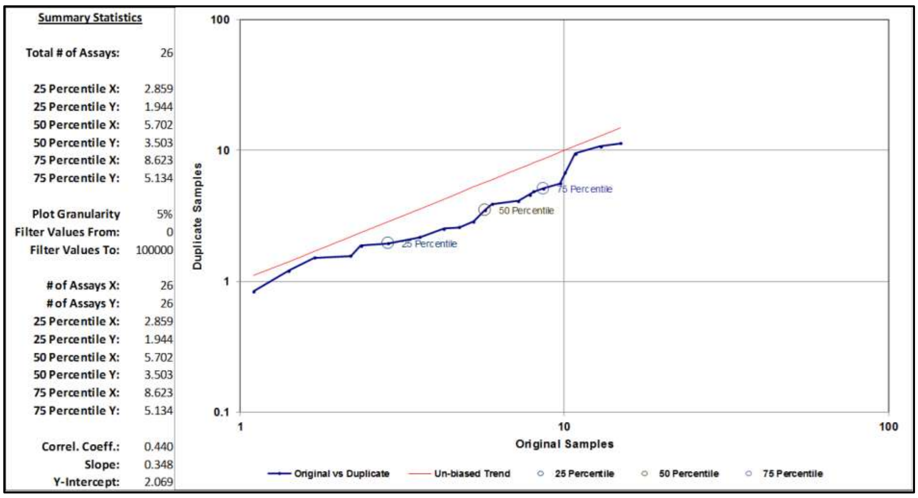


Figure 12-12 Twinned Hole Analysis Q-Q Plot (Au ppm)- AQI Holes vs PAS Holes for All Hole Types (Cube, 2017)

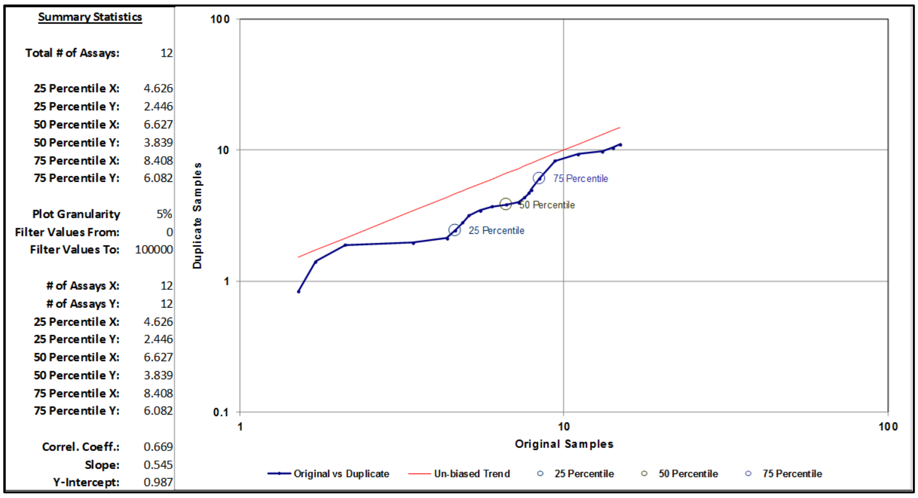


Figure 12-13 Twinned Hole Analysis Q-Q Plot (Au ppm) - AQI Holes (RC) vs PAS Holes (DD) (Cube, 2017)

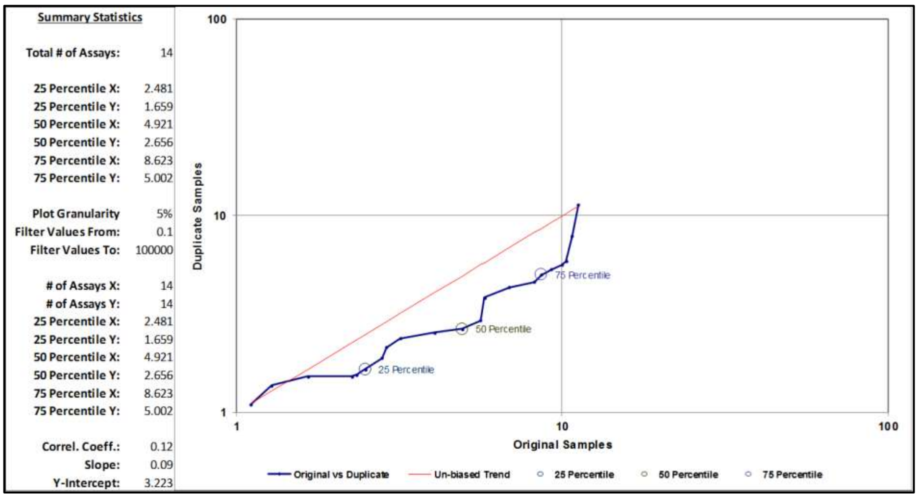


Figure 12-14 Twinned Hole Analysis Q-Q Plot (Au ppm) - AQI Holes (DD) vs PAS Holes (DD) (Cube, 2017)

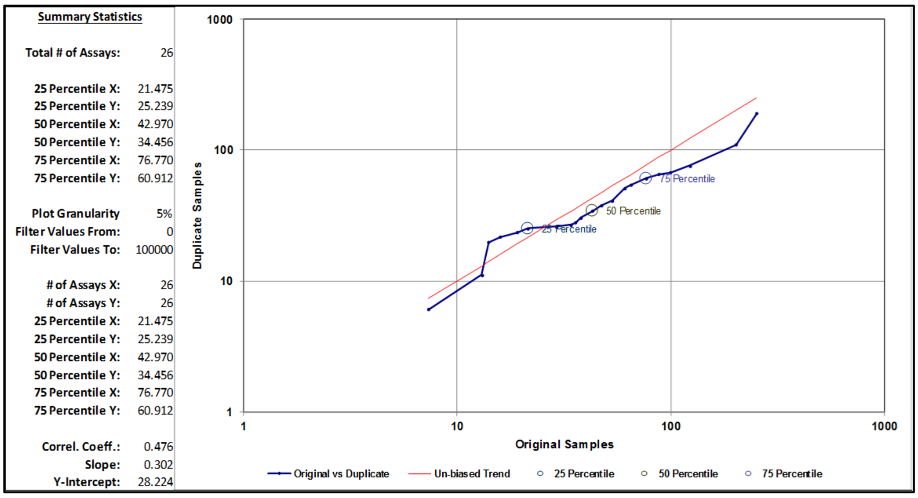


Figure 12-15 Twinned Hole Analysis Q-Q Plot (Ag ppm) - AQI Holes vs PAS Holes for All Hole Types (Cube, 2017)

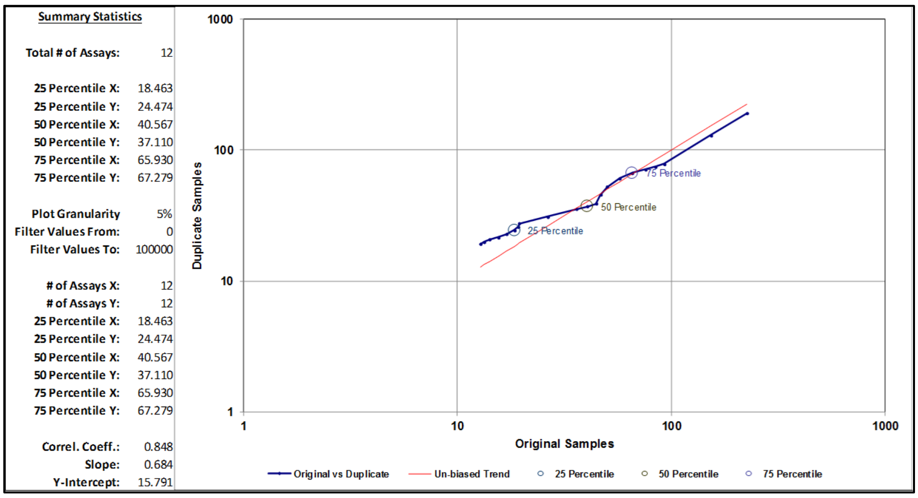


Figure 12-16 Twinned Hole Analysis Q-Q Plot (Ag ppm) - AQI Holes (RC) vs PAS Holes (DD) (Cube, 2017)

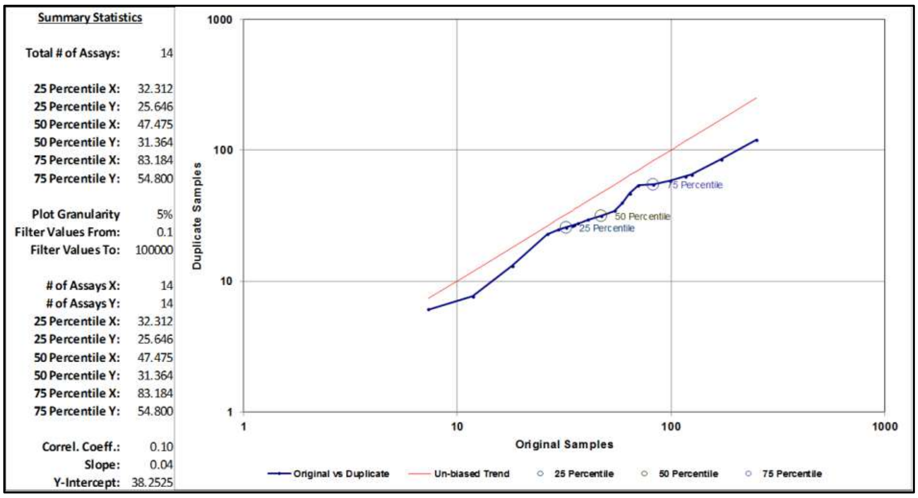


Figure 12-17 Twinned Hole Analysis Q-Q Plot (Ag ppm)- AQI Holes (DD) vs PAS Holes (DD) (Cube, 2017)

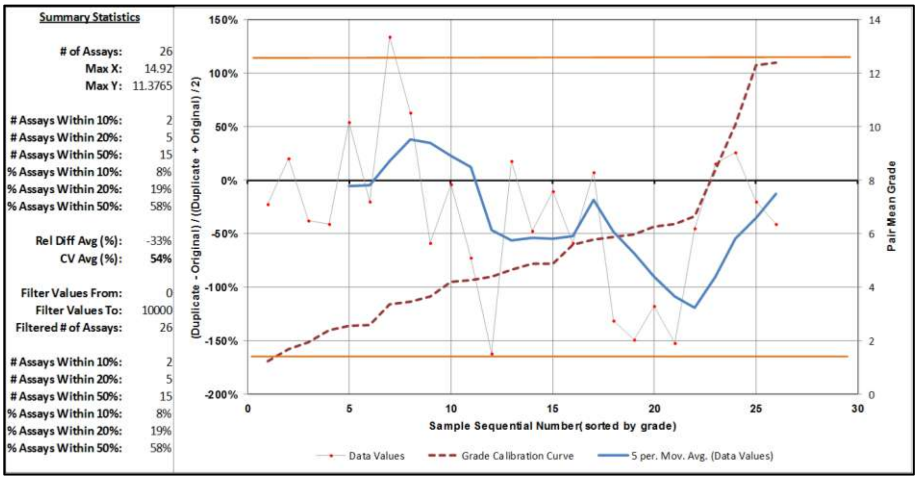


Figure 12-18 Twinned Hole Analysis RMPD Plot (Au ppm) - AQI Holes vs PAS Holes for All Hole Types (Cube, 2017)

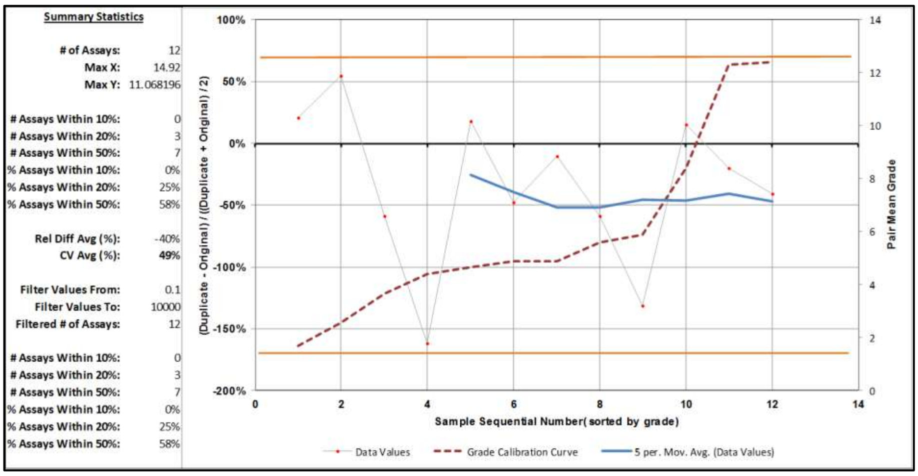


Figure 12-19 Twinned Hole Analysis RMPD Plot (Au ppm) - AQI Holes (RC) vs PAS Holes (DD) (Cube, 2017)

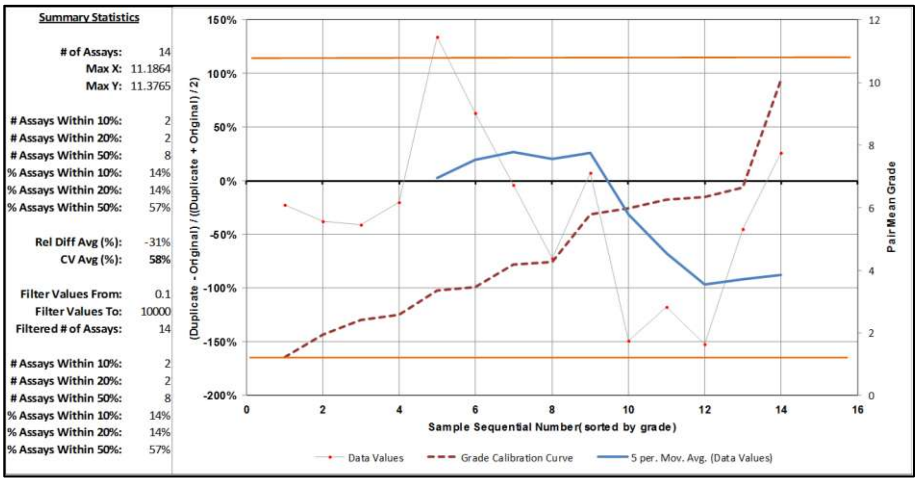


Figure 12-20 Twinned Hole Analysis RMPD Plot (Au ppm) - AQI Holes (DD) vs PAS Holes (DD) (Cube, 2017)

Results from the visual assessment for both Aquiline RC v PAS DD and Aquiline DD v PAS DD indicate the potential of smeared results downhole, particularly evident from the washed-out zones as observed in examples of core observed by Cube.

In summary, although local thickness and grade variations will be evident in the mineralised domains when carrying out twinned hole analyses, there may be a number of factors that affect the consistency of the bias between the PAS and Aquiline drilling. These include:

- Technical or procedural issues - drilling conditions for both DD and RC, handling and core preparation, core logging (recording of recovery, RQD, etc.), bias in core cutting and sampling procedures, RC sampling, QAQC protocols;
- Geological - supergene Au/Ag enrichment, coarse gold, localised high-grade ore, degree of fracturing.

PGD summarised their findings by stating that the review of twinned holes is inconclusive in defining a specific factor for the differences found in the grades between Aquiline and PAS holes. Cube concurs with this assessment, and also notes that there are concerns regarding the quality of results from the PAS drilling campaign in 2011. The removal of PAS drill holes from the data used for the Mineral Resource estimate is based on the following issues:

- Metadata and other drilling information that could not be gathered or was note available at the time of the Cube site visit; and
- The results of the data verification analyses and QAQC analyses of the PAS drilling program.

12.5. Geological Logging

During the site visit to the DD core processing facility, Cube reviewed and verified the following logging and sampling procedures from the drilling programs conducted by previous owners of the Calcatreu Project:

- All DD holes were geologically logged in full;
- Logging was done both qualitatively and quantitatively - including description of lithologies, alteration, oxidation, structure;
- All PGD DD core processing included photographing core prior to cutting;
- No information in the data provided was included with respect to structural logging of DD core using an orientation device to measure angle to core axis (CA) of structures for non-oriented intervals or holes;
- Data provided included records for RQD and fracture frequency and core recovery which were recorded during logging and sampling at the core processing facility at the field office;
- Hard copy drilling records, including examples of downhole survey information, original lab assay sheets, and logging records were reviewed for both recent and older drilling completed by Aquiline and PAS; and
- Core mark up for sampling intervals and core cutting and processing for sample dispatch to the assay laboratory were reviewed.

Several holes were summary logged by Cube to verify the interpreted geology and compare against the geology interpretations by PGD, and assay results supplied as part of the drilling database. The objective was to understand the style of the mineralisation, core quality and recovery, and to confirm the consistency of the logging codes for use in interpretation. This was supplemented by examination of core photography from PGD.

Cube concluded that the gross stratigraphy of the deposit from the summary logging confirmed the original logging in the supplied drilling database, although detailed logging descriptions were not supplied with the database records for the PAS 2011 drilling.

12.6. Principal Authors Statement

Following the completion of the validation and verification checks, Cube has noted some concerns with the data quality in relation to the PAS drilling program conducted in 2011. Cube has not used the 2011 PAS drilling information in the December 2018 Mineral Resource estimation work in light of the concerns with data quality and lack of data to conduct data verification analysis.

For the PGD drilling conducted in 2017 and 2018, along with the Normandy SA and Aquiline drilling completed previously, Cube believes that this data has been prepared according to industry standards and is suitable for inclusion in updating of geological modelling and in the December 2018 Mineral Resource estimation.

13. Mineral Processing and Metallurgical Testing

PGD has not completed any mineral processing or metallurgical testing at the Calcatreu Project. In addition, neither Newmont nor Normandy undertook any mineral testing or metallurgical test work as the project status remained at an exploration stage and did not proceed towards a feasibility study.

However, some historic metallurgical test work was commissioned by Aquiline during 2004. The Principal Author of this report does not view this test work as current and therefore it is not summarised in this report.

14. Mineral Resource Estimate

14.1. Summary

The December 2018 Mineral Resource estimate for Calcatreu incorporates all drilling completed by PGD up to the end of 2018 over the Calcatreu Project area.

The Calcatreu resource area for the December 2018 MRE is separated into two mineralised corridors:

1. Nelson-Vein 49 Corridor which currently extends 2.5 km long x 0.5 km wide toward the north-east; and
2. Castro Sur Corridor which currently has a known extent of 1.8 km long x 50 m wide towards the north-east.

Both corridors are characterised by continuous, planar and sigmoidal zones of hydrothermal quartz vein breccias and alteration haloes containing significant gold-silver anomalism and co-incident with resistivity/ chargeability targets.

Within the Calcatreu Project area, there are several other prospects containing anomalous gold-silver values sampled from surface mapping and tested by both DD and RC drilling, most recently during the 2018 program. These prospects were not included in the December 2018 model update.

14.2. Data Sources

The MRE incorporates RC and DD drilling completed since 1999 over the Calcatreu Project areas.

The MRE for Calcatreu is based on the drilling data completed up to the end of December 2018 and validated by Cube. The data used for the December 2018 update consists of the following:

- Drill hole data and trench assays as a MS Access database and other MS Excel data;
- Topographic survey file made available as elevations in DXF format;
- Digital photos of Aquiline DD core; and
- Historical Geological logging, surface mapping and previous interpretations relating to the Calcatreu Prospects from several sources.

All other data files relating to the 2018 MRE are original work files that have been created by Cube.

14.3. Drilling Database

Collar, survey, assay, geology and other relevant drilling data were provided by PGD to Cube as either MS Access database files (*.mdb), MS Excel spreadsheet files, or ASCII file format (*.csv). The drilling data received from PGD is current to the 31st December 2018. Cube validated the data prior to importing into a Cube standard and structured MS Access database which was then mapped to Surpac. Further validation checks in Surpac were carried out prior to wireframe interpretation and subsequent modelling and estimation work.

Following the standard validation checks, Cube believes the database for the Calcatreu Gold-Silver Project is adequate for Mineral Resource estimation.

14.3.1. Grid System

The Gauss Kruger Projection and Campo Inchauspe Faja 2 datum coordinate system (National Datum of Argentina) has coordinates recorded using a double frequency (L1 and L2), with TOPCON Model GB-1000 differential GPS generally giving precision of X=1cm, Y=1cm and Z (altitude)=1.5 cm.

All coordinates in the drill hole database are in the Gauss Kruger Projection UTM system and are expressed in metric units. The coordinates of the centre point of the project area are 2,460,000 E, 5,370,000 N as defined in the Gauss Kruger Projection, Zone 2 with the Campo Inchauspe Datum

The drill hole database collar records were also supplied with local grid co-ordinates which differed from the Gauss Kruger UTM system, but no other information regarding local grid conversion was supplied.

14.3.2. Database Compilation

A breakdown of holes types and drill hole statistics used for the Calcatreu Mineral Resource estimation is summarised in Table 14-1.

Table 14-1: Summary of Samples by Hole Type used for Calcatreu Resource Models (Cube, as at 31/12/2018)

Zone	Type	# of holes	Metres	Ave depth
Vein 49	RC	65	4,820.0	74.15
	RCD	71	13,658.3	192.37
	DDH	88	10,772.2	122.41
	Sub-Total	**224**	**29,250.5**	**130.58**
Nelson	RC	75	5,610.5	74.81
	RCD	38	4,946.9	130.18
	DDH	32	2,918.9	91.22
	Sub-Total	**145**	**13,476.3**	**92.94**
Belen	RC	27	2,485.0	92.04
	RCD	7	1,036.6	148.09
	DDH	3	590.0	196.67
	Sub-Total	**37**	**4,111.6**	**111.12**
Castro Sur	RC	49	4,040.5	82.46
	RCD	65	10,453.5	160.82
	DDH	9	1,326.6	147.39
	Sub-Total	**123**	**15,820.6**	**128.62**
All Zones	**Total**	**529**	**62,658.9**	**118.45**

14.3.3. Database Structure

All the supplied drill hole data was compiled into a Cube structured MS Access drill hole database (Cube_CCT_2018_12_31.mdb). The database was then mapped to Surpac. A description of the database and the relevant tables and main fields are noted in Table 14-2.

Table 14-2: Cube Drill Drill hole Database Structure (Cube, as at 31/12/2018)

DB Table	Cube Field	Description	DB Table	Cube Field	Description
	hole_id	Hole Name		hole_id	Hole Name
	x	Collar Easting		depth_from	Interval Depth From
	y	Collar Northing		depth_to	Interval Depth To
	z	Collar RL		interval	DH Sample interval length, calculated
	max_Depth	Total Hole Depth	**Geol.**	Rock_Code	Adjusted Lithology code
	Precollar	RC precollar depth		lith	Logging DB Lithology code
	DD_tail	DD tail depth		struc1_code, int	structural code, intensity
	Zone	Prospect Name		Description	Full logging description
	Rank	Completeness of data; design v. survey		Cube_Comments	Validation query result
Collar	hole_path	Downhole trace (Linear or Curved)		hole_id	Hole Name
	hole_type	DDH, RD, RC, RAB, AC		depth_from	Interval Depth From
	Year Drilled	Year Drilled		depth_to	Interval Depth To
	Company	Company Name		interval	DH Sample interval length, calculated
	Local E & N	Local grid Easting and Northing		weath_int	Weathering Intensity
	Collar Dip/Azi	Planned collar di[and azimuth	**Oxide**	weath_code	Weathering type
	hole_twin_id	Twinned hole ID number		rec_m	Core recovery (m)
	Cube_Comments	Validation query result		rec_pct	Core recovery (%)
	hole_id	Hole Name		core_size	DD core size
	depth	Downhole Depth of Survey		Cube_Comments	Validation query result
	dip	Drill hole Inclination		hole_id	Hole Name
Survey	azimuth	Drill hole Azimuth (MGA) or Mag Azimuth		samp_id	Sample Id
	dhs_method	Downhole survey method		depth_from	Interval Depth From
	Priority	DHS quality priority		depth_to	Interval Depth To
	Local, Mag Azi	Local and Magnetic azimuths recorded	**Density**	BD	bulk density value
	Cube_Comments	Validation query result		rock_code	Adjusted Lithology code
	hole_id	Hole Name		Alter1, alt1_int	Alteration code and intensity
	Samp_id	Sample Number		Cube_Comments	Validation query result
	depth_from	Interval Depth From		hole_id	Hole Name
	depth_to	Interval Depth To		depth_from	Interval Depth From
Assay	interval	DH Sample interval length, calculated		depth_to	Interval Depth To
	au_use	Au g/t Final Assay used in estimate	**Zone code**	length	mineralisation interval
	ag_use	Ag g/t Final Assay used in estimate		zone_code	Mineralisation domain number
	au_equ use	Au equivalent (calculated)			
	Sample type	Sample method (chip, RC, core)			
	samp_wt	Sample weight (gm)			

14.3.4. Treatment of Below Detection Samples and Null Samples

During database validation and verification by Cube the following changes were made to the Cube MS Access database with respect to below detection limit ("BDL") and null values:

- For Au, the conversion of negative numbers (-0.005 g/t Au) to an assigned background (0.01g/t Au). This was completed for 9,626 records in the Cube MS Access database;
- For Ag, the conversion of negative numbers (-0.5 g/t Au) to an assigned background (0.01g/t Au). This was completed for 10,872 records in the Cube MS Access database; and
- Un-sampled intervals or missing samples and interval gaps were left blank (i.e. 'null' values) to indicate these intervals will be ignored by the compositing routine and subsequent estimation work.

The treatment of BDL samples for gold and silver is summarised in Table 14-3 and Table 14-4.

Table 14-3: Treatment of BDL Assays and Other Values - Au ppm

PGD DB (Au_ppm Field)	Cube Au_use Field	No. of Records	Comments
Null	-2	78	Hole not sampled; mostly abandoned holes.
Null	0.01	-	Un-sampled intervals inside mineralised domains.
'0'	n/a	0	
negative values	n/a	0	
0.0025	0.01	21	BDL samples for Trench holes; ignored in MRE model.
0.005	0.01	10,239	BDL assays; rounded to 2 decimal places.

Table 14-4: Treatment of BDL Assays and Other Values - Ag ppm

PGD DB (Ag_ppm Field)	Cube Ag_use Field	No. of Records	Comments
Null	-2	78	Hole not sampled; mostly abandoned holes.
Null	0.25	-	Un-sampled intervals inside mineralised domains.
'0'	n/a	0	
negative values	n/a	0	
0.1	0.1	76	BDL samples for Trench holes; ignored in MRE model.
0.25	0.25	9,495	BDL assays, no changes made.

14.4. Geology and Mineralisation Models

14.4.1. Weathering Surfaces

A topographic surface wireframe file was imported from a DXF file received from PGD and validated against the collar locations of all drill hole data. Surfaces for base of complete oxidation were created into Surpac by Cube from oxidation data records in the database logging records for depths of weathering. (Table 14-5).

The boundaries were also used to assign bulk density values for material within each oxidation zone for the different lithological units hosting mineralisation.

Table 14-5: Surface Geological Domain Files and Descriptions (Cube, 2018)

Prospect	Description	Surpac File Name	Comments
Vein 49/ Belen/ Nelson	Topographic surface	topo_original_2019	Topographic surface DTM layer - current dxf files provided by client. Surface extended to cover block model area.
Vein 49/ Belen/ Nelson	Boundary of Oxide-Non-Oxide	cct_ox_surface_ext_2018	Oxide-Non-Oxide oxidation boundary modelled from oxidation logging in Calcatreu database records (data in Aquiline holes only).
Castro Sur	Topographic surface	topo_original_2019	Topographic surface DTM layer - dxf file (topo_2m_gk.dxf) provided by client. Surface extended to cover block model area.
Castro Sur	Boundary of Oxide-Non-Oxide	cs_ox_surface_ext_2018	Oxide-Non-Oxide oxidation boundary modelled from oxidation logging in Calcatreu database records (data in Aquiline holes only).

Figure 14-1 is an oblique cross section showing a typical example of the depth of weathering for the oxide and 'non-oxide' zones within the Vein 49 mineralisation envelopes.

14.4.2. Mineralisation Interpretations

The Calcatreu Mineral Resource area covering Vein 49, Nelson and Belen Prospects, has a combined dimension of 2.5 km (total strike length from Nelson to Vein 49) by 550 m (width of all mineralisation domains combined). The maximum depth known to date for the deepest mineralisation is 370 m vertical depth below surface.

Vein 49, Nelson and Belen

Interpretations were completed on oblique sections and wireframed within Surpac to create 3D solids based on 25 m spaced sections, orientated southwest to northeast. The interpretation linked mineralisation zones identified during several trenching and drilling programs since 1999 in conjunction with presence of mineralisation identified from other exploration work.

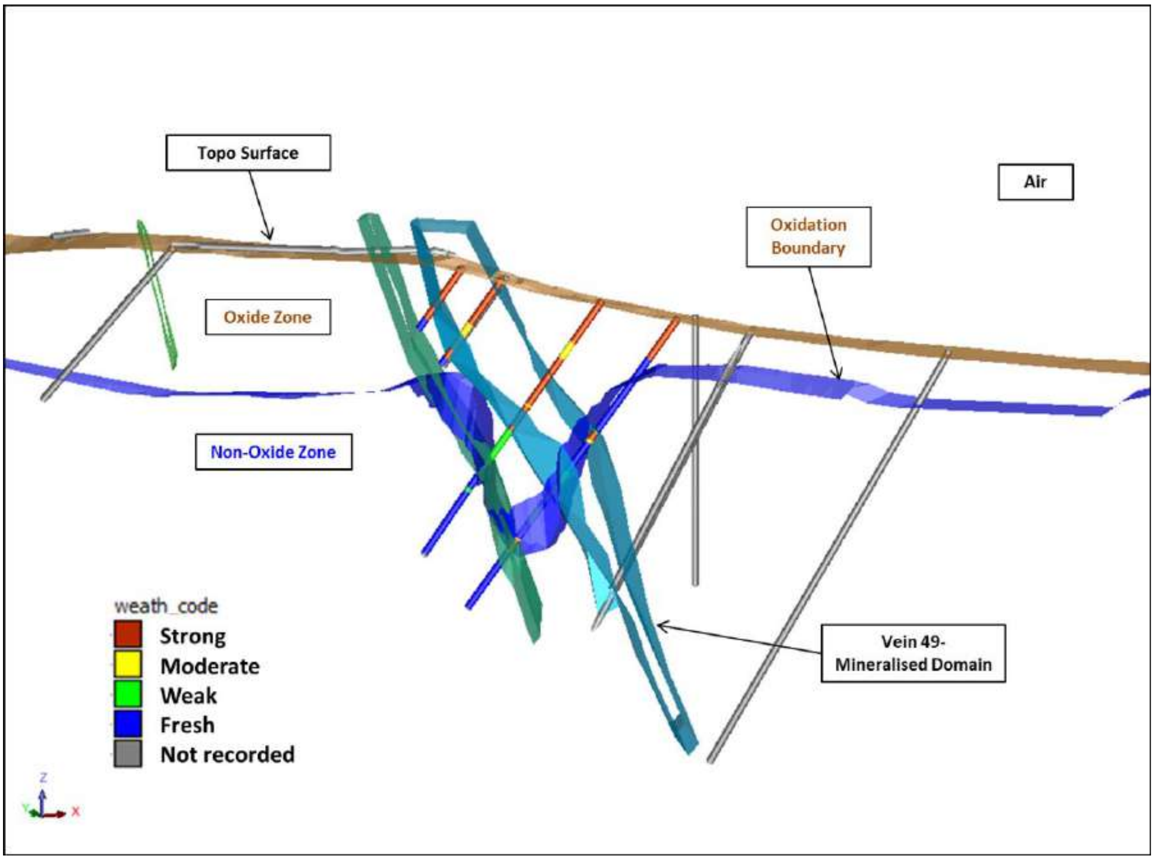


Figure 14-1: Vein 49 - Oblique Cross Section: Showing Oxidation Surfaces and Mineralisation Domains (Cube, 2018)

In order of priority, mineralised domains were interpreted based on the following criteria:

- Generated on 25 m oblique cross sections over the Calcatreu resource areas;
- Mineralised domains were digitised on cross-section using 3D strings and then wireframed to generate solids;
- Review of historical three-dimensional modelling ("3DM") interpretations and wireframes;
- Core photos, where available, were used to visually identify mineralised zones;
- Where possible, interpretation strings were snapped to defined mineralisation boundaries for later flagging of domain codes into an MS Access database (Cube_CCT_2018_12_31.mdb);
- End sections were projected to the distance of the average drill hole spacing of 25 m;
- Projection down dip was confined to projected plunge and dip, ~25 m below the deepest drill hole;
- Review and editing of interpretation in long section and plan view flitches; and
- Final validation checks of 3D wireframe and volume checks.

Plan and isometric view illustrations of the mineralised domains interpreted for Vein 49, Nelson and Belen at Calcatreu are illustrated in Figure 14-2 and Figure 14-3. Domain coding and naming of mineralisation domains are listed in Table 14-6.

Cube visually assessed several core intervals through the mineralisation on site and also reviewed each mineralised zone section from historic geology maps, geological logging, and available information in the core photos (Aquiline holes only). Each interval that was part of the mineralisation domains for each Calcatreu Prospect was checked against the visual evidence of mineralisation in the core photos and also all assay and core logging information. Several adjustments were made to the sectional interpretation prior to updating the 3D wireframe, coding and compositing.

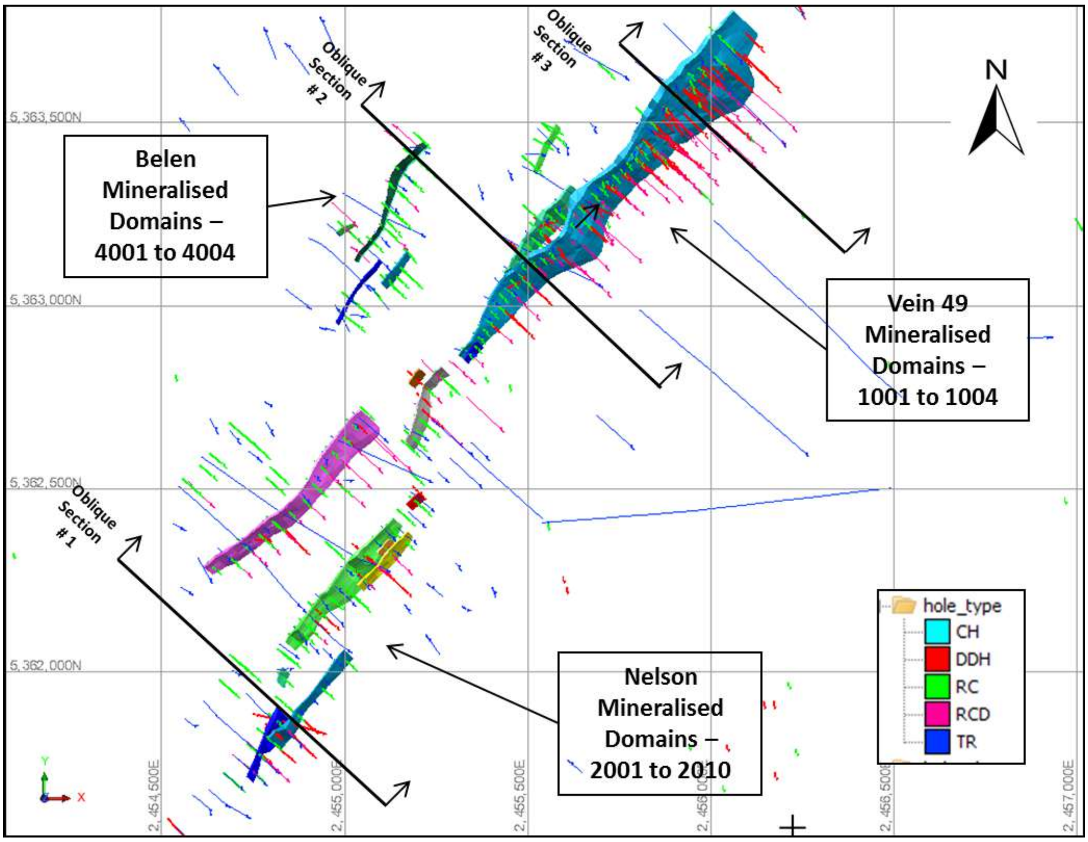


Figure 14-2: Vein 49, Belen and Nelson – Plan of Mineralised Domains with Drill Coverage (Cube, 2018)

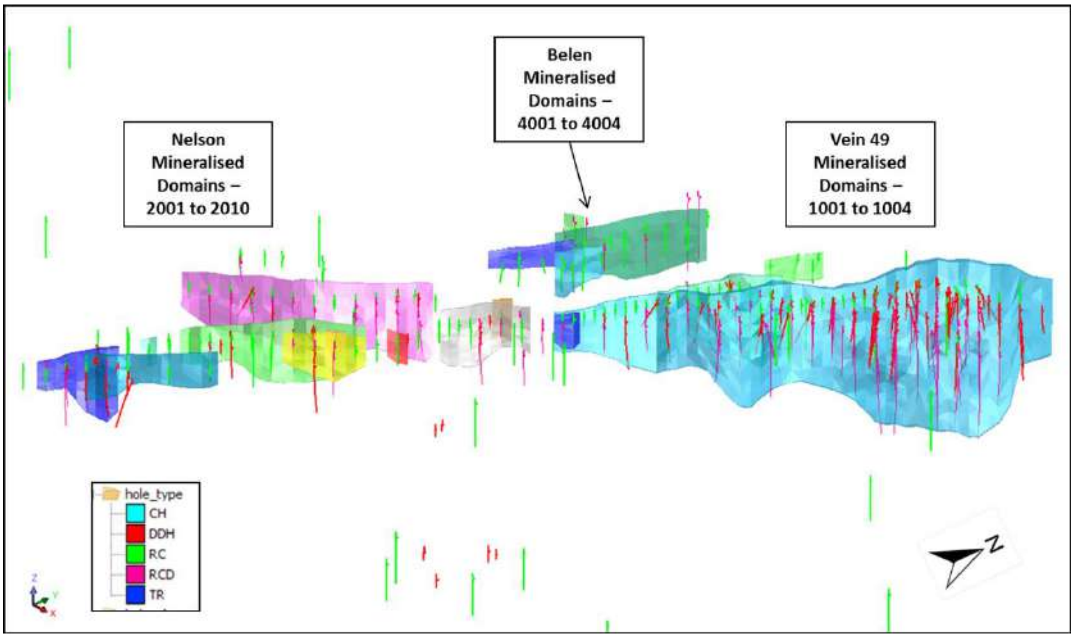


Figure 14-3: Vein 49, Belen and Nelson –Isometric View Showing Mineralisation Wireframes (Cube, 2018)

Table 14-6: Vein 49, Belen and Nelson – Listing of Mineralisation Domains (Cube, 2018)

Prospect	Domain #	Surpac File Name	Description
Vein 49	1001	cct_min_v49_1001	Vein 49 - South
Vein 49	1002	cct_min_v49_1002	Vein 49 - Main Zone
Vein 49	1003	cct_min_v49_1003	Vein 49 - West 1
Vein 49	1004	cct_min_v49_1004	Vein 49 - West 2
Nelson	2001	cct_min_nel_2001	Nelson South - 1
Nelson	2002	cct_min_nel_2002	Nelson South - 2
Nelson	2003	cct_min_nel_2003	Nelson South - 3
Nelson	2004	cct_min_nel_2004	Nelson East - Main
Nelson	2005	cct_min_nel_2005	Nelson East - 2
Nelson	2006	cct_min_nel_2006	Nelson East - 3
Nelson	2007	cct_min_nel_2007	Nelson East - 4
Nelson	2008	cct_min_nel_2008	Nelson West
Nelson	2009	cct_min_nel_2009	Nelson North - Main
Nelson	2010	cct_min_nel_2010	Nelson North - 2
Belen	4001	cct_min_bel_4001	Belen - East 1
Belen	4002	cct_min_bel_4002	Belen - East 2
Belen	4003	cct_min_bel_4003	Belen - Main Zone
Belen	4004	cct_min_bel_4004	Belen - West

Figure 14-4 to Figure 14-6 show an oblique cross section view of the interpreted mineralisation domains in relation to high-grade Au composites and the weathering profiles for each prospect.

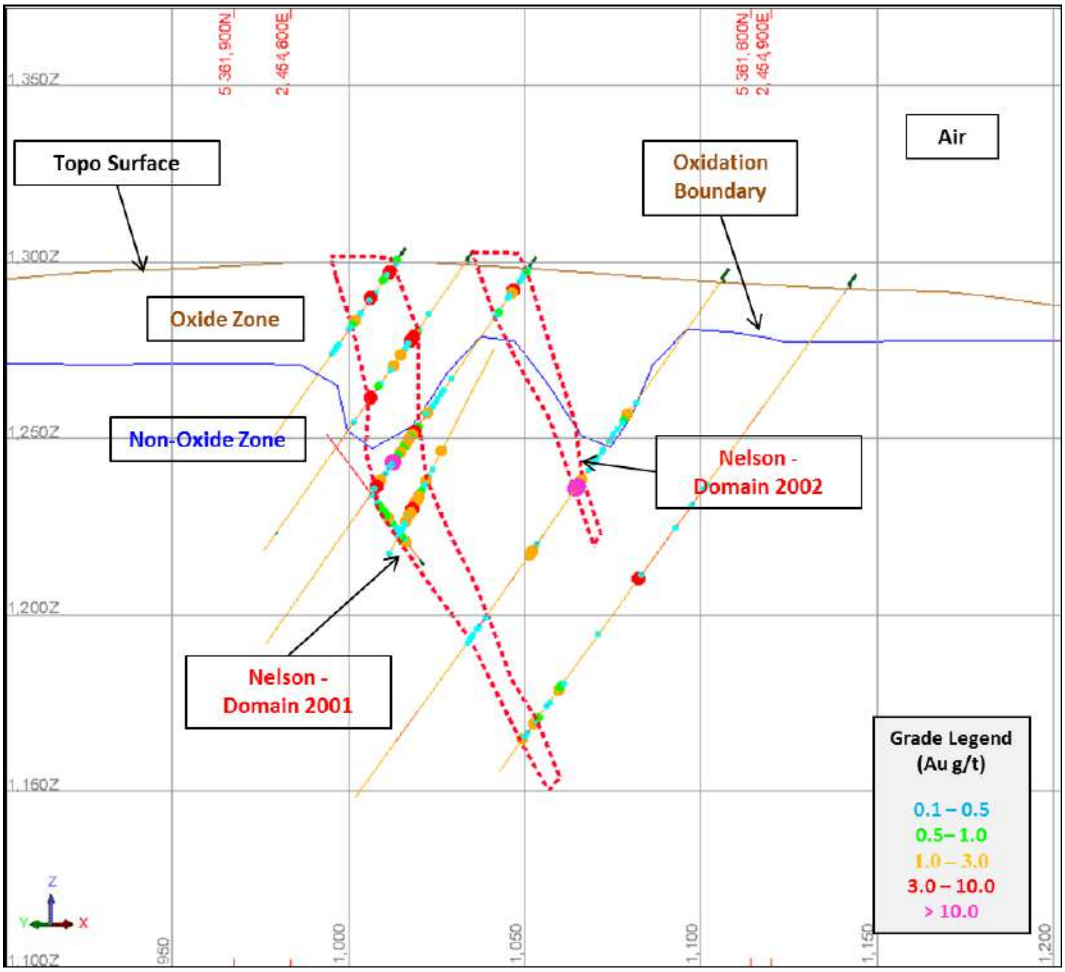


Figure 14-4: Nelson - Oblique Cross Section #1: Showing Au Domains and Drilling (Cube, 2018)

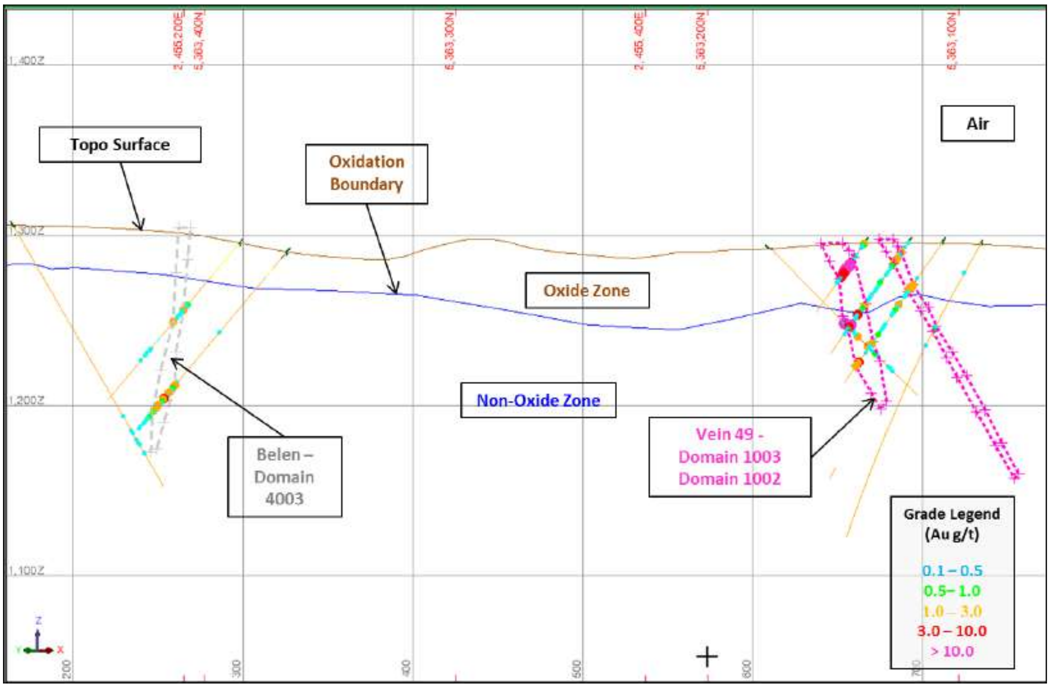


Figure 14-5: Belen/Vein 49 - Oblique Cross Section #2: Showing Au Domains and Drilling (Cube, 2018)

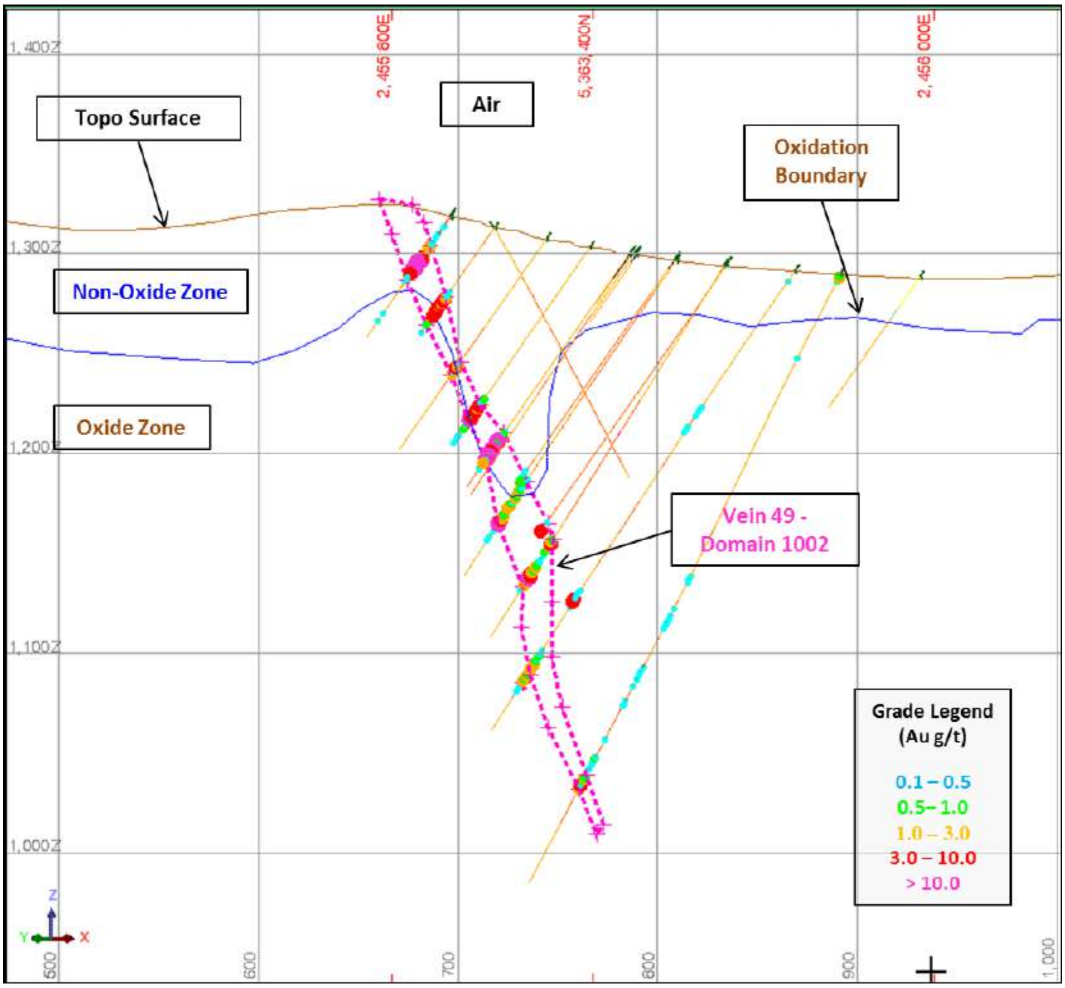


Figure 14-6: Vein 49 - Oblique Cross Section #3: Showing Au Domains and Drilling (Cube, 2018)

Castro Sur

The Castro Sur Mineral Resource area has dimensions of 1.7 km (total strike length) by 100 m (total width across all mineralisation domains). The maximum depth known to date for the deepest mineralisation is 300 m vertical depth below the surface.

The interpretation methodology was completed in the same manner as for the other Calcatreu Prospects, although data spacing and geological information was generally poorer in quality, and there was no DD core drilling information to assist with geological and mineralisation interpretations.

Domain coding and naming of mineralisation domains are listed in Table 14-7. Plan and isometric view of the mineralised domains interpreted for Castro Sur is illustrated in Figure 14-7 and Figure 14-8.

Figure 14-9 shows an oblique cross section view of the mineralised domains.

