Independent NI43-101 Technical Report
Zacatecas Properties, Zacatecas State, Mexico

Drilling at Tres Cruces, Panuco Deposit

Prepared for

Zacatecas Silver Corp.

By

Morales-Ramirez, Keane (Metallurgy), Barry
(Review of Sample Preparation, Analysis and Security),
and Puritch, Wu and Yassa (Resource Estimate)

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Executive Summary

Introduction

- Mr Juan-Manuel Morales-Ramirez P. Geo. (“Morales-Ramirez”), Mr Joseph Keane, P. Eng. (“Keane”), Ms Barry, P. Geo. (“Barry”) — and with respect to Mineral Resource Estimation Mr Eugene Puritch, P. Eng. (“Puritch”), Mr Wu, P. Geo. (“Wu”) and Mr Yassa, P. Geo. (“Yassa”) of P&E Mining Consultants Inc. (collectively “P&E”) — were requested by Zacatecas Silver Corp. (the “Company”) to produce a National Instrument 43-101 (“NI43-101”) compliant Technical Report and Current Initial Resource Estimate (the “Report”) for the Zacatecas Silver-Polymetallic Project (the “Property”) in Mexico.

- Morales-Ramirez is responsible for Sections 1 to 11, 14 to 15 and 18 of this report; Keane is responsible for the Section 12 (Mineral Processing and Metallurgical Testing). Whilst this Technical Report is submitted in support of a Current Mineral Resource Estimate — Morales-Ramirez also provides an update of Exploration Activities by the Company.

- Barry of P&E reviewed Section 10 (Sample Preparation, Analysis and Security) to ensure that protocols meet the standards required for inclusion of results in the estimation of a Mineral Resource; and P&E is responsible for Section 13 (Mineral Resource Estimates). The Effective Date of the Resource is 14 December 2021.

- The Authors each contributed to their respective sections of the Executive Summary, and Interpretation and Conclusions (Chapter 16).

- In addition to disclosure of the Companies Initial Resource Estimate for the Panuco Deposit — the NI43-101 provides an update of the Companies exploration activities at the Property

Property Description and Location

- The Property is located adjacent to the city of Zacatecas, in the municipalities of Panuco, Veta Grande, Morelos, Zacatecas and Guadalupe, Zacatecas State, Mexico — it consists of 149 mining concessions covering 7826 hectares. The Property is centred on latitude 22°49’2.89” N and longitude 102°33’48.72” W.

- The Company acquired 100% of the Property through its wholly owned subsidiary (Desarrollos Mineros Zacatecas Silver, S.A. de C.V. or “DMZS”) from Impulsora Minera Santacruz, S.A. de C.V. (“IMSC”) (a wholly owned subsidiary of Santacruz Silver Mining Ltd) — subject to a purchase agreement dated 31 August 2020 as amended on 23 December 2020.

- As part of the Purchase Agreement, Desarrollos Mineros Zacatecas Silver, S. A. de C. V. also assumed certain royalties, as outlined in Section 3.5 of this Report.

- In consideration of the Property, the Company issued 5,000,000 common shares to IMSC and made a cash payment of US $1,500,000 on the date the Company listed its common shares on the TSX Venture Exchange. In addition, as part of the transaction, the Company paid all outstanding taxes due on the Property — approximately US $200,000.

- The Company has negotiated surface access agreements with the Panuco Ejido, the Municipality of Panuco and two private landowners at Panuco; two private landowners at San Gill; and a private land-owner at El Cristo — agreements are valid for two to five years which provide access for all planned drilling activities. The Company is in the process of finalizing additional access at El Cristo which will comprise 30 families under one agreement.

- Two drill permits have been awarded by SEMARNAT for drilling at Panuco for a total of 47 drill pads. A drill permit was also awarded by SEMARNAT for San Gill for a total of 10 drill pads.

- The Property is clear of federally protected natural areas. Morales-Ramirez is not aware of any social or environmental liabilities.

Accessibility, Climate, Infrastructure and Physiography

- The Property is located close to the cities of Zacatecas and Guadalupe — both capable of providing a skilled workforce and infrastructure for exploration and development. All project areas on the Zacatecas Property are easily accessed by unpaved roads off paved public highways. Climate allows for year-round operation. Topography is generally subdued with occasional moderately steep hills. Elevations vary from 2300 to 2600 metres above mean sea level.

History

- The Zacatecas Mining District has a long history of mining dating back to pre-colonial times. Mining by the Spaniards commenced in 1548 and by the late 1800's silver from the Zacatecas Mining District accounted for 60% of the value of all Mexican exports. The Mexican Geological Survey estimate that almost 750 Moz of silver was produced from the Zacatecas Mining District between 1548 and 1987.

- Between 1994 and 2010 Golden Minerals completed geological mapping, and trench and surface rock-chip sampling, within the Zacatecas district.

- Between 2007 and 2011 Golden Minerals drilled 36,178 m of diamond core at Panuco, Muleros, El Cristo and San Manuel-San Gil — of which over 23,000 m were at Panuco. Four hundred and eleven trenches were excavated for a total of 14,641 m — 83 trenches totalling 4540 m were excavated at Panuco.

- In October 2016, Santacruz Silver Mining Ltd completed an historical resource estimate of the Panuco Deposit, as set forth in the technical report titled "2016 Mineral Resource Estimate – Panuco Deposit, Zacatecas, Mexico" dated 3 November 2016. The report was prepared by Van Phu Bui, P. Geo, and Gary Henry Giroux, P. Eng, and filed on www.sedar.com ("2016 Panuco Historical Resource").

- In 2019, Santacruz completed an updated historical inferred resource estimate, as set forth in the technical report titled "Technical Report – Veta Grande Project, Zacatecas State, Mexico" dated 20 August 2019. The report was prepared by Van Phu Bui, P. Geo and Michael O'Brien, P. Geo and is filed on www.sedar.com ("2019 Panuco Historical Resource"). The resource was estimated using a drill dataset comprising 75 diamond holes, 866 down hole surveys and 2607 assay samples. A surface trench database totalling 183 trenches for 1813 samples was also used.

  The 2019 Panuco historical inferred resource reported 3,954,729 tonnes at 153 g/t AgEq (136 g/t Ag, 0.14 g/t Au, 0.012 % Pb and 0.11% Zn) for a total of 19,472,901 ounces AgEq — based on a cut-off 100 g/t AgEq Operational recoveries similar to the Veta Grande vein were used — being gold (52.2%), silver (62.1%), lead (87.9%) and zinc (78.6%). US $1350/oz gold, US $16/oz silver, US $0.90/lb (lead) and US $1.10/lb (zinc) were assumed.

Geological Setting and Mineralization

- The regional distribution of epithermal deposits in Mexico indicates they are closely associated with regional faults — as is the case in the Zacatecas region where major deposits occur along the crustal boundary between the Guerrero Terrane (to the west) and the Oaxaquia Block (to the east).

- The geology of the Zacatecas area consists of Triassic metamorphic rocks of the Zacatecas Formation overlain by basic volcanic rocks of the Upper Jurassic or Lower Cretaceous Chilitos Formation. Tertiary rocks consist mainly of a Paleocene and/or Eocene red conglomerate unit which is overlain by Eocene to Oligocene rhyolitic tuffs and intercalated flows. Some Tertiary rhyolite bodies cut the Mesozoic and Tertiary units and display characteristics of flow domes.

- Mineralization at Zacatecas relates to Tertiary magmatism and associated volcanic activity. Mineralization at Panuco, Muleros, El Cristo and San Manuel-San Gil is hosted in the Chilitos Formation — massive lavas and pillow lavas of basaltic-andesitic composition, interbedded with sedimentary rocks, volcanoclastic rocks, and limestones.

- At district and prospect scale mineralization is hosted in steeply dipping epithermal veins with dominant northwest-southeast strike. Mineralized systems are defined by multiple sub-parallel veins, which often terminate in a series of splays. Vein flexures are common. A north-south oriented hematitic breccia that is up to 800 m long and 40 m wide crops out at San Manuel-San Gill — the north-south orientation more typical of gold-rich epithermal systems at Zacatecas.

- Silver, gold, and base metal mineralization is hosted in multiphase, crustiform and colloform banded quartz-calcite veins, vein breccias, and quartz vein stockworks within zones of strong argillic alteration. Mineralization is best developed within coherent andesite volcanic rocks and volcano-sedimentary units.

- Galena, sphalerite, chalcopyrite and argentite are the main economic sulphide minerals — gangue includes quartz, calcite, pyrite, arsenopyrite, hematite, goethite, illite and clay minerals.

Deposit Type

- The Zacatecas mining district covers an area of over 700 km2. It is part of the largest silver province in the world — the Mexican Silver Belt — which extends from Sonora in the north to Oaxaca in the south, and defines a ca. 1500 km long northwest-southeast trending belt that includes the world-class mining districts of Zacatecas, Guanajuato and Fresnillo. Most mineralization is of an epithermal type.

- The epithermal deposits within the Zacatecas District — and the silver-gold-base metal mineralization on the Property — display characteristics of intermediate and low sulfidation styles. Camprubi and Albinson (2007) proposed a new empirical classification for Mexican epithermal deposits — better suited to mineralization at the Property where veins may be of intermediate sulphidation, hybrid intermediate-low sulphidation, or low sulphidation type.

- Economic mineralization, if present, is restricted to a discrete vertical interval of 200-300 m (low sulphidation veins) and 400-800+ m (intermediate sulphidation veins). Identifying the "tops" and "bottoms" of the mineralized system is essential for placing the level of erosion, or the location of a drill hole intercept, within the broader context of a deposit's vertical extent — allowing for more effective drill targeting.

Exploration

- The Company has completed systematic field-based exploration and mapping at Panuco, San Gill-San Manuel and El Cristo. Specifically:

- The Company acquired high-resolution Worldview 3 satellite imagery (34 cm panchromatic and 1.36 m 8-band multi-spectral VNIR resolution) encompassing all concessions and areas in between. The location of ground control points was derived from TerraSar-X satellite data with a cited positional accuracy of <20 cm accuracy in X, Y and Z — ensuring rectification of the Worldview 3 image to <1 m X, Y and Z.

- An AW3D Enhanced 50 cm digital terrain model (DTM) and 1 m topographic contour map was generated using multi-view Maxar archive imagery — providing a detailed topographic surface model for all future mapping and 3D modelling work.

- Geological mapping has been completed at Panuco, San Gill and at El Cristo. Lithological, alteration and structural geological maps were generated on a Worldview 3 base map. A thin veneer of Quaternary to Recent soil, sand and gravel masks areas of bedrock — limiting the effectiveness of field mapping. Shallow historical workings are visible on satellite imagery and define the location of the major veins — providing an effective vector to high value drill targets.

Drilling

- The Company commenced angled diamond drilling at Panuco on 30 August 2021. Drilling is being conducted by Major Drilling. To date the Company has drilled 29 angled PQ and HQ diamond holes for a total of 5160 m — 4243 m at Panuco and 917 m at San Gill. Drilling is ongoing along the Tres Cruces vein in the north of Panuco.

- The Company's 2021 drill program is an exploratory program that targeted areas outside of the current Panuco Resource Estimate. Four holes (1077 m) were drilled in the Panuco Central Vein at the eastern boundary of the Company's concessions, 22 holes (3165 m) targeted the Tres Cruces vein in the northern part of Panuco, and 3 holes (917 m) drill tested the San Gill breccia.

- Assay results for the four holes drilled into the eastern part of the Panuco Central Vein are of low tenor — suggesting that high grade mineralization does not continue.

- Assay results have been received for nine of the 22 holes drilled at Tres Cruces. All holes intercepted down-dip extensions of veins mapped at surface — either as multiphase sulphidic quartz veins or variably silicified fractures zones over downhole widths of up to 3 m. Several intercepts returned significant grades which highlight the exploration potential of Panuco. Specifically:

    # 1.85 m @ 261 g/t AgEq (224 g/t Ag and 0.49 g/t Au) from 126.05 m downhole (Hole PAN 2021-008)
    # 2.17 m @ 823 g/t AgEq (798 g/t Ag and 0.34 g/t Au) from 154.94 m downhole (Hole PAN 2021-009)
    # 3.00 m @ 267 g/t AgEq (203 g/t Ag and 0.85 g/t Au) from 46.50 m downhole (Hole Pan 2021-010)

Sample Preparation, Analysis and Security

- Two types of samples were submitted for assay: Golden Minerals historical drill core taken by Morales-Ramirez for verification assay; and diamond drill core samples from the current drilling program which were submitted for sample preparation and analysis by Company geologists.

- In both cases, sample preparation, sub-sampling protocol and analytical procedure followed industry-recognized standards of best practice — applicable for the style of mineralization, type of sample and stage of exploration.

- Samples were submitted to ALS Zacatecas for preparation — sample pulps were then couriered by ALS Zacatecas to ALS Loughreah (Ireland) for analysis. Verification samples were delivered to ALS Zacatecas by Morales-Ramirez to ensure that chain of custody was maintained.

- ***Samples from Historical Core***
    # Given the time expired since Golden Minerals completed their work, Morales-Ramirez could not verify the security, sample preparation and assay protocol, or QA/QC protocol used. Morales-Ramirez re-sampled the complete second half of historical drill core, comprising 178 samples from Panuco, 26 samples from El Cristo, nine samples from San Manuel-San Gil and one sample of Muleros core. All assay results have been received.

- Samples were submitted in batches of 20 comprising 16 samples of drill core, a field blank, a CRM (certified reference material), and one crush and one pulp duplicate. Crush and pulp duplicates were taken at the crushing and pulverising stations respectively, inserted into the same batch as the original sample, and processed and assayed as part of that batch.

- Blank assay results were of low tenor and all batches passed QAQC — indicating no cross contamination between samples. Gold and silver-base metal CRM's assayed within acceptable tolerance limits and all batches passed QAQC. Assay results of crush and pulp duplicates show good precision with the original — demonstrating appropriate sub-sampling and sample preparation protocol for the type of sample and style of mineralization.

- X-Y scatter plots of original drill core samples (Golden Minerals) versus verification drill core samples (Morales-Ramirez) show significant scatter — to the positive and to the negative of a "one-to-one" relationship. Overall verification samples show a slight negative bias as compared to originals. Two factors may have contributed to the negative bias: 1) selective removal of high grade half cut core for further study, and 2) mixing of mineralized and unmineralized half-cut core within core boxes as they have been moved over time.

  Given that the half-cut core used for verification purposes is over 10 years old, that core boxes have been moved during the last ten years, and that mineralized samples have likely been taken for further study — Morales-Ramirez is of the opinion that verification sample assay results validate the original Golden Minerals assay results. As such — Morales-Ramirez is also of the opinion that the drill core assay results of Golden Minerals can be used in the estimation of a current resource estimate at Panuco.

- ***2021 Company Drill Core Samples***
  - Morales-Ramirez reviewed the Companies diamond drill program during a site visit in December 2021. Morales-Ramirez noted that drill recovery was excellent, and that diamond drilling, core handling and logging, and core sampling, follows industry recognized standards of best practice.

  - PQ and HQ drill core is placed in core boxes by the drillers at the rig — Company geologists are responsible for moving the core to the Company's core logging and storage warehouse in Zacatecas. The core is then photographed, geotechnically and geologically logged, marked for cutting and sampling, and then cut lengthways into two equal halves.

  - Sample selection for assay is dictated by geology with a minimum sample length of 40 cm. Half core samples are placed in strong plastic bags, given a unique sequential number, and then sealed with a single use clip-lock seal. Chain of custody is maintained by the Company until the samples are passed to ALS Zacatecas.

  - As of the effective date of this report, the company has submitted 658 samples of drill core for assay, from a total of 26 angled diamond holes at Panuco and three angled diamond drill holes at San Gill. Assays have been received for 366 samples.

  - Samples were submitted in batches of 20 comprising 17 drill core samples, a field blank, a CRM, and either one crush or one pulp duplicate. Crush and pulp duplicates were taken at the crushing and pulverising stations respectively, inserted into the same batch as the original sample, and processed and assayed as part of that batch.

  - Blank assay results were of low tenor and all batches passed QAQC — indicating no cross contamination between samples. Assay result of staged duplicates (either crush or a pulp) indicate acceptable precision between original and duplicate samples — confirming that sub-sampling and sample preparation protocol is appropriate for the type of sample and style of mineralization. Gold and silver-base metal CRM's assayed within tolerance limits and all batches passed QAQC.

Morales-Ramirez is of the opinion that drill core assay results from the current drill program are representative of the style of mineralization drilled and that assay results are accurate.

Data Verification

- Morales-Ramirez verified the assay results of Golden Minerals by re-sampling select intervals of historical core. Morales-Ramirez also verified the drilling, core handling, sampling and assay protocol of the Companies current diamond drill program during a December 2021 site visit.

- Morales-Ramirez used the Worldview 3 satellite base image over-printed with Property boundaries to verify a number of the concession corner coordinates in the field. Morales-Ramirez is satisfied that the Property boundaries coincide with the geographic field area covered in this report.

Samples from Historical Core

Morales-Ramirez conducted extensive verification of all facets of the historic dataset to ensure that the diamond drill core assay results of Golden Minerals were suitable for the use in estimation of the current mineral resource at Panuco.

Morales-Ramirez collected 214 half-cut drill core samples from historical Golden Hills core — ensuring that verification sample intervals matched those of the original. Samples were submitted to ALS for analysis — chain of custody was maintained by Morales-Ramirez. Sample preparation and analysis followed industry-recognized standards of best practice and all sample batches passed QAQC.

X-Y scatter plots showing the original drill core assay results of Golden Minerals, and the assay results of verification drill core samples taken by Morales-Ramirez, show significant scatter — to the positive and negative of a "one-to-one" relationship.

Verification drill core samples show a slight negative bias as compared to original samples. Given that the half core sampled for verification purposes is over 10 years old, that core boxes have been moved during the last ten years potentially resulting in mixing of mineralized and unmineralized core intervals, and that mineralized samples have likely been taken for further study — Morales-Ramirez is of the opinion that verification sample assay results validate the original Golden Minerals assay results. The Author is of the opinion that the drill core assay results of Golden Minerals can be used in the estimation of a current resource estimate at Panuco.

Morales-Ramirez cross-checked approximately 20% of the historical Panuco assay database against original ALS assay certificates — there were no mismatched or incorrect assay entries. Morales-Ramirez also cross-checked a number of geological logs against remaining the half-cut core and the geological database — the Author is satisfied that drill core lithology and mineralization was correctly logged and entered into the database.

The Company engaged an independent surveyor to re-survey all historical Panuco drill collars and 10 historical collars at El Cristo and San Manuel-San Gil. Re-surveyed collar locations were used in the current Inferred Mineral Resource estimate at Panuco.

Morales-Ramirez is of the opinion that the drill hole information and sample database of Golden Minerals are a reasonable and accurate representation of the mineralization at Panuco, and that both are of sufficient quality, to support an Inferred Mineral Resource estimation.

- ***2021 Company Drill Core Samples***

During a December 2021 site visit — Morales-Ramirez reviewed the companies drill program, and core handling, logging, sampling and assay program.

Drilling is conducted in either PQ or HQ diameter double tube and core recoveries are generally better than 98% — including mineralized intervals. Drill collar locations are surveyed by an independent surveyor.

Morales-Ramirez cross-checked a number of geotechnical and geological logs and note that logs are a reasonable and accurate reflection of geology and mineralization. Sample intervals correctly reflect styles and widths of mineralization.

Core sampling and chain of custody, and sample preparation and analysis, follow industry-recognized standards of best practice. Samples are prepared at ALS Zacatecas and assayed at ALS Ireland. Samples are dispatched in batches of 20 with appropriate QAQC.

Morales-Ramirez is of the opinion that the current drill program is being conducted to a high standard and that core logging, sampling, and sample preparation and assay protocol, follow industry-recognized standards of best practice that are appropriate for the type of deposit, style of mineralization and stage of the project.

Mineral Processing and Metallurgical Testing

- The Company collected a bulk sample from representative intervals of historical Panuco drill core and submitted to SGS Minerals at Lakefield ("SGS") for preliminary bench-scale metallurgical tests.
- Drill core intervals were placed into individually labelled polythene sample bags and sealed with a single use clip-lock seal. Chain of custody was maintained by the Company until the bulk samples was delivered to DHL for courier to SGS.
- Metallurgical test work by SGS supports both a bulk flotation flow-path and a sequential flotation flow-path — the bulk flotation flow-path produced a single gold, silver, lead and zinc rougher concentrate (15 minutes of flotation and 23% mass pull) with 697 g/t silver, 0.97 g/t gold, 1.67% zinc and 0.58% lead and recovering 96.2 % of the silver, 93.6% of the gold, 96.5% of the zinc and 92.1 % of the lead.

Mineral Resource Estimates

- A Mineral Resource Estimate was prepared by P&E. At a cut-off of 100 g/t AgEq the Panuco Deposit Mineral Resource Estimate consists of 2.7 million tonnes at 187 g/t AgEq (171 g/t Ag and 0.17 g/t Au) for 16.4 million ounces AgEq (15 million ounces silver and 15 thousand ounces gold) in Inferred Mineral Resources. This Mineral Resource Estimate comprises two mineralized veins:

  # The Panuco Central Vein that contains an Inferred Mineral Resource of 2.1 million tonnes at 171 g/t AgEq (156 g/t silver and 0.16 g/t gold) for 11.3 million ounces AgEq (10.3 million ounces silver and 11 thousand ounces gold), and

  # Panuco North Vein which contains an Inferred Mineral Resource of 0.7 million tonnes at 235 g/t AgEq (216 g/t Ag and 0.21 g/t Au) for 5.1 million ounces AgEq (4.7 million ounces silver and 5 thousand ounces gold.

	Tonnes (k)	Ag (g/t)	Ag (Moz)	Au (g/t)	Au (Koz)	AgEq (g/t)	AgEq (Moz)
Panuco Central Vein	2,056	156	10.326	0.16	11	171	11.3
Panuco North Vein	677	216	4.709	0.21	5	235	5.13
Total	**2,733**	**171.1**	**15.0**	**0.17**	**15.1**	**186.6**	**16.4**

Notes:
1) Mineral Resources, which are not Mineral Reserves, do not have demonstrated economic viability; 2) The estimate of Mineral Resources may be materially affected by environmental permitting, legal title, taxation, socio-political, marketing or other relevant issues; 3) Resources

are classified according to Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") Definition Standards (2014) and CIM Best Practices (2019); 4) The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could be upgraded to an Indicated Mineral Resource with continued exploration; 5) Silver equivalent Mineral Resources for the Panuco Deposit were calculated using the following metal prices: Ag at US $21/oz and Au at US$1,625/oz; 6) Metallurgical recoveries have been estimated to be 82% silver and 95% gold. 7) The Inferred Mineral Resource Estimate uses a cut-off of 100 g/t AgEq based on US$/tonne costs of $35/ mining, $15 processing and $5 G and A. 8) AgEq = Ag g/t + (Au g/t x 90).

- The database for the Mineral Resource Estimate consisted of 75 drill holes (23,444 m) and 183 trenches (4,540 m) — of which a total of 66 drill holes (19,826 m) and 135 trenches (3,545 m) intersected the mineralization wireframes used for the Mineral Resource Estimate.

- The drill hole database contained assays for silver and gold and other metals of no economic importance. Morales-Ramirez completed extensive data verification on the historical database by re-sampling 178 historical sample intervals — approximately 15% of sample intervals in the Mineral Resource Estimate.

- The Mineral Resource Estimate was generated using inverse distance cubed for gold and silver for grade interpolation within a 3D block model, constrained by mineralized zones defined by wireframed solid models. The bulk density values used in the Mineral Resource Estimate were derived from a regression equation based on data measured from samples collected from re-assayed drill core by Morales-Ramirez.

Adjacent Properties

- Several producing mines and advanced exploration properties adjoin the Zacatecas Property. The Veta Grande Mine (Santacruz Silver Mining Ltd) and San Acacio Deposit (Defiance Silver Corp.) are part of the Veta Grande Vein System — the Zacatecas Property bounds the Veta Grande property to the north, west and south.

- The El Compass Mine (Endeavour Silver Corp.) is located approximately 2 km to the south of the Company concessions. The mine exploits low sulphidation epithermal veins with north and northwest strike — within the context of the district, the veins at El Compass are unusual — they strike predominantly north-south, are gold-rich silver-poor, and have low total sulphide content with very low base-metal content.

- Endeavour Silver Corps concessions — which hosts the El Compass Mine — surround the Companies southernmost concessions.

  The Authors of this technical report have been unable to verify the information with respect to the Acacio Deposit and notes that the information is not necessarily indicative of the mineralization on the Zacatecas Property.

Other Relevant Data and Information

- The Authors are not aware of any other information or data that may be relevant to this report — other than that already disclosed in this report.

Interpretation and Conclusions

- Mineralization on the Property shares many similarities to other silver-dominant epithermal systems within Zacatecas mining district and the epithermal deposits of the Mexican Silver Belt. This provides a foundational understanding of deposits type and a framework on which to develop targets.

- Silver-gold-base metal mineralization is of low sulphidation, hybrid intermediate-low sulphidation and intermediate sulphidation type.

- The recognition of hybrid epithermal deposit types, which may display overprinting mineralizing events, suggests there is merit in remodelling the historic dataset to provide a clearer understanding of key controls on mineralization, and better define system the "tops" and "bottoms" (and thus vertical extent) of mineralization.

- The Property includes the advanced Panuco Deposit and several earlier stage targets — specifically Muleros, El Cristo, San Manuel-San Gil, and others.

- Verification and modelling of historical drill data from the Panuco deposit has been completed — allowing estimation of an inferred mineral resource.

- The Panuco Deposit Mineral Resource Estimate consists of 2.7 million tonnes at 187 g/t AgEq (171 g/t Ag and 0.17 g/t Au) for 16.4 million ounces AgEq (15 million ounces silver and 15 thousand ounces gold).

- Four diamond holes (for 1077 m) were drilled by the company in 2021 to test the eastern extension of the Central Panuco Vein at the eastern edge of the Companies concessions — assay results were of low tenor.

- The Panuco deposit remains open along strike to the west and at depth — a significant step back and step out drill program is justified. A number of sub-parallel veins of shorter strike length, splays and dilational jogs also require drill testing.

- The Companies 2021 drill program has focused on the Tres Cruces Vein where 22 holes (for 3165 m) have been completed — drilling was exploratory in nature and holes targeted the near surface depth extension of veins mapped at surface and/or historical surface workings. Holes were drilled at -40° to -65° and ranged from 30 to 250 m total depth — most were less than 150 m (approximately 80 m vertical). Almost all holes intercepted sulphidic quartz veins and/or silicified structures over downhole widths of up to 3 m. Assay results have been received for 9 holes — including three highly significant intercepts:

    # 1.85 m @ 261 g/t AgEq (224 g/t Ag and 0.49 g/t Au) from 126.05 m downhole (Hole PAN 2021-008)
    # 2.17 m @ 823 g/t AgEq (798 g/t Ag and 0.34 g/t Au) from 154.94 m downhole (Hole PAN 2021-009)
    # 3.00 m @ 267 g/t AgEq (203 g/t Ag and 0.85 g/t Au) from 46.50 m downhole (Hole Pan 2021-010

  Drilling results indicates that the Tres Cruces Vein is an attractive exploration target. Drilling is ongoing and the Company is presently applying to SEMARNAT for an additional 29 drill pads.

- The Company collected a bulk sample from representative intervals of historical Panuco drill core. Bench-scale metallurgical testwork by SGS Canada indicates that mineralization supports both a bulk flotation flow-path and a sequential flotation flow-path. The bulk flotation flow-path produced a single gold, silver, lead and zinc rougher concentrate (15 minutes of flotation and 23% mass pull) with 697 g/t silver, 0.97 g/t gold, 1.67% zinc and 0.58% lead and recovering 96.2 % of the silver, 93.6% of the gold, 96.5% of the zinc and 92.1 % of the lead.

- The company drilled three diamond holes (917 m) across the San Gill breccia — assay results are pending. The San Manuel-San Gill target remains under-explored. A north-south trending hematic breccia that is 800 m long and up to 40 m wide, is a significant drill target, as gold rich epithermal veins within the district are generally oriented north-south. A number of untested, northwest trending, sulphidic quartz-carbonate veins are also present. Significant further work is required in the San Manuel-San Gill area.

- The Muleros system is defined by three main veins and multiple splays which crop out over a strike length of at least 2.5 km. Historical drilling targeted the upper 100 m of parts of two veins. Vein extensions, the Rosario vein and the depth potential of the El Rosario vein remain untested. An area of historical shafts also requires scout drilling.

- El Cristo is a significantly under-explored target. The system most likely represents the northwest strike extension of the Veta Grande vein system. It comprises multiple veins, vein breccias and splays which crop out over a strike length of 2.5 km. Significant further drilling is required.

Recommendations

- A 2022 exploration budget of US $3 - 5M is proposed for the next phase of diamond drilling — based on an additional 10,000 to 15,000 m of angled PQ and HQ diamond drilling.

  # The Panuco inferred resource estimate is open at depth and to the west, and there are untested vein splays, flexures and intersections. Step-back, step-out and scout drilling is recommended.

  # The recent discovery of vein-hosted silver-gold-base metal mineralized at Tres Cruces that is open in all directions justifies significant further drilling.

  # El Cristo is an attractive target that requires drill testing. El Cristo is characterized by multiply NW-trending veins with a cumulative strike extent of at least 3 km — being the strike extension of the Veta Grande.

  # The Company has drilled 3 holes into the San Gill breccia and assays are pending. The N-S trending San Gill breccia and associated NW-SE trending silver-base metal mineralized veins is a large breccia and vein system that requires further scout drilling.

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Appendicees

1 Introduction and Terms of Reference

Mr Juan-Manuel Morales-Ramirez P. Geo. ("Morales-Ramirez"), Mr Joseph Keane, P. Eng. ("Keane"), Ms Barry P. Geo. ("Barry") — and with respect to Mineral Resource Estimation Mr Eugene Puritch, P. Eng. ("Puritch"), Mr Wu, P. Geo. ("Wu") and Mr Yassa, P. Geo. ("Yassa") of P&E Mining Consultants Inc. (collectively "P&E") were requested by Zacatecas Silver Corp. (the "Company") to produce a National Instrument 43-101 ("NI43-101") compliant Technical Report and Current Initial Resource Estimate (the "Report") for the Zacatecas Silver-Polymetallic Project (the "Property") in Mexico. The Property is in the Zacatecas Mining District of Mexico (Figure 1).

The Company acquired a 100% interest in the Property, subject to certain underlying royalties, pursuant to the terms of a purchase agreement dated August 31, 2020 (the "Purchase Agreement") between the Company, Santacruz Silver Mining Ltd. ("Santacruz"), Impulsora Minera Santacruz, S.A. de C.V., being a subsidiary of Santacruz, and Desarrollos Mineros Zacatecas Silver, S.A. de C.V. ("DMZS"), a wholly owned subsidiary of the Company. The mining concessions that comprise the Property are registered in the name of DMZS and the terms of the Purchase Agreement are outlined in Section 3 of this report.

In addition to disclosure of the Companies Initial Resource Estimate for the Panuco Deposit — the NI43-101 provides an update of the Companies exploration activities at the Property. The Authors understand that the report may be used to assist with raising capital in the public markets

1.1 Scope of Work

The Authors were requested by Zacatecas Silver Corp. to produce a National Instrument 43-101 compliant Technical Report and Current Initial Resource Estimate for the Zacatecas Silver-Polymetallic Project in Mexico. The Effective Date of the Initial Mineral Resource Estimate is 14th December 2021.

In addition to disclosure of the Companies Initial Mineral Resource Estimate for the Panuco Deposit the NI43-101 provides an update of the Companies exploration activities at the Property.

1.2 Qualified Persons

Morales-Ramirez wrote Sections 1 to 11, 14 to 18 of this report — who the Property between the 12th and 18th of October 2020, from the 10th to 19th of December 2020 and on the 10th and 11th of December 2021. Field and site observations were complimented by a comprehensive review of historic data and literature Keane is responsible for the Section 12 (Mineral Processing and Metallurgical Testing).

Barry of P&E reviewed Section 10 (Sample Preparation, Analysis and Security) to ensure that protocols met the standards required for inclusion of results in the estimation of a Mineral Resource; and P&E is responsible for Section 13 (Mineral Resource Estimates).

The Authors each contributed to their respective sections of the Executive Summary, and the Interpretation and Conclusions (Chapter 16).

Morales-Ramirez (P. Geo.) is an independent exploration consultant with over 40 years of experience focused in Mexico. This includes specialist experience in intermediate and low sulphidation epithermal gold-silver-base metal systems as typical of the deposits in the Zacatecas region. Mr Morales holds a bachelor's degree in Geology from the National Polytechnic Institute, Mexico, and a master's degree in Geology from the University of Sonora, Mexico. He is a Certified Professional Geologist (CPG-11234) and member of the American Institute of Professional Geologists (AIPG). The Author is a Qualified Person for the purposes of National Instrument 43-101, the scope of this report, style of mineralization and stage of project.

Keane (P. Eng.) is a metallurgical engineering consultant providing process engineering design advice to the mineral processing and pollution abatement industries. Recent assignments include projects for QuadraFNX, Mercator Minerals, Norsemont Mining, Philex Mining, China Interational Gold, Alamos Gold, NovaGold, and AngolGold Ashanti properties in Colombia, Argentina, and Brazil. He is a board member of a Mexican gold mining company. Keane authored two presentations for the Copper Heap Leach short course at the 2011, 2012, and 2013 SME annual meetings. Prior to joining SGS in 2006 — Keane has worked in senior positions with a number of metallurgical consultancies and operating mines.

Puritch (P. Eng.) is an independent professional mining engineer licenced in five Canadian Provinces with 40 years experience in engineering and operations of open-pit and underground mines in Canada, Central and South America, Australia, Africa, Russia, Eastern Europe, China, South Korea and Mongolia. Gold, silver, base metal, PGM, and iron deposits have been the focus with projects ranging from small underground narrow vein to large open-pit multi-element properties. Puritch is a graduate of the Haileybury School of Mines with a Technologist Diploma in Mining. He obtained an additional year of undergraduate education in Mine Engineering at Queen's University and met the Professional Engineers of Ontario Academic Requirement Committee's Examination requirement for Bach-

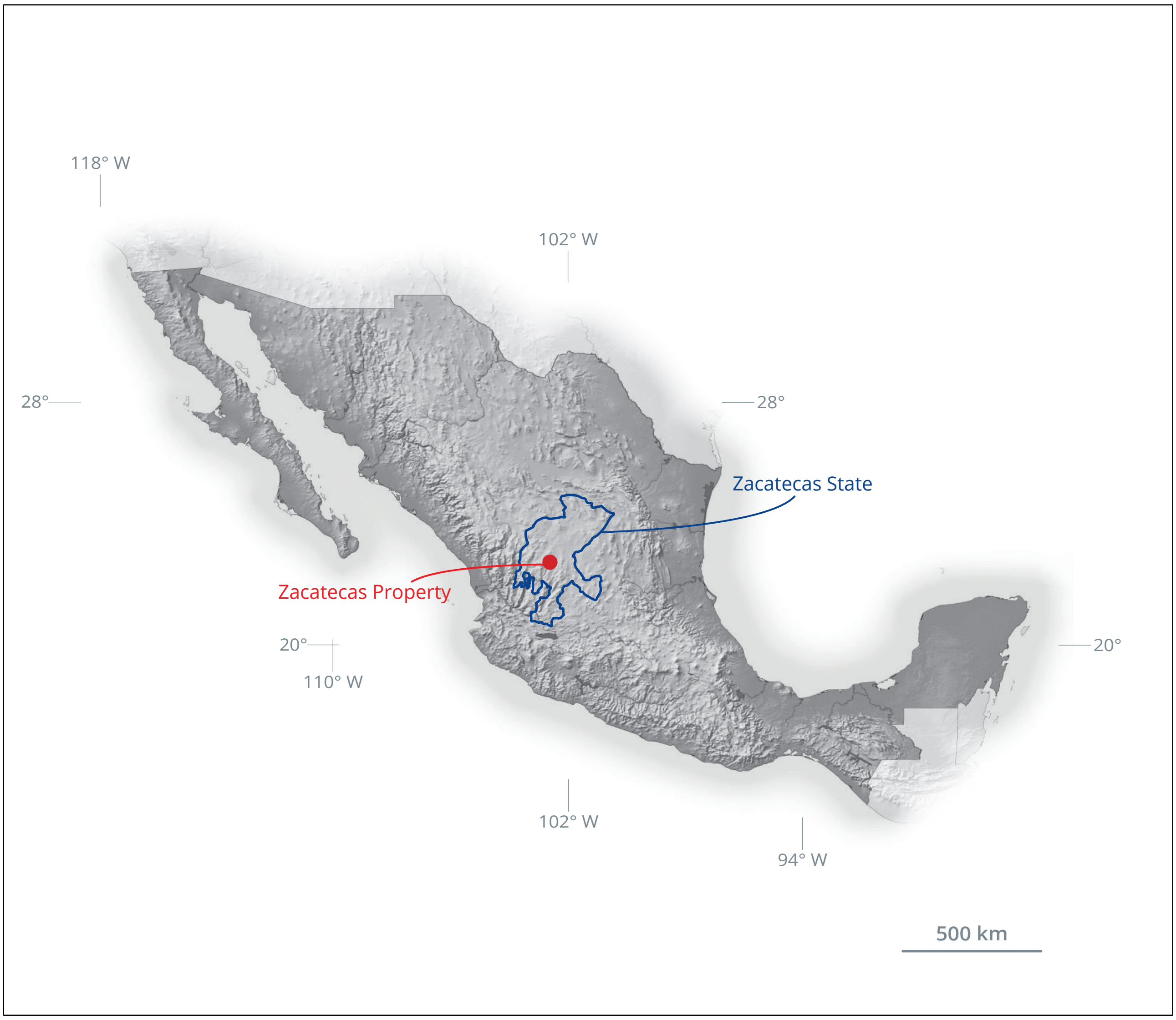

Figure 1: Location of the Zacatecas Project (red dot), Zacatecas State (blue outline), Mexico.

elor's Degree in Engineering Equivalency. He is a mining consultant currently licensed by the: Professional Engineers and Geoscientists New Brunswick (License No. 4778); Professional Engineers, Geoscientists Newfoundland and Labrador (License No. 5998); Association of Professional Engineers and Geoscientists Saskatchewan (License No. 16216); Ontario Association of Certified Engineering Technicians and Technologists (License No. 45252); Professional Engineers of Ontario (License No. 100014010); Association of Professional Engineers and Geoscientists of British Columbia (License No. 42912); and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (No. L3877). Mr. Puritch is also a member of the National Canadian Institute of Mining and Metallurgy. The author is a "Qualified Person" by reason of his education, affiliation with professional associations and past relevant work experience.

Wu (P. Geo) has worked as a professional geologist with more than 25 years experience in mineral resource estimation, exploration and mining in China and Canada. He has worked in exploration and mining operations focused on diamonds, gold, copper, silver, zinc, lead and iron. Wu is a graduate of Jilin University, China, with a Master's degree in Mineral Deposits (1992). He is a geological consultant and a registered practising member of the Association of Professional Geoscientists of Ontario (Registration No. 1681). The author is a Qualified Person by reason of his education, affiliation with a professional association, and past relevant work experience.

Yassa (P. Geo.) is a professional geologist with more than 35 years experience in exploration for precious and base metals, uranium and industrial minerals. He has worked in many grass-roots exploration to mining projects in Canada, Russia, Central Asia and in West African countries. Yassa is a graduate of Ottawa University at Ottawa, Ontario with a B.Sc. (Hons) in Geological Sciences (1977). He is a geological consultant currently licensed by the Order of Geologists of Québec (License No 224) and by the Association of Professional Geoscientist of Ontario (License No. 1890). Yassa is a Qualified Person by reason of his education, affiliation with a professional association, and past relevant work experience.

Barry (P. Geo) has over 15 years experience since obtaining her degree in geology, gaining field experience in various exploration projects located within Canada, Mexico, Ecuador and Peru. She has worked on early- to late-stage exploration projects, investigating gold, silver, base metal and uranium mineralization. Ms Barry is a graduate of RMIT University of Melbourne, Victoria, Australia, with a B.Sc. in Applied Geology. She is a geological consultant currently licensed by Engineers and Geoscientists British Columbia (License No. 40875), Professional Engineers and Geoscientists Newfoundland & Labrador (License No. 08399), Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (License No. L3874), and a member of the Australasian Institute of Mining and Metallurgy of Australia (Member No. 305397). The author is a Qualified Person by reason of her education, affiliation with professional associations, and past relevant work experience.

1.3 Sources of Information

The information in this Report is based on several sources including field observations by Morales-Ramirez, historical data and information, verification re-sampling by Morales-Ramirez, information and data provided by the Company, and publicly available reports listed in Section 18 (References).

Site Visits: Morales-Ramirez has made three site visits to the property. During these site visits Morales-Ramirez visited a number of concession boundaries in the field to ensure that historical and current fieldwork and datasets are located within current concessions; reviewed and resampled historical drill core; reviewed historical datasets and information; and reviewed the drilling, core handling, sampling and assay protocol of the Companies current diamond drill program.

Historical Information and Data: The Company made available historical data including, but not limited to,

geological maps, channel sample data from surface trenches; drill program data including collar files, down-hole survey files, geotechnical and geological logs, core photographs, assay intervals and assay results, ALS assay certificates, and the drill database.

Current Company Data: Whilst not relevant to the Inferred Resource Estimate for Panuco, the Company provided Morales-Ramirez with current geological maps, surface sampling data, and drill program data including collar files, down-hole survey files, geotechnical and geological logs, core photographs, assay intervals and assay results, ALS assay certificates, and the drill database.

2 Reliance on Other Experts

The Authors relied wholly on information provided by the Company with respect to Section 3.1 (Legal Title), Section 3.2 (Mineral Tenure), Section 3.3 (Royalties and Holding Costs), Section 3.4 (Environmental Liabilities), Section 3.5 (Permitting) and Section 3.6 (Social Licence).

This information was provided in a "Legal and Title Review Opinion Letter" provided by Enrique R del Bosque of RB Abogados Law Firm of address Insurgentes Sur 1787 piso 6, Colonia Guadalupe Inn, Mexico D.F. C.P 01020, Mexico. The opinion letter was addressed to the TSX Venture Exchange (Vancouver) and Zacatecas Silver Corp. (Vancouver), and dated December 13, 2021.

3 Property Description and Location

3.1 Property Location

The Zacatecas Property is located adjacent to the city of Zacatecas, in the municipalities of Panuco, Veta Grande, Morelos, Zacatecas and Guadalupe, Zacatecas State, Mexico (Figure 1). The Zacatecas Property consists of 149 mining concessions comprising 7826.3 hectares. The Property is centred on latitude 22°49'2.89"N and longitude 102°33'48.72"W on the 1:50,000 topographic map sheets F13-B58 and F13-B68 (Figure 2).

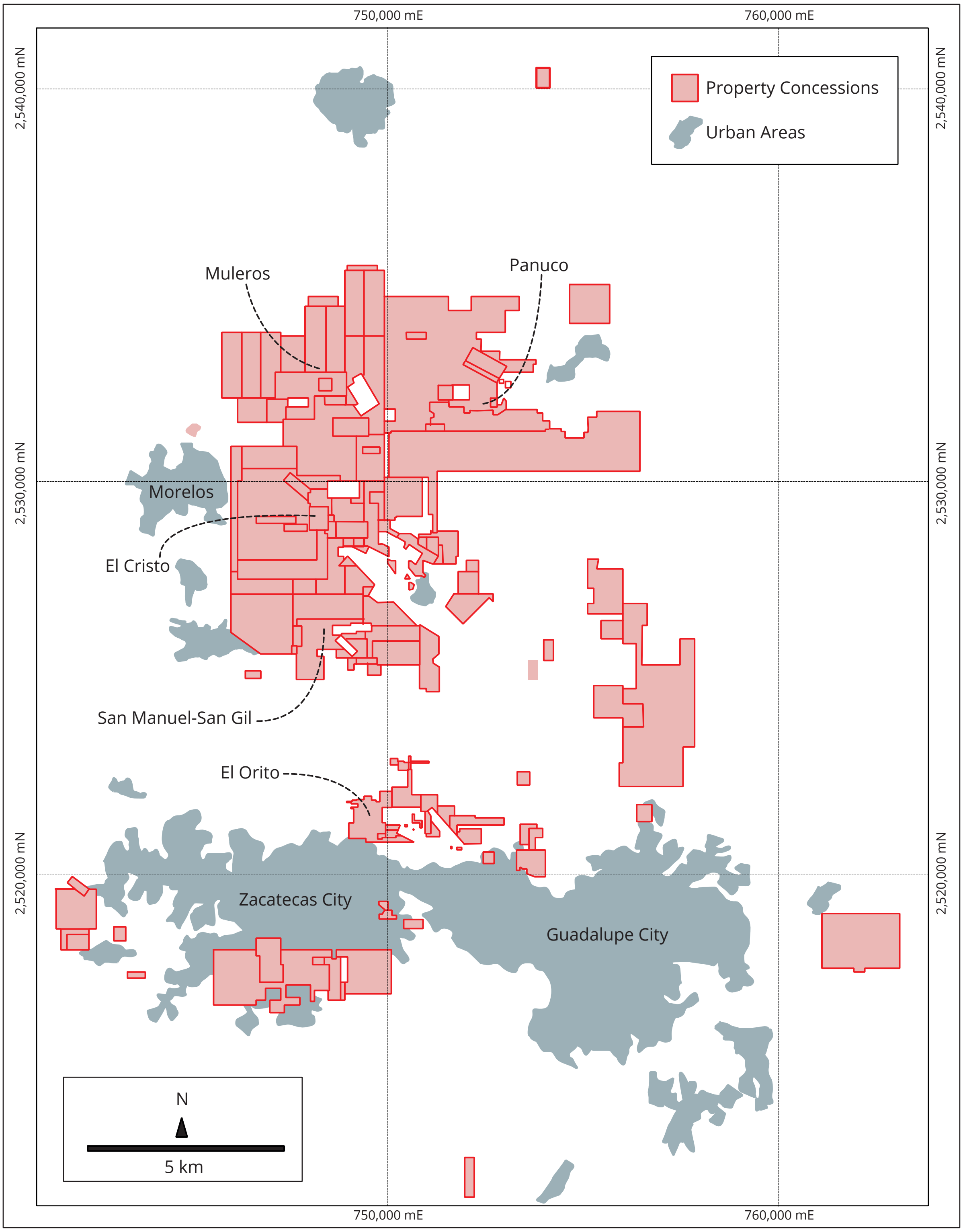

Figure 2: Mineral title concessions map (see Table 1 for details).

3.2 Verification of Licence Title Status

The authors have relied upon the legal opinion of Enrique R del Bosque of RB Abogados Law Firm with address Insurgentes Sur 1787 piso 6, Colonia Guadalupe Inn, Mexico D.F. C.P 01020, Mexico ("Lawyers") for verification of title status (see Section 2 — Reliance on Other Experts). The result of the legal title opinion conforms with the title information as shown in Table 1.

3.3 Grant of Concession

Article 27 of the Mexican constitution establishes that the Federal Republic owns all minerals found on Mexican Territory. In accordance with the Mining Law (in force since 1992, amended 2014), mining concessions are granted for a period of 50 years from the inscription date. Title expiry dates are shown in Table 1.

3.4 Taxes and Fees

Semi-annual taxes are paid in January and July of each year following the submittal of semi-annual work reports. Taxes are calculated based on the age of the concession within its grant period, the concession size and the annual adjusted quote published by the Official Gazette of the Federation in accordance with Articles 59 and 60 of the Mexican Mining Law (2014). The quote is adjusted annually for inflation. Mining duties paid to the Public Registry of Mines in 2021 by the Company totalled MEX $1,726,090 plus VAT (approximately US $86,500 per exchange rate January 7, 2020).

3.5 Purchase Agreement

Zacatecas Silver Corp. entered into a purchase agreement dated August 31, 2020 (the "Purchase Agreement") with Santacruz Silver Mining Ltd. ("Santacruz"), Impulsora Minera Santacruz, S.A. de C.V. ("IMSC"), being a subsidiary of Santacruz, and Desarrollos Mineros Zacatecas Silver, S.A. de C.V. ("DMZS"), a wholly owned subsidiary of the Company.

Under the terms of the Purchase Agreement, DMZS acquired a 100% interest in the Property, subject to the underlying royalties set forth under section 3.6 below, from IMSC. In consideration of the Property, the Company issued 5,000,000 common shares of the Company to IMSC and made a cash payment of US $1,500,000 on the date the Company listed its common shares on the TSX Venture Exchange. The Company also agreed to pay all outstanding taxes due on the Property, which amounted to approximately USD $200,000.

3.6 Property Royalties, Back-in Rights and Encumbrances

The Property is not subject to any back-in rights or other agreements and encumbrances. As part of the Purchase Agreement outlined in Section 3.5 of this report, DMZS assumed certain royalties, as outlined in:

- An "Acknowledgement and Assignment Agreement of Royalty Payment Obligation" between IMSC and Minera Cordilleras, S. de R.L. de C.V. ("Minera Cordilleras") dated April 28, 2016 and an "Assignment Agreement" between Mr Fibela and Minera Cordilleras (the "Fibela Royalty"). The Fibela Royalty sets a royalty payment of 2% in favour of Mr Juan Gilberto Fibela Hernández, or the amount of US $575,000 of the "ore" extracted, only and exclusively from the mining concession called SAN GIL, title 217430.

- An "Acknowledgement and Assignment Agreement of Royalty Payment Obligation" entered into between Santacruz Silver and Zacatecas Silver dated May 2, 2016, whereby Santacruz is subrogated to the fulfilment of all obligations derived from a rights assignment agreement dated June 17, 2008 between Minera Águila Plateada, S.A. de C.V. and Santacruz Silver ("Original Rights Assignment Agreement"). The Original Rights Assignment

Lot Name	Title Number	Recording Date	Expiry Date	Area (Ha)
2 DA. AMPL. A SANTA GABRIELA	211769	28/07/2000	27/07/2050	57.22
3a. AMPLIACIÓN AL PATROCINIO	191198	29/04/1991	28/04/2041	4.78
ALICIA	217650	06/08/2002	05/08/2052	6.55
AMPL. EL PIRUL	212117	31/08/2000	30/08/2050	17.90
AMPL. SAGRADO CORAZÓN	213895	06/07/2001	05/07/2051	10.99
AMPL. SANTA GABRIELA	210770	26/11/1999	25/11/2049	69.96
AMPL. VIOLETA	219029	30/01/2003	29/01/2053	9.44
AMPL.A BUENA VISTA	181757	18/11/1987	17/11/2037	6.37
BELEM	210780	26/11/1999	25/11/2049	9.00
BETTY	223265	18/11/2004	17/11/2054	0.92
BETTY FRACCIÓN I	223266	18/11/2004	17/11/2054	2.03
BETTY FRACCIÓN II	223267	18/11/2004	17/11/2054	2.69
BETTY FRACCIÓN III	224781	07/06/2005	06/06/2055	0.04
BETTY FRACCIÓN IV	223268	18/11/2004	17/11/2054	0.40
BUENA VISTA	172189	26/10/1983	25/10/2033	11.04
CASTILLO 1	224192	20/04/2005	19/04/2055	64.26
CASTILLO 2	224361	27/04/2005	26/04/2055	47.23
CASTILLO 3	224362	27/04/2005	26/04/2055	64.72
CASTILLO 4	219080	04/02/2003	03/02/2053	9.35
CEVADA	191674	19/12/1991	18/12/2041	23.79
CUEVA SANTA	213139	16/03/2001	15/03/2051	10.00
DON JESÚS	212939	13/02/2001	12/02/2051	5.58
EL COMETA	201711	11/10/1995	10/10/2045	76.02
EL CRISTO	194429	30/12/1991	29/12/2041	16.00
EL DORADO	189081	05/12/1990	04/12/2040	57.00
EL DORADO 2	231738	15/04/2008	14/04/2058	288.69
EL DORADO 3	230429	24/08/2007	23/08/2057	128.80
EL DORADO 6	238048	12/07/2011	11/07/2061	7.73
EL DORADO 7	238049	12/07/2011	11/07/2061	5.64
EL LOBO 1	225067	12/07/2005	11/07/2055	15.82
EL LOBO 2	225068	12/07/2005	11/07/2055	8.32
EL PEÑON	238819	04/11/2011	03/11/2061	30.00
EL PIRUL	216999	05/06/2002	04/06/2052	20.00
EL PORVENIR 8	196045	23/09/1992	22/09/2042	8.47
EL PROGRESO	221385	03/02/2004	02/02/2054	20.10
EL SALVADOR	204191	18/12/1996	17/12/2046	10.00
ESMERALDA	214767	29/11/2001	28/11/2051	10.00
ESPERANZA	212980	20/02/2001	19/02/2051	13.00
ESPERANZA 1-06	227713	28/07/2006	27/07/2056	6.79
ESPERANZA IV-06 FRACCIÓN II	228834	08/02/2007	07/02/2057	0.92
ESTRELLITA	220666	09/09/2003	08/09/2053	1.37
ESTRELLITA 1-06	227566	06/07/2006	05/07/2056	15.00
ESTRELLITA MARINERA	211490	31/05/2000	30/05/2050	10.00
GABY	219877	29/04/2003	28/04/2053	32.00
IF FRACC. I	211821	28/07/2000	27/07/2050	132.16
IF FRACC. II	211822	28/07/2000	27/07/2050	23.49

Table 1: List of Mining Concessions

Lot Name	Title Number	Recording Date	Expiry Date	Area (Ha)
IF II	219190	18/02/2003	17/02/2053	45.19
JARINA	215508	22/02/2002	21/02/2052	29.04
LA CARPA 2	220890	24/10/2003	23/10/2053	102.66
LA CASTELLANA	192561	19/12/1991	18/12/2041	2.00
LA ESTRELLA	227739	10/08/2006	09/08/2056	15.59
LA FE 1	218078	03/10/2002	02/10/2052	49.30
LA FE 3	218079	03/10/2002	02/10/2052	14.15
LA FE 4	218230	17/10/2002	16/10/2052	9.00
LA PLOMOSA	238756	25/10/2011	24/10/2061	100.00
LA VIRGEN 2	230898	26/10/2007	25/10/2057	5.43
LARGO II	219209	18/02/2003	17/02/2053	67.39
LARGO II FRACCIÓN I	219049	04/02/2003	03/02/2053	0.07
LARGO III	219195	18/02/2003	17/02/2053	219.29
LARGO IV	219198	18/02/2003	17/02/2053	6.48
LARGO IX	219631	26/03/2003	25/03/2053	5.95
LARGO VI	224318	22/04/2005	21/04/2055	165.88
LARGO VI FRACCIÓN I	224319	22/04/2005	21/04/2055	0.06
LARGO VI FRACCIÓN II	224320	22/04/2005	21/04/2055	0.07
LARGO VI FRACCIÓN III	224321	22/04/2005	21/04/2055	0.22
LARGO VI FRACCIÓN IV	224322	22/04/2005	21/04/2055	0.13
LARGO VI FRACCIÓN V	224323	22/04/2005	21/04/2055	0.08
LARGO VI FRACCIÓN VI	224324	22/04/2005	21/04/2055	0.03
LARGO VI FRACCIÓN VII	224325	22/04/2005	21/04/2055	0.16
LARGO VI FRACCIÓN VIII	224326	22/04/2005	21/04/2055	0.03
LARGO VI FRACCIÓN X	220772	30/09/2003	29/09/2053	0.48
LARGO VII FRACC. DOS	226244	02/12/2005	01/12/2055	58.41
LARGO VII FRACC. TRES	225623	23/09/2005	22/09/2055	0.62
LARGO VII FRACC. UNO	226245	02/12/2005	01/12/2055	242.18
LARGO VIII	220993	11/11/2003	10/11/2053	27.35
LARGO XI	219632	26/03/2003	25/03/2053	0.53
LARGO XII	219633	26/03/2003	25/03/2053	1.19
LAS PALOMITAS	217009	14/06/2002	13/06/2052	25.00
LOS ÁNGELES	219476	07/03/2003	06/03/2053	10.00
LOS DOS AMIGOS	217119	14/06/2002	13/06/2052	43.75
LOS MUERTOS	211496	31/05/2000	30/05/2050	7.77
MACARIO	220665	09/09/2003	08/09/2053	29.61
MACARIO II	224363	27/04/2005	26/04/2055	135.22
MARTHA	227730	10/08/2006	09/08/2056	94.68
MINA DE GUERREROS	190004	06/12/1990	05/12/2040	20.00
MONSERRAT	219200	18/02/2003	17/02/2053	517.14
NAVIDAD	224706	31/05/2005	30/05/2055	366.01
NAVIDAD 2	230431	24/08/2007	23/08/2057	20.00
NAVIDAD FRACC. 1	224707	31/05/2005	30/05/2055	0.06
OLGA	227731	10/08/2006	09/08/2056	5.81
PABELLÓN	200057	30/06/1994	29/06/2044	89.00
PANUCO	233300	23/01/2009	22/01/2059	805.22

Table 1: List of Mining Concessions (cont.)