Table 14-7: Castro Sur Mineralisation Domain Codes, Files and Descriptions (Cube, 2018)

Prospect	Mineralisation Domain #	Surpac File Name	Description
Castro Sur	3001	cct_min_cas_3001	CS - South Extent 1
Castro Sur	3002	cct_min_cas_3002	CS - South Extent 2
Castro Sur	3003	cct_min_cas_3003	CS - South 1
Castro Sur	3004	cct_min_cas_3004	CS - South 2
Castro Sur	3005	cct_min_cas_3005	CS - South 3
Castro Sur	3006	cct_min_cas_3006	CS - Main Zone
Castro Sur	3007	cct_min_cas_3007	CS - North
Castro Sur	3008	cct_min_cas_3008	CS - North Extent 1
Castro Sur	3009	cct_min_cas_3009	CS - North Extent 2

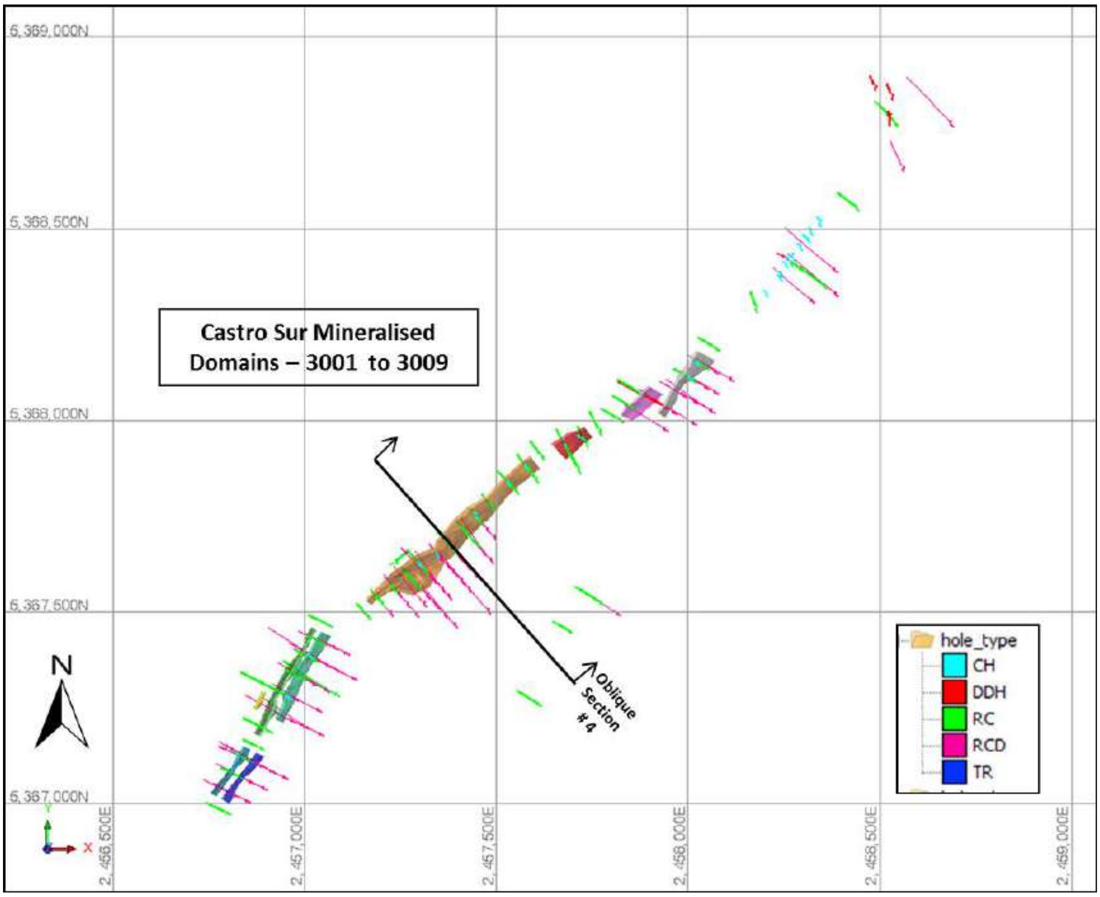


Figure 14-7: Castro Sur – Plan of Mineralised Domains with Drill Coverage (Cube, 2018)

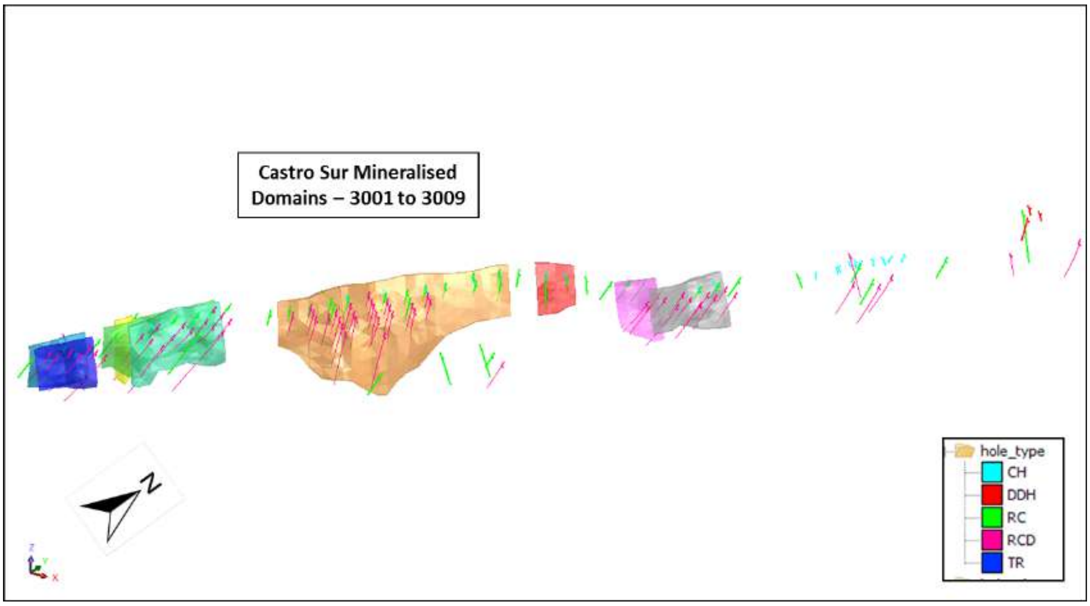


Figure 14-8: Castro Sur –Isometric View Showing Mineralisation Wireframes (Cube, 2018)

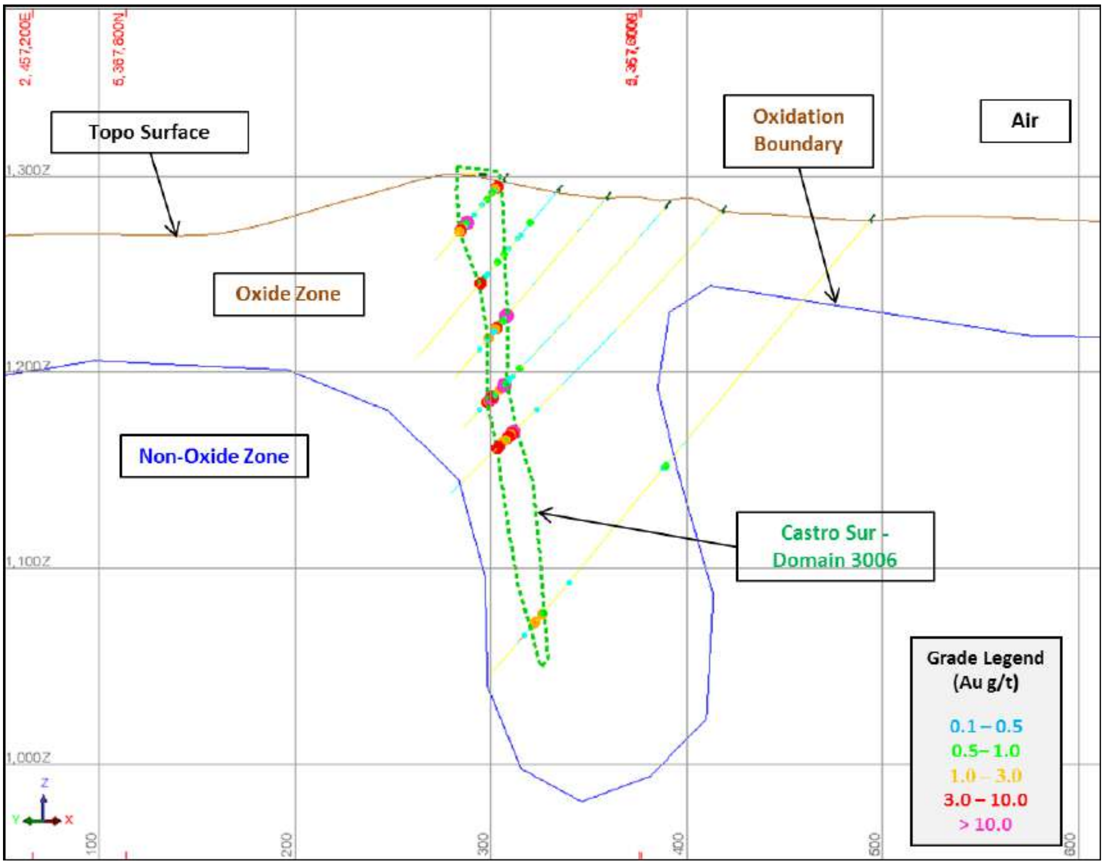


Figure 14-9: Castro Sur- Oblique Cross Section #4: Showing Au Domains and Drilling (Cube, 2018)

14.5. Domain Boundary Analysis

A boundary analysis was undertaken to assess the grade boundary characteristics between the major domains of each prospect at Calcatreu and the waste material. The boundary analysis plots the average grade of Au and Ag, based on a nominal distance above and below the boundary of interest (Figure 14-10 to Figure 14-15).

The domain boundary plots clearly show sharp (or hard) boundary between the main mineralisation domains for each prospect and the waste material. The analysis provides confidence that the mineralisation domains in each prospect created can be used as hard boundaries to constrain the sample data during the sample compositing process.

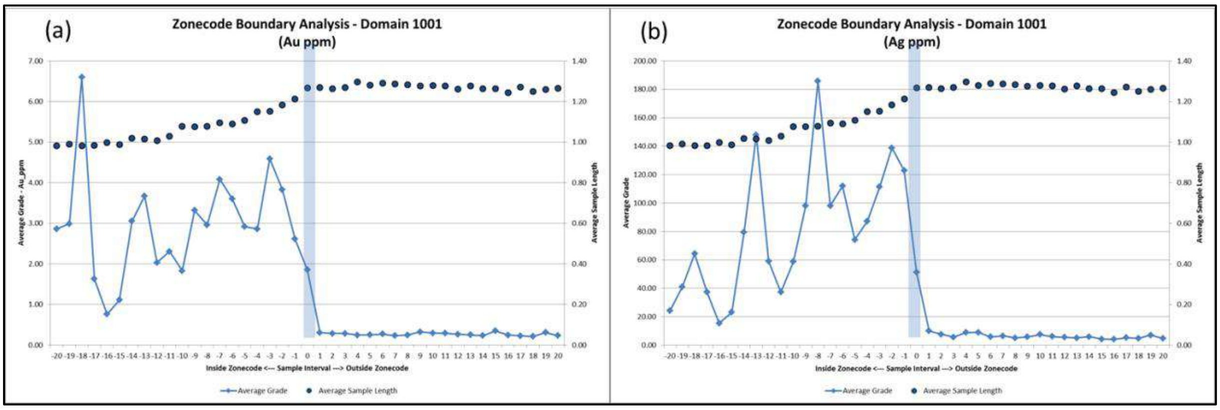


Figure 14-10: Vein 49 - Boundary Analysis for Domain 1001 (a) Au g/t, (b) Ag g/t (Cube, 2018)

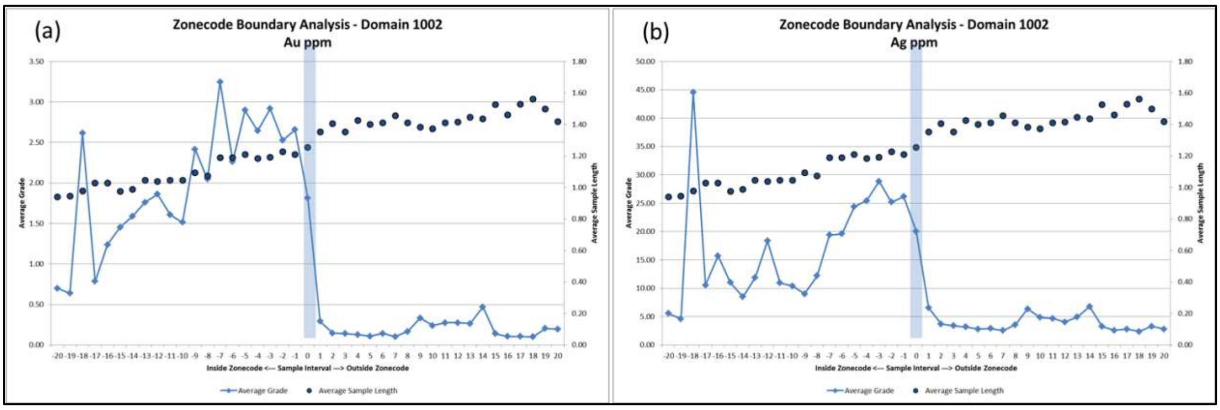


Figure 14-11: Vein 49 - Boundary Analysis for Domain 1002: (a) Au g/t, (b) Ag g/t (Cube, 2018)

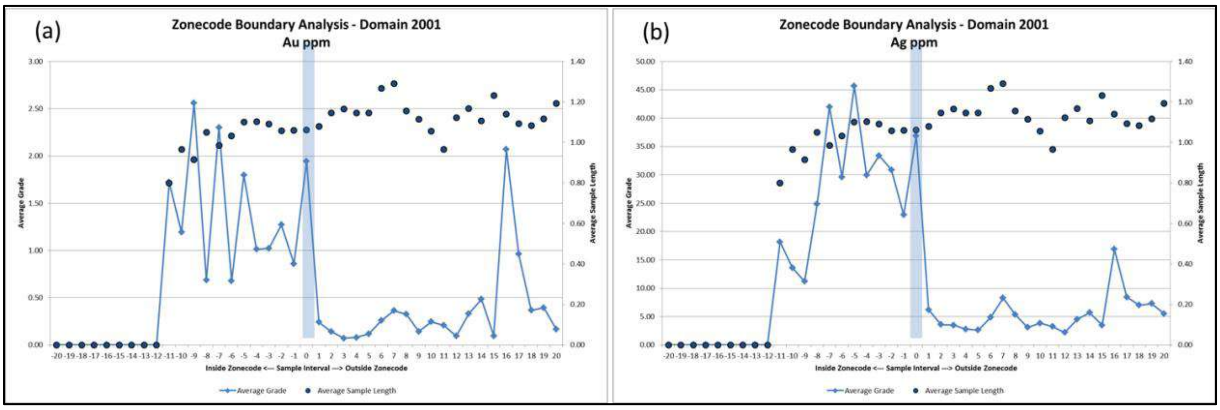


Figure 14-12: Nelson - Boundary Analysis for Domain 2001: (a) Au g/t, (b) Ag g/t (Cube, 2018)

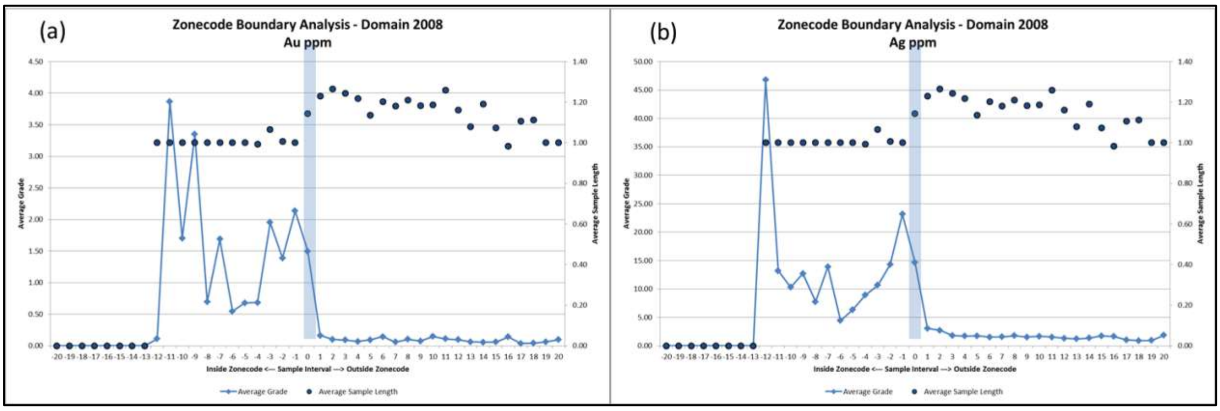


Figure 14-13: Nelson - Boundary Analysis for Domain 2008: (a) Au g/t, (b) Ag g/t (Cube, 2018)

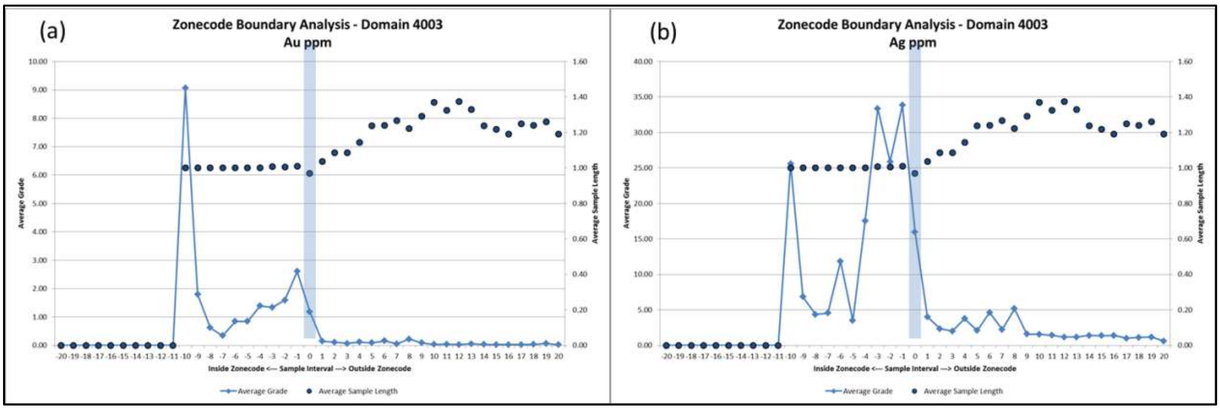


Figure 14-14: Belen - Boundary Analysis for Domain 4003: (a) Au g/t, (b) Ag g/t (Cube, 2018)

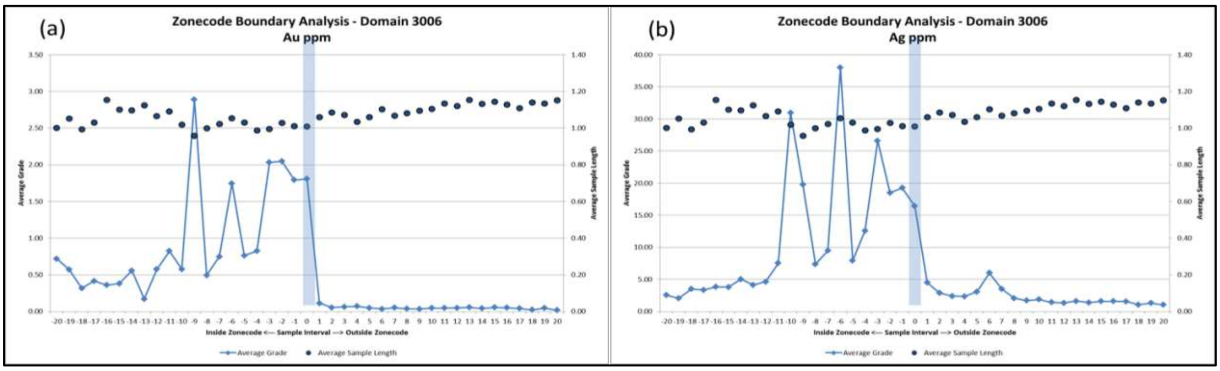


Figure 14-15: Castro Sur - Boundary Analysis for Domain 3006: (a) Au g/t, (b) Ag g/t (Cube, 2018)

14.6. Domain Coding and Compositing

14.6.1. Sample Flagging

Drilling intervals within mineralised domains were flagged with a unique database code in the following manner:

- Within the Cube Calcatreu MS Access database, a table named "zonecode" was created to store the unique codes;
- The mineralised domain was initially coded using the drill hole intersect wireframe process in Surpac to write a unique code representing the interpreted domain;
- A four-digit numbering system was created to define the domains which were stored in the 'zonecode' field within the zonecode table (e.g. 1001 = Calcatreu domain 1001); and
- Cube graphically checked each intercept and made manual adjustments where necessary.

The zonecode table unique codes were used to extract sample and composite data combinations for later statistical analysis and estimation.

14.6.2. Sample Lengths

A sample length analysis was conducted for all mineralised domains separated and subset by each prospect with log-normal histogram plots representing each prospect shown in Figure 14-16 to Figure 14-19.

The sampling was predominately conducted on one-metre intervals (mostly representing RC drilling sampling intervals). Sample lengths for DD core varied from 0.5 m to 2.0 m and controlled by geology. In the zones of interest (e.g. Au grades > 1.0 g/t Au), Aquiline DD core was sampled mostly between 0.5 m to 1.5 m intervals. For PAS DD drilling, the sample intervals were wider, and mostly between 1.5 m to 2.0 m.

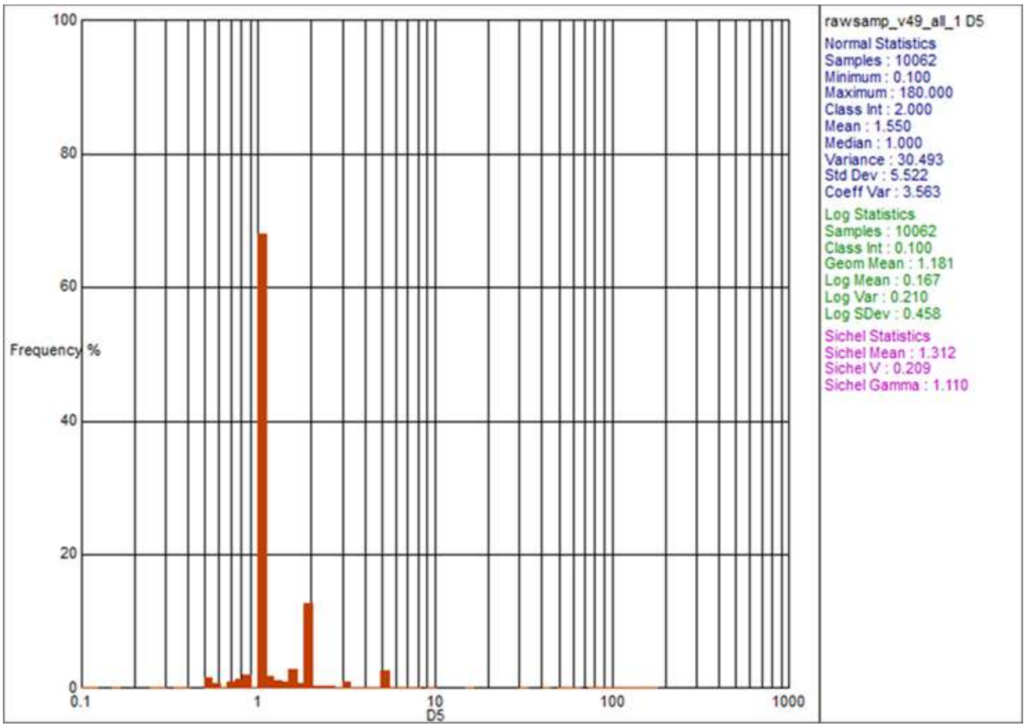


Figure 14-16: Vein 49 – Histogram Plot of Sample Lengths (Cube, 2018)

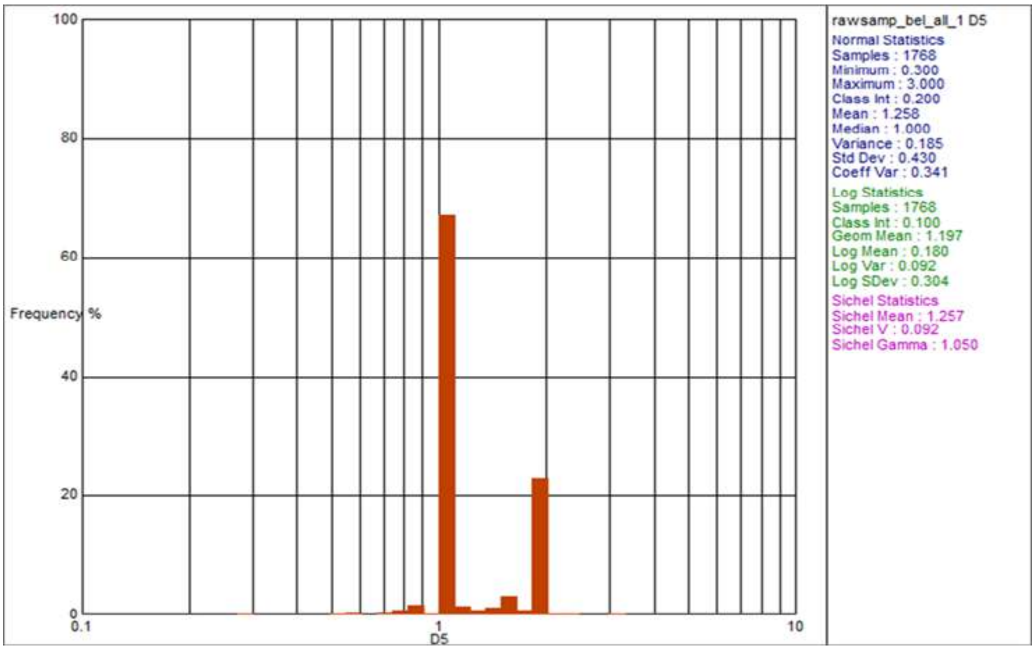


Figure 14-17: Belen - Histogram Plot of Sample Lengths (Cube, 2018)

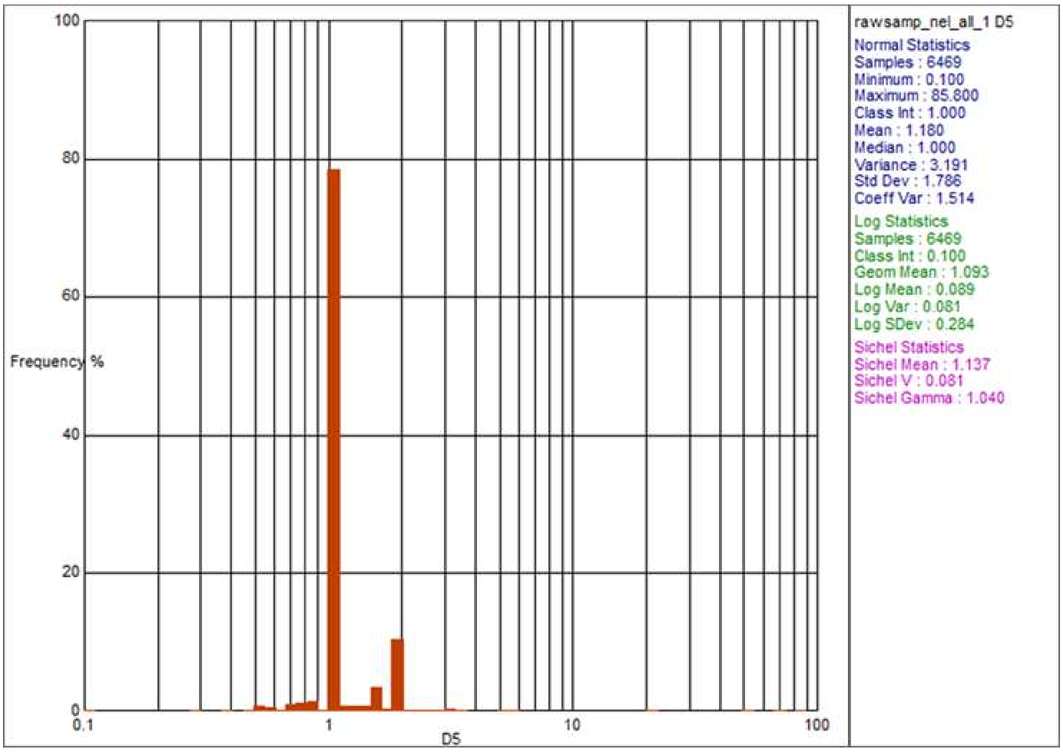


Figure 14-18: Nelson - Histogram Plot of Sample Lengths (Cube, 2018)

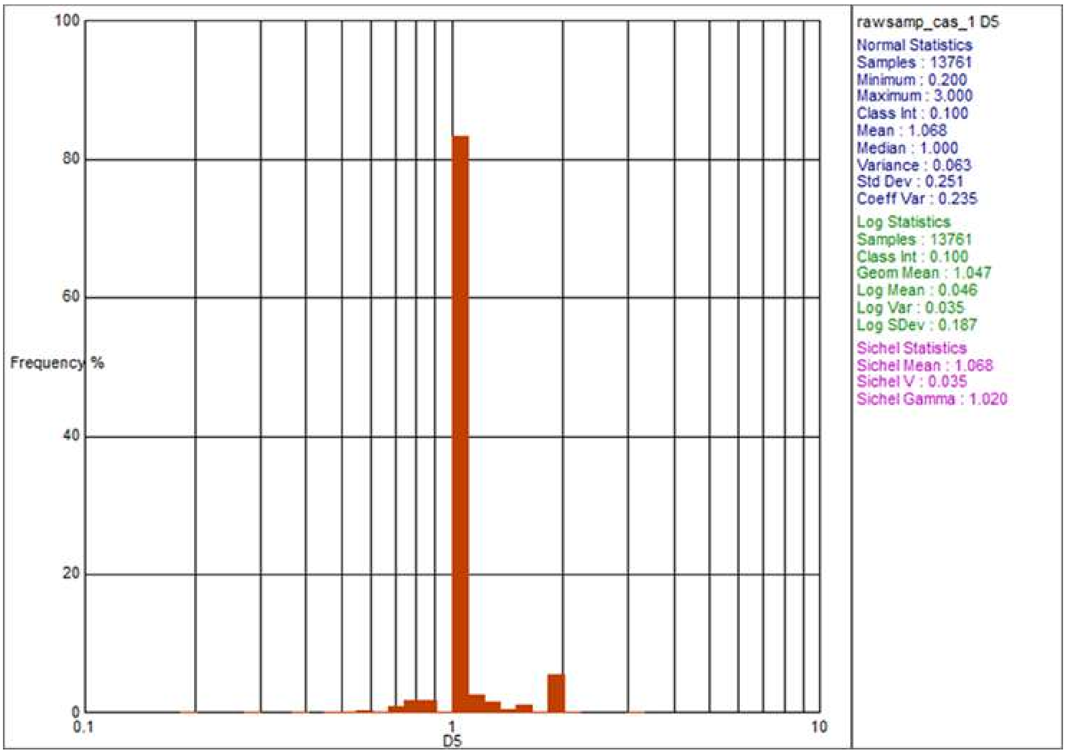


Figure 14-19: Castro Sur - Histogram Plot of Sample Lengths (Cube, 2018)

14.6.3. Compositing Methodology

Several factors were considered when determining the most appropriate compositing length for the various mineralised styles at Calcatreu;

- Sample length statistics;
- Mineralisation complexity and dimensions;
- Homogeneity of gold mineralisation in the zones; and
- Suitability of the composites for the MRE.

The drill hole sampling information was composited to a one-metre composite interval in order to reduce the variability inherent in raw samples or a smaller composite length relative to estimation resource model block dimensions. In addition, the compositing routine aims to assist in reducing the nugget effect and improving the quality of variography when carrying out spatial data analysis.

The selection of a suitable support for the Calcatreu proved problematic due to the variable sample lengths and the narrow nature of some mineralisation domain widths and the problems associated with core loss.

The compositing routine was performed within Surpac using the “Best Fit” algorithm. The “Best Fit” routine allocates the same proportion of the residue composite length (i.e. if last composite of a domain is <50% of the composite length) to the drill hole composites, resulting in slight differences in composite lengths between drill holes. The “Best Fit” routine reduces potential issues associated with residue composites located at domain boundaries locations.

The structure for composite files created in Surpac is summarised in Table 14-8.

Table 14-8: Structure of Surpac Composite Files (Cube, 2018)

Field	Description
D1	Au g/t – Uncut composite grade
D2	Ag g/t – Uncut composite
D3	Au_equ – Uncut composite calculated filed
D4	Hole ID
D5	Interval Depth From
D6	Interval Depth To
D8	Downhole Composite Length
D15	Zonecode (Domain number)
D30	Au g/t – Cut composites, where applied.
D40	Ag g/t – Cut composites, where applied.
D50	Au equ – Cut composites, calculated

A complete listing of the mineralisation zonecodes and number of composites is shown in Table 14-9.

Table 14-9: Listing of All Domain Codes and Composites (Cube, 2018)

Prospect	Domain Code	3DM Wireframe Vol. (m3)	Composite Length	# of Holes	# of Comps
Vein 49	1001	18,979	1	3	18
Vein 49	1002	3,971,369	1	162	2,596
Vein 49	1003	336,968	1	37	370
Vein 49	1004	22,742	1	4	14
Sub-Total		**4,350,058**			**2,998**
Nelson	2001	210,772	1	16	229
Nelson	2002	139,858	1	8	61
Nelson	2003	9,209	1	1	4
Nelson	2004	289,496	1	27	190
Nelson	2005	81,748	1	6	26
Nelson	2006	12,775	1	1	10
Nelson	2007	10,042	1	2	6
Nelson	2008	524,434	1	37	279
Nelson	2009	145,965	1	13	99
Nelson	2010	26,068	1	2	14
Sub-Total		**4,350,058**			**398**
Belen	4001	38,473	1	1	4
Belen	4002	38,849	1	5	24
Belen	4003	231,680	1	15	114
Belen	4004	22,146	1	1	12
Sub-Total		**331,148**			**154**
Castro Sur	3001	128,895	1	7	93
Castro Sur	3002	145,012	1	9	139
Castro Sur	3003	352,837	1	17	199
Castro Sur	3004	310,803	1	15	184
Castro Sur	3005	60,868	1	2	22
Castro Sur	3006	1,387,889	1	40	715
Castro Sur	3007	95,760	1	4	50
Castro Sur	3008	79,712	1	5	28
Castro Sur	3009	276,632	1	10	170
Sub-Total		**2,838,408**			**963**
Total		**11,869,672**			**4,513**

14.7. Statistical Analysis

A statistical and visual analysis of the extracted one-metre downhole composites was undertaken for each of the mineralised domains. A key objective was to validate the definition of the mineralised domains and also to evaluate the need for special treatment of obvious statistical outliers (top cutting or grade capping).

14.7.1. Basic Statistics

The basic descriptive statistics for one-metre composite gold and silver grades in the mineralised domains are summarised in Table 14-10 and Table 14-11 and are shown as log probability plots in Figure 14-20 to Figure 14-29.

Table 14-10 Summary Basic Statistics for one-metre Composites by Domain for Au g/t- Uncut values (Cube, 2018)

Deposit	Domain	Number	Minimum	Maximum	Mean	Median	Std Dev	CoV
CALCATREU	**1001**	18	0.11	3.95	1.36	0.94	1.20	0.88
	1002	2 596	0.01	76.90	2.41	0.92	4.28	1.78
	1003	370	0.02	69.70	3.76	0.77	8.07	2.15
	1004	14	0.02	14.20	2.42	0.48	4.46	1.84
	2001	229	0.01	16.30	1.28	0.58	2.03	1.59
	2002	61	0.03	28.00	2.34	0.96	4.14	1.77
	2003	4	0.07	3.93	1.17	0.11	1.85	1.58
	2004	190	0.04	21.00	1.84	0.77	2.58	1.40
	2005	26	0.24	10.80	2.18	0.71	2.47	1.13
	2006	10	0.12	2.25	1.02	0.99	0.68	0.67
	2007	6	0.04	3.72	1.81	2.01	1.35	0.74
	2008	279	0.01	27.10	1.66	0.53	3.04	1.84
	2009	99	0.04	36.50	1.75	0.53	4.05	2.31
	2010	14	0.07	4.14	0.80	0.28	1.21	1.50
	4001	4	0.05	3.08	0.85	0.11	1.49	1.76
	4002	24	0.07	11.85	2.65	1.21	3.36	1.27
	4003	114	0.01	13.75	1.67	0.72	2.59	1.55
	4004	12	0.24	4.86	2.07	0.91	1.57	0.76
	1101	4 525	0.00	16.45	0.15	0.07	0.46	2.97
	2101	414	0.01	1.81	0.12	0.07	0.17	1.36
	2102	466	0.01	1.78	0.11	0.06	0.17	1.57
CASTRO SUR	**3001**	93	0.01	13.90	0.87	0.26	1.81	2.09
	3002	139	0.01	22.98	1.57	0.33	3.73	2.37
	3003	199	0.01	16.90	0.99	0.33	1.94	1.96
	3004	184	0.01	8.30	0.55	0.19	1.13	2.04
	3005	22	0.03	4.22	0.65	0.15	1.01	1.57
	3006	715	0.01	72.10	1.32	0.44	3.68	2.79
	3007	50	0.01	11.80	0.59	0.19	1.68	2.84
	3008	28	0.01	75.80	5.13	0.36	16.74	3.27
	3009	170	0.01	46.40	1.24	0.27	4.73	3.82

Table 14-11 Summary Basic Statistics for one-metre Composites by Domain for Ag g/t- Uncut values (Cube, 2018)

Deposit	Domain	Number	Minimum	Maximum	Mean	Median	Std Dev	CoV
CALCATREU	**1001**	18	2.10	20.70	8.73	7.60	5.38	0.62
	1002	2 596	0.50	594.00	22.65	9.26	40.24	1.78
	1003	370	0.60	754.00	43.12	16.40	89.57	2.08
	1004	14	0.60	54.20	6.74	1.70	13.94	2.07
	2001	229	0.01	416.00	30.47	8.15	58.61	1.92
	2002	61	1.30	206.00	25.53	12.40	32.87	1.29
	2003	4	2.40	7.90	4.85	3.20	2.53	0.52
	2004	190	0.70	94.00	13.31	8.09	14.83	1.11
	2005	26	0.01	114.00	20.99	6.50	29.32	1.40
	2006	10	1.80	11.30	3.69	2.50	3.08	0.84
	2007	6	1.50	23.60	10.55	8.30	8.72	0.83
	2008	279	0.01	274.00	15.98	6.20	30.76	1.93
	2009	99	0.60	300.00	13.52	5.07	34.24	2.53
	2010	14	1.30	62.00	11.17	4.30	16.82	1.51
	4001	4	0.01	3.50	1.75	0.60	1.71	0.97
	4002	24	1.60	132.00	31.44	12.00	43.40	1.38
	4003	114	0.60	242.00	23.26	7.50	39.70	1.71
	4004	12	6.20	209.00	65.38	40.90	64.17	0.98
	1101	4 525	0.01	319.46	3.66	2.00	9.28	2.53
	2101	414	0.01	20.60	2.49	1.90	2.16	0.87
	2102	466	0.01	38.20	2.18	1.44	3.04	1.40
CASTRO SUR	**3001**	93	0.01	125.00	5.08	1.50	16.04	3.16
	3002	139	0.01	163.00	6.05	2.50	15.58	2.57
	3003	199	0.01	98.80	6.13	2.60	12.37	2.02
	3004	184	0.01	190.00	5.65	1.85	16.21	2.87
	3005	22	0.01	6.40	1.94	1.30	1.61	0.83
	3006	715	0.01	1 189.50	15.43	4.70	61.14	3.96
	3007	50	0.01	45.60	8.60	6.20	9.00	1.05
	3008	28	0.50	78.60	8.70	1.90	19.48	2.24
	3009	170	0.50	780.00	22.58	4.56	88.02	3.90

The variability of gold and silver grade in the one-metre composites, as measured by the Co-efficient of Variation ("CoV") ranges from moderate to very high. The CoV is uniformly high in the economically most important Domains 1002, 1003 and 3006. In such cases, the use of a standard linear estimation method such as the OK estimation method is likely to produce over-smoothed block estimates.

The gold and silver distribution plots for these domains also do not show evidence of a strong multi-modal character and appear to point towards a coherent single population in most cases (with the possible exception of gold in Domain 1003 showing possible evidence of a second high-grade population from about 4.0 g/t Au upwards).

It is therefore Cube's opinion that the estimation of gold and silver grade in the three highlighted domains will be best dealt with using a Local Uniform Conditioning ("LUC") estimation approach, which is capable of both producing estimates at the SMU block scale, and better predicting the grade-tonnage distribution without over-smoothing of the estimates.

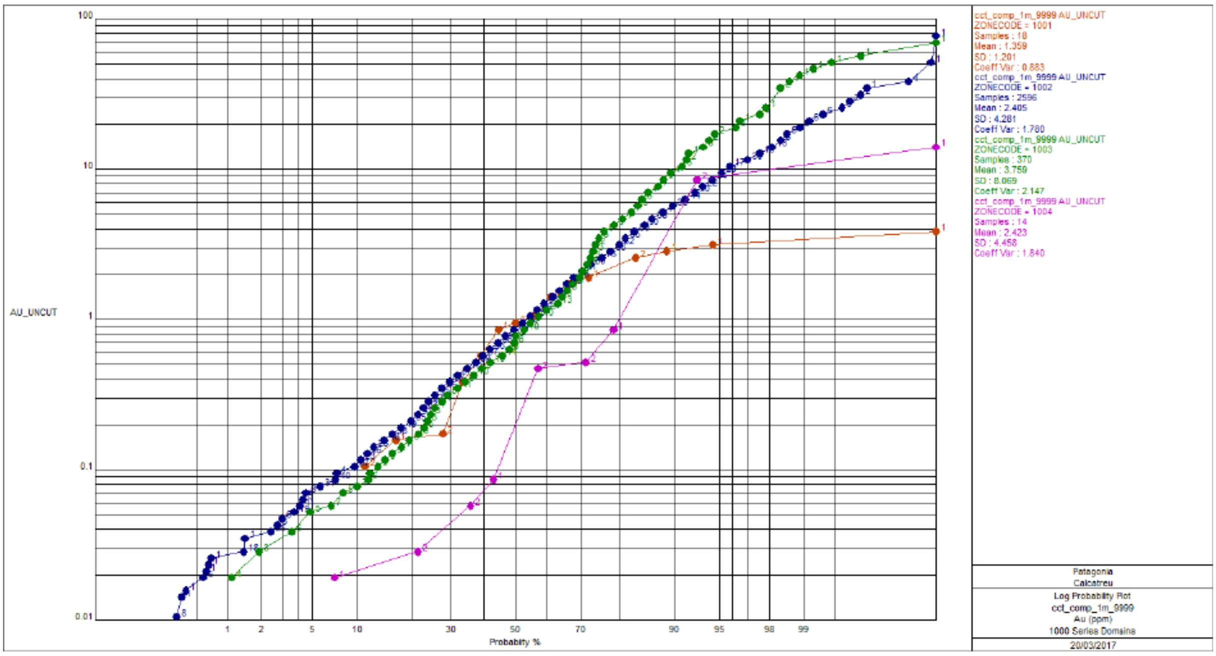


Figure 14-20 Vein 49 - 1000 Series Domains Log-Probability Plot (Au ppm) (Cube, 2018)

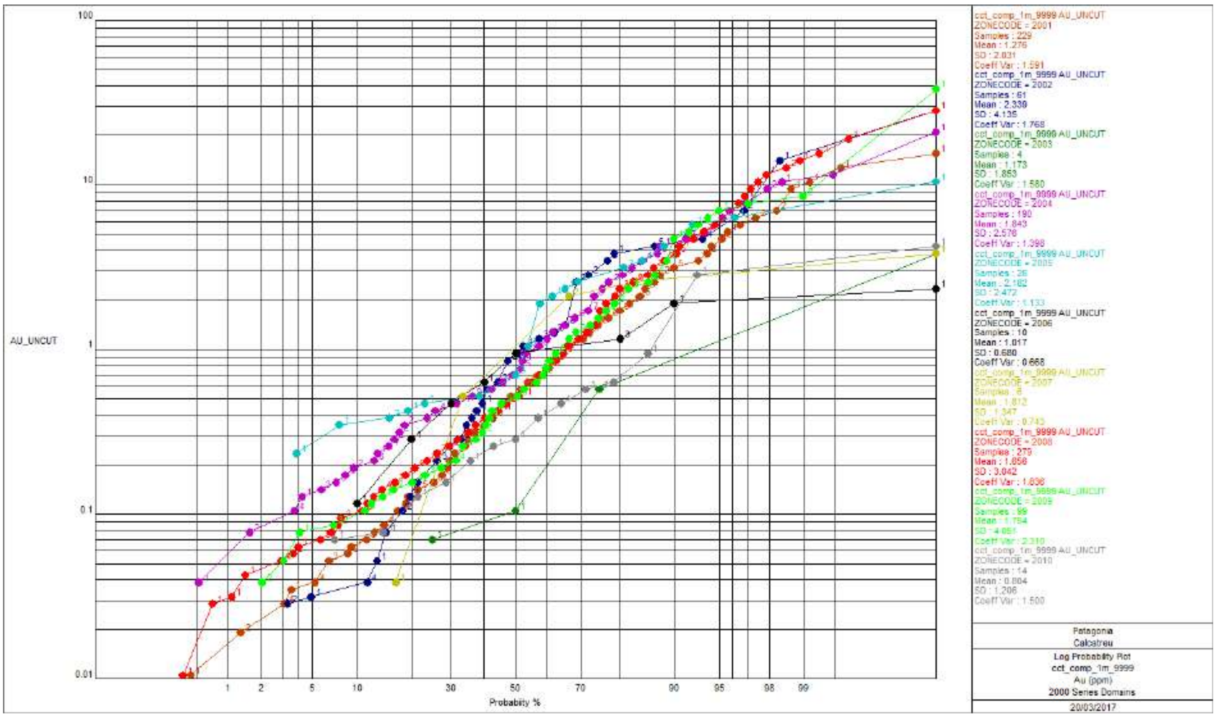


Figure 14-21 Nelson - 2000 Series Domains Log-Probability Plot (Au ppm) (Cube, 2018)

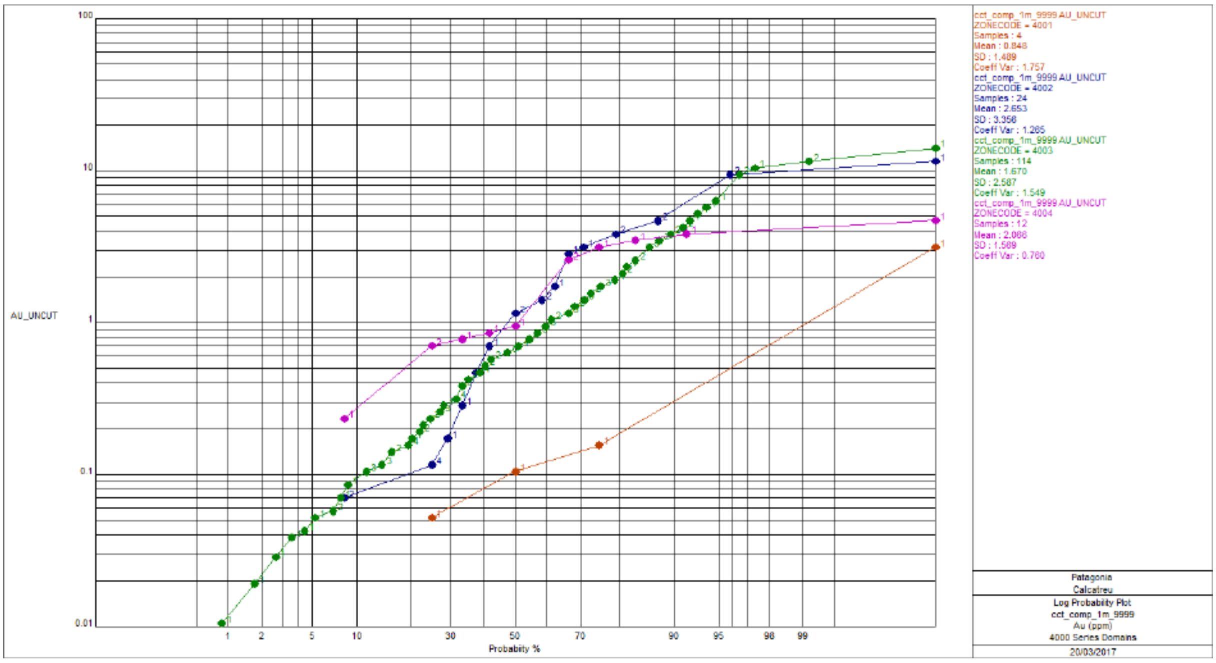


Figure 14-22 Belen - 4000 Series Domains Log-Probability Plot (Au ppm) (Cube, 2018)

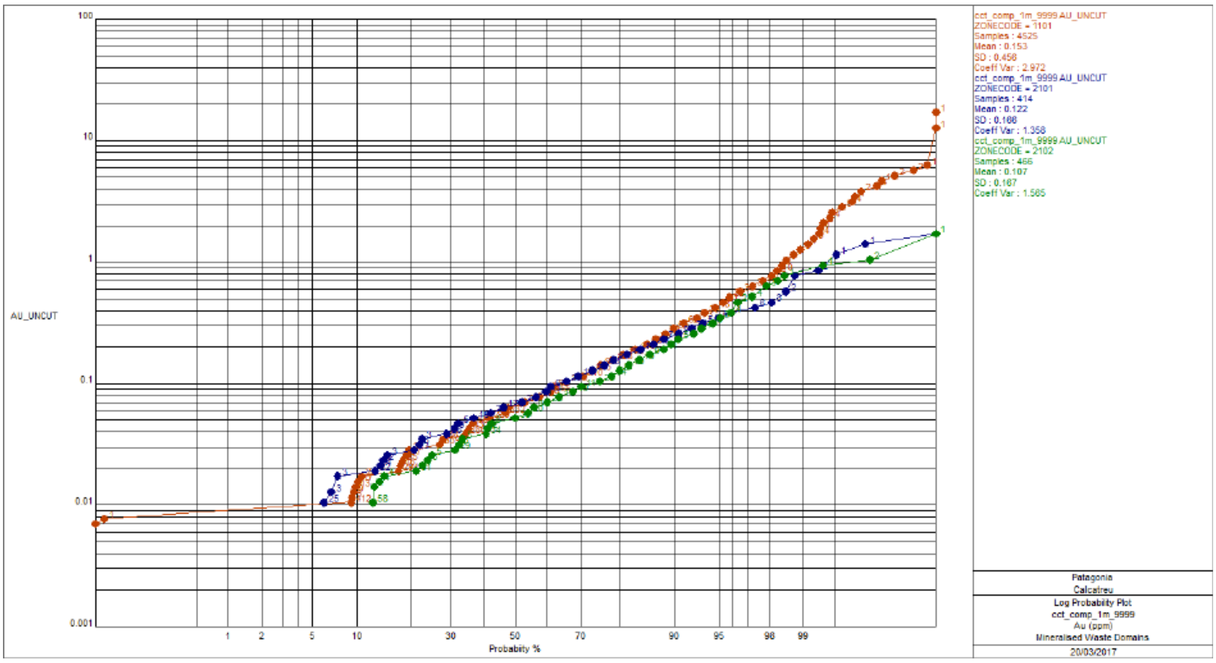


Figure 14-23 All Zones – Mineralised Waste Domains Log-Probability Plot (Au ppm) (Cube, 2018)

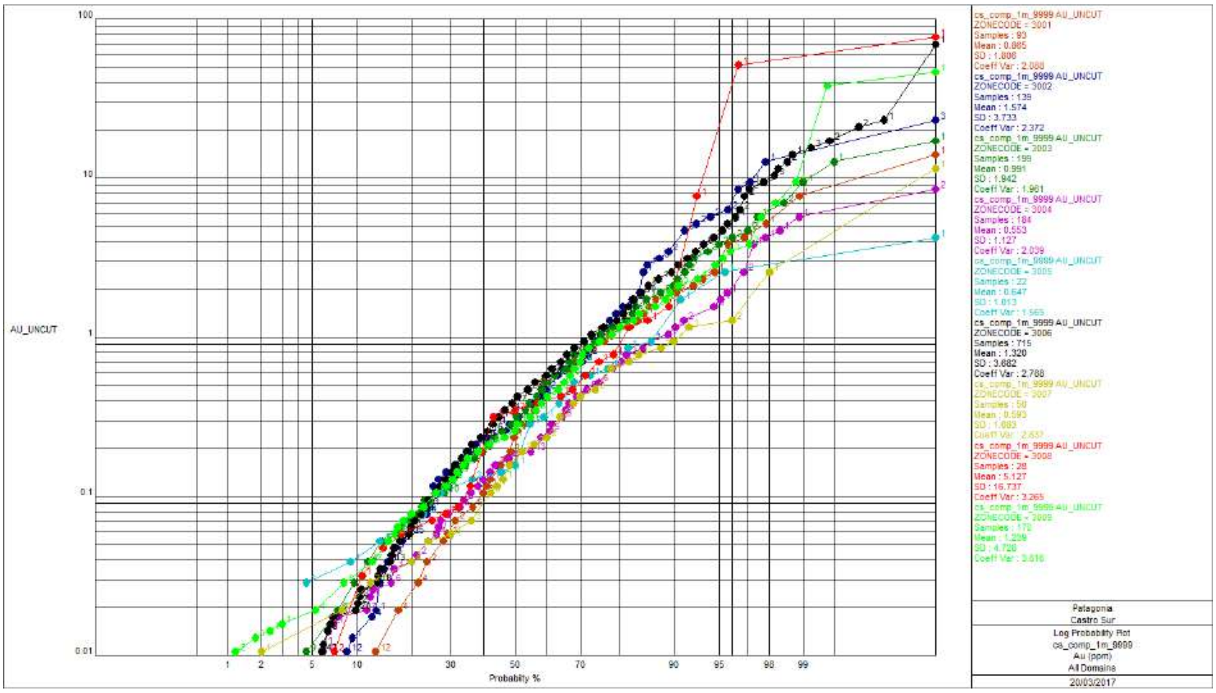


Figure 14-24 Castro Sur - 3000 Series Domains Log-Probability Plot (Au ppm) (Cube, 2018)

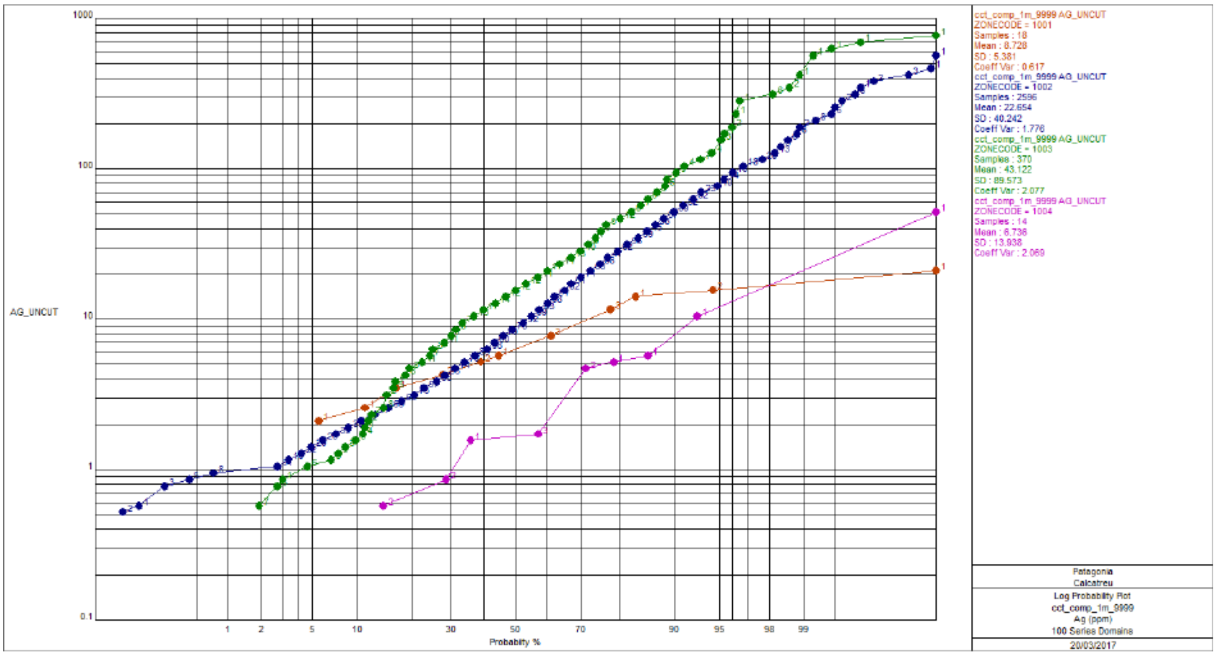


Figure 14-25 Vein 49 - 1000 Series Domains Log-Probability Plot (Ag ppm) (Cube, 2018)

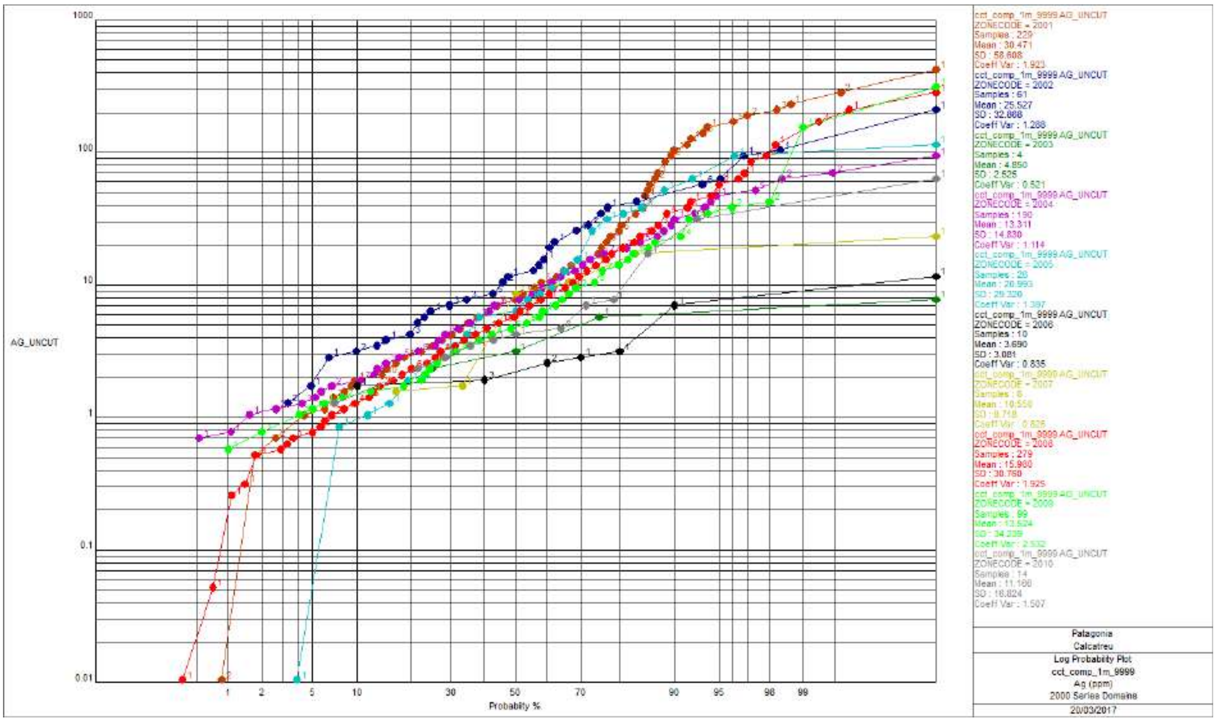


Figure 14-26 Nelson - 2000 Series Domains Log-Probability Plot (Ag ppm) (Cube, 2018)

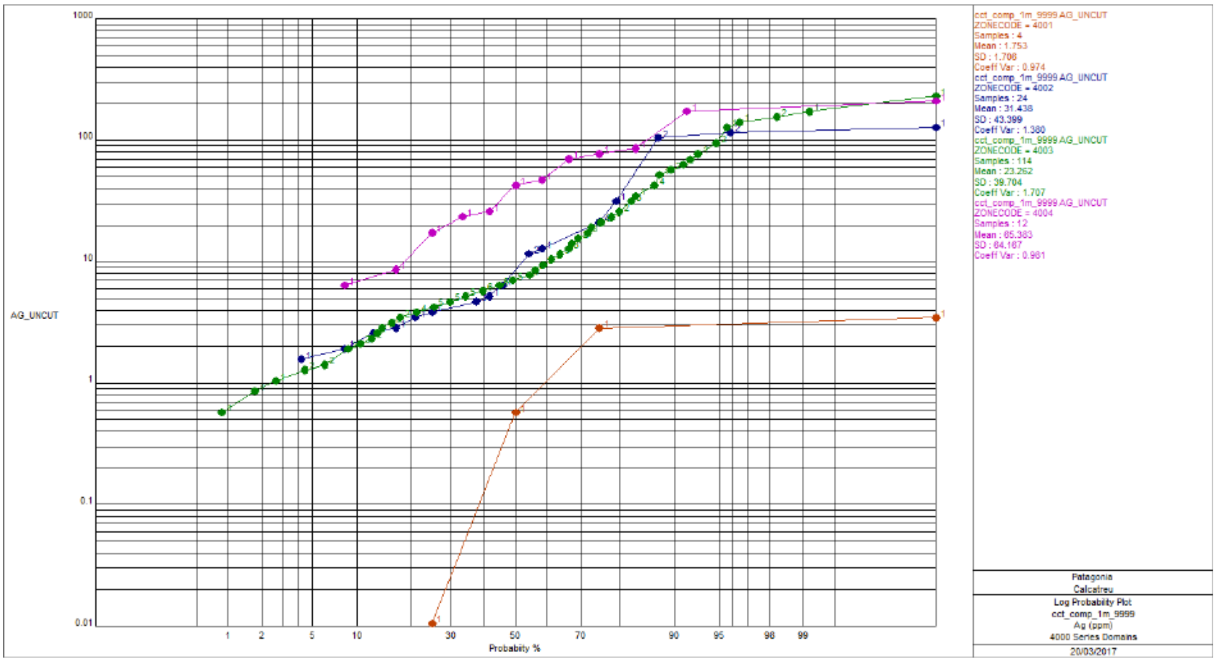


Figure 14-27 Belen - 4000 Series Domains Log-Probability Plot (Ag ppm) (Cube, 2018)

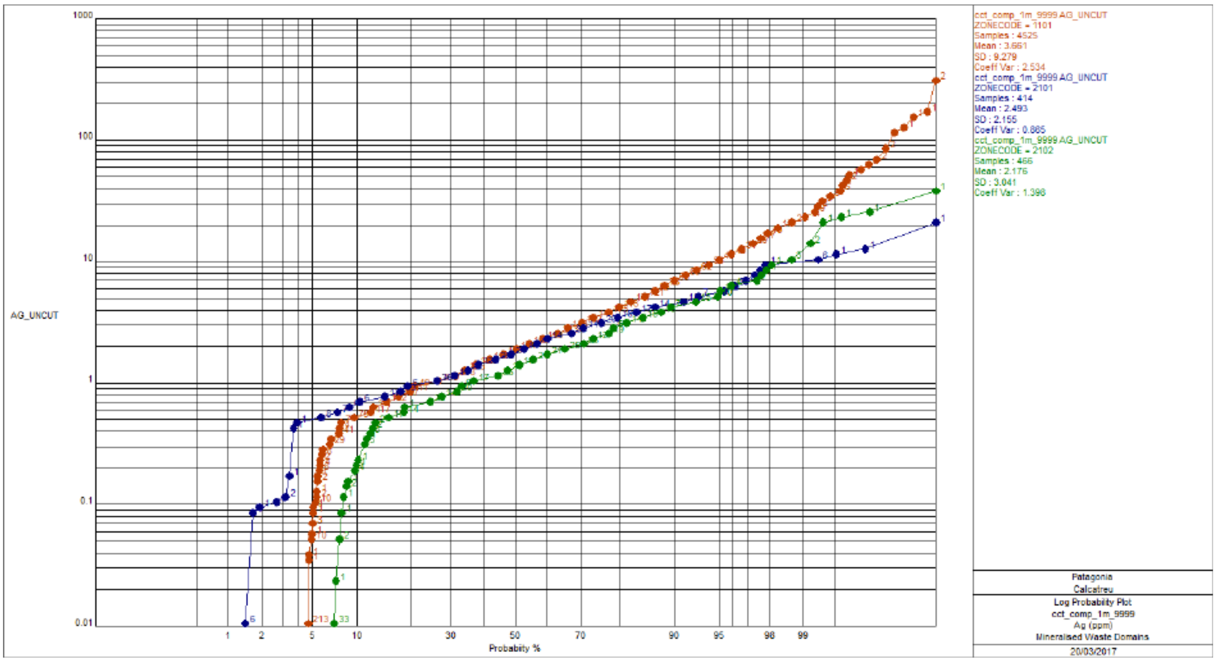


Figure 14-28 All Zones – Mineralised Waste Domains Log-Probability Plot (Ag ppm) (Cube, 2018)

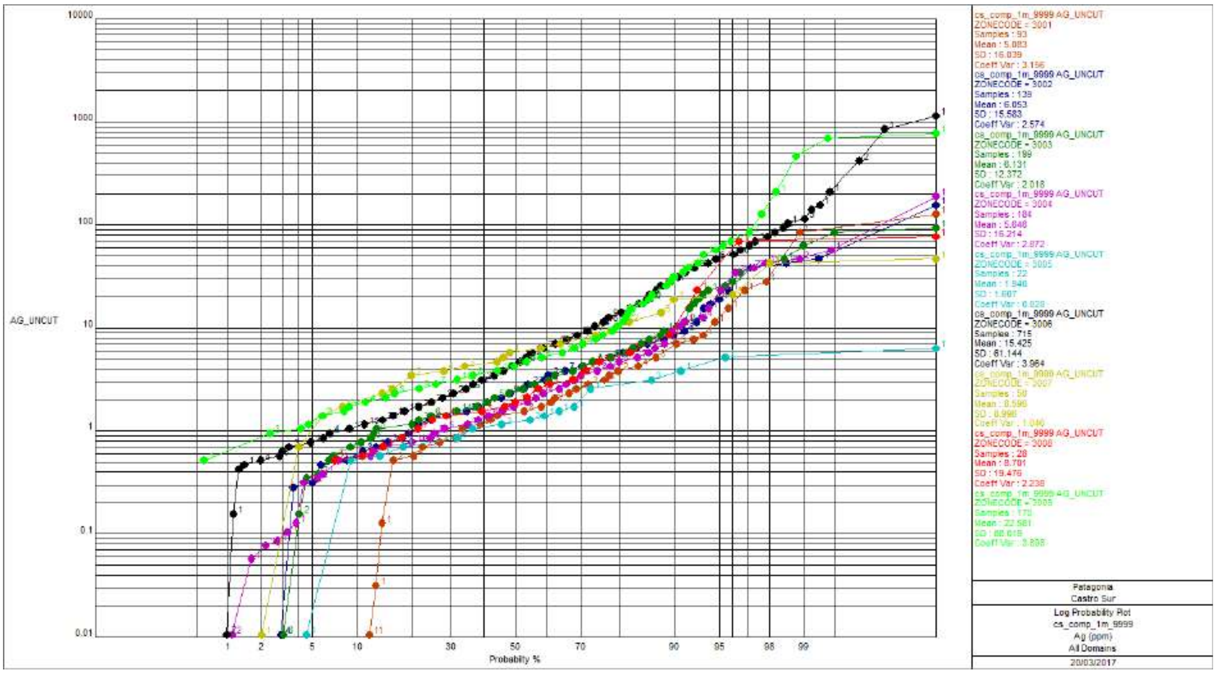


Figure 14-29 Castro Sur - 3000 Series Domains Log-Probability Plot (Ag ppm) (Cube, 2018)

14.7.2. Multi Element Analysis

From geological observations by the system contains gold-dominant mineralisation with low silver and base-metals. Precious metals are present as native metal, as alloys and sulphides, in close association with base metal sulphides (predominantly pyrite). The figures below show relationship plots between

Au and Ag values from the most recent drilling database for the main prospects at Calcatreu and summarised as follows:

- Vein 49: C-C of 0.71 has been calculated from the C-C plot from a data set of 33,386 paired samples (Figure 14-30);
- Nelson: C-C of 0.60 has been calculated from the C-C plot from a data set of 6,463 paired samples (Figure 14-31);
- Belen: C-C of 0.71 has been calculated from the C-C plot from a relatively small data set of 1,768 paired samples (Figure 14-32); and
- Castro Sur: C-C of 0.37 has been calculated from the C-C plot from a relatively small data set of 267 samples (Figure 14-33).

Overall, there is a good understanding of the correlation between Au-Ag mineralisation and base metal sulphide minerals. The correlation plots show a moderate to weak correlation between Au and Ag, but the sample data sets have not been subset by mineralisation domains, oxidation type or other possible lithological or structural controls.

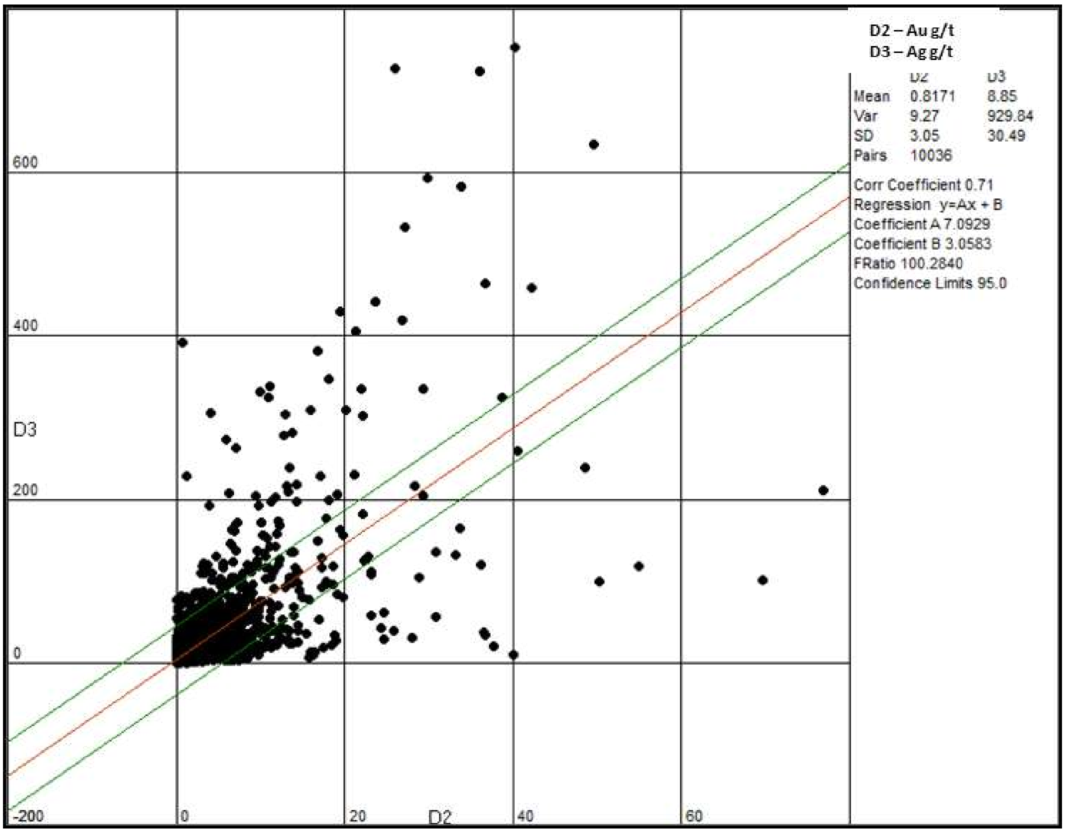


Figure 14-30: Vein 49 - Ag versus Au Correlation Plot for All Samples (Cube, 2018)

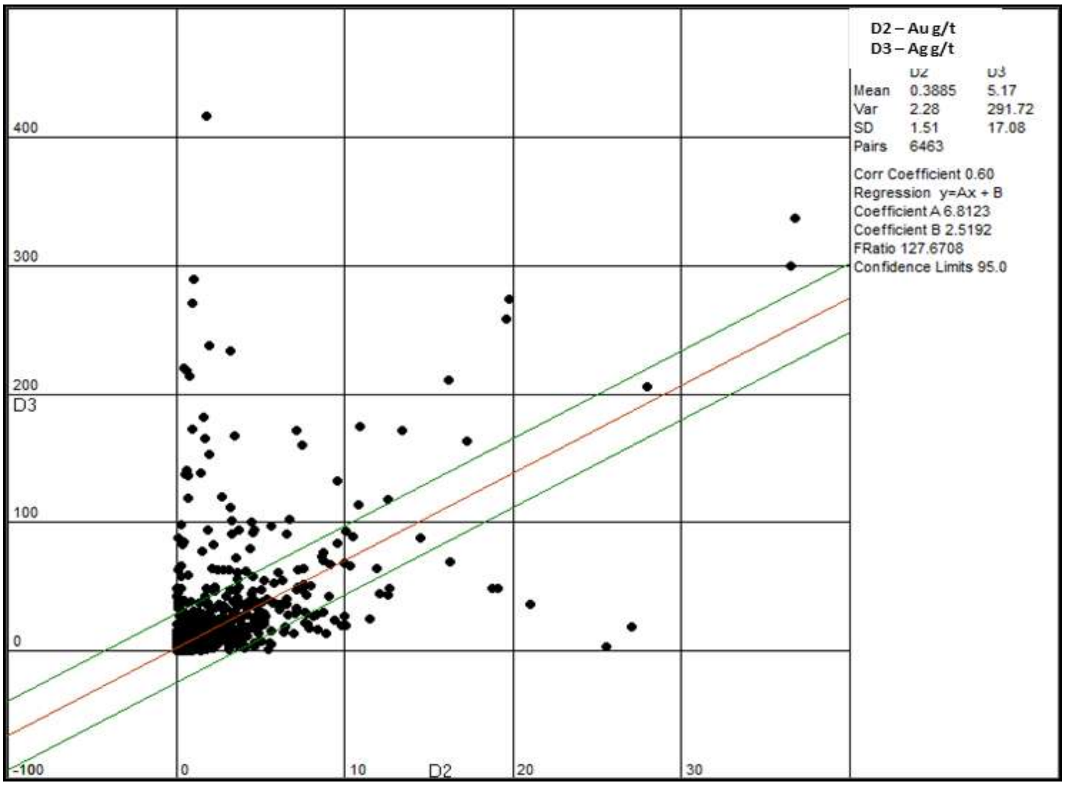


Figure 14-31: Nelson - Ag versus Au Correlation Plot for All Samples (Cube, 2018)

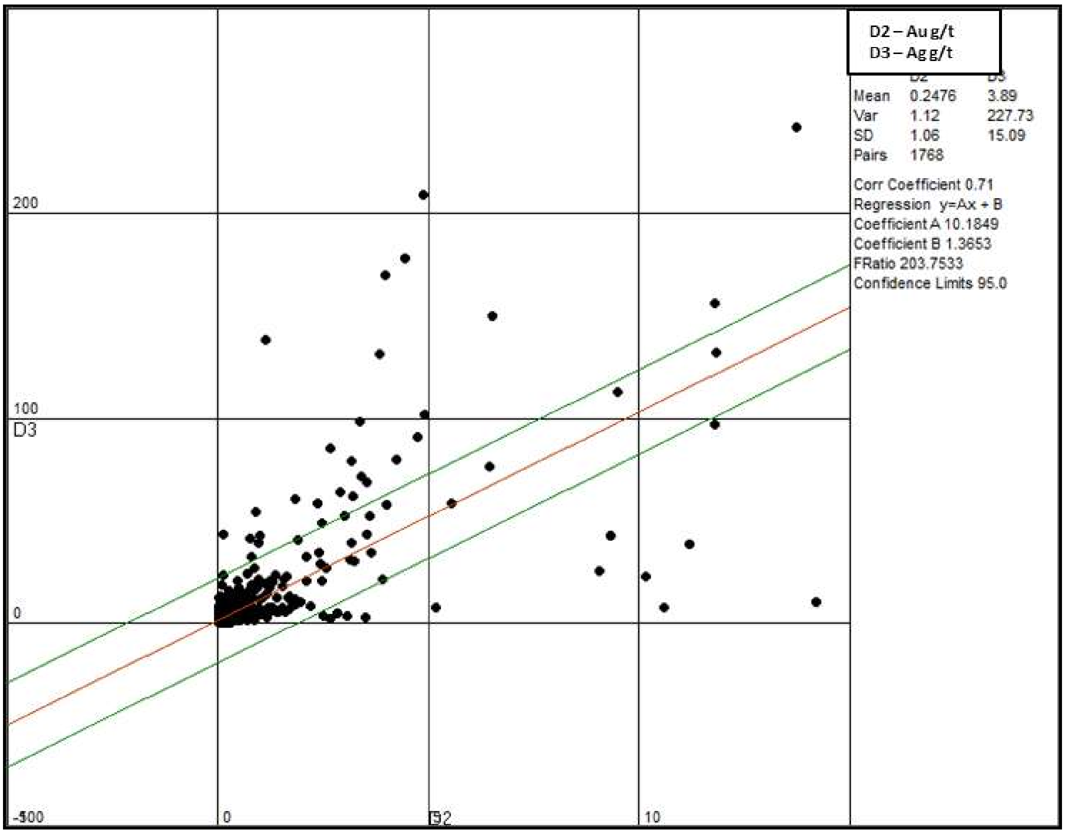


Figure 14-32: Belen - Ag versus Au Correlation Plot for All Samples (Cube, 2018)

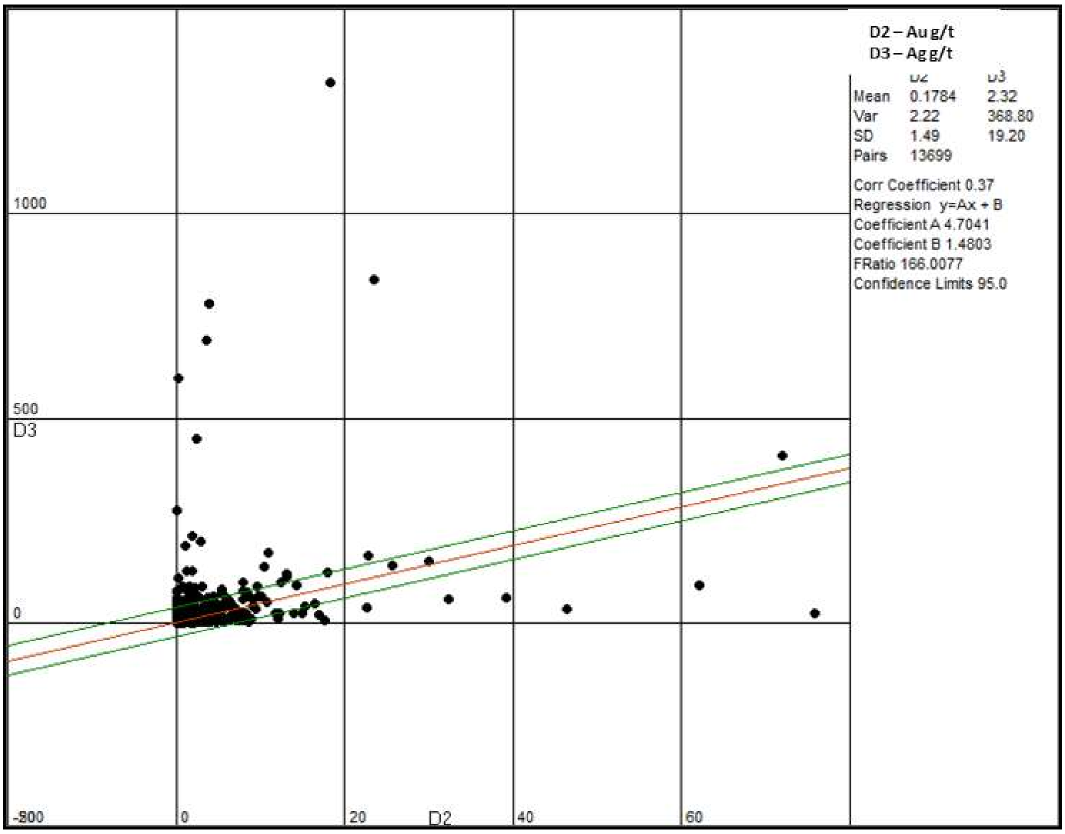


Figure 14-33: Castro Sur - Ag versus Au Correlation Plot for All Samples (Cube, 2018)

Other observations from multi element analyses:

- There is a strong correlation with high-grade Au-Ag mineralisation and Fe-oxide (derived from pyrite);
- Overall, the Au/Ag ratio is approximately 0.14 (i.e. 1:7), which has been estimated for primary mineralisation. PGD has noted high values for base metals, including up to 2.0% Zn and 1.2% Pb as observed in Zn and Pb sulphides;
- A weak to moderate correlation exist in primary ore between Au-Ag (CI= 0.63) being higher for Pb-Zn (CI= 0.86). Correlation Indexes are lower in oxidised intercepts. Au-Ag (CI= 0.54) and between Pb-Zn (CI= 0.33);
- Most sulphide content in non-oxidised veins is very low, showing sulphur values as low as 0.07%;
- Arsenic values are also very low indicating arsenopyrite is rare or not present; and
- Au grades display a wider “halo” from surface to shallow depths commonly associated to quartz veins or zones of quartz veining and stockwork; in other cases, related to argillised or highly fractured zones (± veining) with abundant oxides of Fe and Mn.

14.8. Grade Capping

Cube reviewed the statistics of the composites to check for outlier composite grades prior to estimation. The composite data were reviewed for each domain and top cuts were chosen, where considered appropriate, using the following criteria:

- By consideration of the stability of the upper tail of the grade distribution, as observed in log-probability plots and log-histograms; and
- By graphical inspection of the spatial grade distribution.

High-grade top cuts were applied to the gold and silver composite data for estimation in the various domains as listed in Table 14-12 and Table 14-13.

Table 14-12 Mineralisation Domains and High-Grade Capping – Au g/t (Cube, 2018)

Deposit	Domain	Top Cut	No. Cut	Uncut Mean	Cut Mean	%Mean Reduction	Uncut CoV	Cut CoV	%CoV Reduction
CALCATREU	1001	No Cut	0	1.36	1.36	0.0%	0.88	0.88	0.0%
	1002	35	6	2.41	2.38	-1.1%	1.78	1.67	-6.0%
	1003	50	2	3.76	3.69	-1.8%	2.15	2.06	-4.1%
	1004	8	3	2.42	1.94	-19.9%	1.84	1.70	-7.7%
	2001	12	2	1.28	1.26	-1.6%	1.59	1.51	-5.2%
	2002	10	2	2.34	1.98	-15.3%	1.77	1.21	-31.6%
	2003	No Cut	0	1.17	1.17	0.0%	1.58	1.58	0.0%
	2004	15	1	1.84	1.81	-1.7%	1.40	1.31	-6.5%
	2005	8	1	2.18	2.07	-4.9%	1.13	1.02	-9.9%
	2006	No Cut	0	1.02	1.02	0.0%	0.67	0.67	0.0%
	2007	No Cut	0	1.81	1.81	0.0%	0.74	0.74	0.0%
	2008	15	3	1.66	1.59	-3.9%	1.84	1.65	-10.1%
	2009	10	1	1.75	1.49	-15.2%	2.31	1.46	-36.8%
	2010	No Cut	0	0.80	0.80	0.0%	1.50	1.50	0.0%
	4001	No Cut	0	0.85	0.85	0.0%	1.76	1.76	0.0%
	4002	6	3	2.65	2.12	-20.1%	1.27	1.02	-19.2%
	4003	No Cut	0	1.67	1.67	0.0%	1.55	1.55	0.0%
	4004	No Cut	0	2.07	2.07	0.0%	0.76	0.76	0.0%
	1101	5	7	0.15	0.15	-2.6%	2.97	2.33	-21.6%
	2101	No Cut	0	0.12	0.12	0.0%	1.36	1.36	0.0%
	2102	No Cut	0	0.11	0.11	0.0%	1.57	1.57	0.0%
CASTRO SUR	**3001**	8	1	0.87	0.80	-7.4%	2.09	1.75	-16.2%
	3002	18	3	1.57	1.47	-6.6%	2.37	2.15	-9.4%
	3003	12	2	0.99	0.96	-2.8%	1.96	1.81	-7.6%
	3004	No Cut	0	0.55	0.55	0.0%	2.04	2.04	0.0%
	3005	No Cut	0	0.65	0.65	0.0%	1.57	1.57	0.0%
	3006	25	1	1.32	1.26	-4.9%	2.79	2.16	-22.6%
	3007	4	1	0.59	0.44	-26.3%	2.84	1.59	-44.1%
	3008	8	2	5.13	1.21	-76.4%	3.27	2.00	-38.8%
	3009	15	2	1.24	0.91	-26.5%	3.82	2.15	-43.6%

Table 14-13 Mineralisation Domains and High-Grade Capping – Ag g/t (Cube, 2018)

Deposit	Domain	Top Cut	No. Cut	Uncut Mean	Cut Mean	%Mean Reduction	Uncut CoV	Cut CoV	%CoV Reduction
CALCATREU	1001	No Cut	0	8.73	8.73	0.0%	0.62	0.62	0.0%
	1002	400	5	22.65	22.52	-0.6%	1.78	1.72	-3.0%
	1003	500	4	43.12	41.24	-4.4%	2.08	1.86	-10.3%
	1004	No Cut	0	6.74	6.74	0.0%	2.07	2.07	0.0%
	2001	250	3	30.47	29.48	-3.2%	1.92	1.82	-5.5%
	2002	125	1	25.53	24.20	-5.2%	1.29	1.09	-15.1%
	2003	No Cut	0	4.85	4.85	0.0%	0.52	0.52	0.0%
	2004	No Cut	0	13.31	13.31	0.0%	1.11	1.11	0.0%
	2005	No Cut	0	20.99	20.99	0.0%	1.40	1.40	0.0%
	2006	No Cut	0	3.69	3.69	0.0%	0.84	0.84	0.0%
	2007	No Cut	0	10.55	10.55	0.0%	0.83	0.83	0.0%
	2008	250	1	15.98	15.89	-0.5%	1.93	1.89	-1.8%
	2009	50	2	13.52	9.89	-26.9%	2.53	1.15	-54.5%
	2010	No Cut	0	11.17	11.17	0.0%	1.51	1.51	0.0%
	4001	No Cut	0	1.75	1.75	0.0%	0.97	0.97	0.0%
	4002	60	5	31.44	20.52	-34.7%	1.38	1.07	-22.2%
	4003	175	2	23.26	22.65	-2.6%	1.71	1.62	-5.0%
	4004	100	2	65.38	50.47	-22.8%	0.98	0.69	-29.4%
	1101	100	6	3.66	3.53	-3.6%	2.53	1.77	-30.3%
	2101	No Cut	0	2.49	2.49	0.0%	0.87	0.87	0.0%
	2102	No Cut	0	2.18	2.18	0.0%	1.40	1.40	0.0%
CASTRO SUR	3001	50	2	5.08	3.85	-24.2%	3.16	2.11	-33.3%
	3002	60	1	6.05	5.31	-12.2%	2.57	1.73	-32.6%
	3003	No Cut	0	6.13	6.13	0.0%	2.02	2.02	0.0%
	3004	70	1	5.65	4.99	-11.5%	2.87	2.00	-30.5%
	3005	No Cut	0	1.94	1.94	0.0%	0.83	0.83	0.0%
	3006	500	2	15.43	13.99	-9.3%	3.96	2.78	-29.9%
	3007	No Cut	0	8.60	8.60	0.0%	1.05	1.05	0.0%
	3008	50	2	8.70	6.86	-21.1%	2.24	1.89	-15.4%
	3009	200	3	22.58	14.81	-34.4%	3.90	2.26	-41.9%

On a naïve statistical basis, both the gold and silver grade caps are predicted to reduce global metal by approximately 4%.

14.9. Variography Analysis

14.9.1. Trend Analysis

Grade distribution plots were created on raw samples for Au and Ag within the mineralisation domains in order to ascertain any discernible grade trends with azimuth, dip and plunge for each mineralisation envelope. The orientation discs created assist in later variography work as validation checks against the variography and ensure geological understanding is incorporated into the geostatistical analysis.

Figure 14-34 and Figure 14-35 show illustrations of the orientation discs correlated with the 3DM mineralisation trends for each of the Calcatreu Prospects. Although dip and azimuth orientations were easily identifiable, no plunge orientations were applied to the trends based on the grade distribution analysis.

Table 14-14 lists the orientation trends for each mineralisation domain at Calcatreu.

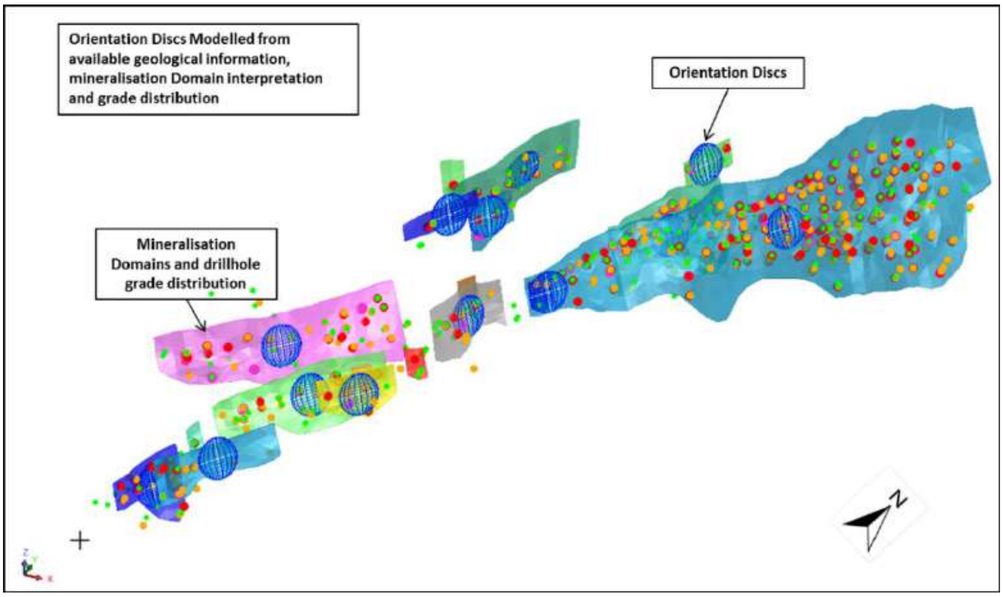


Figure 14-34: Orientation Discs Modelled for Vein 49, Belen and Nelson Prospects (Cube, 2018)

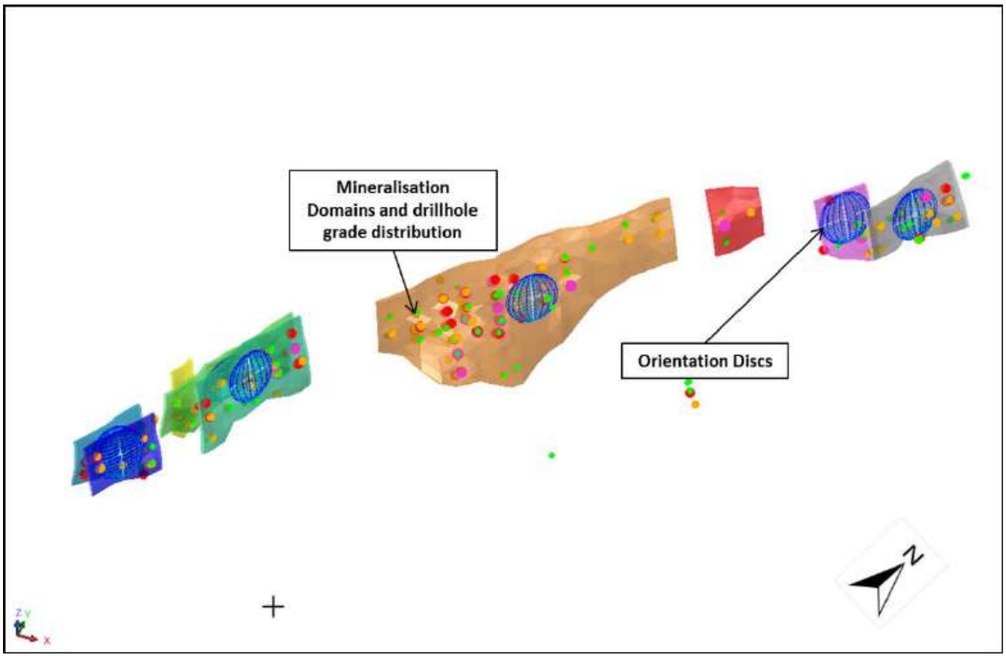


Figure 14-35: Orientation Discs Modelled for Castro Sur Prospect (Cube, 2018)

Table 14-14: Mineralisation Structural Trend Interpretations for Calcatreu Prospects (Cube, 2018)

Prospect	Mineralisation Domain #	Mineralisation Trend averages (dip/dip direction)
Vein 49	1001	-75/040
Vein 49	1002	-66/038, shallow NE plunge
Vein 49	1003	-72/038
Vein 49	1004	-74/027
Nelson	2001	-74/023
Nelson	2002	-67/040
Nelson	2003	-66/020
Nelson	2004	-62/040
Nelson	2005	-73/043
Nelson	2006	-60/042
Nelson	2007	-67/048
Nelson	2008	-69/045
Nelson	2009	-76/022
Nelson	2010	-76/035
Belen	4001	-76/035
Belen	4002	-78/040
Belen	4003	-82/208
Belen	4004	-80/063
Castro Sur	3001	-79/037
Castro Sur	3002	-85/032
Castro Sur	3003	-81/027
Castro Sur	3004	-86/208
Castro Sur	3005	-88/027
Castro Sur	3006	-82/049
Castro Sur	3007	-71/058
Castro Sur	3008	-74/043
Castro Sur	3009	-79/032

14.9.2. Variogram Modelling

A number of different variograms including Indicator, Raw and Gaussian were generated and interpreted as part of the Calcatreu Mineral Resource estimation process.

Variograms generated from the composited raw variable produced uninterpretable experimental variograms. To overcome the influence of the skewed distribution the raw data was transformed into the Gaussian space and validated by reviewing the distribution, scatter plots and correlation coefficients of the original and back transformed data.

Variogram models were based on the 1m composites derived from the mineralised domains as described in Section 14.5, initially evaluated after a Gaussian transformation, and then back-transformed. Where data for particular domains proved to be insufficient for variography analysis, parameters for grade estimation were adopted from other representative mineralisation.

Table 14-15 and Table 14-16 summarises the gold and silver variogram parameters for the key domains, with examples of back-transformed variogram models for gold and silver in Domain 1002 in Figure 14-36 and Figure 14-37 respectively. Variogram parameter substitutions are listed in Table 14-17.

Table 14-15 Variogram Model Parameters for Gold Grade – Sills Normalised to 100% (Cube, 2018)

Domain	Nugget	Spherical 1				Spherical 2				Surpac Rotation		
		sill	major (m)	semi (m)	minor (m)	sill	major (m)	semi (m)	minor (m)	Trend	Plunge	Dip
1001	17.70%	52.20%	15	15	5	30.10%	78	78	8	50	0	-65
1002	17.70%	52.20%	15	15	5	30.10%	78	78	8	50	0	-65
1003	22.10%	51.50%	6	6	3	26.40%	28	28	6	50	0	-70
1004	17.70%	52.20%	15	15	5	30.10%	78	78	8	50	0	-65
1101	16.40%	50.90%	7	7	4	32.60%	21	21	8.5	50	0	-65
2001	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2002	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2003	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2004	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2005	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2006	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2007	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2008	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2009	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2010	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
3001	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3002	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3003	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3004	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3005	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3006	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3007	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3008	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3009	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
4001	30.00%	26.20%	8	8	5	43.80%	29	29	8	30	0	-90
4002	30.00%	26.20%	8	8	5	43.80%	29	29	8	30	0	-90
4003	30.00%	26.20%	8	8	5	43.80%	29	29	8	30	0	-90
4004	30.00%	26.20%	8	8	5	43.80%	29	29	8	30	0	-90

Table 14-16 Variogram Model Parameters for Silver Grades – Sills Normalised to 100% (Cube, 2018)

Domain	Nugget	Spherical 1				Spherical 2				Surpac Rotation		
		sill	major (m)	Trend	Trend	Trend	major (m)	semi (m)	minor (m)	Trend	Plunge	Dip
1001	17.70%	52.20%	15	15	5	30.10%	78	78	8	50	0	-75
1002	17.70%	52.20%	15	15	5	30.10%	78	78	8	50	0	-65
1003	22.10%	51.50%	6	6	3	26.40%	28	28	6	50	0	-70
1004	17.70%	52.20%	15	15	5	30.10%	78	78	8	25	0	-75
1101	16.40%	50.90%	7	7	4	32.60%	21	21	8.5	50	0	-65
2001	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-70
2002	29.90%	29.10%	8	8	5	41.00%	63	63	8	50	0	-65
2003	29.90%	29.10%	8	8	5	41.00%	63	63	8	25	0	-65
2004	29.90%	29.10%	8	8	5	41.00%	63	63	8	40	0	-60
2005	29.90%	29.10%	8	8	5	41.00%	63	63	8	45	0	-75
2006	29.90%	29.10%	8	8	5	41.00%	63	63	8	40	0	-70
2007	29.90%	29.10%	8	8	5	41.00%	63	63	8	40	0	-65
2008	29.90%	29.10%	8	8	5	41.00%	63	63	8	45	0	-70
2009	29.90%	29.10%	8	8	5	41.00%	63	63	8	20	0	-75
2010	29.90%	29.10%	8	8	5	41.00%	63	63	8	35	0	-75
3001	29.50%	51.10%	10	10	3	19.40%	72	72	5	35	0	-75
3002	29.50%	51.10%	10	10	3	19.40%	72	72	5	35	0	-85
3003	29.50%	51.10%	10	10	3	19.40%	72	72	5	30	0	-80
3004	29.50%	51.10%	10	10	3	19.40%	72	72	5	30	0	-85
3005	29.50%	51.10%	10	10	3	19.40%	72	72	5	25	0	-90
3006	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
3007	29.50%	51.10%	10	10	3	19.40%	72	72	5	60	0	-70
3008	29.50%	51.10%	10	10	3	19.40%	72	72	5	45	0	-75
3009	29.50%	51.10%	10	10	3	19.40%	72	72	5	40	0	-80
4001	30.00%	26.20%	8	8	5	43.80%	29	29	8	40	0	-80
4002	30.00%	26.20%	8	8	5	43.80%	29	29	8	40	0	-75
4003	30.00%	26.20%	8	8	5	43.80%	29	29	8	30	0	-90
4004	30.00%	26.20%	8	8	5	43.80%	29	29	8	60	0	-80

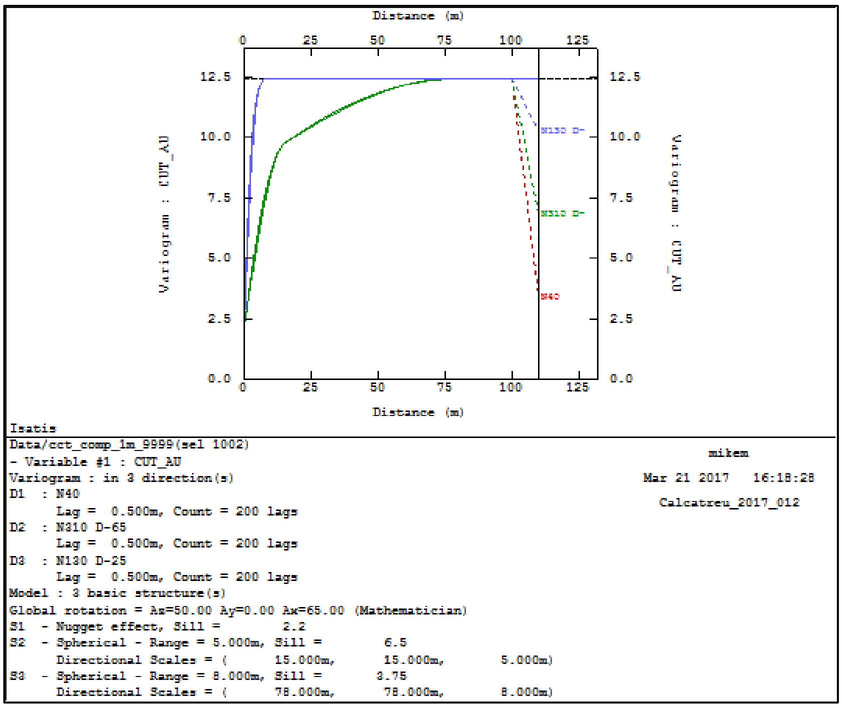


Figure 14-36 Back Transformed Variogram Model for Gold Grade – Domain 1002 (Cube, 2018)

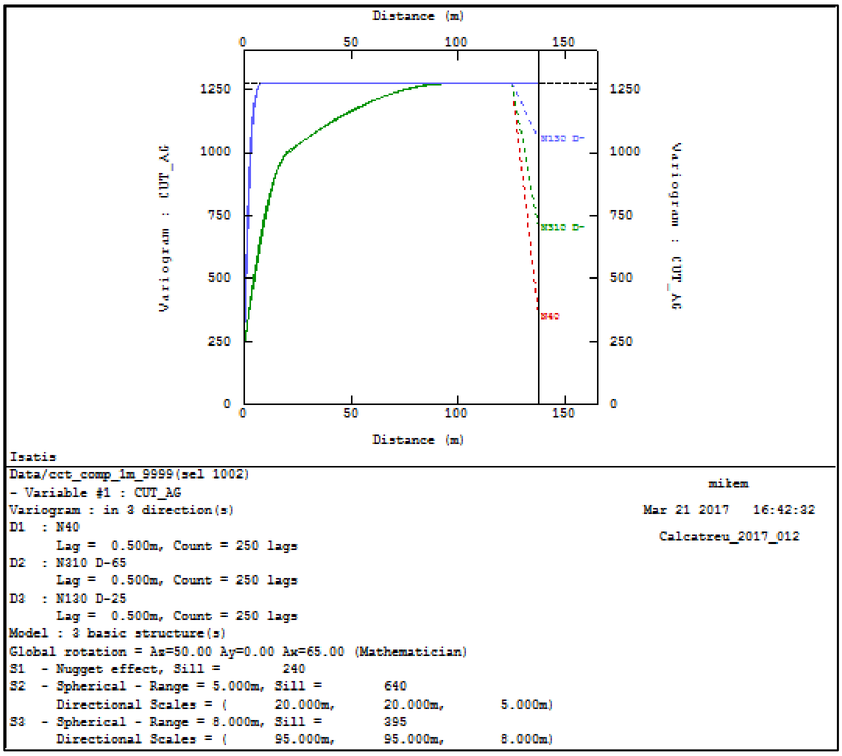


Figure 14-37 Back Transformed Variogram Model for Silver Grade – Domain 1002 (Cube, 2018)

Table 14-17 Variogram model substitutions (Cube, 2018)

Domain for Source Variogram Model	Domains for Model Substitution
1002	1001,1004
1003	None
1101	2101, 2102
2001	2002 to 2010
3006	3001 to 3005 & 3007 to 3009
4003	4001, 4002 & 4004

14.10. Block Model Definition

14.10.1. Background

Several key points to consider when taking into account the selection of an appropriate estimation block size include:

- Evaluate the parent cell size with the drill density in the X (easting) and Y (northing) dimensions;
- Consider the approach to mining and minimum SMU dimensions when deciding on the vertical block size (Z);
- Ensure sufficient sub-celling to fill the wireframes in the most efficient manner. More sub-celling will be required around narrower mineralised structures, whereas less sub-celling will be required around the broader core of the mineralised breccia zone; and
- Optimise the block model dimensions to the immediate confines of the interpreted area to reduce processing time and optimising the block model size.

14.10.2. Block Model Construction

Two separate block models were created in Surpac for the MRE. The parent block size was set to the chosen SMU block size to be used in the LUC estimates (i.e. 5 mX x 10 mY x 10 mZ) and the models were rotated with the Y-axis oriented 45° east of north to match the strikes of the deposits.

For the block model parameters to be used for the both models, Cube constructed the block model using small sub-block sizes in order to reduce the volume variance within the mineralisation wireframes.

Surpac block model definitions for Calcatreu and Castro Sur are summarised in Table 14-18 and Table 14-19 respectively. The spatial dimensions for each block model are illustrated in the plan views in Figure 14-38 and Figure 14-39.