Lot Name	Title Number	Recording Date	Expiry Date	Area (Ha)
PANUCO 2	225464	09/09/2005	08/09/2055	865.45
PATRICIA	224364	27/04/2005	26/04/2055	31.18
PINO I FRACC. 1	219007	28/01/2003	27/01/2053	6.33
PINO I FRACC. 2	219009	28/01/2003	27/01/2053	39.88
PINO II	219008	28/01/2003	27/01/2053	61.80
PINO III	219585	18/03/2003	17/03/2053	16.68
PINO IV	230430	24/08/2007	23/08/2057	2.86
PUERTO DE LAS PALOMAS	211497	31/05/2000	30/05/2050	24.20
PURÍSIMA DEL DESIERTO	212560	31/10/2000	30/10/2050	4.76
QUINTA AMPL AL PATROCINIO	212359	29/09/2000	28/09/2050	5.63
REGINA	187587	05/07/1990	04/07/2040	5.86
REMEDIOS	220798	07/10/2003	06/10/2053	50.00
SAGRADO CORAZÓN	190009	06/12/1990	05/12/2040	15.17
SAN FELIPE	211779	28/07/2000	27/07/2050	51.17
SAN FELIPE 2	235136	15/10/2009	14/10/2059	98.86
SAN GABRIEL	218947	28/01/2003	27/01/2053	85.00
SAN GABRIEL	218948	28/01/2003	27/01/2053	85.00
SAN GABRIEL	218989	28/01/2003	27/01/2053	77.01
SAN GIL	217430	16/07/2002	15/07/2052	183.33
SAN JORGE	211400	23/05/2000	22/05/2050	7.82
SAN JORGE 2	217867	18/09/2002	17/09/2052	8.56
SAN JOSÉ	170277	31/03/1982	30/03/2032	10.00
SAN JOSÉ DE GRACIA	217649	06/08/2002	05/08/2052	14.00
SAN JOSÉ II	203269	28/06/1996	27/06/2046	40.00
SAN JUAN	214989	29/01/2002	28/01/2052	11.03
SAN JUAN 1	238046	12/07/2011	11/07/2061	274.51
SAN JUDAS TADEO	213838	03/07/2001	02/07/2051	20.00
SAN LÁZARO	227728	10/08/2006	09/08/2056	9.76
SAN LAZARO 2 FRACC. 1	235399	24/11/2009	23/11/2059	0.23
SAN LAZARO 2 FRACC. 2	235400	24/11/2009	23/11/2059	0.10
SAN LUÍS DE ORO	186941	17/05/1990	16/05/2040	11.59
SAN LUÍS DEL ORO 2	231921	16/05/2008	15/05/2058	30.61
SAN MANUEL	195450	14/09/1992	13/09/2042	7.54
SAN MANUEL	210809	30/11/1999	29/11/2049	13.04
SAN MARTÍN	210730	26/11/1999	25/11/2049	14.39
SAN MARTÍN	219586	18/03/2003	17/03/2053	71.00
SAN MARTÍN	219587	18/03/2003	17/03/2053	60.75
SAN MARTÍN	219588	18/03/2003	17/03/2053	85.00
SAN MARTÍN	219589	18/03/2003	17/03/2053	71.88
SAN MARTÍN	219590	18/03/2003	17/03/2053	85.00
SAN MARTÍN	219591	18/03/2003	17/03/2053	85.00
SAN MARTÍN	219592	18/03/2003	17/03/2053	85.00
SAN MARTÍN	219593	18/03/2003	17/03/2053	58.44
SAN MARTÍN	220622	04/09/2003	03/09/2053	13.24
SAN MARTÍN CABALLERO	219028	30/01/2003	29/01/2053	25.00
SAN MARTÍN FRACCIÓN I	219390	04/03/2003	03/03/2053	5.32

Table 1: List of Mining Concessions (cont.)

Lot Name	Title Number	Recording Date	Expiry Date	Area (Ha)
SAN PEDRO	200584	31/08/1994	30/08/2044	16.00
SAN PEDRO	220994	11/11/2003	10/11/2053	12.55
SAN RAFAEL	212705	22/11/2000	21/11/2050	27.07
SAN RAFAEL 2	219701	02/04/2003	01/04/2053	23.85
SAN SABINO	192567	19/12/1991	18/12/2041	9.00
SANTA ELENA	195449	14/09/1992	13/09/2042	10.00
SANTA TERESA	212449	24/10/2000	23/10/2050	7.57
VILLA	186880	17/05/1990	16/05/2040	36.34
VIOLETA FRACC. I	216929	05/06/2002	04/06/2052	122.64
VIOLETA FRACC. II	216930	05/06/2002	04/06/2052	14.37
VIOLETA III	231257	25/01/2008	24/01/2058	8.15
			Total Area (Ha) = 7826.33	

Table 1: List of Mining Concessions (cont.)

Agreement sets a royalty payment of 1% in favour of Minera Águila Plateada, S.A. de C.V. of the "ore" extracted only and exclusively from the mining concession called SAN SABIANO, title 192567.

An "Acknowledgement and Assignment Agreement of Royalty Payment Obligation" between IMSC and Minera Largo dated April 28, 2016, an "Acknowledgement of Properties Agreement" between International Mineral Development and Exploration Inc. ("IMDEX"), Minera Cascabel S.A. de C.V. and Kerry McDonald and a "Finder's Fee Agreement" dated October 6, 1994 between Kerry McDonald and IMDEX. (the "IMDEX Royalty"). The IMDEX Royalty sets a royalty payment of 1% in favour of IMDEX over the following mining concessions.

Lot Name	Title Number
AMPLIACION	191198
CEVADA	191674
LA CASTELLANA	192561
PABELLON	200057
SAN MARTIN	210730
AMPL. SANTA GABRIELA	210770
SAN MANUEL	210809
2 DA. AMPL. A SANA GABRIEL	211769
IF FRACC. I	211821
IF FRACC. II	211822
QUINTA AMPL AL PATROCINIO	212359
ESMERALDA	214767
VIOLETA	216929
VIOLETA FRACC. II	216930
LOS DOS AMIGOS	217119
LA FE 1	218078
LA FE 3	218079
LA FE 4	218230
LARGO III	219195
PATRICIA	224364
SAN LAZARO	227728

Table 2: List of Mining Concessions subject to Royalty.

3.7 State Royalties and Taxes

Upon commercial production, governmental royalties payable under articles 268 and 270 of the Federal Duties Law (Ley Federal de Derechos) are: (i) a mining duty payable on a yearly basis of a 7.5 per cent of the income of the sale of the mineral extracted from a mining concession minus the authorized deductions, and (ii) a mining duty payable on a yearly basis of a 0.5 per cent of the income from the sale of gold, silver or platinum minerals.

3.8 Environmental Liabilities

Mining within the Zacatecas Mining District has occurred at various scales for over 470 years. Drill sites and trenches related to recent Panuco, Muleros, El Cristo and San Manuel-San Gil exploration programs have been restored to their original state by previous operators.

Historical artisanal surface workings up to 30 meters deep are present at Panuco, Muleros, El Cristo and San Manuel-San Gil. In addition, small waste rock piles and tailings related to previous exploitation and mining activities currently exist at El Cristo and San Manuel-San Gil.

Given that most of the historical workings are very old and have been largely revegetated (Figures 3 and 4) — Morales-Ramirez is of the opinion that there are no associated environmental liability.

3.9 Permitting

Exploration activities that impact the environment are regulated by the Secretaria del Medio Ambiente y Recursos Naturales (SEMARNAT) under the Ley General de Equilibrio Ecologico y Protection Ambiente (LGEEEPA). Permitting requirements are determined by climatic zone, the degree of planned surface disturbance and whether other overriding restrictions such as protected areas exist. For exploration activities such as mapping, geochemical sampling, geophysics, with negligible surface or vegetation disturbance, no permitting is required.

NOM 120 SEMARNAT-2011 (NOM120) is the regulation that establishes the limits and reporting requirements for exploration activities that require surface disturbance — such as trenching and building of access roads. Under this regulation an "Informe Preventivo" must be submitted to SEMARNAT. The report describes the proposed surface disturbance and work to be completed, specific risks to the environment, plan to mitigate impact, and plans for reclamation following the completion of work.

If the surface disturbance is more than the limits outlined by, or is in an area not covered by NOM120, further environmental studies must be completed and a "Manifestación de Impacto Ambiental" (MIA) must be submitted to SEMARNAT. This is an environmental impact statement that must be reviewed and approved by SEMARNAT.

If the mining activity outlined also requires the permanent physical disturbance of the surface such as the construction of mine infrastructure, a "Cambio de Uso de Suelo Forestal e Impacto Ambiental" (CUS) must be applied for. The Property is clear of federally protected natural areas.

The Company commenced a diamond drill program on the 30th of September 2021. To date the Company has drilled 5160 m of angled PQ and HQ diamond core — 4243 m at Panuco and 917 m at San Gill. Drilling is ongoing along the Tres Cruces vein in the north of Panuco. Drilling is being conducted following grant of three SEMARNAT Permits — two permits at Panuco and one at San Gill. An additional two applications are in process for additional drill pads at Panuco and San Gill. Each permit application has been supported by an Informe Preventivo. SEMARNAT has efficiently processed and approved all applications within 4 to 6 weeks of submittal.

3.10 Social License and Surface Rights

The following condensed interpretation and translation of the Mexican Mining Law on Surface Rights was extracted from the International Comparative Legal Guides website: https://iclg.com/practice-areas/mining-laws-and-regulations/mexico.

Mining concession holders may use lands where mining concessions are located. Use of the lands may be through ownership or possession of lands (e.g., Lease Agreements/Temporary Occupation Agreements/Expropriation through an Administrative Proceeding, and others). The Mexican Constitution recognises the following surface rights:

(i) Bienes Comunales (social land granted to indigenous communities)
(ii) Ejidos (social land granted to individuals or communities)
(iii) National Land
(iv) Zonas Federales (Federal areas, beaches and river causes)
(v) Private Property.

A private commercial mining company may acquire property types mentioned in points (i), (ii) and (v) above. Typically, the consideration payable for the lands is agreeable between the parties.

In accordance with Mexican Mining Law — mining activities should be approved ahead of any other use or exploitation of the land where the mining concessions are located. The Mexican Mining Law and its Regulations provide rules under which a mining concession holder may require the expropriation or the temporary occupation of the land when it does not reach an agreement with the landowner. In the case of expropriation, the consideration is payable based on an appraisal made by an Agency of the Mexican Government.

As of the effective date of this report, the Company has surface rights agreements with private landowners, at Panuco and San Gill, and with the Panuco Edijo and Municipality of Panuco. These access agreements cover all areas impacted by the current drill program. Access agrements are currently being negotiated at El Cristo and San Manuel.

Panuco Ejido — Three year access agreement based on initial payment of MXN 150,000 (ca. US$ 7350), committed expenditure for road maintenance and such of MXN 150,000 (ca. US$ 7350), and a fee of MXN 5000 (ca. US$ 250) per drill pad. The Company has paid the initial MXN 150,000 and for eight drill pads totalling MXN 40,000 (ca. US$ 2000). The agreement covers 300.77 hectares of land.

Senor Manuel Nava (Panuco) — Five year access agreement based on an annual payment of MXN 100,000 (ca. US$ 5000). The Company is allowed to develop an unlimited number of drill pads on the 750 hectares of land covered by this agreement. The first annual payment has been made. Four drill pads have been initially been planned.

Senor David Girón (Panuco) — One year access agreement based on a single payment of MXN 10,000 (ca. US$ 500). agreement covers 2.46 hectares and only one diamond drill pad is planned.

Municipality of Panuco — Two drill holes are planned on ground held by the Municipality of Panuco. The company has been provided access at no cost.

Martínez Brothers (San Gill) — Two year access agreement based on an annual payment of MXN 100,000 (ca. US$ 5000). The Company is allowed to develop an unlimited number of drill pads on the 351.66 hectares of land covered by this agreement. The first annual payment has been made. Four drill pads have been initially been planned.

Senor Antonio Soto Marquez (San Gill) — Access agreement based on a signing payment of MXN 30,000 (ca. US$ 1750) and a fee of MXN 5000 (ca. US$ 250) per drill pad.

3.11 Other Factors and Risks

Beyond the information provided in Sections 3.1 to 3.10 of this report, Morales-Ramirez are unaware of any other significant factors and risks that may affect access, title, or the right or ability to perform work on the Zacatecas Property.

Figure 3: Typical view of historic workings at El Cristo. Workings are almost completely in filled and re-vegetated. They are unlikely to pose any environmental issue.

Figure 4: Typical view of the larger workings at Panuco. Workings are partially infilled, almost completely re-vegetated, and unlikely to create any environmental issues.

4 Accessibility, Climate, Local Resources, Infrastructure and Physiography

4.1 Accessibility

All target areas on the Zacatecas Property are easily accessed by unpaved roads off paved public highways. The more northerly projects of Muleros and Panuco are approximately 15 km north of the city of Zacatecas — they are accessed by the paved highway No. 155.

Within each of the exploration areas — the Panuco Deposit, Muleros, El Cristo and San Manuel-San Gil — there is a network of dirt roads that connect to drill sites and historical workings.

4.2 Climate

The climate is typical of the high-altitude Mesa Central, dry and semi-arid. Temperatures typically range from 9°C to 22°C with an average daily mean of 15°C. Maximum temperatures reach 30°C to 38°C during the summer season and minimum temperatures in the winter may drop to 0°C with freezing conditions and occasional snow.

The rainy season occurs between June and September each year and the average annual precipitation is approximately 500 mm (Servicio Meteorológico Nacional, 2016). From a climatic perspective it is possible to operate year-round.

4.3 Physiography

The Zacatecas Property is in the Sierra Madre Occidental physiographic province near the boundary with the Mesa Central province (Mexican Plateau). The region is characterized by rounded, northwesterly-trending mountains. Elevations vary from 2,300 masl to 2,600 masl. Topography is generally subdued, with occasional moderately steep hills (Figures 5 to 7).

4.4 Vegetation and Land Use

The property is situated between forested and sub-tropical regions to the southwest, and desert conditions to the northeast. Vegetation consists of natural grasses, mesquite or huizache and crasicaule bushes. Standing bodies of water are dammed as most streams are intermittent.

4.5 Infrastructure and Local Resources

The cities of Zacatecas and Guadalupe (located within 10 to 15 km of most licences) are significant urban centres capable of providing a skilled workforce. They offer all required amenities — including an airport linking to Mexico City — and can supply all logistic needs.

Zacatecas is connected by rail (Ferrocarrill Mexicano) to other major cities in Mexico and the seaports of Manzanillo and Lazaro Cardenas on the west coast.

The towns of Panuco, Vetagrande, Muleros, and Minillas — all within or proximal to the Project — offer little infrastructure other than grid power supplied by the Federal Electricity Commission (CFE) and ground-water from wells supplied by the state.

The authors are of the opinion that there is sufficient space within the concession for mining operations, tailings storage and waste disposal, and processing facilities. The Company is currently evaluating water sources for the property.

Mexico is a mining-focused country with a highly skilled and mobile workforce. The authors are of the opinion that any development at the Property could be serviced with relevant skilled personnel and equipment.

Figure 5: Typical view of topography and vegetation at Panuco. The area is semi-arid and sparsely vegetated — vegetation is thicker within seasonally dry drainages.

Figure 6: Typical rolling topography at San Gill with shallowly incised drainages. Elevation ranges from 2300 to 2600 masl. Cacti locally form dense clusters.

Figure 7: View of historic surficial workings at San Gill with Cozamin working and plant in the background. This area is one of the steeper at the Property.

5 History

5.1 District History

The Zacatecas Mining District has had a long history of mining dating back to pre-colonial times when local indigenous people (Huichol people) mined silver (and some gold) from the oxide zones of the vein deposits located around what is now known as the State of Zacatecas.

Mining by the Spaniards commenced in 1548 with production from three mines — the Albarrada Mine on the Veta Grande vein system, and the San Bernabe and Los Tajos Mines on the Mala Noche vein system. By the late 1800's silver from the Zacatecas Mining District accounted for 60% of the value of all Mexican exports. The Mexican Geological Survey estimate that almost 750 Moz of silver was produced from the Zacatecas Mining District between 1548 and 1987 (Ponce & Clark, 1988).

Historically only oxide material was mined. In the mid-1900's attempts were made to extract silver and base metals from the sulphide material — the lack of electric power, labour problems, and low metal prices forced many mines to close sulphide operations. In some cases, the sulphide material was only used as backfill.

5.2 Recent Property History

Due to the large number of veins within the Zacatecas Mining District, and the long history of mining, there are a significant number of relatively small mineral concessions. The more recent mining history is complex with multiple owners working different combinations of licences and the mining history prior to 1990 is not well constrained or documented.

Between 1994 and 2010 Golden Minerals — via its local subsidiary Minera Largo S. de RL de C.V. — completed extensive geological mapping, and trench and surface rock-chip sampling, within the Zacatecas district. This included the Panuco deposit and the Muleros, El Cristo, and San Manuel-San Gil exploration targets.

Between 2007 and 2011, Golden Minerals completed 36,178 meters of diamond drilling at Panuco, Muleros, El Cristo and San Manuel-San Gil — of which over 23,000 metres were at the Panuco deposit. A summary of works completed is presented in Table 3.

	Drill Holes		Trench		Rock Chip	Soils
	Holes	Metres	Trenches	Metres		
Panuco	75	23,444	183	4540	80	0
Muleros	37	6704	126	5997	2	0
El Cristo	8	2854	85	4104	46	0
San Gil	9	3176	17		242	765

Table 3: Summary of historic exploration work completed by Golden Minerals. The total number of metres excavated at San Gill in 17 trenches is unknown.

5.2.1 Panuco Area

Between 2006 and 2009 Golden Minerals completed reconnaissance work and geological mapping in the Panuco area. Three major vein systems were identified — Panuco NW, Panuco Central and Tres Cruces (Figure 8). Veins trend broadly northwest-southeast and generally dip to the southwest (Figure 8).

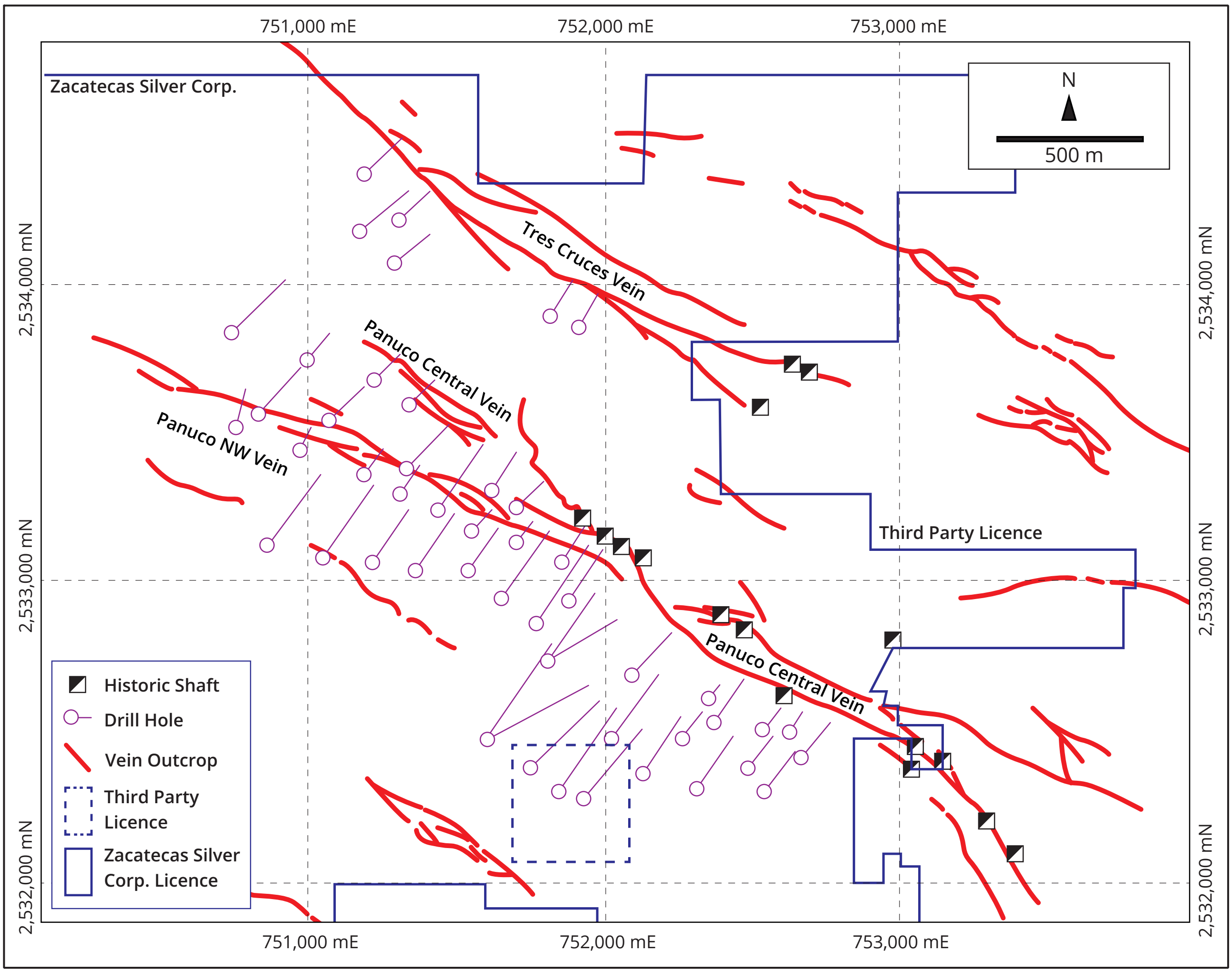

Figure 8: Simplified map showing Panuco vein system, Zacatecas Silver Corp. licence boundaries, historic shafts and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012).

Of the 75 inclined HQ diameter diamond drill holes (23,444 m) — 18 holes (4556 m) were drilled in 2009, 14 holes (3548 m) were drilled in 2010, and 43 holes (15,339 m) were drilled in 2011. Intercepts included:

- # *Hole PA09-01: 174.46 to 176.25 m (1.79 m) grading 0.32 g/t Au, 517.31 g/t Ag, 0.43% Pb and 2.32% Zn*
- # *Hole PA10-30: 333.24 to 335.23 m (2.79 m) grading 0.37 g/t Au, 391.92 g/t Ag, 0.03% Pb and 0.04% Zn*
- # *Hole PA11-68: 625.00-626.50 m (1.50 m) grading 1.05 g/t Au, 668 g/t Ag, 0.01% Pb and 0.01% Zn*

5.2.2 Muleros Area

Golden Minerals completed reconnaissance work and geological mapping at Muleros between 2006 and 2009. Four sub-parallel quartz-calcite veins were identified over strike lengths of between one to three kilometres (Figure 9). Veins strike 120 to 130° and typically dip 75° to the southwest (with a range of dips from 50°-85°). Individual veins range from <1 to 5 m in thickness, and often brecciated. Argentite, pyrite, galena and sphalerite are the dominant metaliferous sulphide minerals — disseminated silica-pyrite may occur as selvedges.

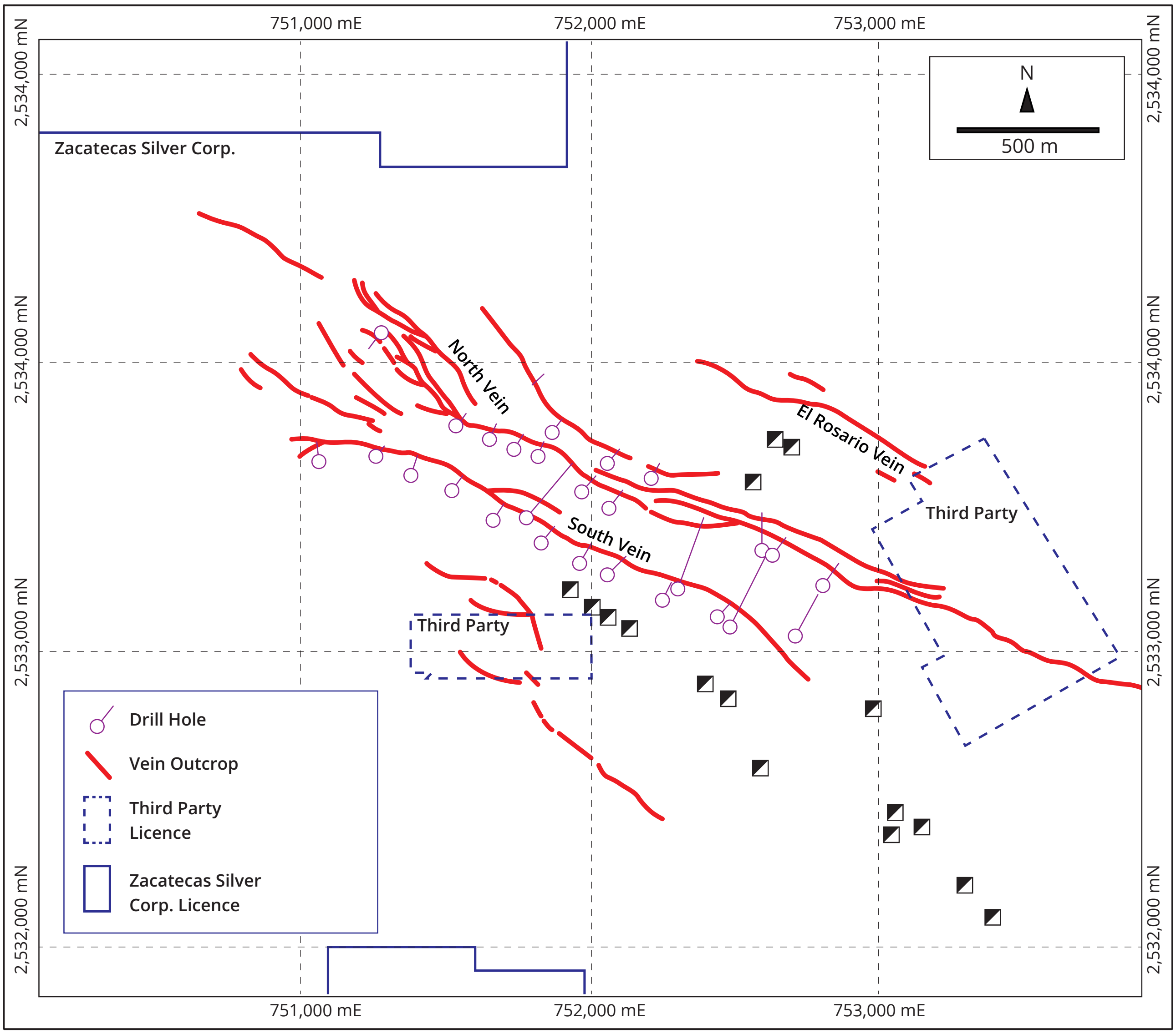

Figure 9: Simplified map showing Muleros vein system, Zacatecas Silver Corp. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012).

Approximately 996 surface samples were collected from outcrop and 126 trenches excavated across the vein structures. Silver assays average 40 g/t Ag (<5 g/t Ag to 793 g/t Ag) and gold assays average 0.08 g/t Au (<0.005 g/t Au to 3.3 g/t Au). Lead (<2 to 16,300 ppm Pb) and zinc (3 to 13,600 ppm Zn) are highly anomalous. Minor copper (1.19 to 465 ppm Cu) is also present.

Between 2007 and 2008 Golden Minerals completed 37 HQ diamond drill holes totalling approximately 6704 m. Holes were generally drilled at -60° inclination, spaced 100-150 m along strike and averaged 120 m in length — the longest hole was 562.6 m in length. Drilling was designed to test the vein to a vertical depth of about 100 meters. Intercepts included:

- *Hole MU07-01: 63.95 to 65.20 m (1.25 m) grading 0.08 g/t Au, 101 g/t Ag, 913 ppm Pb and 2070 ppm Zn*
- *Hole MU07-07: 73.95 to 76.25 m (2.30 m) grading 1.56 g/t Au and 286.26 g/t Ag*
- *Hole MU08-35: 261.10 to 66.20 m (1.61 m) grading 1.74 g/t Au and 56.6 g/t Ag*

5.2.3 El Cristo Area

El Cristo is defined by a series of veins and vein splays that define an extensional jog with a strike length of approximately 2.5 km and a width of approximately 0.5 km (Figure 10). Other smaller veins are also present and could be more extensive when mapped under cover. Veins trend 120 to 130° and dip between 30 to 70° to the southwest. Veins range between 0.2 and 1.8 m wide and comprises banded quartz-carbonate with argentite-galena-sphalerite-minor chalcopyrite. Based on its along strike position and broadly parallel orientation, El Cristo is likely the north-westerly extension of the Veta Grande system.

Between 2006 and 2013 approximately 1625 trench channel samples and 466 outcrop rock-chip grab samples were collected. Silver assays ranged from <0.5 to 486 g/t and gold assays ranged from <0.005 to 4.8 g/t. Lead (<2 to 33,300 ppm Pb) and zinc (6 to 31,200 ppm Zn) are highly anomalous. Minor copper (1 to 1305 ppm Cu) is also present.

In 2010 Golden Minerals completed 8 HQ diamond drill holes totalling approximately 2854 m. Silver and gold assays were generally of a moderate tenor — lead and zinc were significantly elevated. For example:

Hole CR10-04: intercepted 0.82 m grading 0.341 g/t Au, 29 g/t Ag, 26,400 ppm (2.64%) Pb and 62,800 ppm (6.28%) Zn.

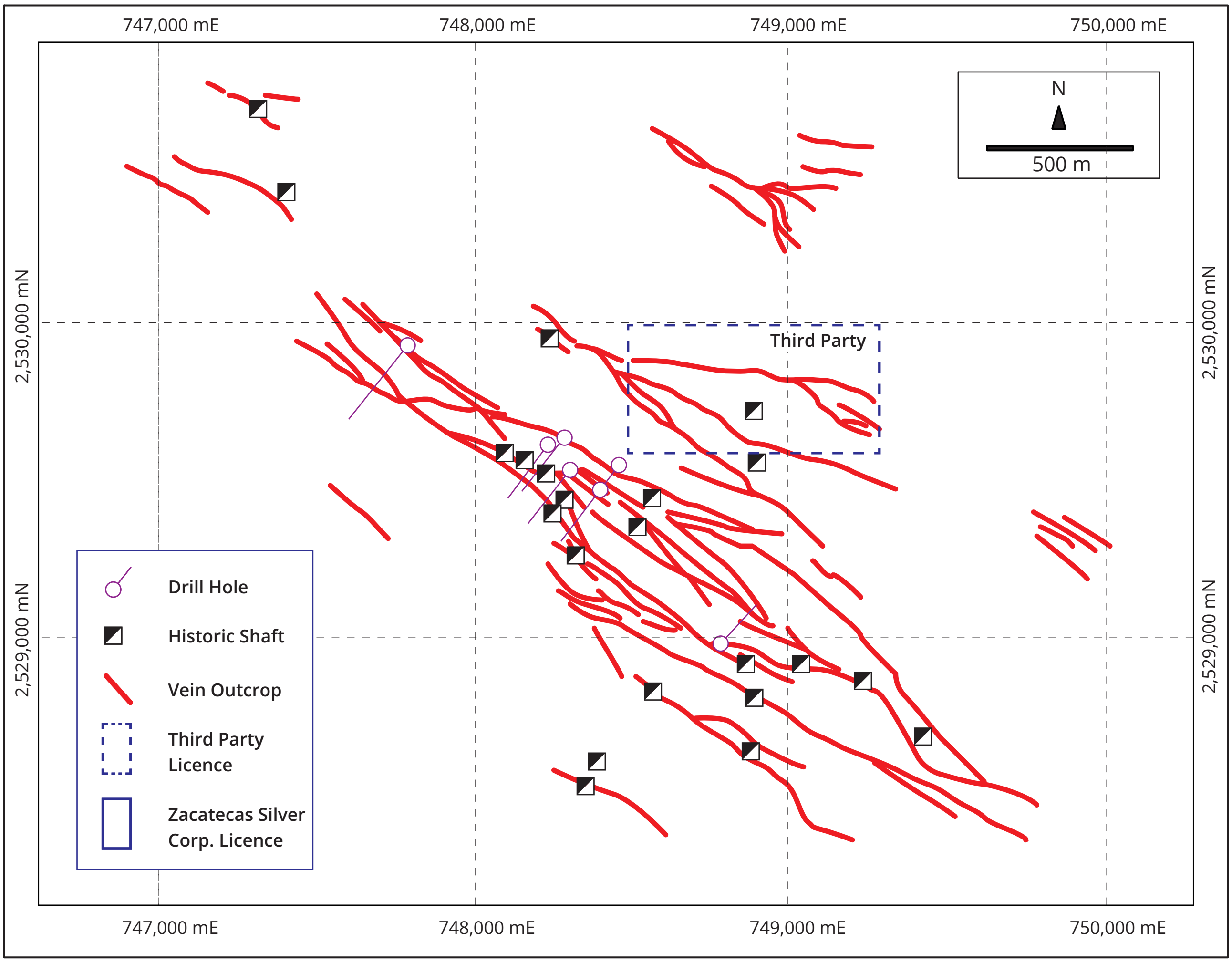

Figure 10: Simplified map showing the El Cristo vein system, Zacatecas Silver Corp. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012).

5.2.4 San Manuel-San Gill

The San Manuel-San Gill target is relatively unexplored. Quartz-carbonate veins crop out in a variety of strike orientations including 070°, 110° and 340° (Figure 11). Vein widths vary from 0.1 to >7 m and display strike lengths of 400 to 1400 m.

Between 2006 and 2013 Golden Minerals completed soil (785 samples), rock-chip (180 samples) and trench channel (688 samples) geochemical programs. Soils were submitted for MMI (mobile metal ion) analysis which defined several silver-lead-zinc anomalies — several of which remain untested.

Nine HQ diameter diamond drill holes were completed in 2011 for a total of 3176 m. Several narrow intercepts included.

- *Hole MG 11-01: intercepted a downhole interval of 1.65 m grading 0.36 g/t Au, 437 g/t Ag*
- *Hole MG 11-08: intercepted 4.16 m at 1.14 g/t Au, 128 g/t Ag, 2.23% Pb and 1.86% Zn*

5.3 Work By Santacruz

Between November 2015 and October 2016 Santacruz conducted surface exploration within the Zacatecas region — including the Property.

Between July and August of 2016 Santacruz conducted surface chip sampling across the Panuco, Muleros, El Cristo and San Manuel-San Gil vein systems. A total of 49 samples were collected at Panuco, one sample was collected at Muleros, two samples at El Cristo and one sample from San Manuel-San Gil.

Chip samples were collected across the width of the vein structure and included altered and mineralized wall rock material on each shoulder of the vein structure. Sample lengths ranged between 0.25 m and 1.9 m and assays between <0.01 g/t Ag and 305.46 g/t Ag. The results of this sampling were effective at confirming the presence of mineralization identified previously by Golden Minerals — but did not add to the understanding of any vein systems.

In October 2016, Santacruz Silver completed a historical resource estimate of the Panuco Deposit as set forth in the technical report titled "2016 Mineral Resource Estimate – Panuco Deposit, Zacatecas, Mexico" dated 3rd November 2016. The report was prepared by Van Phu Bui, P. Geo, and Gary Henry Giroux, P. Eng, and filed on www.sedar.com ("2016 Panuco Historical Resource"). The 2016 Panuco Historical Resource reported 2,642,000 tonnes at 192 g/t Ag Eq. (181 g/t Ag, 0.17 g/t Au, 0.02 % Pb, 0.04% Zn) for a total of 16,342,456 ounces Ag Eq. (cut-off 100 g/t Ag Eq.). The resource was based on results from trenching and drilling completed by Golden Minerals (Bui & Giroux, 2016).

The 2016 Panuco Historical Resource defined "inferred mineral resources", which is a category set forth under CIM Definition Standards for Mineral Resources & Mineral Reserves adopted on May 10, 2014. The 2016 Panuco Historical Resource was calculating using 75 drill collars, 866 down hole surveys and 2607 assayed samples. A surface trench database totalling 183 trenches with 1,839 samples was also utilized.

Resource blocks were defined using dimensions of 20 m along strike, 5 m across strike and 5 m vertical — blocks were then superimposed over wire-frames of visually logged mineralization and adjusted to ensure all resource blocks were constrained by geology. Grades for gold, silver, lead and zinc were interpolated into the blocks using ordinary kriging. Assumptions used in the 2016 Panuco Historical Resource include the following metal prices: gold price of US $1100/oz, silver price of US $17/oz, lead price of US $0.80/lb and zinc price of US $0.80/lb. The 2019 Panuco Historical Resource assumed operational recoveries similar to the Veta Grande and La Cantera System being: gold at 70%, silver at 79.2%, lead at 84.2% and zinc at 82.2%. The authors consider the 2016 Panuco Historical Resource relevant as it defines the extent of and models the Panuco deposit.

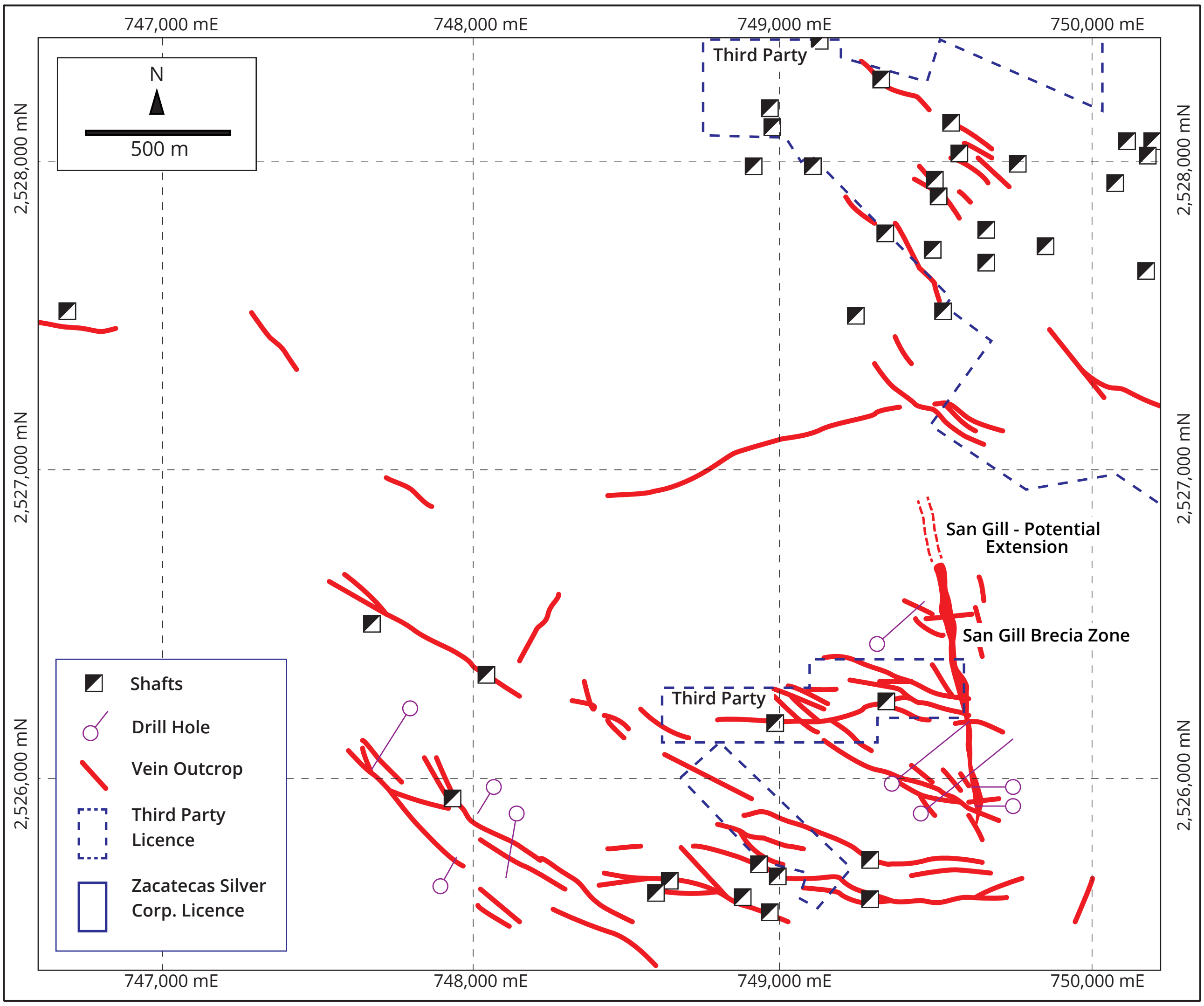

Figure 11: Simplified map showing the San Manuel-San Gill vein system, Zacatecas Silver Corp. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012).

Morales-Ramirez has not done sufficient work to classify the 2016 Panuco Historical Resource as a current mineral resource or mineral reserves, and Zacatecas is not treating the historical estimate as current mineral resources or mineral reserves.

In 2019 Santacruz Silver completed an updated historical resource estimate as set forth in the technical report titled "Technical Report – Veta Grande Project, Zacatecas State, Mexico" dated 20th of August 2019. The report was prepared by Van Phu Bui, P. Geo and Michael O'Brien, P. Geo, and filed on www.sedar.com ("2019 Panuco Historical Resource"). The 2019 Panuco Historical Resource reported 3,954,729 tonnes at 153 g/t Ag Eq. (136 g/t Ag, 0.14 g/t Au, 0.012 % Pb, 0.11% Zn) for a total of 19,472,901 ounces Ag Eq. (cut-off 100 g/t Ag Eq.). The 2019 Panuco Historical Resource used "inferred mineral resources", which is a category set forth under CIM Definition Standards for Mineral Resources & Mineral Reserves adopted on May 10, 2014.

The 2019 Panuco Historical Resource estimate was calculated using 75 drill collars, 866 down hole surveys and 2,607 assayed samples. A surface trench database totalling 183 trenches with 1,813 samples was also used. Resource blocks were defined using with dimensions of 20 m along strike and down dip, and 1 m across strike. Grades for gold, silver, lead and zinc were interpolated into blocks using the following estimation algorithms: Panuco central

— ordinary kriging; and Panuco NW and Tres Cruces — inverse distance squared. Assumptions used in the 2019 Panuco Historical Resource include the following metal prices: gold price of US $1,350/oz, silver price of US $16/oz, lead price of US $0.90/lb and zinc price of US $1.10/lb. The 2019 Panuco Historical Resource assumed operational recoveries similar to the Veta Grande System being: gold at 52.2%, silver at 62.1%, lead at 87.9% and zinc at 78.6%. The authors consider the 2019 Panuco Historical Resource relevant due to its identification, definition and modelling of the Panuco deposit.

Morales-Ramirez has not done sufficient work to classify the 2019 Panuco Historical Resource as a current mineral resource or mineral reserves, and Zacatecas is not treating the historical estimate as current mineral resources or mineral reserves

6 Geological Setting and Mineralization

The Zacatecas mining district covers an area of over 700 km2. It is part of the largest silver region in the world — the Mexican Silver Belt — which extends from Sonora to Oaxaca and defines a ca. 1500 km long northwesterly-trending belt that includes the world-class mining districts of Zacatecas, Guanajuato and Fresnillo.

Zacatecas covers the eastern flank of the southern Sierra Madre Occidental province and the central-western limit of the Mesa Central physiographic province. The Mesa Central is an elevated plateau that partially overlaps the Sierra Madre Occidental along its northwestern boundary and is bounded to the south by the Mexican Volcanic Belt.

Silver mineralization within the Zacatecas district occurs mainly in epithermal veins — less commonly in skarn and manto-type replacement bodies. Mineralization was associated with Tertiary magmatism and volcanic activity — with key controls on mineralization provided by major crustal structures.

6.1 Epithermal Deposits of Mexico

Epithermal deposits — especially those rich in silver — have traditionally been the most economically important in Mexico. Within the Zacatecas region they include such world class examples as Fresnillo (>2.25 Boz Ag production and future ore reserves), high-tonnage deposits such as Real de Ángeles and low-tonnage (between 5 and 7 Mt) high-grade deposits (800 and 1500 ppm Ag) such as Sombrerete and Colorada.

The epithermal deposits known to date in Mexico are generally middle Eocene to early Miocene in age and are mainly low and intermediate sulphidation types formed under alkaline/neutral chemical regimes. Their distribution matches the distribution of early to mid-Tertiary volcanism (Figure 12) associated with the evolution of the Sierra Madre Occidental and the Sierra Madre del Sur (Damon et al., 1981; Clark et al., 1981, 1982; Camprubí et al. 1982 and 2003a). Deposits are broadly grouped into three age categories based on their association with coeval volcanic activity: 1) older than ca. 40 Ma; 2) between ca. 40 to 27 Ma; and 3) younger than ca. 23 Ma — deposits in the Zacatecas are between 27 to 40 Ma in age.

The regional distribution of epithermal deposits in Mexico indicates they are closely associated in space with regional faults. This is the case in the Zacatecas region where major deposits are located along the crustal boundary between the Guerrero Terrane (to the west) and the Oaxaquia Block (to the east) — defined in the Zacatecas region by the San Luis–Tepehuanes fault zone (SLTFZ). The SLTFZ trends broadly northwest-southeast, but locally trends northwards from the Real de Asientos and Zacatecas deposits, before flexing westwards at Fresnillo. Change in fault orientation may be important with respect to the structural localisation and control of the world class Fresnillo deposit.

6.2 Property Geology

The Zacatecas Mining District occurs in a structurally complex setting, associated with siliceous to intermediate sub-volcanic and volcanic rocks, underlain by sedimentary and meta-sedimentary rocks. The geologic units of the Zacatecas area include Triassic metamorphic rocks of the Zacatecas Formation and overlying basic volcanic rocks of the Upper Jurassic or Lower Cretaceous Chilitos Formation. Tertiary rocks consist mainly of a Paleocene and/or Eocene red conglomerate unit overlain by Eocene to Oligocene rhyolitic tuff and intercalated flows. Some Tertiary rhyolite bodies cut the Mesozoic and Tertiary units and posses the characteristics of flow domes.

6.2.1 Triassic Zacatecas Formation

These are the oldest rocks in the district. They crop out to the northwest and southwest of Zacatecas city and comprise

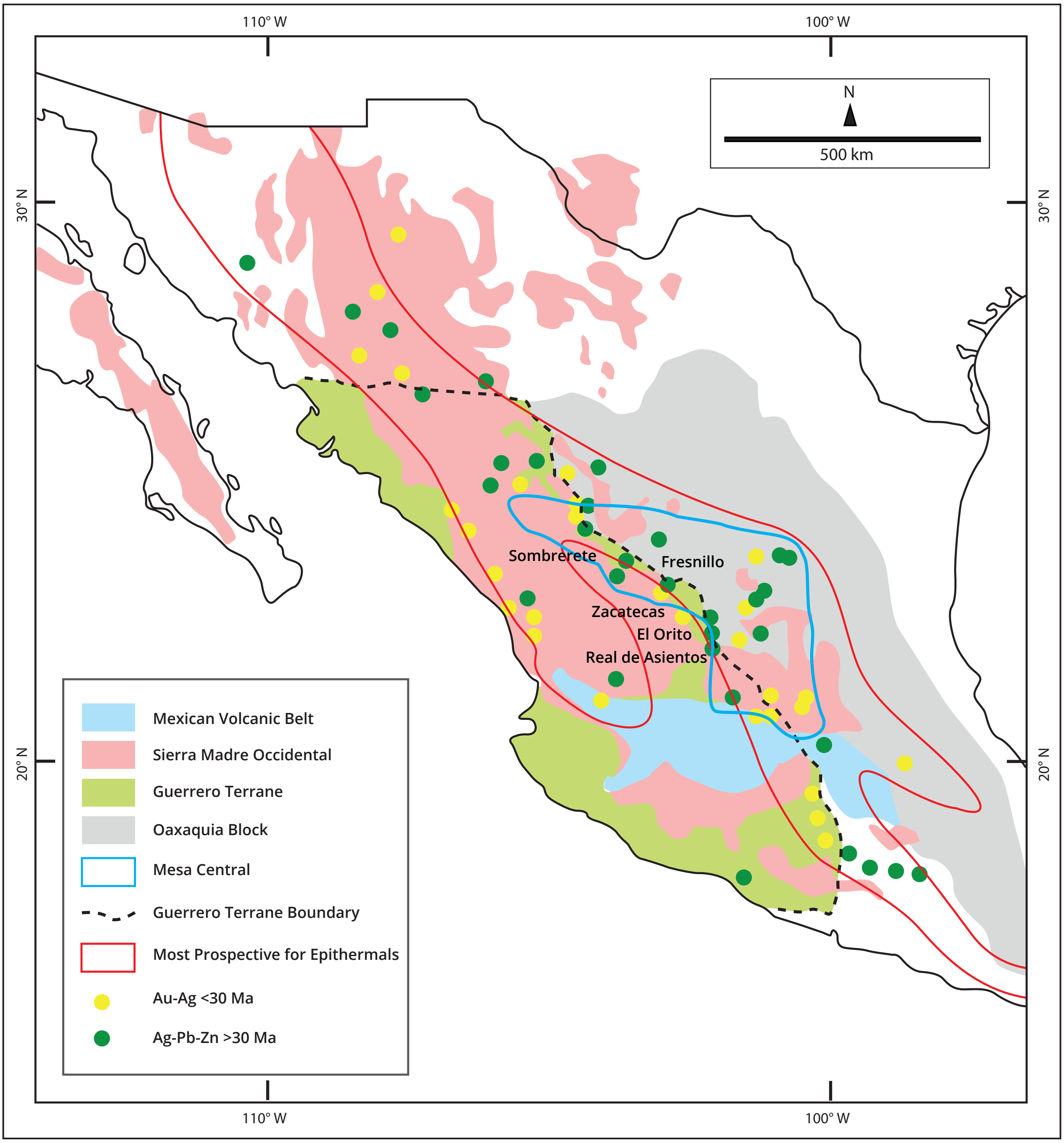

Figure 12: Simplified geology of northern and central Mexico showing epithermal deposits of the Silver Mexican Belt, key terrane boundaries, the Mesa Central physiographic block, and the Guerrero Terrane Boundary. Note how the Fresnillo, Zacatecas and Real de Asientos deposits are proximal to this crustal suture — which presents as the San Luis-Tepehuanes Fault Zone in the Zacatecas Region. Modified after Albinson et al, 2001 and Zamora Vega, 2018.

an Upper Triassic marine sequence of siltstones, sandstones, conglomerates and limestones which have been metamorphosed to slates, phyllites and sericite-schists, quartzites and recrystallized limestones. The Zacatecas Formation hosts the El Bote and Pimienta vein systems to the west of the city of Zacatecas

6.2.2 Chilitos Formation

Overlying the Zacatecas Formation is the late Jurassic to early Cretaceous volcano-clastic Chilitos Formation. This formation comprises massive lavas and pillow lavas of basaltic-andesitic composition, interbedded with sedimentary rocks, volcanoclastic rocks and limestone. The Chilitos Formation exhibits greenschist facies metamorphic grade and is in thrust contact with the Zacatecas Formation.

The Chilitos Formation is host to several silver occurrences within the Zacatecas Mining District, including the Veta Grande, Panuco, Muleros, El Cristo and San Manuel-San Gil vein systems.

6.2.3 Eocene Zacatecas Red Conglomerate

The Zacatecas Red Conglomerate Formation is a 200 to 400 m thick, polymictic, clast-supported conglomerate containing rounded to sub-rounded fragments of the Zacatecas and Chilitos Formations — the unit thus post-dates both formations. It was most likely deposited during the Paleocene to Eocene. The Red Conglomerate mainly outcrops immediately to the south and southeast of Zacatecas city. It is conformable with and intercalated with the overlying rhyolite breccias of the Alamitos volcanoclastics which has been dated at 46.8 Ma. (Ponce & Clark,1988). The Zacatecas Red Conglomerate marks the final stage of the Laramide Orogeny.

6.2.4 Tertiary Volcanics / Volcanoclastics

Eocene volcanism in the Zacatecas district is part of the voluminous igneous activity of the Sierra Madre Occidental silicic province (Aguirre-Diaz and Labarthe–Hernandez, 2003). Rhyolitic ignimbrites, lava domes, plugs and dykes unconformably overlie or intrude older rocks. Magmatism spanned ca. 9 million years from 50.8 to 41.7 Ma. Volcanic rhyolitic tuffs with flow intercalations are locally interbedded with the Zacatecas Red Conglomerate.