Table 14-18 Block model definition – Calcatreu (Vein 49, Nelson, Belen) (Cube, 2018)

Axis	X	Y	Z
Minimum Coordinates	2,453,500	5,362,000	850
Maximum Coordinates	2,455,500	5,365,500	1450
User Block Size	5	10	10
Min. Block Size	1.25	2.5	2.5
Rotation	0	45	0

Table 14-19 Block model definition – Castro Sur (Cube, 2018)

Axis	X	Y	Z
Minimum Coordinates	2,455,750	5,367,250	1000
Maximum Coordinates	2,457,750	5,370,750	1500
User Block Size	5	10	10
Min. Block Size	1.25	2.5	2.5
Rotation	0	45	0

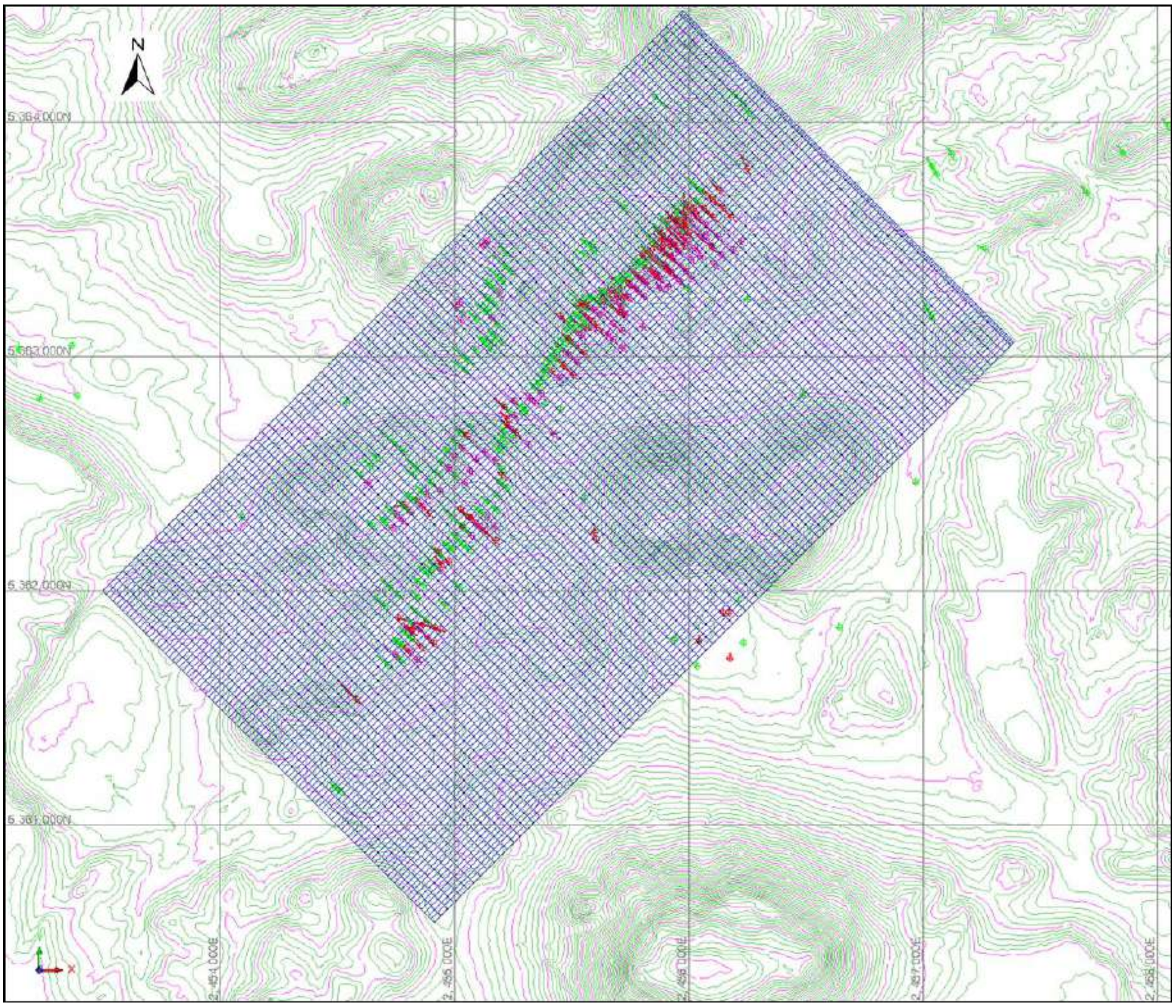


Figure 14-38 Plan View of Calcatreu (Vein 49/Nelson) Block Model Dimensions (Cube, 2018)

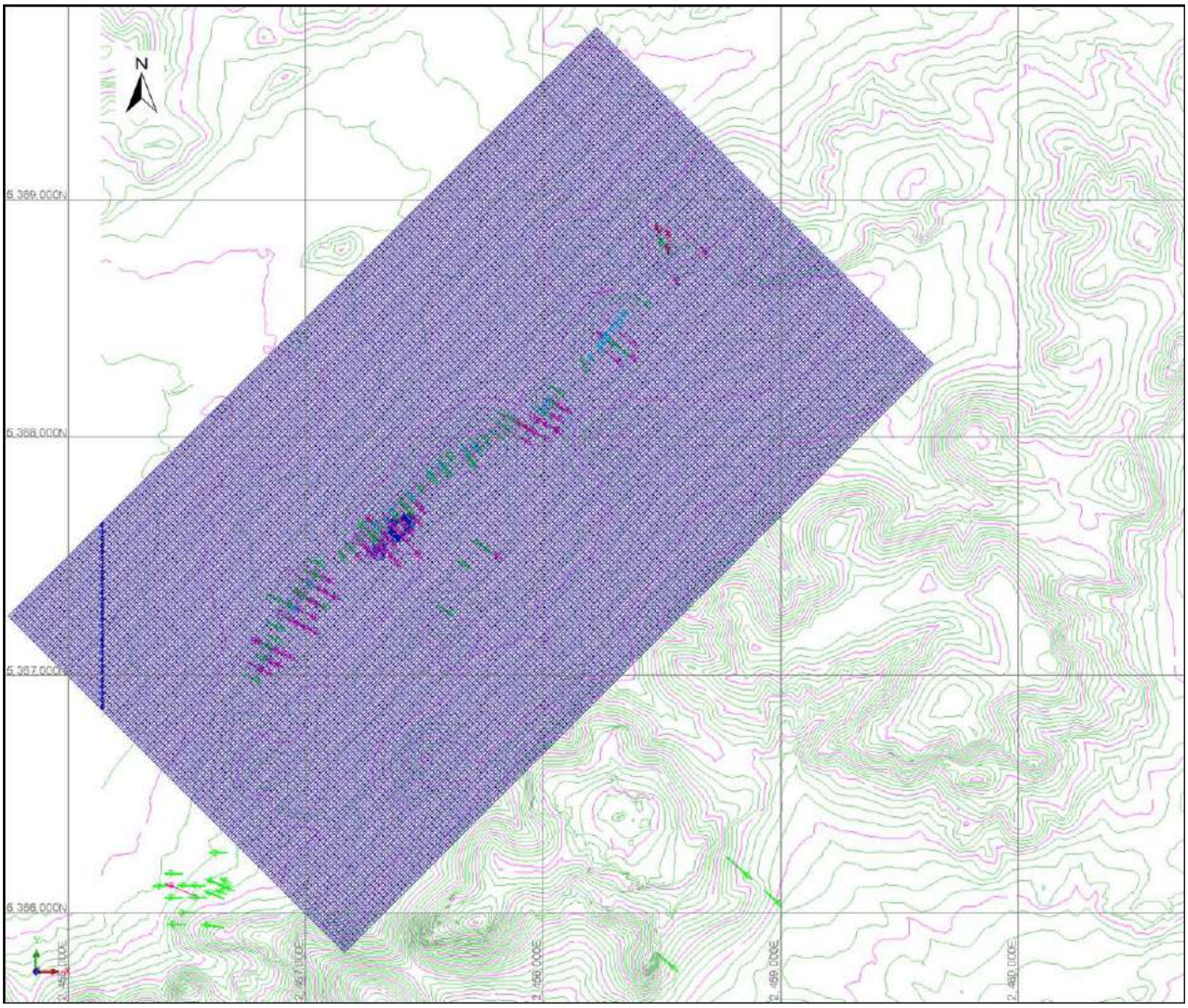


Figure 14-39 Plan View of Castro Sur Block Model Dimensions (Cube, 2018)

14.11. Block Model Attributes

The block model was generated in Surpac, and flagged with the appropriate estimation domains, topographical surfaces and other domain coding attributes listed in Table 14-20.

Table 14-20: Calcatreu Block Model Attributes (Cube, 2018)

Attribute Name	Background	Description
ag_fin	0.25	Ag ppm - Mine Design & Reporting Final Estimate
ag_id2	0.25	Ag ppm - ID^2 Estimate
ag_luc	0.25	Ag ppm - Local UC Estimate
ag_ok	0.25	Ag ppm - OK Estimate
au_fin	0.005	Au ppm - Mine Design & Reporting Final Estimate
au_id2	0.005	Au ppm - ID^2 Estimate
au_luc	0.005	Au ppm - Local UC Estimate
au_ok	0.005	Au ppm - OK Estimate
auequ_fin	0.01	Au_equ ppm (=au_fin+ag_fin/68) - Final Estimate
density_new	2.4	Density: Air=0, Oxide Zone=2.44, CCT fresh mineralisation zone=2.54, fresh Andesite zone=2.51
depletion	2	Depletion - Numeric: 0=Air,1= Mined, 2=Insitu
design	1	Mine Design - Numeric: 0=Above topo, 1=Insitu, 2=Inside Pit Design1, 3=Inside Pit Design2, 4=Inside Pit Design3
geo_lith	0	Lithology Domains - Numeric: 0=UNK, 1=AND, 2=RHY, 3=TUFF, 4=VEIN, 5=BXX, 6=OTHER
geo_material	1	Material Type - Numeric: 0=Air, 1=Rock, 2=Cover, 3=other1, 4=other2
geo_ox	3	Weathering Code - Numeric: 0=Air, 1=Oxide, 2=Trans, 3=Fresh
rep_flag	0	Reporting Flag - Numeric: 0=Not Reported, 1=Reported
res_cat	4	Resource Classification - Numeric: 0=Air, 1=Measured, 2=Indicated, 3=Inferred, 4=Unclassified
zonecode	0	Mineralised Domain Code - Numeric:1000 series = V49; 2000 series = Nelson; 3000 series = CS; 4000 series = Belen
avd	0	Average Distance to Samples
ns	0	Number of Samples
sor_au	0	Slope of regression - au ppm

14.11.1. Oxidation

Oxidation codes were assigned within the block model attribute oxidation based on the interpreted weathering profiles in in Table 14-21.

Table 14-21: Assigned Oxidation State (Cube, 2018)

Model	Weathering Type	Oxidation Code	Constraint	Constraint ID
CCT	Air	0	Above	topo_original_2018.dtm
CCT	Oxide	1	Above	cct_ox_surface_ext_2018.dtm
CCT	Non-oxide	3	Below	cct_ox_surface_ext_2018.dtm
CS	Air	0	Above	topo_original_2018.dtm
CS	Oxide	1	Above	cs_ox_surface_ext_2018.dtm
CS	Non-oxide	3	Below	cs_ox_surface_ext_2018.dtm

14.11.2. Bulk Density

Bulk density was assigned within the block model attribute 'density' according to the mineralised rock or waste type in Table 14-22.

Table 14-22: Assigned Bulk Densities (Cube, 2018)

Model	Geological Domain/Type	Density Value (t/m3)	Constraint	Constraint ID
CCT	Air	0	Above	topo_original_2018.dtm
CCT	Waste - Oxide	2.44	Above; Not Inside	cct_ox_surface_ext_2018.dtm; not inside min zones
CCT	Waste - Fresh	2.51	Below; Not Inside	cct_ox_surface_ext_2018.dtm; not inside min zones
CCT	Oxide Mineralisation	2.44	Above; Inside Min Domains	cct_ox_surface_ext_2018.dtm; dom_min_9999
CCT	Fresh Mineralisation	2.54	Below; Inside Min domains	cct_ox_surface_ext_2018.dtm; dom_min_9999
CS	Air	0	Above	topo_original_2018.dtm
CS	Waste - Oxide	2.44	Above; Not Inside	cct_ox_surface_ext_2018.dtm; not inside min zones
CS	Waste - Fresh	2.51	Below; Not Inside	cct_ox_surface_ext_2018.dtm; not inside min zones
CS	Oxide Mineralisation	2.44	Above; Inside Min Domains	cs_ox_surface_ext_2018.dtm; dom_min_9999
CS	Fresh Mineralisation	2.54	Below; Inside Min domains	cs_ox_surface_ext_2018.dtm; dom_min_9999

14.11.3. Mineralisation Domains

The mineralised domains acted as hard boundaries to control the Mineral Resource estimation. Geological domains were assigned within the block model attribute 'zonecode' according to the 3D wireframes and are summarised Table 14-23.

Table 14-23: Assigned Geological Domains (Cube, 2018)

Model	Type	Domain Code	Constraint	Constraint ID
CCT	Vein 49 - South	1001	Inside	dom_min_1001
CCT	Vein 49 - Main Zone	1002	Inside	dom_min_1002
CCT	Vein 49 - West 1	1003	Inside	dom_min_1003
CCT	Vein 49 - West 2	1004	Inside	dom_min_1004
CCT	Nelson South - 1	2001	Inside	dom_min_2001
CCT	Nelson South - 2	2002	Inside	dom_min_2002
CCT	Nelson South - 3	2003	Inside	dom_min_2003
CCT	Nelson East - Main	2004	Inside	dom_min_2004
CCT	Nelson East - 2	2005	Inside	dom_min_2005
CCT	Nelson East - 3	2006	Inside	dom_min_2006
CCT	Nelson East - 4	2007	Inside	dom_min_2007
CCT	Nelson West	2008	Inside	dom_min_2008
CCT	Nelson North - Main	2009	Inside	dom_min_2009
CCT	Nelson North - 2	2010	Inside	dom_min_2010
CCT	Belen - East 1	4001	Inside	dom_min_4001
CCT	Belen - East 2	4002	Inside	dom_min_4002
CCT	Belen - Main Zone	4003	Inside	dom_min_4003
CCT	Belen - West	4004	Inside	dom_min_4004
CS	CS - South Extent 1	3001	Inside	dom_min_3001
CS	CS - South Extent 2	3002	Inside	dom_min_3002
CS	CS - South 1	3003	Inside	dom_min_3003
CS	CS - South 2	3004	Inside	dom_min_3004
CS	CS - South 3	3005	Inside	dom_min_3005
CS	CS - Main Zone	3006	Inside	dom_min_3006
CS	CS - North	3007	Inside	dom_min_3007
CS	CS - North Extent 1	3008	Inside	dom_min_3008
CS	CS - North Extent 2	3009	Inside	dom_min_3009

14.11.4. Mining Depletion

The topography wireframes supplied by PGD have no historic mine excavations. This wireframe has been used to assign blocks above the topographic surface to a value of "0" for the following attributes – density, depletion, design, and res_cat.

14.11.5. Classification

Mineral Resource classification boundaries were created in Surpac for each mineralised domain following grade interpolation and model validation. Assigned codes used for classifying the block model as Measured, Indicated and Inferred are summarised in Table 14-24. Some domains were classified wholly as Inferred as noted.

Table 14-24: Assigned Classification Domains (Cube, 2018)

Model	Classification Type	Rescat Code	Domains	Constraint	Constraint ID
CCT	Measured	1	No Material	-	NA
CCT	Indicated	2	Domain 1001-03; 2001-02, 2004, 2008	Above object 4	cct_rescat_bdy_2018.dtm
CCT	Inferred	3	Domain 1001-03; 2001-02, 2004, 2008	Below object 4, above object 3	cct_rescat_bdy_2018.dtm
CCT	Inferred	3	Domains 1004; 2003, 2005-07, 2007, 2009-10; 4001-04	Inside	dom_min_****
CCT	Unclassified	4	Domain 1001-03; 2001-02, 2004, 2008	Below object 3	cct_rescat_bdy_2018.dtm
CS	Measured	1	No Material	-	NA
CS	Indicated	2	Domain 3006	Above object 4	cs_rescat_bdy_2018.dtm
CS	Inferred	3	Domain 3006	Below object 4, above object 3	cs_rescat_bdy_2018.dtm
CS	Inferred	3	Domain 3001-05, 3007-09	Inside	dom_min_****
CS	Unclassified	4	Domain 3006	Below object 3	cs_rescat_bdy_2018.dtm

14.12. Grade Estimation

14.12.1. Estimation Approach Summary

The estimation of the Calcatreu consisted of:

- Undertake Kriging Neighbourhood Analysis (“KNA”) to establish search parameters;
- Three-dimensional OK and LUC estimation for major domains;
- Inverse Distance to the power of 2 (“ID^2”) estimation approach for model comparison analysis; and
- Global assignment at an average grade for small estimation domains due to the limited sampling information.

14.12.2. Grade Estimation Using LUC

The primary grade estimation method used for gold and silver in the main mineralised zones (Domains 1002, 1003 and 3006) is LUC, and was undertaken using Isatis software. LUC is considered an appropriate method for the estimation of local recoverable resources as it produces more accurate grade-tonnage functions, which are in accordance with well understood volume-variance relationship principles. It limits the smearing of high-grade and the over-smoothing of grade compared to linear estimation methods such as OK.

The final grade estimate for gold and silver used for the main mineralised domain is effectively a diluted recoverable resource estimate. The process attempts to estimate the recoverable tonnage and grade based on the dimensions of a SMU, which is broadly representative of what will be practically achievable during actual mining. The initial step in a LUC estimation is undertaken using the OK method into relatively large Panels and therefore can be considered as being 'diluted', as the Panels are estimated using all data within a broad mineralised envelope. A Change of Support ("CoS") correction is then applied to the large diluted panels in order to predict the likely grade-tonnage distribution at SMU selectivity within each Panel. In addition to the imposition of a minimum selective mining dimension, a further CoS correction was applied to the models in the form of an Information Effect. The Information Effect is a theoretical 'penalty' adjustment to the SMU grade-tonnage distribution to account for the anticipated misclassification when making mining selectivity decisions based on future grade control spaced data.

The LUC method consists of the following steps:

- Undertake an OK estimate of gold and silver grade into Panels, in this case 5mX x 15mY x 15mZ. This was undertaken for all the domains, and retained as the primary estimate for all of the zones except Domains 1002, 1003, and 3006, which were subject to the additional steps below;
- Undertake a CoS process, using a Discrete Gaussian Model. This makes use of a Gaussian model fitted to the sample data, in conjunction with the gold/silver variogram model, to predict the grade distribution for smaller, SMU-sized blocks defined in this case at 2.5mX x 5mY x 5mZ;
- Implement Uniform Conditioning ("UC"), which uses the results of the CoS and the Panel OK to produce an array variable of volume proportion and grade above a chosen set of grade thresholds. This represents the grade distribution of SMU's inside each panel. The UC results are conditioned to the original panel OK grade estimate; and
- The UC is post-processed using the Abzalov (2006) approach to produce a single grade per SMU block (this is the final LUC estimate). The mean grade of the SMU's in any given Panel is equal to the OK grade for that Panel, and so the total metal is preserved.

14.12.3. Panel Ordinary Kriging

Search neighbourhood analysis for Panel OK at Calcatreu and Castro Sur were undertaken based on the gold grade variable and variogram, with reference to the chosen Panel block size. The parameters determined for gold were adopted for silver on a domain-by-domain basis. The analysis was undertaken in the following manner:

- The shape of the search ellipsoid was determined with due consideration given to the anisotropy in the variogram models. In addition, some visual inspections, using tools available in Isatis, were undertaken to assess the pattern of informing sample selection. The search ellipsoid radii ratios were then chosen so as to provide an optimal sample neighbour selection for estimation;
- The minimum and maximum allowable number of samples was chosen using KNA. KNA makes use of kriging quality statistics, in this case the Slope of Regression, Weight of the Mean and Negative Weights statistics, to select optimal minimum and maximum values for estimation. An example of such an analysis is shown in Figure 14-40; and
- The search neighbourhood radii were chosen to be as small as possible while still fulfilling the requirement of filling all blocks in the estimation domains with estimates. The estimation field was limited to a volume nominally covered by the available drill hole data. This does away with the need to use a multi-pass estimation strategy.

Search neighbourhood parameters used for OK Panel estimation are listed in Table 14-25. A distance limiting option was used for Domain 1101, in order to prevent the undue spread of high-grade values, which are in all likelihood highly discontinuous in this zone. Values above a certain threshold were ignored if situated beyond a chosen distance from the block centroid. The thresholds used were 0.8 ppm and 25 ppm for gold and silver grade, respectively. The distance limit was set at 5 m.

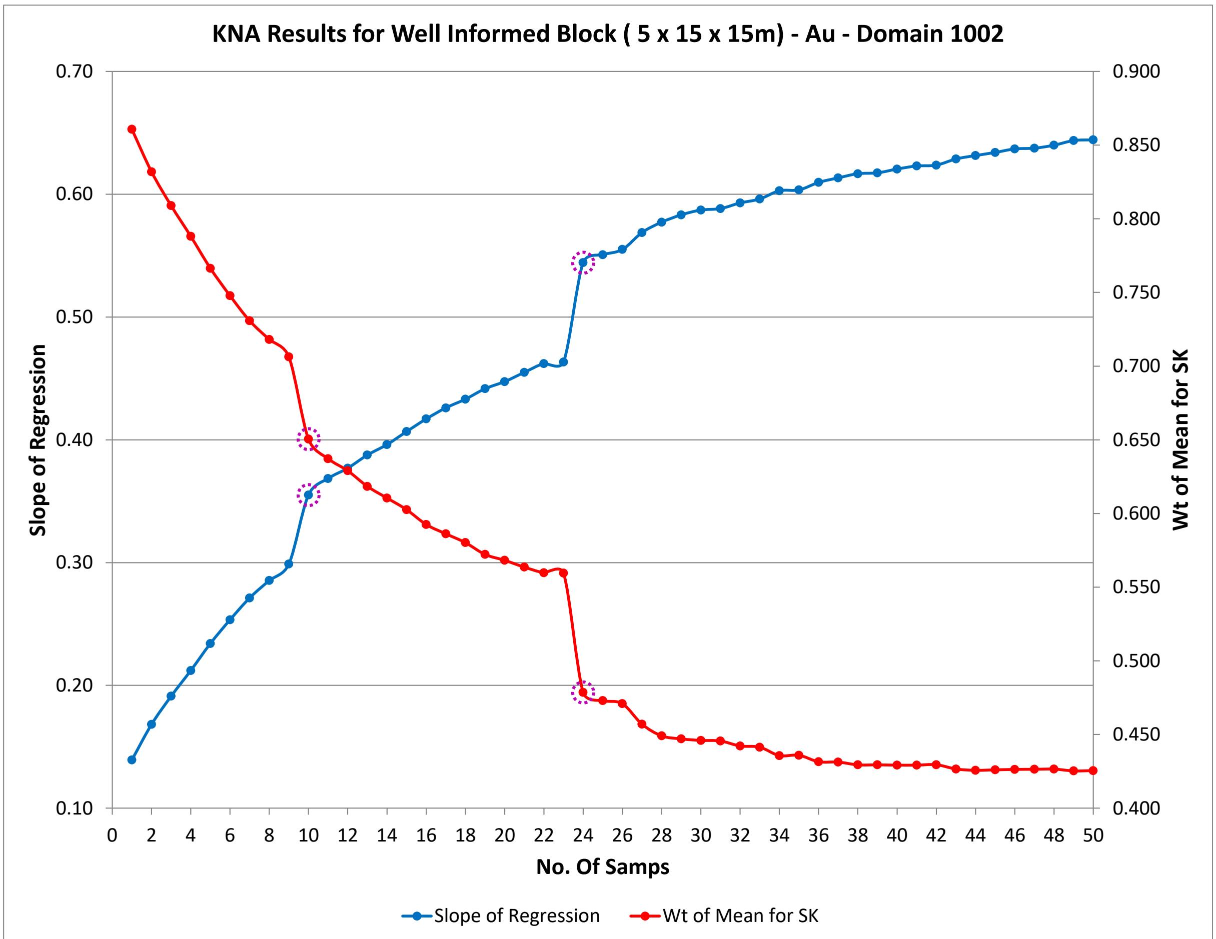


Figure 14-40 Example of KNA Plot for Domain 1002, Showing Slope of Regression and Weight of the Mean (Cube, 2018)

Table 14-25 Search Neighbourhood Parameters for Panel OK (Au and Ag) (Cube, 2018)

Domain	Search Radii (m)			Min Samp	Max Samp	Surpac Rotation			Block Discretisation		
	major	semi	minor			Trend	Plunge	Dip	X	Y	Z
1001	80	80	20	10	24	50	0	-75	5	8	8
1002	160	160	40	10	24	50	0	-65	5	8	8
1003	100	100	25	6	30	50	0	-70	5	8	8
1004	140	140	35	10	24	25	0	-75	5	8	8
1101	140	140	35	8	24	50	0	-65	5	8	8
2001	80	80	20	8	22	25	0	-70	5	8	8
2002	240	240	60	8	22	50	0	-65	5	8	8
2003	60	60	15	2	22	25	0	-65	5	8	8
2004	100	100	25	8	22	40	0	-60	5	8	8
2005	120	120	30	8	22	45	0	-75	5	8	8
2006	60	60	15	8	22	40	0	-70	5	8	8
2007	60	60	15	2	22	40	0	-65	5	8	8
2008	100	100	25	8	22	45	0	-70	5	8	8
2009	100	100	25	8	22	20	0	-75	5	8	8
2010	100	100	25	8	22	35	0	-75	5	8	8
2101	140	140	35	8	24	45	0	-60	5	8	8
2102	100	100	25	8	24	40	0	-65	5	8	8
3001	80	80	20	10	24	35	0	-75	5	8	8
3002	100	100	25	10	24	35	0	-85	5	8	8
3003	100	100	25	10	24	30	0	-80	5	8	8
3004	100	100	25	10	24	30	0	-85	5	8	8
3005	140	140	35	10	24	25	0	-90	5	8	8
3006	120	120	30	10	24	40	0	-80	5	8	8
3007	100	100	25	10	24	60	0	-70	5	8	8
3008	120	120	30	10	24	45	0	-75	5	8	8
3009	60	60	15	10	24	40	0	-80	5	8	8
4001	160	160	40	2	24	40	0	-80	5	8	8
4002	80	80	20	8	24	40	0	-75	5	8	8
4003	140	140	35	8	24	30	0	-90	5	8	8
4004	80	80	20	8	24	60	0	-80	5	8	8

14.12.4. Change of Support and Uniform Conditioning

An Information Effect Correction was also implemented. A grade control sample pattern of 2.5 mX x 5 mY x 5 mZ was assumed. Uniform Conditioning ("UC") makes use of the results of the Change of Support step, along with the Panel grade estimated by OK in the previous step. It also takes account of the variance of the Panel estimate.

It should be noted that following the UC, the distribution of SMU grades within each Panel is available, but there is not as yet an SMU block model with a single grade per block. This means that the results of the UC can be difficult to work with, especially when undertaking mine planning studies.

Table 14-26 and Table 14-27 contain the Change of Support and final LUC block grade variances. It is evident that there is good agreement between the LUC variance and the theoretical block variance with Information Effect Correction.

Table 14-26: Change of Support and UC Parameters – LUC Au grade estimation (Cube, 2018)

Domain	Sample Variance	Dispersion Variance	Theoretical Block Variance	Block Variance with IEC	CoS Co-Efficient	No. of UC Classes	LUC Block Variance
1002	12.44	5.55	6.89	5.98	0.781	8	6.66
1003	32.99	21.82	11.16	8.42	0.641	8	9.56
3006	6.39	4.05	2.34	1.82	0.665	8	1.70

Table 14-27: Change of Support and UC Parameters – LUC Ag grade estimation (Cube, 2018)

Domain	Sample Variance	Dispersion Variance	Theoretical Block Variance	Block Variance with IEC	CoS Co-Efficient	No. of UC Classes	LUC Block Variance
1002	1 276	549	727	643	0.806	8	600
1003	4 869	3 282	1 587	1 187	0.618	8	1 125
3006	1 465	859	606	505	0.762	8	315

14.12.5. Localised Uniform Conditioning

LUC is a post-processing step that maps the grade distribution of the SMU's, as estimated by UC, into individual SMU block grades:

- The first step in this mapping process is to estimate a block grade for each SMU using OK. This estimate is used only to rank the SMU blocks falling within each larger Panel block from lowest to highest grade; and
- The final SMU block grade is calculated simply by dividing the UC tonnage curve in each Panel into equal portions, according to the number of SMU's in the Panel. The SMU dimensions must be factors of the Panel dimensions. The grade of the tonnage slice at the high-grade end of the curve is then assigned to the highest ranked SMU, and so forth.

Essentially LUC is a post-processing step that discretises the UC distribution estimate and assigns grades to SMU's based on the most likely grade ranking of each SMU. The search neighbourhood parameters used for the OK SMU ranking estimates are summarised in Table 14-28.

The final result of the LUC step is thus a single grade per SMU (in this case 2.5 mX x 5 mY x 5 mZ), with the SMU block model being much more amenable to mine planning studies than the relatively cumbersome UC estimates that are stored at a Panel resolution.

Table 14-28: Search parameters for Au and Ag grade – SMU Ranking OK estimates in the LUC domains (Cube, 2018)

Domain	Search Radii (m)			Min Samp	Max Samp	Surpac Rotation		
	major	semi	minor			Trend	Plunge	Dip
1002	160	160	40	10	18	50	0	-65
1003	100	100	25	6	24	50	0	-70
3006	120	120	30	10	18	40	0	-80

14.13. Mineral Resource Estimate Validation

Cube carried out the following validation methods for the Calcatreu gold and silver grade LUC and OK estimates:

- Visual inspection of block grade estimates versus raw samples from drill holes on sections;
- Comparison of volumetric data (3D wireframe vs block model domain volume), and global mean sample grades versus global mean estimated;
- Global comparison of the estimated mean LUC/OK block grades to the un-declustered and declustered mean of informing composite grades, on a domain-by-domain basis. The LUC estimates were also compared to the mean grade of a check ID^2 estimation; and
- Semi-locally using Swath plots comparing the LUC/OK gold estimates to the sample data and the ID^2 check estimate.

14.13.1. Visual Validation

Figure 14-41 to Figure 14-46 show examples of the visual inspection for validating the block models. Figure 14-43 shows a cross section of Vein 49 in which the Au and Ag block grades are specifically checked against the raw drill hole assays and composites.

Overall, Cube believes that visual checks demonstrated that the LUC/OK block grade estimates have honoured the sample data satisfactorily.

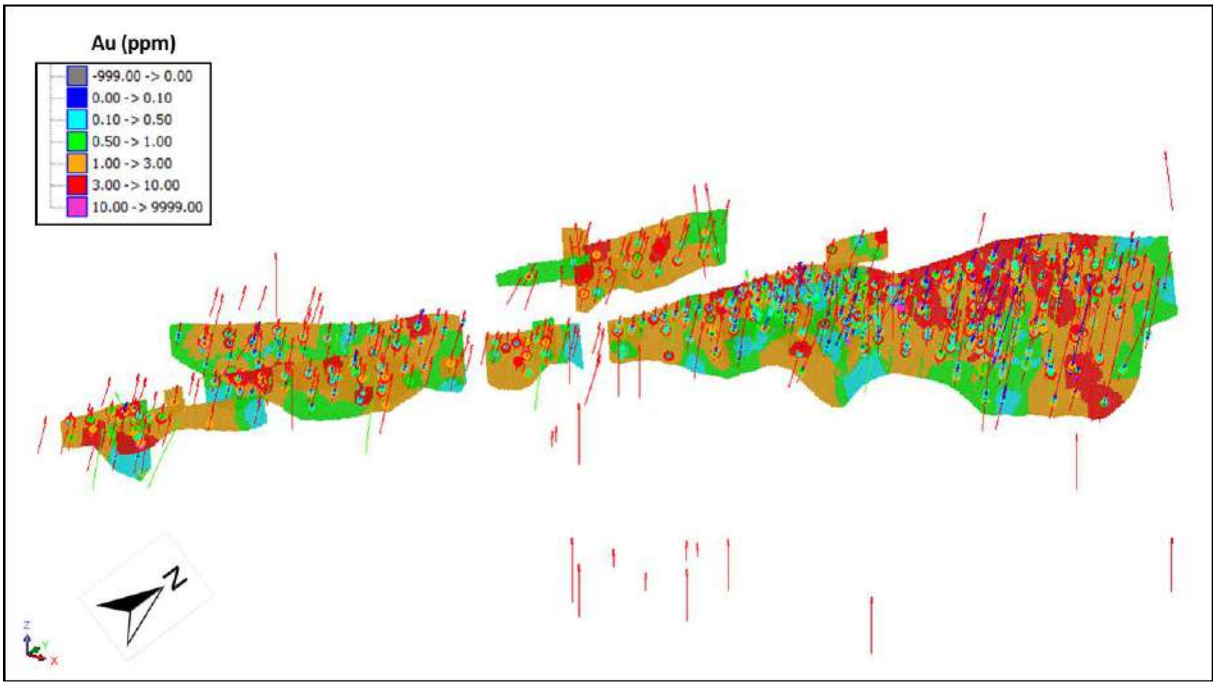


Figure 14-41: Calcatreu (Vein 49/Nelson) Block Model – Isometric View – Drilling versus Block Model Grades (Cube, 2018)

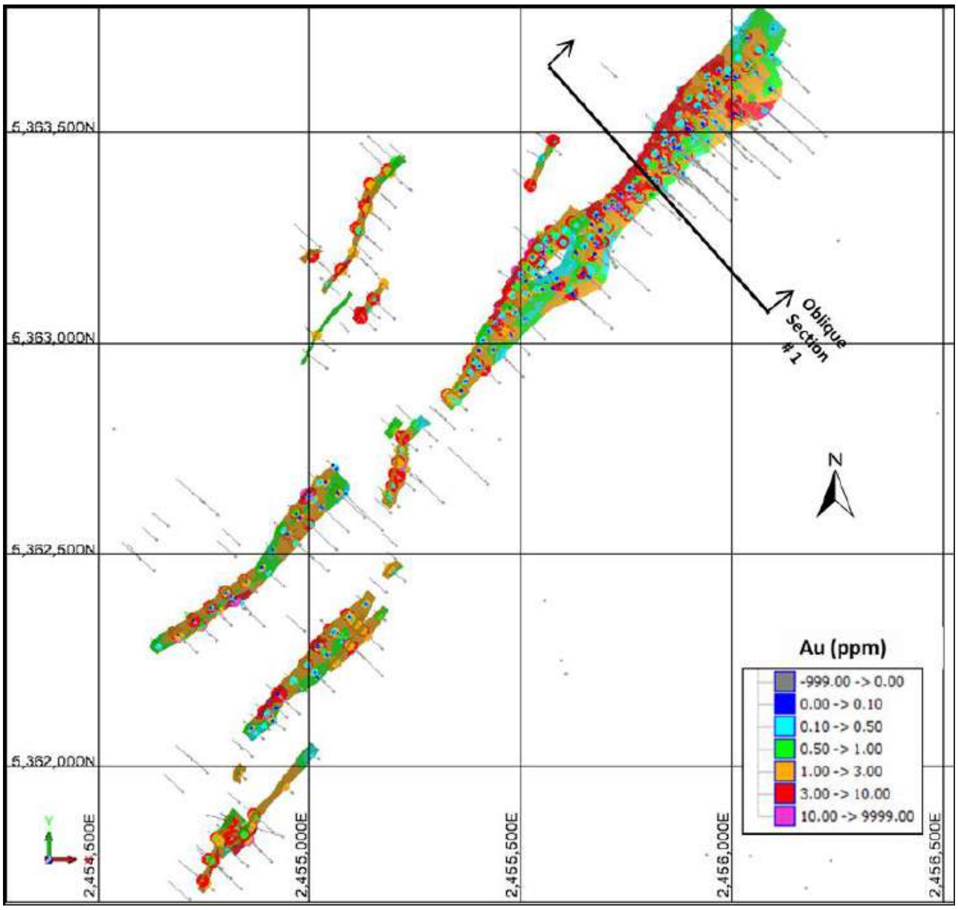


Figure 14-42: Calcatreu (Vein 49/Nelson) Block Model – Plan View – Oblique Section Reference (Cube, 2018)

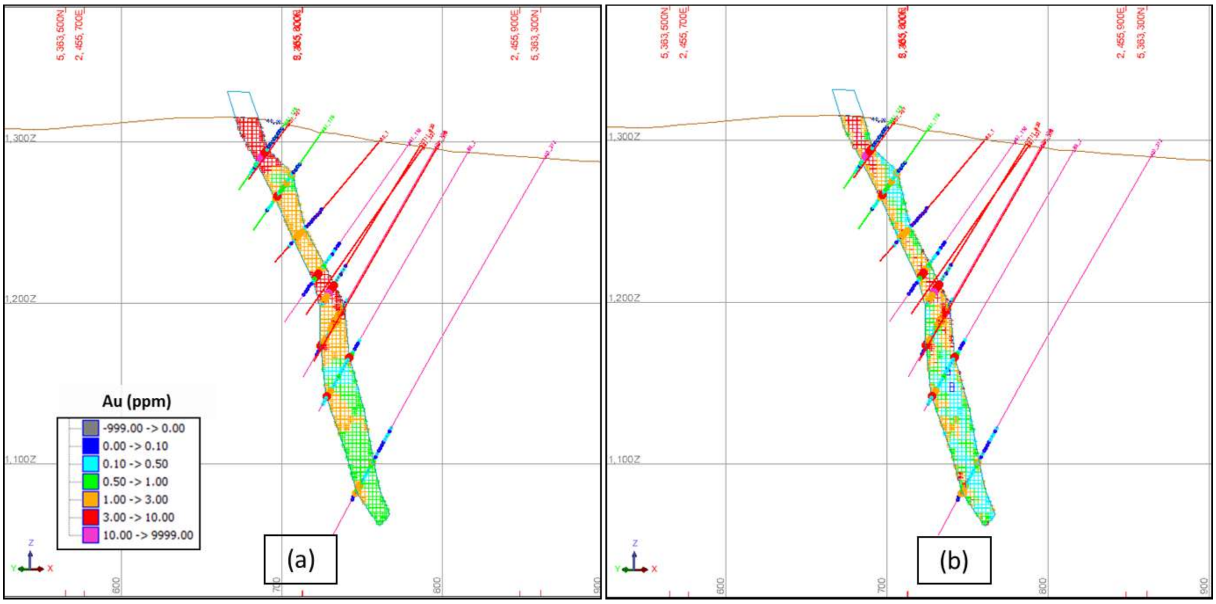


Figure 14-43: Calcatreu (Vein 49/Nelson) Block Model –Oblique Cross Section #1 – Block Grade Estimation Comparison: (a) ID^2, (b) LUC (Cube, 2018)

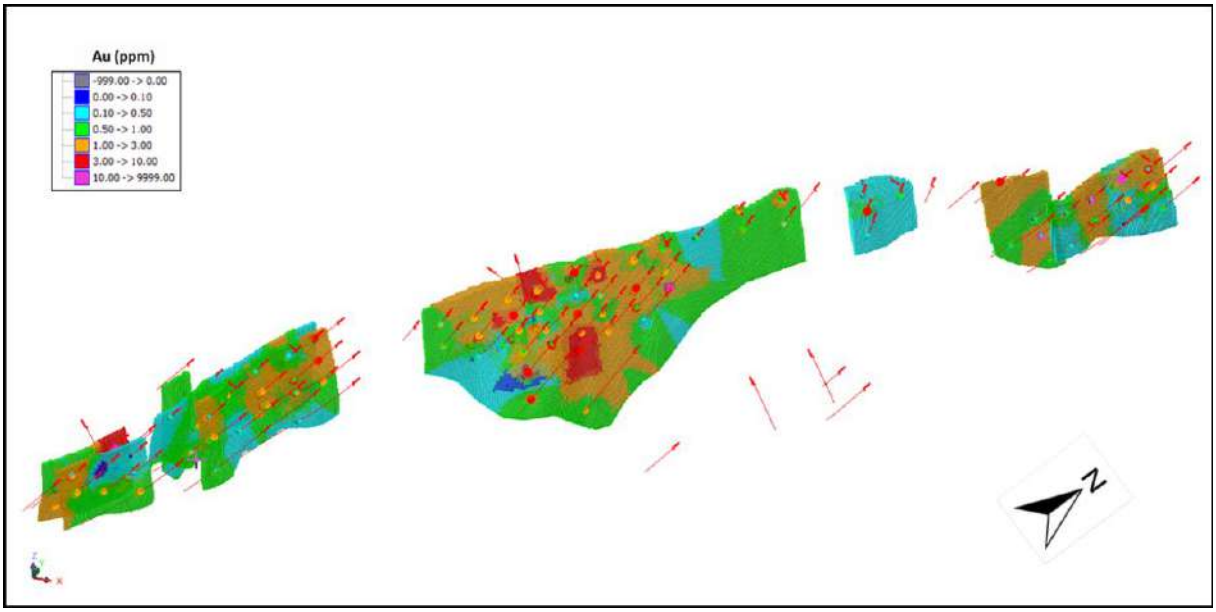


Figure 14-44: Castro Sur Block Model – Isometric View – Drilling versus Block Model Grades (Cube, 2018)

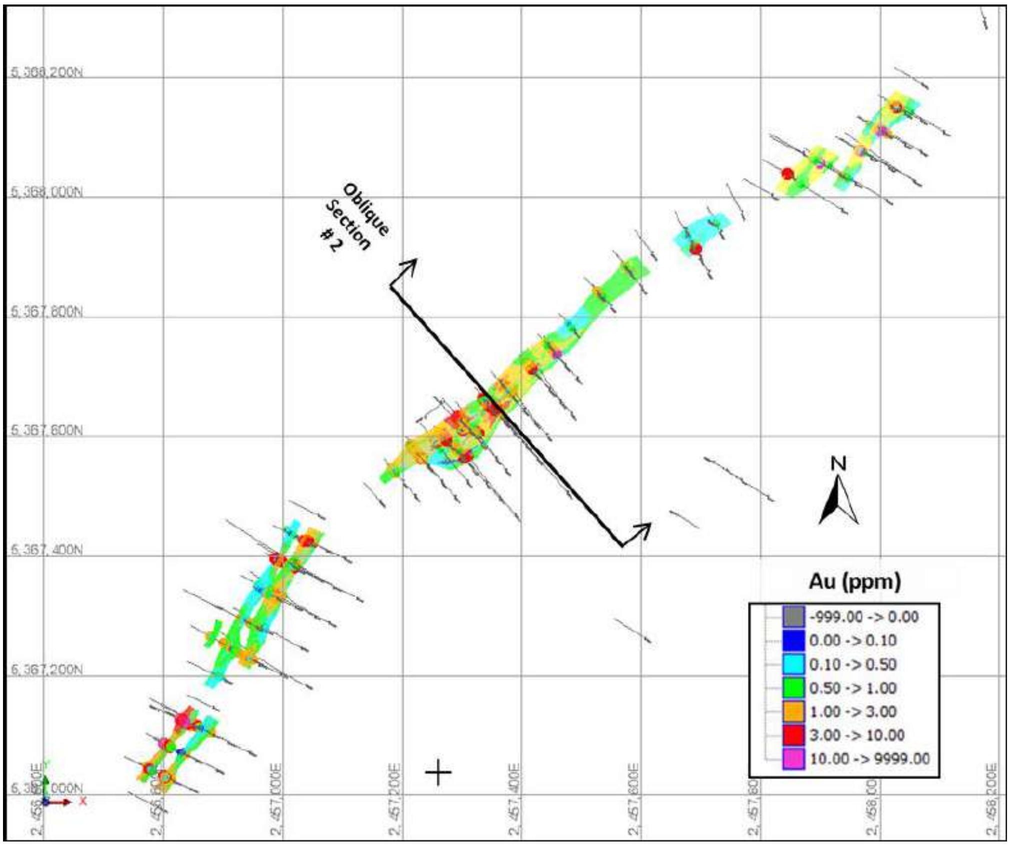


Figure 14-45: Castro Sur Block Model – Plan View – Oblique Section Reference (Cube, 2018)

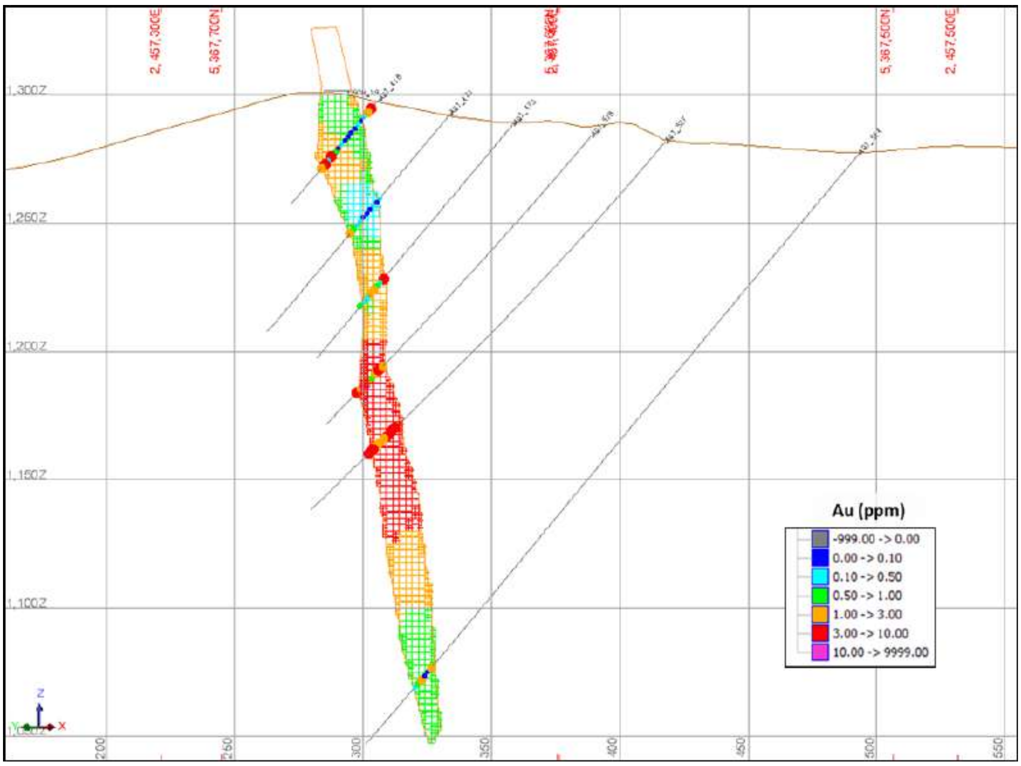


Figure 14-46: Castro Sur Block Model –Oblique Cross Section #2 –Drilling versus Block Grades (Cube, 2018)

14.13.2. Volumetric Comparisons

Validation checks included volumetric comparison between undepleted 3DM wireframes against the mineralised domains coded in the block model to ensure no errors in coding would lead to discrepancies in mineral resource reporting at a later stage.

The volume variance between the wireframes and the block models was acceptable for the intended use of the Calcatreu block models (Table 14-29).

Table 14-29: Volumetric Comparisons for All Calcatreu Mineralisation Domains (Cube, 2018)

Prospect	Domain #	Wireframe vol. (m3)	BM vol. (m3)	WF vol. vs. BM vol.	Comments
Vein 49	1001	18,979	19,078	0.5%	
Vein 49	1002	3,971,369	3,971,305	0.0%	
Vein 49	1003	336,968	336,734	-0.1%	
Vein 49	1004	22,742	22,852	0.5%	
Nelson	2001	210,772	211,125	0.2%	
Nelson	2002	139,858	140,578	0.5%	
Nelson	2003	9,209	9,148	-0.7%	
Nelson	2004	289,496	288,914	-0.2%	
Nelson	2005	81,748	81,984	0.3%	
Nelson	2006	12,775	13,008	1.8%	Narrow min zone
Nelson	2007	10,042	10,234	1.9%	Narrow min zone
Nelson	2008	524,434	524,516	0.0%	
Nelson	2009	145,965	146,188	0.2%	
Nelson	2010	26,068	26,211	0.5%	
Belen	4001	38,473	38,414	-0.2%	
Belen	4002	38,849	39,039	0.5%	
Belen	4003	231,680	231,555	-0.1%	
Belen	4004	22,146	22,180	0.2%	
Castro Sur	3001	128,895	128,938	0.0%	
Castro Sur	3002	145,012	144,914	-0.1%	
Castro Sur	3003	352,837	352,688	0.0%	
Castro Sur	3004	310,803	310,875	0.0%	
Castro Sur	3005	60,868	61,289	0.7%	
Castro Sur	3006	1,387,889	1,387,641	0.0%	
Castro Sur	3007	95,760	96,133	0.4%	
Castro Sur	3008	79,712	79,664	-0.1%	
Castro Sur	3009	276,632	276,750	0.0%	

14.13.3. Global Statistical Comparisons

The global statistical comparison is summarised in Table 14-30 through Table 14-33. No significant variances were noted for the major estimation domains in each prospect.

Table 14-30: Global Validation Statistics for OK Panel Grade Estimates (Au ppm) (Cube, 2018)

Domain	Variable	# samples	Min	Max	Mean	Variance
1001	Composites (undecl.)	18	0.11	3.95	1.36	1.36
	Composites (decl.)	18	0.11	3.95	1.22	1.08
	OK Est CUT_AU 1001	67	0.89	1.53	1.23	0.03
1002	Composites (undecl.)	2,596	0.01	35	2.38	15.83
	Composites (decl.)	2,596	0.01	35	2.02	11.97
	OK Est CUT_AU 1002	6,285	0.1	12.41	2.1	3.05
1003	Composites (undecl.)	370	0.02	50	3.69	57.64
	Composites (decl.)	370	0.02	50	2.63	34.91
	OK Est CUT_AU 1003	805	0.15	14.89	2.74	4.60
1004	Composites (undecl.)	14	0.02	8	1.94	10.08
	Composites (decl.)	14	0.02	8	1.63	8.37
	OK Est CUT_AU 1004	107	1.03	2.94	1.61	0.10
2001	Composites (undecl.)	229	0.01	12	1.25	3.56
	Composites (decl.)	229	0.01	12	1.45	4.67
	OK Est CUT_AU 2001	407	0.19	5.04	1.35	0.93
2002	Composites (undecl.)	61	0.03	10	1.98	5.64
	Composites (decl.)	61	0.03	10	1.91	5.77
	OK Est CUT_AU 2002	294	0.51	4.21	1.82	0.66
2003	Composites (undecl.)	4	0.07	3.93	1.17	2.57
	Composites (decl.)	4	0.07	3.93	1.35	2.97
	OK Est CUT_AU 2003	47	0.27	1.6	1.34	0.02
2004	Composites (undecl.)	190	0.04	15	1.81	5.58
	Composites (decl.)	190	0.04	15	1.56	4.18
	OK Est CUT_AU 2004	667	0.4	4.87	1.64	0.56
2005	Composites (undecl.)	26	0.24	8	2.07	4.31
	Composites (decl.)	26	0.24	8	2.06	4.73
	OK Est CUT_AU 2005	201	1.16	3.14	2.08	0.12
2006	Composites (undecl.)	10	0.12	2.25	1.02	0.42
	Composites (decl.)	10	0.12	2.25	1.22	0.46
	OK Est CUT_AU 2006	32	1.12	1.34	1.2	-
2007	Composites (undecl.)	6	0.04	3.72	1.81	1.51
	Composites (decl.)	6	0.04	3.72	1.76	1.68
	OK Est CUT_AU 2007	42	0.95	2.74	1.75	0.09
2008	Composites (undecl.)	279	0.01	15	1.59	6.87
	Composites (decl.)	279	0.01	15	1.5	6.42
	OK Est CUT_AU 2008	1,147	0.42	5.07	1.47	0.44
2009	Composites (undecl.)	99	0.04	10	1.49	4.67
	Composites (decl.)	99	0.04	10	1.46	4.63
	OK Est CUT_AU 2009	388	0.17	3.32	1.49	0.38
2010	Composites (undecl.)	14	0.07	4.14	0.8	1.35
	Composites (decl.)	14	0.07	4.14	0.98	1.64
	OK Est CUT_AU 2010	67	0.77	1.28	0.97	0.01
4001	Composites (undecl.)	4	0.05	3.08	0.85	1.66

Domain	Variable	# samples	Min	Max	Mean	Variance
	Composites (decl.)	4	0.05	3.08	0.65	1.33
	OK Est CUT_AU 4001	108	0.58	0.74	0.65	-
4002	Composites (undecl.)	24	0.07	6	2.12	4.50
	Composites (decl.)	24	0.07	6	1.83	4.19
	OK Est CUT_AU 4002	102	0.78	2.74	1.84	0.18
4003	Composites (undecl.)	114	0.01	13.75	1.67	6.63
	Composites (decl.)	114	0.01	13.75	1.69	6.19
	OK Est CUT_AU 4003	592	0.63	4.17	1.61	0.36
4004	Composites (undecl.)	12	0.24	4.86	2.07	2.26
	Composites (decl.)	12	0.24	4.86	2.24	2.90
	OK Est CUT_AU 4004	55	1.92	2.57	2.24	0.02
1101	Composites (undecl.)	4,525	0	5	0.15	0.12
	Composites (decl.)	4,525	0	5	0.16	0.14
	OK Est CUT_AU 1101	15,555	0.01	0.84	0.12	-
2101	Composites (undecl.)	414	0.01	1.81	0.12	0.03
	Composites (decl.)	414	0.01	1.81	0.12	0.03
	OK Est CUT_AU 2101	1,591	0.04	0.32	0.12	-
2102	Composites (undecl.)	466	0.01	1.78	0.11	0.03
	Composites (decl.)	466	0.01	1.78	0.1	0.03
	OK Est CUT_AU 2102	2,388	0.02	0.29	0.1	-
3001	Composites (undecl.)	93	0.01	8	0.8	1.94
	Composites (decl.)	93	0.01	8	0.75	1.52
	OK Est CUT_AU 3001	237	0.11	1.76	0.69	0.13
3002	Composites (undecl.)	139	0.01	18	1.47	9.90
	Composites (decl.)	139	0.01	18	1.66	11.77
	OK Est CUT_AU 3002	239	0.4	4.47	1.64	0.82
3003	Composites (undecl.)	199	0.01	12	0.96	3.03
	Composites (decl.)	199	0.01	12	0.98	3.18
	OK Est CUT_AU 3003	623	0.26	2.77	0.98	0.19
3004	Composites (undecl.)	184	0.01	8.3	0.55	1.26
	Composites (decl.)	184	0.01	8.3	0.61	1.44
	OK Est CUT_AU 3004	601	0.12	2.28	0.63	0.10
3005	Composites (undecl.)	22	0.03	4.22	0.65	0.98
	Composites (decl.)	22	0.03	4.22	0.58	0.79
	OK Est CUT_AU 3005	143	0.48	0.9	0.59	-
3006	Composites (undecl.)	715	0.01	25	1.25	7.31
	Composites (decl.)	715	0.01	25	1.25	6.41
	OK Est CUT_AU 3006	2,059	0.07	5.49	1.24	0.79
3007	Composites (undecl.)	50	0.01	4	0.44	0.47
	Composites (decl.)	50	0.01	4	0.4	0.26
	OK Est CUT_AU 3007	179	0.24	0.93	0.38	0.01
3008	Composites (undecl.)	28	0.01	8	1.21	5.65
	Composites (decl.)	28	0.01	8	1.03	4.38
	OK Est CUT_AU 3008	198	0.59	1.65	1.05	0.04
3009	Composites (undecl.)	170	0.01	15	0.91	3.82
	Composites (decl.)	170	0.01	15	0.91	3.47
	OK Est CUT_AU 3009	432	0.26	3.03	0.88	0.22

Table 14-31: Global Validation Statistics for OK Panel Grade Estimates (Ag ppm) (Cube, 2018)

Domain	Variable	# samples	Min	Max	Mean	Variance
1001	Composites (undecl.)	18	2.1	20.7	8.7	27.3
	Composites (decl.)	18	2.1	20.7	8.2	24.8
	OK Est CUT_AG 1001	67	6.32	10.5	8.4	0.9
1002	Composites (undecl.)	2,596	0.5	400	22.5	1,503.1
	Composites (decl.)	2,596	0.5	400	18.7	1,187.8
	OK Est CUT_AG 1002	6,285	1.47	122.6	19	270.0
1003	Composites (undecl.)	370	0.6	500	41.2	5,893.4
	Composites (decl.)	370	0.6	500	37.6	5,402.9
	OK Est CUT_AG 1003	805	1.59	120.2	37.2	538.6
1004	Composites (undecl.)	14	0.6	54.2	6.7	180.4
	Composites (decl.)	14	0.6	54.2	8.1	244.8
	OK Est CUT_AG 1004	107	5.02	17.6	7.7	4.0
2001	Composites (undecl.)	229	0.01	250	29.5	2,856.7
	Composites (decl.)	229	0.01	250	28.6	2,668.7
	OK Est CUT_AG 2001	407	4.61	150.7	29.2	832.7
2002	Composites (undecl.)	61	1.3	125	24.2	689.1
	Composites (decl.)	61	1.3	125	23.3	712.9
	OK Est CUT_AG 2002	294	8.16	45.7	22.2	75.6
2003	Composites (undecl.)	4	2.4	7.9	4.9	4.8
	Composites (decl.)	4	2.4	7.9	4.9	5.5
	OK Est CUT_AG 2003	47	3.88	5.2	4.9	-
2004	Composites (undecl.)	190	0.7	94	13.3	218.8
	Composites (decl.)	190	0.7	94	12.1	209.1
	OK Est CUT_AG 2004	667	3.8	29.3	12.7	26.5
2005	Composites (undecl.)	26	0.01	114	21	826.6
	Composites (decl.)	26	0.01	114	20.9	903.7
	OK Est CUT_AG 2005	201	5.79	35.9	21.2	27.3
2006	Composites (undecl.)	10	1.8	11.3	3.7	8.5
	Composites (decl.)	10	1.8	11.3	4.5	12.5
	OK Est CUT_AG 2006	32	3.75	5.2	4.4	0.2
2007	Composites (undecl.)	6	1.5	23.6	10.6	63.3
	Composites (decl.)	6	1.5	23.6	9.8	57.6
	OK Est CUT_AG 2007	42	5.34	14.9	9.7	2.5
2008	Composites (undecl.)	279	0.01	250	15.9	900.4
	Composites (decl.)	279	0.01	250	15.5	1,024.0
	OK Est CUT_AG 2008	1,147	3.08	67.4	14.7	68.8
2009	Composites (undecl.)	99	0.6	50	9.9	128.4
	Composites (decl.)	99	0.6	50	9.8	130.3
	OK Est CUT_AG 2009	388	2.07	20.9	9.9	9.9
2010	Composites (undecl.)	14	1.3	62	11.2	262.8
	Composites (decl.)	14	1.3	62	13.5	342.1
	OK Est CUT_AG 2010	67	10.26	17.5	13.5	2.2
4001	Composites (undecl.)	4	0.01	3.5	1.8	2.2
	Composites (decl.)	4	0.01	3.5	1.8	2.0
	OK Est CUT_AG 4001	108	1.53	1.9	1.8	-
4002	Composites (undecl.)	24	1.6	60	20.5	465.1

Domain	Variable	# samples	Min	Max	Mean	Variance
	Composites (decl.)	24	1.6	60	18.9	448.0
	OK Est CUT_AG 4002	102	5.53	30	19	30.7
4003	Composites (undecl.)	114	0.6	175	22.6	1,336.4
	Composites (decl.)	114	0.6	175	23.8	1,243.0
	OK Est CUT_AG 4003	592	4.99	58.2	22.3	139.4
4004	Composites (undecl.)	12	6.2	100	50.5	1,120.7
	Composites (decl.)	12	6.2	100	52	1,387.6
	OK Est CUT_AG 4004	55	44.26	60.6	51.7	9.9
1101	Composites (undecl.)	4,525	0.01	100	3.5	38.9
	Composites (decl.)	4,525	0.01	100	3.3	44.4
	OK Est CUT_AG 1101	15,555	0.33	24.2	2.9	2.9
2101	Composites (undecl.)	414	0.01	20.6	2.5	4.6
	Composites (decl.)	414	0.01	20.6	2.4	4.3
	OK Est CUT_AG 2101	1,591	0.72	7.9	2.3	0.9
2102	Composites (undecl.)	466	0.01	38.2	2.2	9.2
	Composites (decl.)	466	0.01	38.2	2	6.7
	OK Est CUT_AG 2102	2,388	0.39	7.4	2	1.4
3001	Composites (undecl.)	93	0.01	50	3.9	65.1
	Composites (decl.)	93	0.01	50	3.5	45.0
	OK Est CUT_AG 3001	237	1.01	11.5	3.4	4.5
3002	Composites (undecl.)	139	0.01	60	5.3	84.3
	Composites (decl.)	139	0.01	60	5.5	90.4
	OK Est CUT_AG 3002	239	1.93	17.6	5.5	14.7
3003	Composites (undecl.)	199	0.01	98.8	6.1	152.3
	Composites (decl.)	199	0.01	98.8	6	133.4
	OK Est CUT_AG 3003	623	1.76	17.9	6.1	9.5
3004	Composites (undecl.)	184	0.01	70	5	98.8
	Composites (decl.)	184	0.01	70	6.1	129.9
	OK Est CUT_AG 3004	601	1.08	23.8	6.3	21.8
3005	Composites (undecl.)	22	0.01	6.4	1.9	2.5
	Composites (decl.)	22	0.01	6.4	1.8	2.3
	OK Est CUT_AG 3005	143	1.42	2.2	1.8	-
3006	Composites (undecl.)	715	0.01	500	14	1,509.2
	Composites (decl.)	715	0.01	500	15.1	1,292.4
	OK Est CUT_AG 3006	2,059	1.57	66.8	14.7	142.6
3007	Composites (undecl.)	50	0.01	45.6	8.6	79.3
	Composites (decl.)	50	0.01	45.6	9.2	96.0
	OK Est CUT_AG 3007	179	3.78	17.9	9	12.0
3008	Composites (undecl.)	28	0.5	50	6.9	162.8
	Composites (decl.)	28	0.5	50	5.9	121.5
	OK Est CUT_AG 3008	198	3.04	10.4	6.2	2.8
3009	Composites (undecl.)	170	0.5	200	14.8	1,116.6
	Composites (decl.)	170	0.5	200	14.9	1,047.0
	OK Est CUT_AG 3009	432	1.34	60.6	15.6	102.8

Table 14-32 Global Validation Statistics for LUC Grade Estimates (Au ppm) (Cube, 2018)

Domain	Variable	# samples	Min	Max	Mean	Variance
1002	Composites (undecl.)	2,596	0.01	35	2.38	15.83
	Composites (decl.)	2,596	0.01	35	2.02	11.97
	LUC CUT_AU 1002	70,741	0.03	26.03	2.1	6.66
	ID2 Check Est CUT_AU 1002	70,741	0.06	26.19	2.17	3.70
1003	Composites (undecl.)	370	0.02	50	3.69	57.64
	Composites (decl.)	370	0.02	50	2.63	34.91
	LUC CUT_AU 1003	6,868	0.06	28.39	2.74	9.56
	ID2 Check Est CUT_AU 1003	6,868	0.12	22.82	2.97	6.37
3006	Composites (undecl.)	715	0.01	25	1.25	7.31
	Composites (decl.)	715	0.01	25	1.25	6.41
	LUC CUT_AU 3006	24,169	0.03	11.74	1.22	1.70
	ID2 Check Est CUT_AU 3006	24,169	0.02	13.16	1.19	0.93

Table 14-33 Global Validation Statistics for LUC Grade Estimates (Ag ppm) (Cube, 2018)

Domain	Variable	# samples	Min	Max	Mean	Variance
1002	Composites (undecl.)	2,596	0.5	400	22.5	1,503.1
	Composites (decl.)	2,596	0.5	400	18.7	1,187.8
	LUC CUT_AG 1002	70,741	0.79	281.8	18.9	599.5
	ID2 Check Est CUT_AG 1002	70,741	1.17	387.9	19.9	325.5
1003	Composites (undecl.)	370	0.6	500	41.2	5,893.4
	Composites (decl.)	370	0.6	500	37.6	5,402.9
	LUC CUT_AG 1003	6,868	0.85	247.4	36.9	1,124.8
	ID2 Check Est CUT_AG 1003	6,868	1.36	258.7	40.8	902.4
3006	Composites (undecl.)	715	0.01	500	14	1,509.2
	Composites (decl.)	715	0.01	500	15.1	1,292.4
	LUC CUT_AG 3006	24,169	0.27	185.5	14.4	314.7
	ID2 Check Est CUT_AG 3006	24,169	1.3	275.7	14.2	148.6

14.13.4. Swath (Trend) Plots

Examples of swath plots for the combined Vein 49 estimation domains by Easting and RL slices for Au and Ag grades are shown in Figure 14-47 and Figure 14-48 respectively.

The correspondence between samples and estimates is good, as evident in the Swath plots. The comparison of the composite grades against the block model grades indicated the raw grade spikes and sections of limited data are adequately handled by the block grade estimates within the selected search windows. Given the drill hole spacing and the high nugget effect the estimates reconciled well against the drill hole composited data.

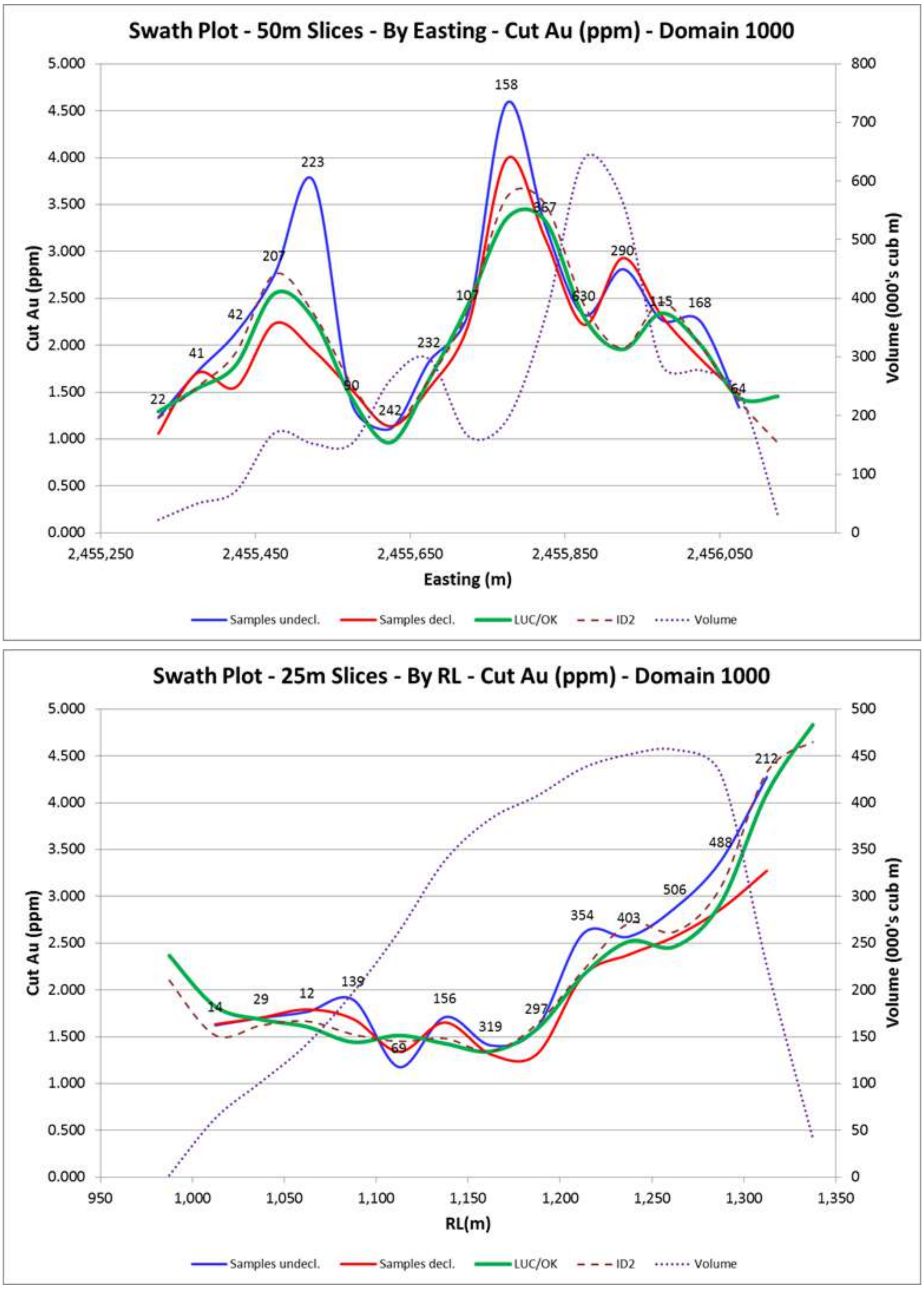
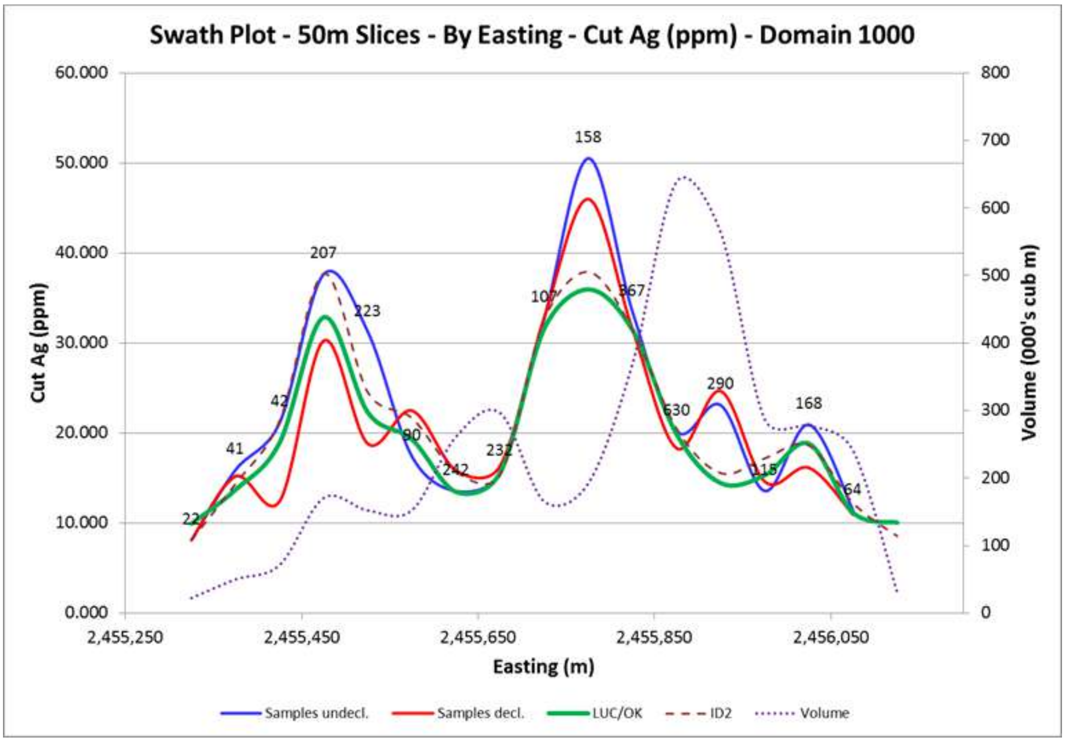


Figure 14-47: Vein 49 – All Domains: Swath Plots for Au grade – LUC vs ID² Estimation (Cube, 2018)



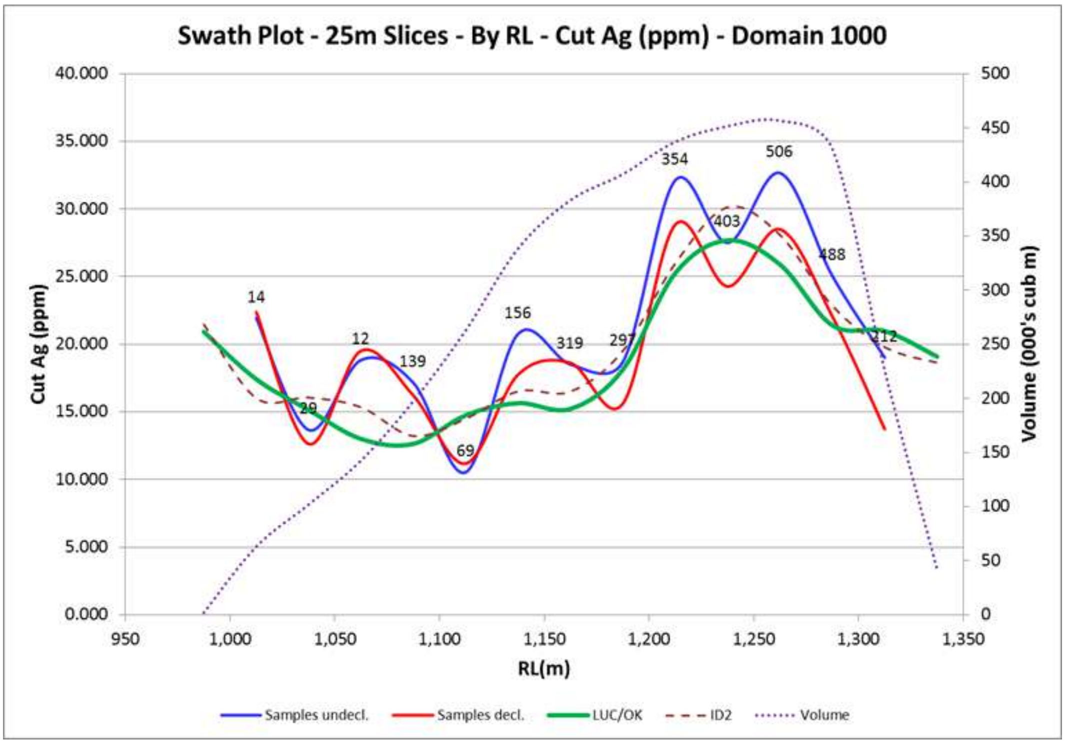


Figure 14-48: Vein 49 – All Domains: Swath Plots for Ag grade – LUC vs ID^2 Estimation (Cube, 2018)

14.13.1. Model Validation Summary

The informing composites and the LUC block estimates, as well as the LUC estimates and the ID^2 check estimates were observed to correspond satisfactorily both globally and in the swath plots. The exception to this is the mineralised waste Domain 1101, in which distance limiting was applied to the high-grade outliers during estimation. As expected, the block estimates in this domain has a lower grade tenor than the informing samples.

Visual comparison of the LUC estimates to the informing composites shows that the estimation reflects local variations in the data.

It is Cube's opinion that the LUC/OK gold and silver estimates are valid and satisfactorily represent the informing data for the 2018 MRE.

14.14. Approach to Un-estimated Blocks

The Calcatreu block model contained a small number of un-mineralised blocks which were allocated grades at half the Au and Ag detection limit. These blocks occurred in sparsely drilled areas of the resource area within the main mineralised domain wireframes and did not meet the minimum requirement for a block to be estimated.

14.15. Mineral Resource Estimate Classification

14.15.1. Classification Summary

A range of criteria were considered by Cube when addressing the suitability of the classification boundaries. These criteria include:

- Geological continuity and volume;
- Drill spacing and drill data quality;
- Modelling technique;
- Estimation properties including search strategy, number of informing composites, average distance of composites from blocks and kriging quality parameters which are quantified in the slope of regression; and
- Risk or uncertainty present in the estimated gold and silver grades.

14.15.2. Geological Continuity and Surface Volume

Cube is confident that the geological continuity and volume accuracy of the mineralised surfaces have been classified appropriately based on the modelling process as detailed in Sections 14.3 to 14.10 and the validation of the model as described in Section 14.11.

14.15.3. Drill Spacing

The resource classification for Calcatreu is mostly based on drill data spacing in combination with the slope of regression data for each block in the estimate.

Blocks have been classified as Indicated or Inferred essentially based on data spacing and using a combination of search volume and number of data used for the estimation. No material in the MRE has been classified as Measured Mineral Resources.

The drill spacing criteria for classification is as follows:

- Indicated Mineral Resources are defined nominally on 25 m x 25 m or less spaced drilling;
- Inferred Mineral Resources are defined by data density greater than 25 m x 25 m spaced drilling to a maximum of 50 m x 50 m spacing, and confidence that the continuity of geology and mineralisation can be extended along strike and at depth.

The drill spacing at Calcatreu is considered by Cube to be adequate to determine the geological and grade continuity for reporting of Mineral Resources.

14.15.4. Data Quality

Most drilling completed at Calcatreu is orientated normal to the dip of the mineralisation, providing in most instances a representative sample across the mineralisation. The mineralisation is clearly visible in DD core and is known to be associated with a steeply dipping hydrothermal quartz vein structures and mineralised andesitic rocks.

Figure 14-49 and Figure 14-50 provide visual overviews summarising the Mineral Resource classification categories for the two Calcatreu block model areas.

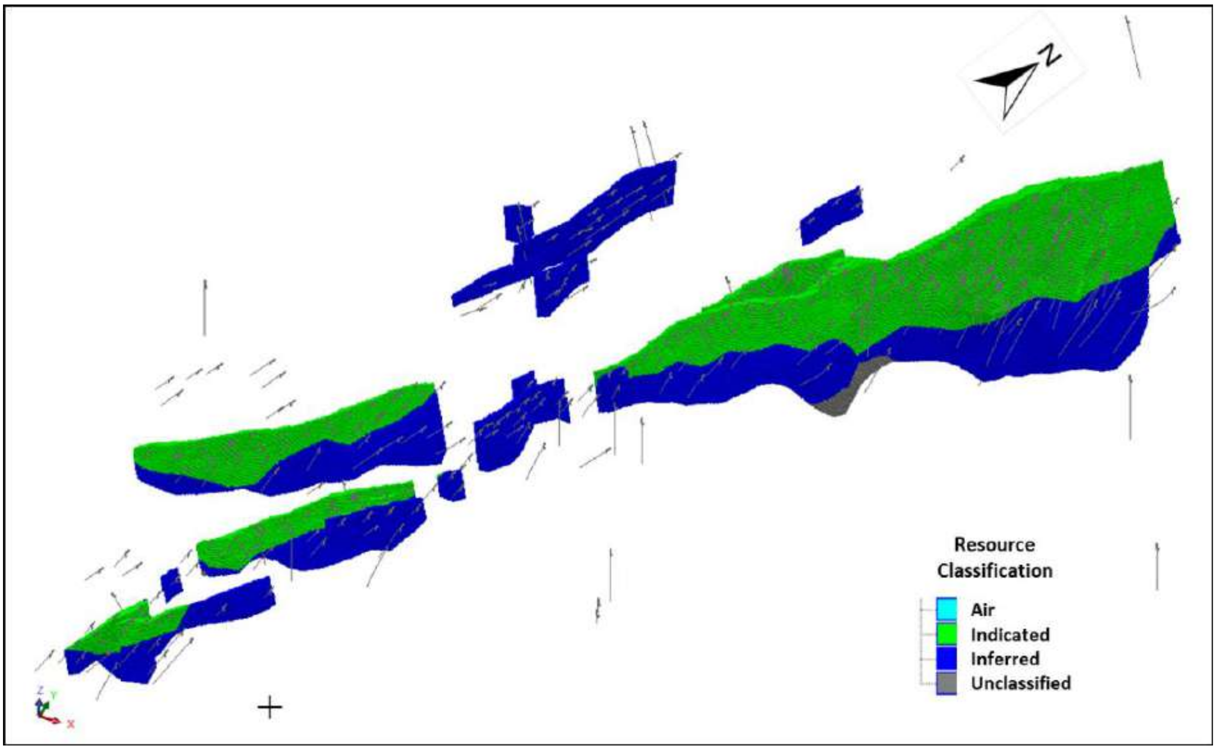


Figure 14-49: Calcatreu (Vein 49/Nelson) Block Model – Isometric View Showing Resource Classification (Cube, 2018)

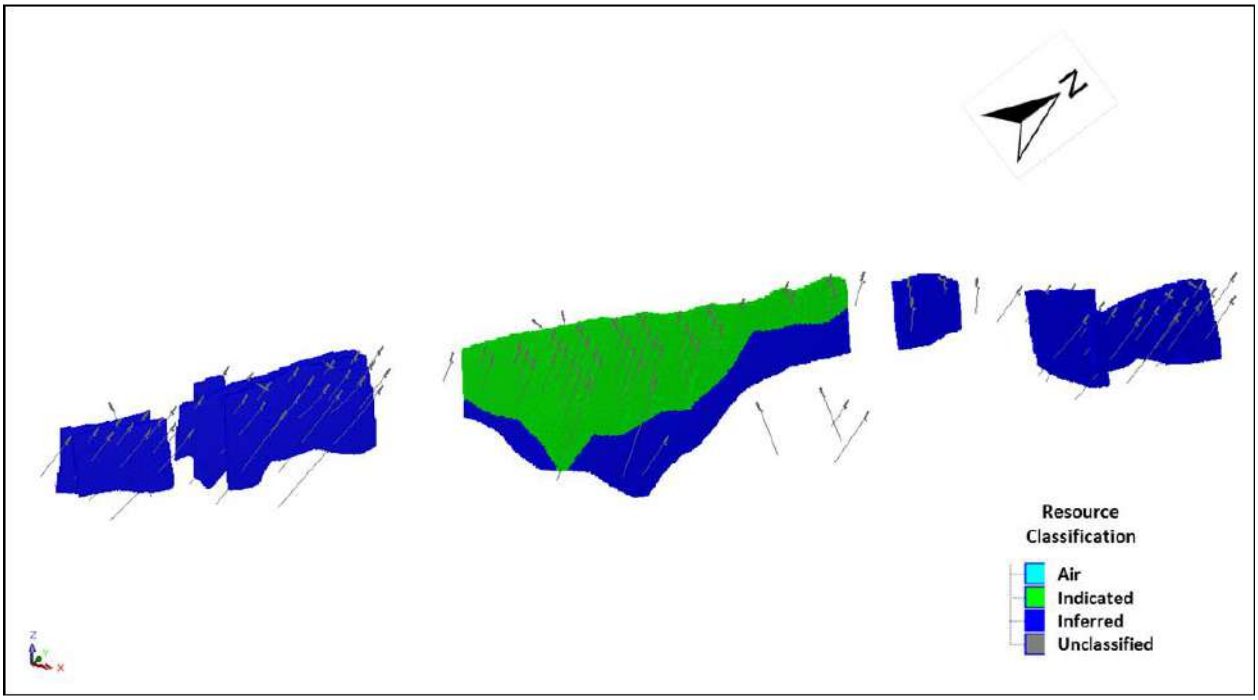


Figure 14-50: Castro Sur Block Model – Isometric View Showing Resource Classification (Cube, 2018)

14.16. Mineral Resource Reporting

14.16.1. Mineral Resource Statement

The Calcatreu Mineral Resource as at 31 December 2018 is suitable for public reporting in compliance with the NI 43-101 and the CIM Definition Standards (May 2014). The Calcatreu Mineral Resource is reported at a base-case 0.5 g/t gold cut-off grade within the interpreted mineralised domains to a maximum vertical depth of 365 m. The MRE appropriately reflects the Competent Person's view of the resource.

For the December 2018 Mineral Resource statement, the Au, Ag and Au_equ are reported as per tabulated in Table 14-34.

Table 14-34 Calcatreu Mineral Resource by Project Area (as at 31 December 2018)

Zone	INDICATED RESOURCES						
	kTonnes	Grade (g/t)			Contained Metal (kOz)		
		Au	Ag	Au_equ	Au	Ag	Au_equ
Vein 49	6,447	2.45	21.01	2.71	512	4,568	568
Nelson	1,383	1.51	16.94	1.72	67	753	76
Belen	-	-	-	-	-	-	-
Castro Sur	2,010	1.40	14.77	1.58	90	954	102
TOTAL-Indicated	**9,841**	**2.11**	**19.83**	**2.36**	**669**	**6,275**	**746**
Zone	**INFERRED RESOURCES**						
	kTonnes	**Grade (g/t)**			**Contained Metal (kOz)**		
		Au	**Ag**	**Au_equ**	**Au**	**Ag**	**Au_equ**
Vein 49	2,863	1.48	13.38	1.64	136	1,231	151
Nelson	1,448	1.42	14.66	1.60	66	682	74
Belen	681	1.61	23.32	1.90	35	511	42
Castro Sur	3,086	1.12	9.81	1.24	111	974	123
TOTAL-Inferred	**8,078**	**1.34**	**13.09**	**1.50**	**348**	**3,399**	**390**

Notes:

1. Effective date of 31 December 2018;
2. Mineral Resources are estimated at a block cut-off grade of 0.5 g/t Au_equ;
3. Figures may not add up due to rounding;
4. Gold equivalent ("**Au_equ**") values are calculated at a ratio of 81.25:1 Ag/Au;
5. Mineral Resources are estimated using a long-term metal prices of US$1,300 per ounce (gold); and US$16 per ounce (silver);
6. A minimum mining width of two metres was used when modelling the resources;
7. Bulk densities for the mineralised zones are 2.44 t/m^3 (oxide), 2.54 t/m^3 (fresh);
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability;
9. The quantity and grade of reported inferred mineral resources in this estimate are uncertain in nature and there has been insufficient exploration to define these inferred mineral resources as measured or indicated mineral resources.

The extent to which the estimate of December 2018 MRE could be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant issues is considered to be low, in the estimation of the QP. This assumption is based on the review conducted during the site visit by the QP whereby relevant documentation with respect to mining and environmental permitting is current and relevant. PGD has land rights agreements in place with local landholders, and PGD has in place regular communication with local communities and stakeholders.

The QP is aware that there are currently local elections due which may result in a change in the provincial government which may impact on the future development of the Project. Other factors may include the legislative restrictions for the use of cyanide which may be an impediment for any potential processing options and will need to be considered for future advanced studies of the project.

14.16.2. Gold Equivalent Calculations

For the MRE the Au, Ag and Au equivalent ("Au_equ") grades were reported. Au_equ was calculated for each cell block grade within the Calcatreu block model. Au_equ values where determined by dividing a set Au price (USD1,300/Oz) by a set Ag price (USD16/Oz) following guidance from PGD.

The formula used was:

Au_equ (g/t) = Au (g/t) + Ag (g/t)/81.25

14.16.3. Cut-off Grade Parameters

The economic portion of a resource is typically determined by the application of a breakeven cut-off grade that considers the total estimated operating costs for the mine, process plant and administration. For the Calcatreu there will be two payable metals (gold and silver), with gold being the predominant payable metal. Therefore, it is easiest to express the breakeven cut-off as a gold equivalent grade.

Cube has applied a COG of 0.5g/t Au equivalent for reporting of the Calcatreu MRE based on guidance from PGD. The COG applied is considered to be appropriate for the style of mineralisation and the expectation that open pit mining methods will be used for any future ore extraction giving that gold and silver mineralisation outcrops from surface.

14.16.4. Grade-Tonnage Curves

Grade tonnage ("GT") curve was created to show average tonnages and grades at different cut-off grades for Au as illustrated in Figure 14-51 to Figure 14-54 for both resource areas.

The Vein 49/Nelson/Belen GT curve plots for Au shows relatively gradual changes in tonnage and grade from the lower cut of 0.5 g/t Au onwards.

The Castro Sur GT curve plots for Au shows comparatively steeper changes in tonnage from 0.5 g/t Au, indicating more sensitivity to cut-off changes for this particular model.

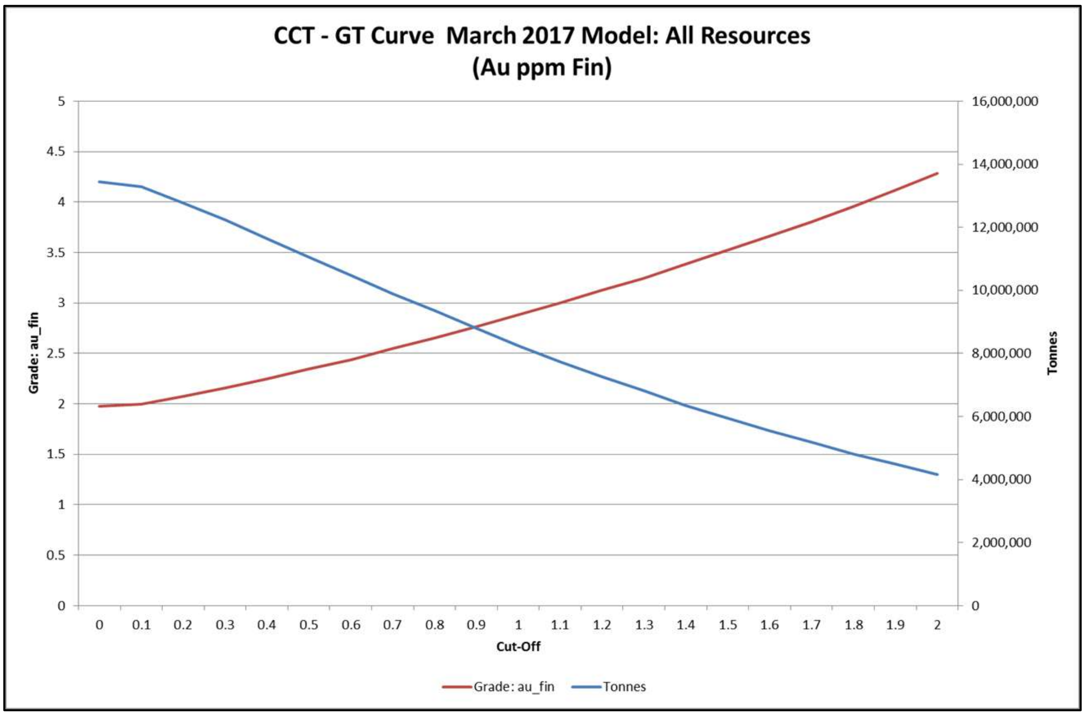


Figure 14-51: GT Curve for All Material at Calcatreu (Vein 49/Nelson) for Au g/t (Cube, 2018)

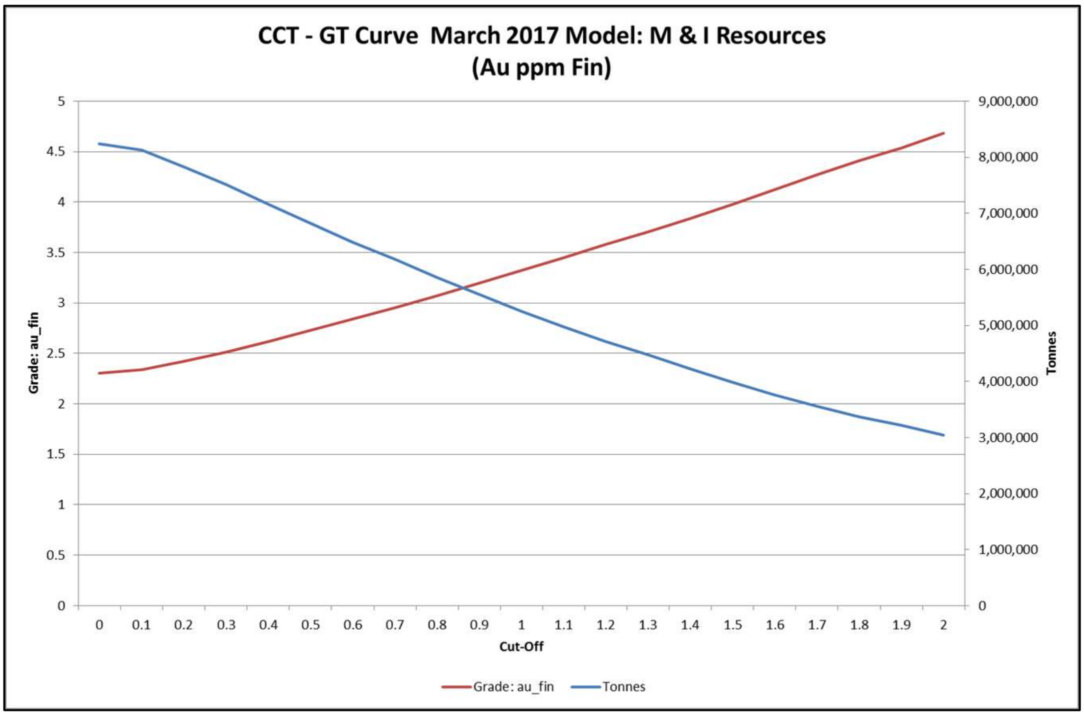


Figure 14-52: GT Curve for Indicated Only at Calcatreu (Vein 49/Nelson) for Au g/t (Cube, 2018)

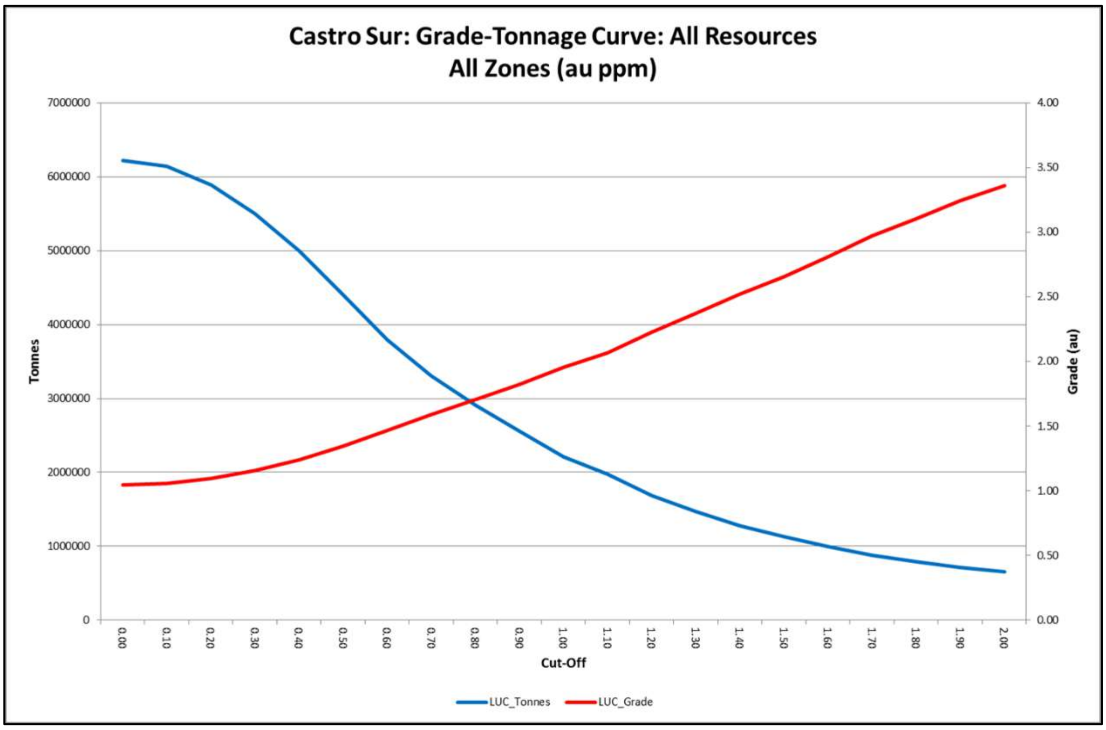


Figure 14-53: GT Curve for All Material at Castro Sur for Au g/t (Cube, 2018)

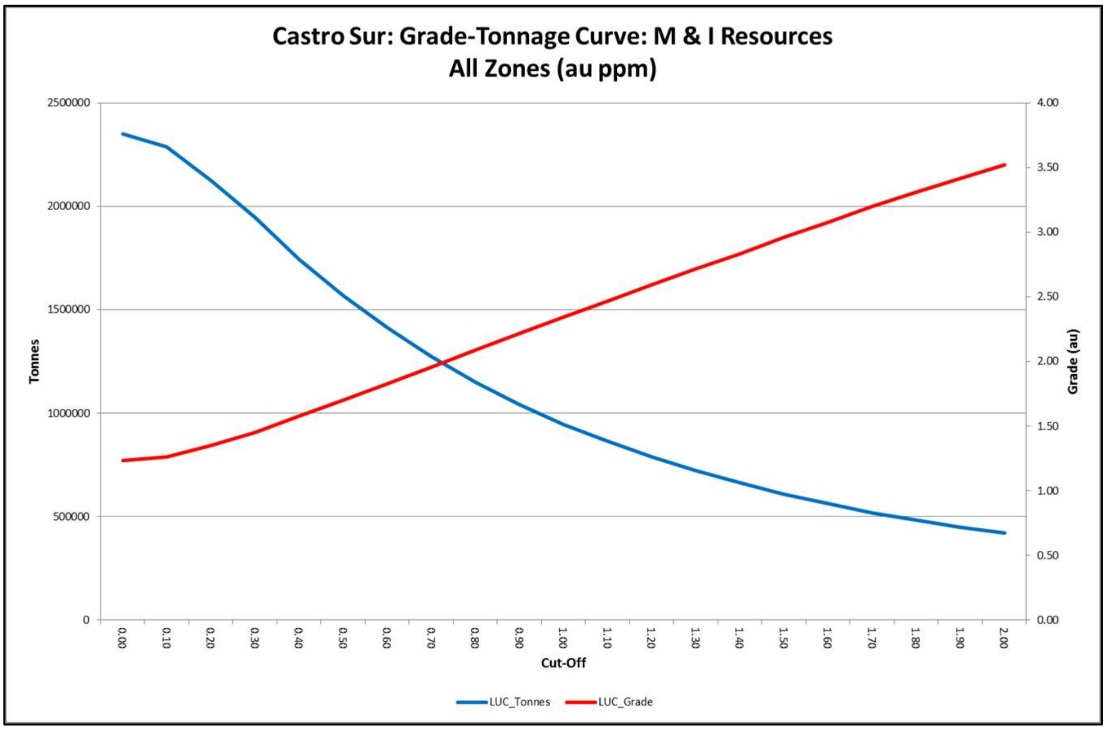


Figure 14-54: GT Curve for Indicated Only at Castro Sur for Au g/t (Cube, 2018)

14.16.5. Reasonable Prospects for Eventual Economic Extraction Assessment

Under the CIM definitions, a mineral resource must be potentially economic in that it must be "in such form and quantity and of such a grade or quality that it has reasonable prospects for economic extraction."

The final grade estimate for Au and Ag used for the main mineralised domain is effectively a diluted recoverable resource estimate. The process attempts to estimate the recoverable tonnage and grade based on the dimensions of a SMU, which is broadly representative of what will be practically achievable during actual open pit mining methods. The SMU block size adopted for Calcatreu in the 2018 block model is 2.5 mX x 5.0 mY x 5.0 mZ.

Approximately 66% of the resource is classified as indicated resources based on the mineralisation domain model of the quartz vein showed good continuity from hole to hole and section to section as well as good agreement between sectional interpretation and the surface mapping.

Cube has used a COG of 0.5 g/t Au equivalent for the reporting the mineral resources at the Calcatreu Project. This cut-off grade is reported to have been based upon guidance from PGD. Gold equivalent calculation was based on long-term metal prices of US$1,300 per ounce for gold and US$16 per ounce for silver.

The Principal Author believes that the COG applied is acceptable for the mining method likely based on the nature of the gold-silver mineralisation, i.e. outcropping, shallow depths, simple geometry of the controlling mineralisation structures, and interpreted mining widths generally greater than 2 metres. This assessment does not take into consideration any geotechnical assessment for ground conditions and pit wall stability. The Principal Author has had extensive experience working in profitable open pit gold operations in Australia where lower cut-off grade ranges were between 0.5 g/t Au and 0.8 g/t Au, and with similar orebody geometry and grade tenure, and during periods where gold prices reached levels around US$300 per ounce (1999-2000).

Processing options that would likely be employed to exploit the resource include either heap leaching or treatment by conventional crushing, grinding, and carbon-in-leach ("CIL") process plant to produce gold/silver doré.

Previous technical studies for the Calcatreu Project have included a gold recovery predicted by test work to be 90% and silver recovery of 74%, as stated in the report - *Calcatreu Gold Project, Initial Feasibility Study*, Vol 1-4, by Snowden Group for Aquiline Resources Inc. reported dated 5th April 2007 (Aquiline, 2007).

The continuity of gold-silver mineralisation, open pit mining methods, and predicted metal recoveries based on the previous metallurgical test work, all indicate that the project has a reasonable prospect for eventual economic extraction under the prevailing gold and silver prices.

15. Adjacent Properties

PGD is the dominant mineral tenement holder in the region and there have been no mineral discoveries of significance made in the immediate vicinity apart from those within PGDs Calcatreu properties.

The most significant occurrence of mineralisation with some proximity to Calcatreu is the Navidad project located in Chubut Province approximately 100 km southeast of Calcatreu.

Navidad comprises five prospects - Galena Hill, Connector Zone, Navidad Hill, Calcite Hill and Calcite Hill NW Extension. These prospects are located on the Navidad Trend and form nearly continuous, near-surface zones of gold-silver mineralisation over a strike length of 3.6 km.

The Somun Cura Massif geological province hosts several recently producing and advanced stage precious metals projects located near Calcatreu. These are listed in Table 15-1.

Table 15-1: Selected Au-Ag Deposits and Prospects of the Near Calcatreu (Cube, 2018)

Deposit	Location	Type
Los Menucos Fm	Los Menucos	NA
Caltrauan, Puesto, Cuya	Los Menucos	High Sulphidation (Caltrauan Puesto), Low Sulphidation (Cuya)
Arroyo Verde	340km E of Calcatreu	Low Sulphidation
Mina Angela	50km E of Vein 49	NA
Cerro Vanguardia Gold-Silver Mine	770km S of Calcatreu	Epithermal vein deposits (low-sulphidation deposit)
Manantial Espejo Gold-Silver Project	700km S of Calcatreu	Low Sulphidation
El Desquite Gold Project	200km SW of Calcatreu	Low Sulphidation

The location of the major gold-silver projects listed are illustrated in Figure 15-1.

Cautionary Statement: Information regarding the adjacent properties is not necessarily indicative of the gold-silver mineralisation at Calcatreu. None of the assumptions from adjacent properties were used by Cube in preparing the Report. The Mineral Resources estimated herein rely solely on the Calcatreu drilling database, and the resources lie entirely within the Calcatreu Project.