- **Rhyolite Plugs and Domes**: Intrusion of rhyolite plugs and domes was spatially related to the Mala Noche fault zone. Intrusives include the San Gil and La Sierpe plugs and dykes (which intrude the Jurassic–Cretaceous volcano-sedimentary sequence) and the El Magistral plug (which is emplaced along the contact between the Jurassic–Cretaceous volcano-sedimentary sequence and the Zacatecas Formation). Zamora-Vega (2018) cites U-Pb zircon crystallization ages of 50.19 ± 0.53 Ma to 50.73 ± 0.37 Ma.

  Dyke-hosted magmatic and hydrothermal breccias are present. Barren magmatic breccias are located close to the contact with the volcano-sedimentary succession. Angular hydrothermal breccias comprise clasts of rhyolite cemented by chalcopyrite-pyrite bearing quartz.

  The La Bufa rhyolite dome is structurally controlled by the La Cantera fault — which down-faults the Zacatecas conglomerate against the Jurassic-Cretaceous volcano-sedimentary sequence. Zamora-Vega (2018) cites a U-Pb zircon crystallization age of 48.64 ± 0.50 Ma.

- **Ignimbrites**: The La Virgin Ignimbrites — a 200 m thick voluminous pyroclastic unit — is the youngest volcanic units. It extends from the southern part of the El Orito vein system more than 5 km to the south. It is not observed within the concessions.

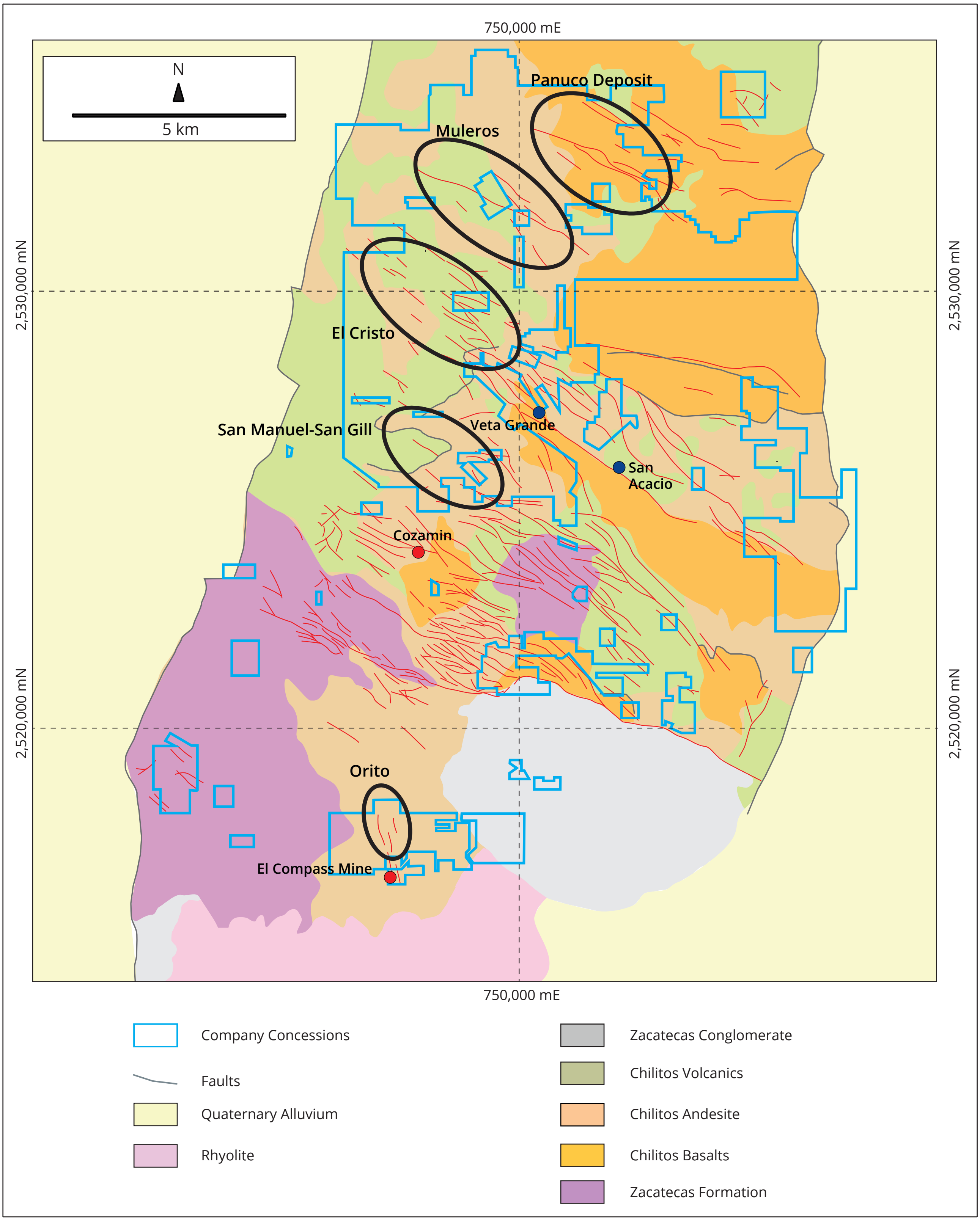

Figure 13: Map showing the geology of the area comprising the Companies concessions (modified from Caballero-Martinez, 1999 and Bui and O'Brien (2017).

6.2.5 Quaternary Cover

Quaternary gravels, sands and silts are locally developed and may obscure vein extensions in some areas. A thin veneer of Quaternary material is often present in drainages.

6.3 Property Geology

With the exception of the Orito vein system, located within the southern-most concessions of the Property, all other veins systems are hosted exclusively by basaltic and andesitic volcanic rocks, volcanoclastic rocks and interbedded marine sedimentary rocks of the Chilitos Formation. Within the Zacatecas Property the Chilitos Formation has been mapped as its component lithologies — yet stratigraphic relations have not been established between lithologies and they may represent lateral facies changes.

6.3.1 Panuco Deposit

Panuco Lithology: The Panuco vein system is hosted by andesitic flows, mixed andesites and andesitic tuffs and volcanoclastic sediments of the Chilitos Formation (Figure 14). A small rhyolite body crops out along the western extension of the Panuco Central Vein and its emplacement was likely related to the Eocene intrusion event observed along the Mala Noche Fault system. Jasperoids — presumably related to silica deposition during the mineralizing event — crop out locally.

Quaternary regolith is extensive especially in the northwest of the Panuco system (Figure 14) and may obscure lateral vein extensions.

Panuco Structure: The Panuco vein system is hosted by an anastomosing array of brittle transcurrent-normal faults that strike between 140°-145°, dip 60°-75° southwest, and can collectively be traced over a 4 km strike length. The system is defined by three prominent vein structures — Panuco NW, Panuco Central and Tres Cruces using the nomenclature of Bui and O´Brien (2019). Tristan-Gonzales et al. (2012) suggested that movement along these faults was initially right-lateral followed later by normal left-lateral. Veins pinch and swell from <10 cm to >6 m thickness in outcrop and drill sections.

The Panuco Central vein can be traced over a strike length of 2300 m and dips between 52° and 76° to the southwest. In the southeastern area of the Panuco Central vein, drilling has traced the vein approximately 755 m down dip from surface — in the northwestern area of the Panuco Central vein drilling has traced the vein approximately 410 m down dip from surface.

Panuco NW is effectively a splay extension of Panuco Central vein that has been traced over a strike length of 1500 m. It dips between 54° and 78° to the southwest and drilling by Golden Minerals has traced the down-dip extension approximately 480 m down dip from surface.

The Tres Cruces vein has been traced over a strike length of 870 m, dipping between 67° and 86° to the southwest. Drilling has traced the vein down dip to approximately 388 m below surface. .

In addition to the three main vein sets — sub-parallel subordinate veins have also been identified especially within the structural hanging wall of each vein (Figure 14).

Panuco Mineralization: Silver, gold, and base metal mineralization at the Panuco deposit is hosted in breccia veins, banded, crustiform and colloform quartz-calcite veins, and quartz vein stockwork within zones of strong argillic alteration. Mineralization is best developed within coherent andesite volcanic rocks and volcanosedimentary units.

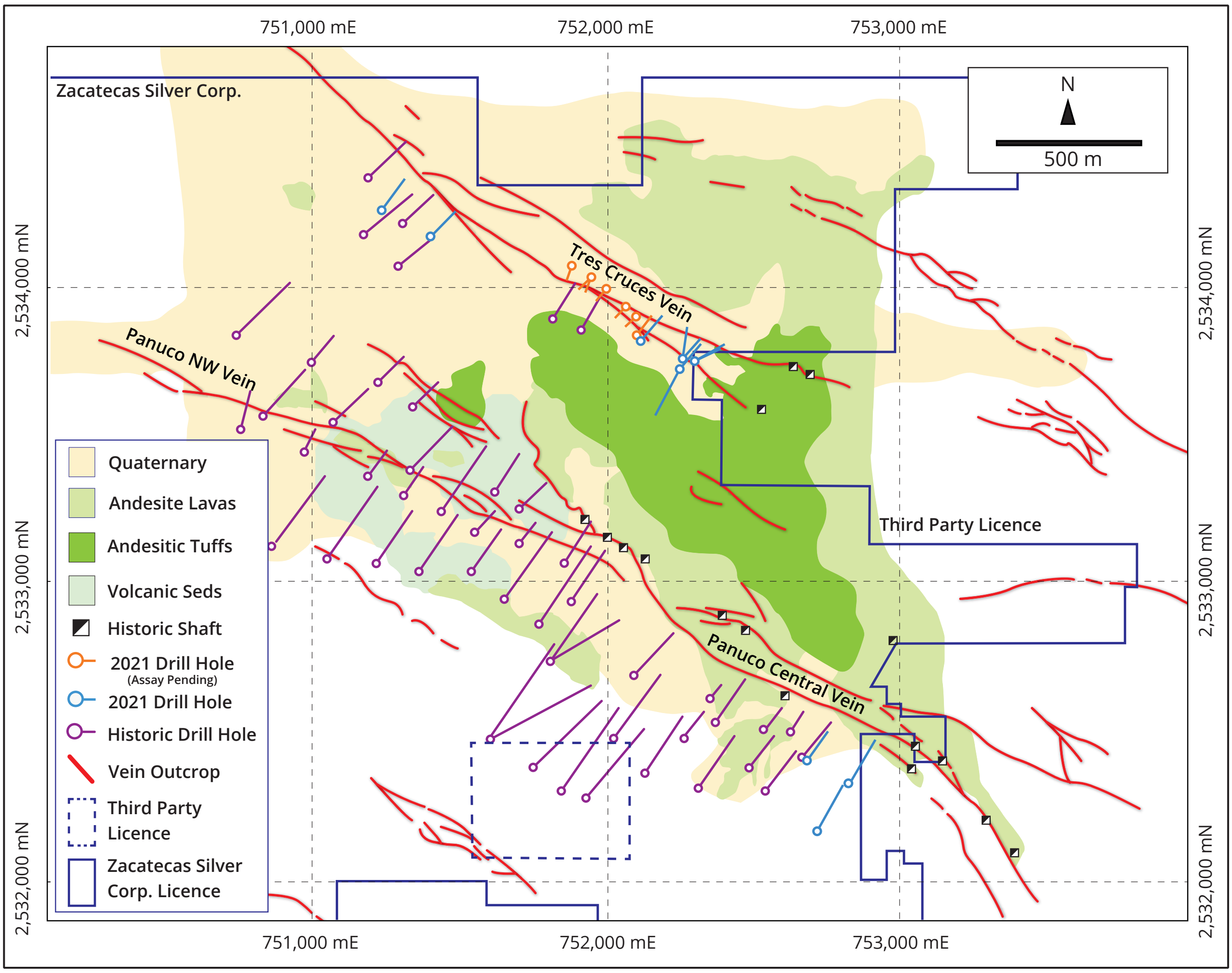

Figure 14: Geological map of the Panuco vein system, Zacatecas Silver Corp. licence boundaries, historic shafts and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012).

The veins are composite in nature — multiple pulses of quartz-sulphide precipitation are apparent and a late infill of quartz and/or carbonate (generally calcite) is commonly present. Galena, sphalerite, chalcopyrite and argentite are the main economic sulphide minerals —gangue includes quartz, calcite, pyrite, arsenopyrite, hematite, goethite, illite and clay minerals.

Panuco Alteration: Clasts within veins are strongly quartz-illite+/-kaolinite-calcite altered. Argillic alteration is strong proximal to veins and extends with decreasing intensity up to 15 m into the enclosing wall rocks. Propylitic alteration is widespread.

6.3.2 Muleros Target Area

Muleros Lithology: Veins at Muleros are hosted by the Chilitos Formation (Figure 15). This is a marine volcanoclastic and sedimentary sequence of andesitic to basaltic pillow-lavas, andesitic flows and tuffs, intercalated with lessor mudstones and basinal limestones. Dioritic dykes, sills and laccoliths were emplaced at broadly the same time. Quaternary regolith and alluvium is extensive and may obscure vein extensions.

- ***Muleros Structure***: The Muleros vein system is hosted by transcurrent-normal faults that strike approximately 110° and can collectively be traced over a 3 km strike length. The system is defined by three principal vein structures — the South Vein, the North Vein (Sabino Vein) and the El Rosario Vein (Figure 15). The South and North Veins dip between 55-80°to the southwest and the Rosario Vein dips 70-80° to the northeast. Veins vary from <1 to 5 m in true thickness.

  The North and South veins splay to the northwest. Drilling has shown that veins may coalesce and splay at depth, and pinch and swell in width from <10 cm to >6 m.

- ***Muleros Mineralization***: Silver and base metal mineralization at the Muleros deposit is hosted in brecciated veins, banded, crustiform and colloform quartz-carbonate veins, and quartz vein stockworks, within zones of strong argillic alteration. Metallic minerals include galena, sphalerite, chalcopyrite, argentite and proustite — gangue includes quartz, calcite, pyrite, arsenopyrite, hematite, goethite, illite and clay minerals.

- ***Muleros Alteration***: Argillic alteration is generally strong to intense proximal to veins and may extend with increasing intensity for up to 10 m into the wall rocks. Clasts within veins are intensely clay-silica altered.

6.3.3 El Cristo Vein System

- ***El Cristo Lithology***: The El Cristo system is hosted by the Chilitos Formation — a sequence of andesitic to basaltic pillow-lavas, andesitic flows and tuffs, intercalated with mudstones and basinal limestones of marine affinity.

- ***El Cristo Structure***: The El Cristo vein system comprises several subparallel veins which form a sigmoidal complex that coalesces to the northwest and southeast. Veins extends for over 2.5 km along a strike of 120° to 130° over a width of up to 600 m (Figure 16). Dip varies from vertical to 60° to both northeast to southwest.

- ***El Cristo Mineralization***: Silver and base metal mineralization at El Cristo is hosted in brecciated veins, banded, crustiform and colloform quartz-carbonate veins, that vary in thickness from 10 cm to 7 m.

  MADSA completed a petrographic and fluid inclusion study of 12 surface samples taken along the strike length of the El Cristo vein system (Albinson, 2009). The study noted four paragenetic stages: 1) early brecciation and cementation of wall rock fragments by fine grained silica-disseminated pyrite; 2) deposition of complex banded, coarse-crystalline quartz-calcite-sulphide; 3)late coarse-crystalline quartz and amethyst as centimeter-sized prismatic crystals in vughs; and late coarse crystalline calcite infilling vughs.

6.3.4 San Manuel-San Gill Vein System

- ***San Manuel-San Gill Lithology***: The San Manuel-San Gil vein system is underlain by basaltic and andesitic volcanics, volcanoclastics, interbedded marine sedimentary rocks of the Chilitos Formation. To the south of the concessions, Tertiary rhyolite flows and domes are observed on Cerro San Gil and Cerro Seirpe — rhyolites are interpreted to have intruded a flexure in the in the Mala Noche structure and provide evidence of proximal heat source for hydrothermal system. Most of the San Manuel-San Gil area is covered by recent regolith and soil cover.

- ***San Manuel-San Gill Structure***: Two major structural trends are present at San Manuel-San Gill: a NS oriented hematitic breccia; and NW oriented quartz-carbonate-sulphide veins (Figure 17).

  The hematitic breccia has a NS-trending strike of approximately 800 m, is up to 40 m wide, and is most likely vertical. The NS orientation of the breccia suggest the system may be gold-enriched — as evidenced by other gold-mineralized NS oriented veins in the Zacatecas region. This is consistent with the results of the five hole drill

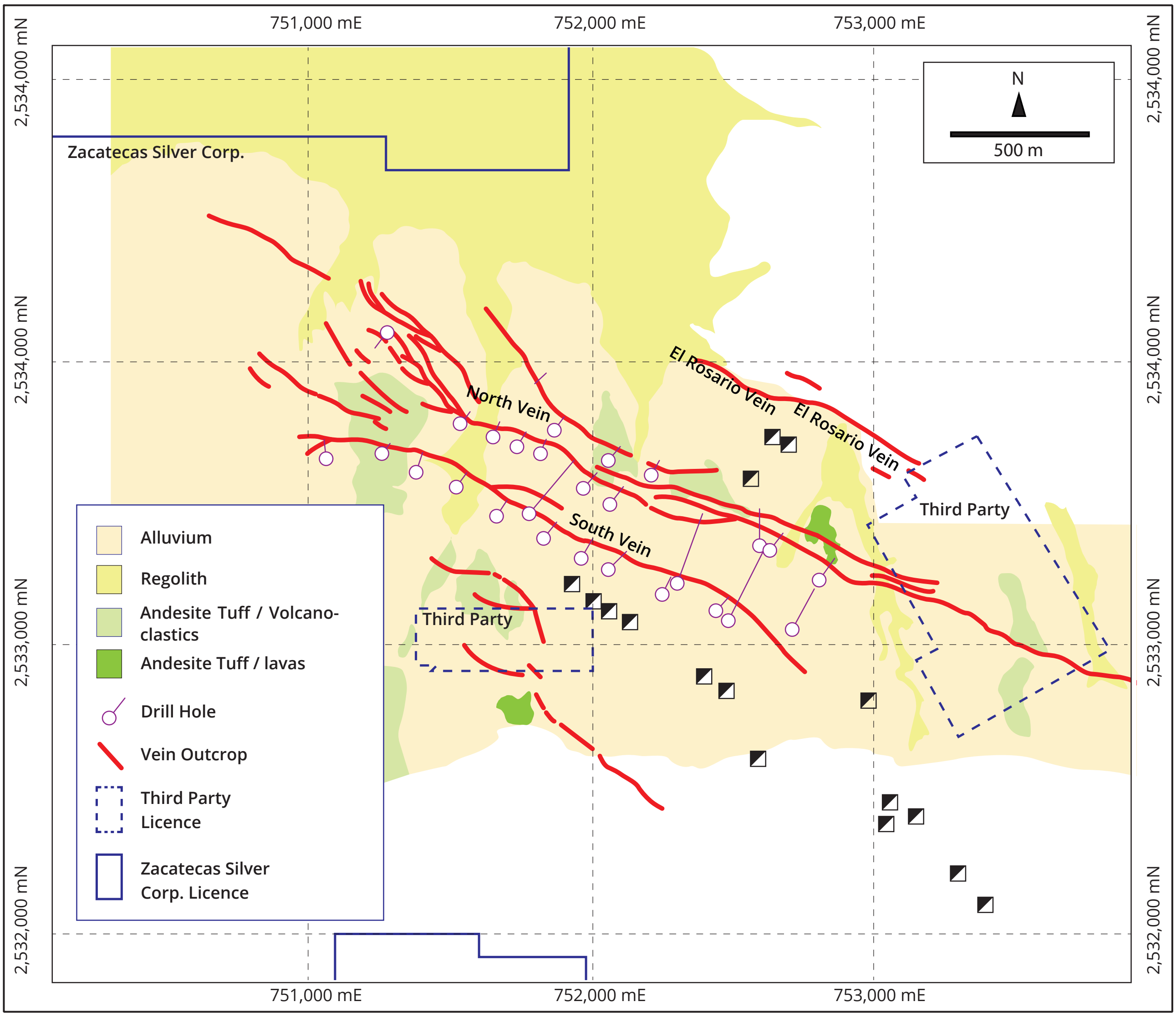

Figure 15: Geology of the Muleros vein system. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012).

program of Golden Minerals which returned assays such as 4.16 m at 1.14 g/t Au, 128 g/t Ag, 2.23% Pb and 1.86% Zn (Hole MG 11-08).

Quartz-carbonate-sulphide veins of between 10 cm to >7 m wide, trend NW-SE over a strike length of at least 2 km. Individual veins are between 400 to 1400 m long. Veins splay to the SE where multiple sub-parallel veins intersect — but do not cross — the hematite breccia.

San Manuel-San Gill Mineralization: Silver, gold, and base metal mineralization is hosted in breccia veins, banded, crustiform and colloform quartz veins, and quartz vein stockwork within zones of strong argillic alteration. Ore minerals include galena, sphalerite, chalcopyrite and argentite. Gangue minerals include pyrite, hematite, goethite, quartz, calcite, illite and clay minerals.

San Manuel-San Gill Alteration: Alteration envelopes around fault-veins is variable depending largely upon host lithology. Argillic alteration of andesitic flows sills and dykes is limited to narrow envelopes — alteration in vol-

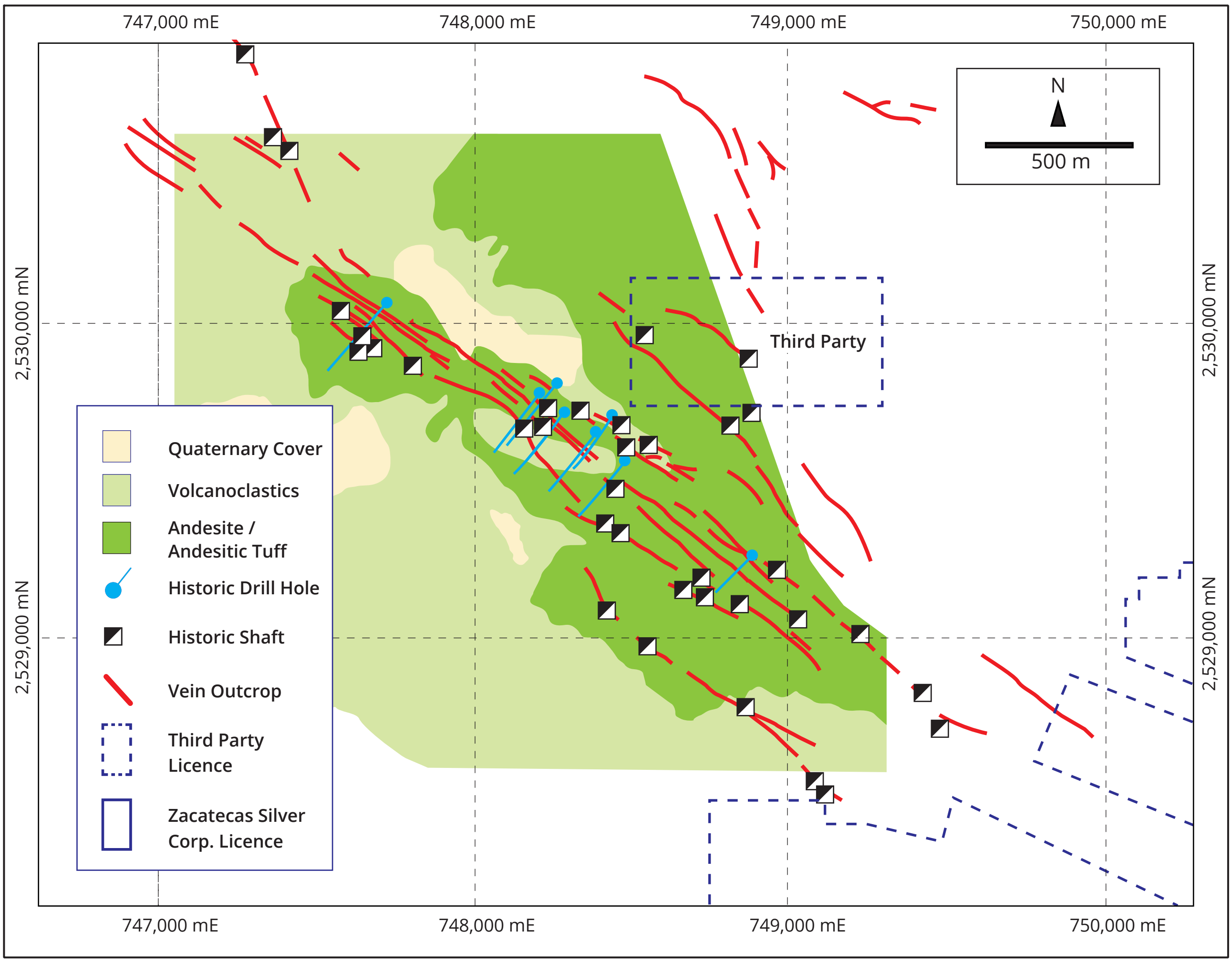

Figure 16: Geology map of El Cristo. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012).

canoclastics and sedimentary units is more pervasive and extends meters from the vein. Late stage calcite veins generally lack alteration selvedges.

6.3.5 *Other Targets*

Outside the central block of concessions that forms the bulk of the Zacatecas Property are satellite concessions that have not been part of the recent exploration. These blocks include the El Oro, El Orito, La Cantera, Monserrat, El Peñón, San Judas and San Juan (Figure 2).

- ***Orito Concession***: The Orito concessions are located within and along the southern boundary of the city of Zacatecas. The concessions overlie the Orito vein system which is hosted volcanoclastics of the Chilitos Formation. Mineralization is present in three parallel north-northwest striking veins that dip 54°-85° to both the east and west. Mineralization is confined to veins and consists of banded sulphides and adularia. The El Compas vein system to the south of the Orito concessions is gold rich and silver-base metal poor (Zamora-Vega, 2018).

- ***Cantera Concession***: The Cantera concessions are located along the northern limits of the city of Zacatecas and host veins of the Cantera-El Bote vein system. Veins strike southeast, dip 60° to 90° to the southwest, and jux-

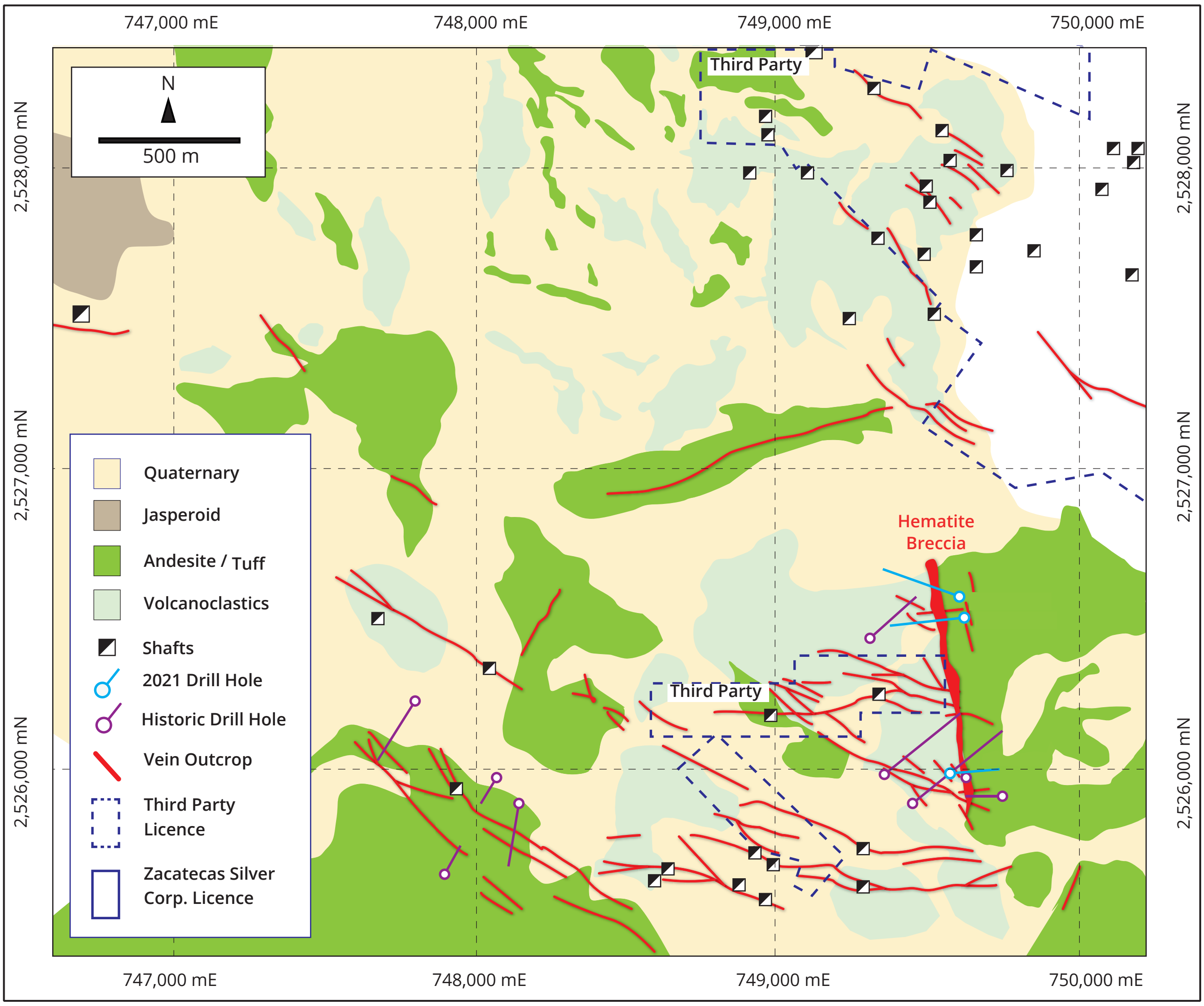

Figure 17: Geology map of the San Manuel-San Gill vein system. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012).

tapose the volcanic rocks of the Chilitos Formation to the north against the Zacatecas Red Conglomerate to the south. The Cantera concessions surrounds the past producer Cantera Mine of Santacruz Silver.

- *Monserrat Concession*: The Monserrat concessions are located along the eastern margin of the Sierra Zacatecas — the southeastern projection of the Veta Grande vein system. The concessions overlie andesites, basalts, and volcanoclastics of the Chilitos Formation.

- *El Peñón Concession*: The El Peñón concession is located approximately 20 km north of the city of Zacatecas. The concession overlies the contact between the volcanoclastics of the Chilitos Formation and porphyritic rhyolitic intrusives. Mineralization comprises a manganese prospect that has not been described.

- *San Juan Concession*: The San Juan concession is located 6 km east of the city of Guadalupe on highway 45. The concession covers andesites of the Chilitos Formation. Mineralization is hosted by a 1.7 m wide oxidized vein that trends 290°, dips 70° northeast, and strikes 200 m.

- ***San Judas Concession***: The San Judas concessions are located to the east of El Orito. Work by previous owners was limited to mapping veins hosted within phyllites and sandstones of the Zacatecas Formation.

7 Deposit Type

The Zacatecas Silver District is one of the most prolific silver producing areas in the world with an estimated production of in excess of 681 million ounces of silver during the period 1546 to 1895 (Geological Mining Monograph of the State of Zacatecas).

Silver mineralization occurs mainly in intermediate sulphidation epithermal veins — less commonly in low sulphidation epithermal veins. Skarn and manto-type replacement bodies are present but are not common. Mineralization is spatially and temporally associated with Tertiary volcanic activity — with key controls on mineralization provided by major crustal structures.

On a global scale intermediate and low sulfidation deposits are generally mutually exclusive in time and space. This is not the case in the Zacatecas District where both intermediate and low sulphidation styles are present — both types may even occur within a single deposit. Deposits are Tertiary in age (Middle Eocene to Early Miocene). Their space and time distribution closely follows the evolution of the continental arc volcanism of the Sierra Madre Occidental and Sierra Madre del Sur.

The relative timing of deposit formation within the Zacatecas District is contested. Authors such as Camprubi and Albinson (2007) consider the formation of low and intermediate sulphidation deposits was broadly coeval and the result of a single prolonged hydrothermal system — which evolved from an intermediate-sulfidation state (Mala Noche and Stage I of the Veta Grande vein systems) into a low-sulfidation state (El Orito vein system and stage II of the Veta Grande vein). Other authors such as Zamora Vega et al. (2008) suggest that the low sulphidation mineralization is a later and separate event.

Irrespective of the timing of formation, from an exploration perspective, it is important to note that some deposits within the company's concessions are hybrid intermediate and low sulphidation systems. As such, changes in metal tenor, vein texture and alteration assemblage typically used to pick the 'tops and bottoms' of mineralization in low and intermediate sulphidation systems, may show considerable variation from classic epithermal deposit models. This has important implications for exploration targeting.

7.1 Epithermal Deposits — An Overview

Epithermal Au and Ag deposits of both vein and bulk-tonnage styles may be broadly grouped into high, intermediate and low sulphidation types based on the sulphidation states of their hypogene sulphide assemblages (Sillitoe and Hedenquist, 2003).

High sulphidation deposits contain sulphide-rich assemblages of high sulphidation state such as pyrite-enargite, pyrite-luzonite, pyrite-famatinite, and pyrite-covellite (Einaudi et al., 2003).

Intermediate sulphidation deposits contain minerals with sulphidation states between those of high and low sulphidation types such as chalcopyrite, FeS-poor sphalerite, galena and tetrahedrite-tennantite (Einaudi op. cit.).

Low sulphidation deposits contain the low-sulphidation pair pyrite-arsenopyrite — the latter present in minor quantities within banded veins of quartz, chalcedony, adularia and subordinate calcite. Very minor amounts of copper (<100–200 ppm) may be present as chalcopyrite or, less commonly, as tetrahedrite-tennantite (Einaudi op. cit.).

A review of worldwide examples of major epithermal deposits (e.g. Berger and Bonham, 1990 and Sillitoe, 2002) suggests a reasonable correlation between various epithermal types and subtypes, and specific volcano-tectonic settings.

High sulphidation epithermal deposits occur mainly in calc-alkaline andesitic-dacitic arc terranes. Sillitoe and Hedenquist (2003) suggest that arcs subjected to neutral stress conditions, or mild extension, host many of the world's premier high-sulphidation deposits — although there are some examples from compressive arcs.

Intermediate sulphidation deposits — as with high sulphidation types — generally occur in calc-alkaline andesitic-dacitic arcs. More felsic rocks may be locally important hosts. The major intermediate-sulphidation deposits are generally associated with neutral to mildly extensional arcs.

Low sulphidation deposits are generally confined to bimodal magmatic suites, in and around rifts generated during intra-, near-, and back-arc extension, as well as in post-collisional settings. In Mexico, this setting is rarely associated with major volcanic centres — but is more frequently associated with localised dome development.

The common spatial and temporal association between high and intermediate sulphidation deposits in and around individual volcanic centres (Margolis et al., 1991; Sillitoe 1999), in conjunction with other evidence such as fluid inclusion data, suggests a close relationship with magmatism relationship (Sillitoe and Hedenquist, 2003). In some cases there is evidence for a spatial, and occasionally genetic relationship between high and intermediate sulphidation epithermal deposits (Sillitoe, 1999; Hedenquist et al., 2000), and deposit types may be considered as transitional in some instances.

In contrast, low sulphidation epithermal deposits form distal to the magmatic source and the over-lapping spatial and temporal nature of low and intermediate sulphidation epithermal deposits — as is the case at within the Zacatecas District — is less well documented. In order to understand the characteristics of such hybrid epithermal systems — and thus in formulating exploration strategies and challenges — it is important to understand the main features of classic low sulphidation (Section 7.2) and intermediate sulphidation (Section 7.3) types.

A hybrid model for Zacatecas-type deposits that exhibit silver-dominant low sulphidation characteristics, but with polymetallic intermediate sulphidation roots (Ag-Zn-Pb-Cu), is discussed in Section 7.4.

7.2 Low Sulphidation Epithermal Deposit Type — Main Features

Despite local variations, low sulphidation epithermal deposits worldwide display the following main characteristics:

Metal Signature: Gold, silver, argentite and electrum are common in association with pyrite, marcasite, pyrargyrite, acanthite and Ag-selenides. Minor iron-rich sphalerite, galena, tetrahedrite-tennantite and chalcopyrite, and minor to very minor arsenopyrite ± pyrrhotite, may be present. Total sulphide content is generally <2% (by volume) — dominated by pyrite and/or marcasite. Antimony and mercury define the tops of the mineralized system.

Gangue Minerals: Gangue minerals are dominated by bands of chalcedony and cryptocrystalline quartz. Adularia, illite or smectite may be present. Calcite gangue is generally minor and late. Baryte is uncommon — fluorite may be locally present. Pyrite and/or marcasite are the dominant sulphide gangue minerals.

Colloform banded quartz (ginguro texture) and other boiling textures (carbonate replacement textures) are typical of bonanza zones. Open-space filling, symmetrical and other layering, and crustiform, comb-structure, colloform banding are common. Multiple brecciation and locally developed breccias are also common.

Deposit Morphology: On a regional scale deposits are related to regional-scale fracture systems related to grabens, calderas, flow-dome complexes and rarely maar diatremes. Extensional structures in volcanic fields — normal faults, fault splays and dilational jogs — serve to focus fluids and metal deposition. Metal deposition may also occur in permeable host rock lithologies.

Upward-flaring ore zones centred on structurally controlled hydrothermal conduits are typical. Large veins (>1 m wide and 100's of metres in strike length) are common — within a given district multiple veins form sub-parallel to anastomosing vein swarms. Quartz vein stockworks — especially in the hanging wall and between major structures — may form bulk targets. Breccias are locally developed and are attractive high grade targets. Disseminated mineralization may develop.

Vein systems can be laterally extensive but ore shoots have relatively restricted vertical extent. High-grade ores are commonly found in dilational zones in faults at flexures and splays.

- ***Alteration Minerals***: Silicification is extensive in ores as multiple generations of quartz and chalcedony are commonly accompanied by adularia and calcite. Pervasive silicification in vein envelopes is flanked by sericite-illite-kaolinite assemblages. Intermediate argillic alteration [kaolinite-illite- montmorillonite (smectite)] forms adjacent to some veins; advanced argillic alteration (kaolinite-alunite) may form along the tops of mineralized zones. Propylitic alteration dominates at depth and peripherally.

- ***Paragenesis and Zonation***: Deposits are commonly strongly vertically zoned over 250 to 350 m — mineralization passes from Au-Ag rich base metal poor (or silver dominant and base metal poor as in the case of Zacatecas), downwards to a silver-rich base metal zone, an underlying base metal-rich zone, which grades downwards into a sparse base metal-pyrite zone. Understanding the vertical position in the system, relative to the "tops" and "bottoms" of mineralization, is key to effective exploration targeting.

7.3 Intermediate Sulphidation Epithermal Deposit Type — Main Features

Despite geographic variations, intermediate sulphidation epithermal deposits worldwide display the following main characteristics:

- *Metal Signature*: Most intermediate sulphidation epithermal veins show a metal signature comprising gold and silver, with lesser zinc, lead and copper. Mexican deposits are often extremely silver rich. Total sulphide content ranges from 5 to >20% (by volume) with pyrite > sphalerite > galena > chalcopyrite (if present). Sphalerite is vertically zoned from black, iron-rich (Fe>Zn), higher temperature species at depth, through brown and red, to yellow, iron-poor (Zn>Fe), low temperature species at shallower levels. Tellurides may be common in some systems — selenides are uncommon. Manganese is often present (usually in association with carbonate gangue). Tetrahedrite-tennantite may be present.

- ***Gangue Minerals***: Quartz and carbonate are the dominant gangue minerals in intermediate sulphidation epithermal systems. Barite, gypsum, anhydrite and manganiferous silicates may be locally important. Pyrite is the dominant sulphide gangue.

Multiple episodes of quartz deposition is the norm, as evidenced by cross-cutting quartz phases and varied quartz textures. Vein-filling crustiform and comb textured quartz is common — reflecting the higher temperature of formation as compared to low sulphidation quartz veins. Equant space-filling, saccharoidal, finely crystalline and open space quartz-flooding may be present — especially towards the top of the system. Colloform banded quartz (ginguro texture) and other boiling textures typical of low sulphidation epithermal systems are generally not present.

Vein-filling carbonate is the dominant gangue in the upper parts of intermediate sulphidation epithermal veins. The Ca/Mg carbonate end members (calcite, Mg-calcite and dolomite) form at deeper levels, whilst Fe/Mn carbonate end members (siderite and rhodocrosite) form at shallower levels under cooler conditions. Carbonates may form fine bands which alternate with quartz-rich carbonate bands, especially in the transition zone from quartz-dominant to carbonate-dominant phases. Blocky and massive vein-filling carbonate are common.

Barite, if present, generally forms vein fill in the uppermost parts of the system. Gypsum and anhydrite may also be present as late phases in the uppermost parts of intermediate sulphidation epithermal systems.

Deposit Morphology: The majority of intermediate sulphidation deposits form steeply dipping veins which may contain bonanza grade shoots (especially within quartz-base metal sulphide veins and breccias). Within a given district, multiple veins are common and typically form sub-parallel to anastomosing vein swarms, as is typical within the Zacatecas District.

Vein breccias and larger breccia bodies may also be developed — vein breccias especially may be of high grade metal tenor even within narrow vein deposits. Stockworks may occur in the hanging wall of deposits — they range from narrow selvedages that extend metres from veins and silicified structures, to extensive stockworks that may be of sufficient density and grade to justify an open pitable bulk tonnage mine. Extensive hanging wall stockworks are more likely to develop in low sulphidation epithermal systems that form closer to surface.

Alteration Minerals: Alteration minerals in intermediate sulphidation epithermal systems are zoned in a similar manner to that of the gangue mineralogy. Proximal to mineralization, quartz-sericite dominates at depth whilst proximal carbonate dominates in the shallower parts of the system. Pyrite is ubiquitous. Further from mineralization, illite-smectite passes outwards to epidote-chorite (prophylitic).

Paragenesis and Zonation: Intermediate sulphidation systems are distinctly zoned — but over a much larger vertical interval than low sulphidation systems. Ores tend to be dominated by quartz-pyrite-base metal sulphides at depth, and become more carbonate rich at the expense of these phases at progressively shallower levels. Carbonate deposition may also postdate and cross-cut earlier quartz sulphide phases as the fluid system cools and collapses. Baryte, gypsum and anyhdrite, if present, are formed in the uppermost parts of the system and/or represent the latest depositional event.

7.4 Zacatecas Epithermal Deposit Type—Main Features

The epithermal deposits within the Zacatecas District — and silver-gold-base metal mineralization on the Property — display intermediate and low sulfidation styles. Albinson (Camprubi and Albinson, 2007) proposed a new empirical classification scheme for Mexican epithermal deposits based on their depth of formation (with respect to the paleo-water table) as determined by fluid inclusion studies (Albinson et al., 2001). This scheme considers three types of epithermal deposit (A, B, and C).

In Mexico all three types are associated with development of calc-alkali volcanic arcs within an extensional back arc setting (Figure 18) — typical of the Mexican Altiplano. Intermediate and low sulphidation deposits are most likely to coexist when they form distal to (4-5 km) parental intrusives — hosted within andesites and rhyolites proximal to, and beneath, rhyolite dome complexes. Type A may also form lateral to, or above, shallow parental intrusives.

Type A is characterized by exclusively polymetallic IS mineralization along the full vertical extent of the deposit (Figure 19) — such as Fresnillo and Sombrerete in Zacatecas. Type A forms at depths (>1000 m) from relatively high-salinity brines (>7.5 to <23 wt% NaCl eq.) at temperatures of 230-300°C.

Type B is the most widespread in Mexico and exhibits extensive precious metal low sulphidation mineralization which passes downwards to an intermediate sulphidation type. The Veta Grande system is a variant characterized by dominantly intermediate sulphidation mineralization, with subordinate low sulphidation mineralisation, that is generally restricted to the uppermost parts of the deposit. Type B systems form at intermediate depths (400–1000 m).

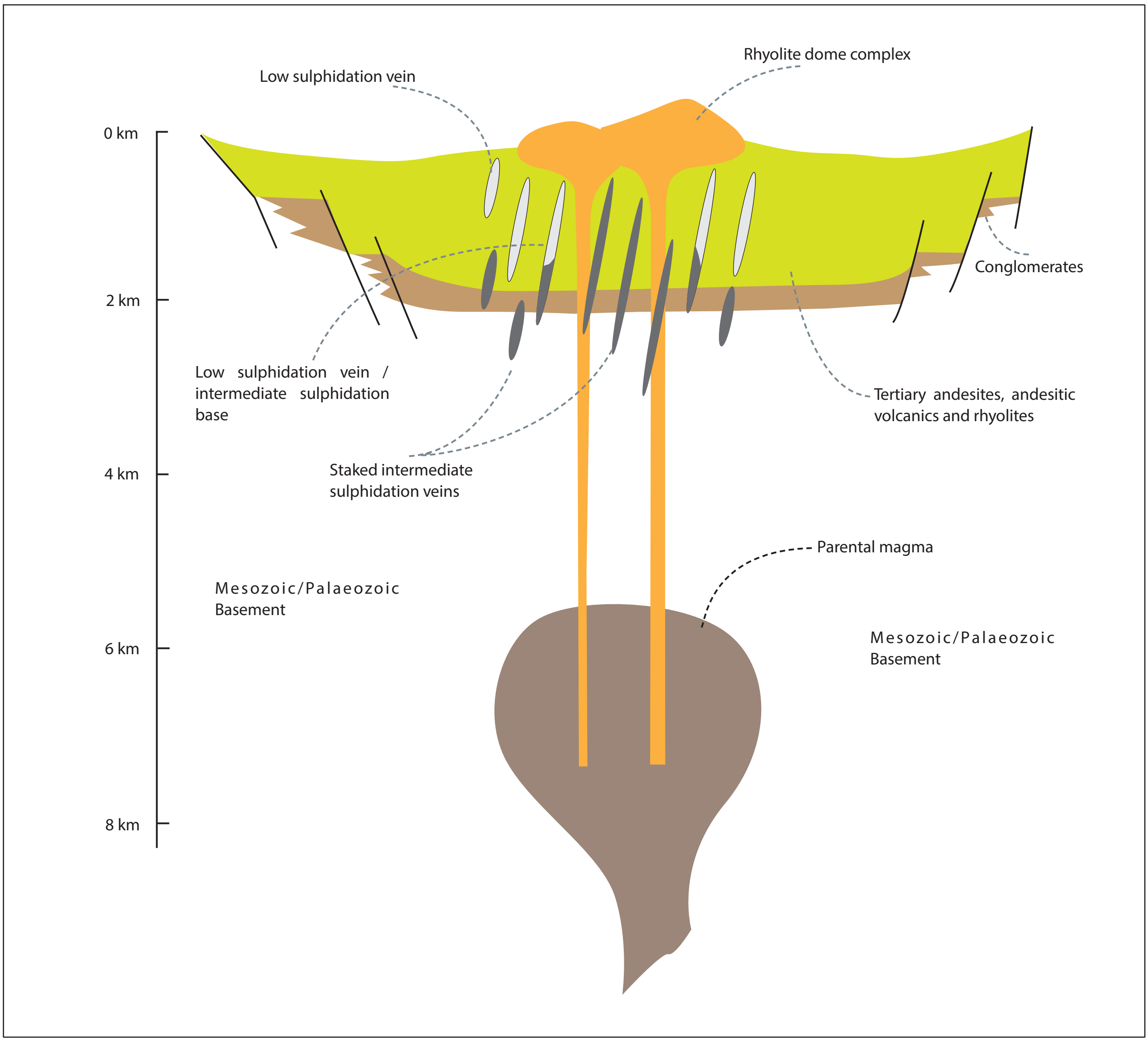

Figure 18: Schematic showing the metallogenic setting of low sulphidation epithermal, hybrid low and intermediate sulphidation, and intermediate sulphidation veins at Zacatecas. Veins form distal (>5 km) above and lateral to the parent magma. Rhyolite dome complexes are locally important. Veins develop in extensional settings and may have combined vertical extent of 1000+ m.

Types A and B are characterized by (1) mineralization with abundant sulphides (total sulphide contents >5%); (2) the occurrence of sphalerite with compositions dominantly low in FeS; (3) variable amounts of galena, pyrite, chalcopyrite, tetrahedrite-tennantite, and silver sulfosalts; (4) mainly accompanied by crystalline varieties of quartz, Mn carbonates and silicates, fluorite, and relatively scarce adularia as non-sulphide minerals; and (5) dominant alteration styles in which illite gives way to sericite with depth — propylitic alteration forms an outer halo.

Type C consists solely of low sulphidation type mineralization — such deposit in Mexico tend to be relatively small with maximum tonnages between 1.0 and 3.5 Mt (such as Pinos in Zacatecas). They are commonly genetically linked to rhyolitic hypabyssal igneous activity hosted within calc-alkaline or silicic volcanic piles. Mineralization forms at shallow depths (<500 m) from dilute fluids (<3.5 wt% NaCl equivalent), at relatively cool temperatures (<240°C).

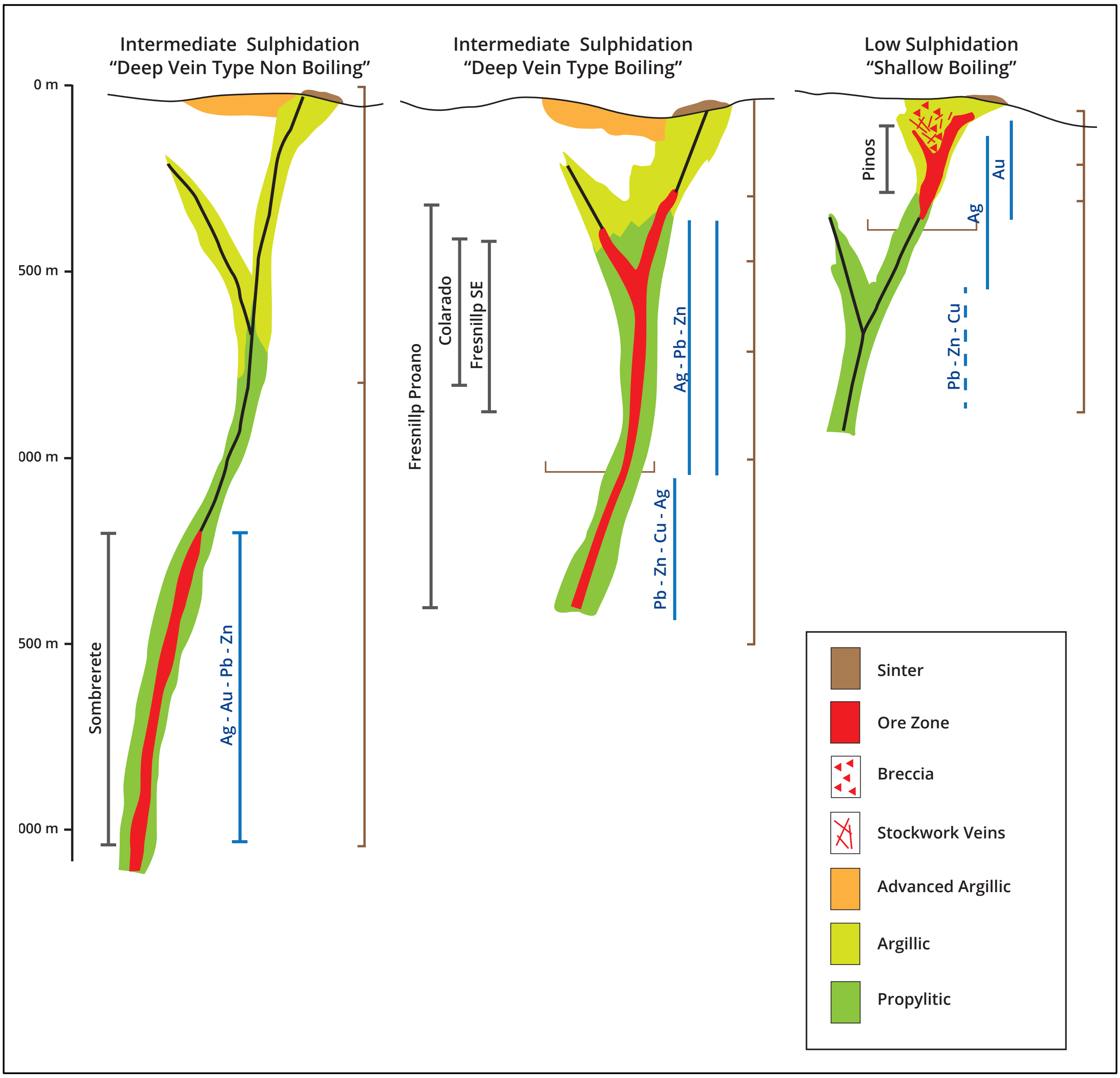

Figure 19: Schematic of typical low sulphidation epitheram, and boiling and non-boiling intermediate sulphidation deposits. Deposit models are highly implified. Correctly modelling the type of system allows the "tops" and "bottoms" of the mineralization to be modelled — critical to effective exploration as it allows surface outcrops and drill hole intercepts to be placed in the correct vertical context. Modified after Albinson *et al*. (2001).

The low sulphidation deposits of the Zacatecas district are characterized by (1) mineralization poor in sulphides (<2% total sulphide by volume); (2) with dominant pyrite, arsenopyrite, silver sulfosalts, acanthite, naumannite, and electrum; (3) gangue which includes varieties of amorphous silica, multi-banded cryptocrystalline, and crystalline quartz, adularia, and bladed calcite; (4) the occurrence of sphalerite with compositions high in FeS; and (5) weakly developed alteration styles, characterized by the occurrence of illite or chlorite, depending on the composition of the host rocks.

7.5 Zacatecas-Type Epithermals — Exploration Strategy

From an exploration perspective it is essential to understand that epithermal systems — whether intermediate sulphidation, hybrid intermediate-low sulphidation, or low sulphidation — display a strong vertical zonation of mineralisation and geochemical signature, gangue mineralogy and alteration facies. Economic mineralisation, if present, is restricted to a discrete vertical interval of 200-300 m (for Type C low sulphidation systems) and 400-800+ m (for Type A intermediate sulphidation systems). Identifying the "tops" and "bottoms" of a mineralized system is essential with respect to understanding the level of erosion, or the location of a drill hole intercept within the broader context of a deposit's vertical extent.

The long history of discovery and mining within the Zacatecas region would suggest that it is a mature exploration district that should be relatively well understood. However, recent advances in deposit modelling have demonstrated that many of the deposits within the Zacatecas Silver District are a broadly coeval mix of intermediate sulphidation, hybrid intermediate-low sulphidation, and low sulphidation systems.