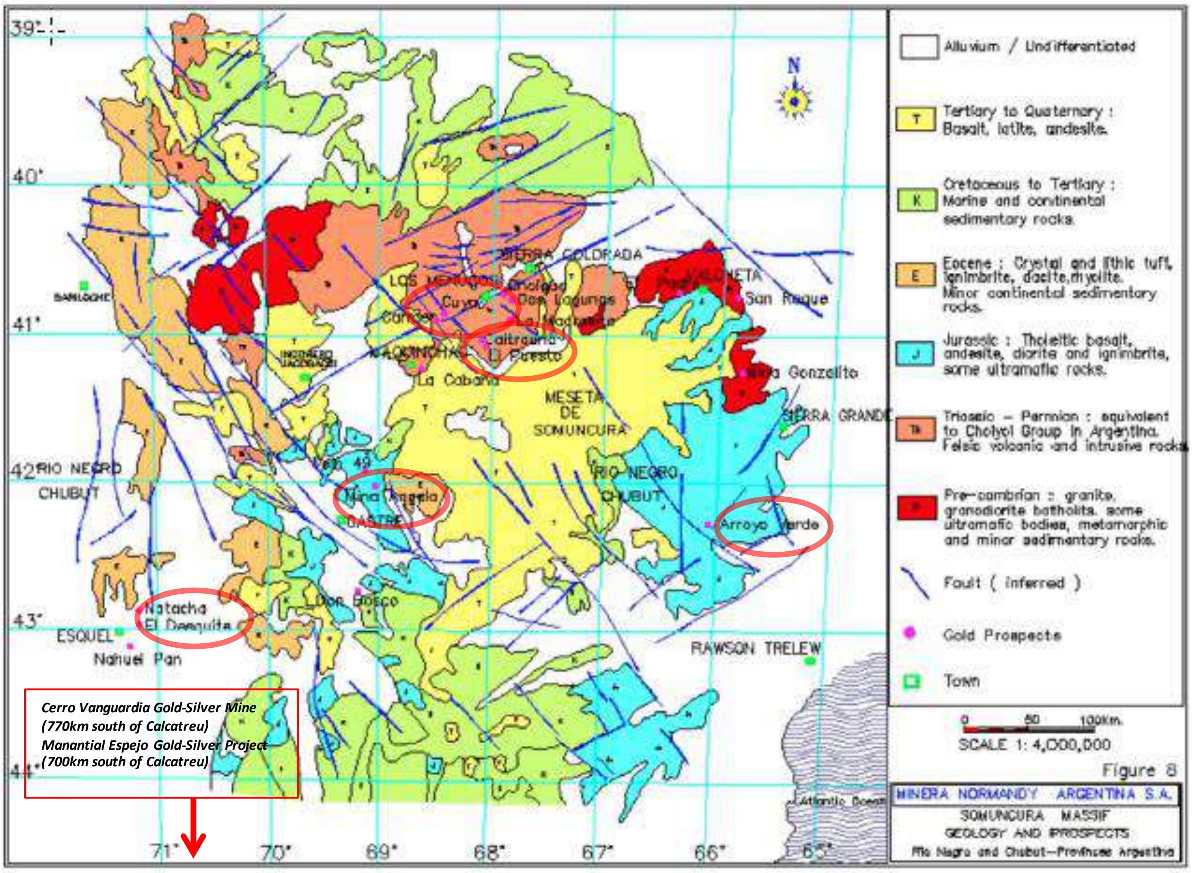


Figure 15-1: Geology and Prospects of the Somun Cura Massif (Micon, 2003)

16. Other Relevant Data and Information

Cube is unaware of any other relevant data or information which has not been considered in the preparation of this report or in reports previously lodged in accordance with NI 43-101.

17. Interpretation and Conclusions

17.1. Summary of Results and Interpretation

The 2018 MRE incorporates RC and DD drilling completed since 2000 over the Calcatreu Project area, including all drilling completed by PGD up to the end of 2018. It is also informed by sampling and geological information from trenches, the surface expression of mineralised zones as indicated by geological mapping, a dataset of bulk density measurements taken from whole core samples, topographic survey files of the project, digital photos of some DD drill core, and updated geological interpretations.

The input drill data is comprehensive in its coverage of the Au and Ag mineralisation at Calcatreu and does not misrepresent the mineralisation. Knowledge of the geological controls on mineralisation has been used to develop the overall MRE.

The following is a summary of work and key findings from the 2018 update of the Mineral Resource estimation work along with some comments on risks and upside potential observed for the Calcatreu Project.

Data Quality

RC and DD core were the main drilling methods for all drilling at Calcatreu and this information was used to inform data for the 2018 MRE work for Calcatreu.

The drilling information reviewed by Cube is considered to be consistent with the Principal Authors' understanding of the style of gold and silver mineralisation targeted by PGD and the previous owners at Calcatreu and is adequate for the estimation of Mineral Resources, as a result of following assessments:

- Drilling and sampling methodology;
- Collar and downhole surveying techniques;
- Sample preparation and assaying methods by independent laboratories;
- Geological logging and core sampling;
- Independently assessment of available QAQC sample data for the recent PGD DD drilling with some DD and RC drilling from previous drilling conducted by Normandy SA, Aquiline and PAS;
- Assessment of sample recovery and quality of core samples;
- Systematic data validation and verification checks of DD core, collar locations, and hardcopy data were conducted by Cube at during the site visit and subsequent follow up analysis; and
- Selected validation and verification checks of DD core, collar locations, and hardcopy data conducted by Cube at Ingeniero Jacobacci site office;
- Assessment of drill hole twinning and significant intersection verification programs.

The following summary highlights the issues found during the site visit and data review:

- Core-loss seems an important issue which clearly affected both Aquiline and PAS drilling. It is likely that there has been core loss as a result of washing out of clay-filled cavities and in the soft, highly weathered zones;

- Following the completion of the validation and verification checks, Cube has noted some concerns with the data quality in relation to the PAS drilling program conducted in 2011. These concerns are based on the results of QAQC analysis, and the review of twinning analysis which both showed significant bias in the grades associated with Au and Ag mineralisation. In addition to these concerns, some data verification information regarding the 2011 PAS drilling campaign was not forthcoming or made available to Cube during or subsequent to the site visit (e.g. QAQC results, drilling and sampling methods, core photos). For this reason, Cube has not used the recent PAS drilling information in the final 2018 Mineral Resource estimation work;
- The 2017 due diligence drilling program carried out within the Vein 49 significant intersections zones; all confirmed the presence of high-grade gold mineralisation. The PQ core samples provided a much-improved core recovery due to the diamond drill core triple tube setup;
- The drilling database used for the 2018 MRE was validated and found to be well structured and no obvious material discrepancies were detected in the collar, survey, assay or geology data. A small number of minor issues were noted and forwarded to PGD for review and feedback. The issues were properly explained and did not have any material effect on the MRE.

Interpretations and Domaining

- The Calcatreu Mineral Resource area covering Vein 49, Nelson and Belen Prospects, has a combined dimension of 2.5 km (total strike length from Nelson to Vein 49) by 550 m (width of all mineralisation domains combined). The maximum depth known to date for the deepest mineralisation is 370m vertical depth below surface;
- Cube visually assessed several core intervals through the mineralisation on site and also reviewed each mineralised zone section from historic geology maps, geological logging, and available information in the core photos. Each interval that was part of the mineralisation domains for each Calcatreu Prospect was checked against the visual evidence of mineralisation in the core photos and also all assay and core logging information. Several adjustments were made to the sectional interpretation prior to updating the 3D wireframe, coding and compositing;
- Mineralisation domain boundary analyses clearly show sharp (or hard) boundary between the main mineralisation domains for each prospect and the waste material. The analysis provides confidence that the mineralisation domains in each prospect created can be used as hard boundaries to constrain the sample data during the sample compositing process; and
- The drill hole sampling information was composited to a 1.0m composite interval in order to reduce the variability inherent in raw samples or a smaller composite length relative to estimation resource model block dimensions. The selection of a suitable support for the Calcatreu proved problematic due to the variable sample lengths and the narrow nature of some mineralisation domain widths and the problems associated with core loss.

Data Analysis

- Statistical and visual analysis for Au and Ag grades was undertaken to validate the overall controls on mineralisation and to determine which estimation approach to adopt. The aim was also to evaluate the need for special treatment of obvious statistical outliers;

- The effect of top-cutting is illustrated by the % reduction in mean grade for Au and Ag, and also the effect on CoV. More significant reductions are noted for Au in the Calcatreu-style mineralisation, primarily due to several very high-grade outliers where the grade capping has affected mean grades and CoV. Where there are very small sample populations, the mean grade and CoV, also show high reductions; and
- Experimental variograms were generated within major mineralisation domains. Gaussian variograms for the mineralisation domains were generated and interpreted as part of the spatial data analysis. Where data for particular domains proved to be insufficient for variography analysis, parameters for grade estimation were adopted from other representative mineralisation.

Estimation Methodology and Validation

The input drill data is comprehensive in its coverage of the gold and silver mineralisation at Calcatreu and does not misrepresent the mineralisation. Knowledge of the geological controls on mineralisation has been used to develop the overall resource estimate.

The following points summarise the methodology used in the estimation process:

- The block models were generated in Surpac and flagged with the appropriate estimation domains and topographical surfaces. The block dimensions select for the estimation process was 5 mX x 10 mY x 10 mZ and sub-celled to 1.25 mX x 2.5 mY x 2.5 mZ;
- Cube selected LUC as the preferred method estimation of Au and Ag grade for the major mineralisation domains. This method is used to define a recoverable resource at a SMU scale, and is ideally suited to variables that have a diffusive character;
- OK was used to produce the reported estimates for the other minor domains at the panel resolution of 2.5 mX x 5 mY x 5 mZ and with a Y axis rotation of 50° east of north. The panel estimates were devolved into the SMU block model for compatibility with the block size used for the LUC estimates, and for ease of insertion into the final Surpac block model;
- Search ellipse geometry and size was determined from the experimental variograms generated for mineralised domain; and
- Cube carried out the several validation methods for the Calcatreu Au and Ag grade LUC and OK estimates. The correspondence between mean grade composite samples and block grade estimates is good, as demonstrated by the visual inspection in cross sections, global comparisons of volume and mean grade statistics, and semi-local comparisons on sections and levels.

Knowledge of the distribution of grades is necessary in order to get a better estimate of the mean. This usually involves making assumptions about the grade distribution based on current understanding of the geology and mineralisation (Vann, 2002). The combined LUC and OK estimation approach adopted by Cube for Calcatreu attempts to remove the optimistic and or pessimistic nature of interpreting the high-grade domains, particularly where there is a limited number of drill hole intercepts.

Classification and Reporting

The density of drilling supports the classification of 66% of the Mineral Resource to be classified as Indicated (by contained metal). The resource risk is considered to be low to moderate based on the drilling density and the confidence derived from the confirmation of significant grade intervals from due diligence drilling in 2017 by PGD. The effect of poor core recovery in some core intervals has resulted in the risk assessment leaning toward low-moderate rather than low.

The cut-off grade for reporting is 0.5 g/t Au. As gold resources occur at near-surface the model was constructed with a view towards selective open pit mining and heap leach operation. Thus, a 0.5 g/t Au lower cut-off was deemed appropriate.

The mineral resource classification for Calcatreu is mainly based on data quality, drill data spacing, kriging parameters and the number of composites used for the estimation. Blocks have been classified as Indicated or Inferred only.

For the December 2018 Mineral Resource statement, the Au, Ag and Au_equ are reported as per tabulated in Table 17-1.

Table 17-1 Calcatreu Mineral Resource by Project Area (as at 31 December 2018)

Zone	INDICATED RESOURCES						
	kTonnes	Grade (g/t)			Contained Metal (kOz)		
		Au	Ag	Au_equ	Au	Ag	Au_equ
Vein 49	6,447	2.45	21.01	2.71	512	4,568	568
Nelson	1,383	1.51	16.94	1.72	67	753	76
Belen	-	-	-	-	-	-	-
Castro Sur	2,010	1.40	14.77	1.58	90	954	102
TOTAL-Indicated	**9,841**	**2.11**	**19.83**	**2.36**	**669**	**6,275**	**746**
Zone	**INFERRED RESOURCES**						
	kTonnes	**Grade (g/t)**			**Contained Metal (kOz)**		
		Au	**Ag**	**Au_equ**	**Au**	**Ag**	**Au_equ**
Vein 49	2,863	1.48	13.38	1.64	136	1,231	151
Nelson	1,448	1.42	14.66	1.60	66	682	74
Belen	681	1.61	23.32	1.90	35	511	42
Castro Sur	3,086	1.12	9.81	1.24	111	974	123
TOTAL-Inferred	**8,078**	**1.34**	**13.09**	**1.50**	**348**	**3,399**	**390**

Notes:

1. Effective date of 31 December 2018;
2. Mineral Resources are estimated at a block cut-off grade of 0.5 g/t Au_equ;
3. Figures may not add up due to rounding;
4. Gold equivalent ("Au_equ") values are calculated at a ratio of 81.25:1 Ag/Au;
5. Mineral Resources are estimated using a long-term metal prices of US$1,300 per ounce (gold); and US$16 per ounce (silver);
6. A minimum mining width of two metres was used when modelling the resources;

7. Bulk densities for the mineralised zones are 2.44 t/m3 (oxide), 2.54 t/m3 (fresh);
8. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability;
9. The quantity and grade of reported inferred mineral resources in this estimate are uncertain in nature and there has been insufficient exploration to define these inferred mineral resources as measured or indicated mineral resources.

Comparison with Previous Resource Work

The following points summarise the changes to the interpretation and estimation methodology used by Cube for Calcatreu. In addition, the updated 2018 MRE is based on additional samples from the 2018 drilling results:

- Geological Interpretation – The Cube model extends the mineralised domain boundaries within 0.5 g/t Au threshold correlated with the overall mineralisation trends for Vein 49, Nelson, and Belen. This includes new interpretation and additional mineralisation for the Castro Sur model;
- Statistical Analysis - Variances in application of top cuts to the Au and Ag high-grade outliers - primarily as a result of the re-interpretation and subsequent differences in the sample data within the limits of the new estimation domains for the 2018 model;
- Variography Analysis – application of directional search strategies on declustered composite data for the 2018 modelling work;
- Estimation Methodology – Use of a LUC/OK estimation method for the main mineralisation domains compared to ID^2 estimation method for previous estimates. As there is a strongly skewed grade distribution for both Au and Ag, simply estimating the mean grade by a linear estimation method (ID^2 or simple OK) risks the potential for extreme values dissipating high grades into poorly informed cell blocks within the block model;
- Classification – The methodology for establishing limits for each classification boundary differ between the block models – Cube's methodology has been explained in this report. Previous methodology involved having several grade interpolation passes which were coded and used to determine Indicated and Inferred classification block codes;
- Reporting - Economic cut-off grades & Au equivalent differences. The Cube model reporting cut-off grade is 0.5 g/t Au (for open pit mining method consideration). The Au equivalent calculation previously used was based on much lower precious metal prices, and also included recovery factors. No recovery factors were used in the metal equivalent calculation for the 2018 model.

17.2. Risks and Uncertainties

The key technical risks and uncertainties which relate to the 2018 MRE (and are generally reflected in the classification of the reported 2018 MRE), and which could impact on the viability of the project, are summarised as follows:

- Drill Spacing - Cube considers the main concerns with Calcatreu are in the grade estimation of blocks in the deeper and more sparsely drilled zones within the main mineralisation domains. These zones have been classified as Inferred or unclassified to reflect this uncertainty;

- Sample Quality - For both RC samples and DD core, the analysis shows that the overall quality of the core and the sample recovery is fair to poor. Some data was deemed to be not suitable for Mineral Resource estimation, i.e. PAS drilling results, based on the data verification analysis;
- Mineralisation Domain Analysis – this is a function of the data spacing, quality and variability of the input data, and the degree to which the final result is an unbiased estimate of the total contained metal. Specific areas within the modelling process where risks and uncertainties were identified included:
    - Further statistical analysis is required to validate the overall controls on the main mineralised domain and to determine whether further subdivision of the domains was required based on weathering, grade, alteration, sulphide content or lithology;
    - Review and application of grade top-cuts (to Au and Ag composite data). There are discrete but relatively very high-grade zones in the block model that may require further sub-domaining;
    - The interpretation of minor mineralised domains based on limited data – these zones will require further analysis and possible infill drilling to determine the extent and continuity of mineralisation. At the current drill spacing, the controls on mineralisation are only weakly developed. Data from further infill drilling may change this preferred direction of mineralisation continuity;
- Bulk Density Determinations - The amount of bulk density data available is limited and restricted to samples of the mineralisation zones in Vein 49 and Nelson. Bulk density methodologies also need to be reviewed. As the core in the oxide and high sulphide content zones is generally broken and differentially weathered, the more competent and un-weathered sections of the core is the most likely material used for density determinations and hence is likely to give erroneous values to the assigned density in the oxide/fresh zones. The risk of not using a method which adequately accounts for potential void spaces is considered to be generally low in all fresh rock types, and moderate in more weathered material;
- Estimation Methods - Previous estimation techniques have used an Ordinary Kriging method with hard boundary wireframes to establish the global contained metal available for open pit mining. Cube has initiated an alternative estimation approach (Local Uniformed Conditioning) which will define the recoverable mineralisation and better represent the likely outcome when selectively mining the satellite deposits. Comparison of the two estimation methods has been undertaken to assess the impacts and quantify the risks associated with the resource estimates;
- Resource Classification - With the current level of knowledge, and due to the uncertainty attached to Inferred Mineral Resources, it cannot be assumed that all or part of the Inferred Mineral Resource will upgrade to an Indicated Mineral Resource as a result of continued exploration. Confidence in the estimate is sufficient to allow the meaningful application of technical and economic parameters and for evaluation of the economic viability for public disclosure. The 2018 Mineral Resources reported here do not have demonstrated economic viability;
- Geometallurgy – A metallurgical test work programme reported by Aquiline in 2007 (Aquiline, 2007) demonstrated that the ore is “free milling” and that high gold and silver recoveries can be achieved using a conventional grinding and cyanidation process. Grade versus leach

residue relationships were developed and equate to an Au recovery of 90% at the average head grade of 3.86 g/t Au and Ag recovery of 74% at the average head grade of 33.2 g/t Ag. The 2007 report also included a conceptual assessment of alternative process routes including a non-cyanide Au and Ag recovery process. More recent metallurgical test work reporting and government compliance around cyanide require consideration for future mining studies;

- Mine Planning and Operating Parameter Considerations - Factors used for initial open pit mining costs and recovery factors have not been considered during the Mineral Resource estimation work, and further work is required to define the capital and operating parameters to support formal evaluation of the economic viability of the project;
- Resource Development and Exploration – The potential for economic Au-Ag mineralisation is not closed off along down plunge, or down dip, for most of the mineralisation envelopes interpreted so far. There is potential to extend the resource base by infill and step- out drilling programs. The exploration model for the area, encompassing the structural framework and the mineralisation, is still under development and will need to be refined as more information is gathered and synthesised.

Other Risk Factors

Apart from resolving the acceptability of the use of cyanide, risk mitigation strategies should be incorporated into the project before a decision is made to proceed with development. In particular, the identification of additional mineral resources for conversion into mining inventory, through discovery or upgrading the confidence classification of existing mineral resources, provides an opportunity to significantly improve the project risk profile.

Industry standard mining practises would be critical to the success of an open pit operation where many operations fail to meet good practises for open pit geology, including visual control ore boundaries, grade control and reconciliation practises, effective blasting to control dilution and ore loss.

Environmental factors to be considered would also include assessment of hydrogeology and control over the mining and dumping of pyritic waste that may need to be exercised to manage the risk of acid mine drainage being generated.

The extent to which the estimate of December 2018 MRE could be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing or other relevant issues is considered to be low at the present time. This assumption is based on the review conducted during the site visit by the QP whereby relevant documentation with respect to mining and environmental permitting is current and relevant. PGD has land rights agreements in place with local landholders, and PGD has in place regular communication with local communities and stakeholders.

The QP is aware that there are currently local elections due which may result in a change in the provincial government which may impact on the future development of the Project. Other factors may include the legislative restrictions for the use of cyanide which may be an impediment for any potential processing options and will need to be considered for future advanced studies of the project.

Further work should be undertaken to confirm or modify the preliminary conclusions regarding processing performance, hydrogeology and environmental matters.

Processing investigations should be initiated to identify a technically and economically feasible processing method for the potential mining inventory estimated in the Report.

17.3. Upside Potential

Calcatreu Mineral Resource Development

All the prospects at Calcatreu have potential upside where mineralised structures have not been closed off, and/or structural and mineralisation trends are not well understood at the present time. Below is a summary of the current understanding of each of the main Calcatreu prospects:

- Vein 49/Nelson: The Nelson quartz vein system appear to be the along strike continuation of Vein 49, split into separate veins and showing slightly lower grades and levels of alteration. The veins have not conclusively been demonstrated to connect between Nelson and Vein 49, and are open both along strike to the northeast and down dip;
- Belen: The Belen mineralisation has been identified from RC drilling and is not as well understood in a mineralogical sense but is oriented parallel to Vein 49 mineralisation with a lower Au-Ag grade tenor and less continuity noted from the drill section interpretations.;
- Castro Sur: As with Belen, the Castro Sur mineralisation is not as well understood in a mineralogical sense. The mineralisation zone follows a similar strike trend to the main mineralisation south at Vein 49 but appears to be structurally offset. Interpretation of very narrow domains has shown by steeply dipping NW and SE oriented mineralisation structures. Data spacing and geological information is generally poorer in quality than for Vein 49 and Nelson, and there was no DD core drilling information to assist with geological and mineralisation interpretations.

Figure 17-1 to Figure 17-4 show plan view and composite long sections showing interpreted 3DM mineralisation and composite Au grades, with completed drilling. For the Vein 49/Belen/Nelson Prospects, there are clearly gaps in the drilling, with several potential targets along strike from current mineralisation trends (Figure 17-1). The long section view (Figure 17-2) shows possible plunge components to the main mineralisation zones interpreted for Nelson and Vein 49.

Figure 17-3 shows a plan view of the Castro Sur mineralisation defined in the 2018 model work, with three distinct drilling gaps which require further review and potential as drill targets. Figure 17-4 highlights the gaps in long section view showing mineralisation envelopes not closed off, although plunge components are not evident with the limited drilling information.

It is Cube's view that further resource development work, including drilling definition work on the Vein 49/Nelson and Castro Sur Prospects is warranted.

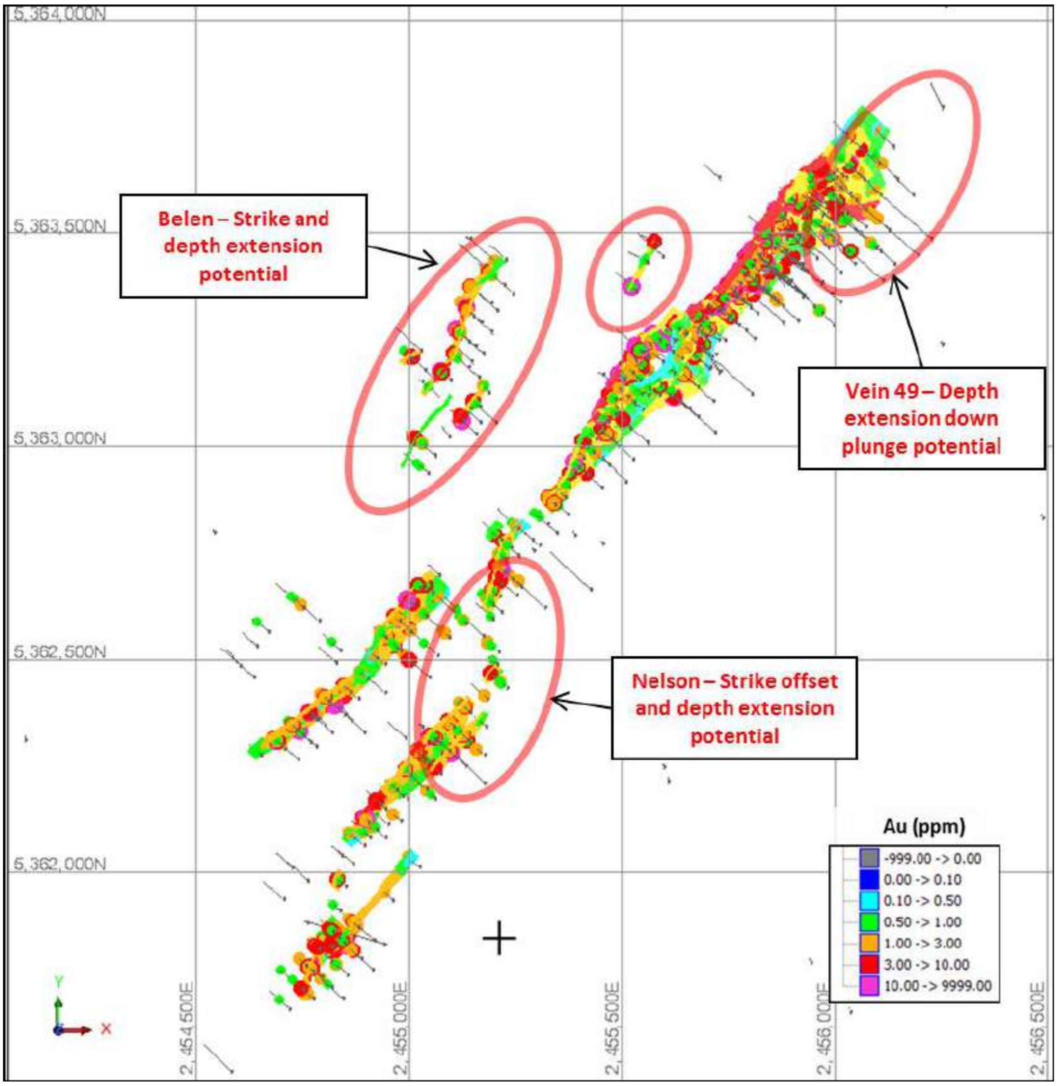


Figure 17-1: Plan View of Vein 49/Belen/Nelson Block Grades and Potential Drill Targets (Cube, 2018)

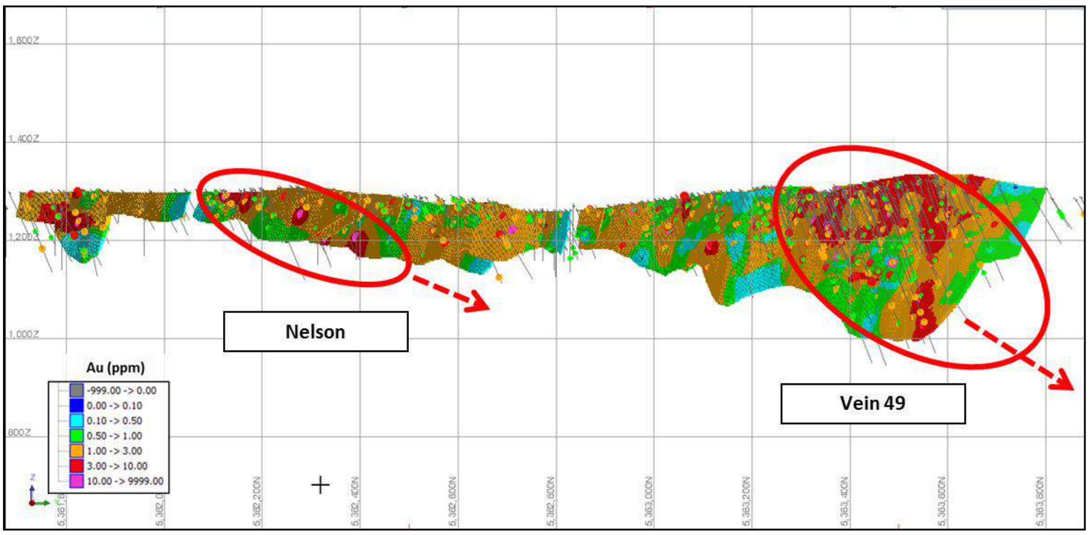


Figure 17-2: Composite Long Section View of Vein 49/Belen/Nelson Block Grades and Potential Drill Targets (Cube, 2018)

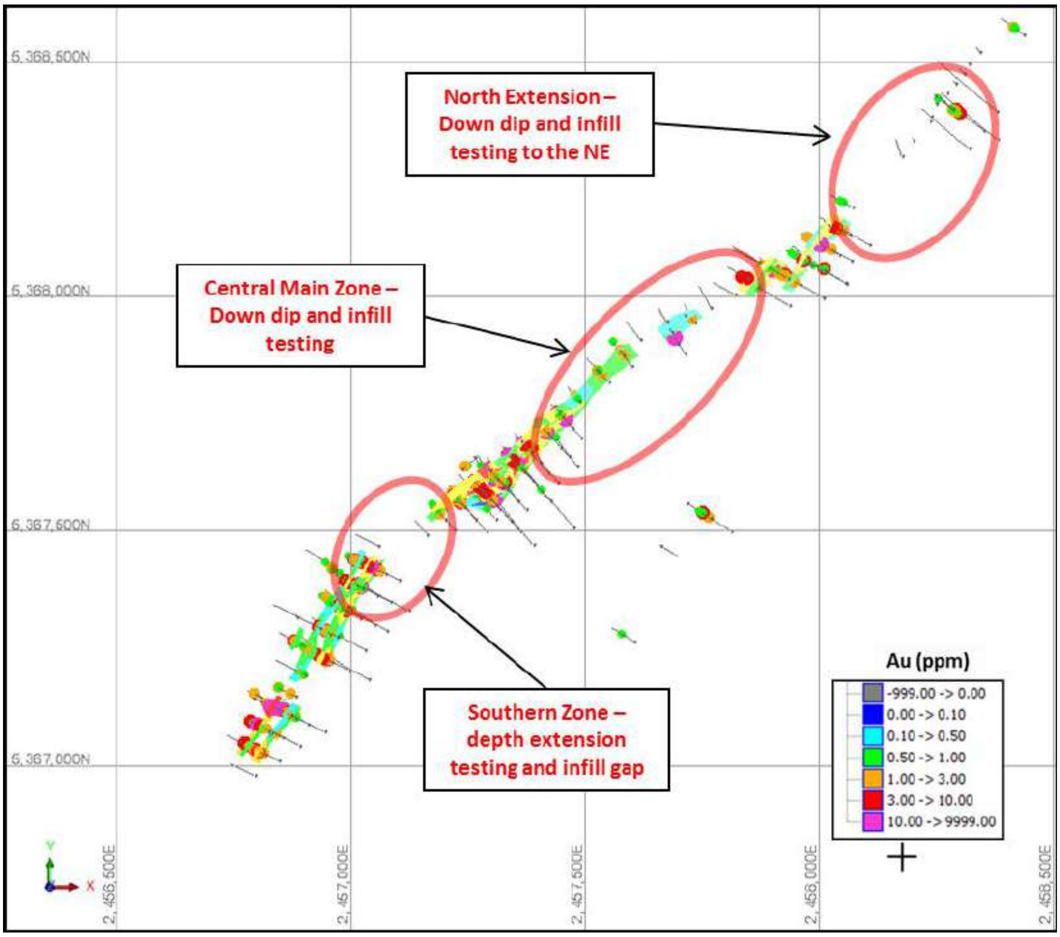


Figure 17-3: Plan View of Castro Sur Block Grades and Potential Drill Targets (Cube, 2018)

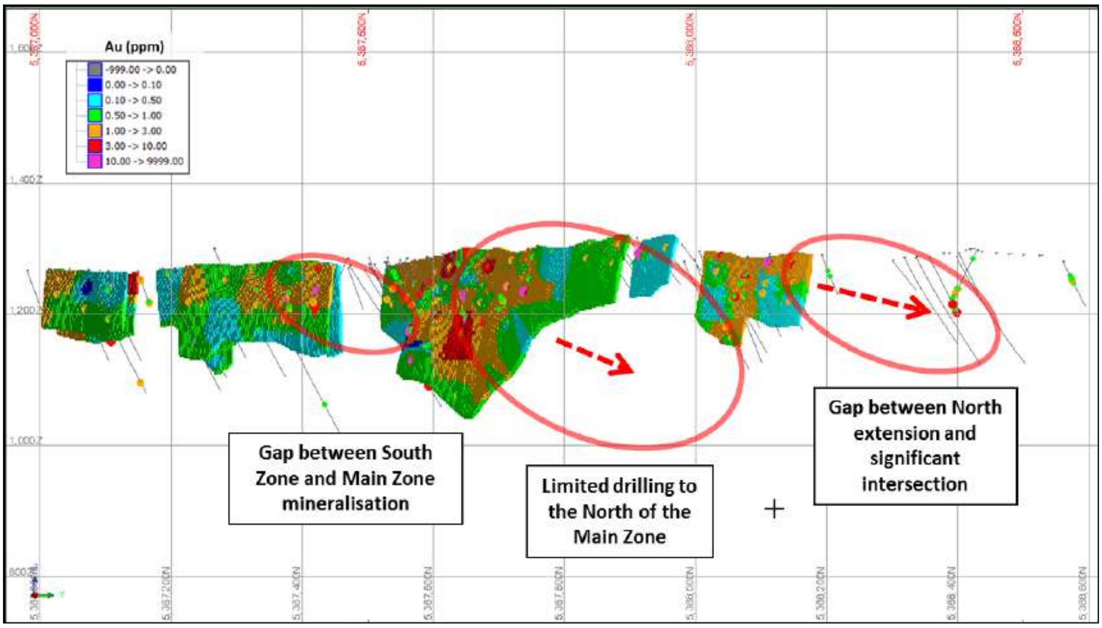


Figure 17-4: Composite Long Section View of Castro Sur Block Grades and Potential Drill Targets (Cube, 2018)

Calcatreu District Exploration

Calcatreu is located in a highly prospective district within the Somun Cura Massif which hosts several occurrences of low sulphidation, epithermal vein-hosted, precious metals deposits defined by several regional structural lineaments (Figure 17-5).

Cautionary Statement: Information regarding the adjacent properties is not necessarily indicative of the gold-silver mineralisation at Calcatreu.

PGD has acquired the Calcatreu Project which contains numerous Au and Au-Ag occurrences scattered over a regional structural corridor, with a strike length of approximately 30 km. Locally there are NE trending structures which control the location of the previous metal mineralisation.

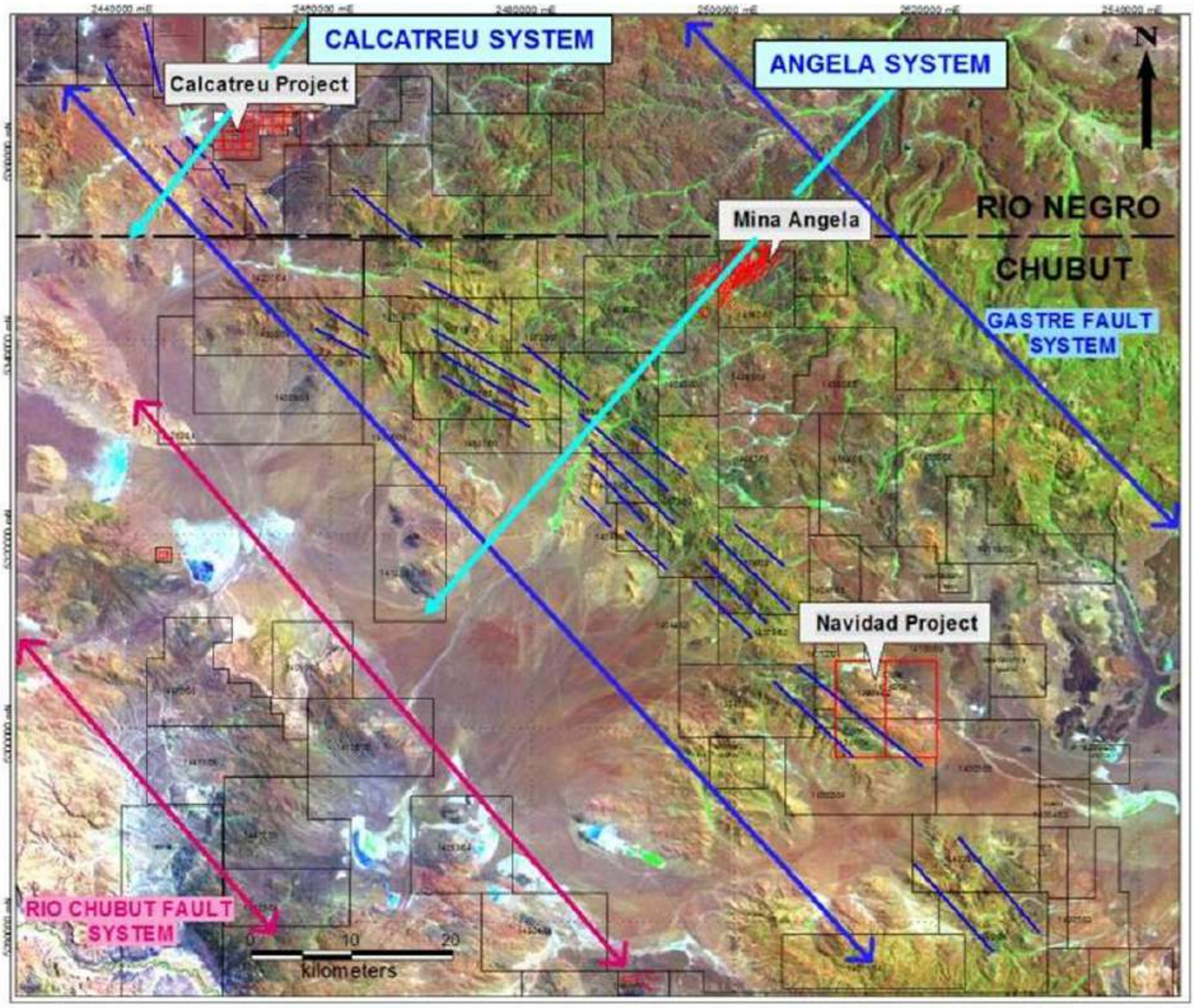


Figure 17-5: Air Photo Imagery of nearby Mining and Exploration Projects in Relation to Major Structural Corridors near Calcatreu (Micon, 2003)

Although geophysics and geochemical exploration has discovered these zones, the programs completed have not fully tested many anomalies identified from surface rock chip geochemistry, trenching and initial RC drill testing. Micon (2003) noted that some geochemical and geophysical anomalies remain unexplained and further follow -up work on the initial vein system discoveries remains to be done.

Based on the results for the 2018 Mineral Resource model completed on four of the prospects at Calcatreu, Cube believes that there is significant precious metal resource potential at Calcatreu and that follow up district scale exploration programs are warranted. Cube has highlighted several Calcatreu district prospect targets as illustrated in Figure 17-6. These include the following targets:

- Nabel-Nabelon Prospect (Figure 17-7) – Northern most Au anomaly in the Calcatreu district;
- Trinidad Prospect (Figure 17-8) – Possibly east-west striking zone;
- Viuda de Castro Prospect (Figure 17-9) – Possible offset of the Castro Sur mineralisation trend;
- Castro Sur North Prospect (Figure 17-10) – Sparsely drilled gap with anomalous Au results to the north of Castro Sur; and
- Fiero and Cancela Prospects (Figure 17-11) – Anomalous Au zones separating Vein 49 from Castro Sur with limited drill testing to date.

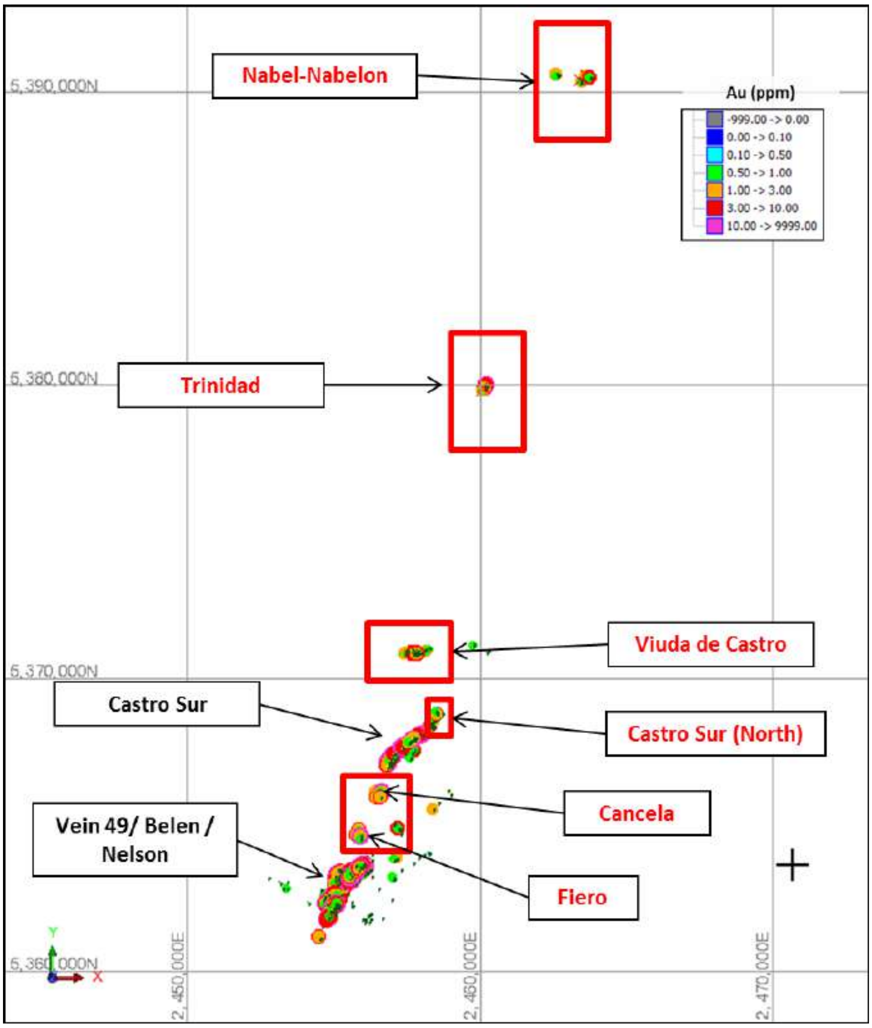


Figure 17-6: Plan View of Calcatreu District Prospects and Drill hole Au Grade Distribution (Cube, 2018

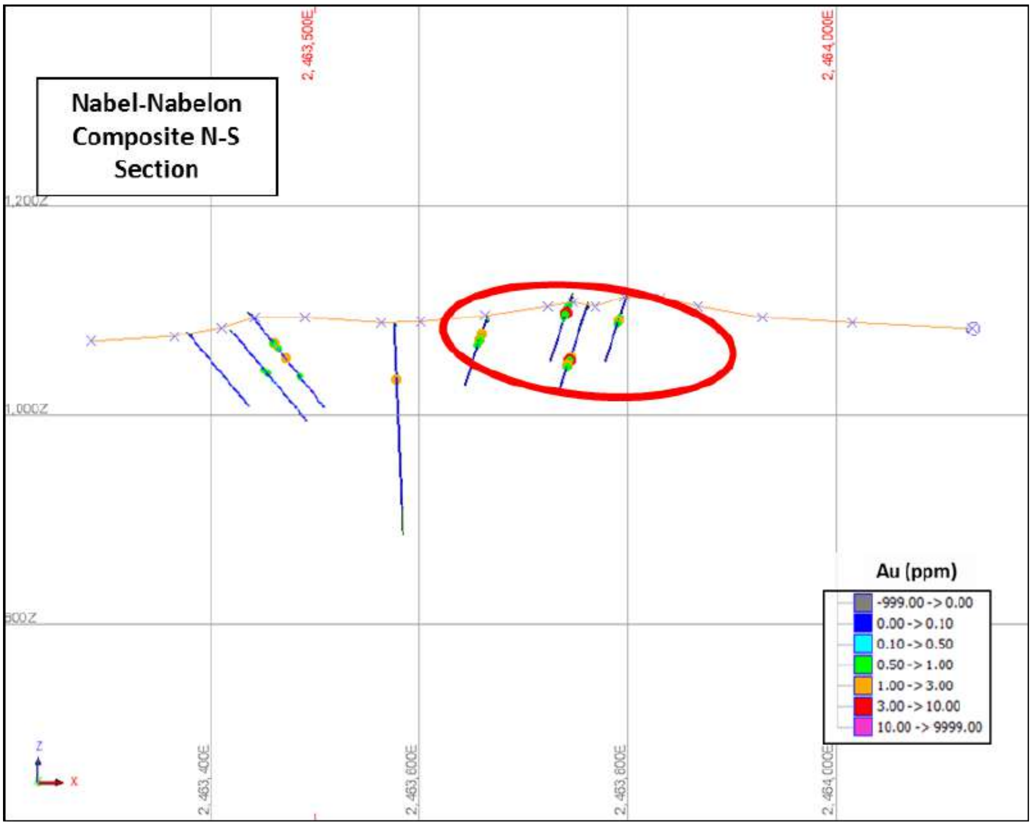


Figure 17-7: Nabel-Nabelon Prospect - Composite North-South Section Showing Drill holes and Au Grade Distribution (Cube, 2018)

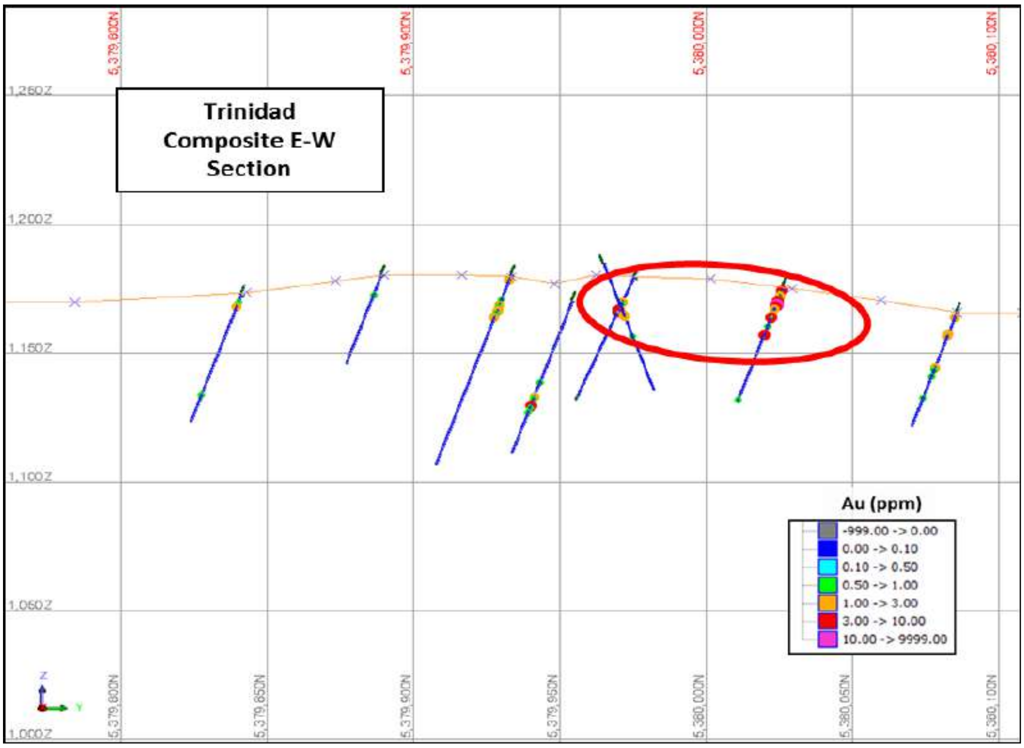


Figure 17-8: Trinidad Prospect - Composite East-West Section Showing Drill holes and Au Grade Distribution (Cube, 2018)

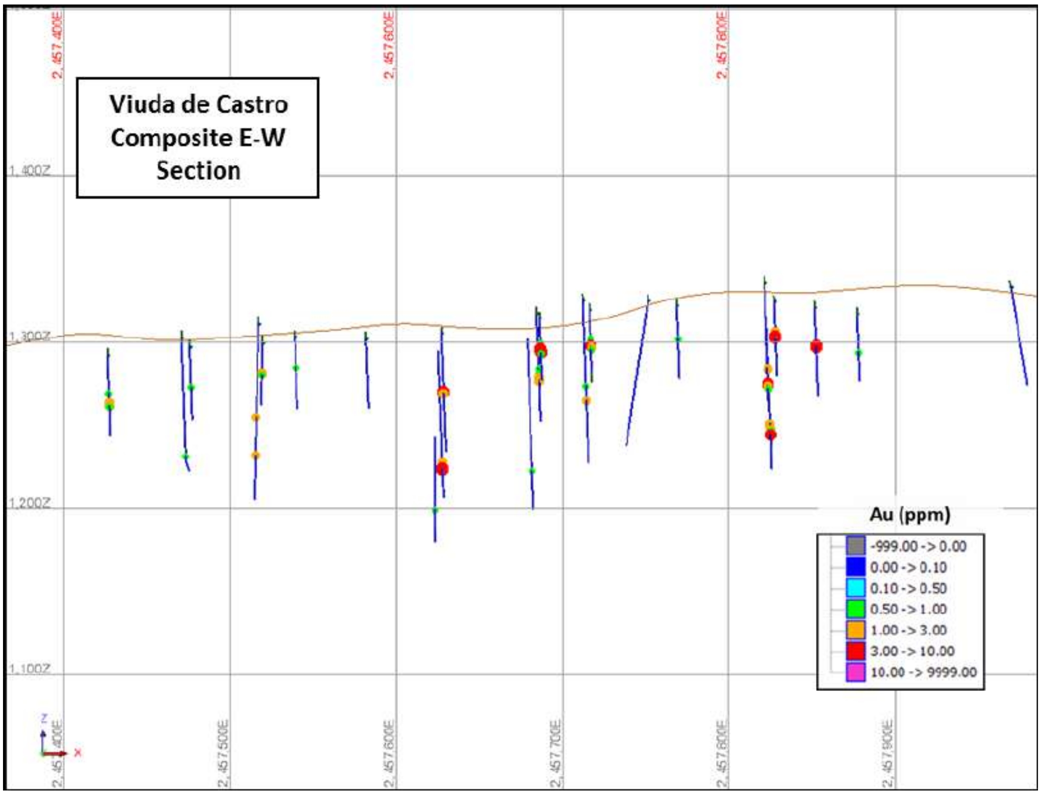


Figure 17-9: Viuda de Castro Prospect - Composite East-West Section Showing Drill holes and Au Grade Distribution (Cube, 2018)

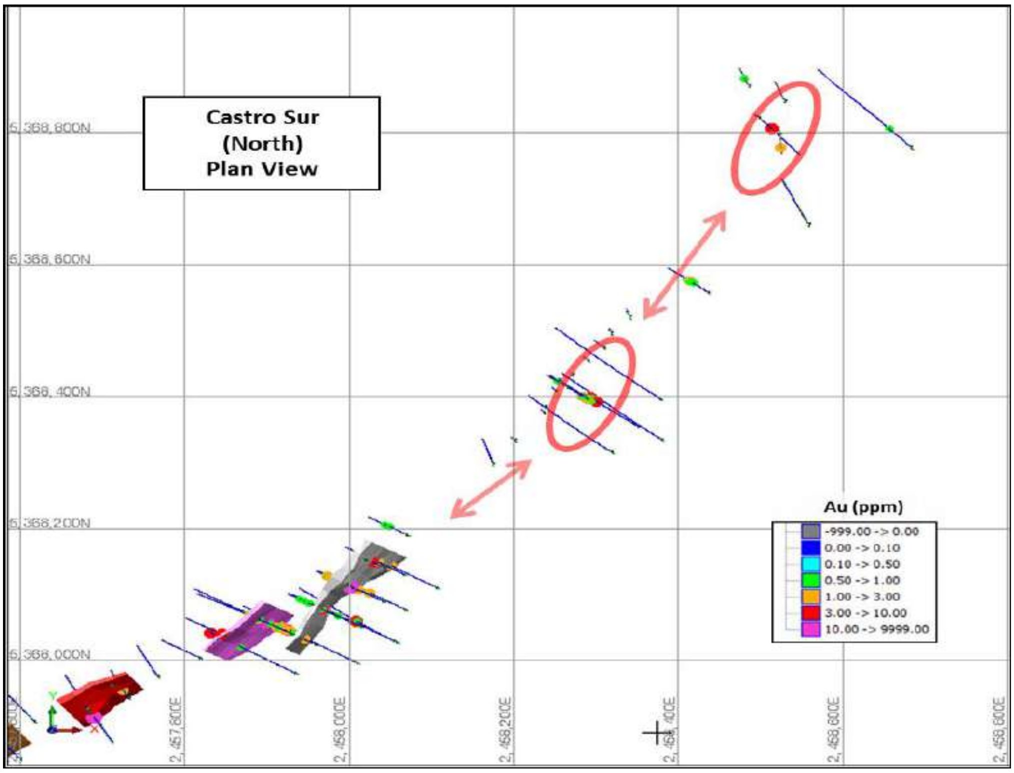


Figure 17-10: Castro Sur (North) Prospect – Plan View Showing Drill holes and Au Grade Distribution (Cube, 2018)

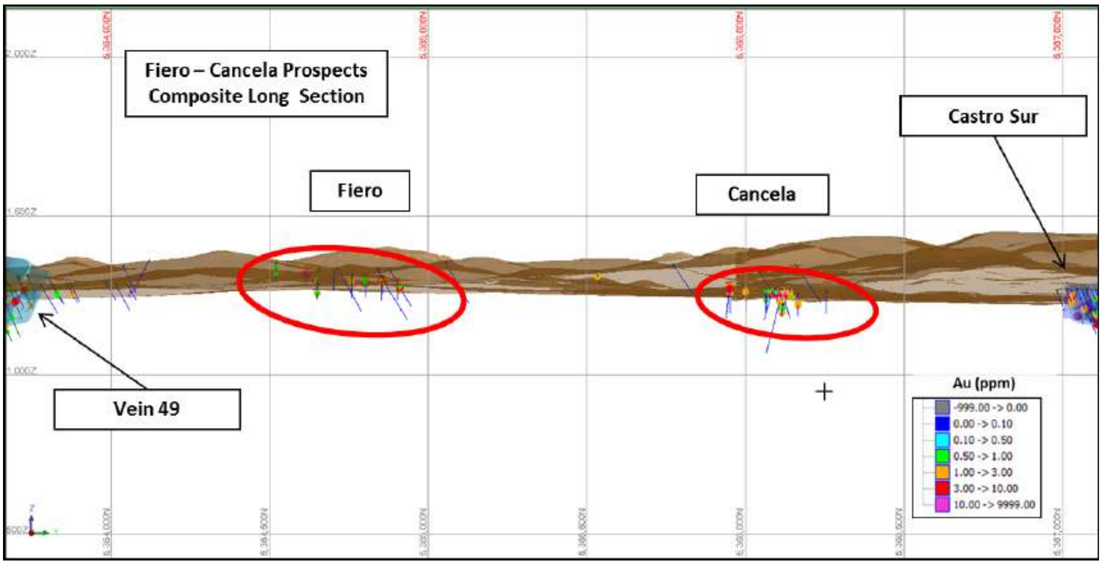


Figure 17-11: Fiero and Cancela Prospects - Composite Long Section Showing Drill holes and Au Grade Distribution (Cube, 2018)

18. Recommendations

Work Program and Budget

PGD plans to actively drill and conducting geophysical surveys within the Calcatreu Project prospect areas. An exploration program estimated at 4,700 m of drilling over two stages has been planned, targeting a prospective zone between Castro Sur and Vein 49.

Based on the targets highlighted by Cube in Section 16.1.3 (resource development targets) and Section 26.3 (exploration targets for resource expansion), Cube supports the work programs planned for targets identified in the Calcatreu prospects. The drilling and costing estimates for phase 1 and 2 are based on approximate budget estimates by PGD (Table 18-1).

The exploration drilling estimates are based on drilling shallow targets along strike from previous drilling intersections and targets identified from surface geochemistry and geophysical survey anomalies identified by PGD in 2018. Some drilling in phase 2 is contingent on the success of phase 1 (Vein 49, Nelson, Castro Sur). Other stage 2 targets are not contingent on the success of phase 1, as these areas are step out drilling targets or new targets.

Table 18-1: Proposed Work Program for Calcatreu (Cube, 2018)

PHASE 1 - Drilling					
Priority	**Prospect**	**Type**	**Targets**	**Drill Metres**	**Costing (USD)**
1	Vein 49	RD	Depth extension, down plunge targets; Along strike gaps in drilling.	800	$80,000
2	Nelson	RD	Strike offset and depth extension potential.	500	$50,000
3	Belen	RD	Strike and depth extension potential.	300	$30,000
4	Castro Sur	RD	Central Main Zone – Down dip and infill testing; Southern Zone – depth extension testing and infill gap.	800	$80,000
	Sub-Total			**2,400**	**$240,000**
PHASE 2 - Drilling					
Priority	**Prospect**	**Type**	**Targets**	**Drill Metres**	**Costing (USD)**
5	Vein 49/Nelson	RD	Follow Up targets from first phase	400	$40,000
6	Castro Sur	RD	Follow Up targets from first phase	400	$40,000
7	Castro Sur North	Exp	North Extension – Down dip and infill testing to the NE; Test gaps to the north.	500	$50,000
8	Viuda de Castro	Exp	Infill shallow targets, test continuity.	200	$20,000
9	Fiero	Exp	Follow up initial drill intersections	200	$20,000
10	Cancela	Exp	Follow up initial drill intersections	200	$20,000
11	Trinidad	Exp	Test E-W strike; infill to test continuity.	200	$20,000
12	Nabel-Nabelon	Exp	Follow up shallow intersections, along strike.	200	$20,000
	Sub-Total			**2,300**	**$230,000**
PHASE 2 - Geochemistry					
12	Castro Sur North	Exp	Surface Geochemistry /outcrop mapping-sampling		$10,000
13	Fiero/ Cancela	Exp			$10,000
14	Trinidad	Exp			$5,000
14	Nabel-Nabelon	Exp			$5,000
	Sub-Total				**$30,000**
	TOTAL			**4,700**	**$500,000**

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20. Date and Signature Page

This Report titled “Mineral Resource Estimate on the Calcatreu Gold-Silver Project, Rio Negro Province, Argentina” for Patagonia Gold Plc and dated 31/12/2018 was prepared and signed by the following authors.

Coordinating Author	Brian Fitzpatrick B.Sc., MAusIMM CP (Geo) Principal Geologist Cube Consulting Pty Ltd	**Signature**	

21. Certificate of Qualified Person

I, Brian Fitzpatrick, do hereby certify that:

a. I am a Principal Geologist with Cube Consulting Pty Ltd of 1111 Hay Street, West Perth, WA 6005.

b. I am the author of the technical report titled "NI 43-101 Independent Technical Report (NI 43-101), Calcatreu Gold-Silver Project, Mineral Resource Estimate, Rio Negro Province, Argentina" and dated 31st December 2018 (the "Technical Report") relating to Patagonia Golds PLC's Calcatreu Project in Argentina.

c. I am a Geologist, with a Bachelor of Science degree, majoring in Geology from the University of Tasmania graduating in 1985. I am a member of the Australasian Institute of Mining and Metallurgy (MAusIMM) with Chartered Professional accreditation (member number 203397). I have worked as a geologist for more than 30 years since my graduation from University. Relevant experience has been gained from working in the gold and base metal mining and exploration industry in various provinces throughout Australia and other countries.

d. I am a Qualified Person as defined in NI 43-101, having more than 5 years of experience which is relevant to the style of mineralisation and type of deposit described in the Technical Report, and to the activity for which I am accepting responsibility. This includes more than 30 years exploration, open pit and underground mining experience in greenstone hosted gold deposits, epithermal gold deposits and Volcanogenic Massive Sulphide ("VMS") poly-metallic deposits.

e. I conducted a site visit of the Calcatreu Project area from 14 to 17 March 2019. I conducted an earlier site visit from 16 to 18 February 2017. The site visits included field inspection of the geology and mineralisation outcropping within the project area, and inspection of core samples, sample preparation and data storage facilities at Ingeniero Jacobacci. Data verification and data validation on all the drilling data following the completion of the 2018 drilling program for the current MRE was also conducted. I have had no other prior involvement with the property that is subject to the technical report.

f. I am responsible for the items reported in each section of the Technical Report.

g. I am independent of Hunt Mining Corp, Patagonia Gold PLC and its subsidiaries, and the property, in accordance with Section 1.5 of NI 43-101.

h. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance with that instrument and form.

i. As of the date of this Technical Report and certificate, 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.

Dated at Perth, Australia, this 31st day of December 2018.

Brian Fitzpatrick
B.Sc., MAusIMM CP (Geo)
Principal Geologist
Cube Consulting Pty Ltd

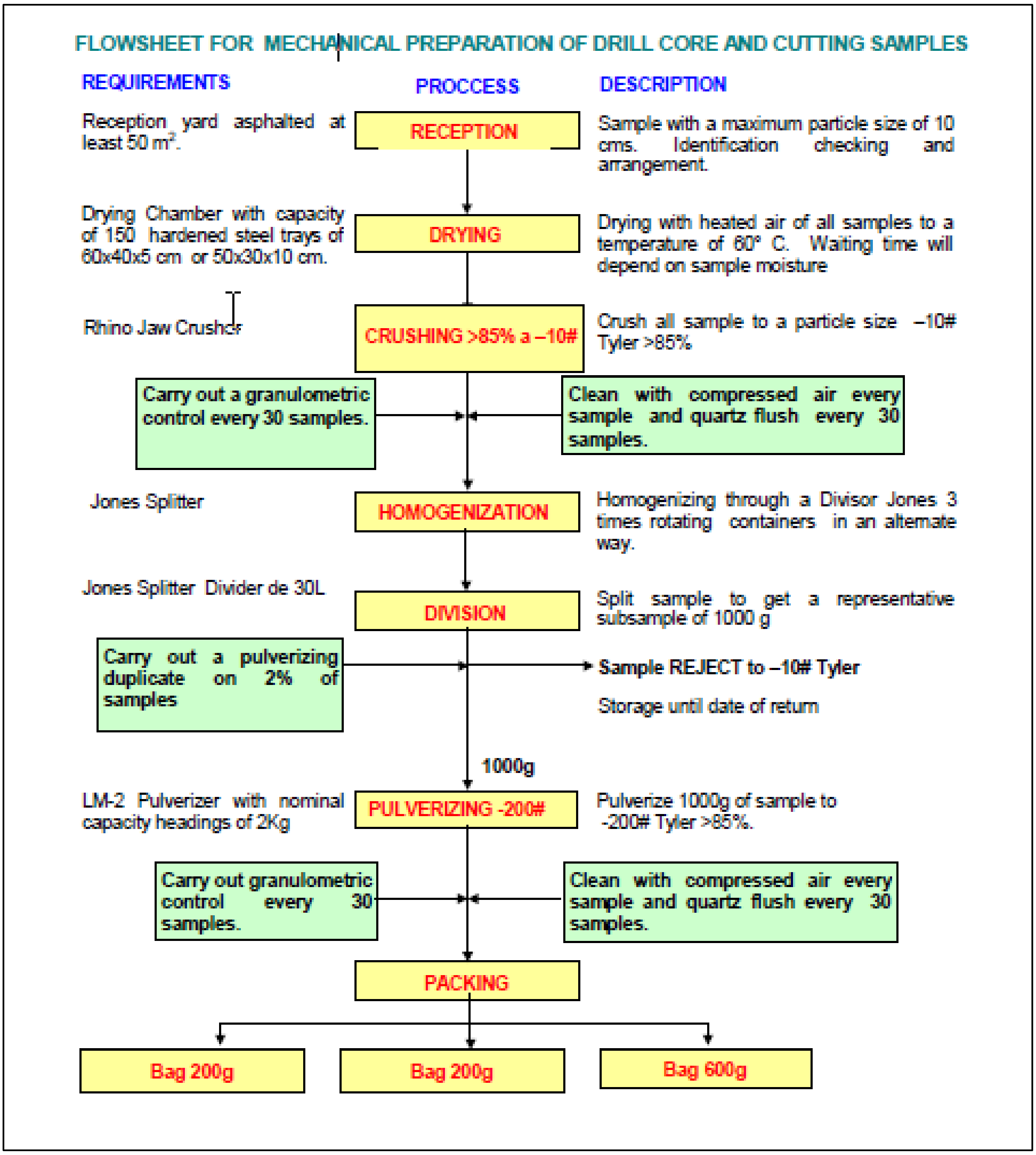
Appendix 1 – Geology Legend

Legend	CODE	Aquiline Description	Legend	CODE	Aquiline Description
Lith	OVB	Overburden (Colluvium and soils)	**Lith**	BST	Basalt
Lith	NR	NO RECOVERY	**Lith**	BSTQ	Basalt + qtz veinlets (50-10%)
Lith	AND	Andesite Undifferentiated	**Lith**	QBST	Basalt+ qtz veinlets (90-50%)
Lith	ANDBX	Andesite Breccia	**Lith**	BSA	Basalt andesitic
Lith	QAND	Andesite + qtz veinlets (90-50%)	**Lith**	BSAQ	Basalt andesitic + qtz veinlets (50-10%)
Lith	ANDQ	Andesite + qtz veinlets (50-10%)	**Lith**	QBSA	Basalt andesitic+ qtz veinlets (90-50%)
Lith	CAND	Calcite Veinlets +Andesite (>50)	**Alt**	ARG	Argillic
Lith	ANDC	Andesite +Calcite Veinlets	**Alt**	VGS	Vuggy - Siliceous
Lith	ANDG	Andesite +Gypsum	**Alt**	SIL	Silicified
Lith	QVEIN	Massive Qtz. Vein (>90%)	**Alt**	PROP	Propillitic
Lith	CVEIN	Calcite Veining >90%	**Alt**	PY	Pyritic
Lith	QCVEIN	Quartz/Calcite vein (>90%)	**Alt**	KA	Kaolinitic
Lith	BXQ	Hydrothermal breccia (qtz matrix)	**Alt**	PHY	Phyllic
Lith	VS	Volcanic -sedimentary rock (undifferentiated)	**Alt**	CB	Carbonate
Lith	QVS	Volcanic -sedimentary + qtz veinlets (90-50%)	**Alt**	FEL	Fe-Limonite
Lith	VSQ	Volcanic -sedimentary + qtz veinlets (50-10%)	**Alt**	FEJ	Fe- Jarosite
Lith	VSBX	Volcanic -sedimentary rock brecciated	**Alt**	ZE	Zeolite
Lith	MZ	Monzo-diorite	**Alt**	GY	Gypsum
Lith	MZB	Monzo-diorite brecciated	**Str**	BX	Breccia
Lith	MDB	Micro-diorite breccia	**Str**	SHR	Shear
Lith	DI	Diorite	**Str**	FLZ	Fault Zone
Lith	BXHD	Hydrothermal breccia (undifferentiated)	**Str**	BRK	Broken
Lith	RHY	Rhyolite	**Str**	COL	Colloform
Lith	RHYQ	Rhyolite + qtz veinlets (50-10%)	**Str**	MAS	Massive
Lith	QRHY	Rhyolite + qtz veinlets (90-50%)	**Str**	BND	Banded
Lith	TFR	Rhyolite tuff	**Str**	FLD	Folded
Lith	TFA	Andesite tuff	**Str**	MY	Mylonite
Lith	TFL	Lithic tuff			
Lith	TFC	Crystalline tuff			

Appendix 2 – Laboratory Protocols

Normandy SA & Aquiline Drilling Programs: Protocols for Analysis – ALS Chemex Mendoza, Argentina)

Sample Preparation Procedure



Analytical Methods - AU-AA24 ASSAY PROCEDURE

Method: Au-AA24	Lab: LS	Description:	Au 50g FA AA finish
Digestion Code:	FA-FUS02	Weight:	50 g
Instrument:	AAS	Volume:	4 ml
Section:	FA-AAS	Min. Weight:	48 g
Department:	Fire Assay	Max Weight:	54 g
Secondary Extraction:		Std. Tolerance:	10%
Rack Size:	84	Dup. Tolerance:	15%
Description:	Au by fire assay and AAS, 50 g nominal sample weight and with lead flux and Ag collector.		
Digestion	0.5 ml HNO3 + 0.5 ml. HCl + 3 ml. H2O		

Analyte List					
Name	Units	Upper Limit	Lower Limit	Reportable	Over Limit
Au	ppm	10.0	0.005	Y	Au-GRA22

Analytical Methods - ME-ICP61 ASSAY PROCEDURE

Method: ME-ICP61	Lab: SA	Description:	27 element four acid ICP-AES
Digestion Code:	GEO-4ACID	Weight:	0.25 g
Instrument:	ICP-AES	Volume:	12.5 ml
Section:	ICP-AES	Min. Weight:	.2 g
Department:	Spectroscopy	Max Weight:	.3 g
Secondary Extraction:		Std. Tolerance:	10%
Rack Size:	40	Dup. Tolerance:	10%
Description:	27 elements by HF-HNO3-HClO4 acid digestion, HCl leach and ICP-AES. Quantitatively dissolves nearly all elements for the majority of geological materials. Only the most resistive minerals, such as Zircons, are only partially dissolved.		

Analytical Methods - ME-ICP61 – Analytes & Detection Limits

Analyte List					
Name	Units	Upper Limit	Lower Limit	Reportable	Over Limit
Ag	ppm	100	0.5	Y	Ag-AA62
Al	%	50	0.01	Y	
As	ppm	10000	5	Y	
B	ppm	10000	10	S	
Ba	ppm	10000	10	Y	
Be	ppm	1000	0.5	Y	
Bi	ppm	10000	2	Y	
Ca	%	50	0.01	Y	
Cd	ppm	500	0.5	Y	
Ce	ppm	500	50	N	
Co	ppm	10000	1	Y	Co-AA62
Cr	ppm	10000	1	Y	
Cu	ppm	10000	1	Y	Cu-AA62
Eu	IS Intensity	10000000	10	N	
Fe	%	50	0.01	Y	
Ga	ppm	500	10	S	
Hf	ppm	10000	10	N	
Hg	ppm	10000	10	N	
In	ppm	10000	10	N	
K	%	10	0.01	Y	
La	ppm	500	10	S	
Li	ppm	10000	10	S	
Mg	%	50	0.01	Y	
Mn	ppm	10000	5	Y	
Mo	ppm	10000	1	Y	Mo-AA62
Na	%	10	0.01	Y	
Nb	ppm	10000	10	N	
Ni	ppm	10000	1	Y	Ni-AA62
P	ppm	10000	10	Y	
Pb	ppm	10000	2	Y	Pb-AA62
Rb	ppm	10000	10	S	
S	%	10	0.01	Y	
Sb	ppm	10000	5	Y	
Sc	ppm	10000	1	S	
Se	ppm	1000	10	S	
Si	ppm	10000	10	S	
Sn	ppm	10000	10	S	
Sr	ppm	10000	1	Y	
Ta	ppm	10000	10	N	
Te	ppm	10000	10	N	
Th	ppm	10000	20	N	
Ti	%	10	0.01	Y	
Tl	ppm	500	10	S	
U	ppm	500	10	S	
V	ppm	10000	1	Y	
W	ppm	10000	10	Y	
Y	ppm	10000	10	S	
Zn	ppm	10000	2	Y	Zn-AA62
Zr	ppm	500	5	S	

Analytical Methods - AU-GRA22 ASSAY PROCEDURE

Method: Au-GRA22	Lab: LS	Description:	Au 50 g FA-GRAV finish
Digestion Code:	FA-FUSGV2	Weight:	50 g
Instrument:	WST-SIM	Volume:	
Section:	FA-GRAV	Min. Weight:	48 g
Department:	Fire Assay	Max Weight:	54 g
Secondary Extraction:	Choice 1		
Rack Size:	84		
Description:	Au by fire assay and gravimetric finish, 50 g nominal sample weight		

Analyte List							
Name	Units	Upper Limit	Lower Limit	Dup Tolerance	Std Tolerance	Reportable	Over Limit
Au	ppm	1000	0.05	15%	7.5%	Y	
Au (mg)	mg	1000	0.001	15%	7.5%	N	

Analytical Methods - AG-AA62 ASSAY PROCEDURE

Method: Ag-AA62	Lab: SA	Description:	Ore grade Ag - four acid / AAS
Digestion Code:	ASY-4ACID	Weight:	0.4 g
Instrument:	AAS	Volume:	100 ml
Section:	ASY-AAS	Min. Weight:	
Department:	Assay	Max Weight:	
Secondary Extraction:			
Rack Size:	40		
Description:	Ore grade Ag by HF-HNO3-HClO4 digestion, HCl leach and AAS		

Analyte List							
Name	Units	Upper Limit	Lower Limit	Dup Tolerance	Std Tolerance	Reportable	Over Limit
Ag	ppm	1000	1	5%	3.53%	Y	Ag-GRA21

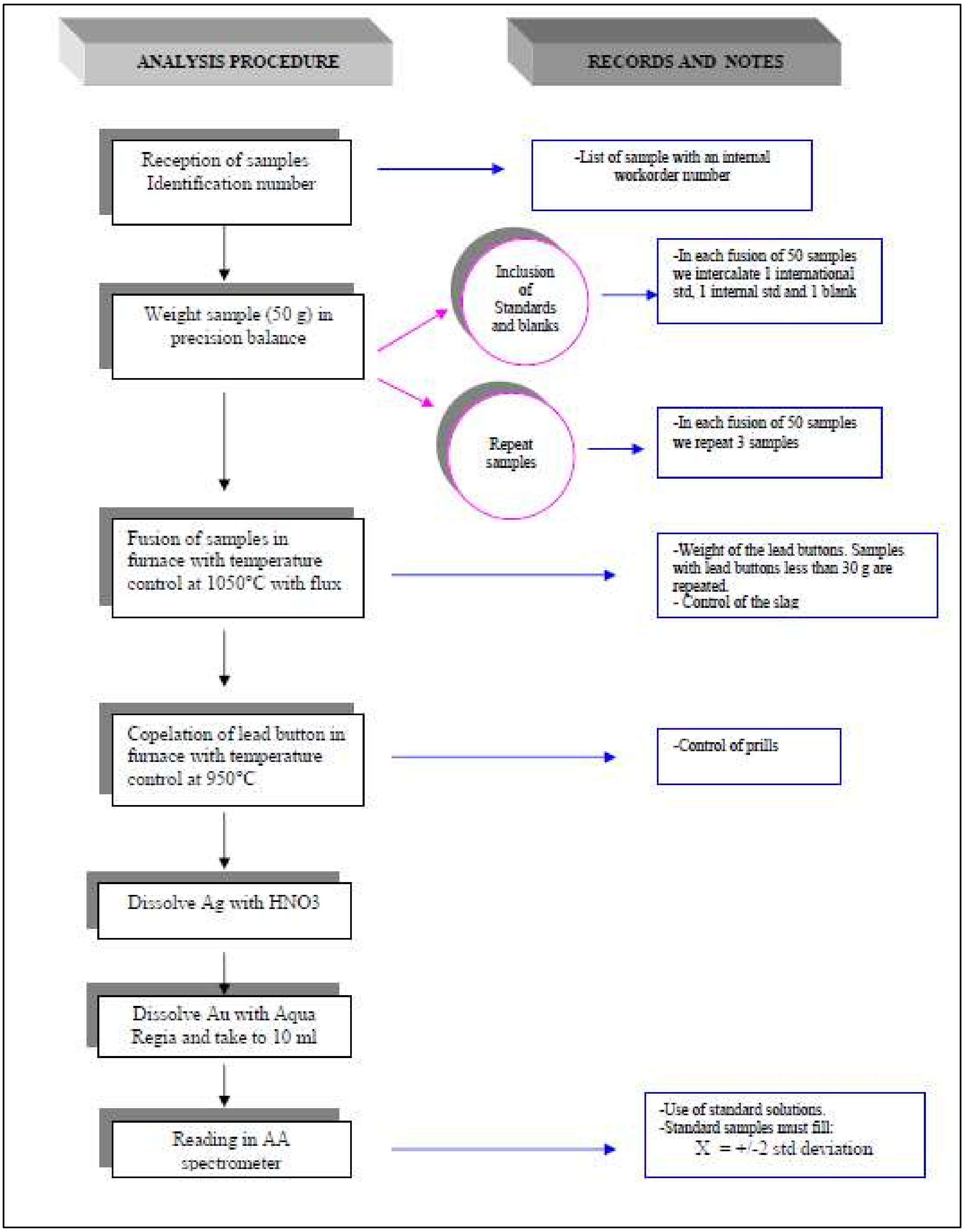
Analytical Methods - AU-GRA22 ASSAY PROCEDURE

Method: Ag-GRA22	Lab: LS	Description:	Ag 50g FA-GRAV finish
Digestion Code:	FA-FUSAG2	Weight:	50 g
Instrument:	WST-SIM	Volume:	
Section:	FA-GRAV	Min. Weight:	48 g
Department:	Fire Assay	Max Weight:	54 g
Secondary Extraction:			
Rack Size:	84		
Description:	Ag by fire assay and gravimetric finish, 50 g nominal sample weight.		

Analyte List							
Name	Units	Upper Limit	Lower Limit	Dup Tolerance	Std Tolerance	Reportable	Over Limit
Ag	ppm	10000	5	15%	10%	Y	

Pan American Drilling Programs: Protocols for Analysis - Alex Stewart (Assayers) Argentina S.A.

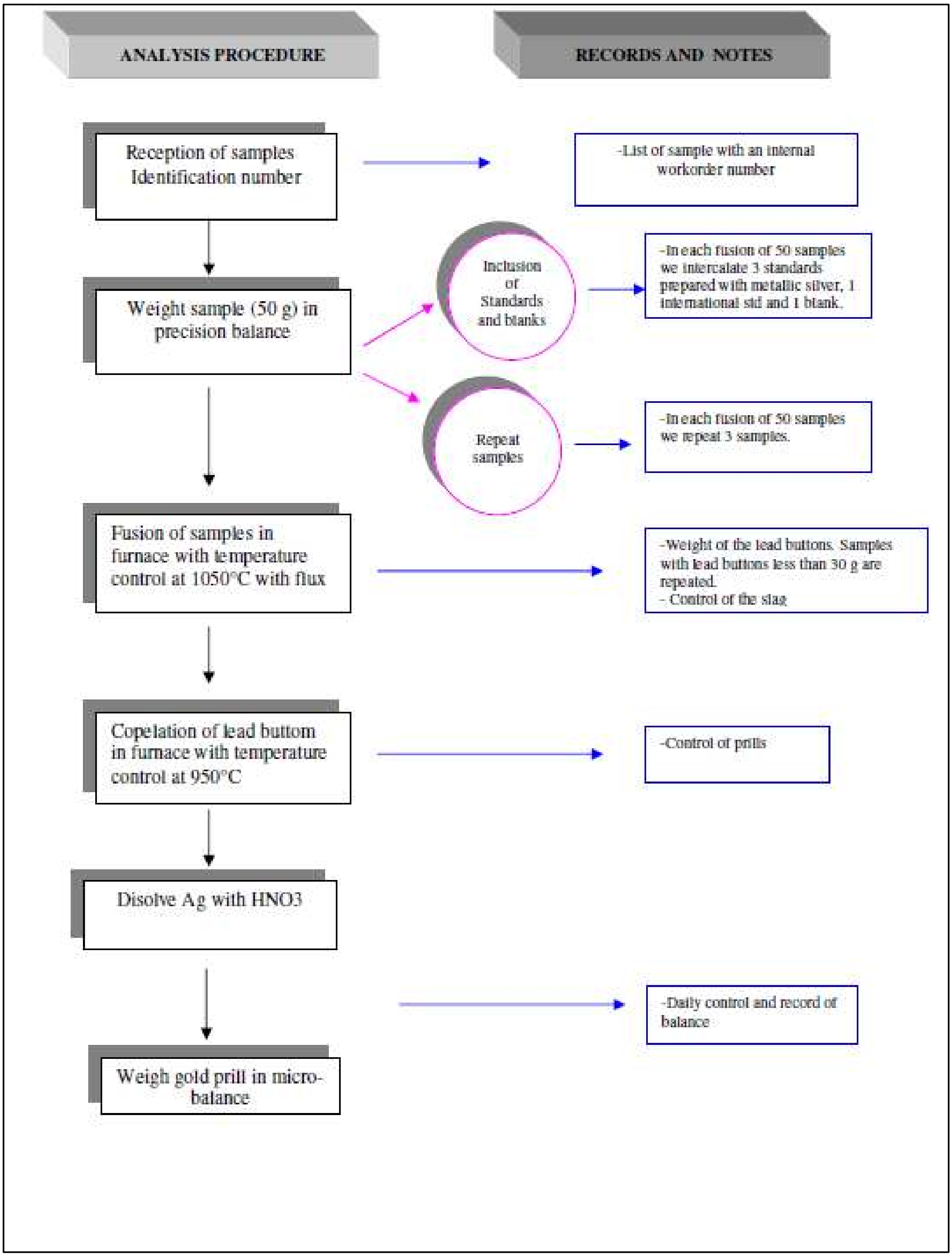
Procedure for Au Fire Assay/AA – Code: Au4-50



Protocols for Analysis - Alex Stewart (Assayers) Argentina S.A.:

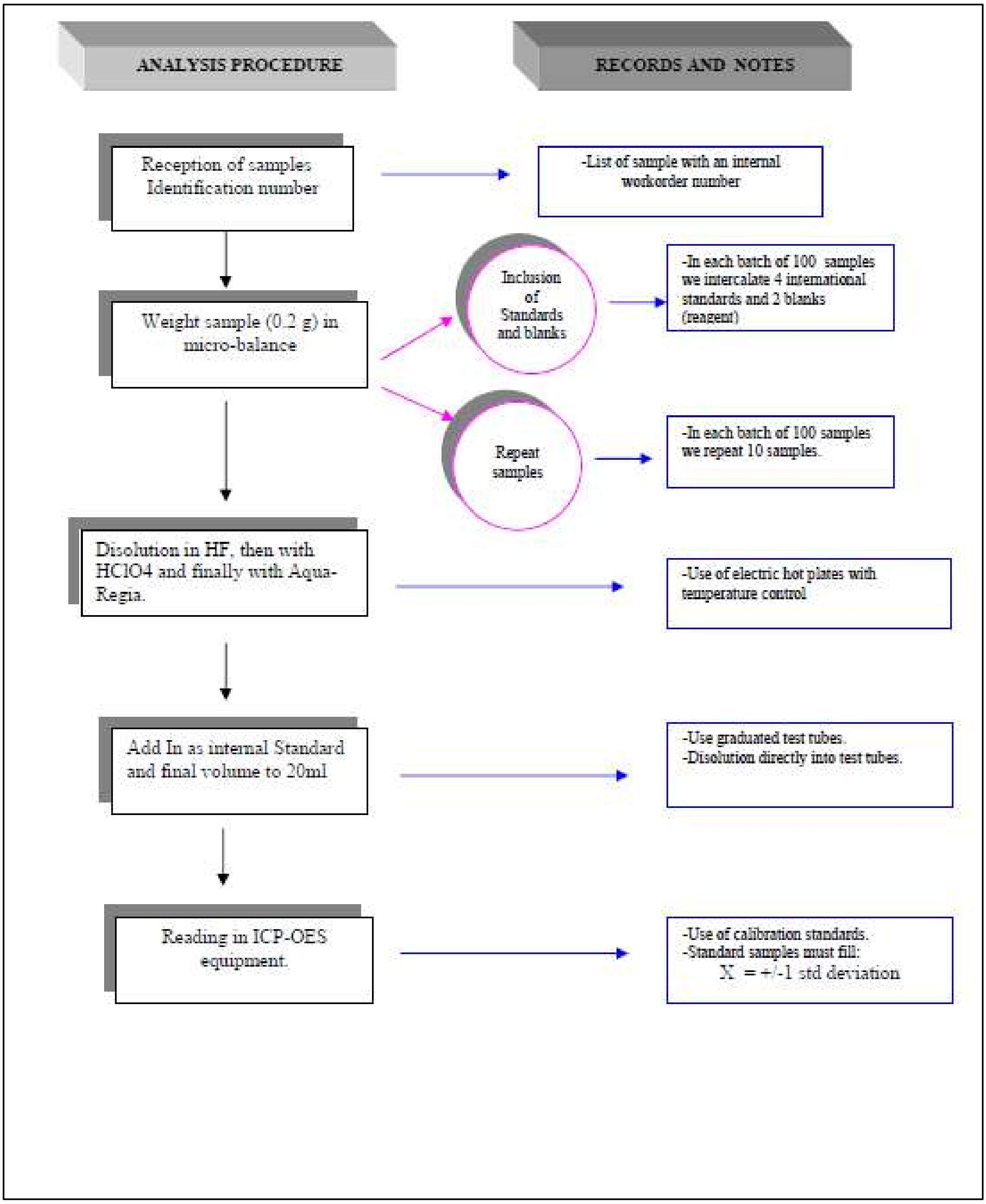
Procedure for Au Fire Assay/Gravimetric – Code: Au4A-50 &

Procedure for Ag Fire Assay/Gravimetric – Code: AuAg4A-50



Protocols for Analysis - Alex Stewart (Assayers) Argentina S.A.:

Procedure for Arsenic & Multi Element Analysis by ICP-OES - Code: ICP-MA-39

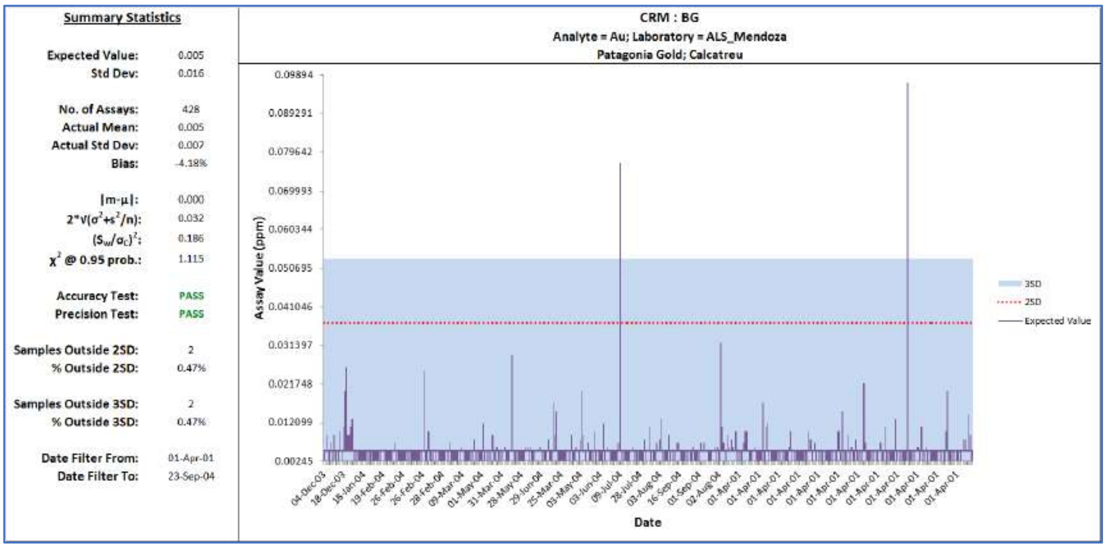


Appendix 3 – QAQC Charts

Certified Reference Material (Standards and Blanks)

CRM: BG (Blank) – ALS Mendoza

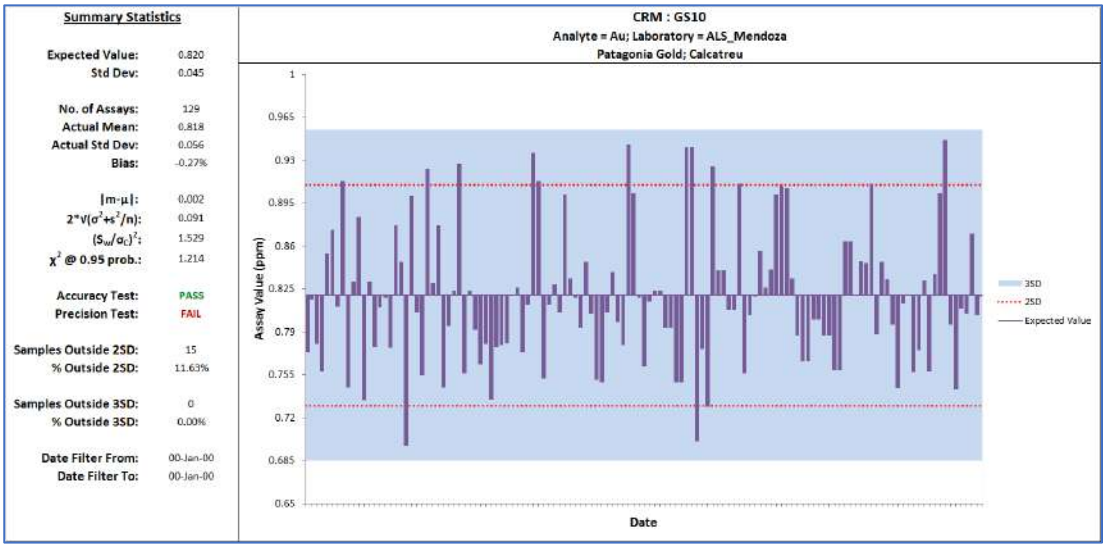
- shows 2 failed results identified – check for possibility of swapped samples.



CRM: BG (Blank) – ALS Mendoza

CRM: GS10 – ALS Mendoza

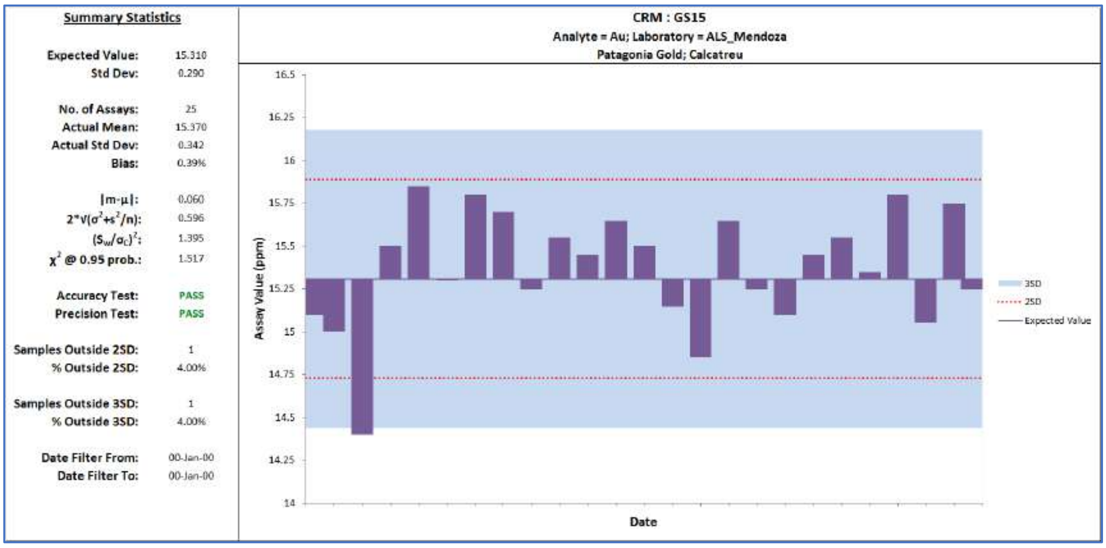
- 5 misclassified std IDs removed; 2 reclassified std IDs added; - re-graphed;
- Fails on precision – May indicate lab calibration issues which needs to be closely monitored if CRM is still in sample stream



CRM: GS10 – ALS Mendoza

CRM: GS15 – ALS Mendoza

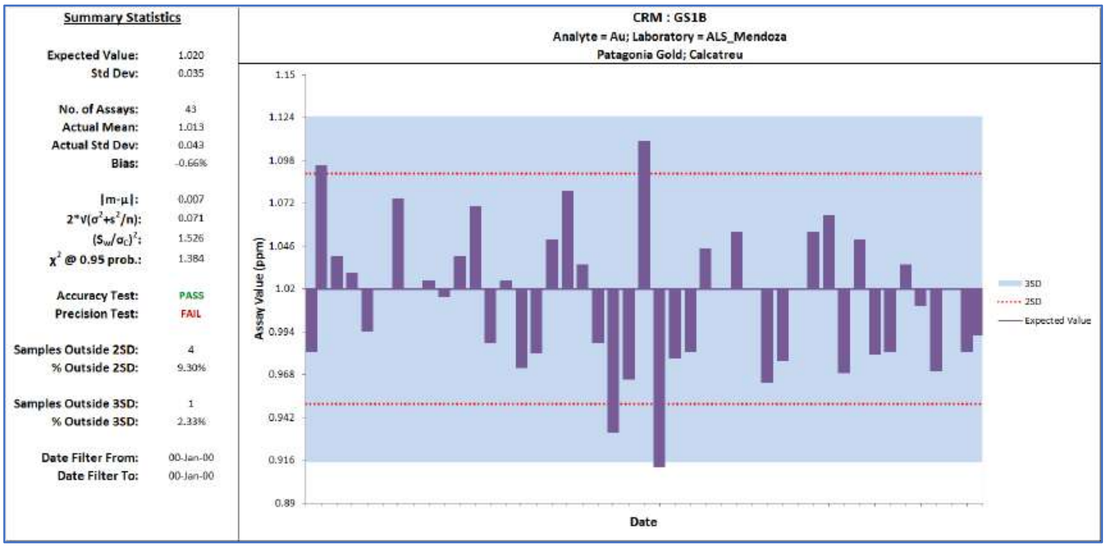
- 1 failed result identified – reporting low.



CRM: GS15 – ALS Mendoza

Error! Reference source not found.**CRM: GS1B – ALS Mendoza**

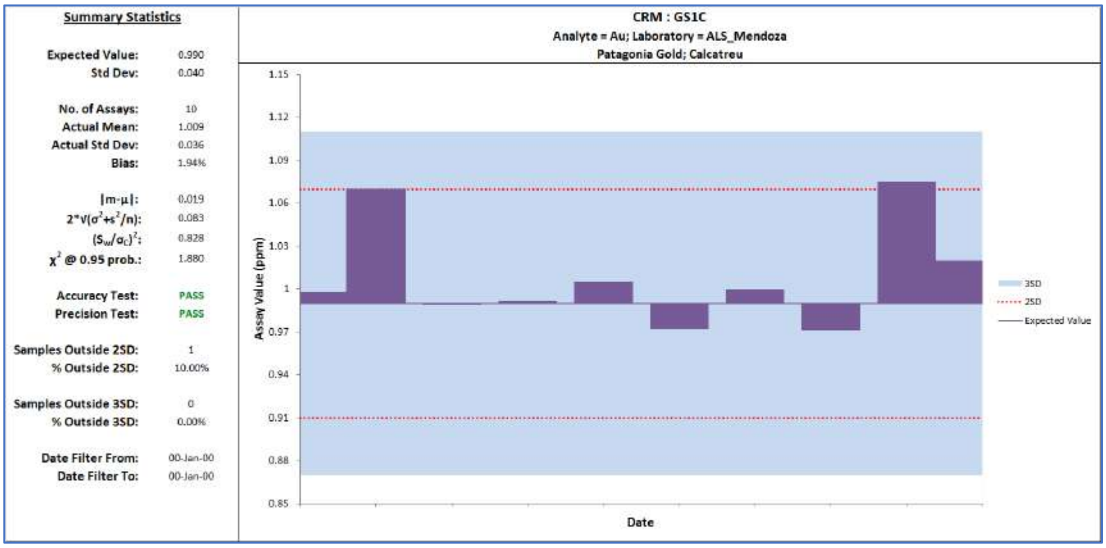
- 2 misclassified std IDs removed and 1 failed result identified – reporting low.
- Precision test passes if failed sample is removed from dataset.



CRM: GS1B – ALS Mendoza

CRM: GS1C – ALS Mendoza

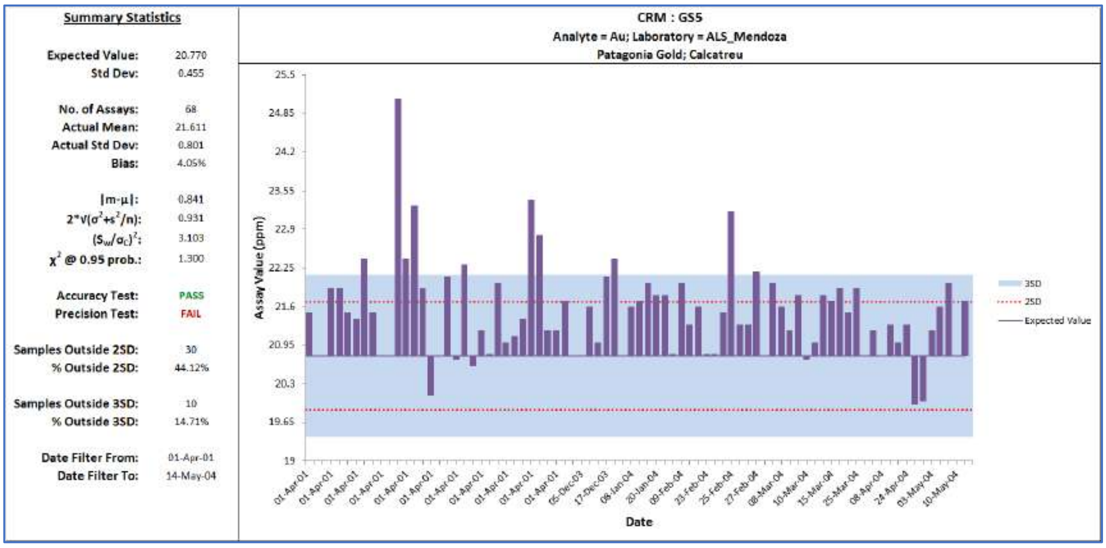
- Re-graphed after adding 5 reclassified Std IDs.



CRM: GS1C – ALS Mendoza

CRM: GS5 – ALS Mendoza

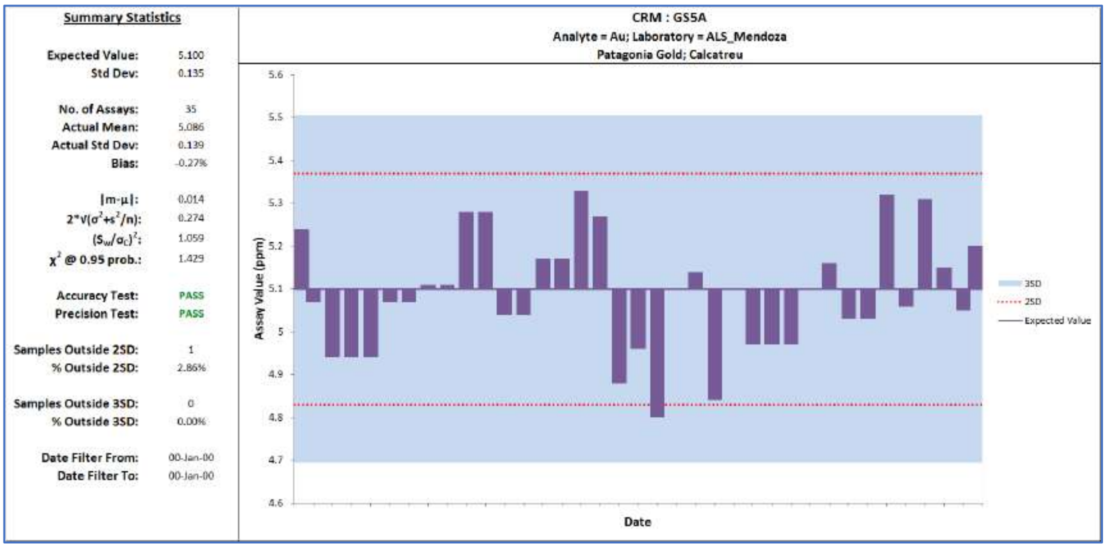
- 12 outliers removed – all reported as 10.00ppm – probably upper limit for Au method;
- 9 failed results identified – all reporting high;
- Failed Accuracy and Precision tests only 74% pass 3SD and showing a 5% positive bias;
- Homogeneous sample compromised by poor storage? Lab equipment analytical calibration issues?



CRM: GS5 – ALS Mendoza

CRM: GS5A – ALS Mendoza

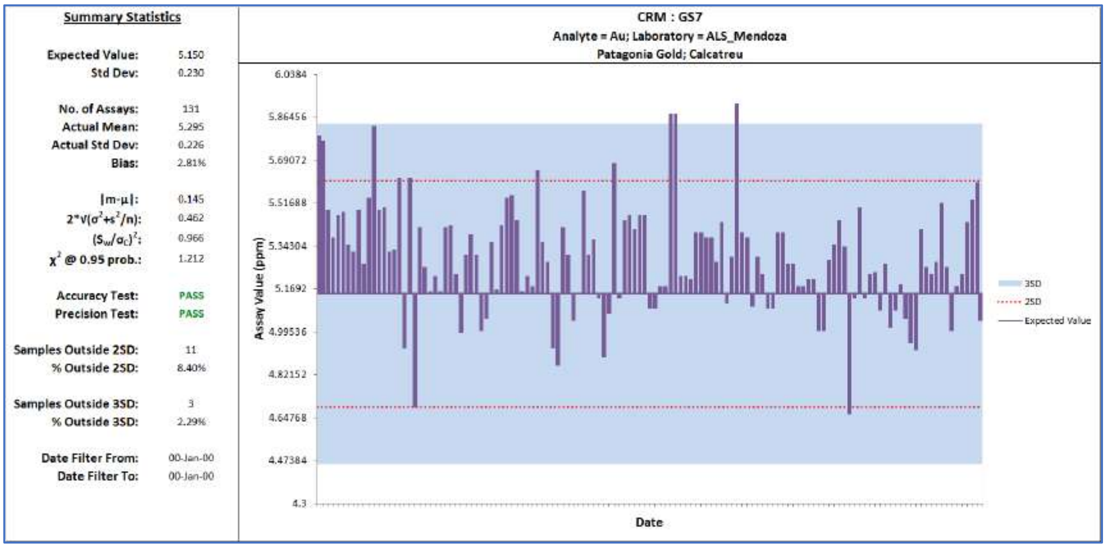
- 2 outliers removed – 1 may be result of upper limit Au method and the other a possible swapped sample - further checking of both required.



CRM: GS5A – ALS Mendoza

CRM: GS7 – ALS Mendoza

- 3 failed results identified – reporting high.