Previous exploration considered low and intermediate sulphidation veins at Zacatecas to be mutually exclusive — such that exploration drill targeting was based on end-member characteristics. Hybrid intermediate-low sulphidation epithermal systems may display complex vertical zonation, overprinted precious and base metal mineralisation and gangue mineralogy, and vertically "telescoped" hydrothermal systems — making drill targeting difficult.

A detailed review and re-modelling of historic data, geological, structural and alteration re-mapping of surface geology, together with selected soil and rock-chip geochemical sampling, is recommended. Emphasis should be placed on:

- ***Structural Modelling*** including key controls on the development of high grade mineralization, the importance of vein flexures, splays and intersections, and the implications of pre-, syn- and post-mineralization fault architecture.

- ***Lithological control*** with an emphasis on modelling the distribution of preferred host lithologies and the role of lithology with respect to dilational fault/vein development.

- ***Deposit Modelling*** focused on vertical changes in metal signature, vein textures, vein mineralogy, and alteration assemblages in order to pick "tops and bottoms" of precious and base metal intervals.

- Understanding ***Paragenesis*** — or the relative timing of mineralizing events — is critical to understanding if a system has been overprinted and thus in ascertaining the vertical position within the system.

8 Exploration

The Company has completed systematic field-based exploration and mapping at Panuco, San Gill-San Manuel and El Cristo. Specifically:

8.1 Satellite Imagery

The Company acquired Worldview-3 and Maxar imagery from archive and tasked new acquisition by the TerraSAR-X satellite

A total of 315 km^2 high resolution Worldview-3 Satellite Imagery was acquired from archive imagery tasked on 6 January 2019 — covering Company licences, the areas between Company licences, and a 2 km wide edge buffer. This coverage ensured that geology, alteration, structure and mineralization, could be placed in a wider context and mapped between licences. Worldview-3 imagery provides for 34 cm panchromatic and 1.36 m 8-band multi-spectral VNIR resolution.

The TerraSAR-X satellite was tasked for two areas each of 25 km^2 to provide 10 ground control points in each area (20 in total) at <20 cm accuracy in X, Y and Z. Data was acquired on six different occasions to ensure quoted accuracy.

The TerraSAR-X satellite was also tasked to provide and additional 20 ground control points of <1 m accuracy in X, Y and Z within the broader 315 km^2 area of the Worldview-3 image. Data was collected during three acquisitions by TerraSAR-X.

An AW3D Enhanced 50 cm Digital Terrain Model ("DTM") and 1 m contour data was generated from multi-view Maxar archive imagery.

Using the <20 cm TerraSAR-X data, the <1 m TerraSAR-X data and the AW3D data — the Worldview 3 image was rectified to an accuracy of <1 m. Data allows for 1 m topographic contours to be generated for the whole 315 km^2 area.

8.2 Mapping Historical Mine Workings

Shallow historical workings and shafts — which define the tops of veins — are visible on Worldview-3 imagery allowing for rapid mapping (Figure 20) followed by field verification of select localities. The location of historical workings mapped by the Company correspond closely to those mapped previously by Golden Minerals.

8.3 Mapping Historical Trenches

Historical trenches excavated by Golden Minerals are visible on satellite data. Satellite mapping of trenches by the Company followed by field verification of approximately 20% of trenches — confirmed the validity of Golden Minerals historical trench data.

8.4 Geological Mapping

The Panuco, San Gill Breccia and El Cristo vein systems were mapped by Company geologists onto a Worldview-3 base map — outcrop was mapped in the field using hand-held GPS with a nominal accuracy of ±3 m and then adjusted when plotted onto Worldview-3 imagery.

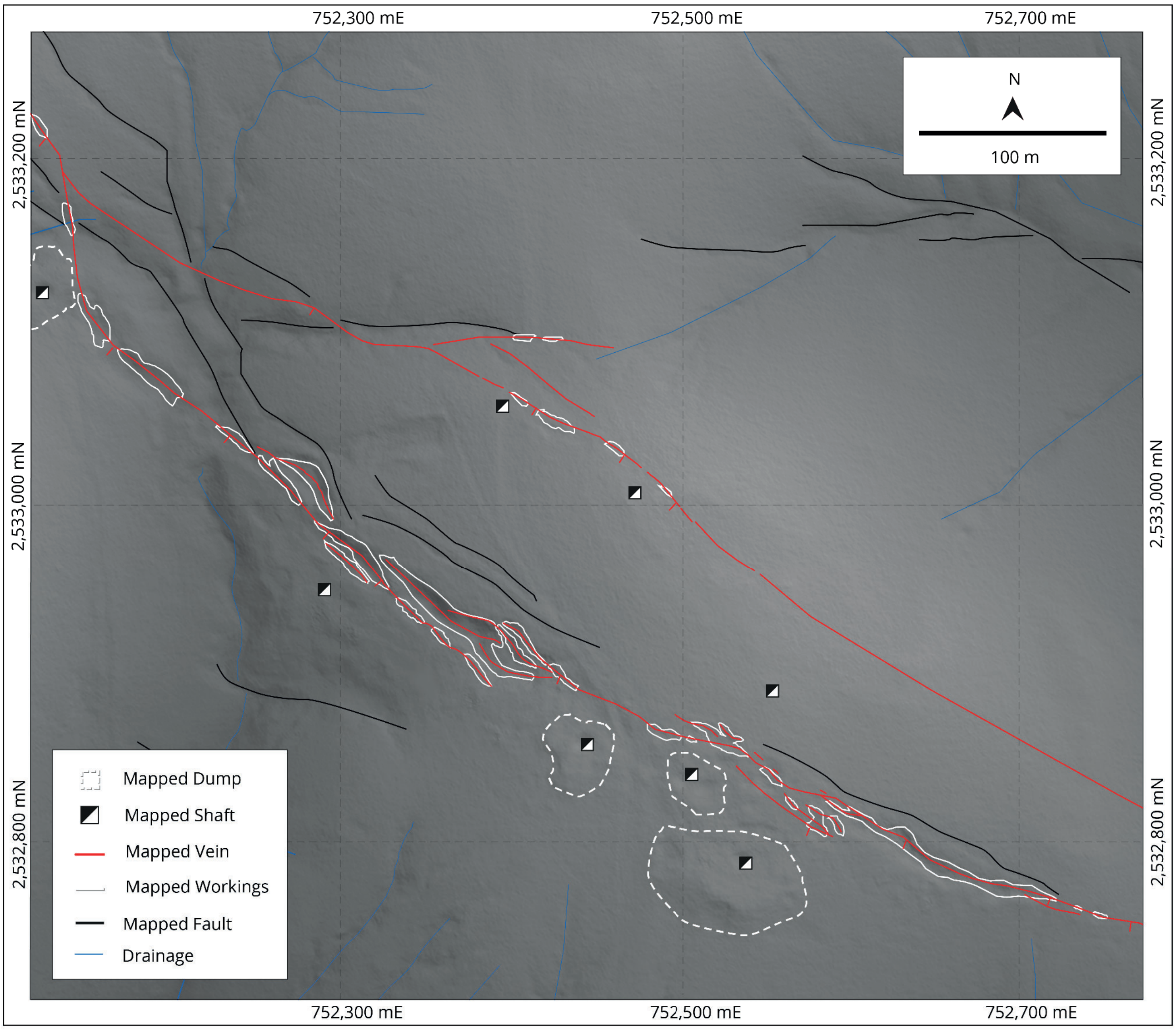

Figure 20: Gray shaded DTM showing part of the Central Panuco Vein. The DEM has been especially useful for mapping historical workings along veins and dumps associated with historical mine shafts. Structural mapping provides vein dips.

- Extensive areas of thin Quaternary and Recent cover limit the effectiveness of bedrock mapping. For this reason it is difficult to map volcanic and intercalated sedimentary stratigraphy in detail. Despite the fact that higher grade mineralization is often hosted in more massive andesitic lithologies (and not the intercalated tuffs or limestones), the limitations of surface mapping are not considered material, as rapid vertical changes in volcanic and sedimentary stratigraphy are to be expected in such a geological setting. Surface mapping of lithology — other than vein and structure distribution — is a poor vector to drill targeting at depth due to rapid facies variations in volcano-clastic sequences.

- Quartz veins and silicified structures generally form resistant outcrops visible in the field — the larger also visible on satellite imagery. Since silver-gold-base metal mineralization is hosted within quartz veins — vein distribution is the major vector to mineralization throughout the field area.

- The company completed structural mapping of all veins at Panuco, San Gill and El Cristo in preparation for drilling — with an emphasis on understand vein continuity and dip. Veins are generally thickest at flexures and/

or where two or more veins intersect. Veins pinch and swell from a maximum of 2 to 3 m to semi-continuous and narrow quartz lenses along structural continuations. The amplitude of these changes are between 50 to 200 m. Plunge appears to be predominantly steep to the southwest.

Between 2007 and 2011 Golden Minerals excavated and sampled four hundred and eleven trenches for a total of 14,641 m — 83 trenches totalling 4540 m were excavated at Panuco. Most historical trenches are back-filled and re-vegetated — and the Company did not see merit applying for new environmental work permits, re-opening trenches and re-sampling. Validation of field trench locations and their plotting on satellite base images provided a high degree of locational confidence. This allowed use of the historical geochemical trench data to highlight those areas of the veins with most anomalous surface geochemistry. Understanding the distribution of metal tenor in vein outcrop is an important vector in drill targeting.

The Company used the criteria above to target high priority undrilled parts of veins at Panuco, El Cristo and the San Gill breccia. Field geologists mapped lithology, and vein location and dip, in the line of planned drill section — to ensure that planned holes were correctly sited to intersect the projected down-dip extension of surface veins at the planned depth (Figure 21).

Given the extensive historical geochemical sampling database, the company did not re-sample rock chip samples or trenches, but rather used historical data as a guide to the areas with the most anomalous historical data. The Company commenced a soil sampling program at Panuco — but due to the often very shallow (often <20 cm) and limited development of *in situ* soils, the Company did not complete the program or assay samples.

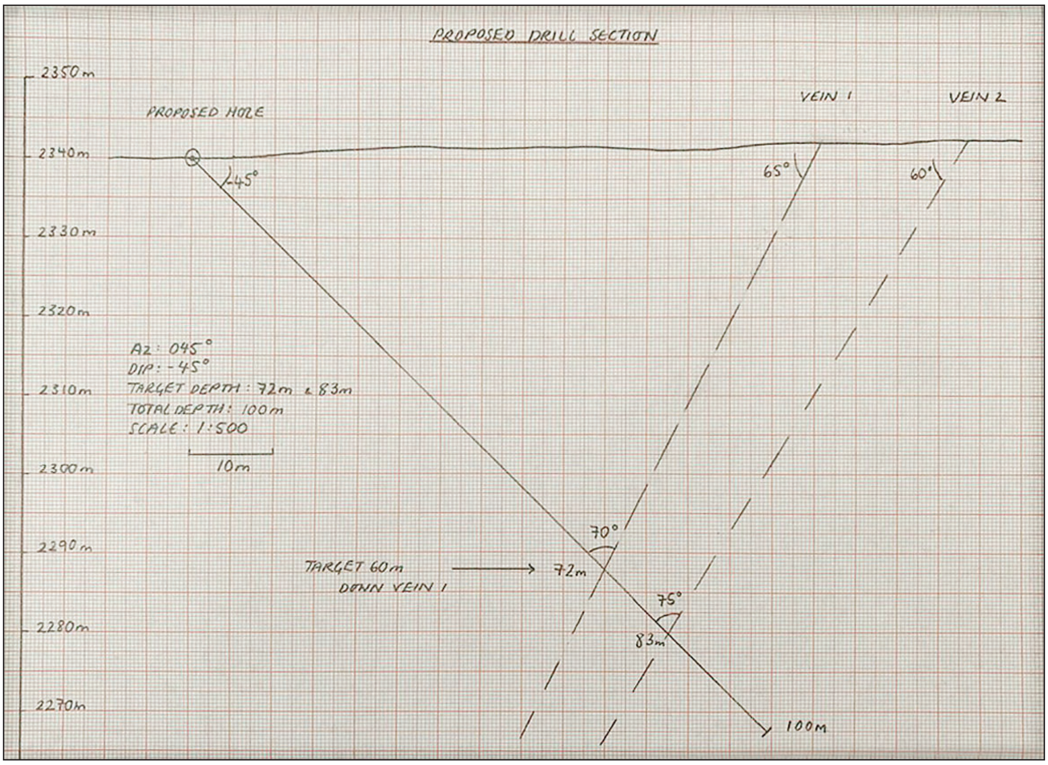

Figure 21: Cross section in the line of a proposed drill section. Geology and structure is mapped in the line of section and the proposed hole is then projected from drill collar location to target intercept. This confirms the angle of dip in the line of section and allows drill progress to be monitored as drilling advances.

9 Drilling

The Company commenced angled diamond drilling at Panuco on 30 August 2021. Drilling is being conducted by Major Drilling. To date the Company has drilled 29 angled PQ and HQ diamond holes for a total of 5160 m — 4243 m at Panuco and 917 m at San Gill. Drilling is ongoing along the Tres Cruces vein in the north of Panuco.

Between 2007 and 2011 Golden Minerals drilled 36,178 m of diamond core at Panuco, Muleros, El Cristo and San Manuel-San Gil — of which over 23,000 m were at Panuco. Historical drilling has been discussed in Section 5 (History), Section 10 (Sample Preparation, Analysis and Security — specifically Section 10.1 Golden Minerals) and Section 11 (Data Verification — specifically Section 11.1 Verification Re-Sampling of Historical Drill Core). Historical drilling is only discussed in this section when historical context adds to understanding.

9.1 Drilling Procedure

Drill Hole Location: Drill hole locations approved by SEMARNAT were located in the field using a hand-held GPS with a nominal accuracy of ±3 m. Marker posts were then used to mark the collar and line of section to ensure the drill rig as correctly located. Once drilling is complete holes are capped with PVC pipe in cement block. An independent chartered surveyor provides accurate collar coordinates in WGS 84 format once holes are complete (Table 4).

Drilling Protocol: Drilling has been contracted to Major Drilling who are independent of the Company. Drilling is being conducted by a track-mounted Major 50 VD 6000 rig (Figure 22) with nominal depth capacity at -50° of 500 m PQ, 1200 m HQ and 1500 m NQ. Core is recovered using standard double tube.

The first 18 holes were drilled in PQ. Thereafter — based on excellent core recovery and good ground conditions — subsequent holes have been collared and drilled in HQ (with an option to down-size to NQ if required).

Downhole Survey: Downhole surveys are conducted using a REFLEX EZ-TRAC™ system capable of transferring downhole data in real-time via an android based REFLEX EZ-TRAC™ App. Results are automatically calculated and displayed on the handheld device — thus eliminating the risk of human error.

Each hole is initially surveyed at 15 m to ensure there has been no deviation from the planned azimuth and dip — thereafter surveys are conducted every 50 m to end of the hole.

Core Handling at the Drill Rig: Drill core is placed into Plastic Corrugated drill core boxes labelled with Hole ID, sequential box number, and from to depths in metres. A cubic wooden core block of same dimensions as the core partitions is placed at the end of each "core-run" — the downhole depth is written onto the core block after each run (Figure 23).

Core Recovery: Drill core is transported from the drill site by Company geologists to the Company's core logging facility. Core is initially photographed. RQD and core recovery is determined for each "drill-run". Overall core recovery is excellent (>98%) — including vein intercepts and cataclastic fault gouge in structures. This reflects the drillers experience, large diameter core and generally good ground conditions'

Core Markup: Core from each run is fitted together (to the extent possible) and marked length-parallel along a centre-line as a guide for core cutting that best results in an "equal deportment of mineralization in each half". Lines are also marked normal to long core axis to denote breaks between adjacent sample intervals.

Target	Hole ID	Easting	Northing	Elevation (m)	Azimuth (°)	Dip (°)	Depth (m)
Panuco Central	PAN2021-001	752620	2532607	2342	030	-79	234
	PAN2021-002	752756	2532526	2326	040	-65	249
	PAN2021-003	752757	2532527	2326	040	-40	224
	PAN2021-004	752657	2532365	2321	037	-50	371
					4 holes total metres = 1077		
Tres Cruces	PAN2021-005	752191	2533920	2365	215	-45	250
	PAN2021-006	751355	2534371	2325	050	-45	155
	PAN2021-007	751354	2534370	2325	050	-74	222
	PAN2021-008	752200	2533954	2369	050	-45	131
	PAN2021-009	752191	2533922	2365	050	-45	164
	PAN2021-010	752059	2534019	2355	050	-40	149
	PAN2021-011	752058	2534018	2355	050	-60	218
	PAN2021-012	752189	2533923	2365	050	-71	213
	PAN2021-013	751190	2534459	2346	036	-56	242
	PAN2021-014	752201	2533956	2370	015	-55	161
	PAN2021-015	752203	2533962	2379	015	-40	131
	PAN2021-016	752206	2533960	2373	015	-67	231
	PAN2021-017	752242	2533950	2373	067	-55	164
	PAN2021-018	752243	2533951	2380	060	-38	146
	PAN2021-019	751943	2534190	2340	230	-50	71
	PAN2021-020	751893	2534234	2332	230	-50	95
	PAN2021-021	751893	2534230	2327	215	-40	53
	PAN2021-022	752042	2534094	2348	235	-40	56
	PAN2021-023	752009	2534134	2344	228	-38	30
	PAN2021-024	752009	2534134	2344	228	-49	80
	PAN2021-025	752050	2534036	2355	042	-56	143
	PAN2021-026	751830	2534269	2328	205	-40	62
					22 holes total metres = 3166		
San Gill	SGI-2021-001	749515	2526149	2521	085	-40	227
	SGI-2021-002	749550	2526729	2513	293	-40	359
	SGI-2021-003	749564	2526663	2510	270	-40	332
					3 holes total metres = 918		

Table 4: Drill hole location and orientation. Depth is the downhole depth to the end of hole. Easting and northing are WGS84. Holes were drilled in either PQ or HQ diameter core.

Figure 22: Major 50 VD 6000 drill rig at Panuco North. The rig is drilling HQ diameter core. Core recovery and geotechnical logging is conducted at site — before core is moved to the companies drill logging and storage facility in Zacatecas. Drilling is being conducted by Major Drilling.

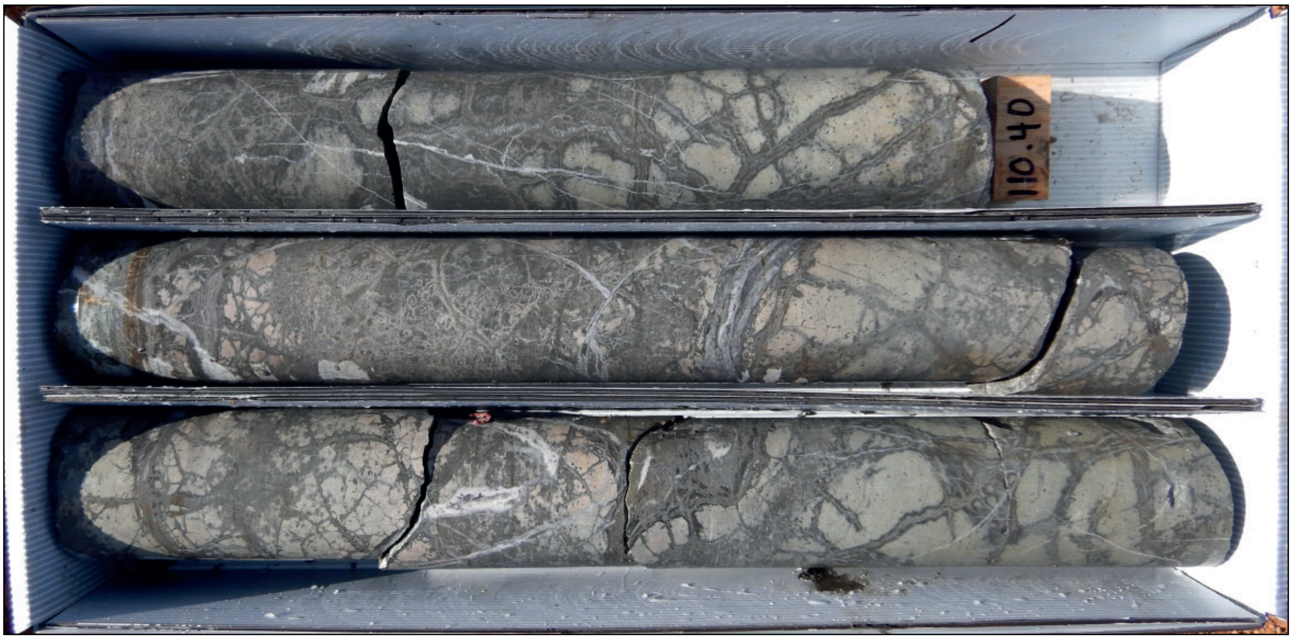

Figure 23: HQ diameter drill core photographed at the drill rig — Tres Cruces. Drilling conditions are very good and core recovery has been >98% throughout the program.

Vein intercepts, silicified and/or sulphidic intervals, faults zones, and zones of alteration are sampled for assay — in each case sampling is dictated by lithological, alteration and mineralized boundaries. Sampling is extended 5 to 10 m into the wall rock. The minimum geological sample interval is 40 cm.

Core is sampled by a Company geologist, placed into plastic sample bags, labelled with a sequential number, and sealed with a single use clip-lock tie. Chain of custody is maintained by the company until samples are delivered to ALS Zacatecas.

Morales-Ramirez is of the opinion that the drilling, collar and down-hole survey, and core logging protocol follows industry recognized standards of best practices, appropriate for the style of deposit, type of mineralization and exploratory nature of the drilling. Morales-Ramirez considers that core mark-up and sampling is being conducted in an appropriate manner — ensuring that samples are representative of the style of mineralization and deposit.

9.2 Panuco Central Vein

The Company drilled 4 angled diamond holes (1077 m) into the eastern part of the Panuco Central Vein — along the eastern boundary of the Company's concessions (Figure 24). Holes were drilled to determine eastward continuity of high grade mineralized defined in the current inferred resource estimate. Holes were drilled in PQ diameter core

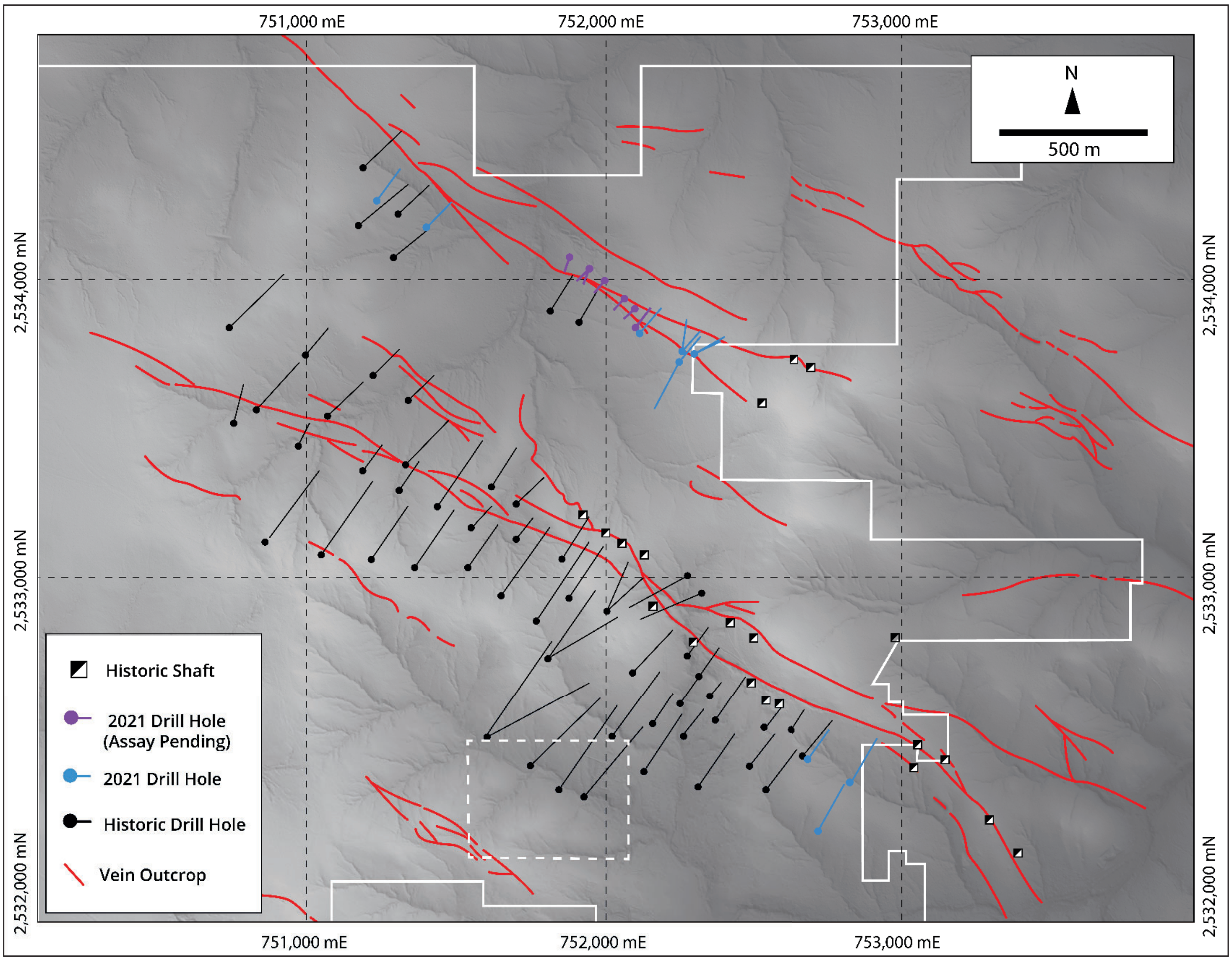

Figure 24: Map of the Panuco Project showing the company's drill hole locations (assays received blue and pending purple). Historical drill hole traces are shown black. The base of the map is a grey scale digital elevation model.

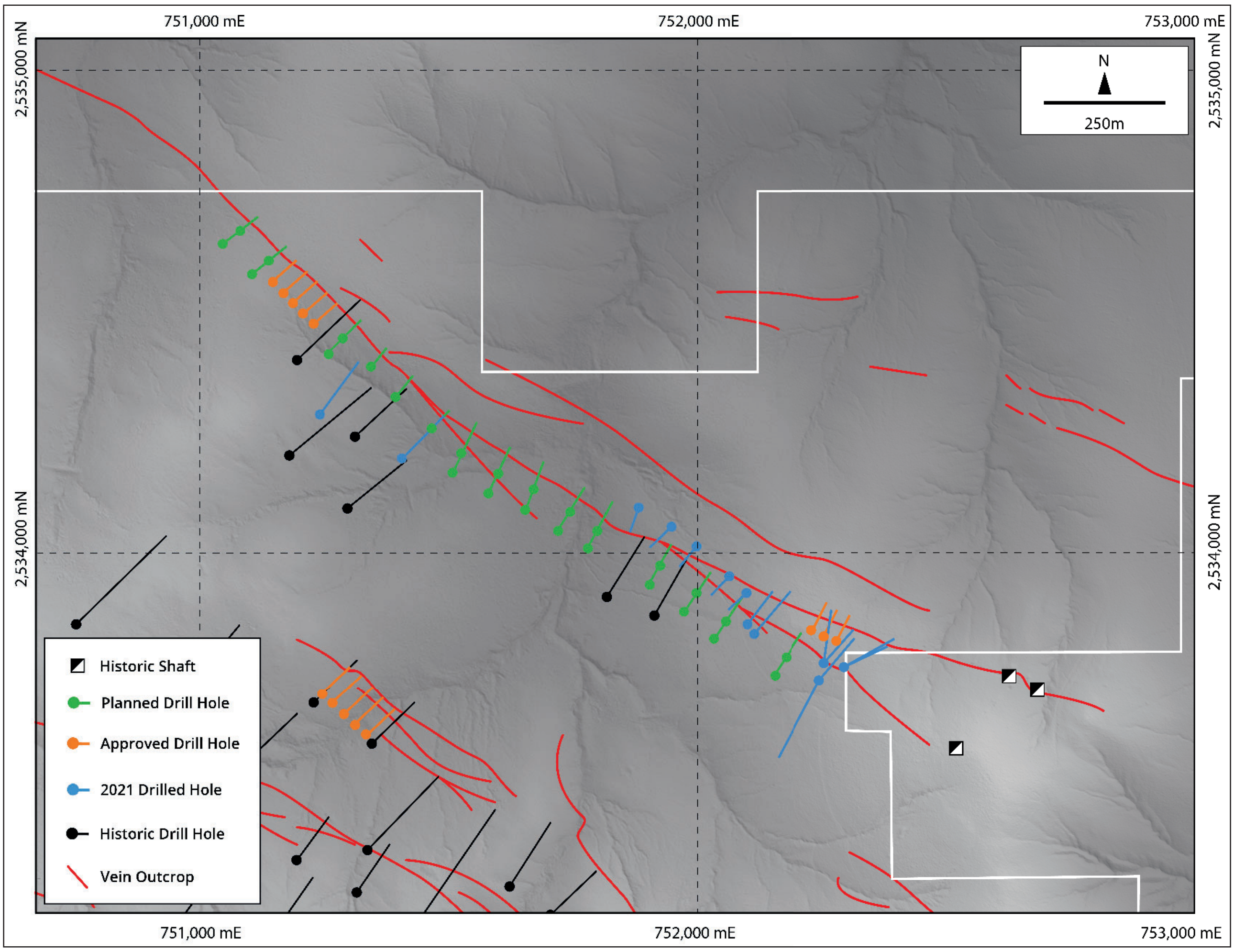

Figure 25: Map of the Tres Cruces Vein showing the company's drill hole locations (assays received blue and pending purple). Historical drill hole traces are shown black. Holes shown green are pending approval by SEMARNAT. The base of the map is a grey scale digital elevation model.

at dips of -40 to -79° to downhole depths of between 224 to 371 m (to a maximum vertical depth of approximately 280 m).

All holes drilled clay-pyrite cataclastic breccias with silicified fragments at the projected target depth — indicating that controlling faults were intersected but that silver-base metal mineralized veins were not developed. Assay results were of a low tenor — it appears that Panuco Central Vein mineralization terminates before the eastern boundary of the companies concession. Assay results from the four drill holes in eastern Panuco Central Vein were not included in the current inferred mineral resource estimate.

9.3 Tres Cruces Vein

The company has drilled 22 angled PQ and/or HQ diameter diamond holes (3165 m) into the Tres Cruces Vein at Panuco (Figure 25) to downhole depths of between 62 to 250 m — most holes were drilled to relatively shallow downhole depths of <150 m.

The Tres Cruces vein strikes northeast-southwest over a distance of almost two kilometres within concessions held by the Company — bifurcating in part. Only six historical diamond holes were drilled by Golden Minerals at Tres Cruces vein despite encouraging intercepts (including 2.09 m @1309 g/t Ag and 0.14 g/t Au from 254 m downhole in PAN09-07). The vein remains open in all directions and is a robust exploration target.

Based on the untested exploration potential of Tres Cruces, the Company commenced a scout drill program. Most of the 22 holes drilled to date have intersected variably silver-gold-base metal mineralized quartz veins or silicified cataclastic breccias which represent extensions of controlling structures where veins are not well developed.

Assay results have only been received for nine of the 22 holes. Results from several of these holes demonstrate the potential of the Tres Cruces system to host high grade silver-gold-base metal mineralization over downhole widths of up to 3 m (additional drilling is required to determine true widths) (Table 5). The more significant intercepts included:

- 1.85 m @ 261 g/t AgEq (224 g/t Ag and 0.49 g/t Au) from 126.05 m downhole (Hole PAN 2021-008)
- 2.17 m @ 823 g/t AgEq (798 g/t Ag and 0.34 g/t Au) from 154.94 m downhole (Hole PAN 2021-009)
- 3.00 m @ 267 g/t AgEq (203 g/t Ag and 0.85 g/t Au) from 46.50 m downhole (Hole Pan 2021-010)

High grade mineralisation within the Tres Cruces system is hosted within multiphase sulphitic quartz veins (Figure 26) — comprising multiple generations of milk white to medium grey, finely crystalline quartz with clasts of pervasively silicified andesitic tuff, and clotted fine pyrite and rare spahlerite and galena. Argentite and native silver is associated with pyrite.

Late stage, milk white to light pink (manganoan?) carbonate fills cavities and fractures (Figures 27 and 28). Wall rocks are often light grey-brown to medium olive, pervasively silica-illite/sericite-chlorite altered (Figures 27 and 28). Variably pyritic cataclastic breccias (Figure 29) — with varying degrees of clast rounding and gouge development — indicate structural (fault) continuty where veins are absent.

9.4 San Gill Breccia

The company has drilled 3 angled PQ diameter diamond holes (918 m) at San Gill Breccia (Figure 30). Two holes at the north of the breccia were drilled to the west and one hole to the south of the breccia was drilled to the east.

Figure 26: Photograph of PQ core from Tres Cruces hole Pan 2021-003 at 209.86 to 210.07 m: Vein intercept showing multiple generations of white to medium grey, finely crystalline quartz with clasts of pervasively silicified, generally angular, polymictic andesitic crystal lithic tuff. Finally disseminated and clotted pyrite is common — blebs of sphalerite and galena are rare.

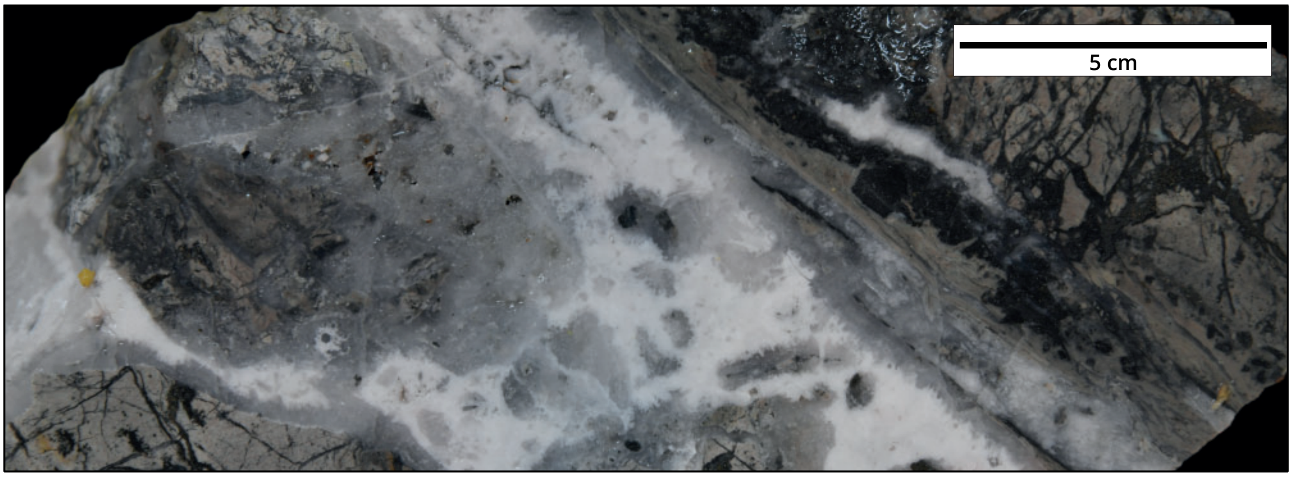

Figure 27: Photograph of PQ core from Tres Cruces hole Pan 2021-006 at 143.00 to 143.20 m: Vein intercept showing early translucent to light grey quartz with minor fine grained pyrite, with late infill of white to very light pink carbonate. Wall rock is pervasively silica-illite altered andesite.

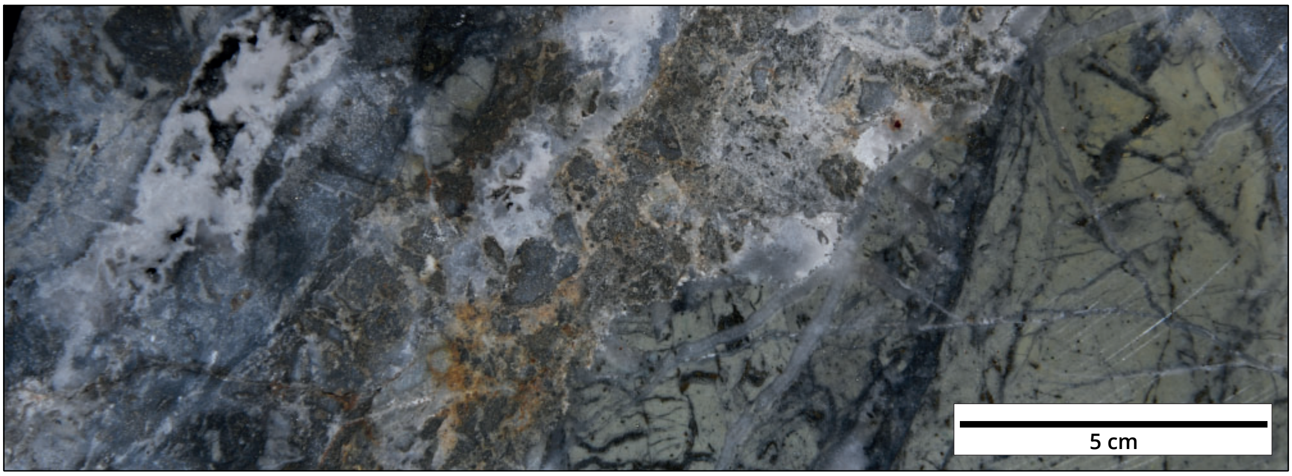

Figure 28: Photograph of PQ core from Tres Cruces hole Pan 2021-010 at 46.64 to 246.86 m: Slightly oxidized translucent to milk white vein quartz with clotted pyrite-base metal sulphides preferentially replacing some clasts. Olive green silica-sericite-chlorite altered andesitic host rock.

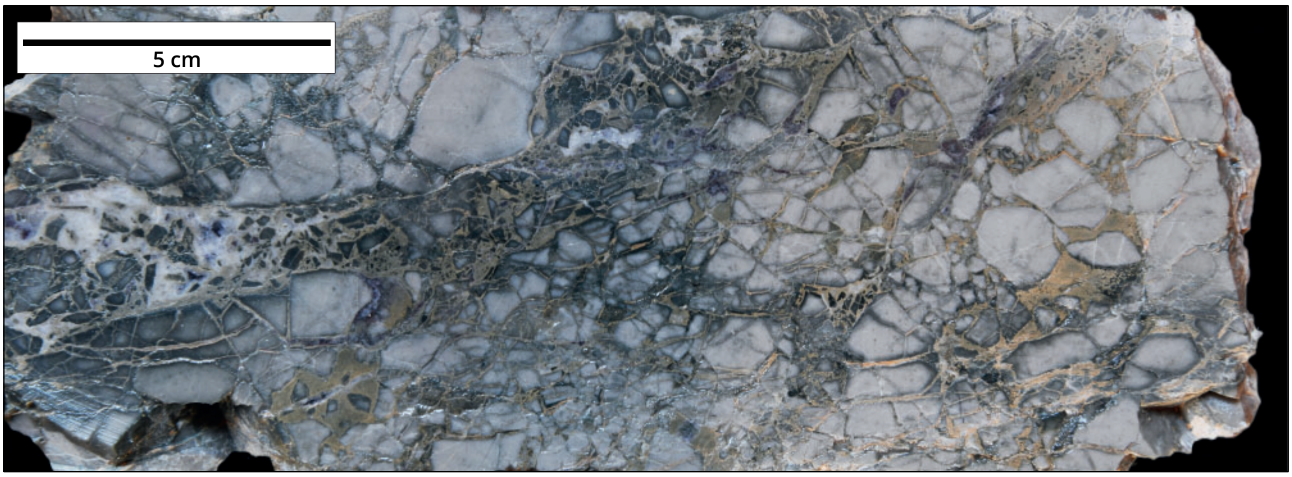

Figure 29: Photograph of PQ core from Tres Cruces hole Pan 2021-003 at 291.47 to 291.67 m: Cataclastic breccia with clay-pyrite and late carbonate infill.

Hole ID	Sample No.	From (m)	To (m)	Interval (m)	Ag (g/t)	Au (g/t)	Pb (%)	Zn (%)
PAN2021-006	ZAC001153	140.48	141.02	0.54	8.4	0.04	0.0006	0.0088
	ZAC001154	141.02	142.84	1.82	5.1	0.04	0.0013	0.0390
	ZAC001156	**142.84**	**143.77**	**0.93**	**142**	**0.26**	**0.0015**	**0.0055**
	ZAC001157	143.77	144.23	0.46	7.2	0.02	0.0013	0.0062
	ZAC001158	144.23	145.28	1.05	8.6	0.10	0.0009	0.0056
				0.93 m @ 162 g/t AgEq (142 g/t Ag, 0.26 g/t Au)				
PAN-2021-008	ZAC001216	124.06	124.85	0.79	0.6	0.01	0.0004	0.0043
	ZAC001217	124.85	126.05	1.20	2.2	0.02	0.0002	0.0076
	ZAC001219	**126.05**	**127.25**	**1.20**	**284**	**0.65**	**0.0064**	**0.0311**
	ZAC001221	**127.25**	**127.90**	**0.65**	**114**	**0.20**	**0.0019**	**0.0074**
	ZAC001222	127.90	128.90	1.00	0.5	0.01	0.0002	0.0068
	ZAC001223	128.90	129.90	1.00	0.5	0.01	0.0002	0.0064
				1.85 m @ 261 g/t AgEq (224 g/t Ag, 0.49 g/t Au)				
PAN-2021-009	ZAC001253	152.90	153.95	1.05	0.5	0.01	0.0002	0.0064
	ZAC001254	153.95	154.95	1.00	0.6	0.01	0.0002	0.0052
	ZAC001255	**154.95**	**155.95**	**1.00**	**653**	**0.65**	**0.0065**	**0.0114**
	ZAC001257	**155.95**	**157.12**	**1.17**	**922**	**0.08**	**0.0114**	**0.0297**
	ZAC001258	157.12	158.12	1.00	5.7	0.01	0.0005	0.0079
	ZAC001259	158.12	159.12	1.00	1.0	0.01	0.0002	0.0061
				2.17 m @ 823 g/t AgEq (798 g/t Ag, 0.34 g/t Au)				
PAN-2021-010	ZAC001262	44.61	45.45	0.84	1.1	0.01	0.0002	0.0073
	ZAC001263	45.45	46.50	1.05	1.6	0.01	0.0003	0.0093
	ZAC001265	**46.50**	**47.03**	**0.53**	**193**	**0.06**	**0.0111**	**0.0577**
	ZAC001266	**47.03**	**47.58**	**0.55**	**121**	**0.04**	**0.0118**	**0.0289**
	ZAC001267	**47.58**	**48.78**	**1.20**	**144**	**0.03**	**0.0045**	**0.0259**
	ZAC001268	**48.78**	**49.50**	**0.72**	**371**	**0.03**	**0.0063**	**0.0174**
	ZAC001269	49.50	50.31	0.81	3.4	0.01	0.0002	0.0061
	ZAC001270	50.31	51.66	1.35	0.5	0.01	0.0002	0.0058
				3.0 m @ 206 g/t AgEq (203 g/t Ag, 0.04 g/t Au)				
PAN-2021-012	ZAC001313	67.76	69.20	1.44	5.1	0.10	0.0002	0.0054
	ZAC001314	69.20	69.75	0.55	6	0.01	0.0002	0.0062
	ZAC001315	**69.75**	**70.57**	**0.82**	**88.6**	**0.23**	**0.0007**	**0.0067**
	ZAC001317	**70.57**	**71.16**	**0.59**	**123**	**1.51**	**0.0020**	**0.0061**
	ZAC001318	71.16	71.66	0.50	17.9	0.11	0.0002	0.0060
	ZAC001319	71.66	72.73	1.07	1.6	0.03	0.0002	0.0063
				1.41 m @ 161 g/t AgEq (103 g/t Ag, 0.77 g/t Au)				

Table 5: Significant drill hole assay results and weighted intercept grades. Mineralization is constrained to veins with wall grades of low tenor. Additional drilling required to determine true widths. AgEq grade was calculated using \$24 / oz Ag and \$1800 ounce Au.

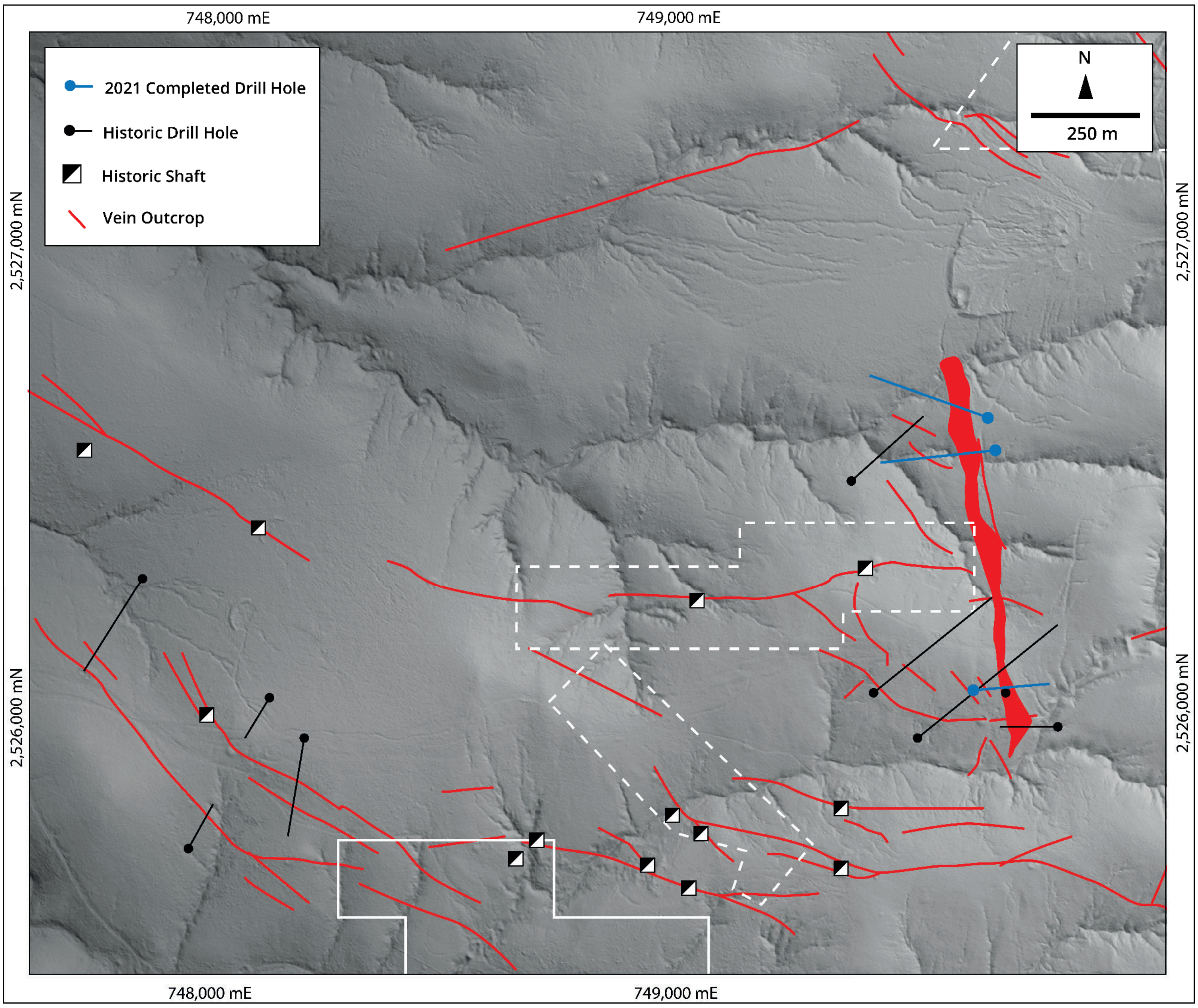

Figure 30: Map of the San Gill breccia showing the company's drill hole locations. Historical drill hole traces are shown black. Assay results from narrow (< 2 m) silicified breccias were unremarkable.

10 Sample Preparation, Analysis and Security

As outlined below — Morales-Ramirez is responsible for this Section. The section was also reviewed by Barry to ensure protocols met the standards required for inclusion of results in estimation of a Mineral Resource.

10.1 Golden Minerals

Given the time that has expired since Golden Minerals completed their work at the Property, Morales-Ramirez was not able to verify the security, sample preparation and assay protocol used by Golden Minerals.

10.1.1 Sample Security

Morales-Ramirez was not able to verify the security protocols implemented by Golden Minerals with respect to handling, transport and storage of core and rock samples. Sample rejects and core were stored within a secure compound in Guadalupe rented by Santacruz Silver.

Sample pulps are bagged and boxed. Boxes containing core samples are stacked on racks within the facility — representing all intervals sampled and assayed by Golden Minerals. Morales-Ramirez is of the opinion that security was appropriate and that core and samples are in good condition.

10.1.2 Sample Preparation

Morales-Ramirez was not able to verify the sample preparation protocol implemented by Golden Minerals — except to note that the following protocol was used.

"Drill core sample intervals were chosen on the basis of combination of lithology, alteration and mineralization to ensure that samples did not cross mineralized boundaries. Sample lengths varied from 0.1 to 2.0 m with a median length of 0.63 m. Core was cut lengthwise into two equal halves — one half was sent for assay and the other half was returned to the core box. Examination of the core by the Morales-Ramirez suggests that core was sectioned in a representative manner".

"Rock chip, trench and drill core samples were sent to the ALS-Chemex sample preparation facility in Zacatecas. Core and rock samples were prepared by crushing to a nominal 70% passing <2 mm (ALS code CRU-31). Crushed samples were passed through a single stage riffle splitter and pulverized to 85 % passing <75 microns (ALS code PUL-31)".

10.1.3 Sample Analysis

Morales-Ramirez was not able to verify the sample analysis protocol implemented by Golden Minerals — or the accuracy and precision of the assay results — except to note that the following protocol was used.

"Pulps were analysed using a 33 element ICP-AES analysis package following a 4 acid digest of a 0.25 g sample (ALS code ME-ICP61) — those samples which assayed above 100 g/t Ag were then assayed by 30 g fire assay with a gravimetric finish (ALS Code Ag-GRA21). Over-limit for copper, lead and zinc were re-assayed following aqua regia digest by ICP-AES finish (ALS code ME-OG62)".

"Samples were assayed for gold by 50 g fire assay with an AA finish (ALS code Au-AA24) — samples which assayed >10 g/t Au were analysed by 50 g fire assay with a gravimetric finish (ALS code Au-GRA22)".

10.1.4 QA/QC

Morales-Ramirez was not able to locate reliable documentation with respect to the QA/QC protocol used by Golden Minerals, although review of the Panuco, Muleros, El Cristo and San Manuel-San Gil drill hole database confirmed that field blanks and four different CRM's that were routinely inserted into sample runs.

10.2 Santacruz

Santacruz only collected 49 surface rock chip channel samples at Panuco — sample lengths of 0.25 m to 1.9 m assayed between <0.01 to 305.46 g/t Ag. Whilst these samples confirm the presence of silver mineralization at surface, Morales-Ramirez could not verify if samples were taken in a representative manner — they are not considered further.

10.3 Historical Panuco Drill Core Verification Sampling by Morales-Ramirez

During a visit to the property between the 10th and 19th of December 2020, Morales-Ramirez collected 157 drill core samples from historic Panuco drill holes — samples were the complete remaining second half of the core. Morales-Ramirez also collected 22 half-cut drill core samples from El Cristo and eight from San Manuel-San Gil. Whilst samples from El Cristo and San Manuel-San Gill were not used in the Panuco resource estimation — Morales-Ramirez believes that verification of the broader database of Golden Minerals is important.

The sample security, sample preparation and sample assay protocol employed by the Morales-Ramirez is outlined below. Industry standard Best Practice and QAQC was implemented. Historical versus drill core verification assay results are discussed in Section 10.3.5 below.

10.3.1 Sample Security

Rock chip and drill core samples collected by Morales-Ramirez were placed in individually numbered plastic sample bags, sealed with a single use clip-lock seal, and personally delivered to the ALS Laboratory in Zacatecas. Chain of custody was maintained by Morales-Ramirez at all times — ensuring the validity and integrity of samples submitted for assay.

10.3.2 Sample Preparation

Samples were prepared by ALS Zacatecas (ALS code PREP-31b). Samples were dried to 110°C, weighed and crushed in a single pass to a nominal 70% passing 2 mm in a jaw-crusher. Approximately 1 kg was sub-sampled using a Jones-style riffle splitter and then pulverised in a single-pass “bowl and puck” to a nominal 85% passing 75 microns.

As the samples submitted by Morales-Ramirez were for verification purposes — the crusher and pulveriser was washed with a barren wash (ALS codes WSH-21 and WSH-22) between each sample.

Morales-Ramirez is satisfied that the sample preparation and sub-sampling protocol is appropriate for the style of mineralization, the stage of exploration and that assay results are acceptable for use in resource estimation. Morales-Ramirez requested that ALS take either one crush or one pulp duplicate in each batch of 17 samples — to ensure precision of sub-sampling protocol is monitored.

10.3.3 Sample Analysis

Samples were analysed by ALS Loughrea (Ireland). Gold was analysed by fire assay with atomic absorption finish using a 50 g sample charge (ALS code Au-AA26) — with a reportable range of 0.01-100 ppm Au.

Silver was assayed by fire assay with a gravimetric finish (ALS code Ag-GRA21) using a 30 g nominal sample weight — with reportable range of 5-10,000 ppm Ag. The relatively high lower detection limit is not considered material given samples submitted by the Morales-Ramirez were verification purposes of assays used in a resource estimation.

Samples were submitted for 33 element analysis by ICP-AES following a 4 acid digest — with reportable ranges silver (0.5 to 100 ppm), lead (2 to 10,000 ppm), zinc (2-10,000 ppm) and copper (1-10,000 ppm Cu). Over-range samples were resubmitted for analysis by four acid digest and ICP-AES finish with the following ranges: Ag 1-1500 ppm (Ag-OG62), lead 0.001-20% (Pb-OG62), zinc 0.001-30% (Zn-OG62) and Cu 0.001-40% (Cu-OG62).

Morales-Ramirez is of the opinion that the analytical protocol is appropriate for the style and grade of mineralization, the type of samples and the use of final assay results in resource estimation.

10.3.4 QA/QC & Laboratory Performance

Morales-Ramirez implemented a QA/QC program comprising the routine insertion of one field blank, one certified reference material (CRM), and either one crush or one pulp duplicate with every 17 drill core samples — to give a batch of 20 drill core and QAQC samples in total. Each batch was treated as a single entity and all 20 samples were prepared and analysed at the same time in the same sample run. The protocol follows industry-recognized standards of best practice.

Field Blanks

A field blank — comprising a 2 to 3 kg rock chip sample — was inserted into every batch of 17 samples. Tolerance limits were set at 5 ppm g/t Ag (Figure 31), 0.05 g/t Au (Figure 32), and 0.03% Pb (Figure 33) and 0.015% Zn

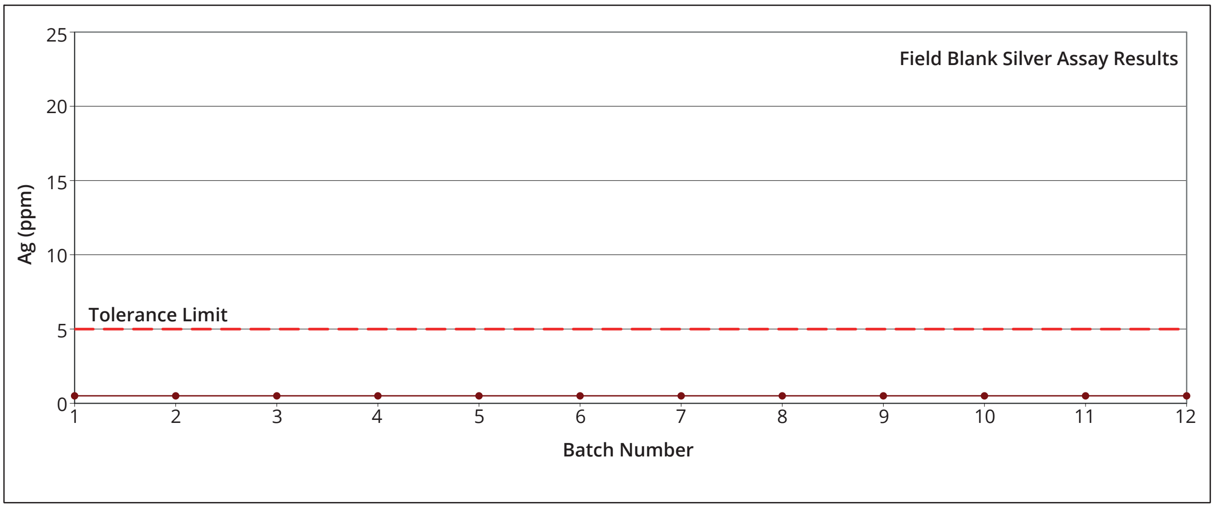

Figure 31: Blank assay results for silver. Field blanks inserted into 12 batches all assayed below 0.5 ppm Ag. There was no observable contamination of field blanks during sample preparation all batches were deemed passed.

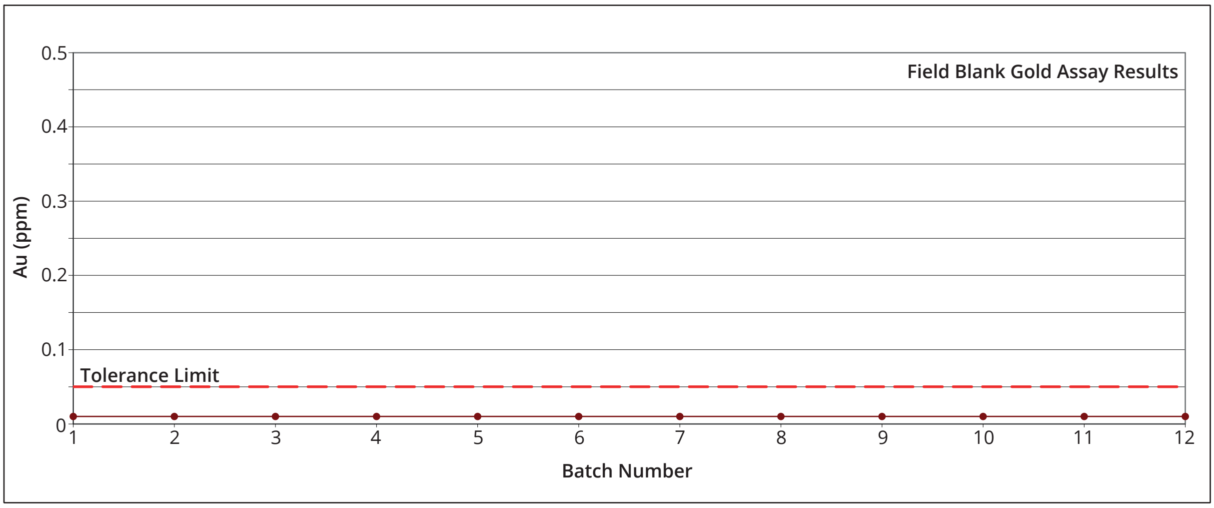

Figure 32: Blank assay results for gold. Field blanks inserted into 12 batches all assayed below 0.01 ppm Au. There was no observable contamination of field blanks during sample preparation all batches were deemed passed.

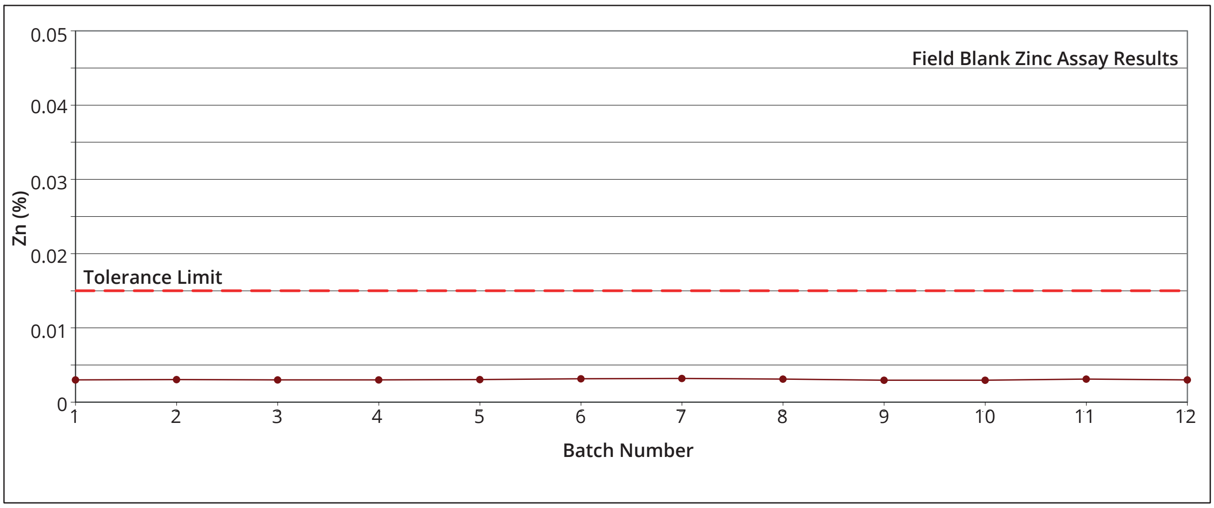

Figure 33: Blank assay results for zinc. Field blanks inserted into 12 batches all assayed 0.0059 and 0.0064% Zn. There was no observable contamination of field blanks during sample preparation all batches were deemed passed.

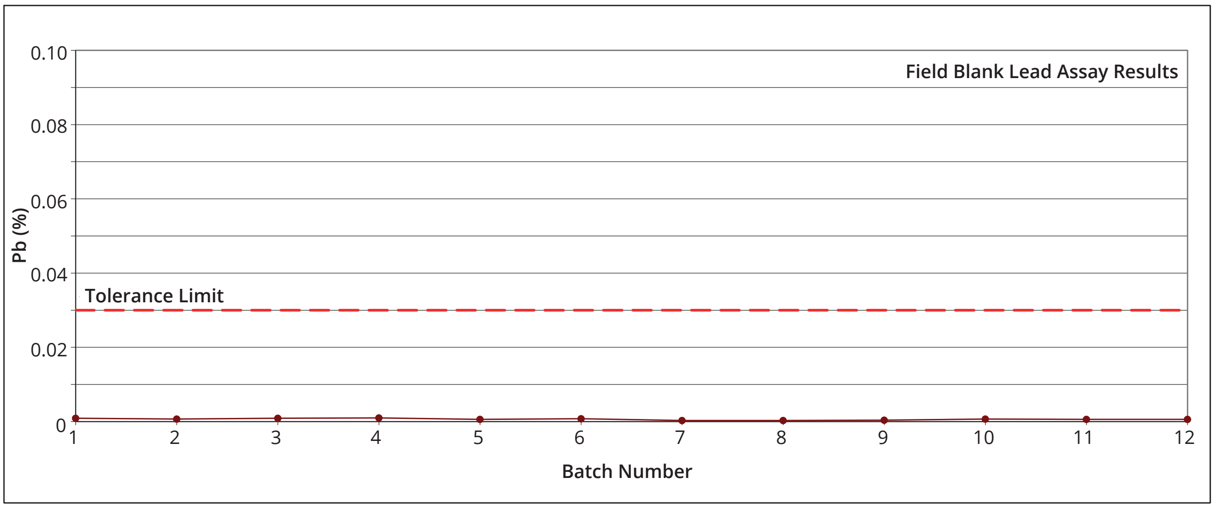

Figure 34: Blank assay results for lead. Field blanks inserted into 12 batches all assayed between 0.0003 and 0.001% Pb. There was no observable contamination of field blanks during sample preparation all batches were deemed passed.

(Figure 34). Assay results for all blanks were extremely low and all batches passed QAQC. There was no indication of cross contamination between samples.

Certified Reference Materials

One Geostats CRM was inserted into every batch of 17 drill core samples. A batch was deemed failed if a single CRM assayed outside of ±3SD (3 standard deviations) or CRM's in two consecutive batches assayed outside of ±2SD. CRM assay results for gold, silver, lead and zinc CRM's were within tolerance limits and all batches passed QAQC.

Three silver-base metal CRM's were used (Geostats GBM 310-2, GBM 915-4 and GBM 313-2) with silver grades — certified for 4 acid total digestion — ranging from 25.7 to 205.5 ppm Ag (Figure 35), zinc grades from 1.00 to 2.07 %, and lead grades from 0.49 to 0.82 %.

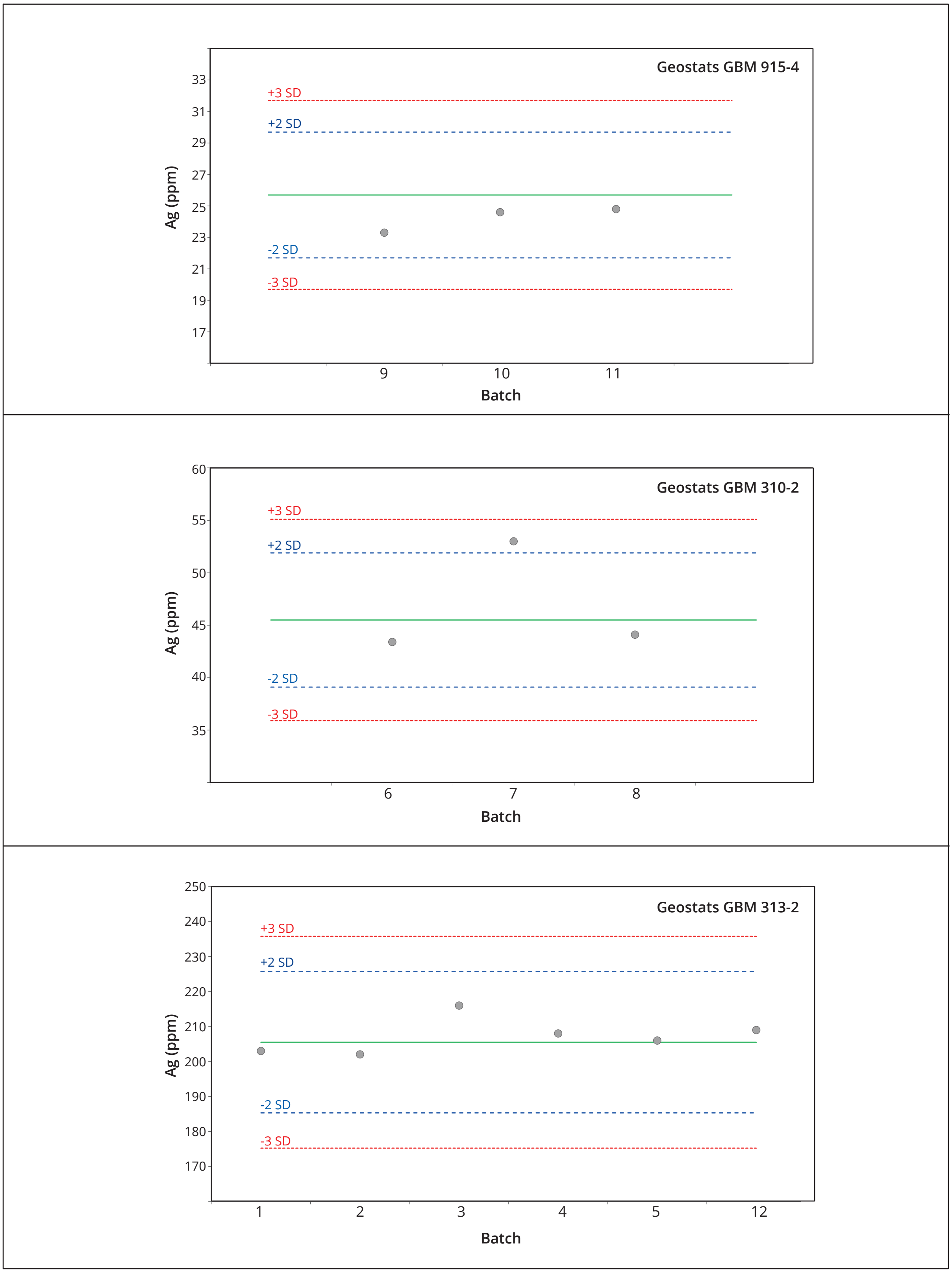

Figure 35: CRM assay results for silver. A batch is deemed failed if one CRM assays outside of ±3 SD — or CRM's in two consecutive batches assay outside ± 2 SD. CRM GBM 915-4 has an average silver grade of 25.7 ppm Ag with a standard deviation of 2.0 ppm Ag; CRM GBM 310-2 has an average silver grade of 45.5 ppm Ag with a standard deviation of 3.2 ppm Ag; CRM GBM 313-2 has an average silver grade of 205.5 ppm Ag with a standard deviation of 10.1 ppm Ag. All batches passed QAQC for silver CRM's.

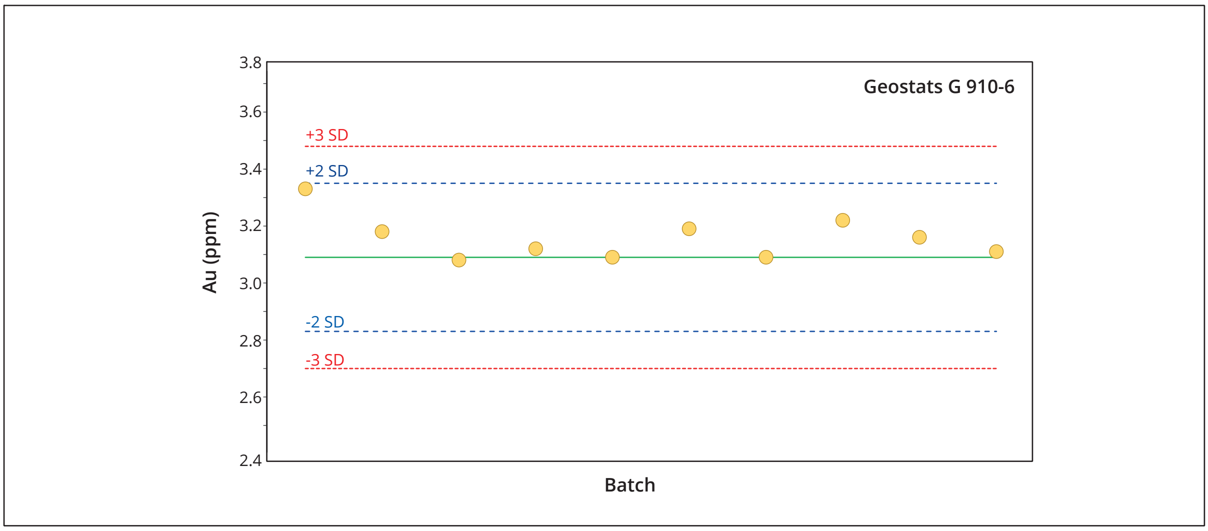

Figure 36: CRM assay results for gold. A batch is deemed failed if one CRM assays outside of ±3 SD — or CRM's in two consecutive batches assay outside ± 2 SD. CRM G 910-6 has an average gold grade — as measured by 50 g Fire Assay — of 3.09 ppm Au with a standard deviation of 0.13 ppm Au. All batches passed QAQC for the gold CRM.

Staged Duplicates

One duplicate was taken from each batch of 17 drill core samples — either a crush duplicate taken from the coarse reject or a pulp duplicate taken from the pulp duplicate, or both — and processed in the same batch and sample stream as the original sample.

X-Y plots of assay results for original samples and their respective crush / pulp duplicates are shown in Figures 37 to 38.

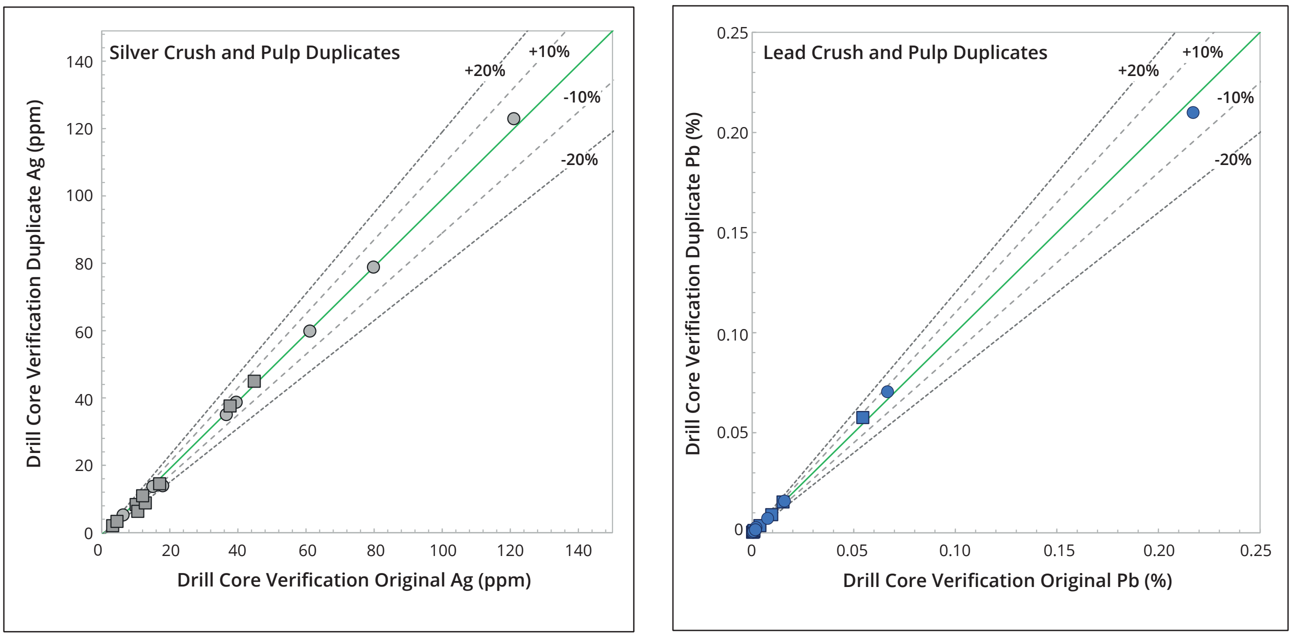

Figure 37: Scatter plots of original grade versus crush duplicate (square) and pulp duplicate (round) for verification drill core samples taken by the Morales-Ramirez. Silver at left and lead at right.

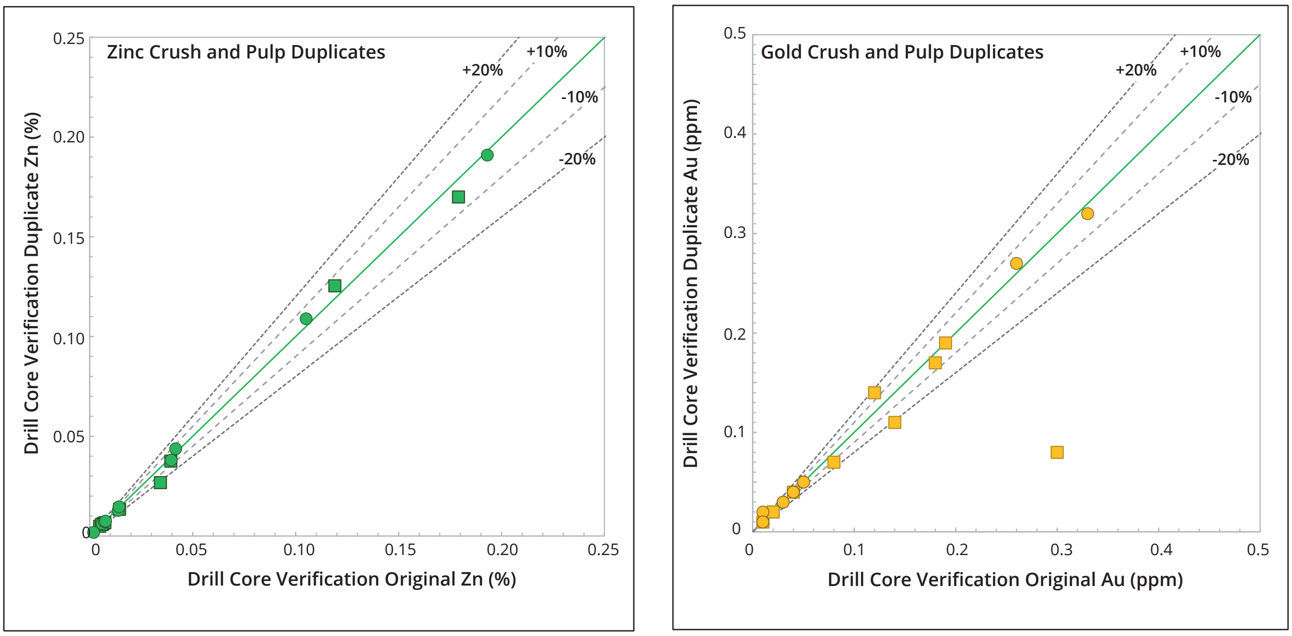

Figure 38: Scatter plots of original grade versus crush duplicate (square) and pulp duplicate (round) for verification drill core samples taken by the Morales-Ramirez. Zinc at left and gold at right.

- Silver (Figure 37), lead (Figure 37) and zinc (Figure 38: graph at left) assays show excellent correlation between original sample and crush / pulp duplicate with most "original-duplicate pairs" plotting within ±10%.

- The correlation between original sample gold assay results and their respective pulp duplicates is good and "original-duplicate pairs" plot within ±10% (Figure 38: graph at right). The correlation between original sample gold assay results and their respective crush duplicate is less tightly constrained and several sample "pairs" plot on or outside ±20% — suggestive of a minor coarse gold component. Morales-Ramirez does not consider this material.

Morales-Ramirez is of the opinion that the precision between original sample and duplicate sample assay results demonstrates appropriate sub-sampling and sample preparation protocol for the type of sample, style of deposit and use of assays results in resource estimation.

10.3.5 Drill Core Verification Sample Assay Results

X-Y scatter plots showing the original drill core assay results of Golden Minerals, and the assay results of verification drill core samples taken by Morales-Ramirez, are presented in Figure 39. Duplicate pairs show significant scatter — to the positive and negative of a "one-to-one" relationship.

Variation of assays results between both halves of the diamond drill core is to be expected in intermediate sulphidation epithermal deposits where lead and zinc sulphide base metal mineralization — and associated silver mineralization — occurs as localized clots and bands.

Scatter is likely to be amplified when a significant period of time has elapsed between the original sampling and later verification sampling. The original sampling by Golden Minerals was completed coincident with drilling — by cutting whole core into equal halves and then sampling one half. When diamond drill core is initially placed in core boxes, lengths of whole core fill the entire core box, restricting movement of the core within the box. Half core that has been stored for over 10 years, may slide up and down each core box partition when boxes are moved, making it more difficult to sample exactly the same intervals as the original half core.

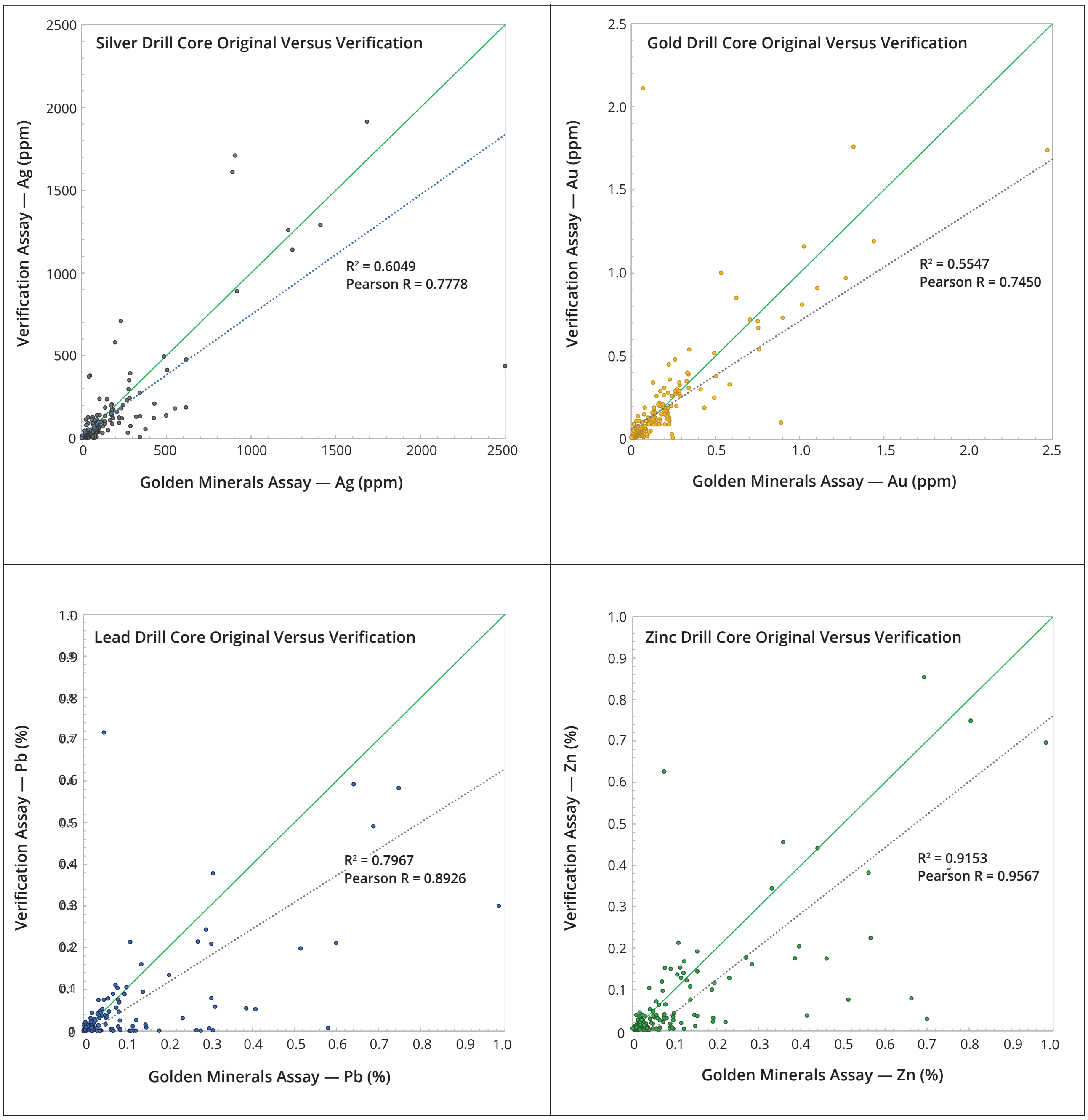

Figure 39: Scatter plots of original Golden Minerals drill core assays results and the assays results for verification half-core samples taken by the Morales-Ramirez.

Verification drill core samples show a slight negative bias as compared to original samples. This is reflected in Pearson R numbers of between 0.7447 and 0.9567 and R^2 values of between 0.5547 to 0.9153 (Figure 39). Two factors may have contributed to slightly lower assay results of verification samples as compared to original drill core assay results: 1) selective removal of high grade half cut core for further study, and 2) mixing of mineralized and unmineralized half-cut core within core boxed partitions as they have been moved over time.

1) Selective removal of mineralized samples from the remaining half core — for specific gravity study, petrology and mineralogical study, and other studies — may result in removal of higher grade samples. Morales-Ramirez noted that only small fragments of half-cut core remained in some boxes consistent with sample removal.

2) It is common practice to mark, cut and sample core to mineral and/or lithological boundaries. However, once the remaining half-cut core has been placed back into the core box, it is common for it to slide within core box partitions, as core boxes are handled and moved. In this manner, pieces of mineralized and unmineralized core may become mixed within a given core box interval, thereby "blurring" mineralogical and lithological boundaries. The net affect of such mixing will be to lower the grade of mineralized intervals and a lift the grade of the immediate wall rock.

Given that the half core used for verification purposes is over 10 years old, that core boxes have been moved during the last ten years and mixing of core within each core box partition may be expected, and that some mineralized samples have likely been taken for further study — Morales-Ramirez is of the opinion that verification sample assay results validate the original assay results of Golden Minerals.

Resampling and reassay of historical core by Morales-Ramirez indicates that the drill core assay results of Golden Minerals are suitable for use in the estimation of a current resource estimate at Panuco.

10.4 2021 Drilling by the Company

During a December 2021 site visit — Morales-Ramirez reviewed the drill core sample security, preparation and assay protocol implemented by the Company for its 2021 drill program. Samples are submitted in batches of 20 comprising 17 drill core samples, a field blank, one CRM and either a crush or pulp duplicate. Morales-Ramirez notes that industry standard Best Practice and QAQC is followed.

10.4.1 Sample Security

Rock chip and drill core samples collected by Company geologists are placed in individually numbered plastic sample bags, sealed with a single use clip-lock seal, and delivered to the ALS Laboratory in Zacatecas. Chain of custody is maintained by the Company until samples are submitted — ensuring sample validity and integrity.

10.4.2 Sample Preparation

Samples were prepared by ALS Zacatecas (ALS code PREP-31b). Samples were dried to 110°C, weighed and crushed in a single pass to a nominal 70% passing 2 mm in a jaw-crusher. A 1 kg sub-sampled was taken using a Jones-style riffle splitter and pulverised in a single-pass "bowl and puck" to a nominal 85% passing 75 microns.

Morales-Ramirez is satisfied that the sample preparation and sub-sampling protocol used by the Company is appropriate for the style of mineralization and the stage of exploration.

10.4.3 Sample Analysis

Samples were analysed by ALS Loughrea (Ireland). Gold was analysed by fire assay with atomic absorption finish using a 50 g sample charge (ALS code Au-AA26) — with a reportable range of 0.01-100 ppm Au.

Samples were also submitted for 33 element analysis by ICP-AES following a 4 acid digest — with reportable ranges silver (0.01 to 100 ppm), lead (2 to 10,000 ppm or 0.0002 to 1%), zinc (2-10,000 ppm) and copper (1-10,000 ppm Cu). Over-range samples were resubmitted for analysis using a four acid digest and ICP-AES finish with the following ranges: Ag 1-1500 ppm (Ag-OG62), lead 0.001-20% (Pb-OG62), zinc 0.001-30% (Zn-OG62) and Cu 0.001-40% (Cu-OG62).

Morales-Ramirez is of the opinion that the analytical protocol is appropriate for the style and grade of mineralization and the type of samples submitted for analysis.

10.4.4 QA/QC & Laboratory Performance

The Company has implemented a QA/QC program comprising the routine insertion of one field blank, one certified reference material (CRM), and either one crush or one pulp duplicates with every 17 drill core samples — to give a batch of 20 drill core and QAQC samples in total. Each batch was treated as a single entity and all 20 samples were prepared and analysed at the same time in the same sample run. The protocol follows industry-recognized standards of best practice.

Field Blanks

A field blank — comprising a 2 to 3 kg rock chip sample — was inserted into every batch of 17 samples. Tolerance limits were set at 5 ppm g/t Ag (Figure 40), 0.05 g/t Au (Figure 41), and 0.03% Pb and 0.015% Zn. Assay results for all blanks were extremely low and all batches passed QAQC. There was no indication of cross contamination between samples.

Certified Reference Materials

Due to COVID restrictions the Company did not receive CRMs in time for batch submission — ALS was asked to insert one gold standard. Given that ALS is an internationally-recognized ISO accredited laboratory — Morales-Ramirez is of the opinion that CRM gold assay results will reflect laboratory accuracy.

The gold CRM from the first batch assayed outside of ±3 SD and is deemed a fail — although this is not material as all assays within this batch were of a low tenor. Gold CRM assays results for all other batches were with tolerance limits (±2 SD) (Figure 42) and all batches were deemed passed.

Morales-Ramirez has discussed the lack of a silver-base metal standard. To remedy this — the Company will submit 10% of pulp rejects to an independent laboratory in batches of 20 with a suitable silver-base metal CRM.

Staged Duplicates

One duplicate — either a crush duplicate taken from the coarse reject or a pulp duplicate taken from the pulp duplicate, or both — was taken from each batch of 17 samples and processed in the same batch and sample stream as the original sample.

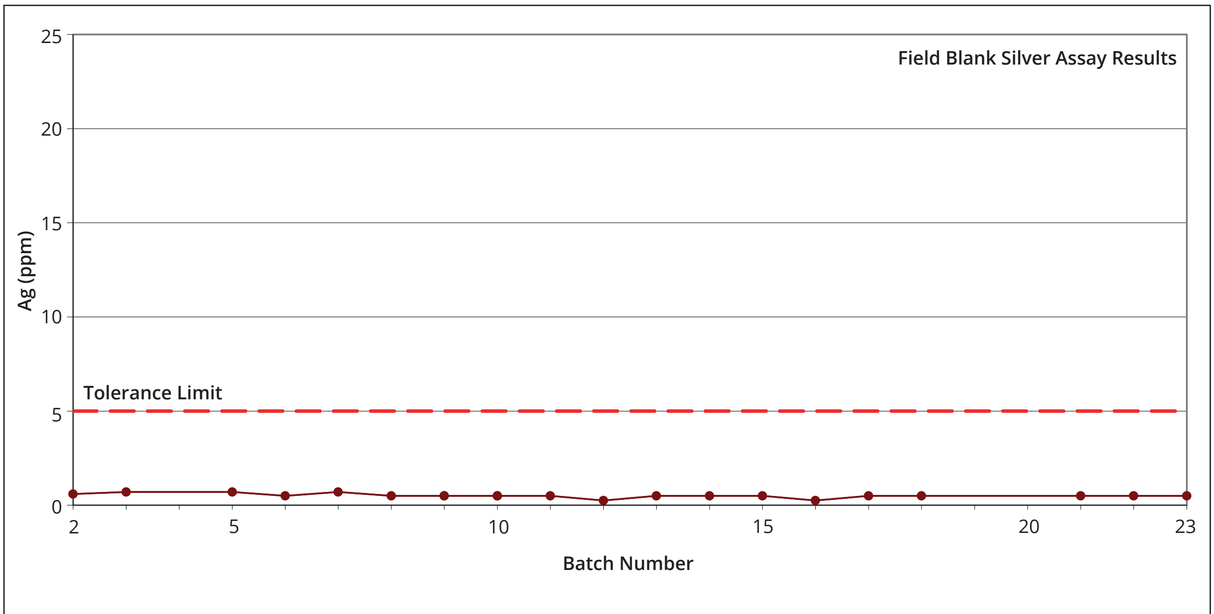

Figure 40: Blank assay results for silver. Field blanks inserted into 22 batches all assayed below 5 ppm Ag. There was no observable contamination of field blanks during sample preparation all batches were deemed passed.

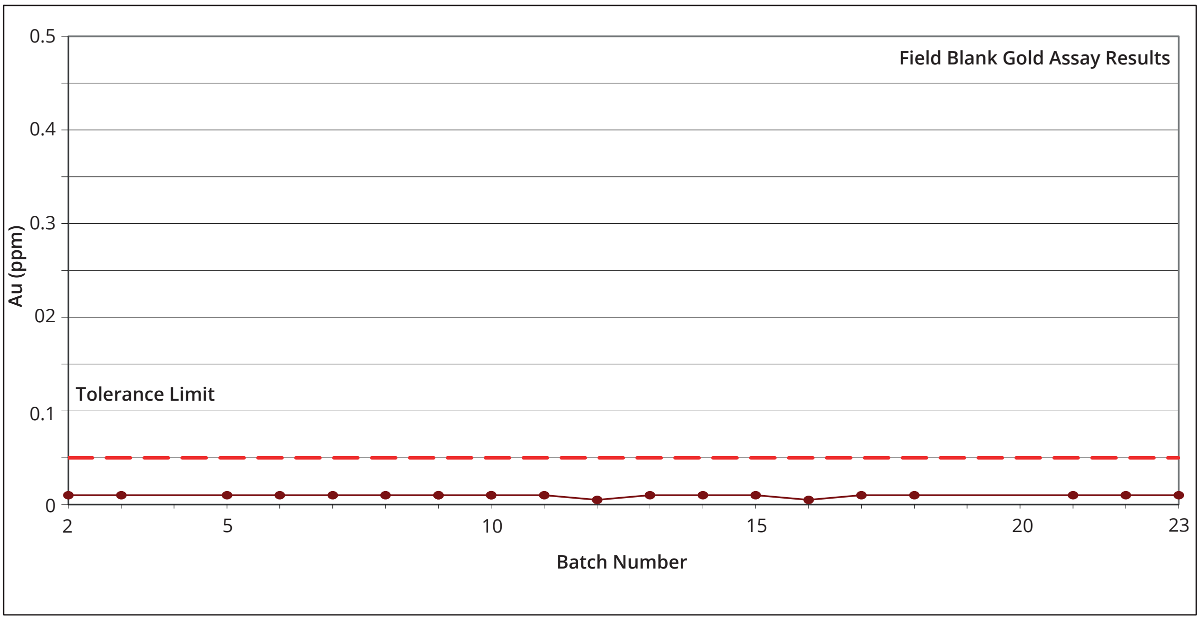

Figure 41: Blank assay results for gold. Field blanks inserted into 23 batches all assayed below 0.5 ppm Au. There was no observable contamination of field blanks during sample preparation all batches were deemed passed.

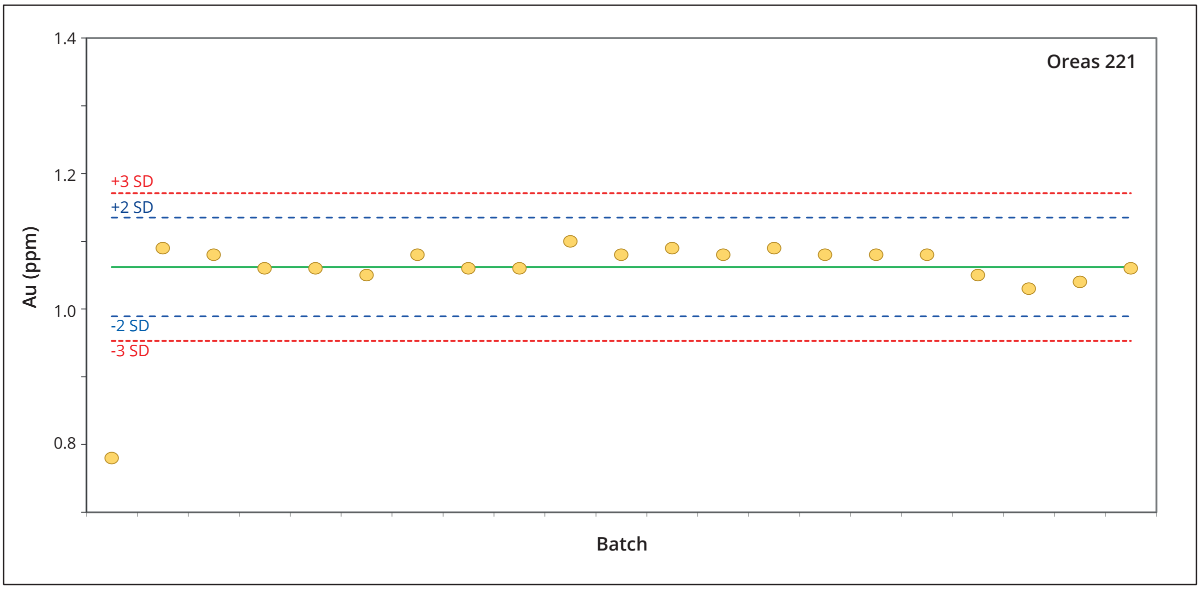

Figure 42: CRM assay results for gold. A batch is deemed failed if one CRM assays outside of ±3 SD — or CRM's in two consecutive batches assay outside ± 2 SD. CRM Oreas 221 has an average gold grade — as measured by 50 g Fire Assay — of 1.062 ppm Au with a 2 standard deviation low of 0.989 ppm and high of 1.135 Au. Batch No. 1 failed QAQC — all other batches passed QAQC for the gold CRM.

X-Y plots of assay results for original samples and their respective crush / pulp duplicates are shown in Figures 43. Silver shows an excellent correlation with all samples assaying within ±20%. There is a slight scatter with gold, lead and zinc — this is not deemed material given scatter is at low grade. This is to be expected with intermediate sulphidation style mineralization.

Morales-Ramirez is of the opinion that the overall precision between original sample assay results and respective duplicate demonstrates appropriate sub-sampling and sample preparation protocol for the type of sample, style of deposit and use of assays results in resource estimation.

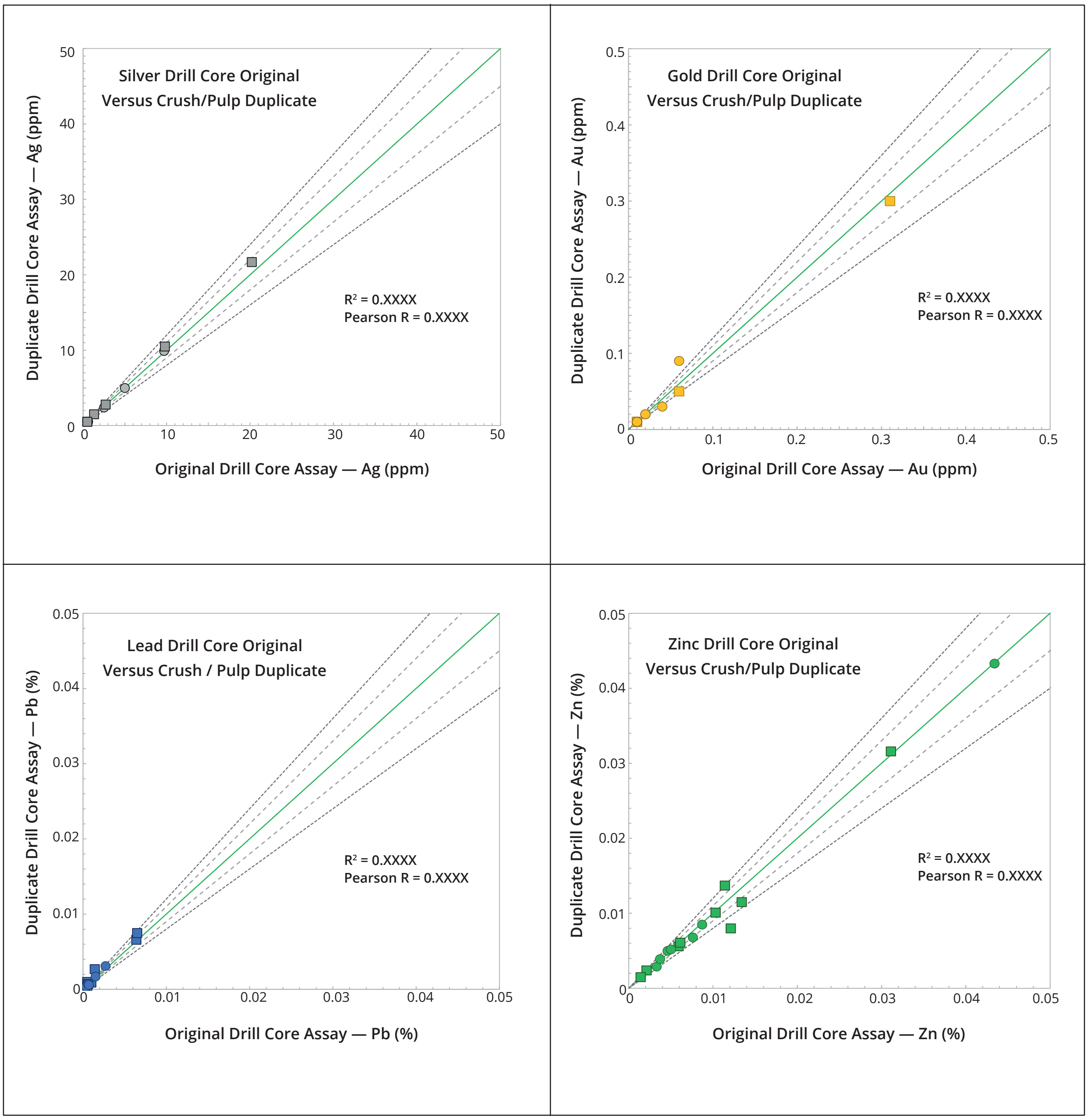

Figure 43: Scatter plots of original grade versus crush duplicate (square) and pulp duplicate (round) for 2021 drill core samples taken by the Company.

11 Data Verification

In addition to verification of all data in the technical report (excluding Section 12: Mineral Processing and Metallurgical Testing and Section 13: Mineral Resource Estimates — which was verified by the respective Authors), Morales verified in detail, 1) the assay results of Golden Minerals by re-sampling select intervals of historical core, and 2) the drilling, core handling, sampling and assay protocol implemented by the Company with respect to the 2021 diamond drill program.

11.1 General Verification

Morales-Ramirez used the Worldview 3 satellite base image over-printed with Property boundaries to verify a number of the concession corner coordinates in the field. Morales-Ramirez is satisfied that the Property boundaries coincide with the geographic field area covered in this report.

Access agreements with the Panuco as set out in Section 3:10 were reviewed. Morales-Ramirez confirms that access has been granted consistent with the representations of the Company.

Morales-Ramirez reviewed the permissions granted by SEMARNAT with respect to current drilling programs and confirms that permission has been granted consistent with the representations of the Company.

Verification by Morales-Ramirez confirms that the historical data and assays results of Golden Hill are reasonable and are accurate representation of mineralization at Panuco. The author considers the database and assays results to be without bias and appropriate for use in estimation of an inferred mineral resource.

With the exception of missing silver-base metal CRM's — which has been addressed – Morales-Ramirez considers that the drilling core recovery, drill core handling, core logging and sampling, and assay protocol implemented by the company, has resulted in data that accurately represents the mineralization drilled by the Company. The Author considers that survey data and assay results is accurate, precise and without bias.

Morales-Ramirez is not aware of any database or data issues — either historical or current — that may materially affect the current inferred resource estimation, or inclusion in future such studies.

11.2 Verification Re-sampling of Historical Drill Core

Morales-Ramirez conducted extensive verification of all facets of the historic dataset to ensure that the historical data and diamond drill core assay results of Golden Minerals are suitable for the use in estimation of the current mineral resource at Panuco. Specifically:

Morales-Ramirez notes that the Company engaged an independent surveyor to re-survey all historical Panuco drill collars and 10 historical collars at El Cristo and San Manuel-San Gil. Re-surveyed collar locations were used in the current Inferred Mineral Resource estimate at Panuco.

Morales-Ramirez was unable to verify historical downhole survey data. However, plots of drill hole traces and drill hole cross sections show hole deviation typical of that expected. The Author has no reason to doubt the validity of the downhole survey database.

Morales-Ramirez cross-checked approximately 20% of the historical Panuco assay database against original ALS assay certificates — there were no mismatched or incorrect assay entries. Morales-Ramirez also cross-checked a number of geological logs against remaining the half-cut core and the geological database — the Author is satisfied that drill core lithology and mineralization was correctly logged and entered into the database

Morales-Ramirez collected 214 half-cut drill core samples from historical Golden Hills core — ensuring that verification sample intervals matched those of the original. Of these — a total of 157 samples were taken from historical drill core intervals used in the Panuco resource estimation — representing approximately 8% of the resource drill core dataset. Morales-Ramirez is of the opinion that a sufficient number of drill core samples were taken to validate the drill assay database used in the Panuco resource estimation.

All samples submitted for assay by Morales-Ramirez were assigned a sequential number and placed in a clearly labelled plastic bag. Bags were sealed with a single use clip-lock seal. Morales-Ramirez delivered the samples direct to the ALS sample preparation facility in Zacatecas and are satisfied that appropriate chain of custody was maintained at all times at Panuco.

Sample preparation was completed by ALS Zacatecas using standard industry protocol. Samples were crushed in a single stage jaw crusher, sub-samples using a Jones-style riffle splitter, and pulverized in a standard LM2. Morales-Ramirez requested that the crusher and pulveriser be cleaned with a barren wash between each sample.

Sample pulps were assayed at ALS Loughrea (Ireland) which is an internationally-recognised, ISO-rated (ISO 17025) laboratory, that employs stringent internal checks and QA/QC protocols, and meets the standards required for the analysis of drill core samples taken to verify an historic assay dataset.

Morales-Ramirez dispatched samples in batches of 20 — comprising 17 samples, one Geostats CRM (Certified Reference Material) of appropriate grade and matrix type, one field blank and one staged (either crush or pulp) duplicate. All batches passed QAQC with appropriate precision and accuracy.

X-Y scatter plots of the original drill core assay results of Golden Minerals, and assay results of verification drill core samples taken by Morales-Ramirez, show significant scatter — to the positive and negative of a “one-to-one” relationship.

Verification drill core samples show a slight negative bias as compared to original samples. Given that the half core sampled for verification purposes is over 10 years old, that core boxes have been moved during the last ten years potentially resulting in mixing of mineralized and unmineralized core intervals, and that mineralized samples have likely been taken for further study — Morales-Ramirez is of the opinion that verification sample assay results validate the original Golden Minerals assay results.

Morales-Ramirez is of the opinion that the drill hole information and sample database of Golden Minerals are a reasonable and accurate representation of the mineralization at Panuco, and that both are of sufficient quality, to support an Inferred Mineral Resource estimation.

11.3 Verification of Company Drill Program

Morales-Ramirez completed detailed verification of the Company’s 2021 drill program during a December 2021 site visit. Specifically:

Morales-Ramirez notes that the Company sites the drill rig using a hand held GPS — but that collar locations are then accurately surveyed by an independent surveyor.

Drilling is conducted in either PQ or HQ diameter double tube and core recoveries are generally better than 98% — including across mineralized intervals.

Downhole surveys are conducted using a REFLEX EZ-TRAC™ at 15 m downhole and thereafter every 50 metres – per industry recognized best standard.

- Drill core is placed into Plastic Corrugated drill core boxes labelled with Hole ID, sequential box number, and from to depths in metres. A wooden core block of same dimensions as the core partitions is placed at the end of each "core-run" — the downhole depth is written onto the core block after each run.

- Core from each run is fitted together and marked length-parallel along a centre-line as a guide for core cutting. Lines are also marked normal to long core axis to denote breaks between adjacent sample intervals.

- Geotechnical core logging and core recovery calculation is conducted at the drill rig. Core is then transferred to the Company's core logging facility for cutting, sampling and detailed logging.

- Morales-Ramirez cross-checked a number of Company geotechnical and geological logs — core logs are a reasonable and accurate reflection of geology and mineralization. Sample intervals correctly reflect styles and widths of mineralization.

- Core sampling and chain of custody, and sample preparation and analysis, follow industry-recognized standards of best practice. Samples are prepared at ALS Zacatecas and assayed at ALS Ireland. Samples are dispatched in batches of 20 with appropriate QAQC.

- Morales-Ramirez checked assay results for field blanks and staged duplicates and notes that all batches passed QAQC. Morales-Ramirez noted that due to COVID issues the Company did not received CRM's in time to insert into sample batches. Whilst this is not ideal — the Company has taken steps to verify the accuracy of assays by submitting 10% of sample pulps to another laboratory for assay.

Morales-Ramirez is of the opinion that the current drill program is being conducted to a high standard and that core logging, sampling, chain of custody, and sample preparation and assay protocol, follow industry-recognized standards of best practice that are appropriate for the type of deposit, style of mineralization and stage of the project. Morales-Ramirez further considers that core mark-up and sampling is being conducted in an appropriate manner — ensuring that samples are representative of the style of mineralization and deposit.

12 Mineral Processing and Metallurgical Testing

This section summarizes the scoping level testwork completed by SGS Lakefield Canada on one master composite sample from the Panuco deposit. The Author responsible for this section is Keane.

12.1 Head Sample Chemical Characterization

One master composite sample was prepared from the Panuco deposit. The sample head grades are shown in Table 6.

Au (g/t)	Ag (g/t)	Pb (%)	Zn (%)	S (% calc.)
0.25	169	0.14	0.41	4.34

Table 6: Master Composite Head Grade.

12.2 Head Sample Mineralogy

The sample was submitted for QEMSCAN and XRD analysis. The sample consisted of mainly quartz (46.8%) and moderate amounts of dolomite (13.5%) and micas (12.9%). Other gangue minerals in minor and trace levels included: K-feldspar (5.3%), plagioclase (0.77%), amphibole/pyroxene (3.4%), chlorite/clays (2.34%), calcite (3.3%), and ankerite (1.2%). Sulphides accounted for about 9.3% of the sample and consisted of pyrite (7.1%), sphalerite (0.66%), arsenopyrite (1.34%), and galena (0.15%). Chalcopyrite and other sulphides were trace. Liberation of the pyrite, sphalerite, and galena was reasonable at ~80%, 87%, and 96% respectively. Arsenopyrite liberation was low at 54%.

12.3 Gravity Separation Testing

The sample was ground in a laboratory rod mill to a P80 of 90 µm. The mill discharge was passed through a Knelson MD-3 gravity concentrator collecting a Knelson concentrate and tailings. The Knelson concentrate was upgraded on a Mozley Mineral Separator. The Mozley concentrate was submitted for gold and silver analysis by fire assay to extinction. The combined Knelson and Mozley tailings were submitted for duplicate gold assay. Only 14.9% of the gold and 2.3% of the silver reported to the Mozley concentrate. Given this fact, it is recommended that gravity not be included in the processing flowsheet. The gravity separation test results are provided in Table 7.

		Assays (g/t)		Distribution (%)	
Product	%	Au	Ag	Au	Ag
Mozley Concentrate	0.3	19.8	1505	14.9	2.3
Combined Gravity Tailings	99.7	0.29	161	85.1	97.7
Calculated Head	100.0	0.34	164	100.0	100.0
Direct Head		0.25	169		

Table 7: Gravity Separation Test Results

12.4 Flotation Testing

12.4.1 Rougher Kinetics

Two flotation flowsheets were investigated by SGS: a bulk flowsheet (Figure 44) and a sequential flowsheet (Figure 46).

12.4.2 Bulk Flowsheet

The bulk flowsheet (Figure 44) produces a single bulk gold, silver, lead, zinc rougher concentrate. A single test was conducted using soda ash as pH modifier, copper sulphate (sulphide activator), potassium amyl xanthate (sulphide collector), Aero 241 (dithiophosphate promoter) and methyl isobutyl carbinol (frother). Timed concentrate samples were collected and assayed to monitor recoveries (Table 8). Test results are illustrated with respect to gold and silver performance in Figure 45.

Gold, silver, lead and zinc recoveries were all greater than 90% after 15 minutes of flotation and with 23% mass pull.

12.4.3 Sequential Flowsheet

A sequential flotation flowsheet was applied to the Master Composite to produce separate lead, zinc, and pyrite concentrates. Tests were conducted using soda ash or sulphuric acid as pH modifiers, copper sulphate (sulphide activator), potassium amyl xanthate (sulphide collector), Aero 241 (dithiophosphate promoter), in the lead circuit, Aero 5100 (allyl alkyl thionocarbamate promoter) in the zinc circuit, and methyl isobutyl carbinol (frother).

Timed concentrates were collected and assayed. Tests with various reagent schemes and one test with a bulk rougher followed by lead and zinc separation were completed. The test, with the highest grades and recoveries, results are given in Table 9 and the flowsheet with reagent additions is shown in Figure 46.

It should be noted that, in the absence of financial model drives, results which are deemed "the best" overall are difficult to define and will depend on metal prices, processing costs, transportation costs, treatment costs, payment terms and other factors influencing the overall profitability.

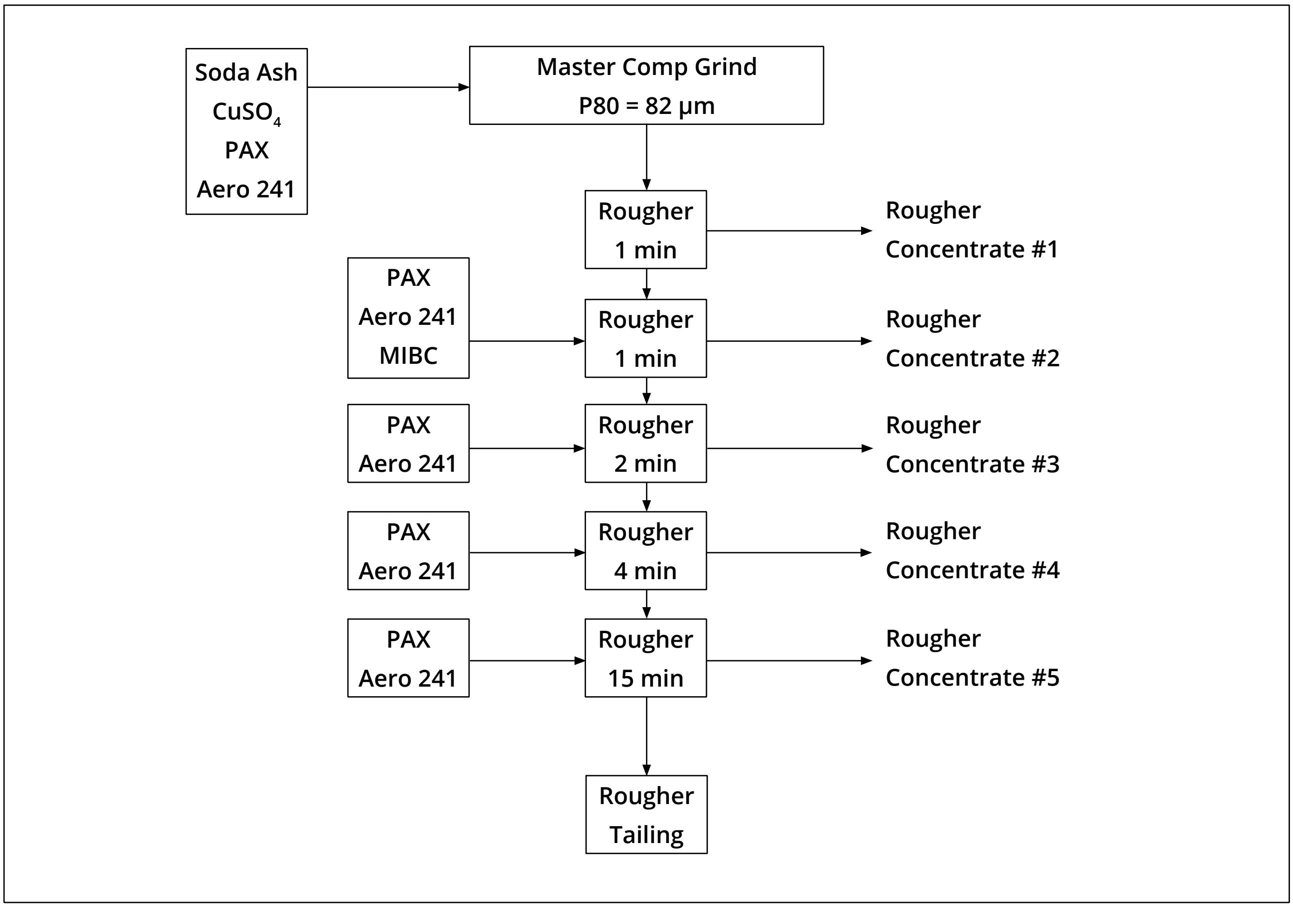

Figure 44: Bulk Flowsheet.

Test No. F1 - P_{80} 82 μm												
Reagents (g/t)		Product	Mass (%)	Assay (g/t Au, Ag and % Pb, Zn)				Distribution (%)			
				Au	Ag	Pb	Zn	Au	Ag	Pb	Zn
Soda Ash	1000	Rougher Conc 1 min	3.1	1.94	1863	1.87	4.78	25.5	35.1	40.3	37.7
CuSO4	150	Rougher Conc 2 min	8.3	1.47	1162	1.09	2.89	51.5	57.7	61.8	60.1
PAX	100	Rougher Conc 4 min	12.8	1.30	959	0.86	2.37	69.6	73.7	75.5	76.1
AERO 241	50	Rougher Conc 8 min	18.8	1.12	801	0.69	1.96	88.0	90.4	88.7	92.4
MIBC	30	Rougher Conc 15 min	23.0	**0.97**	**697**	**0.58**	**1.67**	**93.6**	**96.2**	**92.1**	**96.5**
		Rougher Tailing	77.0	0.02	8	0.015	0.018	6.4	3.8	7.9	3.5
		Head (calculated)	100	0.24	167	0.15	0.40	100	100	100	100
		Head (direct)		0.25	169	0.14	0.41				

Table 8: Rougher kinetics bulk flowsheet test results summary

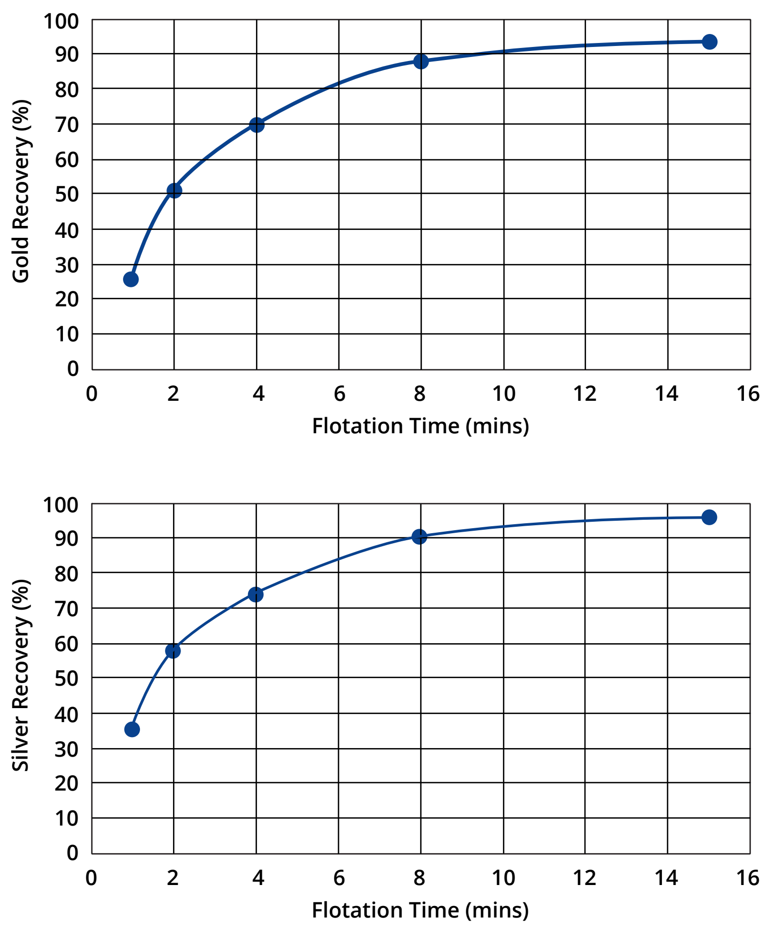

Figure 45: Bulk flowsheet rougher flotation kinetics.

A lead-silver rougher concentrate was produced grading 2420 g/t Ag, 2.55% Pb, and 0.64% Zn and recovering 71.9% of the silver and 87.5% of the lead. The zinc concentrate grade was 2.19% Zn and 190 g/t Ag, recovering 82.0% of the Zn. A pyrite concentrate recovered 47.8% of the gold and an additional 6.5% of the silver in 18.3% of the global mass.

12.5 CLEANER FLOTATION

Two open circuit cleaner tests were completed on the sample with slight adjustments in reagent addition strategies between the two tests. The sequential flowsheet with reagent additions is shown in Figure 47.

In Test F7 (Table 10) a high-grade lead-silver concentrate (with a grade of 37,869 g/t Ag and 50.7% Pb) and a gold-silver-pyrite concentrate were produced. The zinc concentrate grade was 47.4% with 39.3% recovery. Figure 48 shows the linear relationship between lead recovery and silver recovery to the lead concentrate.

Test No. F5 - P_{80} 63 µm

Reagents (g/t)		Products	Mass (%)	Assay (g/t Au, Ag and % Pb, Zn, S)					Distribution (%)				
				Au	Ag	Pb	Zn	S	Au	Ag	Pb	Zn	S
Soda Ash	2000	Pb Rougher Conc 1	1.3	1.28	4299	5.63	0.80	6.52	5.9	33.9	51.2	2.5	1.9
$ZnSO_4$	200	Pb Rougher Conc 1-2	2.6	0.90	3098	3.76	0.69	5.65	8.5	50.4	70.6	4.5	3.4
NaCN	70	Pb Rougher Conc 1-3	3.6	0.88	2787	3.17	0.67	5.42	11.4	61.9	81.1	5.9	4.4
AERO 241	12.5	**Pb Rougher Conc 1-4**	**4.8**	**0.77**	**2420**	**2.55**	**0.64**	**5.17**	**13.4**	**71.9**	**87.5**	**7.7**	**5.6**
		Pb Rougher Tails	95.2	0.25	48	0.018	0.39	4.40	86.6	28.1	12.5	92.3	94.4
$Ca(OH)_2$	1500	Zn Rougher Conc 1	1.5	0.35	776	0.12	2.58	4.89	1.9	7.0	1.3	9.3	1.6
$CuSO_4$	40	Zn Rougher Conc 1-2	6.3	0.27	343	0.076	2.96	5.17	6.0	13.4	3.4	46.0	7.4
5100	45	Zn Rougher Conc 1-3	8.4	0.25	293	0.070	3.04	5.20	7.7	15.2	4.2	62.8	9.9
MIBC	7.5	Zn Rougher Conc 1-4	10.8	0.24	248	0.062	2.77	5.06	9.5	16.4	4.7	73.3	12.3
		Zn Rougher Conc 1-5	**15.3**	**0.35**	**190**	**0.050**	**2.19**	**6.07**	**18.9**	**17.8**	**5.4**	**82.0**	**20.9**
		Zn Rougher Tails	4.5	4.21	373	0.22	0.94	72.9	67.6	10.3	7.1	10.3	73.5
H_2SO_4	600	Py Rougher Conc 1	3.0	0.94	68	0.021	0.36	22.0	10.2	1.3	0.5	2.7	15.0
PAX	70	Py Rougher Conc 1-2	9.3	0.97	76	0.024	0.29	23.8	32.3	4.3	1.6	6.7	49.8
MIBC	5	Py Rougher Conc 1-3	13.1	0.89	68	0.024	0.25	21.4	42.1	5.5	2.2	8.0	63.3
		Py Rougher Conc 1-4	15.5	0.83	63	0.022	0.22	19.4	45.8	6.0	2.5	8.4	67.5
		Py Rougher Conc 1-5	**18.3**	**0.73**	**57**	**0.021**	**0.20**	**16.9**	**47.8**	**6.5**	**2.7**	**8.8**	**69.8**
		Py Rougher Tails	61.6	0.09	<10	<0.01	<0.01	0.27	19.9	3.8	4.4	1.5	3.8
		Head (calc)	100.0	0.28	163	0.14	0.41	0.44	100.0	100.0	100.0	100.0	100.0
		Head (direct)		0.25	169	0.14	0.41						

Table 9: Sequential rougher kinetics test results summary

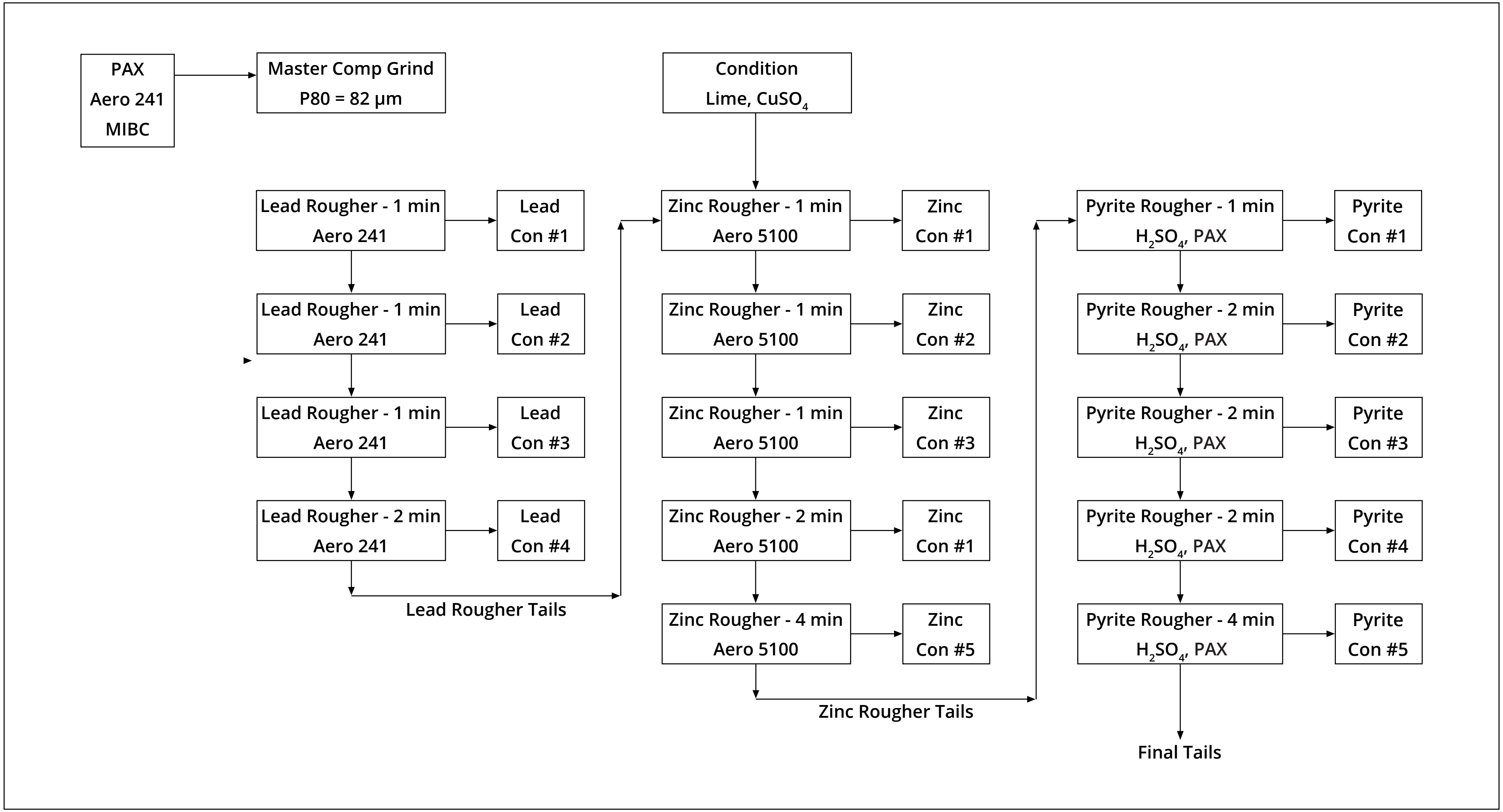

Figure 46: Rougher kinetics sequential flotation flowsheet.

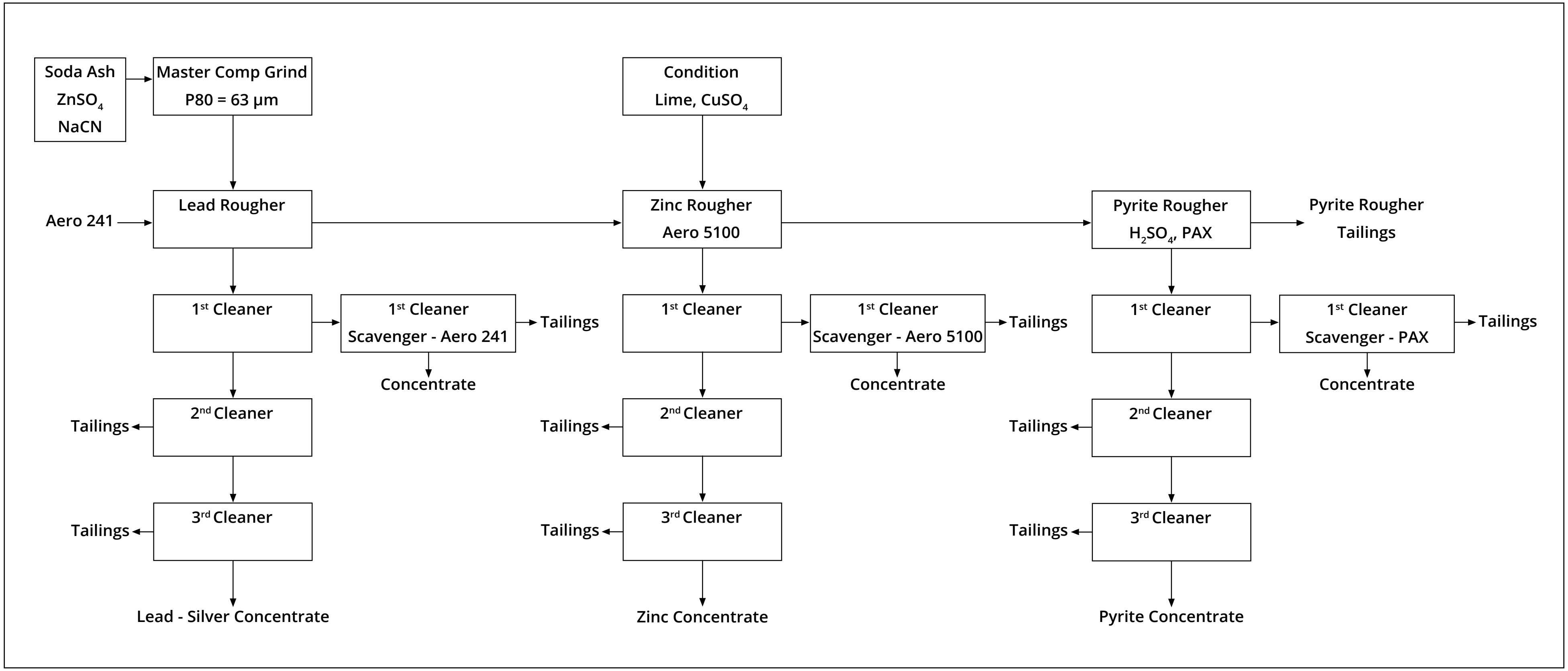

Figure 47: Cleaner sequential flotation flowsheet.

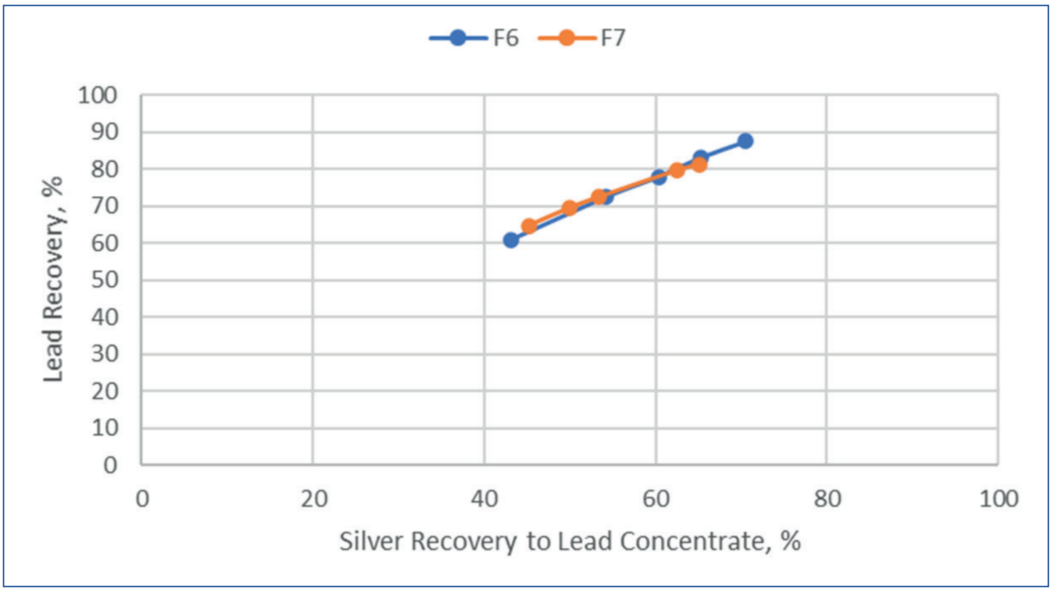

Figure 48: Silver Recovery to Lead Concentrate.

12.6 FUTURE TESTWORK RECOMMENDATIONS

Further testing should include the following;

- Leaching of the whole ore;
- Leaching of a bulk concentrate;
- Flotation testwork at a coarser primary grind with lead and zinc circuit regrinds to 30-50 microns;
- Locked cycle flotation testing to recycle middlings with the goal of improved recoveries;
- Locked cycle testing should be complemented by mineralogical characterization of the tailings and concentrate streams to assess the nature of the value metal losses and concentrate diluents;
- Leaching of the zinc rougher tailings;
- Leaching of the gold-silver-pyrite concentrate;
- Arsenic and other deleterious elements should be tracked for marketing purposes.

Float Test No.	Conditions/ Comments	Reagents	g/t	Product	Mass %	Assays, g/t, %					% Distribution					Stage % Rec'y Zn
						Au	Ag	Pb	Zn	S	Au	Ag	Pb	Zn	S	
F6	Scoping	Lead Circuit		**Pb 3rd Clnr Conc**	**0.2**	**6.58**	**36666**	**45.8**	**3.27**	**22.0**	**5.38**	**43.2**	**60.8**	**1.52**	**0.94**	---
	Cleaner Test	Soda Ash	2000	Pb 2nd Clnr Conc	0.3	4.81	25770	30.5	2.68	18.6	7.04	54.2	72.4	2.24	1.42	---
	F5 Rougher	ZnSO4	200	Pb 1st Clnr Conc	1.0	1.85	9219	10.6	1.34	9.23	8.39	60.3	78.0	3.47	2.20	---
	Conditions	NaCN	70	Pb 1st Clnr + Scav Conc	1.4	1.53	7396	8.3	1.26	8.19	9.38	65.3	83.2	4.39	2.63	---
		Aero 241	12.5	Pb Ro Conc	6.4	0.48	1750	1.92	0.58	4.38	13.3	70.5	87.5	9.25	6.42	---
		CMC	15	Pb Ro Tail	93.6	0.21	50.4	0.02	0.39	4.39	86.7	29.5	12.51	90.7	93.58	---
		Zinc Circuit		**Zn 3rd Clnr Conc**	**0.4**	**2.46**	**4444**	**0.79**	**37.9**	**25.4**	**4.05**	**10.5**	**2.11**	**35.6**	**2.19**	60.8
		Lime	2075	Zn 2nd Clnr Conc	0.7	1.64	2713	0.51	23.9	17.6	4.80	11.4	2.44	39.9	2.69	68.2
		CuSO4	40	Zn 1st Clnr Conc	2.3	0.73	1102	0.23	9.44	8.92	7.15	15.6	3.68	52.8	4.58	90.3
		5100	75	Zn 1st Clnr + Scav Conc	2.6	0.69	1010	0.22	8.77	8.74	7.92	16.6	4.05	57.2	5.24	97.8
		MIBC	7.5	Zn Ro Conc	5.7	0.42	491	0.11	4.15	5.77	10.4	17.5	4.44	58.5	7.47	---
				Zn Ro Tail	87.9	0.20	21.8	0.013	0.15	4.30	76.2	12.0	8.07	32.3	86.1	---
		Pyrite Circuit		**Py 3rd Clnr Conc**	**6.7**	**1.97**	**138**	**0.040**	**1.64**	**45.6**	**57.7**	**5.82**	**1.90**	**27.4**	**69.9**	---
		H2SO4	600	Py 2nd Clnr Conc	7.2	1.45	123	0.046	0.70	28.6	60.5	6.16	2.05	28.1	72.8	---
		PAX	80	Py 1st Clnr Conc	7.8	0.77	78.4	0.038	0.31	15.3	62.7	6.47	2.22	28.6	75.0	---
		MIBC	5	Py 1st Clnr + Scav Conc	8.4	0.94	114	0.042	0.63	20.7	64.9	6.87	2.38	29.5	77.7	---
				Py Ro Conc	10.3	0.14	23.6	0.015	0.053	2.76	66.1	7.16	2.59	29.8	78.9	---
				Py Ro Tail	77.6	0.03	10.0	0.010	0.013	0.41	10.1	4.86	5.48	2.50	7.24	---
				Head (calc)	100.0	0.23	160	0.14	0.40	4.39	100.0	100.0	100.0	100.0	100.0	---
				Head (direct)		0.25	169	0.14	0.41							---
F7	As F6 except	Lead Circuit		**Pb 3rd Clnr Conc**	**0.2**	**12.80**	**37869**	**50.7**	**3.93**	**20.5**	**8.9**	**45.2**	**64.6**	**1.7**	**0.8**	---
	1) Aero 241 in	Soda Ash	2000	Pb 2nd Clnr Conc	0.2	10.44	31683	41.2	3.57	18.7	9.6	50.0	69.5	2.0	1.0	---
	Pb 1st cleaner	ZnSO4	200	Pb 1st Clnr Conc	0.5	5.37	16278	20.7	2.21	11.61	10.2	53.4	72.5	2.6	1.3	---
	2) Increased	NaCN	70	Pb 1st Clnr + Scav Conc	0.8	3.61	11323	13.5	1.82	9.24	11.6	62.5	79.6	3.6	1.7	---
	CuSO4 in	Aero 241	17.5	Pb Ro Conc	2.5	1.33	3868	4.52	0.91	5.60	13.0	65.2	81.3	5.6	3.1	---
	Zn rougher			Pb Ro Tail	97.2	0.22	45.4	0.02	0.23	4.38	84.9	29.8	14.7	55.2	94.5	---
	3) Omit CMC	Zinc Circuit		**Zn 4th Clnr Conc**	**0.3**	**1.54**	**2218**	**1.62**	**47.4**	**31.6**	**2.0**	**5.1**	**4.0**	**39.3**	**2.4**	46.7
		Lime	1800	Zn 3rd Clnr Conc	0.5	1.77	2425	1.44	42.1	29.3	3.3	7.7	4.9	48.6	3.1	57.7
		CuSO4	50	Zn 2nd Clnr Conc	0.8	1.43	1795	0.96	28.6	22.8	4.6	10.0	5.7	57.9	4.2	68.8
		5100	75	Zn 1st Clnr Conc	2.4	0.92	929	0.43	12.0	14.3	8.5	14.8	7.4	69.4	7.5	82.4
		MIBC	7.5	Zn 1st Clnr + Scav Conc	3.8	0.83	776	0.35	8.82	12.7	12.3	19.9	9.5	82.1	10.7	97.6
				Zn Ro Conc	6.0	0.77	528	0.23	5.73	11.4	18.2	21.4	10.1	84.1	15.2	---
				Zn Ro Tail	91.5	0.19	21.8	0.013	0.05	4.02	68.8	13.4	8.6	10.3	81.7	---
		Pyrite Circuit		**Py 3rd Clnr Conc**	**2.1**	**1.84**	**220**	**0.088**	**1.01**	**44.8**	**15.0**	**3.1**	**1.3**	**5.2**	**20.8**	---
		H2SO4	600	Py 2nd Clnr Conc	2.6	1.40	146	0.058	0.32	34.1	18.1	3.6	1.6	5.6	25.0	---
		PAX	150	Py 1st Clnr Conc	3.4	1.12	117	0.059	0.17	24.7	21.5	4.3	1.9	5.9	29.2	---
		MIBC	5	Py 1st Clnr + Scav Conc	4.3	1.44	127	0.049	0.19	33.5	26.4	5.0	2.2	6.3	35.7	---
				Py Ro Conc	5.9	0.35	42.4	0.018	0.052	6.19	28.6	5.5	2.4	6.5	38.0	---
				Py Ro Tail	85.6	0.12	13.8	0.010	0.018	2.30	40.2	8.0	6.2	3.8	43.7	---
				Head (calc)	100.0	0.26	148	0.14	0.41	4.50	100.0	100.0	100.0	100.0	100.0	---
				Head (direct)		0.25	169	0.14	0.41							---

Table 10: Sequential cleaner flotation test results summary

13 Mineral Resource Estimate

13.1 Introduction

The Mineral Resources Estimate presented in this section is reported in accordance with the Canadian Securities Administrators' National Instrument 43-101. It was estimated in conformity with the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") "Estimation of Mineral Resource and Mineral Reserves Best Practice Guidelines" (November 2019) and reported using the definitions set out in the 2014 CIM Definition Standards on Mineral Resources and Mineral Reserves. Mineral Resources that are not converted to Mineral Reserves do not have demonstrated economic viability. Confidence in the estimate of Inferred Mineral Resource is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure. Mineral Resources may be affected by further infill and exploration drilling that may result in increases or decreases in subsequent Mineral Resource Estimates.

The Mineral Resource Estimate was prepared by Wu, Yassa and Puritch of P&E Mining Consultants Inc. The effective date of this Mineral Resource Estimate is 14 December 2021.

13.2 Database

All drilling and assay data were provided by the Company as Excel data files. The GEOVIA GEMS™ V6.8.4 database compiled by P&E for this Mineral Resource Estimate consisted of 75 surface drill holes totalling 23,444 m and 183 trenches totalling 3,540 m. A total of 66 drill holes totalling 19,826 m and 135 trenches totalling 3,545 m intersected the mineralization wireframes. A drill hole and trench location plan view is shown in Appendix A. The basic raw assay statistics of the database are presented in Table 11.

Variable	Ag	Au
Number of Samples	4,440	4,440
Minimum Value*	0.25	0.003
Maximum Value*	2,870.00	3.770
Mean*	24.248	0.051
Median*	2.80	0.012
Geometric Mean	3.35	0.014
Variance	14,393.53	0.02
Standard Deviation	119.97	0.15
Coefficient of Variation	4.95	2.87

Table 11: Assay database statistics summary. * Ag and Au units are g/t.

3.3 Data Verification

Verification of the assay database was performed by P&E against laboratory certificates that were obtained independently from ALS Canada Ltd. Approximately 71% of the entire database was verified for gold and silver. No significant errors were observed in the assay database.

P&E validated the Mineral Resource database in GEMS™ by checking for inconsistencies in analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, survey and missing interval and coordinate fields. Some minor errors were identified and corrected in the database. P&E are of the opinion that the supplied database is suitable for Mineral Resource estimation.

13.4 Domain Interpretation

A total of six mineralization domains were constructed for the Mineral Resource Estimate. The domains were developed based on the geological information and assays. The vein models represent the continuous silver and gold mineralization. All veins were constrained with a cut-off value of 100 g/t AgEq (Silver Equivalent = Ag g/t + (Au g/t x 90) to a minimum core length thickness of 2.0 m. In some cases, assays of less than 100 g/t AgEq were included to maintain the mineralization continuity and minimum width.

A topographic surface was created using drill hole collars. All mineralization domains were clipped against the topographic surface.

The constraining domain wireframes were treated separately for the purpose of rock coding, statistical analysis, compositing limits, and definition of the extent of potentially economic mineralization. The 3-D constraining domain wireframes are shown in Appendix B.

13.5 Rock Code Determination

A unique rock code was assigned to each mineralization domain for the Mineral Resource Estimate as presented in Table 12.

Domain	Rock Code	Volume (m^3)
Central	100	1,375,562
NV1	110	301,197
NV2	120	478,194
NV3	130	158,008
NV4	140	249,768
NV5	150	267,335

Table 12: Rock codes and volumes of mineralization domains

13.6 Wireframe Constrained Assays

Mineral Resource wireframe constrained assays were back coded in the assay database with model rock codes that were derived from intersections of the mineralization wireframes and drill holes and trenches. The basic statistics of the mineralization wireframe constrained assays are presented in Table 13.

Variable	Ag	Au	Sample Length
Number of Samples	621	621	621
Minimum Value*	0.25	0.003	0.09
Maximum Value*	2870	1.98	2.8
Mean*	111.21	0.14	0.79
Median*	37	0.07	0.75
Geometric Mean	30.62	0.06	0.69
Variance	67,462.71	0.05	0.15
Standard Deviation	259.74	0.23	0.39
Coefficient of Variation	2.34	1.63	0.5
Skewness	5.87	3.78	0.75
Kurtosis	45.4	20.62	3.85

Table 13: Domain wireframe constrained assay statistics summary.

13.7 Composting

In order to regularize the assay sampling intervals for grade interpolation, a 1.0 m compositing length was selected for the drill hole intervals that fell within the constraints of the above-noted Mineral Resource wireframes. The composites were calculated over 1.0 m lengths starting at the first point of intersection between assay data hole and hanging wall of the 3-D zonal constraint. The compositing process was halted upon exit from the footwall of the 3-D wireframe constraint. A background value of 0.001 g/t was applied to un-assayed intervals.

If the last composite interval in a drill hole was less than 0.25 m, the composite length for that drill hole interval was adjusted to make all composite intervals equal in length. This process would not introduce any short sample bias in the grade interpolation process. The composite length ranged from 0.56 to 1.45 metres. The constrained composite data was extracted to a point area file for grade capping analysis. The composite statistics of domains are summarized in Table 14.

Variable	Ag Comp.	Ag Comp. Capped	Au Comp.	Au Comp. Capped
Number of Samples	545	545	545	545
Minimum Value*	0.001	0.001	0.001	0.001
Maximum Value*	1,728.78	680.00	1.42	1.42
Mean*	81.80	75.64	0.12	0.12
Median*	38.80	38.80	0.07	0.07
Geometric Mean	19.50	19.30	0.05	0.05
Variance	20,816.26	11,512.47	0.03	0.03
Standard Deviation	144.28	107.30	0.18	0.18
Coefficient of Variation	1.76	1.42	1.47	1.47
Skewness	5.38	2.83	3.38	3.38
Kurtosis	45.66	12.32	17.29	17.29

Table 14: Composite statistics summary.

13.8 Grade Capping

Grade capping was performed on the 1.0 m composite values in the database within each constraining domain to mitigate the possible bias resulting from erratic high-grade composite values in the database. Log-normal histograms and log-probability plots for the composites were generated for each mineralization domain. Selected histograms and log-probability plots are presented in Appendix C. The capped composite statistics are summarized in Table 14.4. The grade capping values are detailed in Table 14.5. The capped composites were utilized to develop variograms and for block model grade interpolation.

Domains	Total No. of Composites	Capping Value (g/t)	No. of Capped Composites	Mean of Composites (g/t)	Mean of Capped Composites	CoV of Composites	CoV of Capped Composites	Capping Percentile
				Silver				
Central	194	560	5	110.71	104.31	1.44	1.27	97.4
NV1	41	100	2	25.95	19.45	2.02	1.42	95.1
NV2	77	360	1	61.92	51.54	2.26	1.38	98.7
NV3	18	no cap	0	15.22	15.22	1.76	1.76	100.0
NV4	58	680	1	106.24	88.16	2.28	1.54	98.3
NV5	157	no cap	0	69.02	69.02	1.11	1.11	100.0

				Gold				
Central	194	no cap	0	0.14	0.14	1.32	1.32	100.0
NV1	41	no cap	0	0.03	0.03	1.33	1.33	100.0
NV2	77	no cap	0	0.10	0.10	1.84	1.84	100.0
NV3	18	no cap	0	0.04	0.04	1.23	1.23	100.0
NV4	58	no cap	0	0.14	0.14	1.49	1.49	100.0
NV5	157	no cap	0	0.14	0.14	1.29	1.29	100.0

Table 15: Grade capping values. CoV = coefficient of variation.

13.9 Variography

A variography analysis was attempted on the Central vein using the Ag capped composites as a guide to determine a grade interpolation search distance and ellipse orientation strategy. Continuity ellipses based on the observed ranges were subsequently generated and utilized as the basis for estimation search ranges, and distance weighting calculations.

13.10 Bulk Density

A uniform bulk density 2.8 t/m^3 was applied for all mineralization domains. Since no bulk density determinations were made, the bulk density utilized was that of contemporaneous Mexican projects.

13.11 Block Modelling

The Panuco block model was constructed using GEOVIA GEMS™ V6.8.4 modelling software. The block model origin and block size are presented in Table 16. The block model consists of separate model attributes for estimated Ag, Au and AgEq grade, rock type (mineralization domains), volume percent, bulk density, and classification.

Direction	Origin	No. of Blocks	Block Size (m)
X	752,719	720	2.5
Y	2,531,928	672	5
Z	2,410	142	5
Rotation	55 ° (counter-clockwise)		

Table 16: Block model definition. Note: Origin for a block model in GEMSTM represents the coordinate of the outer edge of the block with minimum X and Y, and maximum Z.

All blocks in the rock type block model were initially assigned a waste rock code of 99, corresponding to the surrounding country rocks. The mineralization domains were used to code all blocks within the rock type block model that contain 0.01% or greater volume within the wireframe domains. These blocks were assigned individual model rock codes as presented in Table 16

The topographic surface was subsequently utilized to assign rock code 0, corresponding to air, to all blocks 50% or greater above the surface.

A volume percent block model was set up to accurately represent the volume and subsequent tonnage that was occupied by each block inside the constraining wireframe domain. As a result, the domain boundary was properly represented by the volume percent model ability to measure individual infinitely variable block inclusion percentages within that domain. The minimum percentage of the mineralization block was set to 0.01%.

The Ag and Au grades were interpolated into the grade blocks using Inverse Distance weighting to the third power ("ID3"). Nearest Neighbour ("NN") was run for validation purposes. Multiple passes were executed for the grade interpolation to progressively capture the sample points, to avoid over-smoothing and preserve local grade variability. Grade blocks were interpolated using the parameters in Table 17. Selected vertical cross-sections and plans of the AgEq blocks are presented in Appendix D

Pass	No. of Composites			Search Range (m)		
	Min	Max	Max per Hole	Major	Semi-Major	Minor
I	3	12	2	80	80	10
II	1	12	2	300	300	40

Table 17: Block model grade interpolation parameters.

13.12 Mineral Resource Classification

P&E are of the opinion that drilling, assaying and exploration work on the Panuco Project support this Mineral Resource Estimate which is based on spatial continuity of the mineralization within potentially mineable shapes, and are sufficient to indicate a reasonable potential for economic extraction, thus qualifying it as a Mineral Resource under the 2014 CIM Definition Standards. The Mineral Resource was classified as Inferred based on the geological interpretation, variogram performance and drill hole spacing.

13.13 AgEq Cut-Off Calculation

The Panuco Mineral Resource Estimate was derived by applying a 100 g/t AgEq cut-off values (Silver Equivalent = Ag g/t + (Au g/t x 90) to the block models and reporting the resulting tonnes and grades for potentially mineable areas.

The following parameters were used to calculate the AgEq cut-off values that determine underground mining potentially economic portions of the constrained mineralization:

- Ag metal price: US$ 21/oz (approx. 36-month trailing average at Nov 30/21)
- Au metal price: US$ 625/oz (approx. 36-month trailing average at Nov 30/21)
- Ag recovery: 82%
- Au recovery: 95%
- Mining cost: US$ 35/t
- Processing cost: US$ 15/t; and
- G&A: US$ 5/t.

3.14 Mineral Resource Estimate

The Mineral Resource Estimate (Table 18) is reported with an effective date of December 14, 2021. The authors of this Technical Report section consider the mineralization of the Panuco Property to be potentially amenable to underground mining methods.

Tonnes (k)	Ag (g/t)	Ag (Moz)	Au (g/t)	Au (Koz)	AgEq (g/t)	AgEq (Moz)
2,733	171.1	15.0	0.17	15.1	186.6	16.4

Table 18: Panuco Deposit Inferred Mineral Resource Estimate. 100 g/t AgEq cut-off. Notes 1-4 below.

1. *Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.*
2. *The estimate of Mineral Resources may be materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.*
3. *The Inferred Mineral Resource in this estimate has a lower level of confidence than that applied to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of the Inferred Mineral Resource could potentially be upgraded to an Indicated Mineral Resource with continued exploration.*
4. *The Mineral Resources were estimated in accordance with the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions (2014) and Best Practices Guidelines (2019) prepared by the CIM Standing Committee on Reserve Definitions and adopted by the CIM Council.*

13.15 Mineral Resource Sensitivities

The Mineral Resources are sensitive to selections of reporting AgEq cut-offs and resulting sensitivities (Table 19).

Cut-off (AgEq g/t)	Tonnes (k)	Ag (g/t)	Ag (Moz)	Au (g/t)	Au (Koz)	AgEq (g/t)	AgEq (Moz)
250	309	386.5	3,838	0.18	1.8	402.7	3,998
200	671	289.0	6,238	0.15	3.2	302.5	6,528
150	1,654	209.8	11,151	0.18	9.4	225.6	11,995
100	2,733	171.1	15,035	0.17	15.1	186.6	16,397
80	3,288	155.2	16,405	0.17	17.5	170.1	17,981

Table 19: Sensitivities of Mineral Resource Estimate.

13.16 Model Validation

The block model was validated using a number of industry standard methods including visual and statistical methods.

- Visual examination of composites and block grades on successive plans and sections were performed on-screen to confirm that the block models correctly reflect the distribution of composite grades. The review of estimation parameters included:

  # Number of composites used for estimation;
  # Number of drill holes used for estimation;
  # Mean distance to sample used;
  # Number of passes used to estimate grade;
  # Actual distance to closest point;
  # Grade of true closest point; and,
  # Mean value of the composites used

- The Inverse Distance Cubed ("ID3") estimate was compared to a Nearest-Neighbour ("NN") estimate against the composites. A comparison of mean composite grade with the block model of all veins are presented in Table 20.

Data Type	Ag (g/t)	Au (g/t)
Composites	81.8	0.12
Capped composites	75.6	0.12
Block model interpolated with ID3	74.5	0.10
Block model interpolated with NN	71.4	0.10

Table 20: Average grade comparison of block model with composites.

The comparison shows the average Ag and Au grades of block model were slightly lower than that of the capped composites used for the grade estimation. These were most likely due to grade de-clustering and interpolation process. The block model values will be more representative than the composites due to 3-D spatial distribution characteristics of the block models.

- A comparison of the Central Vein Ag grade-tonnage curves (Figures 49 to 52) interpolated with ID3 and NN on a global mineralization basis.

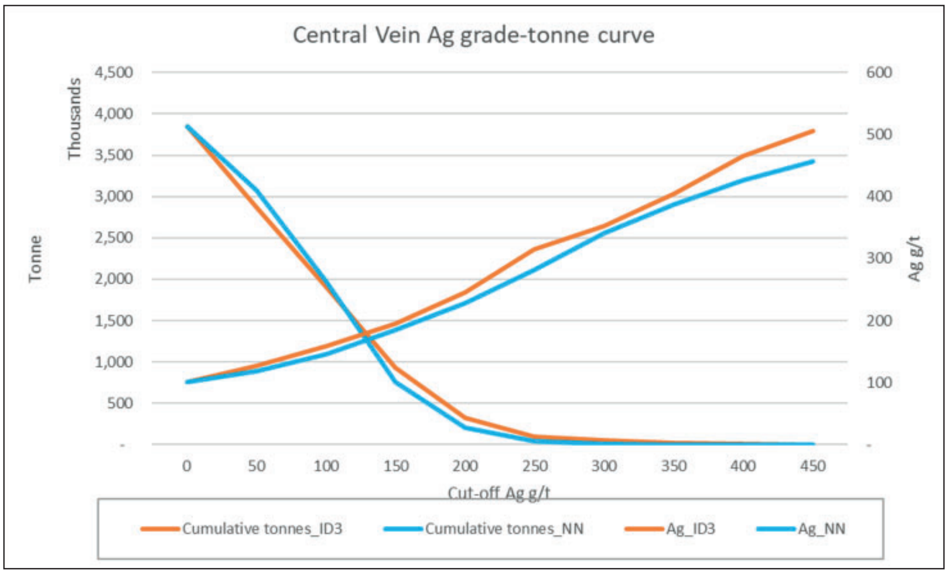

Figure 49: Silver grade-tonnage curve of Central Vein.

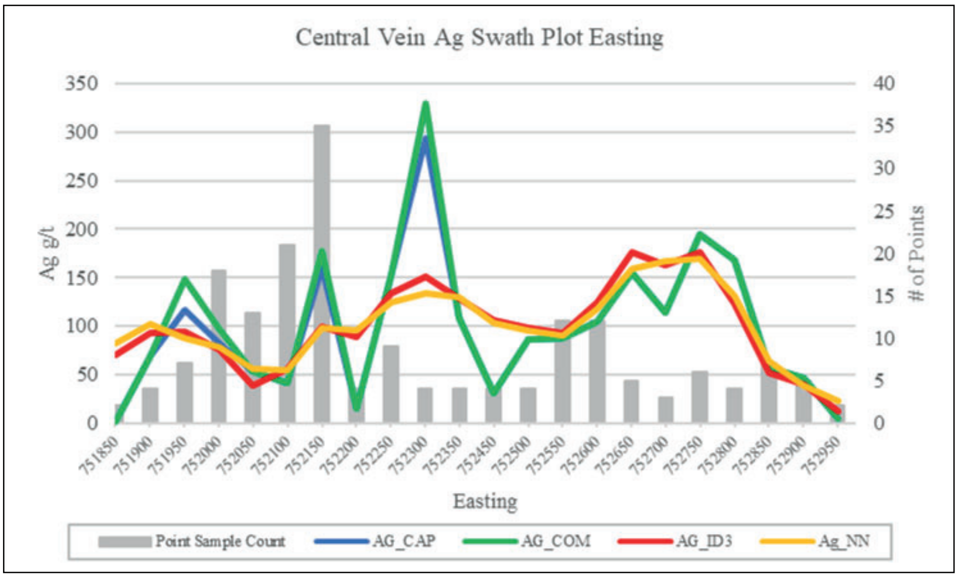

Figure 50: Silver grade swath easting plot of Central Vein.

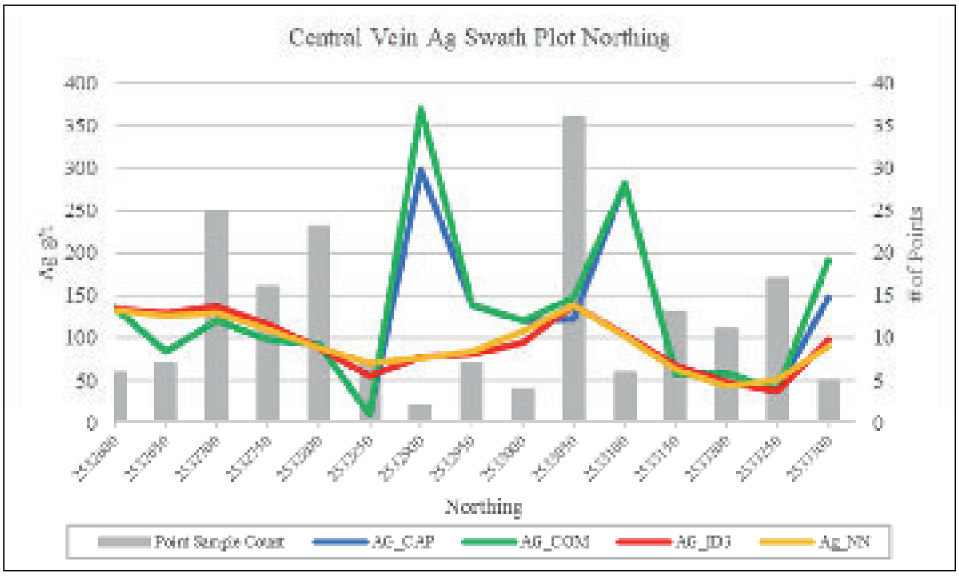

Figure 51: Silver grade swath northing plot of Central Vein.

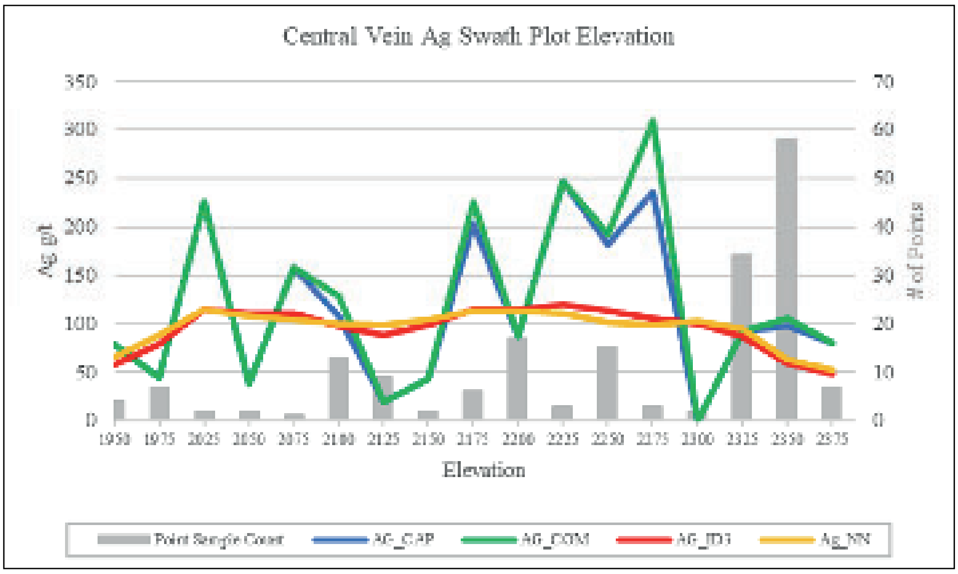

Figure 52: Silver grade swath level plot of Central Vein.

14 Adjacent Properties

Several producing mines and advanced exploration properties adjoin the Zacatecas Property (Figure 53). The Veta Grande Mine and San Acacio Deposit are part of the Veta Grande Vein System. The nearby Cozamin Mine is hosted by the Noche Mala structure. The El Compas Mine is hosted within the Orito Vein System.

The information in this section has been sourced from publicly available data. The author has not independently verified the information within the reports referenced.

14.1 Veta Grande Mine (Santacruz Silver Mining Ltd)

Santacruz Silver Mining Limited — under an option agreement with Minera Contracuña I SA de CV — is operator of, and has the option to purchase, the Veta Grande properties. The Veta Grande Properties consists of 31 mining concessions covering an area of approximately 1019 ha. The Zacatecas Property bounds the Veta Grande property to the north, west and south (Figure 53).

The Veta Grande is a northwest-southeast striking, nested fault/vein system consisting of five veins that splay to the northwest. Mineralization varies in thickness from two to 30 m and veins dip between 60° to 90° to the southwest. The veins consist of quartz, chalcedony and calcite with colliform to crustiform texture and euhedral quartz in open space cavities. The dominant sulphide mineralization consists of pyrite, sphalerite, and galena with rare chalcopyrite.

There is no published reserves or resources for the Veta Grande Mine. Production from the Veta Grande Mine in 2019 was 237,715 oz of silver, 457 oz of gold, 1082 tonnes of lead and 1949 tonnes of zinc from 149,891 tonnes of rock milled. Burk (1994) cited historic production from the Veta Grande mines as >200 Moz silver since its discovery in 1546.

The information with respect to the Veta Grande Mine was taken from a "Technical Report Veta Grande project, Zacatecas Mexico, as prepared for Santacruz Silver Mining Ltd by Bui, V. P and O'Brien, M. F., with effective date 20th August 2019. The report was filed by Santacruz Silver Mining Ltd on SEDAR.

Morales-Ramirez has been unable to verify the information in either report and notes that the information is not necessarily indicative of the mineralization on the Zacatecas Property.

14.2 San Acacio Deposit (Defiance Silver Corp.)

Defiance Silver holds 24 mineral concessions to the southeast of the Veta Grande property of Santa Cruz Silver Mining Ltd. The Veta Grande vein system extends to a vertical depth of at least 335 meters and extends approximately 5.6 km along the strike of the San Acacio property. The San Acacio Mine controls approximately 50% of the historic workings on the Veta Grande system.

Defiance Silver Corp cite a resource of 17.9 Moz Ag Eq. based on 2.9 Mt at 192 ppm Ag eq. (0.16 ppm Au and 182 ppm Ag) using a 100 g/t Ag eq. cut-off.

The information with respect to the San Acacio Deposit was taken from a "A Technical Report and Resource Estimate, San Acacio Silver Deposit, Zacatecas State, Mexico, as prepared by Giroux, G. and Cuttle, J., with an effective date 1st April 2014. The report is filed on the website of Defiance Silver (https://www.defiancesilver.com/projects/zacatecas-projects/resource).

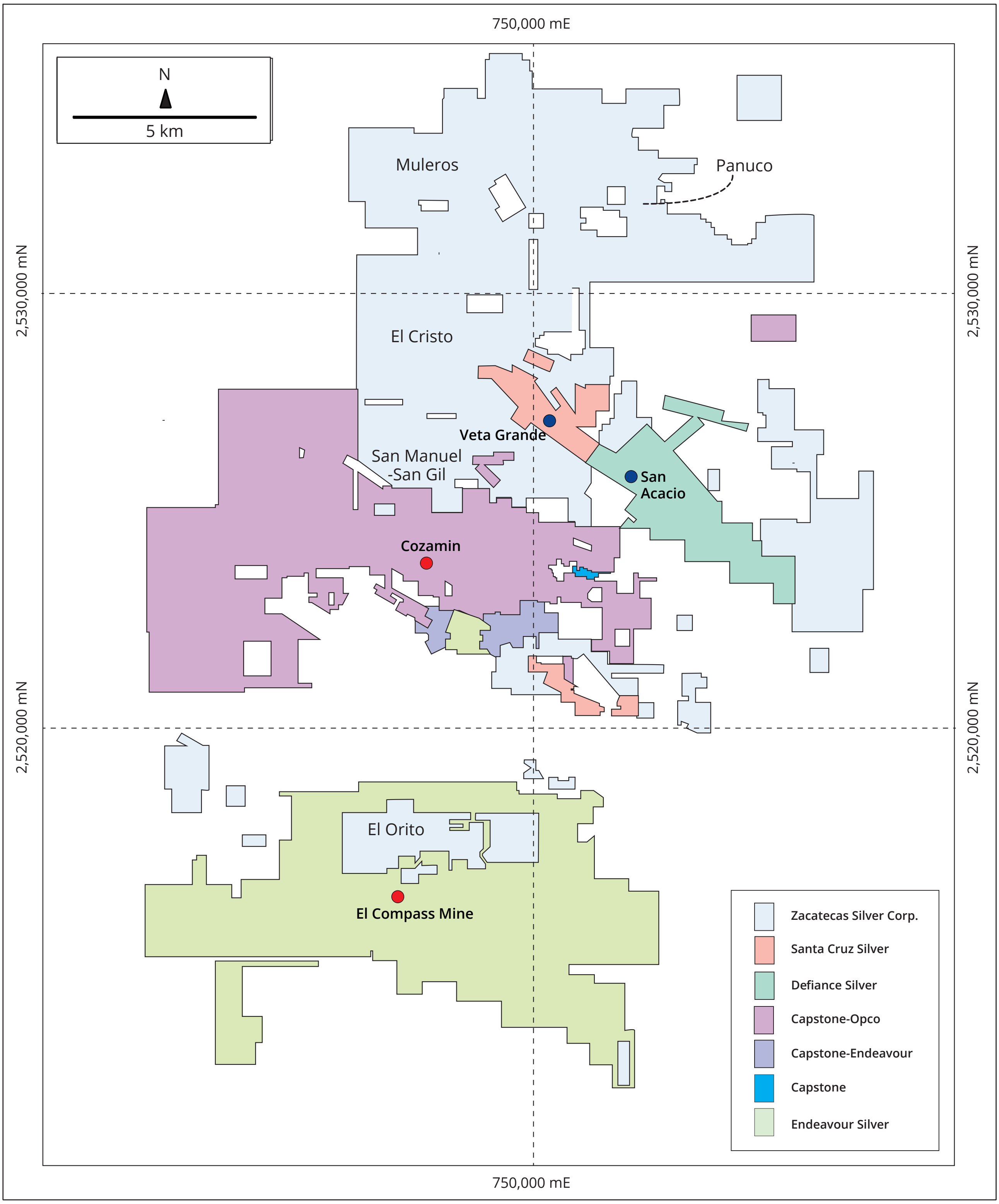

Figure 53: Map showing properties immeditely adjacent to Zacatecas Silver Properties. Operating (red) and non-operating mines/ signifiant deposits (blue) shown.

Morales-Ramirez has been unable to verify the information with respect to the Acacio Deposit and notes that the information is not necessarily indicative of the mineralization on the Zacatecas Property.

14.3 Cozamin Mine (Capstone Mining Corp.)

The property consists of 93 mining concessions covering an area of approximately 4260 ha. The Cozamin property is located south of San Manuel-San Gil Target area on the Zacatecas Property (Figure 53).

Mineralization at Cozamin occurs in veins, and fracture-controlled systems of veinlets and includes a portion of the Mala Noche Vein beneath the historical San Roberto mine. The vein itself varies in strike from east-west to northwest-southeast and dips on average 60°to the north. The vein consists of several anastomosing veins forming sigmoidal structures and the best mineralised shoots are associated with zones where these structures coalesce into a single structure. Chalcopyrite, sphalerite and galena are the dominant economic sulphide minerals (up to 15% of the vein) — pyrite and pyrrhotite increase down dip.

Mineralization is of an intermediate sulphidation type. The copper-rich mineralisation is an early phase that is enveloped, overprinted and/or brecciated by zinc-rich mineralization. The copper veins are inferred to represent a higher temperature pragenesis, having significantly fewer vughs and can be massive pyrrhotite-pyrite-chalcopyrite with little gangue. Zinc-rich veins also tend to be sulphide-rich but with slightly more gangue. This transition from copper-dominant to zinc-dominant mineralization is likely the result of an evolving, telescoped hydrothermal system — associated with a number of rhyolite flow domes which may be the shallow expression of an inferred buried felsic stock.

Well-banded quartz, or quartz-carbonate veins, are inferred to be of a lower temperature style — they are most likely of low sulphidation epithermal type.

In 2006, the Cozamin Mine began commercial production at a rate of 1,000 tonnes per day of ore milled. As of April 30, 2020 the proven and probable reserve estimate for the Cozamin property was reported as 10.178 Mt at 1.79% Cu, 0.36% Zn, 0.05% Pb, and 41 g/t Ag. The combined measured and indicated mineral resource estimate was reported as 27.459 Mt at 1.57% Cu, 1.14% Zn, 0.32% Pb, and 44 g/t Ag, with an additional inferred mineral resource of 16.558 Mt @ 0.64% Cu, 2.26% Zn, 0.61% Pb, and 36 g/t Ag.

The information with respect to the Cozamin Mine was taken from a "NI43-101 Technical Report on the Cozamin, Zacatecas State, Mexico, as prepared by Buss, G. et al., with an effective date 30th April 2020. The report is available from the companies website (https://capstonemining.com/operations/cozamin/default.aspx).

Morales-Ramirez has been unable to verify the information with respect to the Cozamin Deposit and Mine, and notes that the information is not necessarily indicative of the mineralization on the Zacatecas Property.

14.4 El Compas Mine (Endeavour Silver Corp.)

The El Compas Mine is owned by Endeavour Silver Corp and covers an area of approximately 4200 ha, located on the southern outskirts of the city of Zacatecas. The El Compas property concessions surround the El Orito concessions of Zacatecas Silver. Endeavour Silver state on their website (https://www.edrsilver.com/English/mining-assets/operations/el-compas/overview/default.aspx) that production began in the first quarter of 2019 at an initial rate of 250 tpd from an underground, long-hole, mechanized cut and fill operation.

The veins at El Compas strike predominantly north-south and northwest-southeast, and are hosted partly in volcanic and sedimentary rocks of the Chilitos formation and partly in overlying volcanic rocks of the La Virgen formation. Veins are quartz-dominant, finely colloform and crustiform banded, retaining open space fill textures, and display bladed quartz after calcite — typical boiling textures of low sulphidation epithermal systems. Pyrite and pyrrhotite are the most common sulphides.

Within the context of the district the veins at El Compas are unusual — they strike predominantly north-south, are gold-rich and silver-poor, and have a low total sulphide content with very low base-metal content. In contrast — the more typical northwest-southeast oriented veins in the Zacatecas region are silver-dominant with significant total sulphide and base metal sulphide content, displaying characteristics more typical of intermediate sulphidation epithermal vein systems.

Endeavour Silver Corp. cite a 2017 indicated mineral resources of 148,400 tonnes at 7.31 g/t Au and 104 g/t Ag and an inferred mineral resource of 216,800 tonnes at 5.38 g/t Au and 76 g/t Ag (Smith *et al.*, 2017). A cut-off grade of 150 g/t Ag eq. was used based on a US $18/oz silver and US $1225/oz gold price, with recoveries of 83.5% gold and 73% silver. There are no base metal credits.

The current Life of Mine (LOM) contemplates mining 300,000 tonnes containing 829,000 oz silver and 61,000 oz gold for 5,099,000 oz Ag eq.

The information with respect to the El Compas Mine was taken from a "NI43-101 Technical Report and Preliminary Economic Assessment for the El Compas Project, Zacatecas State, Mexico, as prepared by Smith, P. J. et al., with an effective date 27th March 2017. The report is available from the companies website (https://www.edrsilver.com/English/mining-assets/operations/el-compas/overview/default.aspx).

Morales-Ramirez has been unable to verify the information with respect to the El Compas Mine and Deposit, and notes that the information is not necessarily indicative of the mineralization on the Zacatecas Property.

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15 Other Relevant Data and Information

Morales-Ramirez is not aware of any other information or data that may be relevant to this report — other than that already disclosed in previous sections of this report.

16 Interpretations and Conclusions

The Property is located close to the cities of Zacatecas and Guadalupe which can provide a skilled workforce and required infrastructure. All prospects are easily accessed by unpaved roads off paved public highways. Topography is generally subdued (2300 to 2600 masl) and climate allows year-round operation. Morales-Ramirez is not aware of any existing environmental liabilities.

Mineralization on the Property shares many similarities to other silver-dominant epithermal systems within Zacatecas mining district, and the epithermal deposits of the *ca*. 1500 km long Mexican Silver Belt. This provides a foundational understanding of deposits type and a framework on which to develop targets.

Silver-gold-base metal mineralization is of low sulphidation, hybrid intermediate-low sulphidation and intermediate sulphidation type. Structure provides fluid pathways and traps for mineralization — in this respect structure exerts the fundamental control on mineralization.

Economic mineralization in epithermal vein deposits, if present, is restricted to a discrete vertical interval — approximately 200-300 m for low sulphidation systems and 400-800+ m for intermediate sulphidation systems. Identifying the “tops” and “bottoms” of the mineralization relative to level of erosion, or vertical position of a drill hole intercept, is essential for effective drill targeting

The portfolio includes the Panuco Deposit — with a current inferred resource estimate — and multiple earlier stage targets. Drilling by the Company in 2021 intercepted high grade mineralization in the Tres Cruces vein to the north of the Panuco Vein — only six holes were drilled historically at Tres Cruces and drilling by the Company has resulted in a new discovery.

16.1 Panuco

The Panuco vein system consists of three prominent northwest-southeast trending, southwest dipping veins and vein breccias, that have been collectively traced over a 4 km strike length. Additional vein splays and jogs are present.

Verification and modelling of historical drill data from the Panuco deposit has been completed. The Panuco Deposit Mineral Resource Estimate consists of 2.7 million tonnes at 187 g/t AgEq (171 g/t Ag and 0.17 g/t Au) for 16.4 million ounces AgEq (15 million ounces silver and 15 thousand ounces gold).

A bulk sample taken from representative intervals of historical Panuco drill core was submitted to SGS Minerals at Lakefield (“SGS”) for bench-scale metallurgical tests. Test work by SGS supports both a bulk flotation flow-path and a sequential flotation flow-path — the bulk flotation flow-path produced a single gold, silver, lead and zinc rougher concentrate (15 minutes of flotation and 23% mass pull) with 697 g/t silver, 0.97 g/t gold, 1.67% zinc and 0.58% lead. This equates to recoveries 96.2 % of the silver, 93.6% of the gold, 96.5% of the zinc and 92.1 % of the lead.

Drilling by the Company in 2021 focused on areas outside the Panuco Inferred Resource Estimate. Four diamond holes (for 1077 m) were drilled by the company to test the extension of the Central Panuco Vein at the eastern edge of the Companies concessions — assay results were of low tenor.

2021 drilling at Panuco focused on the Tres Cruces Vein where 22 holes (for 3165 m) targeted the near surface depth extension of veins mapped at surface and/or historical surface workings. Assay results have been received for 9 holes — including three highly significant intercept which underline the prospectivity of the Tres Cruces vein. Drilling is ongoing.

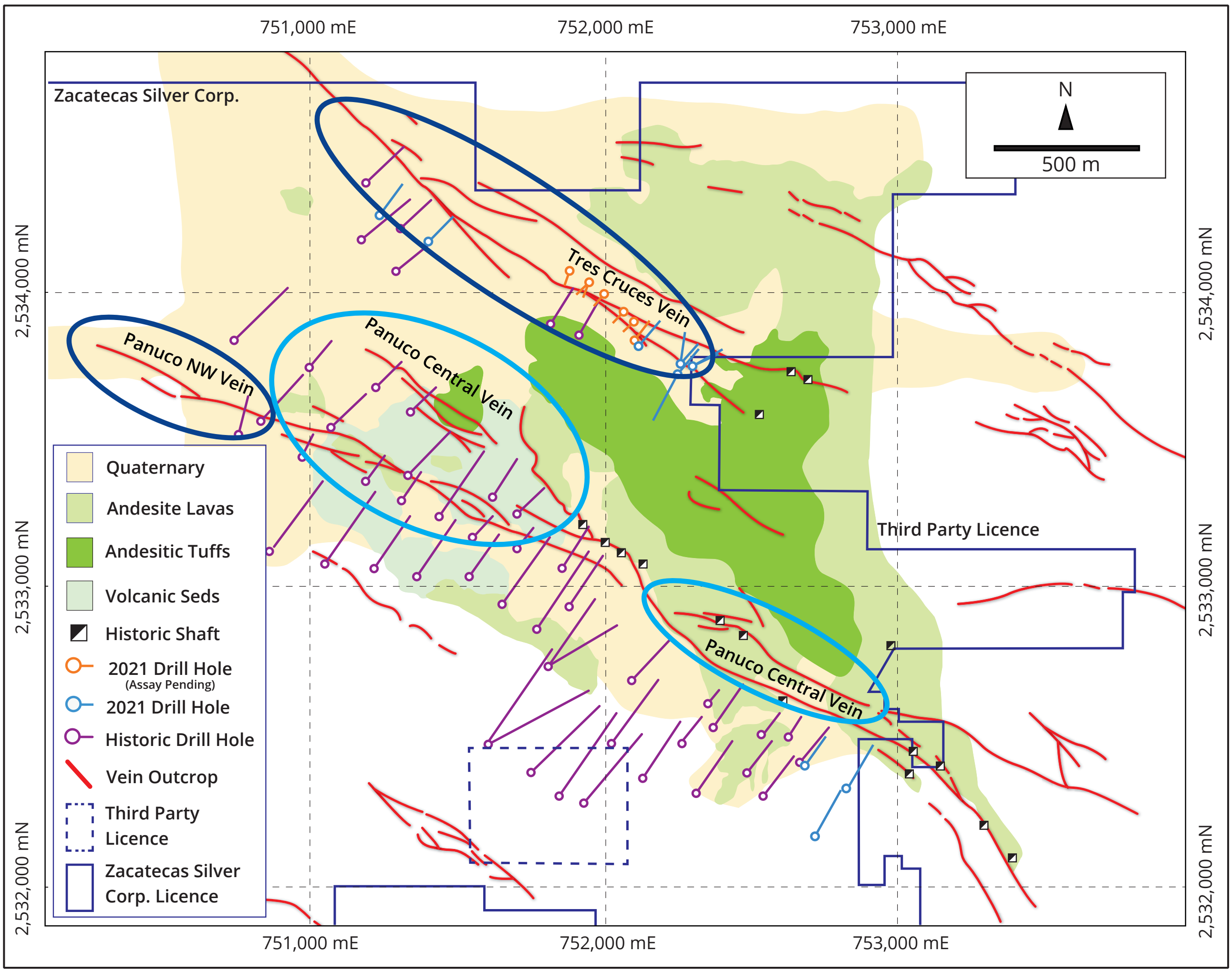

Figure 54: Geological map of the Panuco vein system, Zacatecas Silver Corp. licence boundaries, historic shafts and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Exploration targets shown Blue.

The Panuco deposit remains open along strike to the west and at depth — a significant step back and step out drill program is justified. A number is sub-parallel veins of shorter strike length, splays and dilational jogs also require drill testing.

16.2 Muleros Area

The Muleros vein system is defined by three principal vein structures — the South Vein, the North Vein (Sabino Vein) and the El Rosario Vein (Figure 55). The South and North Veins dip between 55-80° to the southwest and the Rosario Vein dips 70-80° to the northeast. Veins vary from <1 to 5 m in true thickness. The system has a strike length of at least 2.5 km before veins dip under cover the northwest.

In 2007 and 2008 Golden Minerals completed 37 HQ diamond drill holes totalling approximately 6704 m. Holes were generally drilled at -60° inclination and the longest hole was 562.6 m in length — but overall, the drill program was designed to test veins to a vertical depth to about 100 meters. The depth potential of all veins is effectively untested.

Several of the Golden Minerals drill holes intercepted gold grades significantly above that of Panuco and other deposits in the area. For example — hole MU07-07 intercepted a downhole interval of 2.30 m at 1.56 g/t Au and 286 g/t Ag and hole MU08-35 intercepted a downhole interval of 1.61 m at 1.75 g/t Au and 56 g/t Ag. Significant further drilling is required to test the down dip potential of these veins — especially in areas of higher gold grade.

The El Rosario Vein and vein splays at the northwest extension of the North Vein also require drill testing. Extensive Quaternary cover may mask strike extensions of veins to the northwest — these areas should initially be tested by soil geochemistry.

A series of historical shafts extend to the southeast of the south vein in an area of Quaternary cover. These shafts may define the southeast extension of the South Vein — scout drilling is required.

16.3 El Cristo Area

The El Cristo vein system comprises several northwest-southeast trending, subparallel veins which define a sigmoidal

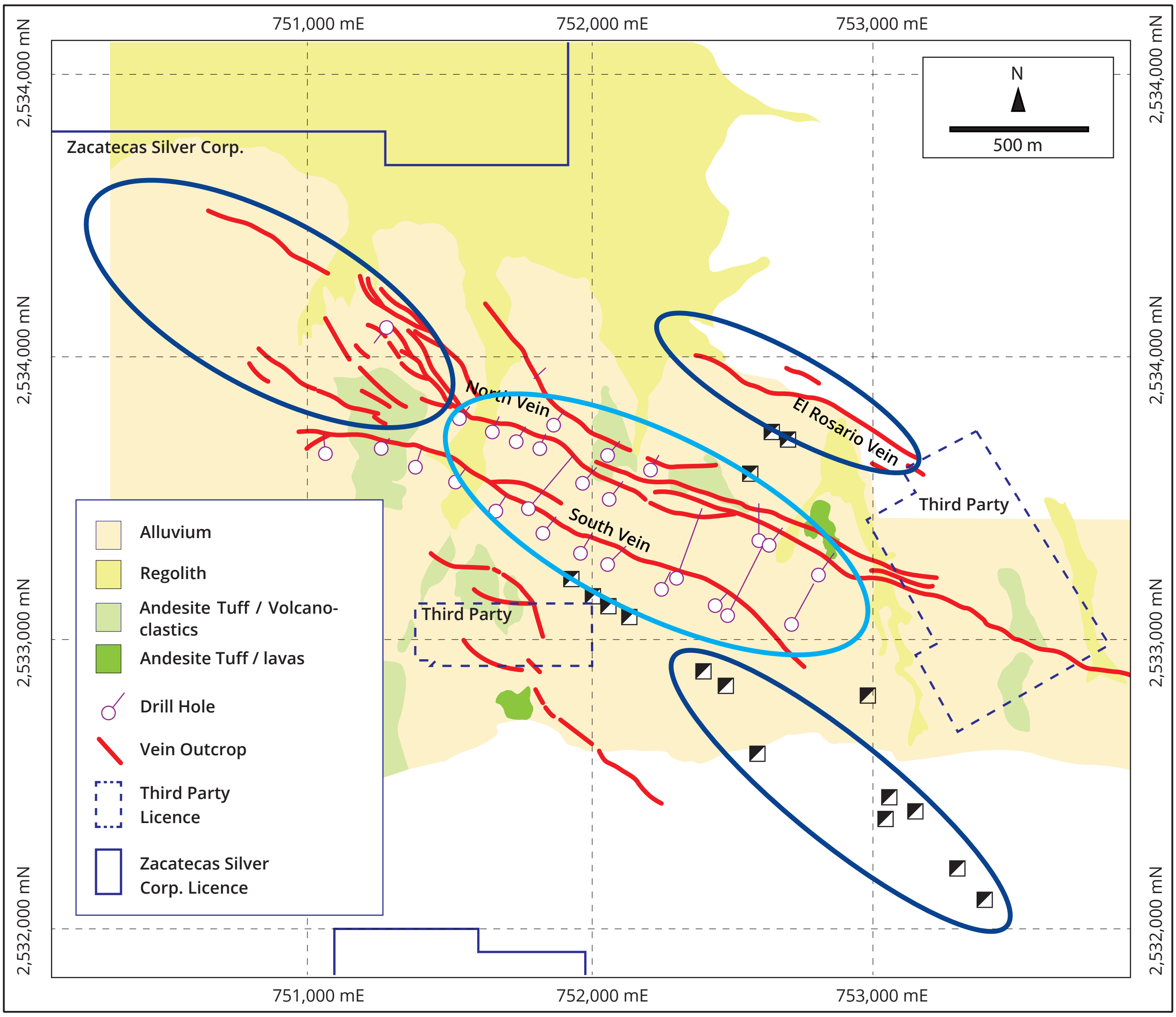

Figure 55: Geology of the Muleros vein system. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012). New drill targets dark blue. Depth extension drill targets in light blue.

complex that is up to 600 m wide and which coalesces to the northwest and southeast. Veins extend over a strike length of at least 2.5 km. Dip varies from vertical to 60° to both northeast to southwest. El Cristo is most likely the northwest extension of he Veta Grande vein system.

Silver and base metal mineralization is hosted in brecciated veins, and crustiform and colloform banded quartz-carbonate veins, that vary in thickness from 10 cm to 7 m.

Golden Minerals completed 8 HQ diamond drill holes for 2854 m — most holes targeted a 300 m strike extension where several veins coalesce in an area with historical shafts. Silver and gold assays were of moderate tenor whilst lead (up to 2.64% Pb) and zinc (up to 6.28 % Zn) were elevated. For this reason, the veins at El Cristo were modelled as the basal part of a low sulphidation epithermal system, implying that the precious metal interval had been eroded.

The Authors note that 8 drill holes do not provide an effective test of an epithermal vein system that has a strike length of over 2.5 km, comprises multiple veins over a width of at least 600 m, is associated with a sigmoidal dilational zone, and is the likely northwest strike extension of the Veta Grande vein system. Moreover, given the presence of hybrid intermediate-low sulphidation deposit types at Zacatecas, base metal signatures — are not on their own — a reliable indicator of depth in the system. El Cristo requires significant further work and drilling.

16.4 San Manuel-San Gill Area

The San Manuel-San Gill target is relatively unexplored. Nine HQ diameter diamond drill holes were completed in 2011 for a total of 3176 m holes were drilled historically. The Company has drilled 3 angled PQ diameter diamond holes (918 m) — two holes were drilled into the north of the breccia and one hole to the south of the breccia. Assay results were unremarkable.

Quartz-carbonate-sulphide veins of between 10 cm to >7 m wide, trend northwest-southeast over a strike length of at least 2 km. Individual veins are between 400 to 1400 m long and splay to the southeast where they intersect a north-south trending hematitic breccia (Figure 57). The breccia is has a strike length of approximately 800 m, is up to 40 m wide, and is most likely vertical. Given their are a number of untested veins at San Manuel-San Gill— further drilling is recommended.

16.5 Other Target Area

The Property includes a number of satellite concessions. These include El Oro, El Orito, La Cantera, Monserrat, El Peñón, San Judas and San Juan — all are relatively unexplored and require reconnaissance review.

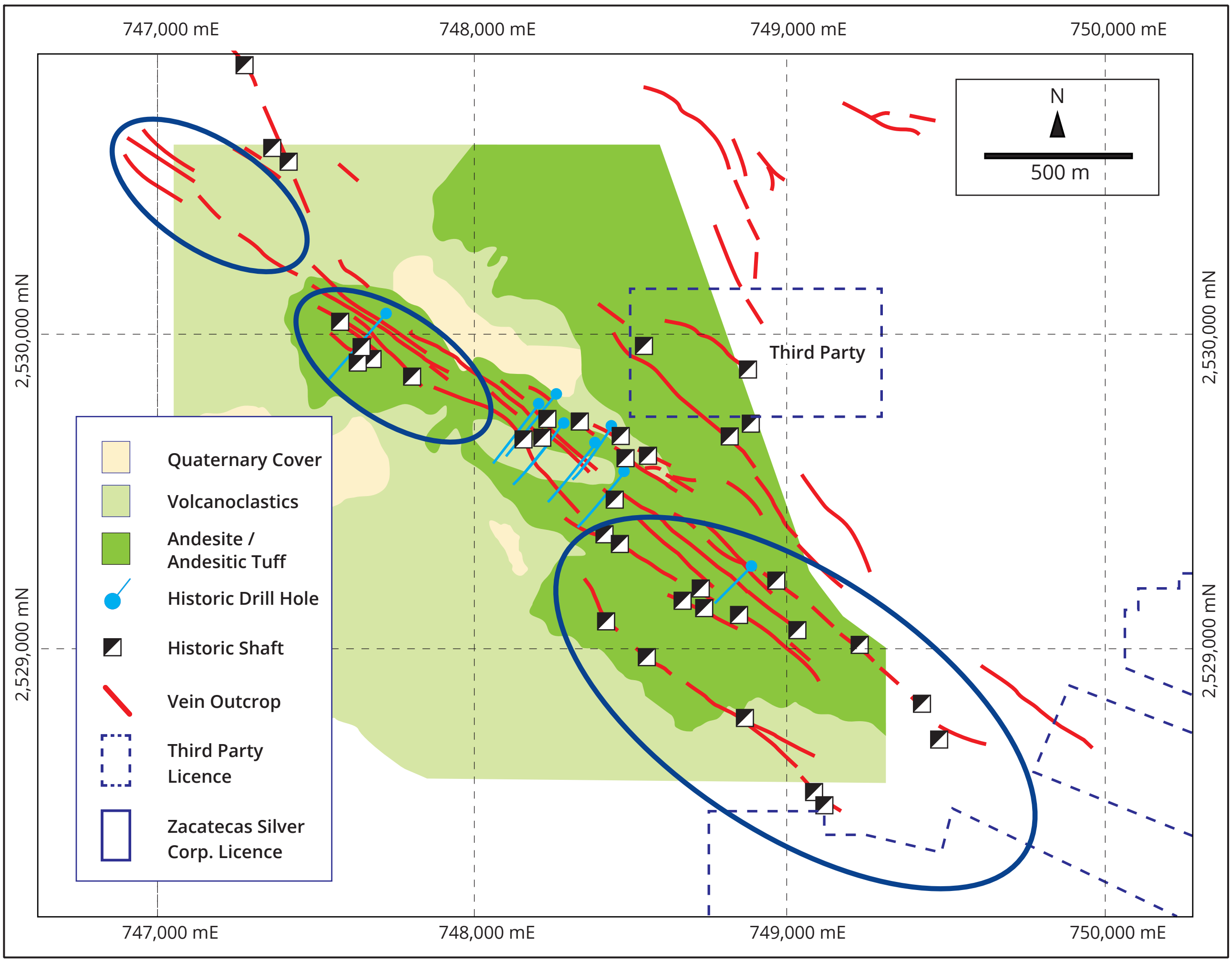

Figure 56: Geology map of El Cristo. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012). New drill targets dark blue.

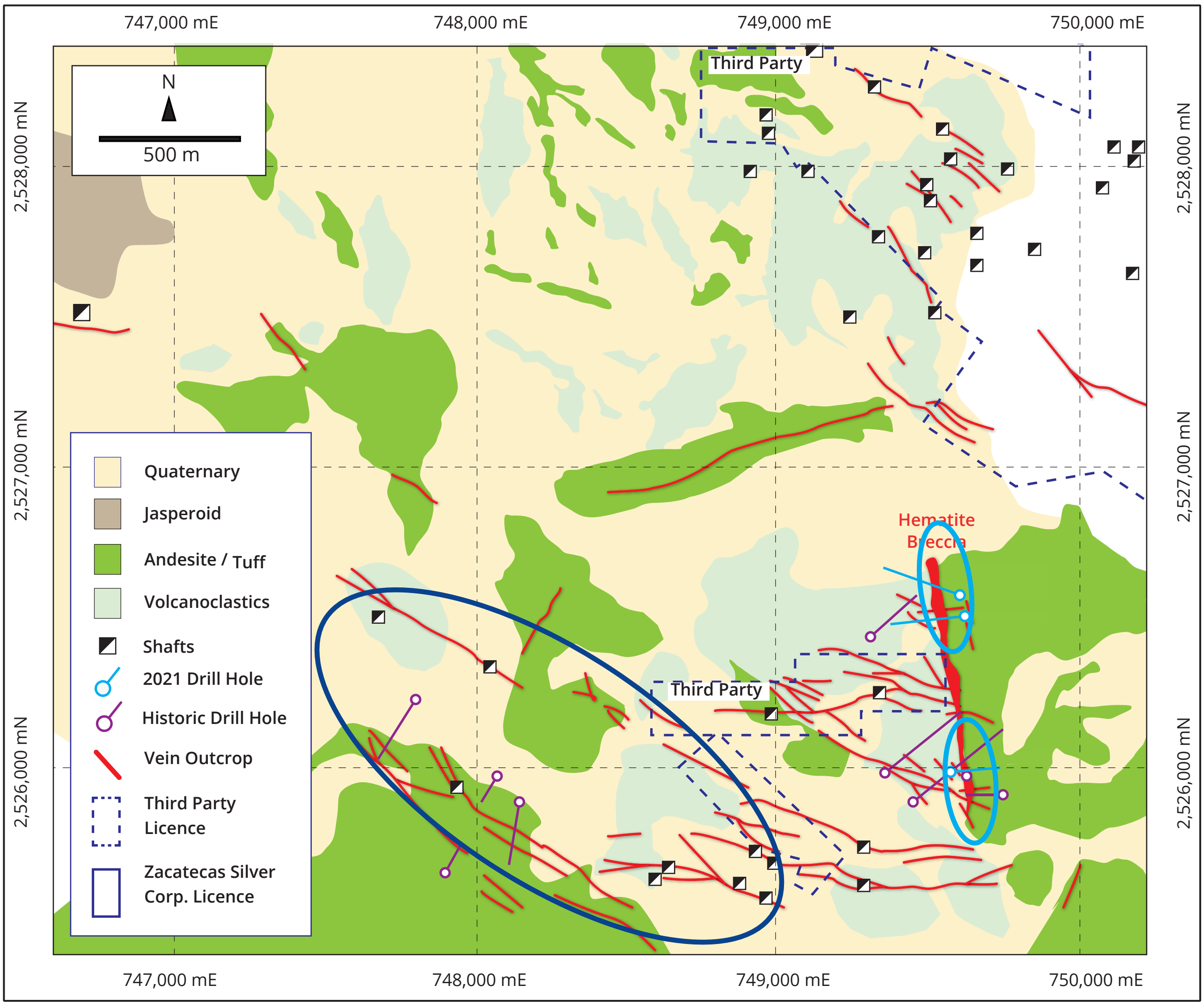

Figure 57: Geology map of the San Manuel-San Gill vein system. Licence boundaries and Golden Minerals diamond drill locations and drill hole traces (projected to surface). Modified after Golden Minerals (2012). Principal drill focus should be the hematic breccia circled light blue. Other priority areas are shown by dark blue ellipse.

17 Recommendations

The Zacatecas Project comprises a large number of intermediate to low sulphidation vein systems which define several distinct prospects — namely Panuco, Muleros, El Cristo and San Manuel-San Gil.

The Company commenced angled diamond drilling at Panuco on 30 August 2021. Drilling is being conducted by Major Drilling. To date the Company has drilled 29 angled PQ and HQ diamond holes for a total of 5160 m — 4243 m at Panuco and 917 m at San Gill. Drilling is ongoing along the Tres Cruces vein in the north of Panuco where several holes have intercepted significant silver mineralization.

A 2022 exploration budget of US $3 - 5M is proposed for the next phase of diamond drilling — based on an additional 10,000 to 15,000 m of angled PQ and HQ diamond drilling.

- The Panuco inferred resource estimate is open at depth and to the west, and there are untested vein splays, flexures and intersections. Step-back, step-out and scout drilling is recommended.

- The recent discovery of vein-hosted silver-gold-base metal mineralized at Tres Cruces that is open in all directions justifies significant further drilling.

- El Cristo is an attractive target that requires drill testing. El Cristo is characterized by multiply NW-trending veins over a cumulative strike extent of 3 km that is the strike extension of the Veta Grande.

- The Company has drilled 3 holes into the San Gill breccia and assays are pending. The N-S trending San Gill breccia and associated NW-SE trending silver-base metal mineralized veins is a large breccia and vein system that requires further scout drilling.

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19 Date and Signature Page

For and on behalf of the Authors to accompany the report dated 28th of January 2022 entitled 'Independent Technical Report on the Zacatecas Properties, Zacatecas State, Mexico'.

"Juan-Manuel Morales-Ramirez"

Juan-Manuel Morales-Ramirez, BSc, MSc, P. Geo
Independent Consultant
28th of January 2022

"Joseph M. Keane"

Joseph M. Keane, P. Eng.
Independent Consultant
28th of January 2022

"Eugene J. Puritch"

Eugene J. Puritch, P. Eng., FEC, CET
Independent Consultant
28th of January 2022

"Antoine R. Yassa"

Antoine R. Yassa, P. Geo.
Independent Consultant
28th of January 2022

"Yungang Wu"

Yungang Wu, P. Geo.
Independent Consultant
28th of January 2022

"Jarita Barry"

Jarita Barry, P. Geo
Independent Consultant
28th of January 2022

20 Certificate of Qualification

To accompany the report dated 28th of January 2022 entitled,
'Independent Technical Report on the Zacatecas Properties, Zacatecas State, Mexico.'

I, Juan-Manuel Morales-Ramirez, BSc, MSc, P. Geo, from Hermosillo, Sonora, Mexico,
do hereby certify that:

1 I am an independent consultant geologist; my address is Calle Paseo del Norte #47, Colonia Paseo del Sol, Hermosillo, Sonora, Mexico, 83246.

2 I graduated with a Bachelor's degree in Geology (Geological Engineering) from Instituto Politécnico Nacional, Mexico City, Mexico in 1976, and MSc (Geology) form Universidad de Sonora in Hermosillo, Sonora, Mexico (thesis pending).

3 I am a Certified Professional Geologist (CPG #11234) in good standing with the American Institute of Professional Geologists in Arizona, USA since 2008.

4 I have practiced my profession continuously for over 40 years since my graduation in 1976. My exploration experience has been acquired with a variety of companies including: Consejo de Recursos Minerales (SGM); the US Geological Survey; VITRO; US Borax, USMX, Cambior (1992-1997), Noranda and X-Ore (2005-2013) and Silver Pursuit Resources Ltd.

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

6 I am responsible Sections 1 to 11, 14 to 15 and 18 of this report — and the respective parts of the Executive Summary, Interpretation and Conclusions (Chapter 16) and Recommendations (Chapter 17) — titled 'Independent Technical Report on the Zacatecas Properties, Zacatecas State, Mexico'.

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

8 I am independent of Zacatecas Silver Corp., the property and property vendor, applying all of the tests in section 1.5 of National Instrument 43-101.

9 I have read National Instrument 43-101 and Form 43-101F1, and the Technical Report has been prepared in compliance with that instrument and form.

10 I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

"Juan-Manuel Morales-Ramirez"

Mr Morales-Ramirez, BSc, MSc, P. Geo
28th of January 2022

20 Certificate of Qualification (cont.)

To accompany the report dated 28th of January 2022 entitled,
'Independent Technical Report on the Zacatecas Properties, Zacatecas State, Mexico.'

I, Joseph M. Keane P. Eng., do hereby certify that:

1 I am an independent mineral processing engineer consultant currently residing at 1061 W. Calle Santiago, Sahuarita, Arizona 85629 USA and am an associate of SGS North America Inc., 3845 North Business Center Drive, Suite 115, Tucson, Arizona 85705 USA

2 This certificate applies to the Report titled "Independent Technical Report, Zacatecas Properties, Zacatecas State, Mexico" dated 28 January 2022 (the Technical Report).

3 I graduated with a degree of Bachelor of Science in Metallurgical Engineering from the Montana School of Mines in 1962. I obtained a Master of Science degree in Mineral Processing Engineering in 1966 from the Montana College of Mineral Science and Technology. In 1989, I received a Distinguished Alumni Award from that institution. I have worked as a mineral processing and metallurgical engineer for a total of 55 years since my graduation from university.

4 I am a member of the Society for Mining, Metallurgy, and Exploration, Inc. (SME #1682600) and am a registered metallurgical engineer in Arizona (#12979), Colorado (#17177), and Nevada (#).

5 I have not visited the property that is the subject of this technical report.

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

7 I am responsible for Section 12 of the Technical Report. This report section summarizes recent flotation test work and contains important recommendations for required future flotation process definition studies.

8 I am independent of the issuer applying all of the tests in Section 1.5 of NI 43-101.

9 As of the date of this 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.

10 I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites assessable by the public.

"Joseph M. Keane"

Joseph M. Keane, P. Eng.
28th of January 2022

20 Certificate of Qualification (cont.)

To accompany the report dated 28th of January 2022 entitled,
'Independent Technical Report on the Zacatecas Properties, Zacatecas State, Mexico.'

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

1 I am an independent mining consultant and President of P&E Mining Consultants Inc.

2 This certificate applies to the Technical Report titled "Independent Technical Report, Zacatecas Properties, Zacatecas State, Mexico", with an effective date of 28th January 2022.

.

3 I am a graduate of The Haileybury School of Mines, with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen's University. In addition, I have also met the Professional Engineers of Ontario Academic Requirement Committee's Examination requirement for a Bachelor's degree in engineering Equivalency. I am a mining consultant currently licensed by the: Professional Engineers and Geoscientists New Brunswick (License No. 4778); Professional Engineers, Geoscientists Newfoundland and Labrador (License No. 5998); Association of Professional Engineers and Geoscientists Saskatchewan (License No. 16216); Ontario Association of Certified Engineering Technicians and Technologists (License No. 45252); Professional Engineers of Ontario (License No. 100014010); Association of Professional Engineers and Geoscientists of British Columbia (License No. 42912); and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (No. L3877). I am also a member of the National Canadian Institute of Mining and Metallurgy.

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

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

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

5 I am responsible for co-authoring Section 13 (Mineral Resource Estimates: with an Effective Date for the Panuco Inferred Mineral Resource Estimate of 14 December 2021), and the relevent sections of the Executive Summary and Chapter 16 (Interpretations and Conclusions) of this report.

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

7 I have had no prior involvement with the Project that is the subject of this Technical Report.

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

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

{SIGNED AND SEALED]
[Eugene Puritch]

Eugene Puritch, P. Eng., FEC, CET
28th of January 2022 (Effectiv e Date: 14th December 2021)

20 Certificate of Qualification (cont.)

To accompany the report dated 28th of January 2022 entitled,
'Independent Technical Report on the Zacatecas Properties, Zacatecas State, Mexico.'

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

1 I am an independent geological consultant contracted by P&E Mining Consultants Inc.

2 This certificate applies to the Technical Report titled "Independent Technical Report, Zacatecas Properties, Zacatecas State, Mexico", (The "Technical Report") with an effective date of 28th January 2022.

3 I am a graduate of Ottawa University at Ottawa, Ontario with a B. Sc (HONS) in Geological Sciences (1977) with continuous experience as a geologist since 1979. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No 224) and by the Association of Professional Geoscientist of Ontario (License No 1890): I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. My relevant experience for the purpose of the Technical Report is:

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

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

5 I am responsible for co-authoring Section 13 (Mineral Resource Estimates: with an Effective Date for the Panuco Inferred Mineral Resource Estimate of 14 December 2021), and the relevent sections of the Executive Summary and Chapter 16 (Interpretations and Conclusions) of this report.

6 I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.

7 I have had no prior involvement with the Project that is the subject of this Technical Report.

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

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

{SIGNED AND SEALED]
[Antoine R. Yassa]

Antoine R. Yassa, P. Geo.
28th of January 2022 (Effective Date: 14th December 2021)

20 Certificate of Qualification (cont.)

To accompany the report dated 28th of January 2022 entitled,
'Independent Technical Report on the Zacatecas Properties, Zacatecas State, Mexico.'

I, Yungang Wu, P. Geo., residing at 3246 Preserve Drive, Oakville, Ontario, L6M 0X3, do here-by certify that:

1. I am an independent consulting geologist contracted by P&E Mining Consultants Inc.

2. This certificate applies to the Technical Report titled "Independent Technical Report, Zacatecas Properties, Zacatecas State, Mexico", (The "Technical Report") with an effective date of 28th January 2022.

3. I am a graduate of Jilin University, China, with a Master's degree in Mineral Deposits (1992). I have worked as a geologist for 25 plus years since graduating. I am a geological consultant and a registered practising member of the Association of Professional Geoscientists of Ontario (Registration No. 1681). I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that, by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. My relevant experience for the purpose of the Technical Report is:

#	Geologist –Geology and Mineral Bureau, Liaoning Province, China	1992-1993
#	Senior Geologist – Committee of Mineral Resources and Reserves of Liaoning, China	1993-1998
#	VP – Institute of Mineral Resources and Land Planning, Liaoning, China	1998-2001
#	Project Geologist–Exploration Division, De Beers Canada	2003-2009
#	Mine Geologist – Victor Diamond Mine, De Beers Canada	2009-2011
#	Resource Geologist– Coffey Mining Canada	2011-2012
#	Consulting Geologist	2012-Present

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

5. I am responsible for co-authoring Section 13 (Mineral Resource Estimates: with an Effective Date for the Panuco Inferred Mineral Resource Estimate of 14 December 2021), and the relevent sections of the Executive Summary and Chapter 16 (Interpretations and Conclusions) of this report.

6. I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.

7. I have had no prior involvement with the Project that is the subject of this Technical Report.

8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance there-with.

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

{SIGNED AND SEALED]
[Yungang Wu]

Yungang Wu, P. Geo.
28th of January 2022 (Effective Date: 14th December 2021)

20 Certificate of Qualification (cont.)

To accompany the report dated 28th of January 2022 entitled,
'Independent Technical Report on the Zacatecas Properties, Zacatecas State, Mexico.'

I, Jarita Barry, P. Geo., residing at 4 Creek View Close, Mount Clear, Victoria, Australia, 3350, do hereby certify that:

1 I am an independent geological consultant contracted by P&E Mining Consultants Inc.

2 This certificate applies to the Technical Report titled "Independent Technical Report, Zacatecas Properties, Zacatecas State, Mexico", (The "Technical Report") with an effective date of 28th January 2022.

3 I am a graduate of RMIT University of Melbourne, Victoria, Australia, with a B.Sc. in Applied Geology. I have worked as a geologist for over 15 years since obtaining my B.Sc. degree. I am a geological consultant currently licensed by Engineers and Geoscientists British Columbia (License No. 40875), Professional Engineers and Geoscientists Newfoundland & Labrador (License No. 08399) and Northwest Territories and Nunavut Association of Professional Engineers and Geoscientists (License No. L3874). I am also a member of the Australasian Institute of Mining and Metallurgy of Australia (Member No. 305397). I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101. My relevant experience for the purpose of the Technical Report is:

• Geologist, Foran Mining Corp.	2004
• Geologist, Aurelian Resources Inc.	2004
• Geologist, Linear Gold Corp.	2005-2006
• Geologist, Búscore Consulting	2006-2007
• Consulting Geologist (AusIMM)	2008-2014
• Consulting Geologist, P.Geo. (APEGBC/AusIMM)	2014-Present

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

5 I am responsible for review of Section 10 (Sample Preparation, Analysis and Security) to ensure that protocols meet the standards required for inclusion of results in the estimation of a Mineral Resource.

6 I am independent of the Issuer applying the test in Section 1.5 of NI 43-101. I am independent of the Vendor and the Property.

7 I have had no prior involvement with the Project that is the subject of this Technical Report.

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

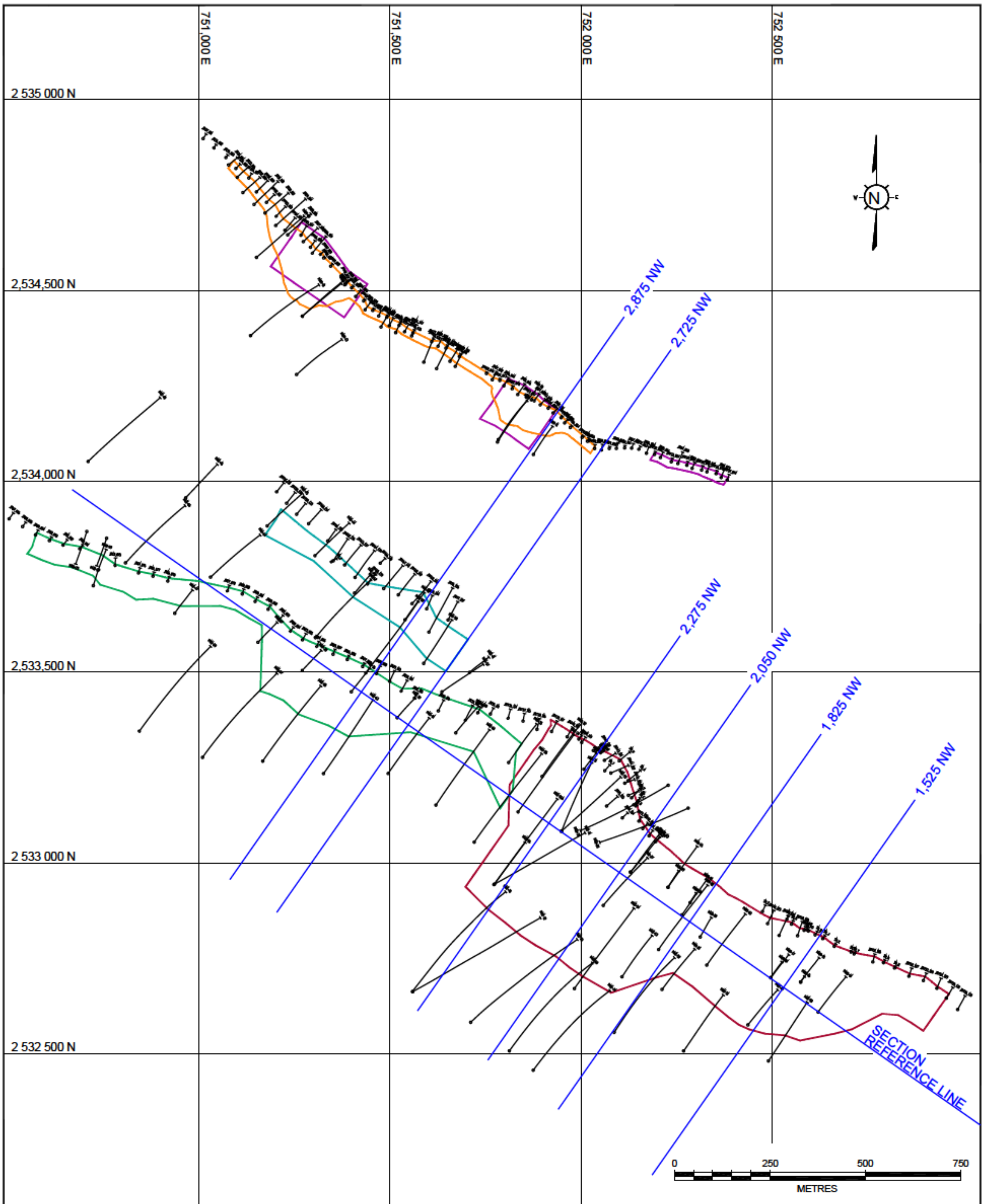
9 As of the effective date of this Technical Report, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

{SIGNED AND SEALED]
[Jarita Barry]

Jarita Barry, P. Geo.
28th of January 2022 (Effective Date: 14th December 2021)

Appendix A

Drill Hole Plan



P&E Mining Consultants Inc.

ZACATECAS SILVER CORP.

PANUCO DEPOSIT

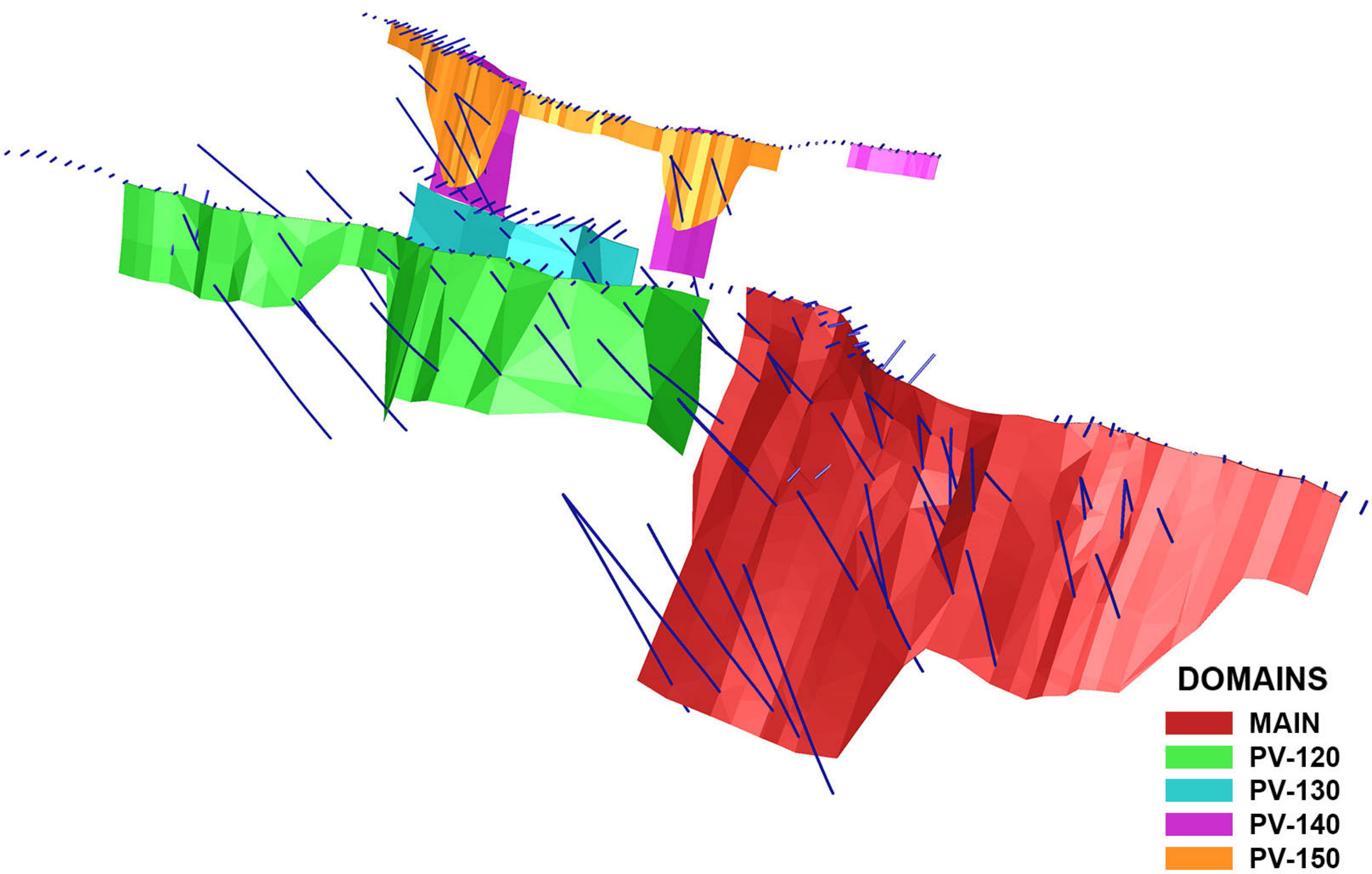
SURFACE DRILL HOLE PLAN

Scale 1:13,000 January 2022

Appendix B

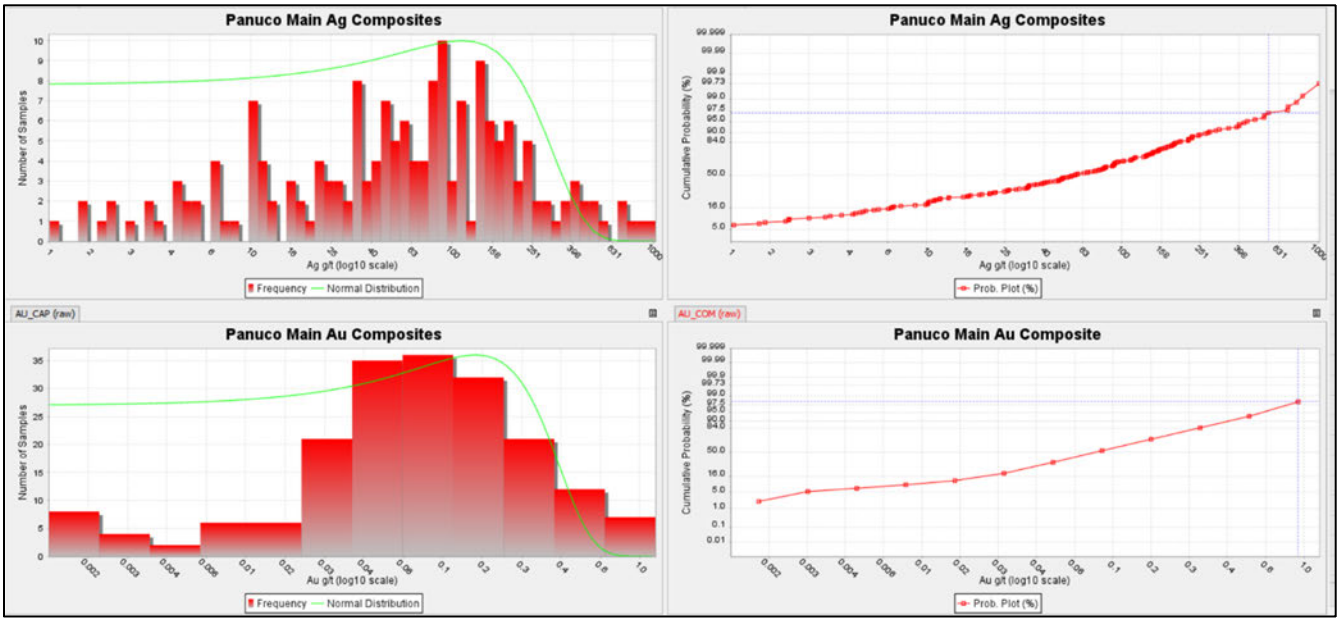
3D Domains

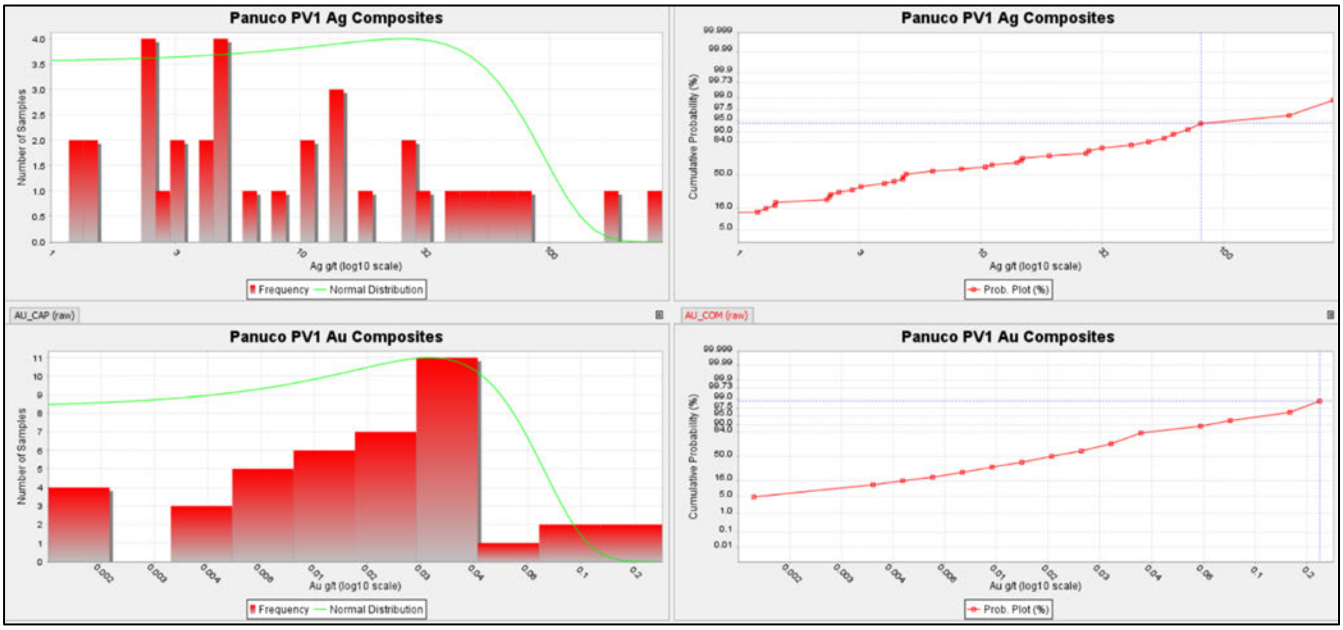
PANUCO DEPOSIT - 3D DOMAINS

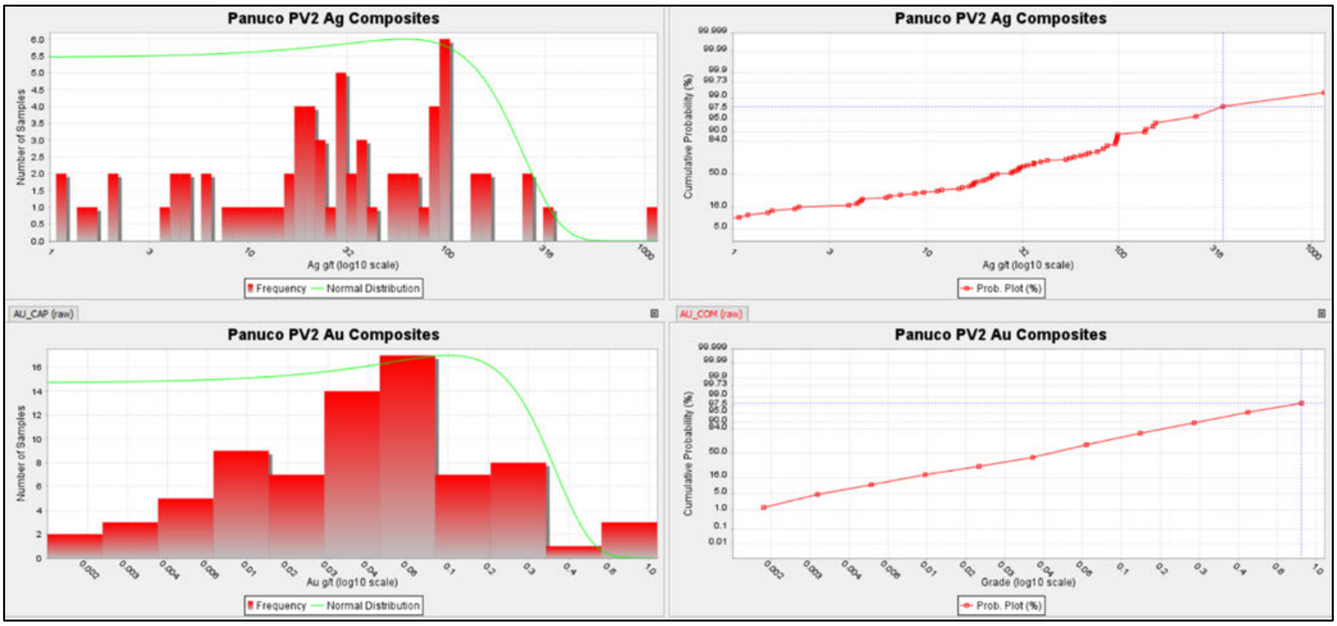


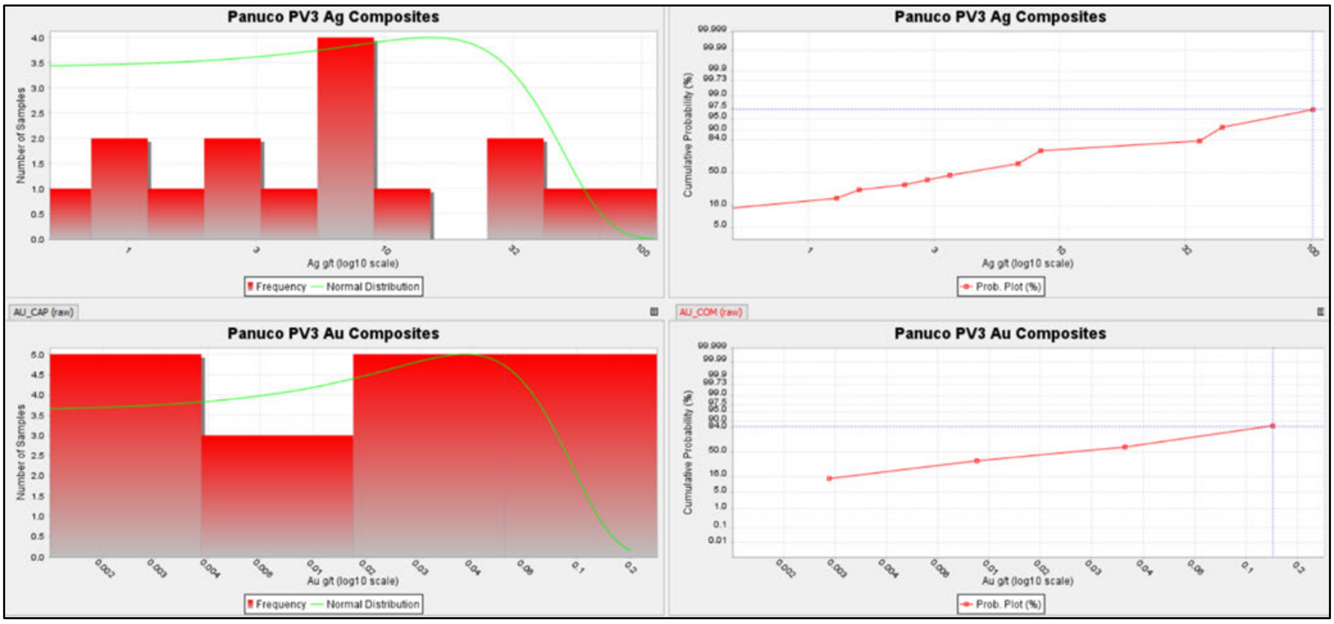
Appendix C

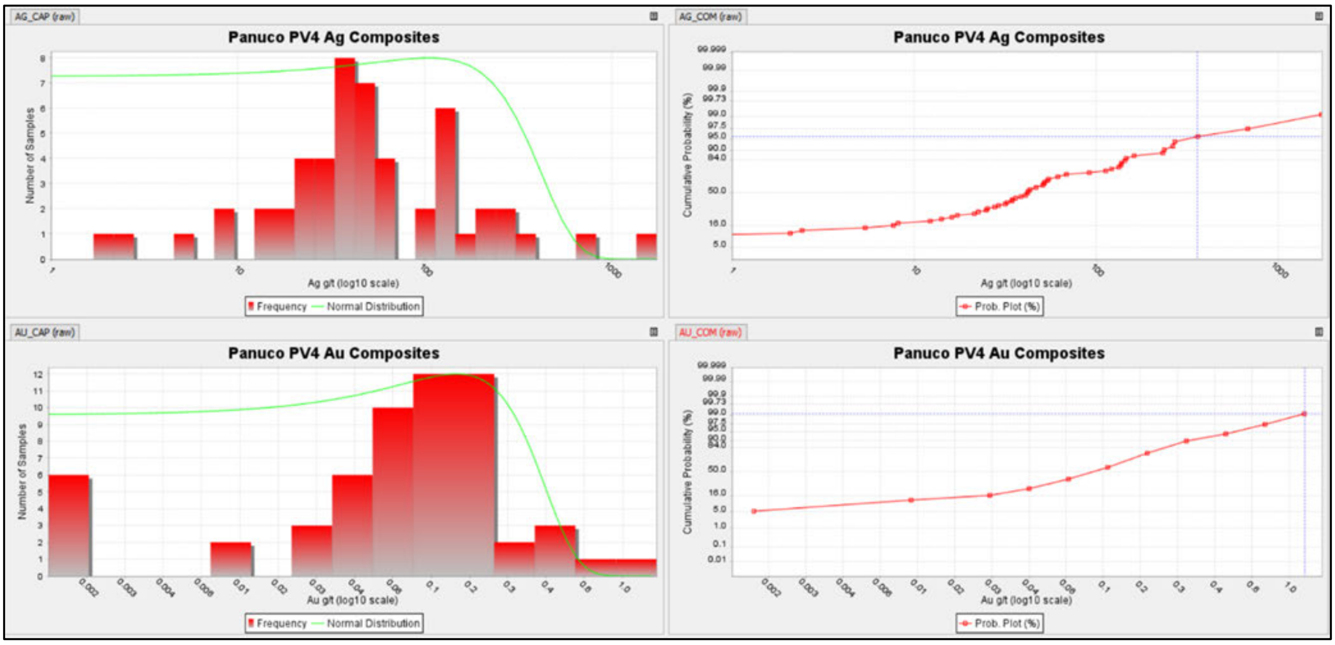
Log Normal Histograms

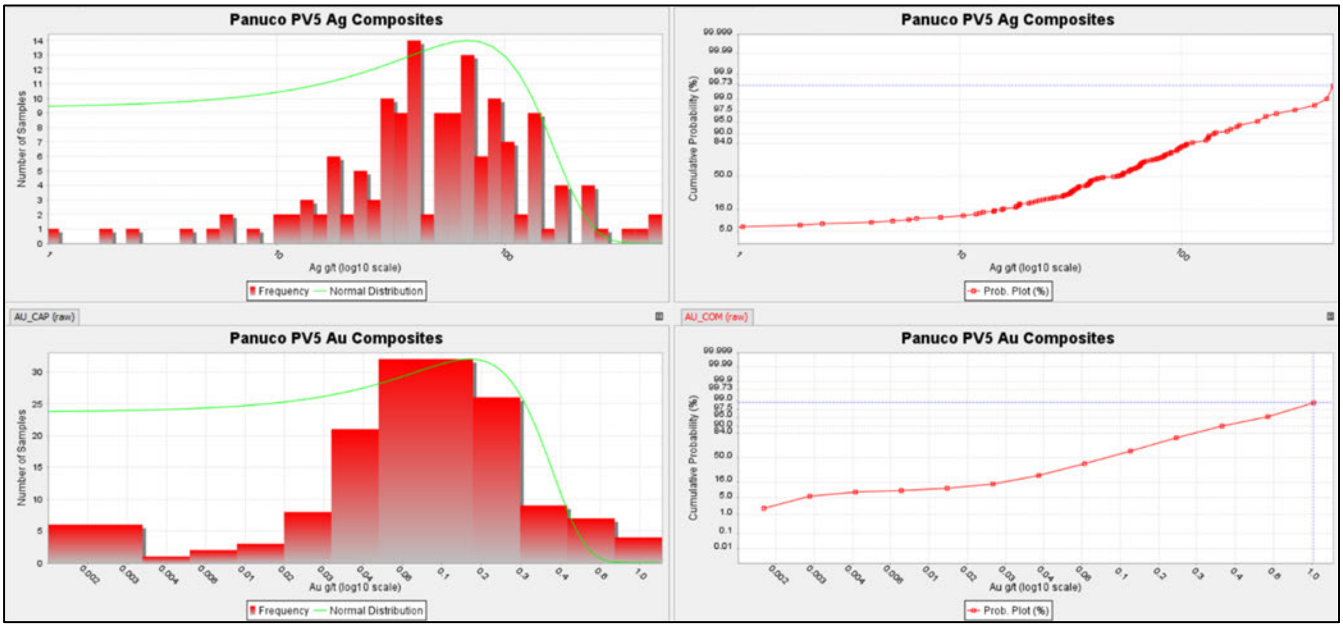

Panuco Main Ag Composites
Number of Samples
Ag g/t (log10 scale)
Frequency
Normal Distribution
Panuco Main Ag Composites
Cumulative Probability (%)
Ag g/t (log10 scale)
Prob. Plot (%)
AU_CAP (raw)
Panuco Main Au Composites
Number of Samples
Au g/t (log10 scale)
Frequency
Normal Distribution
AU_COM (raw)
Panuco Main Au Composite
Cumulative Probability (%)
Au g/t (log10 scale)
Prob. Plot (%)


Panuco PV1 Ag Composites
Number of Samples
Ag g/t (log10 scale)
Frequency
Normal Distribution
Panuco PV1 Ag Composites
Cumulative Probability (%)
Ag g/t (log10 scale)
Prob. Plot (%)
AU_CAP (raw)
Panuco PV1 Au Composites
Number of Samples
Au g/t (log10 scale)
Frequency
Normal Distribution
AU_COM (raw)
Panuco PV1 Au Composites
Cumulative Probability (%)
Au g/t (log10 scale)
Prob. Plot (%)


Panuco PV2 Ag Composites
Number of Samples
Ag g/t (log10 scale)
Frequency
Normal Distribution
Panuco PV2 Ag Composites
Cumulative Probability (%)
Ag g/t (log10 scale)
Prob. Plot (%)
AU_CAP (raw)
Panuco PV2 Au Composites
Number of Samples
Au g/t (log10 scale)
Frequency
Normal Distribution
AU_COM (raw)
Panuco PV2 Au Composites
Cumulative Probability (%)
Grade (log10 scale)
Prob. Plot (%)

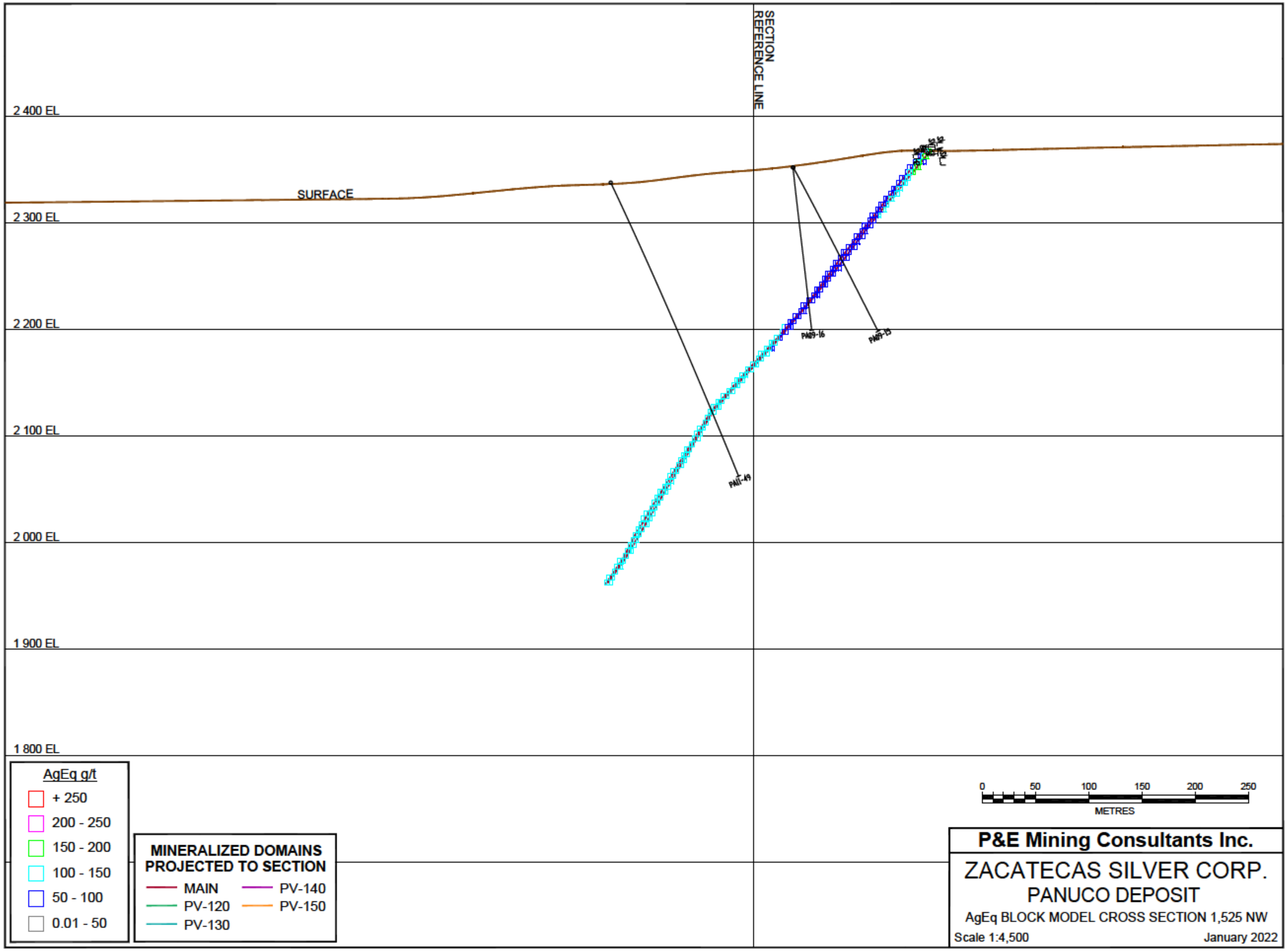

Panuco PV3 Ag Composites
Number of Samples
Ag g/t (log10 scale)
Frequency
Normal Distribution
Panuco PV3 Ag Composites
Cumulative Probability (%)
Ag g/t (log10 scale)
Prob. Plot (%)
AU_CAP (raw)
Panuco PV3 Au Composites
Number of Samples
Au g/t (log10 scale)
Frequency
Normal Distribution
AU_COM (raw)
Panuco PV3 Au Composites
Cumulative Probability (%)
Au g/t (log10 scale)
Prob. Plot (%)

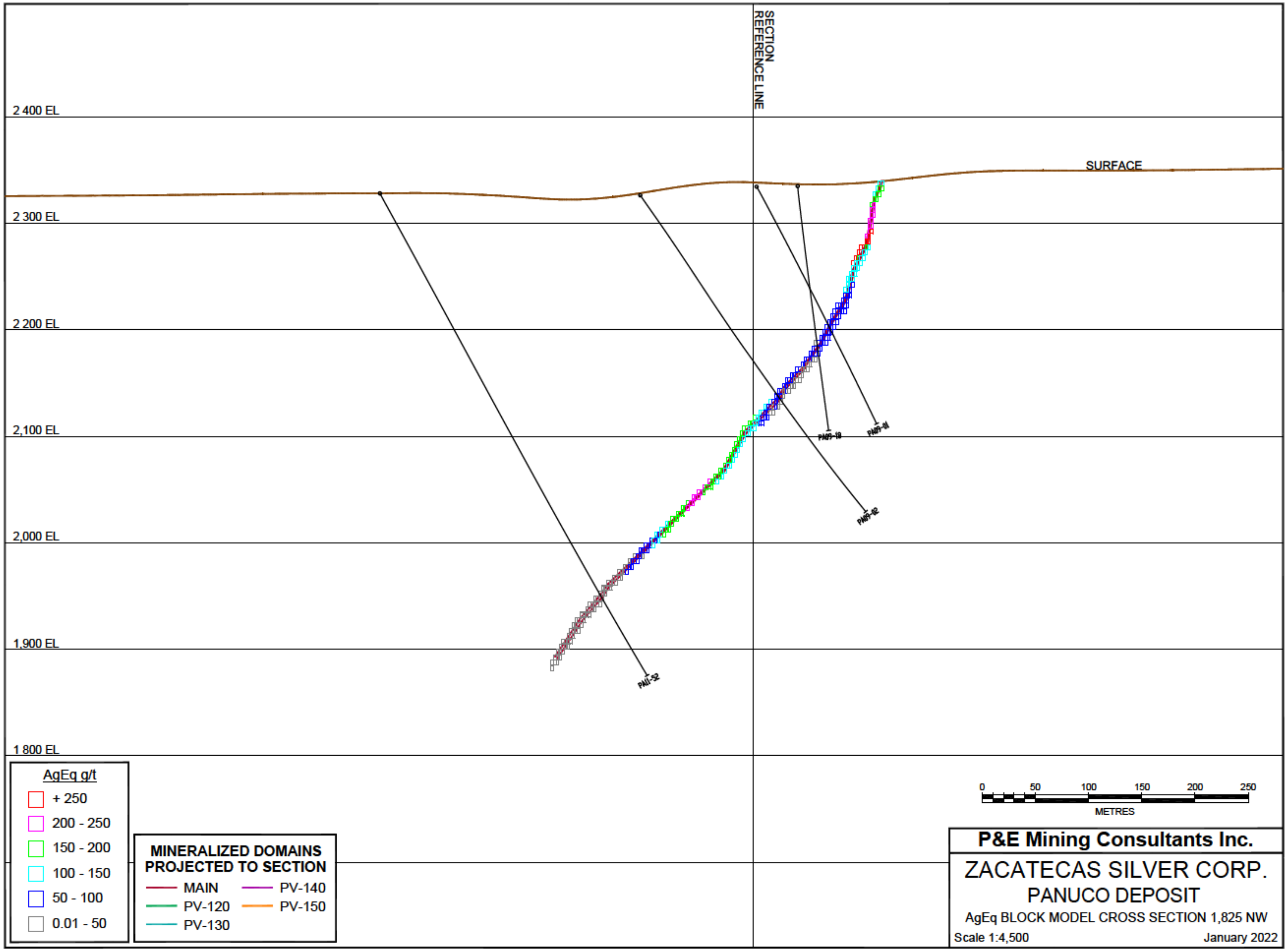

AG_CAP (raw)
Panuco PV4 Ag Composites
Number of Samples
Ag g/t (log10 scale)
Frequency
Normal Distribution
AG_COM (raw)
Panuco PV4 Ag Composites
Cumulative Probability (%)
Ag g/t (log10 scale)
Prob. Plot (%)
AU_CAP (raw)
Panuco PV4 Au Composites
Number of Samples
Au g/t (log10 scale)
Frequency
Normal Distribution
AU_COM (raw)
Panuco PV4 Au Composites
Cumulative Probability (%)
Au g/t (log10 scale)
Prob. Plot (%)

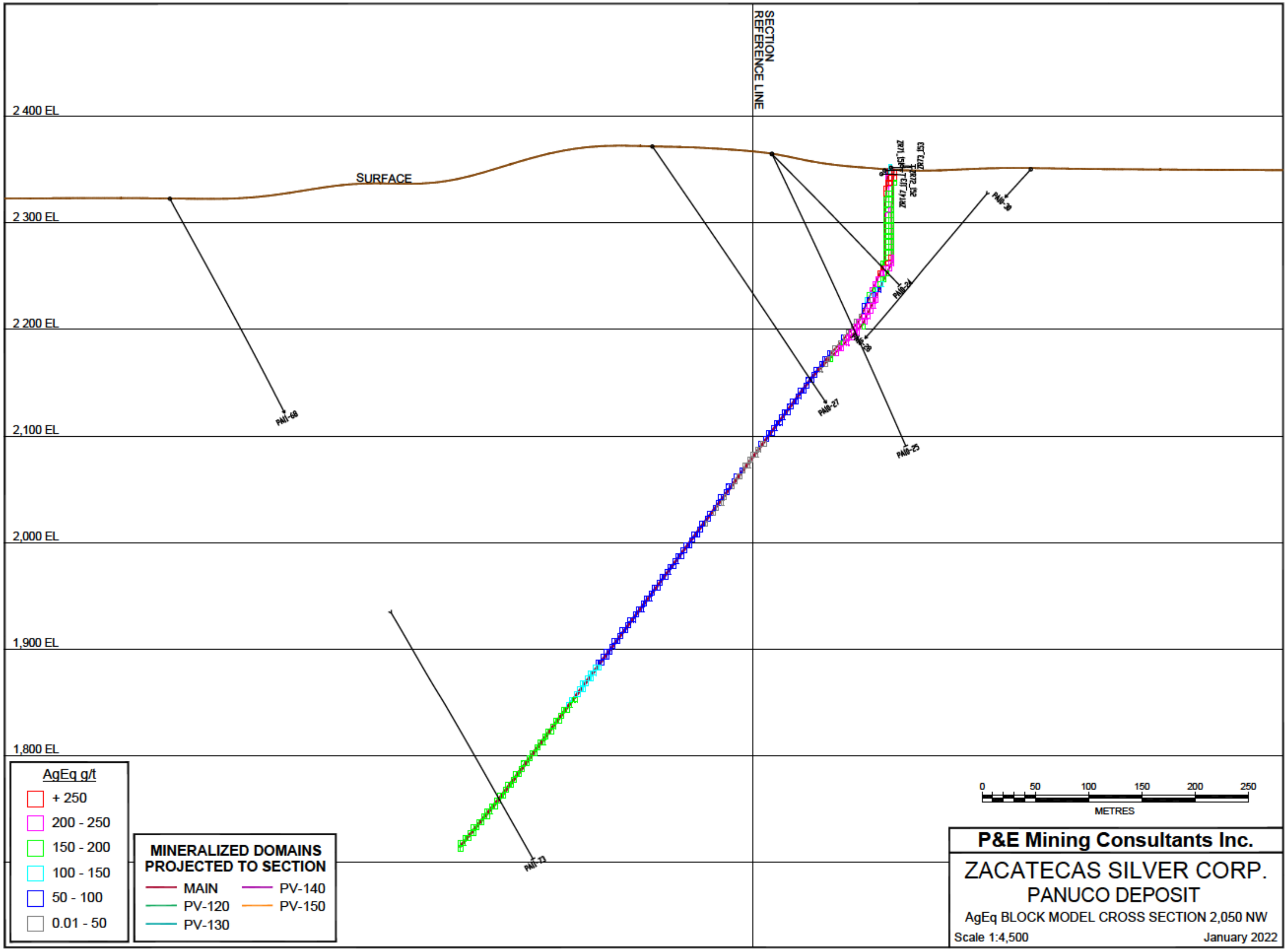

Panuco PV5 Ag Composites
Number of Samples
Ag g/t (log10 scale)
Frequency
Normal Distribution
Panuco PV5 Ag Composites
Cumulative Probability (%)
Ag g/t (log10 scale)
Prob. Plot (%)
AU_CAP (raw)
Panuco PV5 Au Composites
Number of Samples
Au g/t (log10 scale)
Frequency
Normal Distribution
AU_COM (raw)
Panuco PV5 Au Composites
Cumulative Probability (%)
Au g/t (log10 scale)
Prob. Plot (%)

Appendix D

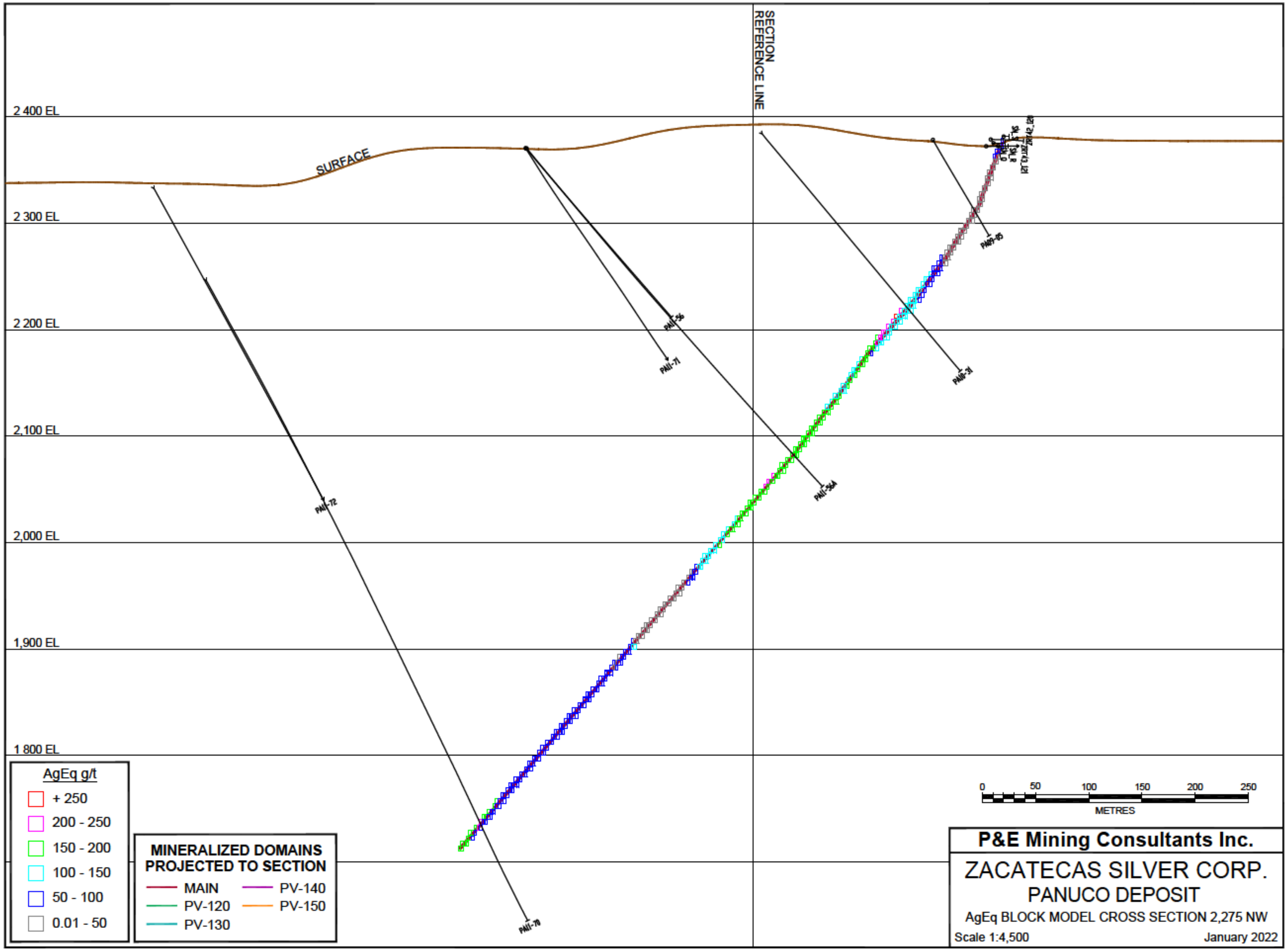
AgEq Block Model Cross Sections and Plans


SECTION
REFERENCE LINE
2 400 EL
2 300 EL
2 200 EL
2 100 EL
2 000 EL
1 900 EL
1 800 EL
SURFACE
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS
PROJECTED TO SECTION
MAIN
PV-140
PV-120
PV-150
PV-130
0
50
100
150
200
250
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL CROSS SECTION 1,525 NW
Scale 1:4,500
January 2022

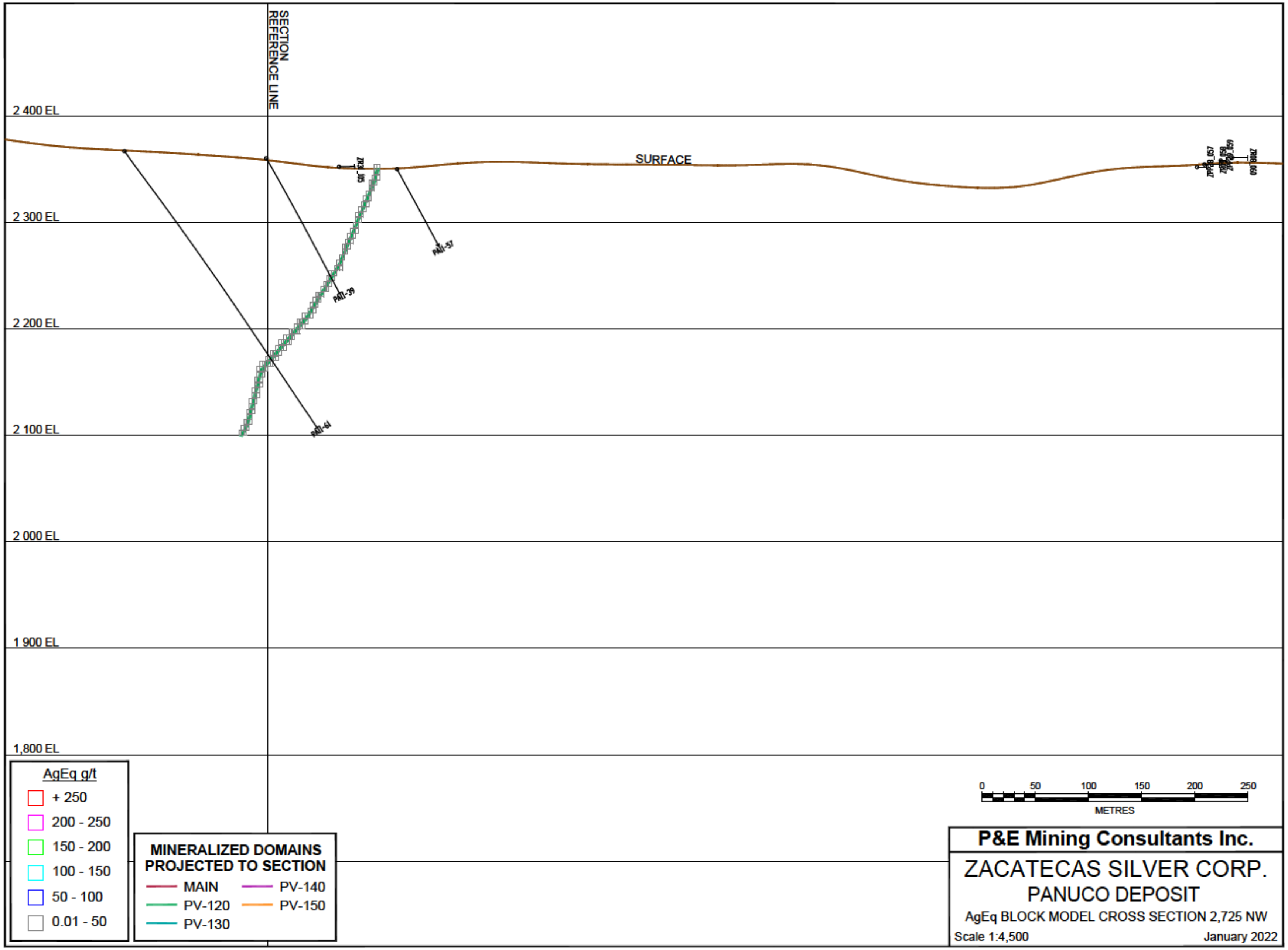

SECTION REFERENCE LINE
2 400 EL
2 300 EL
2 200 EL
2,100 EL
2,000 EL
1,900 EL
1 800 EL
SURFACE
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
PV-140
PV-120
PV-150
PV-130
0
50
100
150
200
250
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL CROSS SECTION 1,825 NW
Scale 1:4,500
January 2022



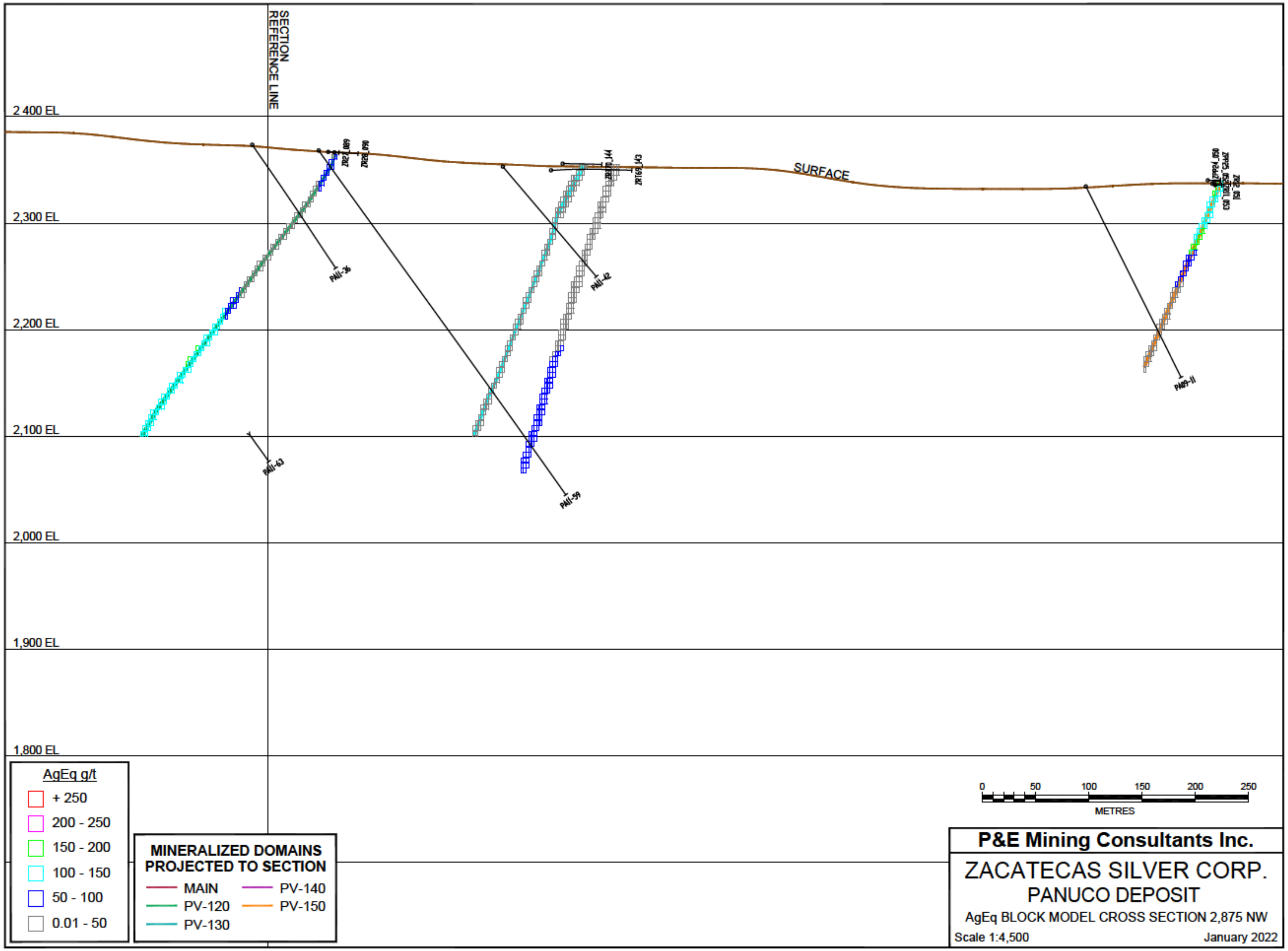
SECTION REFERENCE LINE
2 400 EL
2 300 EL
2 200 EL
2,100 EL
2,000 EL
1,900 EL
1,800 EL
SURFACE
PA18-27
PA18-25
PA18-24
PA18-30
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
PV-140
PV-120
PV-150
PV-130
0
50
100
150
200
250
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL CROSS SECTION 2,050 NW
Scale 1:4,500
January 2022

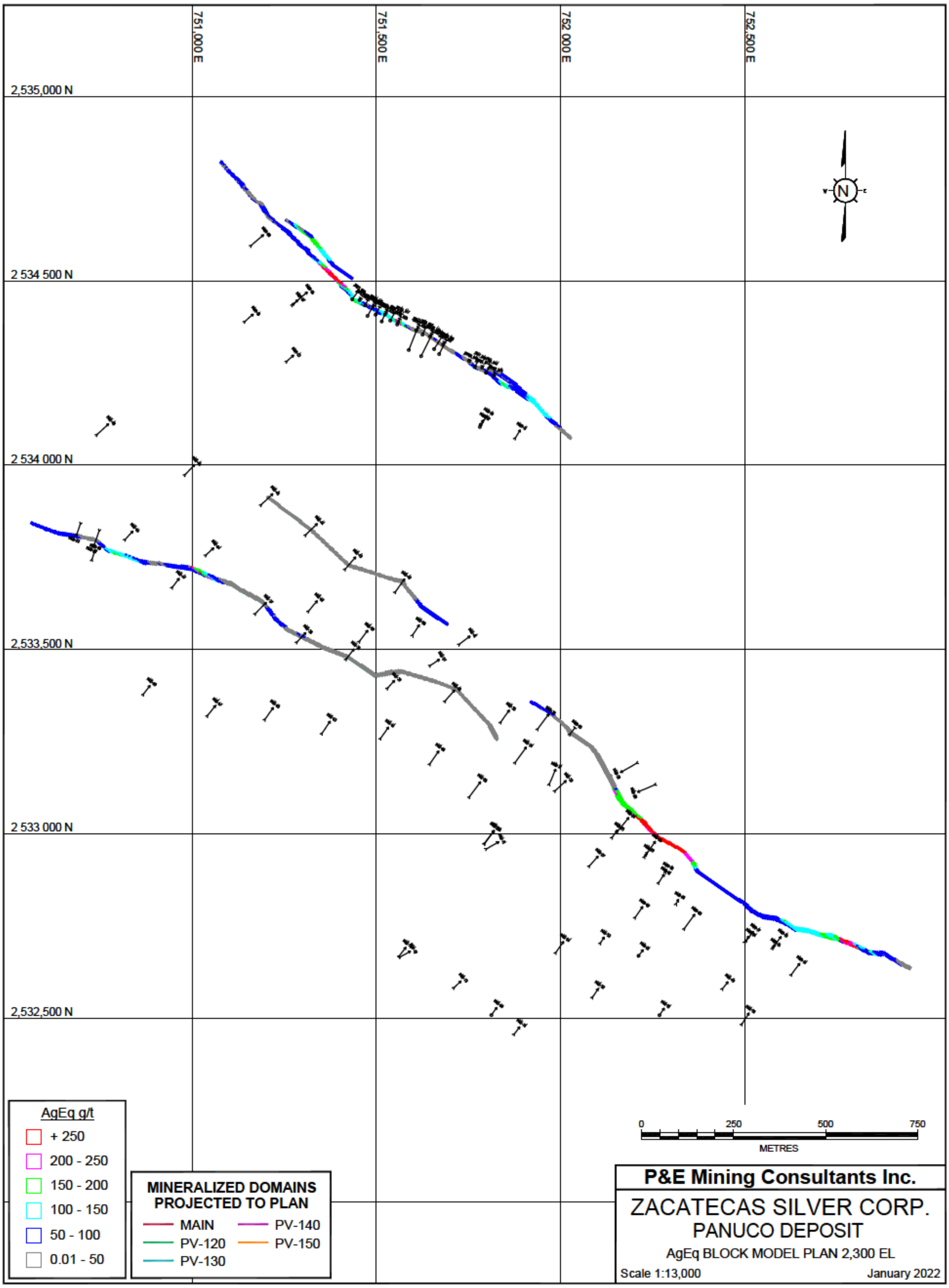


SECTION REFERENCE LINE
2 400 EL
2 300 EL
2 200 EL
2,100 EL
2,000 EL
1,900 EL
1 800 EL
SURFACE
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
PV-120
PV-130
PV-140
PV-150
0
50
100
150
200
250
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL CROSS SECTION 2,275 NW
Scale 1:4,500
January 2022

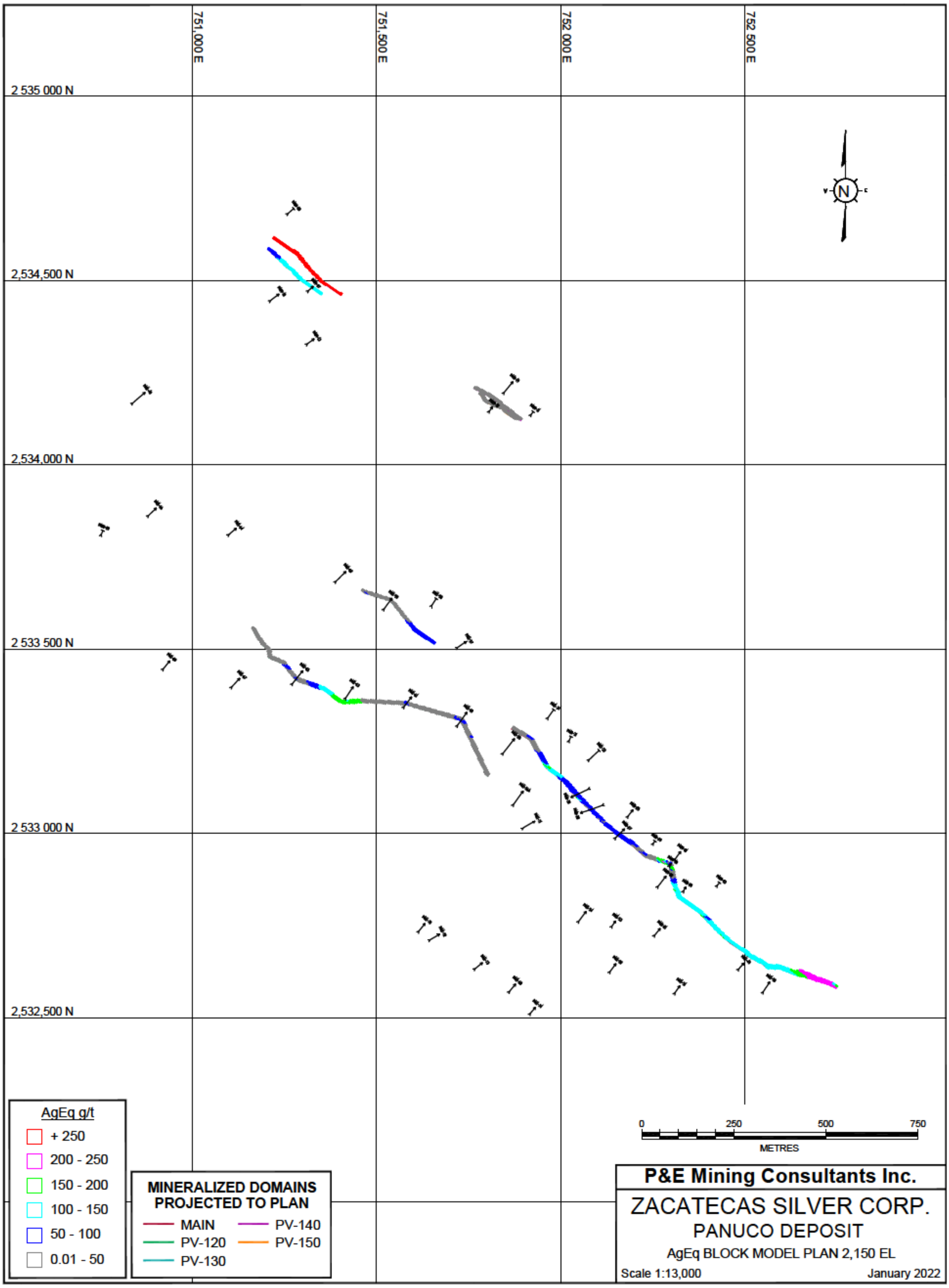


SECTION REFERENCE LINE
2 400 EL
2 300 EL
2 200 EL
2 100 EL
2 000 EL
1 900 EL
1,800 EL
SURFACE
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
PV-140
PV-120
PV-150
PV-130
0 50 100 150 200 250
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL CROSS SECTION 2,725 NW
Scale 1:4,500
January 2022

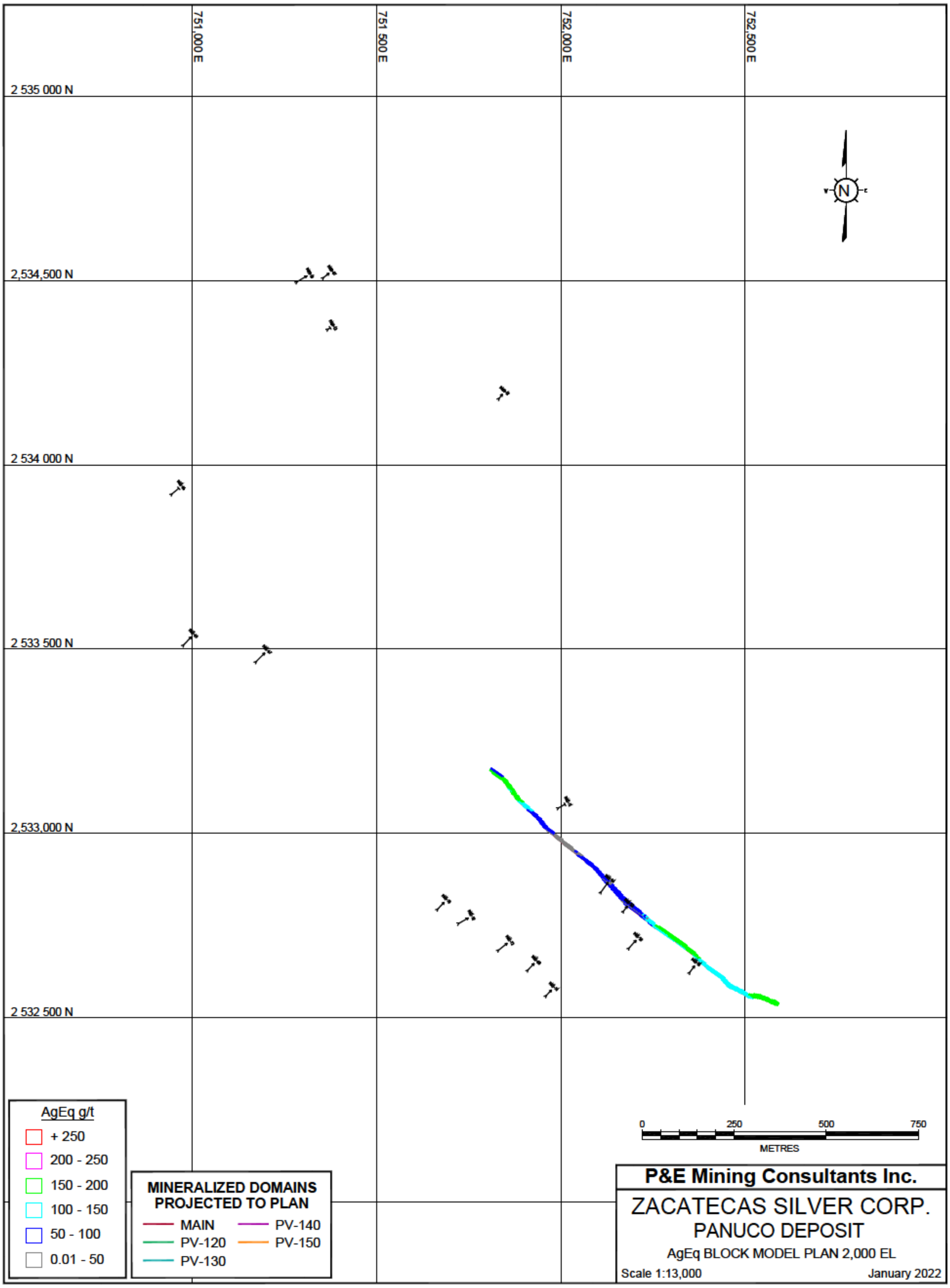

SECTION REFERENCE LINE
2,400 EL
2,300 EL
2,200 EL
2,100 EL
2,000 EL
1,900 EL
1,800 EL
SURFACE
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS PROJECTED TO SECTION
MAIN
PV-140
PV-120
PV-150
PV-130
0 50 100 150 200 250
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL CROSS SECTION 2,875 NW
Scale 1:4,500
January 2022



751,000 E
751,500 E
752,000 E
752,500 E
2,535,000 N
2 534 500 N
2 534 000 N
2,533,500 N
2 533 000 N
2,532,500 N
N
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
PV-120
PV-130
PV-140
PV-150
0
250
500
750
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL PLAN 2,300 EL
Scale 1:13,000
January 2022



751,000 E
751,500 E
752 000 E
752 500 E
2 535 000 N
2,534,500 N
2,534,000 N
2 533 500 N
2 533 000 N
2,532,500 N
N
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
PV-120
PV-130
PV-140
PV-150
0
250
500
750
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL PLAN 2,150 EL
Scale 1:13,000
January 2022


751,000 E
751,500 E
752,000 E
752,500 E
2 535 000 N
2,534,500 N
2 534 000 N
2 533 500 N
2,533,000 N
2 532 500 N
N
AgEq g/t
+ 250
200 - 250
150 - 200
100 - 150
50 - 100
0.01 - 50
MINERALIZED DOMAINS PROJECTED TO PLAN
MAIN
PV-120
PV-130
PV-140
PV-150
0
250
500
750
METRES
P&E Mining Consultants Inc.
ZACATECAS SILVER CORP.
PANUCO DEPOSIT
AgEq BLOCK MODEL PLAN 2,000 EL
Scale 1:13,000
January 2022