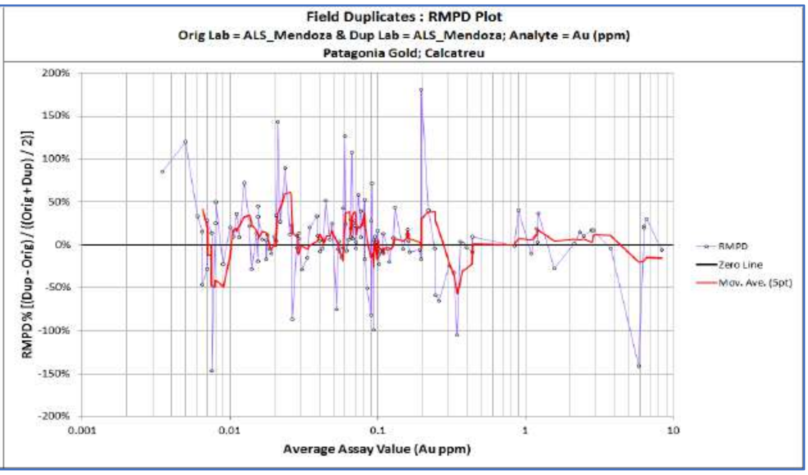
CRM: GS7 – ALS Mendoza

Field Duplicates – RC Sampling

Field Duplicates: RMPD Plot – ALS Mendoza

Summary Statistics

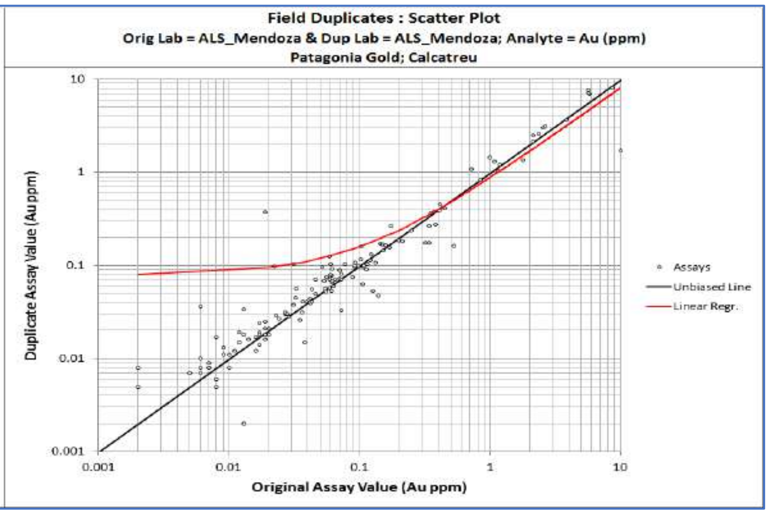
No. of Assays:	143
Original Max:	10.00
Duplicate Max:	8.13
No. Assays within 10%:	47
No. Assays within 20%:	77
No. Assays within 50%:	117
% Assays within 10%:	32.9%
% Assays within 20%:	53.8%
% Assays within 50%:	81.8%
Average RMPD%:	6.5%
Absolute Average RMPD%:	45.2%
Average CV%:	32.0%
Filter Values From:	0.0035
Filter Values To:	8.4



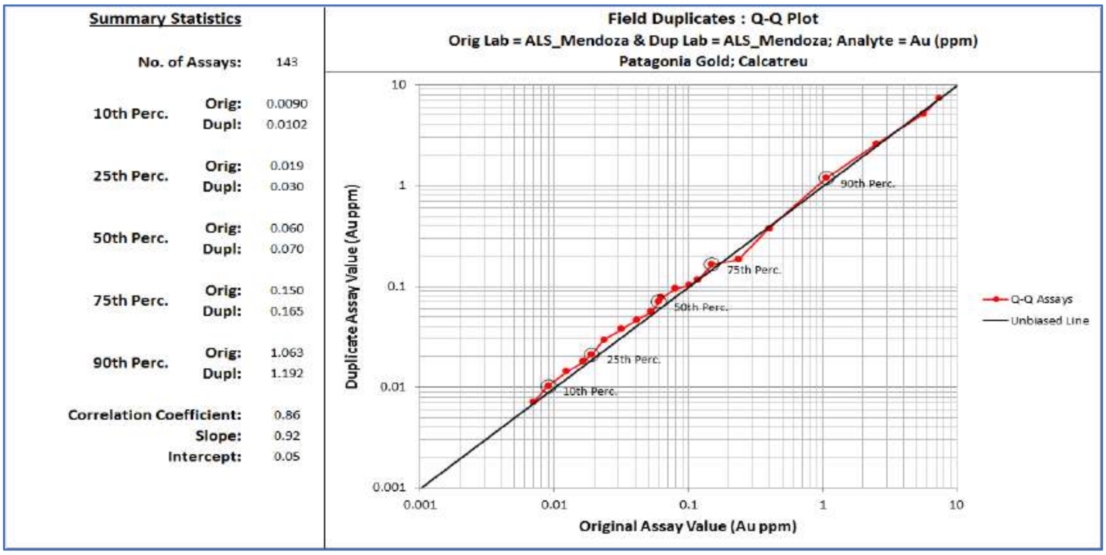
Field Duplicates: Scatter Plot – ALS Mendoza

Summary Statistics

No. of Assays:	143
Original Min:	0.0020
Duplicate Min:	0.0020
Original Max:	10.00
Duplicate Max:	8.13
Original Mean:	0.486
Duplicate Mean:	0.470
Average Difference %:	-3.3%
Correlation Coefficient:	0.86
Slope:	0.92
Intercept:	0.05

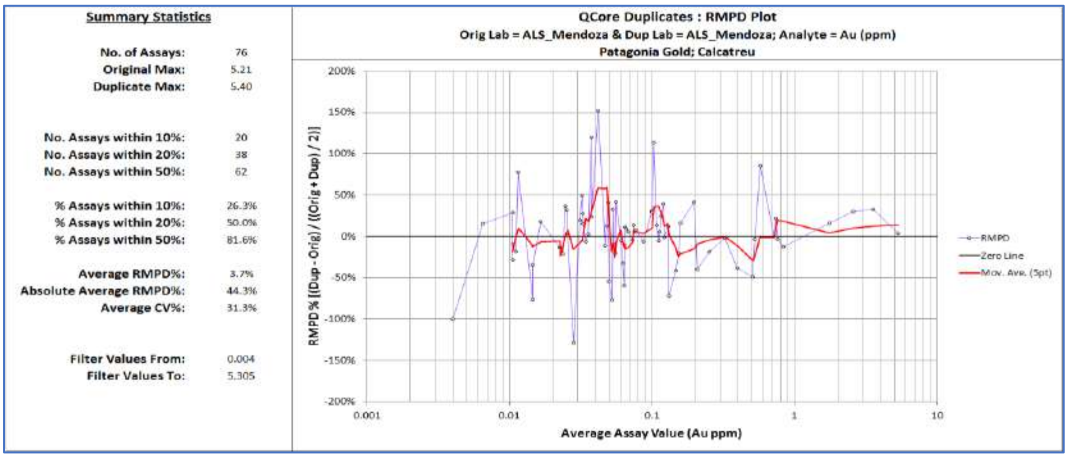


Field Duplicates: Q-Q Plot – ALS Mendoza

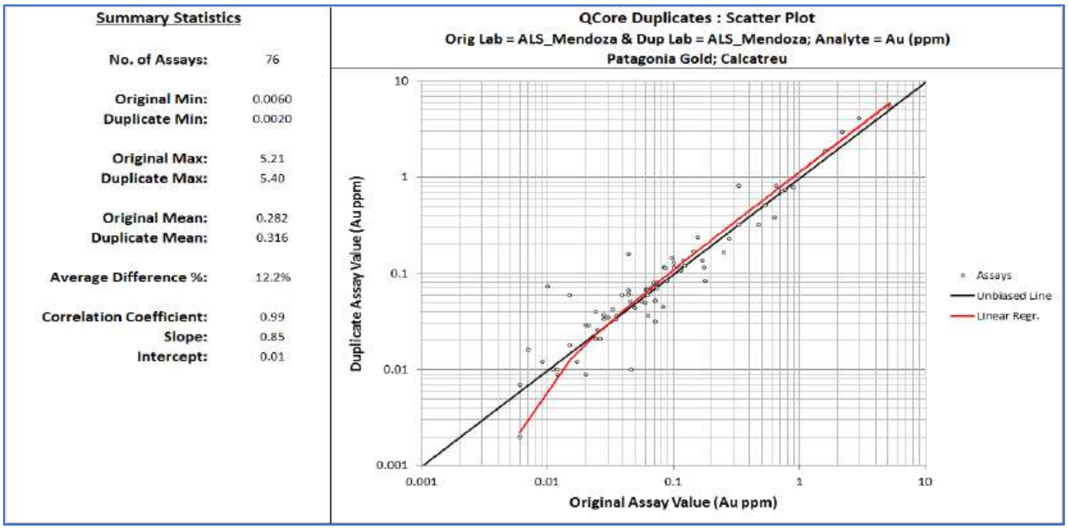


Quarter Core Duplicates – DD Sampling.

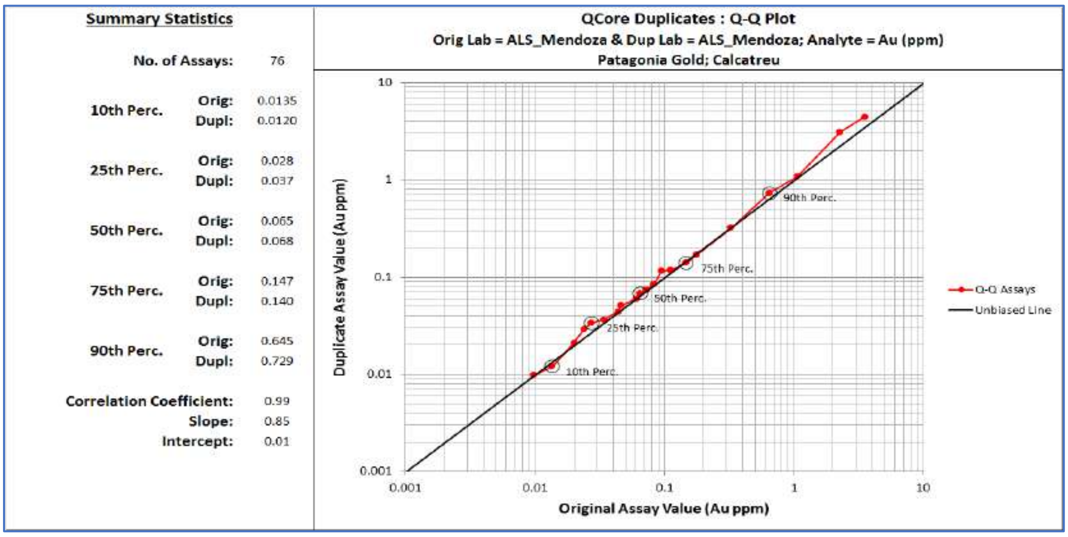
Q-Core Duplicates: RMPD Plot – ALS Mendoza



Q-Core Duplicates: Scatter Plot – ALS Mendoza

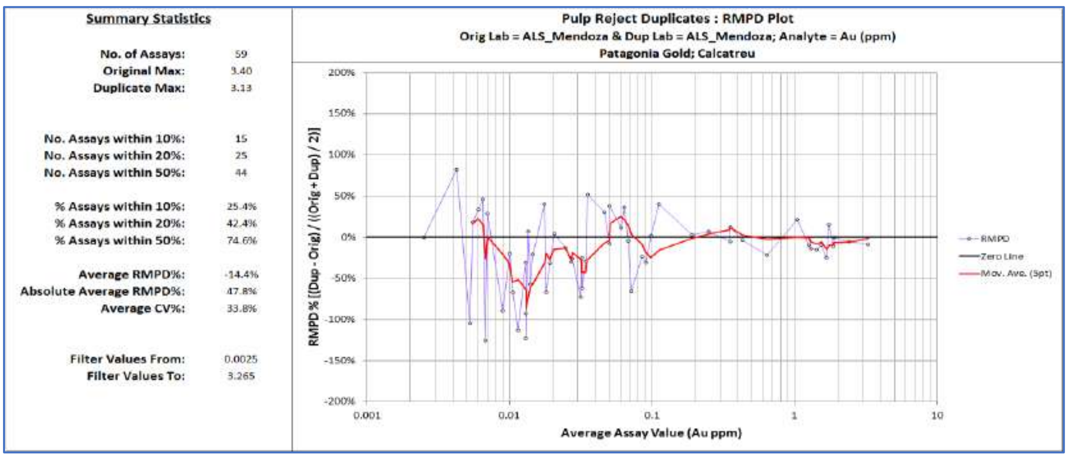


Q-Core Duplicates: Q-Q Plot – ALS Mendoza

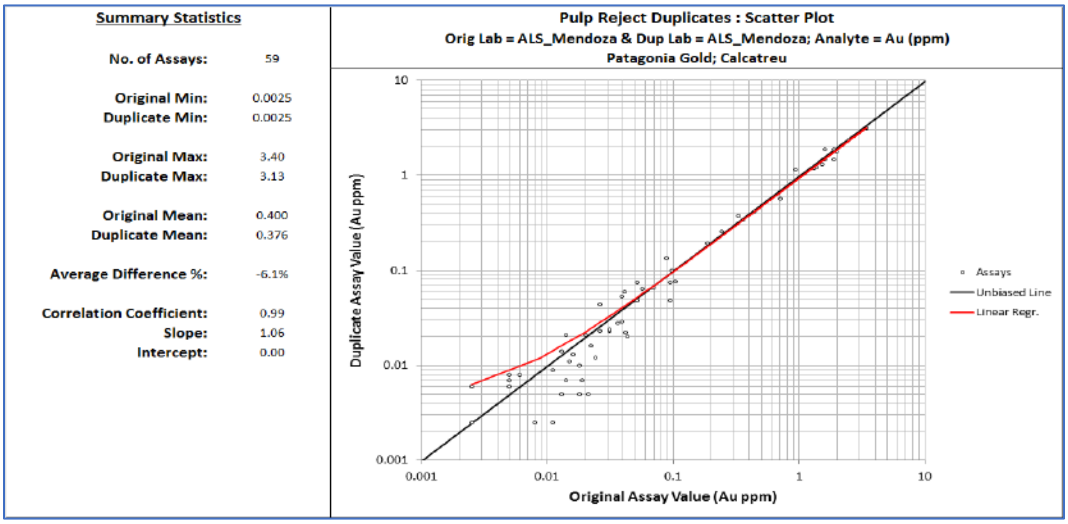


<u>Pulp Reject Duplicates – assigned new sample IDs and carried out at same lab different lab job.</u>

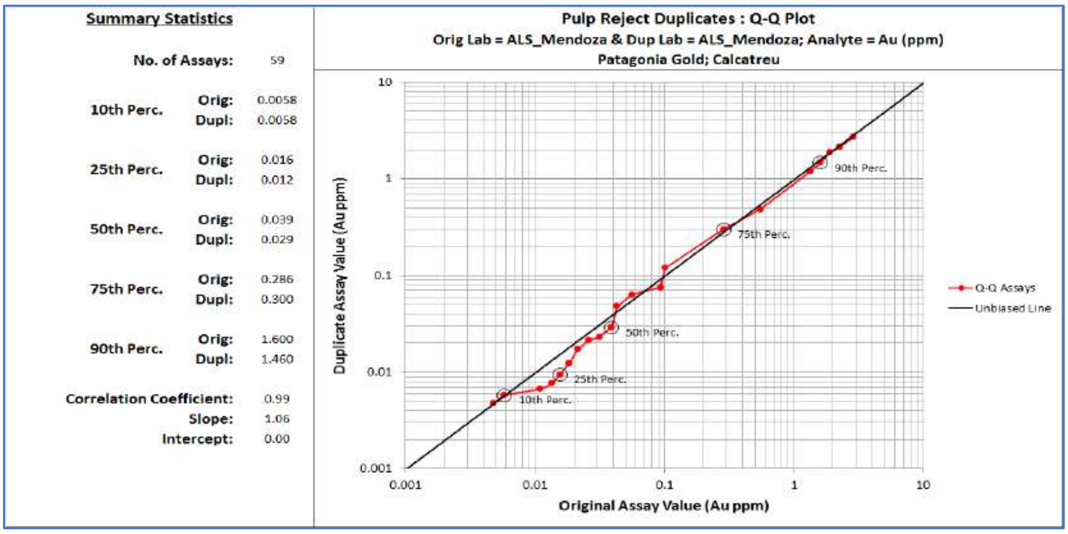
Pulp Reject Duplicates: RMPD Plot – ALS Mendoza



Pulp Reject Duplicates: Scatter Plot – ALS Mendoza

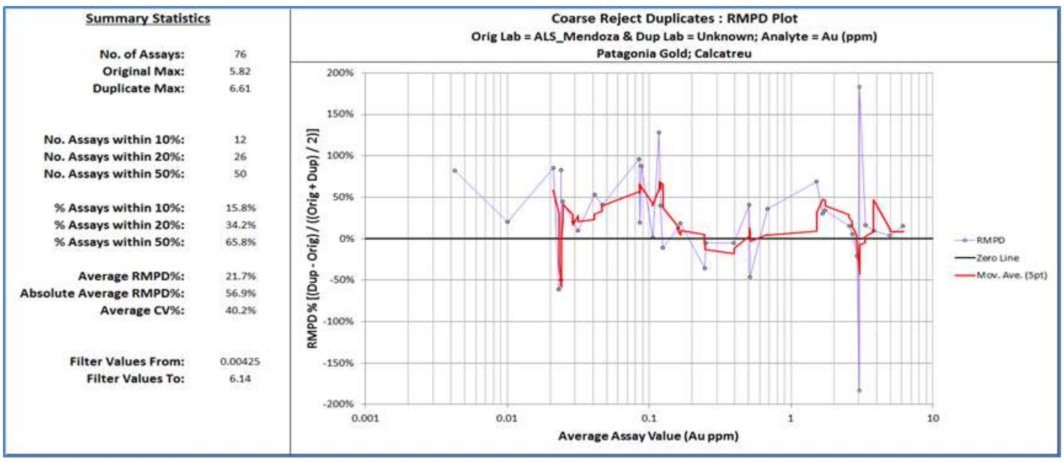


Pulp Reject Duplicates: Q-Q Plot – ALS Mendoza

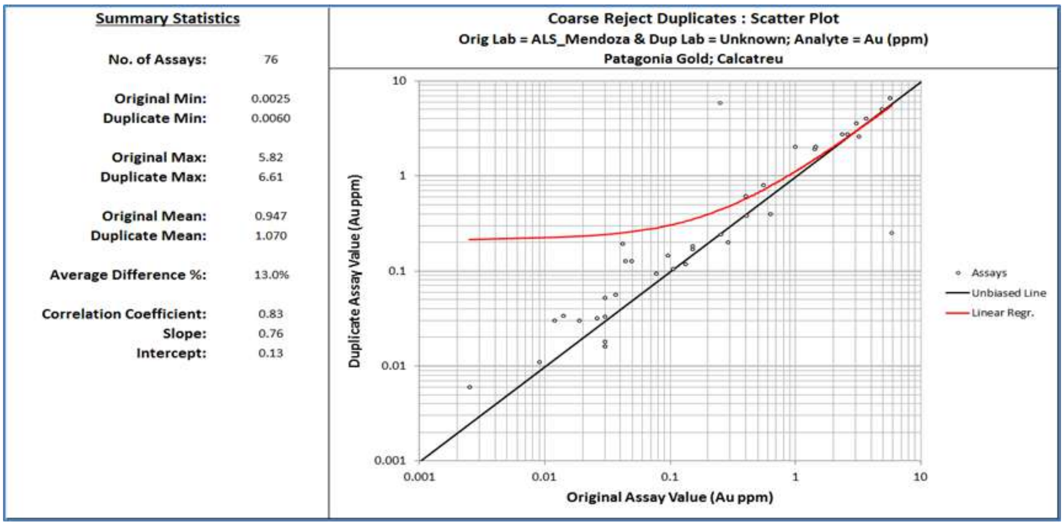


<u>Coarse Reject Duplicates – assigned new sample IDs and carried out at unknown labs/lab jobs.</u>

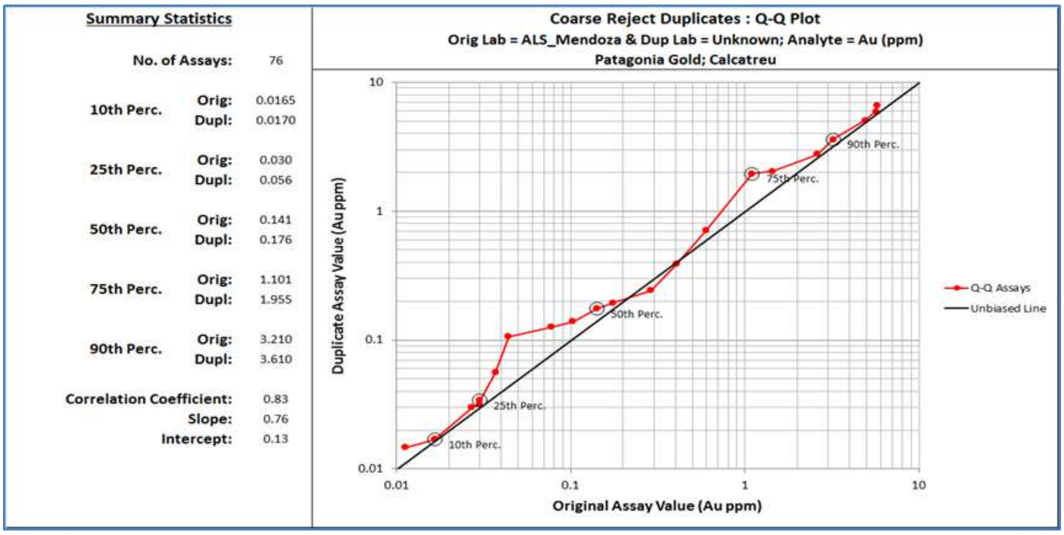
Coarse Reject Duplicates: RMPD Plot – ALS Mendoza



Coarse Reject Duplicates: Scatter Plot – ALS Mendoza



Coarse Reject Duplicates: Q-Q Plot – ALS Mendoza



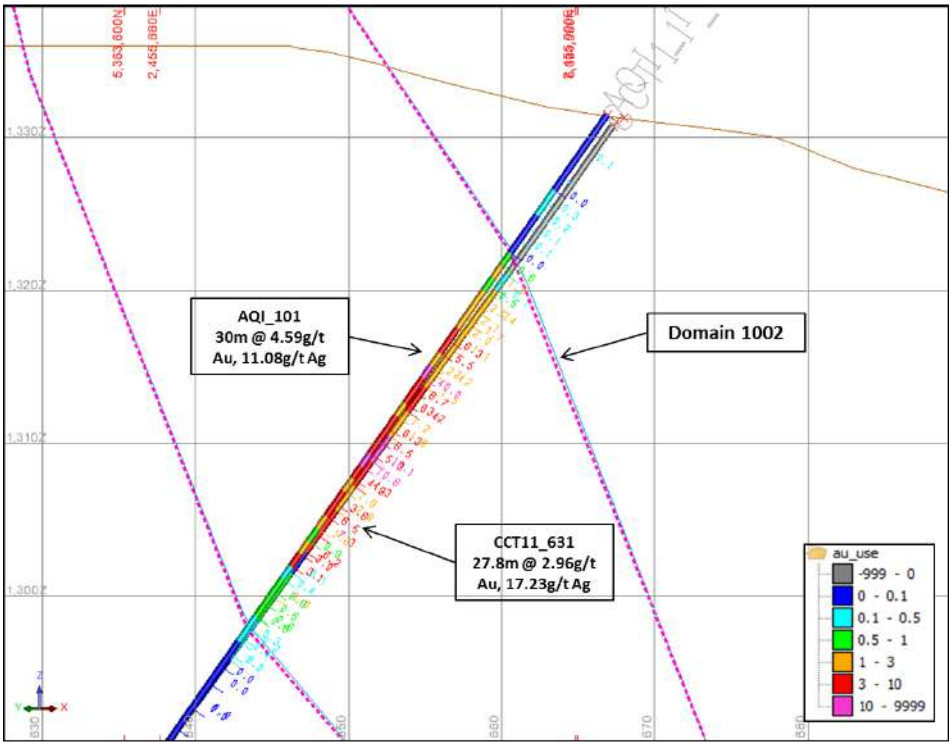
Appendix 3 – Twin Hole Analysis

Twinned Hole Listing of all holes – Aquiline Holes (AQI) versus PAS Holes (CCT11_):

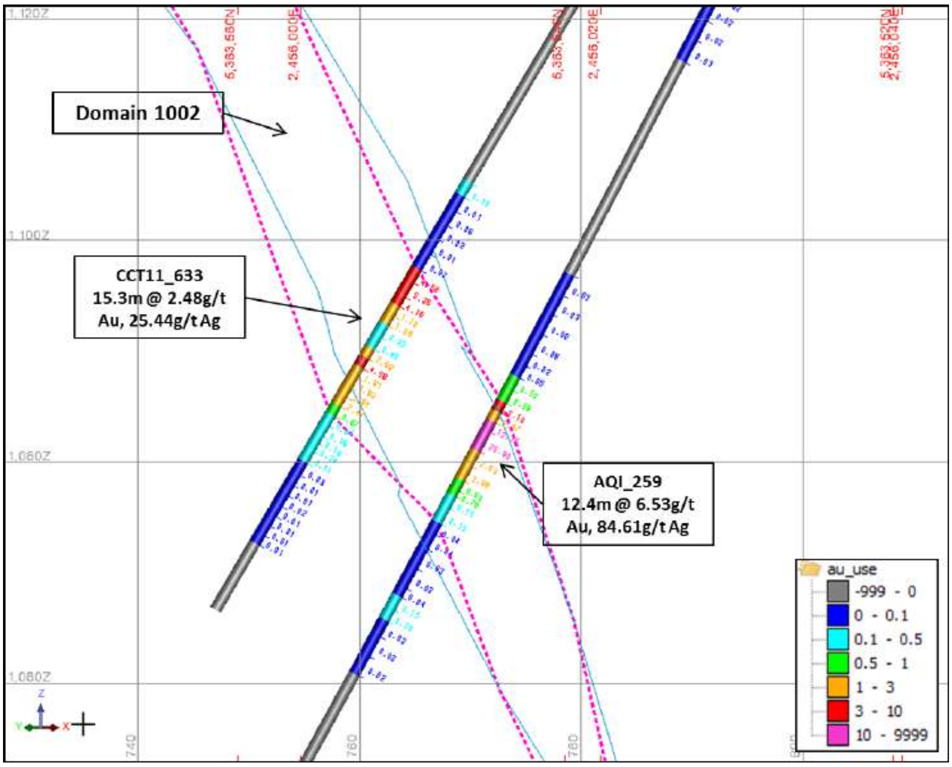
Drill Type	Drill hole	Easting	Northing	RL	EOH Depth	Easting Variance (m)	Northing Variance (m)	RL Variance (m)	Prospect	Domain No.	Comments
DD	AQI_308	2,455,900	5,363,575	1,331	53	-0.59	-1.39	0.24	Vein 49	1002	Not Sampled
DD	CCT11_630	2,455,900	5,363,577	1,331	30						
RC	AQI_101	2,455,900	5,363,577	1,331	80	-1.54	-1.14	0.71	Vein 49	1002	
DD	CCT11_631	2,455,902	5,363,578	1,331	54						
DD	AQI_332	2,456,065	5,363,629	1,307	128.6	-0.25	-2.26	0.13	Vein 49	1002	
DD	CCT11_632	2,456,065	5,363,631	1,307	114						
RCD	AQI_259	2,456,096	5,363,470	1,296	280	0.35	2.46	0.93	Vein 49	1002	
DD	CCT11_633	2,456,095	5,363,467	1,295	267						
DD	AQI_303	2,455,995	5,363,527	1,316	181.7	-2.01	-2.04	0.76	Vein 49	1002	
DD	CCT11_634	2,455,997	5,363,529	1,315	155.5						
RCD	AQI_108	2,455,911	5,363,500	1,315	129.9	-2.17	-2.12	0.75	Vein 49	1002	
DD	CCT11_635	2,455,913	5,363,502	1,314	114						
RCD	AQI_152	2,455,964	5,363,385	1,295	272.8	-2.68	-2.22	0.54	Vein 49	1002	
DD	CCT11_636	2,455,966	5,363,387	1,295	212.3						No Sig Int
RCD	AQI_187	2,455,904	5,363,371	1,297	190	-1.21	-2.58	-0.34	Vein 49	1002	
DD	CCT11_637	2,455,905	5,363,374	1,297	165						
DD	CCT11_638	2,455,888	5,363,388	1,300	31	-6.35	-2.45	0.08	Vein 49	1002	Not Sampled
DD	CCT11_640	2,455,895	5,363,390	1,300	41.5						Not Sampled
RCD	AQI_149	2,455,886	5,363,387	1,299	142.1	-2.34	1.47	-0.32	Vein 49	1002	
DD	AQI_330	2,455,889	5,363,386	1,300	145.6						Not Sampled
DD	AQI_331	2,455,854	5,363,349	1,297	126.6	-0.29	-2.12	-1.57	Vein 49	1002	Not Sampled
DD	CCT11_639	2,455,855	5,363,351	1,298	117						
RC	AQI_103	2,455,843	5,363,495	1,327	116	-2.44	-1.27	1.07	Vein 49	1002	
DD	CCT11_641	2,455,845	5,363,496	1,326	60						
RC	AQI_104	2,455,820	5,363,447	1,318	73	-2.03	-2.45	-0.80	Vein 49	1002	
DD	CCT11_642	2,455,822	5,363,450	1,319	54						
RC	AQI_121	2,455,762	5,363,364	1,300	50	-4.77	1.77	-0.01	Vein 49	1002	
DD	CCT11_643	2,455,767	5,363,362	1,300	57						
RCD	AQI_125	2,455,747	5,363,309	1,291	100	3.98	3.46	0.10	Vein 49	1002	
DD	CCT11_644	2,455,744	5,363,306	1,290	87						No Sig Int
RC	AQI_130	2,455,645	5,363,266	1,304	50	-4.12	-3.62	0.12	Vein 49	1002	
DD	CCT11_645	2,455,649	5,363,270	1,303	51						
RC	AQI_137	2,455,542	5,363,225	1,307	54	-3.00	-1.85	-0.08	Vein 49	1003	
DD	CCT11_646	2,455,545	5,363,227	1,307	51						

Drill Type	Drill hole	Easting	Northing	RL	EOH Depth	Easting Variance (m)	Northing Variance (m)	RL Variance (m)	Prospect	Domain No.	Comments
RC	AQI_135	2,455,556	5,363,212	1,305	80	- 3.75	- 3.08	0.06	Vein 49	1003	
DD	CCT11_647	2,455,560	5,363,215	1,305	90						
RC	AQI_146	2,455,482	5,363,077	1,292	60	- 2.47	- 2.29	- 0.21	Vein 49	1002	
DD	CCT11_648	2,455,485	5,363,079	1,292	60						
RC	AQI_146	2,455,482	5,363,077	1,292	60	- 2.47	- 2.29	- 0.21	Vein 49	1003	
DD	CCT11_648	2,455,485	5,363,079	1,292	60						
DD	AQI_344	2,455,702	5,363,186	1,288	195	- 1.07	- 1.94	0.68	Vein 49	1002	
DD	CCT11_649	2,455,703	5,363,188	1,288	171						
DD	AQI_344	2,455,702	5,363,186	1,288	195	- 1.07	- 1.94	0.68	Vein 49	1003	
DD	CCT11_649	2,455,703	5,363,188	1,288	171						
RCD	AQI_123	2,455,798	5,363,331	1,296	110	1.39	1.71	0.34	Vein 49	1002	
DD	CCT11_650	2,455,797	5,363,330	1,296	105						
RCD	AQI_197	2,455,923	5,363,356	1,294	220	- 2.55	- 1.42	- 0.05	Vein 49	1002	
DD	CCT11_651	2,455,925	5,363,357	1,294	200						
RCD	AQI_188	2,455,917	5,363,426	1,301	190	- 3.63	- 4.08	- 0.02	Vein 49	1002	
DD	CCT11_652	2,455,921	5,363,430	1,301	177						
RCD	AQI_107	2,455,883	5,363,458	1,310	141	- 2.32	- 2.02	- 0.07	Vein 49	1002	
DD	CCT11_653	2,455,886	5,363,460	1,310	95						Not Sampled
RC	AQI_102	2,455,875	5,363,539	1,330	70	- 2.53	- 0.81	0.97	Vein 49	1002	
DD	CCT11_654	2,455,877	5,363,540	1,329	50						Not Sampled
DD	AQI_302	2,455,978	5,363,573	1,321	117	2.00	2.84	0.06	Vein 49	1002	
DD	CCT11_655	2,455,976	5,363,570	1,321	110						Not Sampled
RC	AQI_215	2,455,007	5,362,630	1,283	60	- 1.12	- 2.03	1.46	Nelson	2008	
DD	CCT11_656	2,455,008	5,362,632	1,281	50.7						
RC	AQI_229	2,455,060	5,362,316	1,307	50	1.72	2.66	- 0.09	Nelson	2004	
DD	CCT11_657	2,455,058	5,362,313	1,307	42						
RC	AQI_198	2,454,780	5,362,363	1,293	60	- 2.84	- 3.16	0.53	Nelson	2008	
DD	CCT11_658	2,454,783	5,362,366	1,293	60						
DD	AQI_314	2,454,817	5,361,830	1,301	74	2.86	3.34	- 0.00	Nelson	2001	
DD	CCT11_659	2,454,814	5,361,827	1,301	60						
DD	AQI_314	2,454,817	5,361,830	1,301	74	2.86	3.34	- 0.00	Nelson	2002	
DD	CCT11_659	2,454,814	5,361,827	1,301	60						

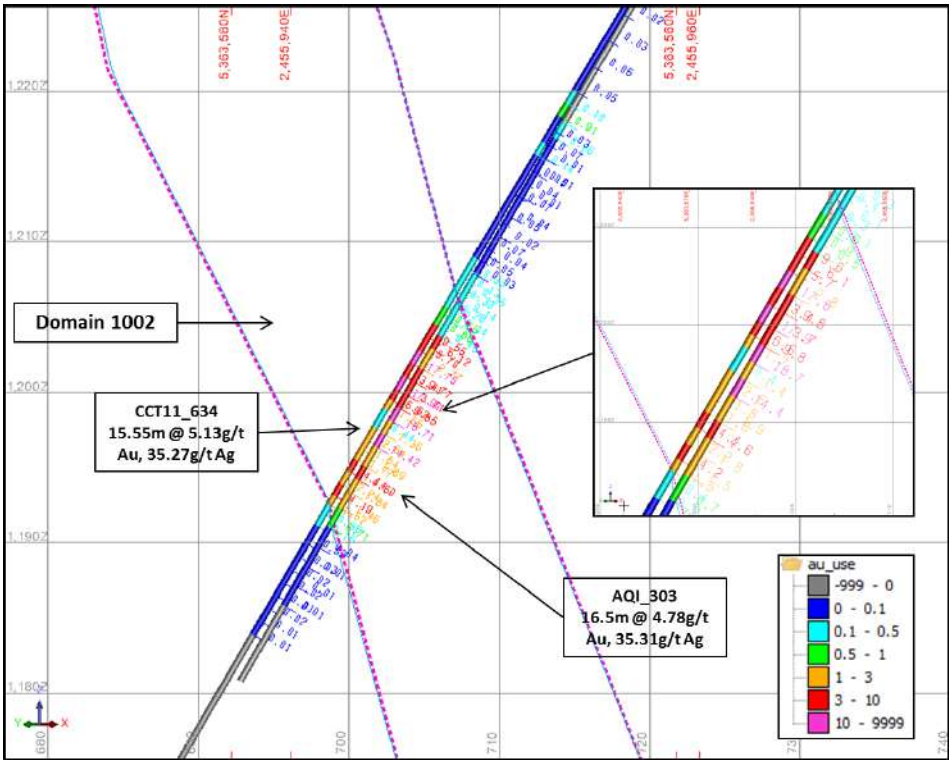
Vein 49 Twin Hole Comparison – AQI DD Hole (AQI_101) and PAS DD Hole (CCT11_631) – Oblique Cross Section:



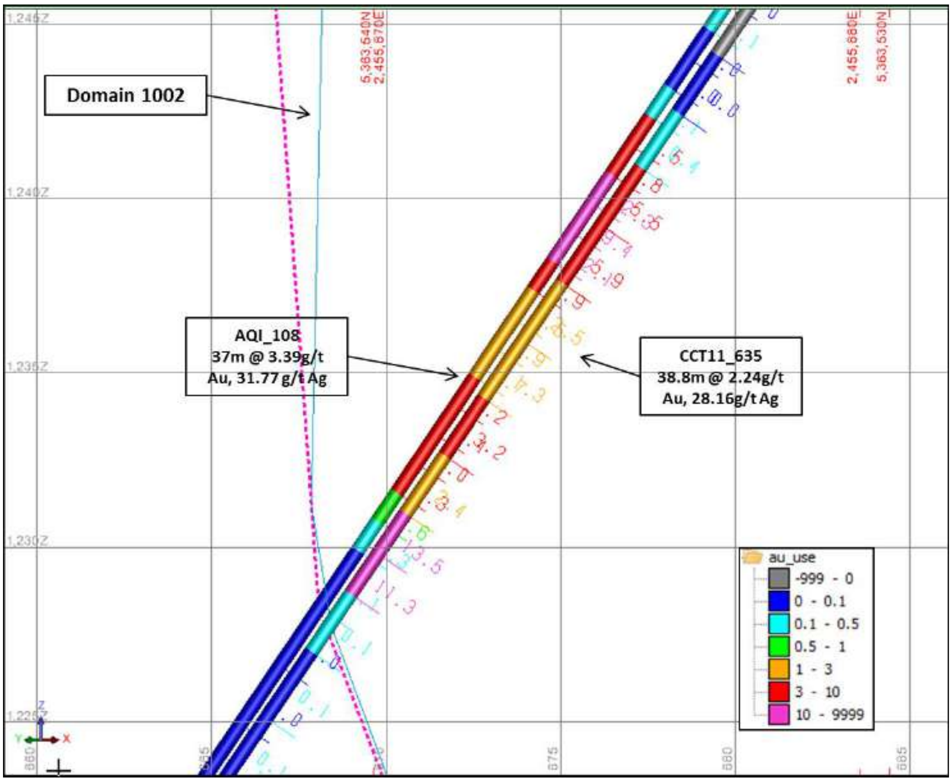
Vein 49 Twin Hole Comparison – AQI DD Hole (AQI_259) and PAS DD Hole (CCT11_633) – Oblique Cross Section:



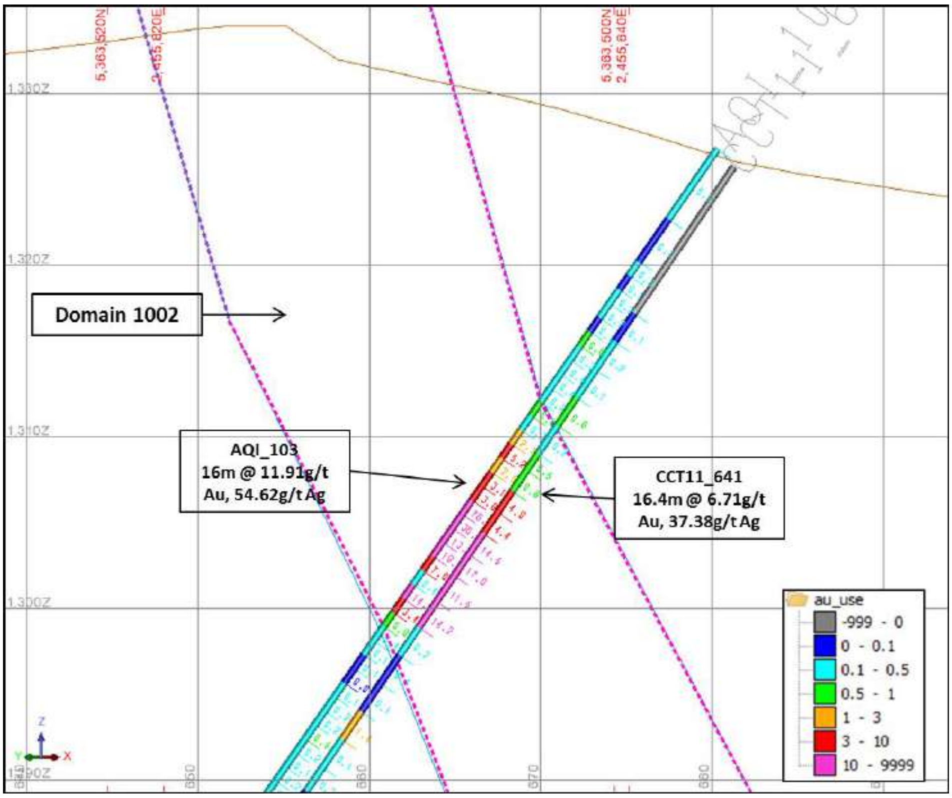
Vein 49 Twin Hole Comparison – AQI DD Hole (AQI_303) and PAS DD Hole (CCT11_634) – Oblique Cross Section:



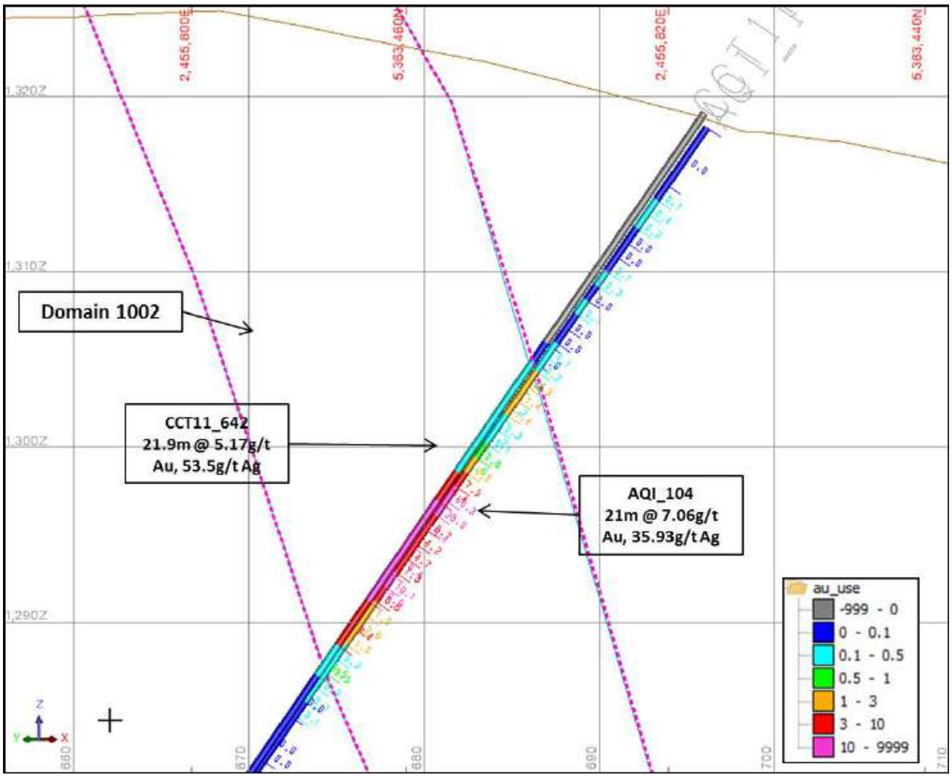
Vein 49 Twin Hole Comparison – AQI DD Hole (AQI_108) and PAS DD Hole (CCT11_635) – Oblique Cross Section:



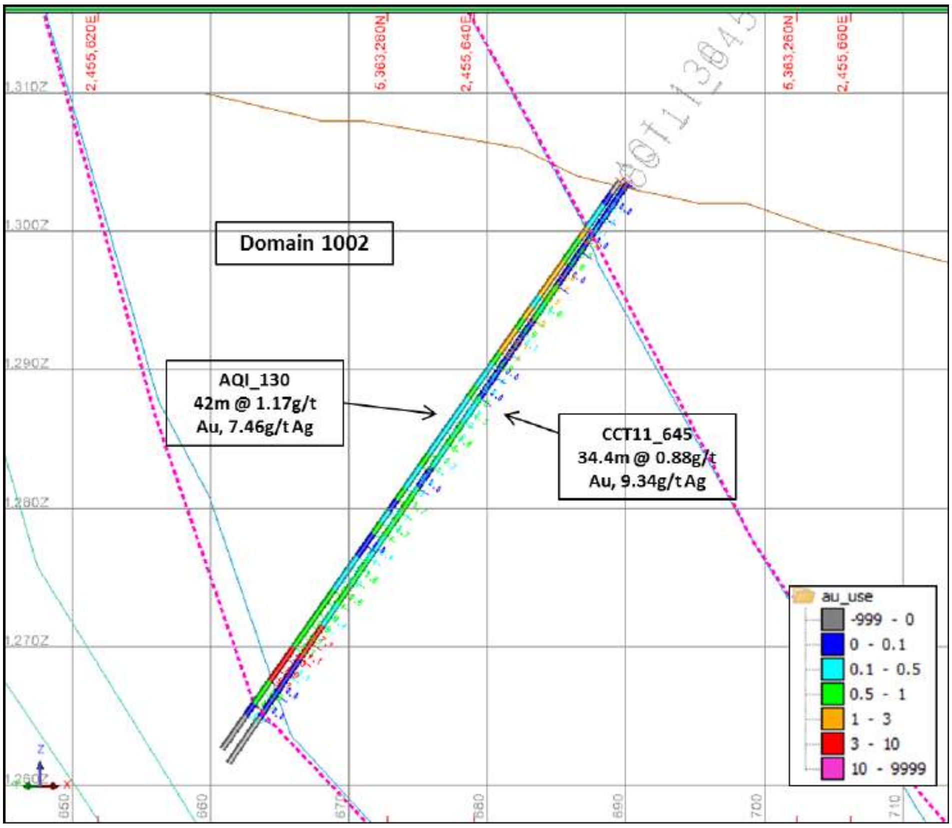
Vein 49 Twin Hole Comparison – AQI RC Hole (AQI_103) and PAS DD Hole (CCT11_641) – Oblique Cross Section:



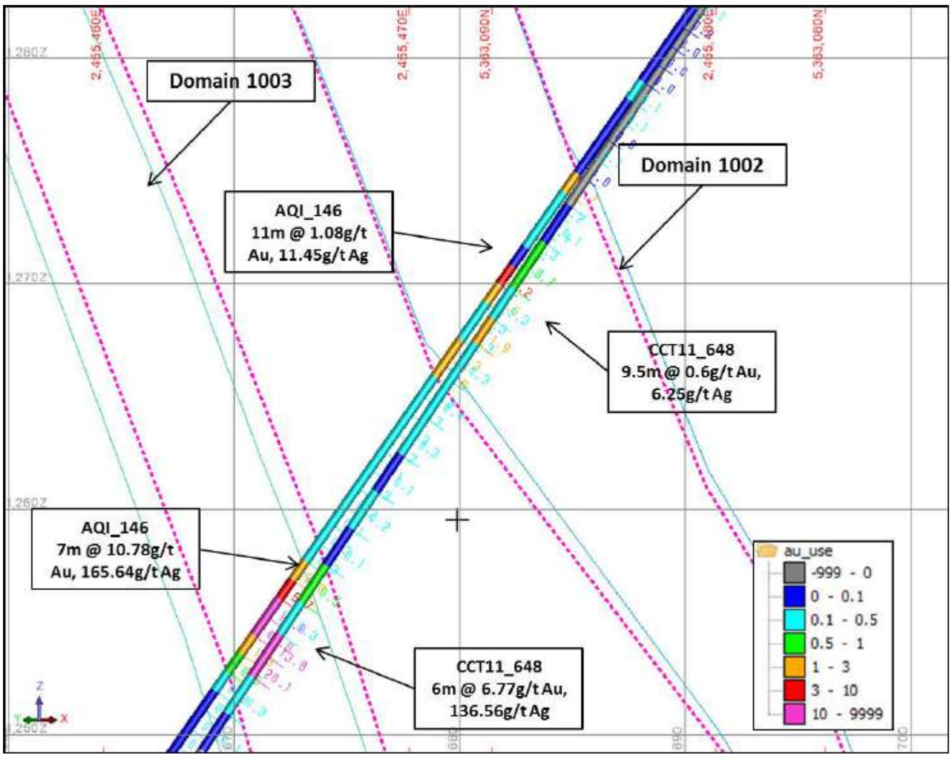
Vein 49 Twin Hole Comparison – AQI RC Hole (AQI_104) and PAS DD Hole (CCT11_642) – Oblique Cross Section:



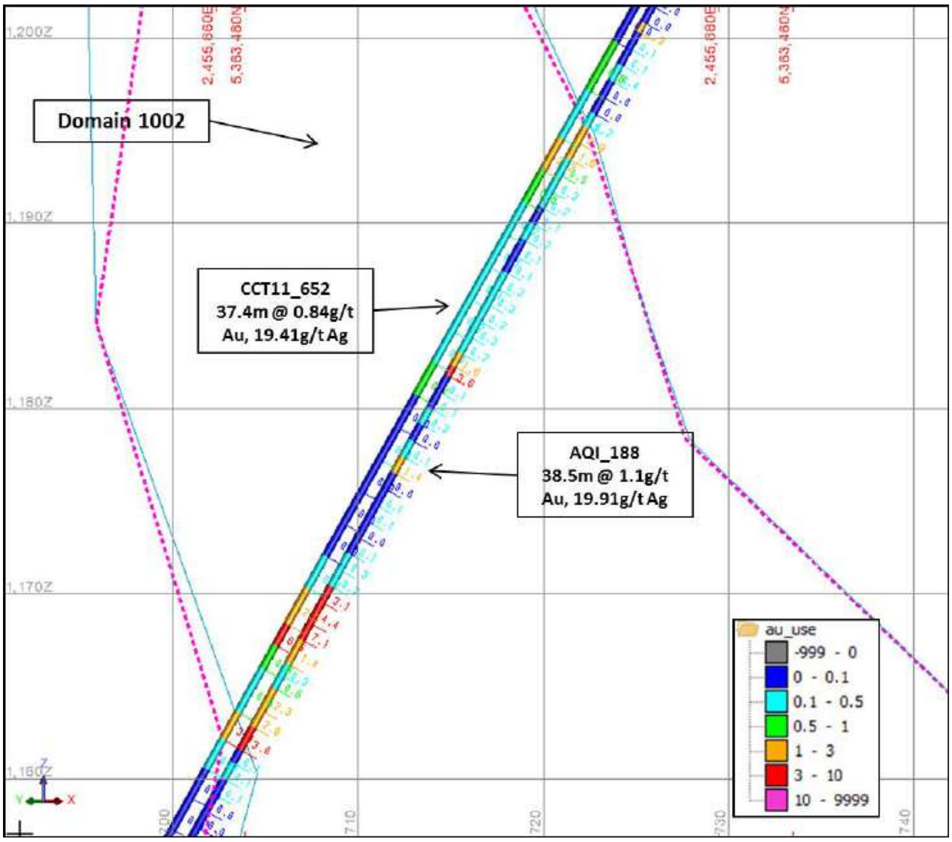
Vein 49 Twin Hole Comparison – AQI RC Hole (AQI_130) and PAS DD Hole (CCT11_645) – Oblique Cross Section:



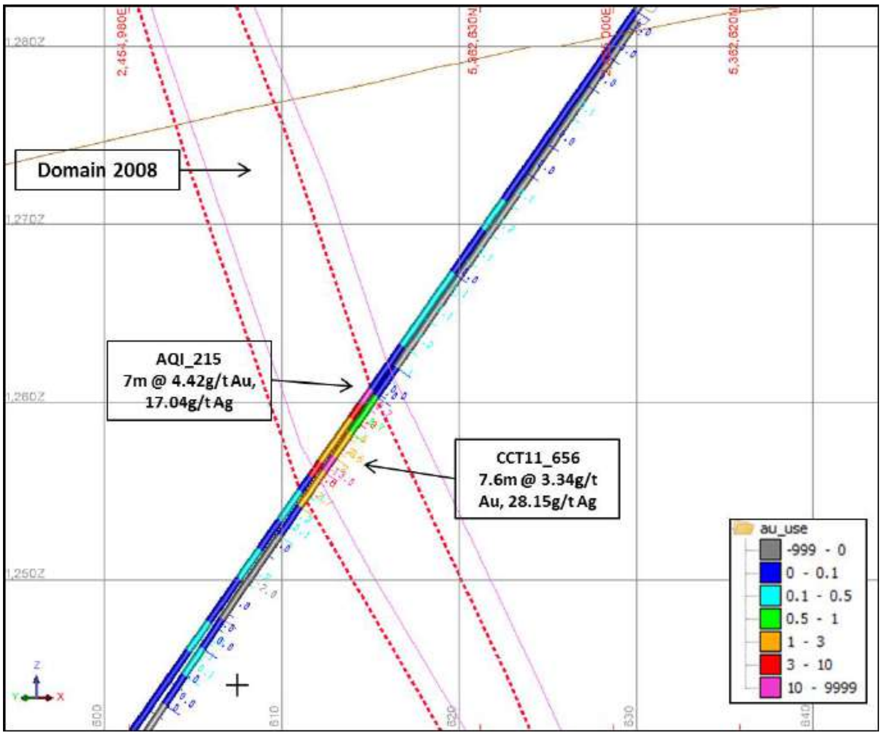
Vein 49 Twin Hole Comparison – AQI RC Hole (AQI_146) and PAS DD Hole (CCT11_648) – Oblique Cross Section:



Vein 49 Twin Hole Comparison – AQI DD Hole (AQI_188) and PAS DD Hole (CCT11_652) – Oblique Cross Section:



Nelson Twin Hole Comparison – AQI DD Hole (AQI_215) and PAS DD Hole (CCT11_656) – Oblique Cross Section:



Nelson Twin Hole Comparison – AQI DD Hole (AQI_198) and PAS DD Hole (CCT11_658) – Oblique Cross Section: