



A.C.A. HOWE INTERNATIONAL LIMITED
Mining and Geological Consultants

TECHNICAL REPORT
ON THE
GOLDEN ZONE PROPERTY
VALDEZ CREEK MINING DISTRICT, CENTRAL ALASKA RANGE,
SOUTH-CENTRAL ALASKA

for
AVIDIAN GOLD INC.

AND
MARCHING MOOSE CAPITAL CORPORATION

Report No. 983

A.C.A. Howe International Limited
Toronto, Ontario, Canada

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Original Date: November 23, 2016
Amended Date: August 17, 2017



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APPENDIX A:	List of Claims
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1. EXECUTIVE SUMMARY

This technical report (“Report”) was prepared by A.C.A. Howe International Limited (“Howe”) at the joint request of Mr. Dino Titano, President and CEO of Avidian Gold Inc. (“Avidian”) and Mr. Larry K. Doan, President and CEO of Marching Moose Capital Corp (“MMCC”), a capital pool company listed on the TSX Venture Exchange (the “TSXV”). This Report has been requested in respect of a proposed amalgamation of Avidian and MMCC (the “Proposed Transaction”), resulting in the business of Avidian becoming the business of MMCC. Following completion of the Proposed Transaction MMCC will change its name to Avidian Gold Inc. (the “Resulting Issuer”). Thus, this Report has been written to fulfill the requirements of the TSXV in respect of the Proposed Transaction.

As this report has been written to fulfill the requirements of the TSXV in respect of the Proposed Transaction between Avidian and MMCC, the TSXV has requested that the report be updated from its original Effective Date of November 23, 2016 and amended to include a description of the work done during the summer of 2017 on the project and where results are available to include them in the Report as of the Amended Effective Date (August 17, 2017). It is understood that while work has been carried out the results of the work program are incomplete and that the final analysis along with interpretative compilation of the work will not be completed until late fall of 2017.

This Report is specific to the standards dictated by National Instrument 43-101, companion policy NI43-101CP and Form 43-101F1 (Standards of Disclosure for Mineral Projects) in respect to the Golden Zone Property (“Property”) and focuses on the mineral resource estimate of the Golden Zone deposit and the overall exploration potential of the Property. The mineral resource estimate is prepared in accordance with Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Definition Standards for Mineral Resources and Mineral Reserves (May 10, 2014) as per NI 43-101 requirements. Only mineral Resources are estimated – no mineral Reserves are defined.

The Golden Zone Property area is located entirely on State of Alaska owned lands and falls within Alaska’s Valdez Creek Mining District and the Talkeetna Recording District approximately 230 air kilometres (km) north of Anchorage and 210 air km south of Fairbanks. The nearest communities are Cantwell, approximately 42 air km to the northeast and Talkeetna approximately 102 air km to the south. With exception to a non-contiguous mill lease, the Property lies within Townships 19S and 20S Range 11W, Fairbanks Meridian. The approximate centre of the main Property lies at 63° 12’ 39” N latitude and 149° 37’ 16” W longitude (UTM Zone 6 V 368,225 E, 7,011,775 N WGS84)

The Property consists of 26 ¼-¼ section (16 hectare) State of Alaska MTRS (Meridian, Township, Range, Section) mining claims totalling approximately 416 ha, 38 ¼ section (64 ha;) State of Alaska MTRS mining claims totalling approximately 2,432 ha, a contiguous 1,168 ha State of Alaska upland mining lease (ADL No. 580985), and a non-contiguous 16 ha State of Alaska millsite lease (ADL No. 547111) at Colorado Station on the main Fairbanks – Anchorage rail line approximately 10 km southeast of the main Property. Mining claims and leases represent



a total area of 4,032 ha. A previously abandoned mining claim, Gold King 48 - ADL 563034, is currently in process of reactivation (“curing”) and upon reactivation, application will be made to incorporate it into the upland mining lease. The mining lease will then total 1,184 ha and the total Property area will be 4,048 ha.

Prior to Avidian’s acquisition of the Property, the State of Alaska Uplands Mineral Lease ADL 580985 and State of Alaska Millsite Lease ADL 547111 were owned 51% by Chulitna Mining Company LLC (Chulitna), 29.4% by Hidefield Gold (Alaska) Inc. (Hidefield) a subsidiary of Hidefield Gold Limited, which is a subsidiary of Minera IRL Limited, and 19.6% by Mines Trust Co. (Mines Trust). Avidian has acquired 100% of Chulitna’s, Mines Trust’s and Hidefield’s interests in the Golden Zone Property (specifically the 1,168 ha State of Alaska Uplands Mineral Lease ADL 580985 and 16 ha State of Alaska Millsite Lease ADL 547111) subject to certain payment and royalty terms. Mines Trust’s title to the two leases and transactions and agreements between Mines Trust and other entities that may be in place have been transferred to Avidian as of the date of this Report. The contiguous 64 State of Alaska MTRS claims within the Golden Zone Property are held 100% by Avidian through its wholly owned Alaskan subsidiary, Avidan Gold Alaska, subject to certain royalty payments to Chulitna and Mines Trust.

The Property is linked to the George Parks Highway and the Alaska Railroad at the Colorado Station by the state owned, Colorado-Bull River Road (DOT 87-6), a seasonally improved dirt road (road distances of 24 and 19 km respectively). The Colorado-Bull River Road leaves the George Parks Highway at approximately milepost 187.5. The property is due south of, and adjacent to the Denali National Park and Preserve; an approximately 4.5 km length of the Colorado-Bull River Road passes through the Park on the northeast side of the West Fork of the Chulitna River. No access permits are required to utilize this section of the road as it is a State-deeded right of way to the mine property. The Colorado-Bull River Road ends at the historic Golden Zone Mine. From the Golden Zone Mine area, dozer and ATV trails provide access to historic mineral prospects.

Avidian, Chulitna, and Mines Trust warrant that they possess or will acquire all State permits required to execute exploration activities currently being undertaken or planned on the property. In April 2016, Chulitna (as leasee and operator) and Mines Trust (as owner) applied to the State of Alaska for a multi-year work permit (January 1, 2016 to December 31, 2020) on the Upland Mining Lease ADL 580985. This five year permit was awarded on May 9, 2016.

To Howe’s knowledge there are no current social, political, environmental or other liabilities and risks associated with the Property area that may affect access, title or the right or ability to perform the work recommended in this Report. Avidian warrants that neither it, Chulitna or Mines Trust have received from any government authority any notice of, or communication relating to, any actual or alleged breach of any environmental laws, regulations, policies or permits. To Howe’s knowledge there are no current or pending challenges to ownership of the lands.

The nearest areas to the Property that are closed to mineral entry include Denali National Park and Preserve which abuts the north and northwest side of the Property and the Denali State Park located approximately 27 km south-southwest of the southern Property boundary. The Property is



located entirely on State of Alaska owned lands and lies within Unit N-16 of the North Parks Highway Region of the Susitna Matanuska Area Plan. Unit N-16 is designated Minerals under the Plan and the intent is to manage the unit for its mineral values.

The climate in the Project area is mountain continental but has a maritime influence in the summer because of its proximity to the coast and the warm Japanese current emanating from the Gulf of Alaska. The effective season for field exploration operations in the Project area runs from June through late September or early October. Mine operations in the region with supporting infrastructure, can operate year-round.

The property is located about 16 air km from the main transportation corridor between Anchorage and Fairbanks which contains the George Parks Highway (Alaska Route 3), the Alaska Railroad and the 345Kv Alaska Intertie. A 610 m gravel airstrip is located at Colorado Station and a 365 m airstrip is located within the upland lease on the access road approximately 1 km northeast of the Golden Zone camp. No electrical power lines, gas lines, or permanent settlements exist on the Property. Facilities on the upland mining lease portion of the Property include a complete 20- to 25-man camp. A shop and apartment are located at the Colorado Station Millsite Lease staging area.

Anchorage and Fairbanks are the nearest sources of mining related commercial services and have an abundant pool of managerial and skilled labour. Anchorage is serviced by modern telecommunications, commercial airlines and ocean port and rail and truck transportation. Fairbanks is the largest city in the Interior region and second most populous metropolitan area in Alaska after Anchorage. Fairbanks is also serviced by modern telecommunications, commercial airlines and rail and truck transportation.

As of the date of this Report, it appears that sufficient surface rights exist on the property that may be necessary for any potential future mining operations including tailings storage areas, waste disposal areas and a processing plant.

The Project area lies on the south foothills of the Alaska Range; relief is moderate, with elevations on the Property ranging from about 600 m asl (altitude above mean sea level) at the northwest end of the property along the West Fork of the Chulitna River, to approximately 1,200 m asl at the southwestern end of the upland mining lease to over 1500 m asl in the extreme southwestern end of the property.

The Golden Zone mine, Golden Zone Property area and Chulitna Mining District have a long exploration and development history. Four periods are recognized:

- 1) 1907 - 1915 — Discovery and early prospecting;
- 2) 1929 - 1942 — Exploration and development related to W.E. Dunkle;
- 3) 1971 - 1983 — Start of modern exploration; and
- 4) 1985 - present — Exploration dominated by junior exploration companies.

Approximately 26,815 m of drilling, both core and reverse circulation, has been conducted on the Golden Zone property, predominantly in the immediate area of the Golden Zone Breccia Pipe.



Most of the drill core is preserved on site in two dedicated storage buildings. In addition to drilling, considerable geologic mapping, ground geophysics, geochemistry and a heli-borne EM and magnetic survey have been completed on the property, both at the Golden Zone Breccia Pipe and at several other prospects on the Property.

The Property lies within the Chulitna and West Fork terranes, a poorly understood, fault-bounded package of rocks that are exotic to the North American craton. The Chulitna and West Fork terranes are comprised of several northeast-trending upper Paleozoic to Cretaceous-age belts of volcanic and sedimentary rocks, bounded to both the northwest and southeast by Jurassic to Cretaceous flysch of the Kahiltna assemblage. The Chulitna terrane consists of Devonian volcanic and sedimentary rocks overlain by Upper Triassic volcanoclastic red beds, basalt, and limestone, and Upper Triassic to Lower Jurassic volcanoclastic sandstone and basalt. The West Fork terrane is faulted against the Chulitna terrane and consists of Jurassic crystal tuff, volcanoclastic sandstone, argillite, and chert.

Intrusive rocks of the region range in composition from ultramafic to granitic (Clautice et al., 2001; Hawley and Clark, 1974). Granitic intrusive rocks fall into two age groups: Late Cretaceous (70 Ma) and Tertiary (55 Ma). The Late Cretaceous plutonic suite is predominantly monzodiorite, quartz monzodiorite and quartz porphyry granite and is genetically associated with much of the mineralization at the Golden Zone property and area. The younger Tertiary intrusives, sometimes referred to as "McKinley-age granites" locally are tourmaline-bearing. These intrusives are associated with tin - silver systems and may be present on the Golden Zone property at the Silver Dikes prospect.

Clautice et al. (2001b) summarize the structural style of the Upper Devonian to Lower Cretaceous Chulitna block to be a tightly folded stratigraphy thrust and overturned toward the south, and subsequently cut by extensive high-angle fault systems. Faulting is dominated by a large northeast-trending graben, or down-dropped block, through Broad Pass in which Tertiary gravels have been preserved. Vertical faults parallel to the graben occur on either side of Broad Pass. Vertical movement between northeast-trending blocks controls the erosional level of exposure of mineralizing plutons and thus surface expressions of mineralization in the region.

Golden Zone Property lies in the Upper Chulitna district, which forms the northern third of the 160 km long highly mineralized area termed the Yentna-Chulitna Mineral Belt. Most of the known mineralization in the Upper Chulitna district occurs in Chulitna terrane rock units. The only recorded metal production from the Chulitna district is from the Golden Zone deposit. Between 1941 and 1942 it produced 1,581 oz Au, 8,617 oz Ag, 21 tons Cu, and 1.5 tons Pb (Hawley and Clark, 1974). A small amount of placer gold was mined from Bryn Mawr Creek, immediately downstream from the Golden Zone, and from McCallie Creek approximately 15 km southwest of the Property. Placer gold accumulations are not significant, as the area has been eroded by multiple glaciation events in the recent past.

Except for the minor placer gold and serpentinite hosted chromite deposits, most known mineral prospects in the Chulitna district are spatially and temporally associated with Cretaceous and Tertiary age intermediate to felsic intrusions. Although the various prospects and deposits possess similarities, those associated with Late Cretaceous intrusions are fundamentally different from



those with early Tertiary intrusions. The former contain significant Au mineralization and the latter significant Ag-Sn mineralization.

Mineralization associated with Late Cretaceous intrusions includes plutonic-related vein/breccia-hosted gold mineralization and skarns and sulphide replacement mineralization. Mineralization associated with Tertiary intrusions includes vein/veinlet-dominated gold mineralization and granite-hosted greisen mineralization.

The Property is underlain primarily by Devonian to Triassic aged volcanics with lesser sediments and ultramafic rocks, sandwiched between younger Jurassic aged sediments exposed in a narrow graben feature to the east, and Jurassic-Cretaceous Kahiltna assemblage flysch sediments to the west. Sediments of the Permo-Triassic suite are typically shallow water sandstones, conglomerates and limestones, while the volcanic components are comprised of basalts and basalt-derived tuffs, of intra-cratonic affinity, and coarse sediments. Many of the lithologies are reddish in colour, due to oxidation of primary Fe-Ti oxides to hematite, which suggests that the volcanics at least, were in part sub-aerial. The Devonian rocks consist of green weathering basaltic to dacitic tuffs and flows of island arc affinity, with lesser bedded chert, near the base of the unit, which in turn, overlie a bedded limestone of late Silurian to early Devonian age. This assemblage is also spatially associated with serpentinite, which commonly occurs as isolated lenses aligned within fault zones, and in fold hinges. It is similar in trace element composition to the gabbroic and basaltic phases of Devonian volcanism, and may represent feeder dikes to the volcanic units.

The Property is cut into three major blocks by a series of steeply dipping to vertical, northeast trending faults, with each block exposing a different erosional level. From west to east, these are the Golden Zone Block, bounded by the BW fault to the west and the Bryn Mawr Fault on the east, the Long Creek Block, bounded by the Bryn Mawr fault to the west and the western-most Jurassic graben fault to the east, and the Silver Dikes Block, bounded by the western Jurassic graben fault on the west and the Chulitna boundary fault to the east. The rocks within the blocks are isoclinally folded about northeast trending, universally west dipping fold axes, with some shearing and faulting along the limbs.

A number of small intrusive dikes, plugs and stocks of late Cretaceous age, ranging from diorite to granite in composition, intrude the volcano-sedimentary sequences within the Property and surrounding area. Disseminated to semi-massive arsenopyrite, and chalcopyrite, along with lesser pyrite, pyrrhotite, galena and sphalerite mineralization is associated with many intrusions. The best known of these intrusions is the Golden Zone plug, a 300 m x 200 m tadpole shaped intrusive body of monzodiorite porphyry within which a gold bearing breccia pipe has been developed. A second period of intrusive activity in the early Tertiary produced a similar set of small plugs and stocks within the Property and surrounding area. These Tertiary intrusions are virtually indistinguishable from the earlier Cretaceous intrusions, particularly when strongly altered, except for generally lower Au:Ag ratios and presence of Sn in associated mineralization. Where granitic or porphyry bodies are in contact with the calcareous units within the volcanosedimentary packages, the rocks typically show skarn development, whereas weakly calcareous units have been hornfelsed. The widespread development of both skarn and hornfels on the property suggests that there are probably a number of additional intrusives, that either



subcrop under glacial cover, or which still have a thin roof of older sedimentary and volcanic rocks.

Gold mineralization on the Property is widespread and occurs within a breccia pipe, shear zones, skarns, porphyry and granitic intrusives, and vein-type geological settings, all of which relate to the late Cretaceous intrusive event. As with many Alaskan intrusive-associated gold occurrences and deposits, the Golden Zone property mineralization is rich in arsenic, and exhibits strong elements of structural control.

The Golden Zone property is divided into three main mineral corridors which correspond to the previously described geological blocks bounded by northeast striking high-angle faults:

1. The Golden Zone Corridor is the northwestern-most block and is bounded on the east by the Bryn Mawr fault. Gold-bearing mineralized zones within the Golden Zone corridor include quartz-arsenopyrite-sulphide veins at the Riverside prospect; similar veins and skarn mineralization at the Banner prospect, veins and shears at the Lupin, Bunkhouse, Mayflower and BLT prospects, the highly mineralized breccia and mineralized porphyry at the Golden Zone Breccia Pipe deposit, and veins and shears at the GAS prospect. The mineralization in the western block area is characterized by a metal suite containing Ag-As-Au-Bi-Sb±Te±Cu±Pb±Zn.
2. The central Long Creek Corridor is separated from the Golden Zone Corridor by the Bryn Mawr fault. Mineral prospects in the central or Long Creek block have less arsenic than the Golden Zone Corridor prospects and are characterized by a metal suite containing Ag-Au-Bi-Cu. Gold-bearing mineralized zones in the Long Creek corridor include skarn, carbonate replacement, and porphyry mineralization associated with quartz-eye porphyry granite. Favourable host-rocks are carbonate-rich volcanoclastic red beds. From north to south, mineralized prospects include Copper King, Long Creek, South Long Creek and Geoff's Anomaly (which lies to the south of the current claim block).
3. The Silver Dikes corridor is contained within the graben filled with Jurassic clastic rocks. This corridor is poorly known and is not completely defined. Mineralized zones in the Silver Dikes corridor are mainly veins and shear zones associated with granitic dikes. The mineralized zones rarely contain detectable gold and are characterized by a metal suite containing Ag-Bi-Pb-Zn and possibly Sn.

Mineralization and granitic intrusions at Golden Zone Property share geologic characteristics with mineral deposits and intrusions elsewhere in the Tintina gold belt and with other alkali-rich intrusive series worldwide. Plutonic rocks appear to be the source of gold and base metals, while faults, breccias, and lithologic contacts have acted as conduits to localize the mineralization in concentrations of potential economic significance. The variety of mineralization styles at the Property is best represented by the reduced intrusion-related gold system (RIRGS) model.

“Reduced intrusion-related gold systems (RIRGS) are characterized by widespread arrays of sheeted auriferous quartz veins that preferentially form in the brittle carapace at the top of small plutons, where they form bulk-tonnage, low-grade Au deposits characterized



by a Au-Bi-Te-W metal assemblage, such as the Fort Knox and Dublin Gulch deposits. RIRGS also include a wide range of intrusion-related mineral deposit styles (skarns, replacements, veins) that form within the region of hydrothermal influence surrounding the causative pluton, and are characterized by proximal Au-W-As and distal Ag-Pb-Zn metal associations, thereby generating a zoned mineral system... RIRGS mostly form at a depth of 5 to 7 km and generate mineralizing fluids that are low salinity, aqueous carbonic in composition and are, therefore, unlike typical porphyry Cu deposits. The RIRGS class was developed on well-studied examples in Yukon and Alaska.” – Hart (2007)

Avidian completed a data review and compilation as well as a check sampling program in July and August 2016 comprising 166 samples collected from nine historic diamond drill holes, and also collected 256 grab samples on the Property. The objective of the fieldwork was to confirm the property-wide distribution of mineralization as documented in historical reports, and to develop preliminary ideas on the controls of the mineralization from its additional prospecting and sampling program. Avidian has advised Howe that as of the date of this Report, it has spent in excess of the minimum required work commitment of US\$ 200,000 as per the work commitment obligation in the purchase agreement relating to this property.

Avidian grab sampling confirmed significant gold grades (>5 g/t) occurs in most prospects, from the Wells Vein in the northern tip of the Property to the South Long Creek prospect in the southern part of the Property, a distance of more than 7 km. Gold values are highest in the Golden Zone Corridor, but significant gold also occurs locally within the Long Creek Corridor. Significant silver values (>25 g/t) occur in almost all prospects; the best silver values occurred in arsenopyrite-rich veins of the South Long Creek prospect. High grade silver is also a feature of veins proximal to the Breccia Pipe. All prospects on the Property contain very high arsenic with values that typically increase more or less proportionally with increasing gold content. Significant copper grades ($>0.25\%$) are not as widespread, but do occur in many prospects over the length of the Property. The Copper King prospect has the most consistently high copper values. Noteworthy lead and zinc values ($>0.25\%$) are more restricted than copper or precious metals. Highest lead values occur in veins near the Breccia Pipe and at South Long Creek. Significant zinc also occurs at these localities, and at Copper King.

For these programs, Avidian maintained security of samples prior to dispatch to the analytical laboratory by limiting access of un-authorized persons. Samples were transported from the field and stored in a secure storage area at the base camp on the Property. Samples remained under the supervision of Avidian’s consultants until the end of the field program when they were delivered to ALS Minerals (ALS) Fairbanks preparation laboratory. Samples are prepared at ALS Global’s Fairbanks facility and sample pulps are forwarded to the ALS’s Mineral Laboratory in North Vancouver, British Columbia for analysis. Howe is of the opinion that the security and integrity of Avidian samples submitted for analysis is un-compromised. Sample preparation follows industry best practices and procedures. The analytical methods used are routine and provide robust data associated with a high degree of analytical precision.

Detailed descriptions of sample preparation, analyses and security protocols and procedures utilized by previous operators were not available in documentation provided to the authors for



review. With the exception of samples analysed by Enserch Corp. (Enserch), all drill and geochemical samples collected since 1972 have been analysed by independent commercial laboratories. Although sample security details varied from project to project, all samples were retained at the Golden Zone camp until shipped in various size allotments to the geochemical laboratories.

It is the authors' opinion that Avidian's current sampling programs are conducted to industry standards and that the QA/QC programs undertaken by Avidian are sufficient to provide confidence in the analyses undertaken at ALS Global Vancouver in 2016. It is the authors' opinion that historical post-1994 sampling programs were carried out to industry standards applicable at the time the work was conducted. No independent QA/QC data exists for analyses of samples collected from the Golden Zone project prior to 1994 and which account for 45% of gold assays in the database. These include the Enserch, Golden Zone Inc. and United Pacific Gold exploration campaigns which together account for 35% of samples in the assay database provided to Howe, and are the subject of the 2016 repeat core (check) sampling program

Mr. L. McGarry, Howe Senior Project Geologist, completed a field visit to the Property from July 11th to 14th, 2016 as part of due diligence in the preparation of this Report. On afternoon of July 10th and the mornings of July 11th and 15th Mr. McGarry visited Avidian's office in Anchorage to review historic Property data files. During the field visit, Mr. McGarry reviewed selected sections of the historic Golden Zone deposit drill core archived on the Property and examined the Golden Zone deposit, the East Vein, Banner, Riverside, Copper King and Long Creek prospect areas. All mineral occurrences visited and technical observations were as reported by Avidian.

Hard copy records selected for verification included collar records, lithological logs, and assay certificates. Digital records were cross checked against hard copy records for typographic or data entry errors. Both hard copy geological logs and assay tables were then cross checked against drill cores. Geological logging was found to be of sufficient quality to allow the use of historical lithological codes for deposit modeling.

During the 2016 site visit Howe completed limited sample verification which included three rock samples from outcrop and two samples of quarter core. Howe's 2016 grab sample results provide an independent confirmation of the presence of significant gold and silver mineralization at the East Vein, Wells Vein and Riverside Vein outcrops on the Property. Howe's quarter core check samples collected from ALIX Resources Corp. drill hole GZBX11003 provide an independent confirmation of the presence of significant gold and silver mineralization at the Golden Zone Deposit. Howe spot checked and verified the position of 11 drill holes and seven (7) trenches in the field, using a handheld Garmin GPS60TM unit.

In July and August 2016, under Howe's direction, Avidian initiated a repeat core sampling program at the Golden Zone deposit to provide quality assurance for assay values obtained between 1980 and 1988 for which no QA/QC data is available. Original sample intervals were selected for repeat sampling and provide a good spread of intervals throughout the deposit and across rock types. A sufficient number of check samples was collected to allow a meaningful assessment of the repeatability of historical assays.



Based on its verification review and sampling, the 2016 repeat core sampling program and a review of available historical QA-QC, Howe concludes that the database for the Golden Zone Property is of sufficient quality to provide the basis for the conclusions and recommendations reached in this Report.

During the period July 2016 to August 2016, Howe carried out a mineral resource estimate (“MRE”) update for the Golden Zone deposit. The MRE was prepared by L. McGarry, Howe Senior Project Geologist and a Qualified Person (QP) for the reporting of Mineral Resources as defined by NI 43-101. Mineral resource modeling and estimation was carried out using the commercially available Micromine (Version 2014) software program. The resource estimate was prepared in accordance with CIM “Estimation of Mineral Resource and Mineral Reserves Best Practice Guidelines” (CIM Council, 2003), CIM “Definition Standards for Mineral Resources and Mineral Reserves”¹ and reported in accordance to NI 43-101².

The MRE study relied on historical exploration data collected by previous operators including information for: 155 diamond drill holes, 63 RC drill holes, 93 trenches and 121 underground sample lines that was provided by Avidian in the form of a digital data export containing a series of Microsoft Excel, AutoCAD and GIS files.

At the Golden Zone deposit, well mineralized units that have been the focus of ongoing exploration were modelled for inclusion in the MRE. Geological interpretations were made in cross, plan and long sections. Interpretation outlines were combined along strike to generate three dimensional wireframes for four principal domains:

- Quartz monzodiorite porphyry, modelled over a width of 130 m, a strike length of 325 m and a depth extent of 330 m, which is informed by 4,199 samples at a drill hole spacing of <10 m to 50 m. The porphyry domain has mean grades of 0.680 g/t Au and 3.245 g/t Ag. Both metals show a reasonably symmetric distribution for logarithmic gold and silver grades that are slightly skewed toward lower values.
- Well mineralized hydrothermal sulphide breccia modelled over a width of 50 m, a strike length of 190 m and a depth extent of 260 m, which is informed by 4,547 samples at a drill hole spacing of <10 m to 20 m. The Sulphide Breccia domain shows log normally distributed gold and silver grade populations that average 3.337 g/t Au and 18.313 g/t Ag.
- Hydrothermal silica breccia modelled over a width of 25 m, a strike length of 150 m and a depth extent of 270 m, which is informed by 1,473 samples at a drill hole spacing of <10 m to 20 m. The Silica Breccia domain has a reasonably symmetric distribution for logarithmic gold and silver grades that average 0.775 g/t Au and 5.156 g/t Ag.
- Shear zone hosting quartz veins, modelled over a width of 30 m, a strike length of 650 m and a depth extent of 350 m, which is informed by 617 samples at a drill hole spacing of <10 m to 100 m. The Shear Zone domain has mean grades of 0.820 g/t Au and 9.868 g/t

¹ CIM Definition Standards - For Mineral Resources and Mineral Reserves, adopted by CIM Council on May 10, 2014.

² National Instrument 43-101 Standards Of Disclosure For Mineral Projects and Form 43101F1 Technical Report, June 24, 2011



Ag. Both metals show a reasonably symmetric distribution for logarithmic gold and silver grades that are slightly skewed to lower values.

A block model was created in Micromine to encompass modelled resource domains. Blocks were constrained by domain wireframe models. The “parent” block size is 5 m in the X axis by 10 m in the Y axis and elevation Z axis. To honour wireframe volumes, blocks may be divided into two sub-blocks in the X axis and four sub blocks in the Y and Z axes, resulting in a geological volume resolution of 2.5 m³.

Grade capping analysis was performed on raw gold and silver assay data to assess the influence of extreme grade outliers on sample population statistics. The following capping values were selected: Porphyry - 20 g/t Au and 60 g/t Ag, Silica Breccia - 25 g/t Au and 130 g/t Ag, Sulphide Breccia - 35 g/t Au and 200 g/t Ag, Shear Zone- uncapped for gold and 60 g/t Ag. To ensure equal sample support, domained assays were regularized to the dominant assay interval length of 1.524 m (5 ft) using length weighted averages of gold and silver grades. A nominal grade of 0.001 g/t was used to populate un-sampled assay intervals for gold and silver. Boundary analysis indicated that all domain boundaries are hard for geostatistical analysis and grade interpolation, such that sample grades in one domain may not inform the block grade in another.

Directional variograms were generated for gold and silver mineralization in each domain. Anisotropy ellipses aligned with the overall trend of each domain; long axis dimension ranged from 30 m (Silica Breccia domain) to 120 m (Porphyry domain). Ordinary block kriging was considered to be an acceptable and appropriate method for estimating block grades in this deposit. For each domain, grade interpolation was carried out in three “runs”. The first run had a maximum search radius equal to half the domain variogram range. Model blocks that did not receive a grade estimate from the first interpolation run are used in the next interpolation run. Subsequent runs are equal to multiples of the variogram range. Blocks were informed by a minimum of 12 and maximum number of 28 samples. Run one and run two block estimates require a minimum of three (3) holes, with at least two (2) samples per hole. Run three block estimates require a minimum of two (2) holes and one (1) sample per hole.

A total of 418 bulk density determinations were completed by Mines Trust in 2009, including 365 determinations from the mineralized domains generated as part of this study. Samples were weighed dry, and then weighed whilst suspended in water to derive density values that were averaged for each MRE domain: Porphyry - 2.73 t/m³, Silica Breccia - 2.80 t/m³, Sulphide Breccia - 3.22 t/m³ and Shear Zone - 2.69 t/m³.

Resource classification parameters were chosen based on a combination of variography results and the judgment of the Qualified Person (QP). Inferred and Indicated mineral resources were identified. Only mineral resources are identified in this Report. No economic work that would enable the estimation of mineral reserves has been carried out and no mineral reserves are defined. Mineral resources that are not mineral reserves do not account for mineability, selectivity, mining loss and dilution and do not have demonstrated economic viability.

To ensure that reported resources have a reasonable prospect of economic extraction a conceptual pit shell was developed. The Whittle pit optimization was run using a price scenario of \$1,350 per



ounce of gold and \$22 per ounce of silver in US Dollars. The resultant pit shell used to define mineral resources has a volume of 0.524 km³ and captures 89% of modelled blocks that received an estimated grade.

Classification boundaries are defined using a combination of modelled domain boundaries and block variables generated during the estimation process. Blocks informed by three (3) or more drill holes and within 30 m of the nearest sample are assigned the Indicated category. All remaining blocks within the Whittle pit shell are classified as Inferred. Blocks outside of the \$1,350 per oz Au Whittle pit shell are not classified. The entire Shear Zone domain is classified as Inferred.

Howe's 2016 MRE uses a reporting cut-off of 0.5 g/t Au after consideration of possible mining and processing costs, and a gold price of \$1,350 per ounce of gold, and considers all breccia pipe (Sulphide Breccia plus Silica Breccia), porphyry and shear zone resources above 800 m asl (or to a depth of up to 320 metres below surface).

Non-diluted Indicated Mineral Resources considered amenable to open pit mining total 4.187 million tonnes with an average gold grade of 1.99 g/t for 267,400 oz Au and an average silver grade of 10.42 g/t for 1,397,800 oz Ag.

Non-diluted Inferred Mineral Resources considered amenable to open pit mining total 1.353 million tonnes with an average gold grade of 0.82 g/t for 35,900 oz Au and an average silver grade of 2.56 g/t for 111,400 oz Ag.

A summary of the 2016 mineral resource estimate update on the Golden Zone Property follows:

Category	Domain	Density	Tonnes	Au (g/t)	Ounces Au	Ag (g/t)	Ounces Ag
Indicated	Porphyry	2.73	1,811,000	0.89	52,000	3.20	186,300
	Sulphide Breccia	3.22	2,007,000	3.17	204,300	17.19	1,109,000
	Silica Breccia	2.80	369,000	0.93	11,100	8.64	102,500
	Total		4,187,000	1.99	267,400	10.38	1,397,800
Inferred	Porphyry	2.73	142,000	0.75	3,400	1.84	8,400
	Shear Zone	2.69	1,216,000	0.83	32,600	2.65	103,400
	Total		1,353,000	0.83	35,900	2.56	111,400

Howe is not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant issues that could potentially affect this mineral resource estimate. The mineral resources may be affected by potential future conceptual study assessments of mining, processing, environmental, permitting, taxation, socio-economic and other factors. There is insufficient information at this early stage of study to assess the extent to which the resources might be affected by these factors. Additional factors which may affect the Mineral Resource estimates include:



- Gold and silver price and valuation assumptions;
- Changes to the assumptions used to estimate gold and silver content (e.g. bulk density estimation, grade model methodology);
- Geological interpretation (revision of breccia pipe contacts, definition of heavy sulphide breccia domain, modeling of internal waste domains e.g. dikes);
- Changes to design parameter assumptions that pertain to the resource constraining Whittle pit shell;
- Changes to geotechnical and mining assumptions, including the maximum pit slope angle; or the identification of alternative mining methods such as open stoping;
- Changes to process plant recovery estimates if the metallurgical recovery in certain domains is lesser or greater than currently assumed;
- The effect of different sample-support sizes between core drilling, RC drilling and underground sampling.

There is insufficient information at this early stage of study to assess the extent to which the resources might be affected by these factors.

Relative to the surface extent of the Golden Zone deposit, there is a significant amount of unexplored ground that offers opportunities to develop additional mineral resources within the presently defined resource constraining Whittle pit shell. The Resulting Issuer should undertake systematic exploration across the full width of the Golden Zone trend with a particular focus on portions of the following areas that fall within the Whittle pit shell: the BLT shear zone and East Vein; the area northeast of the breccia pipe in the Mayflower prospect; and the sheared unit to the northwest of the Breccia pipe.

Aside from extensive diamond and reverse circulation drilling, trenching and underground sampling at the Golden Zone Breccia Pipe deposit, exploration elsewhere on the Property area has to date been largely at a mineral occurrence identification stage, comprising mapping, rock and soil sampling, trenching and geophysics with limited drill testing. The Property contains three mineralized corridors, namely Golden Zone, Long Creek and Silver Dikes. Strongly mineralized samples have been returned from all three corridors, particularly the first two. Numerous polymetallic showings warrant initial or additional drill testing.

Howe concludes that the Golden Zone Property is prospective for the potential discovery of a large tonnage reduced intrusion-related gold systems (RIRGS) deposit, such as those present within the Tintina Gold Province and is a property that warrants significant additional expenditures. Avidian has indicated that it intends to focus its preliminary exploration efforts on the assessing the Property for its potential to host a large tonnage RIRGS deposit. Howe concurs with this decision.

Howe recommends that additional exploration work be conducted on the Property area. Suggested work includes:

General

- A historical assay database with unrounded and untruncated values should be located. If not available, a new assay database should be compiled from hard copy logs and



certificates. An assay database that can pass more stringent verification tests is a requirement for future resource estimate classification upgrades at the Golden Zone Deposit.

- Historic geotechnical and recovery logs should be digitized to allow a quantitative assessment of relationships between grade, recovery and rock quality.
- Historic exploration results are currently stored and managed in spreadsheets which increase the risk of transcription errors and data loss. A relational database should be implemented to allow efficient management, querying and validation of large amounts of data and study information.
- Continue verification and update of the historic GIS database.
- Continue interpretation/re-interpretation of historic geological, geochemical and geophysical datasets.
- In light of available historic baseline data, investigate current environmental baseline requirements necessary to advance potential permitting of Breccia Pipe deposit.

Golden Zone Breccia Pipe

- The effectiveness of rock classification techniques employed by previous operators should be evaluated.
 - A core re-logging exercise should be undertaken using a consistent coding system.
 - Document alteration assemblages in detail.
 - Definition of breccia sub-domains should be investigated to potentially allow more effective modeling of higher grade portions of the deposit.
- The quality of assays and geological data derived from RC drill holes should be investigated by undertaking a program of twinned diamond drill holes.
- A quality assessment of historical collar UTM coordinates should be undertaken. Where possible, drill hole collars that were originally surveyed by plane table in mine grid coordinates should be identified. Collar locations should be surveyed by differential GPS and relative location errors associated with historical holes should be quantified.
- A study of the structural geology, jointing system and the geotechnical properties of rock types at the Golden Zone Deposit should be investigated. A suite of samples representing different parts of the deposit and each rock type should be tested at a rock mechanics laboratory.
- Follow-up previous metallurgical testwork and processing recoveries. Test the Breccia Pipe deposit for potential Acid Rock Drainage (ARD) and deleterious elements.
- The Resulting Issuer should undertake systematic surface exploration across the full width of the Golden Zone deposit trend. Subsequent drilling at the Golden Zone deposit should focus on mineralized features within the current resource constraining pit shell that can expand the mineral resource model.

Property Scale and Prospects

- Property-wide mapping and prospecting/sampling based on the RIRGS model.
- Alteration mapping techniques such as portable Short Wave Infrared Spectroscopy (SWIR) should be considered for both surface mapping and drill hole logging/relogging.
- Detailed mapping, sampling and infill soil sampling of historic and new prospect areas.



- Preliminary shallow diamond drill (core) testing of significant prospects.

Based on Howe's recommendations, Avidian has proposed a preliminary exploration program which focusses on the assessment of the potential for the Property to host a significant large tonnage RIRGS deposit. Howe concurs with Avidian's proposed 2017 program as outlined below:

- Data compilation and planning
- Property-wide mapping, prospecting/sampling and infill soil sampling of historic and potentially newly discovered prospect areas. Approximately 1,000 rock and soil samples are proposed.
- Shallow diamond drill testing of significant prospects totaling approximately 2,300 m at Riverside, Bunkhouse and the surrounding Breccia Pipe area. Approximately 1,500 core samples would be collected.
- Induced Polarization Survey over the main prospect area; Riverside, Breccia Pipe area, Copper King, Long Creek and South Long Creek.
- Preliminary assessment of previous Base Line studies.
- Camp improvements and equipment purchases.
- Compilation and reporting of 2017 exploration results.

As of the Amended Effective Date, Avidian and MMCC's proposed 2017 budget is shown below. Howe considers the proposed budget reasonable and recommends that the Resulting Issuer proceed with the proposed work programs.



ITEM			Cost \$US
Pre-program compilation and planning (60 days @ \$600/day)			\$ 36,000
Property wide mapping/sampling/prospecting/soil surveys (in-fill)			
	2 months (4 @ \$600/day)		\$ 144,000
	Analyses	1,000 samples @ \$30/sample	\$ 30,000
IP Survey (approx. 43 line km)			\$ 165,000
Preliminary Environmental Assessment Report			\$ 30,000
DDH Core Drilling			
	Prospects outside of the Golden Zone Deposit – preliminary DDH testing		
		2,300 m @ approx. 200/m	\$ 460,000
	Analyses	1,500 samples @ \$30/sample	\$ 45,000
Support costs			
	Camp	Pre-program Preparation	\$ 30,000
		Ongoing Camp Costs \$600/day (3 months)	\$ 54,000
	Personnel	5 @ \$500/day (3 months)	\$ 225,000
Interpretation and reporting (25 days @ \$600/day)			\$ 15,000
Contingency	Approx. 14%	Includes capital purchases, rentals, etc.	\$ 164,560
Total			\$ 1,398,560

As of August 17, 2017, Avidian had spent US\$ 1,121,000 on the above work program. The work remaining to be completed is an additional 200 m of core drilling, receipt of approximately 1,450 outstanding analytical results, the geophysical report with interpretations and recommendations, the environmental preliminary assessment report and the final overall compilation and interpretation of all the program results and final report. It is expected that all this work should be completed by mid to end of November and will require the balance of the budget of US\$ 277,560 to complete.

The table below shows what has been completed as of August 17, 2017 and what work remains to be completed and the balance of the budget that will be required to complete the project, totalling US\$ 277,560.



ITEM			Recommended Cost \$US	% Completed	Budget to Completion \$US
Pre-program compilation and planning (60 days @ \$600/day)			\$36,000	100%	\$0
Property wide mapping/sampling/prospecting/soil surveys (in-fill)					
	2 months (4 @ \$600/day)		\$144,000	100%	\$0
	Analyses	1,000 samples @ \$30/sample	\$30,000	\$35% (350 samples)	\$19,500
IP Survey (approx. 43 line km)			\$165,000	90%	\$16,500
Preliminary Environmental Assessment Report			\$30,000	0%	\$30,000
DDH Core Drilling					
	Prospects outside of the Golden Zone Deposit – preliminary DDH testing				
		2,300 m @ approx. 200/m	\$460,000	90% (2,100 m)	\$50,000
	Analyses	1,500 samples @ \$30/sample	\$45,000	36% (400 samples)	\$33,000
Support costs					
	Camp	Pre-program Preparation	\$30,000	100%	\$0
		Ongoing Camp Costs \$600/day (3 months)	\$54,000	83%	\$9,000
	Personnel	5 @ \$500/day (3 months)	\$225,000	83%	\$37,500
Interpretation and reporting (25 days @ \$600/day)			\$15,000	0%	\$15,000
Contingency	Approx. 14%	Includes capital purchases, rentals, etc.	\$164,560	74%	\$60,060
Total			\$1,398,560		\$277,560



2. INTRODUCTION AND TERMS OF REFERENCE

2.1. GENERAL

This technical report (“Report”) was prepared by A.C.A. HOWE INTERNATIONAL LIMITED (“Howe”) at the request of Mr. Dino Titaro, President and CEO for Avidian and Mr. Larry K. Doan, President and CEO of MMCC, a capital pool company listed on the TSXV. This Report has been requested in respect of a proposed amalgamation of Avidian and a wholly owned subsidiary of MMCC (the “Proposed Transaction”), resulting in the business of Avidian becoming the business of MMCC. Following completion of the Proposed Transaction MMCC will change its name to Avidian Gold Inc. (the “Resulting Issuer”). Thus this Report has been written to fulfill the requirements of the TSXV in respect of the Proposed Transaction.

As this report has been written to fulfill the requirements of the TSXV in respect of the Proposed Transaction between Avidian and MMCC, the TSXV has requested that the report be updated from its original Effective Date of November 23, 2016 and amended to include a description of the work done during the summer of 2017 on the project and where results are available to include them in the Report as of the Amended Effective Date (August 17, 2017). It is understood that while work has been carried out the results of the work program are incomplete and that the final analysis along with interpretative compilation of the work will not be completed until late fall of 2017.

This Report is specific to the standards dictated by National Instrument 43-101, companion policy NI43-101CP and Form 43-101F1 (Standards of Disclosure for Mineral Projects) in respect to the Golden Zone Property (“Project” or “Property”) and focuses on the mineral resource estimate of the Golden Zone deposit and the overall exploration potential of the Property. The mineral resource estimate is prepared in accordance with Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Definition Standards for Mineral Resources and Mineral Reserves (May 10, 2014) as per NI 43-101 requirements. Only mineral Resources are estimated – no mineral Reserves are defined.

The Golden Zone Property area is located entirely on State of Alaska owned lands and falls within Alaska’s Valdez Creek Mining District and the Talkeetna Recording District approximately 230 air kilometres (km) north of Anchorage and 210 air km south of Fairbanks. The Property consists of 26 ¼-¼ section (16 hectare (ha)) State of Alaska MTRS (Meridian, Township, Range, Section) mining claims totalling approximately 416 ha, 38 ¼ section (64 ha) State of Alaska MTRS mining claims totalling approximately 2,432 ha, a contiguous 1,168 ha State of Alaska upland mining lease (ADL [Alaska Division of Lands] 580985), and a non-contiguous 16 ha State of Alaska millsite lease (ADL 547111) at Colorado Station on the main Fairbanks – Anchorage rail line approximately 10 km southeast of the main Property. Mining claims and leases represent a total area of 4,032 ha. Mines Trust’s previously abandoned mining claim, Gold King 48 - ADL 563034, is currently in process of reactivation (“curing”) and upon reactivation, application will be made to incorporate it into the upland mining lease. The mining lease will then total 1,184 ha and the total Property area will be 4,048 ha.



Avidian Gold Inc. is a private mineral exploration company. It is focused on the acquisition and development of precious metal assets in North America. The corporate head office is located at 390 Bay Street, Suite 806, Toronto, Ontario, Canada M5H 2Y2.

Marching Moose Capital Corp. was incorporated as a private company by Certificate of Incorporation issued pursuant to the provisions of the British Columbia Business Corporations Act on September 24, 2013. It is classified as a capital pool company (“CPC”) in accordance with Policy 2.4 of the TSXV. MMCC’s common shares commenced trading on the TSX Venture under the symbol “MMC.P” on November 19, 2014. MMCC has no commercial operations and has no assets other than cash and receivables. MMCC does carry on any business other than the identification and evaluation of assets or businesses with a view to completing a transaction where MCMC acquires significant assets, other than cash, by way of purchase, amalgamation, merger or arrangement with another company or by other means (a “Qualifying Transaction”). MMCC’s head office and registered records office address is Suite 2300, 1066 W Hastings Street, Vancouver, British Columbia, Canada V6E 3X2.

Howe is an international geological and mining consulting firm that was incorporated in the province of Ontario in 1966 and has continuously operated under a “Certificate of Authorization” to practice as Professional Engineers (Ontario) since 1970 and Professional Geoscientists (Ontario) since 2006. Howe provides a wide range of geological and mining consulting services to the international mining industry, including geological evaluation and valuation reports on mineral properties. The firm’s services are provided through its office in Toronto, Canada.

On October 20, 2016 Avidian and MMCC entered into a Letter of Intent (the “LOI”). Pursuant to the terms of the LOI, a wholly owned subsidiary of MMCC will amalgamate with Avidian by way of a three-cornered amalgamation by which the Avidian shareholders will receive one post-consolidated MMCC common share (the “Transaction Shares”), for every 2.17 Avidian shares currently held, as set forth below. The Transaction Shares will be issued to the shareholders of Avidian pursuant to exemptions from the registration and prospectus requirements of applicable securities laws. The Transaction Shares will be subject to resale restrictions as required under the applicable securities legislation and the Exchange and will also be subject to escrow restrictions as required by the Exchange.

In connection with the Proposed Transaction, the Resulting Issuer will change its name to Avidian Gold Inc. subject to approval by applicable regulatory authorities.

It is expected that upon completion of the Proposed Transaction, the Resulting Issuer will be listed as a Tier 1 Mining Issuer on the TSXV.

Completion of the Proposed Transaction is subject to a number of conditions, including execution of a definitive agreement, completion of satisfactory due diligence and receipt of applicable regulatory approvals. There can be no assurance that the Proposed Transaction will be completed as proposed or at all.

Neither Howe nor the authors of this Report (nor family members or associates) have a business relationship with Avidian or any associated company, nor with any company mentioned in this



Report that is likely to materially influence the impartiality or create a perception that the credibility of this Report could be compromised or biased in any way. The views expressed herein are genuinely held and deemed independent of Avidian.

Moreover, neither Howe nor the authors of this Report (nor family members or associates) have any financial interest in the outcome of any transaction involving the property considered in this Report other than the payment of normal professional fees for the work undertaken in the preparation of this Report (which is based upon hourly charge-out rates and reimbursement of expenses). The payment of such fees is not dependent upon the content or conclusions of either this Report or consequences of any proposed transaction.

2.2. SCOPE AND CONDUCT/DISCLAIMER

This technical report was prepared on behalf of Avidian and MMCC and reports on the Golden Zone Property into which it has entered into agreement to acquire a 100% interest. Howe understands that Avidian and MMCC intend to utilize the Report for listing purposes on either the TSX Venture Exchange (TSXV). Mr. Ian Trinder, M.Sc., P.Geo., Howe (Canada) Senior Geologist, and Mr. Leon McGarry B.Sc., P.Geo., Howe (Canada) Senior Project Geologist and Resource Modeller are Qualified Persons (QPs) responsible for the preparation of this Report. Mr. Trinder has a Master of Science degree in geology and is a registered Professional Geoscientist (P.Geo.) in good standing registered in the Provinces of Ontario and Manitoba Canada (APGO no. 0452, APEGM no. 22924). Mr. Trinder has over 30 years' experience in the mining industry with a background in international precious and base metals mineral exploration including project evaluation and management. Mr. McGarry has a Bachelor of Science degree in geology and is a registered Professional Geoscientist (P.Geo.) in good standing registered in the Provinces of Ontario and Saskatchewan Canada (APGO no. 2348, APEGS no. 34929). Mr. McGarry has over 10 years' experience in the mining industry including a background in international mineral exploration, mineral resource modelling and estimation and project management for gold and base metal deposits.

Mr. McGarry, completed a field visit to the Golden Zone Property from July 11th to 14th, 2016 as part of due diligence in the preparation of this Report. Travel days from Toronto to Anchorage and return included July 10th and 15th. The afternoon of July 10th and the mornings of July 11th and 15th were spent reviewing historic Property data files at Avidian's office in Anchorage. Mr. McGarry met with and was accompanied in the field by Dino Titaro, Avidian's President and CEO, Dr. Tom Setterfield, Avidian's Vice President Exploration and with whom previous explorers' exploration activities, methodologies, findings and interpretations were discussed. Mr. McGarry reviewed selected sections of the historic Golden Zone deposit drill core archived on the Property and examined the Golden Zone deposit and the East Vein, Banner, Riverside, Copper King and Long Creek prospect areas. Several verification samples of drill core and rock outcrop were collected.

The Effective Date of this Report was November 23, 2016; the Amended Effective Date is August 17, 2017 and is based on data known to Howe at that date. Howe reserves the right, but



will not be obligated to revise this Report and conclusions if additional information becomes known to Howe subsequent to the date of this Report.

Avidian and MMCC reviewed draft copies of this Report for factual errors. Any changes made as a result of these reviews did not include alterations to the conclusions made. Therefore, the statements and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are not false and/or misleading at the date of this Report.

Avidian and MMCC have accepted that the qualifications, expertise, experience, competence and professional reputation of Howe's Principals and Associate Geologists and Engineers are appropriate and relevant for the preparation of this Report. Avidian and MMCC have also accepted that Howe's Principals and Associates are members of professional bodies that are appropriate and relevant for the preparation of this Report.

Avidian has warranted that full disclosure of all material information in its possession or control at the time of writing has been made to Howe, and that to the best of its knowledge it is complete, accurate, true and not misleading. Avidian has also provided Howe with an indemnity in relation to the information provided by it. Avidian has agreed that neither it nor its associates or affiliates will make any claim against Howe to recover any loss or damage suffered as a result of Howe's use of that information in the preparation of this Report. Avidian has also indemnified Howe against any claim arising out of the assignment to prepare this Report, except where the claim arises out of any proven wilful misconduct or negligence on the part of Howe. This indemnity is also applied to any consequential extension of work through queries, questions, public hearings or additional work required arising out of the engagement.

2.3. SOURCES OF INFORMATION

In preparing this Report, Howe reviewed geological reports, maps, miscellaneous technical papers, company letters and memoranda as made available by Avidian, and other public and private information as listed in Section 27 of this Report, "References", including exploration data, geological interpretation, assays from original assay records and reports, digital data including diamond drilling and miscellaneous information relating to the Project as supplied by Avidian.

While all of the information and technical documents reviewed are assumed accurate and complete in all material aspects, Howe has carefully reviewed the information including a spot check comparison of approximately 10% of Avidian's assay database against hardcopies/digital scans/PDF files of laboratory certificates to verify accuracy and completeness. Other than a truncation of certain historic gold and silver oz/t values to two decimal places as discussed in Section 12, no significant errors were detected.

Howe has not independently conducted any legal title or other searches, but has relied upon Avidian, its legal counsel and online web-based land records from the Alaska Department of Natural Resources for information on the status of the claims, property title, agreements, and other pertinent conditions.



In addition, Howe carried out discussions with the management, consultants and technical personnel of Avidian, in particular, Mr. Dino Titaro and Dr. Tom Setterfield. Howe's extensive experience in precious metal deposits was also drawn upon.

The authors believe that the information and data presented to Howe by Avidian are a reasonable and accurate representation of the Golden Zone Property and are of sufficient quality to provide the basis for the conclusions and recommendations reached in this Report.



2.4. UNITS AND CURRENCY

The Metric System or SI System is the primary system of measure and length used in this Report and is generally expressed in kilometres, metres and centimetres; volume is expressed as cubic metres, mass expressed as metric tonnes, area as hectares, and zinc, copper and lead grades as percent or parts per million. The precious metal grades are generally expressed as grams/tonne but may also be in parts per billion or parts per million. Conversions from the SI or Metric System to the Imperial System are provided below and quoted where practical. Many of the geologic publications and more recent work assessment files now use the SI system but older work assessment files almost exclusively refer to the Imperial System. Metals and minerals acronyms in this Report conform to mineral industry accepted usage.

Conversion factors utilized in this Report include:

- 1 troy ounce/ton = 34.2857 grams/tonne
- 1 gram/tonne = 0.0292 troy ounces/ton
- 1 troy ounce = 31.1035 grams
- 1 gram = 0.0322 troy ounces
- 1 pound = 0.4536 kilograms
- 1 foot = 0.3048 metres
- 1 mile = 1.609 kilometres
- 1 acre = 0.4047 hectares
- 1 square mile = 2.590 square kilometres

The term gram/tonne or g/t is expressed as “gram per tonne” where 1 gram/tonne = 1 ppm (part per million) = 1,000 ppb (part per billion). Other abbreviations include ppb = parts per billion; ppm = parts per million; oz/t = ounce per short ton; Moz = million ounces; Mt = million tonnes; t = tonne (1,000 kilograms); SG = specific gravity; lb/t = pound/ton; and, st = short ton (2,000 pounds).

Dollars are expressed in US currency (US\$) unless otherwise noted.

With exception to the Golden Zone Breccia Pipe deposit, the mineralized prospects on the Golden Zone property have not been adequately defined to determine true widths of mineralized zones. Additional work will be required to establish true widths and continuity of mineralization at the various prospects. Unless otherwise noted, the widths of trench chip or drill hole samples described in the Report for these prospect areas are apparent widths.

Unless otherwise noted, Universal Transverse Mercator (“UTM”) coordinates are provided in UTM Zone 6 North with WGS84 datum.



3. RELIANCE ON OTHER EXPERTS

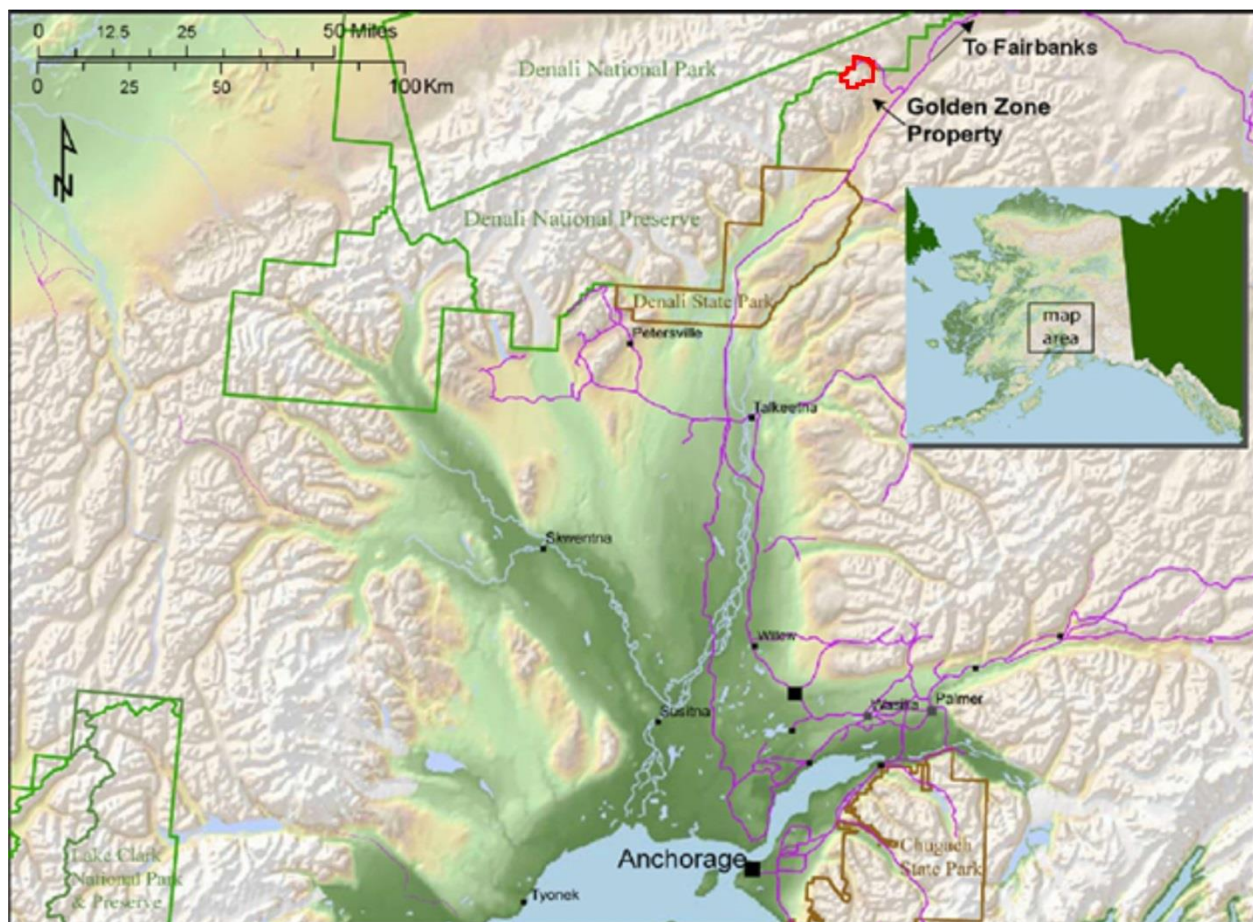
Howe has relied on information provided by Avidian, Avidian's legal counsel and online web-based land records from the Alaska Department of Natural Resources (ADNR, <http://dnr.alaska.gov/MapAK/>) regarding land tenure title and status, underlying agreements and other pertinent conditions. Howe has not independently verified the legal status or ownership of the property or any of the underlying agreements, however Avidian has had an independent legal opinion completed by J.P Tangen, Attorney at Law as to the Property title and status, dated September 12, 2016, and has provided Howe with this opinion (Tangen, 2016). Howe's reliance on Tangen's (2016) legal opinion applies to Section 4.3 and 4.6 (in part) of this Report. All information provided to Howe appears to be of sound quality.



4. PROPERTY DESCRIPTION AND LOCATION

4.1. LOCATION

The Golden Zone property is located in the central Alaska Range of south-central Alaska within the Talkeetna recording district and the Valdez Creek mining district. It lies just west of the Chulitna River, approximately 230 air kilometres (km) north of Anchorage and 210 air km south of Fairbanks (Figure 4-1). With exception to a non-contiguous mill lease, the Property lies within Townships 19S and 20S Range 11W, Fairbanks Meridian. The nearest communities are Cantwell, approximately 42 air km to the northeast and Talkeetna approximately 102 air km to the south. The property lies 16 air km (24 road km) west of the George Parks Highway and 12 air km (19 road km) west of the Alaska Railroad which are the main ground transportation corridors between Anchorage and Fairbanks (Figure 4-1). The approximate centre of the main Property lies at 63° 12' 39" N latitude and 149° 37' 16" W longitude (UTM Zone 6V 368,225 E, 7,011,775 N WGS84).



Avidian, 2016

Figure 4-1: Golden Zone Property – Alaska State Location Map



4.2. PROPERTY DESCRIPTION AND OWNERSHIP

4.2.1 Property Description

The Property area is located entirely on State of Alaska owned lands and falls within Alaska's Valdez Creek Mining District and the Talkeetna Recording District. The Golden Zone property consists of 26 ¼-¼ section (16 hectare (ha)) State of Alaska MTRS mining claims totalling approximately 416 ha, 38 ¼ section (64 ha) State of Alaska MTRS mining claims totalling approximately 2,416 ha, a contiguous 1,168 ha State of Alaska upland mining lease (ADL No. 580985), and a non-contiguous 16 ha State of Alaska millsite lease (ADL No. 547111) at Colorado Station on the main Fairbanks – Anchorage rail line approximately 10 km southeast of the main Property (Figure 4-2). Mining claims and leases currently represent a total area of 4,032 ha. Mines Trust's previously abandoned mining claim, Gold King 48 - ADL 563034, is currently in process of reactivation ("curing") and upon reactivation, application will be made to incorporate it into the upland mining lease as discussed below. The mining lease will then total 1,184 ha and the total Property area will be 4,048 ha.

On October 19, 1995 Mines Trust filed application for the conversion of 73 State of Alaska MTRS mining claims (Table 4-1) to an Upland Mining Lease located in Townships 19S and 20S, Range 11W, Fairbanks Meridian (Table 4-2).

The term of Upland Mining Lease ADL No. 580985 is for 55 years effective December 2, 1996 and expiring December 1, 2051, although the lease is maintained by the same rental and fee schedule governing all state claims (see Section 4.4 and Appendix A). Conversion to leasehold is a necessary condition for any substantial mining operation.

Table 4-1: Historic MTRS claims converted to Upland Mining Lease ADL No. 580985 (1995)

ADL No. series	# of claims	State of Alaska MTRS mining claims	Hectares	Acres
0542473 to 0542476	4	All ¼-¼ section	64	160
0542479 to 0542488	10	All ¼-¼ section	160	400
0542490 to 0542492	3	All ¼-¼ section	48	120
0542495 to 0542511	17	All ¼-¼ section	272	680
0560780 to 0560795	16	All ¼-¼ section	256	640
0561134 to 0561156	23	All ¼-¼ section	368	920
Total	73		1168	2920



Table 4-2: Upland Mining Lease ADL No. 580985 Location

Meridian	Township	Range	Section	Subsection	Hectares	Acres
Fairbanks (F)	019S	011W	25		16	40
	019S	011W	26		128	320
	019S	011W	27		144	360
	019S	011W	34		240	600
	019S	011W	35		32	80
Fairbanks (F)	020S	011W	03		160	400
	020S	011W	04		176	440
	020S	011W	09		176	440
	020S	011W	10		96	240
				Total	1168	2920

Also on October 19, 1995, Mines Trust filed application for a non-contiguous 16 hectare millsite lease for the Golden Zone project located in Township 20 South, Range 10 West, Section 22, SW1/4 of the NW1/4, Fairbanks Meridian. Issued July 1, 1997, the term of Millsite Lease ADL No. 547111 is effective for the duration of Mining Lease ADL 580985; however for billing purposes the lease has been assigned an expiry of September 10, 2024. The millsite lease rental amount is dependent upon a fair-market value appraisal; the first adjustment is made after the 6th year and then every five (5) years thereafter. The millsite lease was amended by recording Document # 2015-000794-0 at the Talkeetna Recorder's office on July 1, 2015, to change the method of calculating the usage charge adjustment factor.

A millsite lease provides surface authorization for mine facilities that are not located on the upland mining lease or mining claims. Mine facilities can be located on mining claims; therefore a millsite lease is technically not required. However, a mining claim is only valid if the claimant has a valid discovery. Since most facilities are located specifically to avoid being over a mineable ore body, this location could theoretically provide a legal loophole where the facilities are not authorized by the mining claim. For that reason, many hard rock mines opt to request a millsite lease because the lease solidifies the legal authorization for surface facilities. The Alaska Department of Natural Resources has the authority to include stipulations in the lease to protect public resources.

Sixty-four (64) State of Alaska MTRS mining claims were staked on behalf of Avidian by Alaska Earth Sciences Inc. (AES) on June 5, 2016 and recorded on June 9, 2016 under the name of Alaska Earth Resources Inc. (AER) at the Talkeetna Recording District office. A Quit Claim Deed transferring ownership from AER to Avidian's 100% owned Alaska subsidiary Avidian Gold Alaska Inc. was recorded with the Talkeetna Recording District office on August 5, 2016.

Howe notes that AES actually staked 65 claims on June 5, 2016 on the basis of the map dated October 14, 1995 and filed by Mines Trust in support of its October 19, 1995 Upland Mining Lease application. Subsequent to the June 2016 staking, it was discovered that the map contained a location error for a mining claim. The 1995 map shows claim RSC-46 (ADL 542483) in the



SE1/4 of the NE1/4 of Section 3, Twp 20S, Range 11W, Fairbanks Meridian. The original location document for RSC-46, from the Talkeetna recorder's office, states however that the claim is located in the NW1/4 of the SW1/4 of Section 4, Twp 20S, Range 11W, Fairbanks Meridian. As a result of the 1995 map location error, the 16 ha NW1/4 of the SW1/4 Section 4 Twp 20S Range 11W was staked in June 2016 as state mining claim GZ-025 (ADL 721953). ADNR declared the claim certificate for GZ-025 null, void and closed as it overlapped the active mining lease ADL 580985.

Furthermore, due to the 1995 map location error, the SE1/4 of the NE1/4 of Section 3, Twp 20S, Range 11W was not staked in June 2016 and remained open. Mines Trust has elected to correct this issue by including the area in the SE1/4 of the NE1/4 of Section 3, Twp 20S, Range 11W in the active upland mining lease ADL 580985. This will be accomplished by reactivating (“curing”) its 2015 abandonment of claim Gold King 48 (Figure 4-2; ADL 563034) which previously covered the area. The cure requires the filing of an amended affidavit of annual labour for the year ending September 1, 2015, payment of 2016 and 2017 rental, and payment of a penalty equal to the 2016 rental rate. Once the payments are made, there is a 50 day waiting period before the claim is re-activated. The delay is to ensure that there are no claim conflicts. Once the claim is cured and activated, Mines Trust must request to amend the existing lease ADL 580985 to include Gold King 48. On receipt of the application, ADNR will adjudicate the claim by doing a title search and a review of the mining documents, after which a public notice for claim conflicts will be published in a local newspaper for one day, and then a 31 day comment waiting period will be in effect. If no claim conflicts are asserted the amendment to the lease will be prepared and readied for signature. Once the amended lease is signed, the amendment must be recorded at the recording district office in which the claim is located. Upon completion of the above process, the amended upland mining lease (ADL No. 580985) will total 1,184 ha.

As of the date of this Report Mines Trust is in process of curing Gold King 48. An amended affidavit of annual labour for the year ending September 1, 2015 was filed at the Talkeetna Recorder on September 12, 2016. Upon receipt of the confirmation copy of the Amended Affidavit of Annual Labour for 2015, the \$170 rental for 2015-2016, the \$170 penalty for late payment, and the \$170 rental for 2016-2017 for Gold King 48 (ADL 563034) was submitted to the Department of Natural Resources.

The State of Alaska claims and upland mining lease are contiguous and cover all significant known deposits and showings in the area. Figure 4-2 shows the Property, mining claims and lease locations with respect to Township, Range and Section, Fairbanks Meridian. Figure 4-2 also shows the general location of all of the major and minor showings and the Golden Zone breccia pipe with respect to property boundaries.

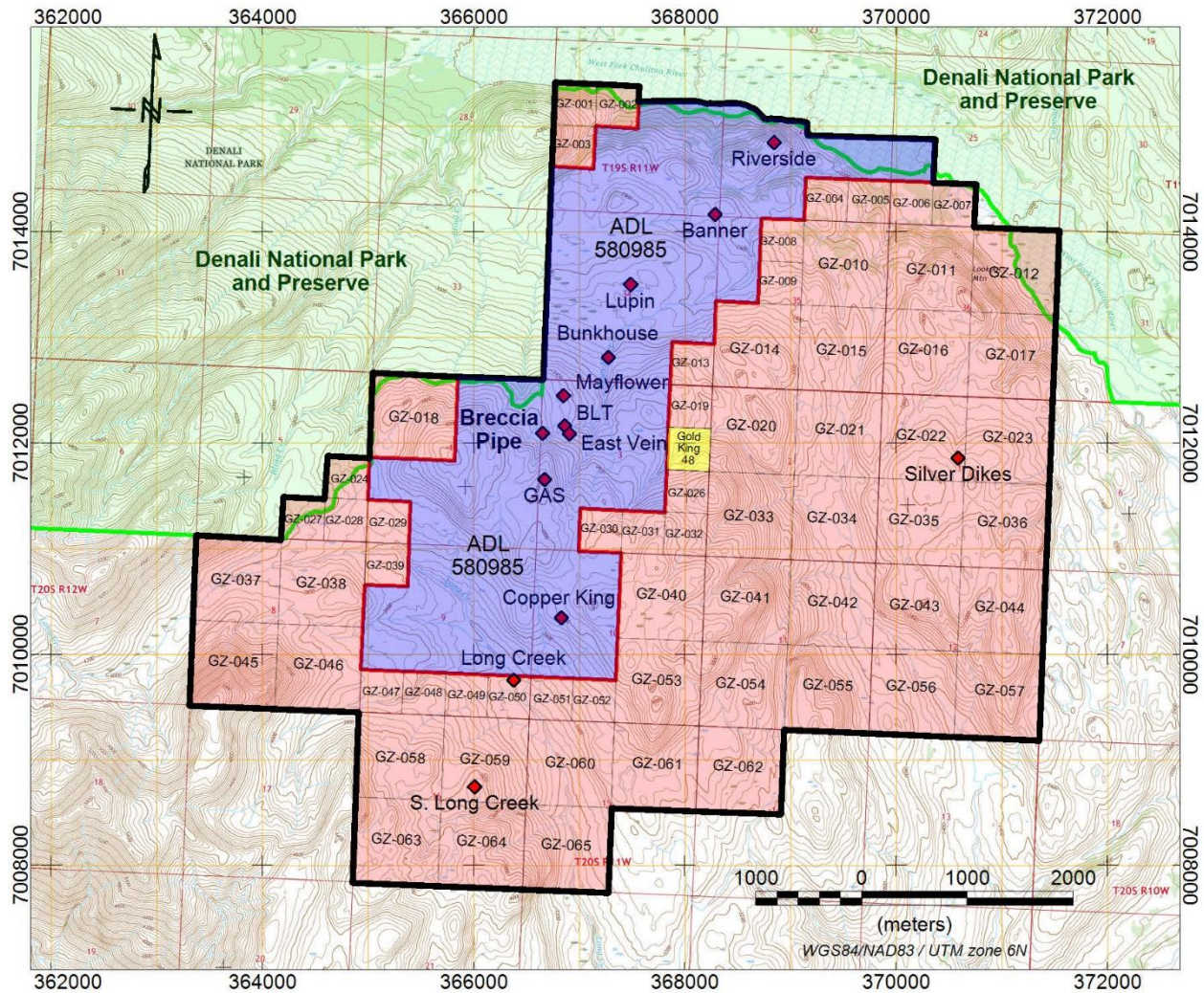


Figure 4-2: Golden Zone Property - MTRS claims and Upland Mining Lease 580985 locations

4.3. PROPERTY OWNERSHIP

Prior to Avidian's acquisition, the State of Alaska Uplands Mineral Lease ADL 580985 and State of Alaska Millsite Lease ADL 547111 were owned 51% by Chulitna Mining Company LLC, a corporation incorporated under the laws of the State of Utah with an office located at 1600 A Street, Suite 310, Anchorage AK 99501-5148 (Chulitna), 29.4% by Hidefield Gold (Alaska) Inc. (Hidefield) a subsidiary of Hidefield Gold Limited (which, on December 21, 2009, became a subsidiary of Minera IRL Limited with an office located at 30 Farringdon Street, London, EC4A 4HJ United Kingdom), and 19.6% by Mines Trust Co., a corporation incorporated under the laws of the State of Alaska with an office located at 11401 Olive Lane, Anchorage, AK 99515 (Table 4-3). Appendix A contains a listing of all Property claims, ADL numbers, staking and filing dates, MTRS description, and acreage. As per the definitive purchase agreement, effective November 21, 2016, between Avidian Chulitna and Mines Trust and the definitive purchase agreement, effective October 22, 2016, between Avidian and Hidefield, Avidian has purchased a 100% interest in the Golden Zone Property (specifically the 1,168 ha State of Alaska Uplands



Mineral Lease ADL 580985 [to be expanded to 1,184 ha with the addition of cured mining claim Gold King 48 currently in progress] and 16 ha State of Alaska Millsite Lease ADL 547111) subject to certain scheduled payment terms and royalty payments as described in Sections 4.3.1 and 4.3.2 below.

In his title opinion report, Tangen (2016) concludes:

“Our examination of the records and other documents is that title to ADL 580985 is vested in Mines Trust Co and that transactions and agreements between Mines Trust Co and other entities, including Golden Zone Inc., Hidefield Gold PLC, Fire River Gold, Alix Resources Corporation, Nortec Minerals Corp and Chulitna Mining LLC that may be in place have not at this time effected a transfer of title; and that ADL 580985 is administratively active and in good standing under the Alaska Land Act and the regulations of the Alaska Department of Natural Resources. Further it is the opinion of this office, that Mines Trust Company (sic) is the holder of Millsite Staging Area Lease (ADL 547111) and that the said lease is current and in good standing.”

The contiguous 64 State of Alaska MTRS claims within the Golden Zone Property are held 100% by Avidian subject to certain royalty payments to Chulitna and Mines Trust as per Sections 4.3.1 and 4.3.2 below.



Table 4-3: Golden Zone Property – Land Acquisition Agreements

Property	Owner	Avidian Purchase Agreement	Avidian NSR Agreements	Claims	Area (Hectares)	Area (Acres)
State of Alaska upland mining lease (ADL No. 580985)	Chulitna 51% Mines Trust 19.6%	Avidian purchases Chulitna's 51% interest and Mines Trust's 19.6% interest for an aggregate interest of 70.6%.	Chulitna 2.0% MTC 1.0% with buydown option to Chulitna 1.0% Mines Trust 6/10%		1,168 (to be increased to 1,184)	2,920 (to be increased to 2,960)
	Hidefield 29.4%	Avidian purchases outright Hidefield's 29.4% interest	Hidefield 1%			
State of Alaska millsite lease (ADL No. 547111)	Chulitna 51% Mines Trust 19.6%	Avidian purchases Chulitna's 51% interest and Mines Trust's 19.6% interest for an aggregate interest of 70.6%.	Chulitna 2.0% MTC 1.0% with buydown option to Chulitna 1.0% Mines Trust 6/10%		16	40
	Hidefield 29.4%	Avidian purchases outright Hidefield's 29.4% interest	Hidefield 1%			
State of Alaska MTRS mining claims	Avidian 100%		Chulitna 2.0% Mines Trust 1.0% with buydown option to Chulitna 1.0% Mines Trust 6/10%	64	2,848	7,120

4.3.1 2016 Avidian Purchase of Hidefield Interest in the Property

As per an email agreement dated August 27, 2016 and a definitive purchase agreement, with the effective date October 22, 2016, Avidian has acquired 100% of Hidefield's interest (29.4%) in the



Golden Zone property and its underlying agreement with a share transaction of 3.5 million shares of Avidian (at CDN \$0.10 per share). Hidefield will retain an uncapped 1% NSR. Royalties will apply to any production from the existing 1,168 ha State of Alaska uplands mining lease ADL 580985 and 16 ha Millsite lease ADL 547111.

4.3.2 2016 Avidian Agreement with Chulitna and Mines Trust

On April 28, 2016 Avidian entered into a binding purchase letter agreement followed by the definitive purchase agreement effective November 21, 2016 with respect to purchasing the interests of both Chulitna and Mines Trust in the Golden Zone property (specifically the 1,168 ha State of Alaska Uplands Mineral Lease ADL 580985 and 16 ha State of Alaska Millsite Lease ADL 547111).

As per the agreement, Avidian purchased both the 51% interest and the 19.6% interest in the Golden Zone property held by Chulitna and Mines Trust respectively — an aggregate interest of 70.6% - subject to terms listed below. These interests will be transferred to Avidian's Alaskan subsidiary.

Acquisition terms are:

A \$US 25,000 non-refundable cash payment to Chulitna for the due diligence period with a “no shop” provision during this period.

Upon successful conclusion of due diligence, Avidian began payment of the following \$US amounts in cash and Avidian shares (or the shares of any successor company) to Chulitna and Mines Trust. Avidian shares are valued at \$CDN 0.10 per share where there is no public market for those shares and at the 20-day volume weighted average price (VWAP) immediately prior to the date a payment is due when the Avidian shares (or its successor company's shares) are listed upon a stock exchange.

	Chulitna		Mines Trust		Status
	Cash (\$US)	Stock (\$US)	Cash (\$US)	Stock (\$US)	
Signing of Binding Agreement April 28, 2016	\$25,000				Paid
End of Due Diligence September 28, 2016	\$150,000	\$150,000	\$25,000	\$100,000	Paid
January 15, 2017	\$50,000	\$50,000		\$25,000	
January 15, 2018	\$50,000	\$50,000		\$25,000	
January 15, 2019	\$100,000	\$100,000		\$25,000	
January 15, 2020	\$100,000	\$100,000		\$25,000	
January 15, 2021	\$100,000	\$100,000		\$25,000	
January 15, 2022	\$150,000	\$150,000		\$25,000	
January 15, 2023	\$150,000	\$150,000		\$25,000	
Totals	\$850,000	\$850,000	\$25,000	\$275,000	

Annual payments will cease after January 15, 2023, or upon the beginning of production of 10,000 ounces or more of gold annually from the Property when NSR's will become payable. Cash payments in years 2019 and following will be considered advance royalty payments and



will be deducted from up to 50% of NSR royalties payable upon achieving production from the Golden Zone property. Those NSR royalties will be as follows:

- Chulitna 2.0%
- MTC 1.0%

Royalty “buy-downs” are available to Avidian — 1 percentage point for \$1 million in the case of Chulitna and 4/10ths of 1 percentage point for \$400,000 in the case of Mines Trust. Should any party wish to cash in all of its NSR, then payments will be scaled up *pro rata* (i.e., Chulitna could sell the remaining percentage point for another \$1 million; Mines Trust could sell its remaining 6/10ths for another \$600,000).

Royalties apply to any production from the existing 1,168 State of Alaska uplands mining lease (ADL 580985) and Alaska 16 ha Millsite Lease (ADL 547111) or any open-to-mineral-entry lands within the Area of Interest shown in Figure 4-3.

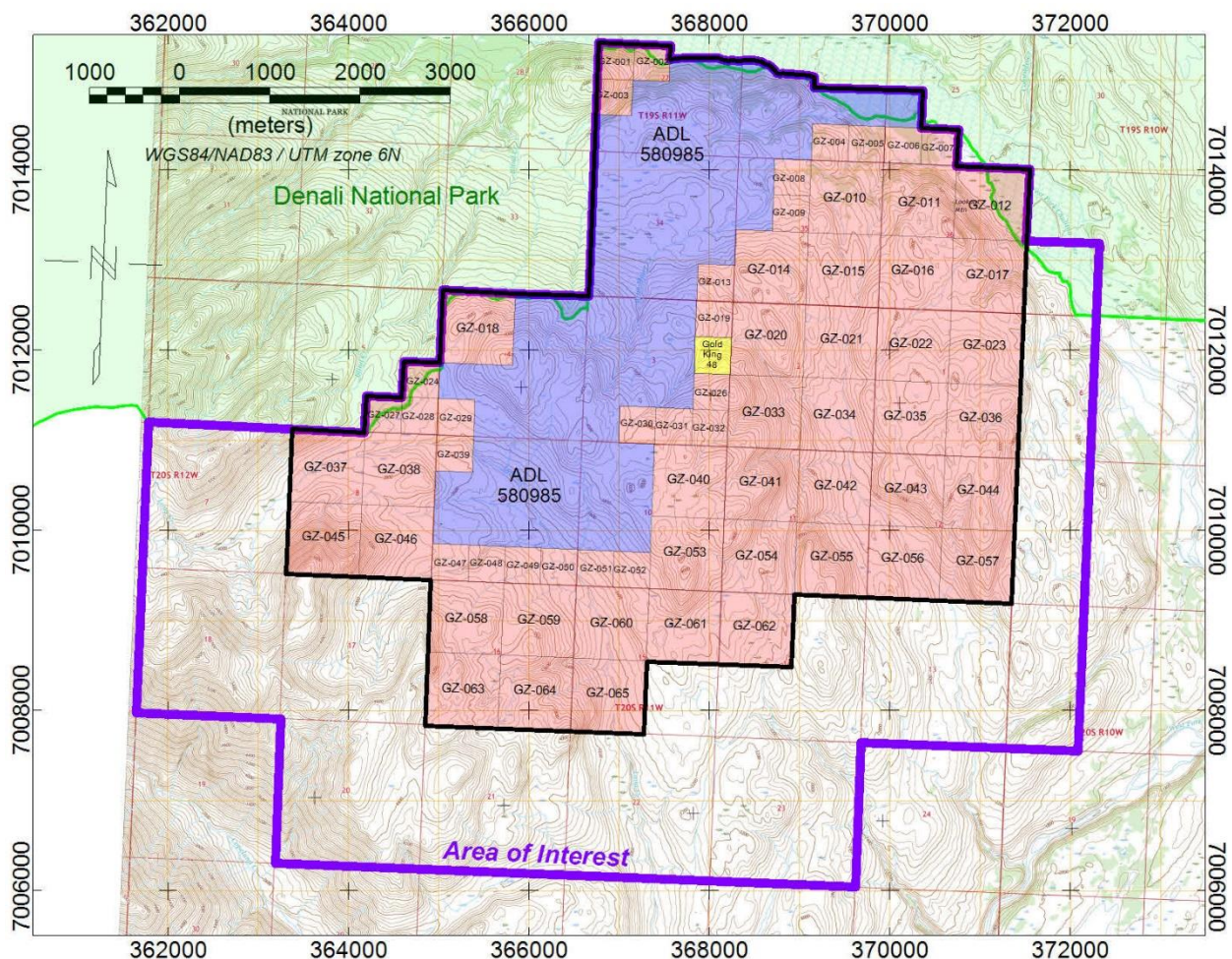


Figure 4-3: Area of interest as per the 2016 Avidian Binding Agreement with Chulitna and Mines Trust



At any time Avidian may decide to return ownership of the Golden Zone property to Chulitna and Mines Trust with no further liabilities to either. If Avidian fully acquires the 29.4% interest of Hidefield, it would transfer that interest subject to any possible royalty to Hidefield to Chulitna and Mines Trust at a 2/3rd to 1/3rd ratio if it withdraws from the project.

Alix Resources Corporation (Alix), as of April 28, 2016, was owed \$200,000 by Chulitna (Alix sold its 51% interest to Chulitna on Jan 7, 2014). This amount was due on Dec 31, 2016, unless the property interest held by Chulitna is earlier transferred to a third party at which time that amount becomes immediately due and payable. Avidian entered into a definitive agreement with Alix on June 6, 2016 and has settled the \$200,000 debt by way of issuance of Avidian shares valued at \$CDN 0.20 per share.

Avidian undertakes to spend \$2 million over a five year period with a minimum annual expenditure of \$200,000 commencing upon the execution of the final documentation. According to Avidian, Chulitna has agreed that work conducted during the due diligence period will also qualify towards the minimum expenditure. Any work that advances the property towards potential additional discoveries or production as well as rental and permitting payments to the State of Alaska or other public entities will count towards this work commitment. Subject to that provision, the annual amounts and the various programs will be entirely at the discretion of Avidian and its technical team. It is noted that Chulitna obtained a work permit for four metallurgical core holes. The permit can be revised, and Avidian is under no obligation to conduct this specific program in 2016 or future years. Howe has been notified by Avidian that as of the date of this Report, it has met the first year's minimum expenditure level.

After signature of the formal agreement, Avidian will be responsible for all costs related to the Golden Zone Property. Until that time Chulitna and Mines Trust and/or Hidefield will be responsible for these costs.

Upon signature of the formal agreement Avidian will take possession of all the Golden Zone property facilities and equipment. Avidian will maintain \$2 million liability insurance on the Golden Zone property and its equipment so long as it controls the property.

4.4. PROPERTY CLAIM STATUS

With exception to annual lease payments and State of Alaska mining claim rentals and labour assessments (Appendix A) the Project claims are not subject to any current encumbrances. A 3% net proceeds production royalty will be payable to the state if mineral production is achieved (Appendix A).

The payment for each State of Alaska mining claim and upland mining lease rental year is due September 1 and payable no later than November 30 of that year. The penalty for failure to make a timely payment is forfeiture (abandonment) of the location.

During the labour year, or within 90 days after the close of that year (September 1), an affidavit



describing the labour or improvements made on mining claims and upland mining leases within the assessment year (including any labour in excess of the requirement for that year) must be recorded. Failure to timely record an affidavit of annual labour constitutes abandonment of all rights acquired under the mining claim.

Table 4-4 details the holding costs for the leases and mineral claims at the Golden Zone Property. Annual work requirements remain constant, however, annual rental costs increase periodically as the claims become older (see Appendix A). For example, if all MTRS claims are maintained, annual mining claim rental costs for the Project will rise to \$12,460 in 2020 and \$30,260 in 2025. Rental rates and work requirements are also subject to review and adjustment for inflation every five to six years.

Table 4-4: Golden Zone Property – Current Land Holding Costs

Property	Claims	Area (Ha)	Area (Acres)	Annual Rent Paid 09/01/2016	Annual Work Paid 09/01/2016	Annual Rent Due 09/01/2017	Annual Work Due 09/01/2017
State of Alaska upland mining lease (ADL No. 580985)		1,168 (1,184) ¹	2,920 (2,960) ¹	\$12,410 (\$12,580) ¹	\$7,300 (\$7,400) ¹	\$12,410 (\$12,580) ¹	\$7,300 (\$7,400) ¹
State of Alaska millsite lease (ADL No. 547111)		16	40	\$ 5,434		\$ 5,434	
State of Alaska MTRS mining claims	64	2,848	7,120	\$6,230 ²	\$17,800	\$6,230	\$17,800
TOTAL		4,032 (4,048) ¹	10,080 (10,120) ¹	\$22,490 (\$22,660) ¹	\$25,100 (\$25,200) ¹	\$22,490 (\$22,660) ¹	\$25,100 (\$25,200) ¹

1. Anticipated revised numbers based upon reactivation (“curing”) of Mines Trust mining claim Gold King 48 (ADL 563034) and its addition to the lease – currently in process
2. In addition, the first years’ rent (Sept 1, 2015 - Aug 31, 2016) was paid upon registration of MTRS claims on June 09, 2016

Avidian has notified Howe that as of the date of this Report all required 2016 annual payments for the upland mining lease, millsite lease and MTRS mining claims have been paid and the filing of the labor affidavit report and associated fees are completed.

4.5. PROPERTY PERMITS

Avidian, Chulitna, and Mines Trust warrant that they possess or will acquire all State permits required to execute exploration activities currently being undertaken or planned on the property. Howe notes that in April 2016 Chulitna (as leasee and operator) and Mines Trust (as owner) applied to the State of Alaska for and received a multi-year work permit (January 1, 2016 to December 31, 2020) on the Upland Mining Lease ADL 580985. Proposed initial work is four metallurgical drill core holes, trenching, airstrip repairs and minor continuing rehabilitation of



2011 drill pads. The permit can be revised, and Avidian is under no obligation to conduct this specific program in 2016 or future years.

The Property is linked to the George Parks Highway and the Alaska Railroad at the Colorado Station by the state owned, Colorado-Bull River Road, a seasonally improved dirt road. Constructed in 1936-37 by the Alaska Road Commission, it is a deeded road of the state highway system under the Section 21(a) of the Alaska Omnibus Act, enacted on June 25, 1959. According to a 1980 letter from the Alaska Department of Transportation and Public Facilities (ADOT&PF), a quit claim deed for the road was recorded June 30, 1959, Book 235, Page 271, Office of the District Recorder, Fourth Judicial District, Fairbanks, Alaska (Loeffler, 2006). The road has not been maintained by the state since approximately 1965 but has been maintained by operators of the Golden Zone property since about 1980 by letter agreement from the ADT&PF. Approximately 4.5 km of the Colorado - Bull River Road crosses through Denali National Park and Preserve on the northeast side of the West Fork of the Chulitna River however Howe has been advised that no Federal access permit is required to utilize this section of the road as it is a State-deeded right of way to the mine property.

Alaska Statute 16.05.871(a) requires the Alaska Department of Fish and Game (ADF&G) to specify the various rivers, lakes, and streams, or parts of them, that are important for spawning, rearing, or migration of anadromous fishes. Protection of these specified water bodies is addressed by other sections of AS 16.05.871, which requires persons or governmental agencies to submit plans and specifications to ADF&G and receive written approval in the form of a Fish Habitat Permit before any action is taken "to construct a hydraulic project, or use, divert, obstruct, pollute, or change the natural flow or bed of a specified river, lake, or stream . . ." or " . . . to use wheeled, tracked, or excavating equipment or log-dragging equipment in the bed of a specified river, lake, or stream . . ." [quoted portions from AS 16.05.871(b)]. This requirement includes, but is not limited to, construction, maintenance, repairs, or placement of structures, docks, bulkheads, road crossings (culverts, bridges, fords), stream diversions and bank stabilization projects; gravel removal; dumping any material into (or onto ice over) a water body; placer mining; water withdrawals or appropriations; the use of vehicles or equipment in the water body; and the use of explosives in or near the water body. Recreational boating and fishing activities do not require a Fish Habitat Permit.

The ADF&G recognizes the bridged Middle Fork of the Chulitna River and the lower reaches of the Bull River and West Fork of the Chulitna River as anadromous (Johnson and Litchfield, 2016). The Colorado-Bull River Road used to access the Property crosses the Middle Fork of the Chulitna River via a bridge and therefore no Fish Habitat Permit is required for this crossing. However the other two rivers, the Bull River and the West Fork of the Chulitna River, must be forded by vehicles; the operators and owners of the Property must apply to ADF&G for yearly permits to cross these rivers.

According to Mines Trust, previous meetings with various regulatory agencies, indicate that the project could be permitted, and no fatal flaws have been identified. Background data have been gathered on biologic resources and an air-quality survey was completed. A baseline surface water program was completed on the project in 2011 and 2012 by Three Parameters Plus, Inc. for Alix.



No further work has been done since 2012 and it would be advisable to have this program reinstated.

If the Property advances to a mine permitting stage, environmental baseline studies will be required to gather information including: air; cultural resources; geochemistry; hydrology; fish and wildlife; and wetlands. Some of these studies require data collection over periods of one or more years. Avidian has stated that they will review previous baseline studies completed on the property to date and further investigate and discuss the baseline study information with the responsible agencies with regard to the continuance of the baseline work, even during the exploration stage.

4.6. ADDITIONAL PROPERTY INFORMATION

To Howe's knowledge there are no current social, political, environmental or other liabilities and risks associated with the Project area that may affect access, title or the right or ability to perform the work recommended in this Report on the Property. Avidian warrants that it has not received or is aware of any government authority notice of, or communication relating to, any actual or alleged breach of any environmental laws, regulations, policies or permits.

To Howe's knowledge there are no current or pending challenges to ownership of the lands. The Tangen (2016) title opinion states:

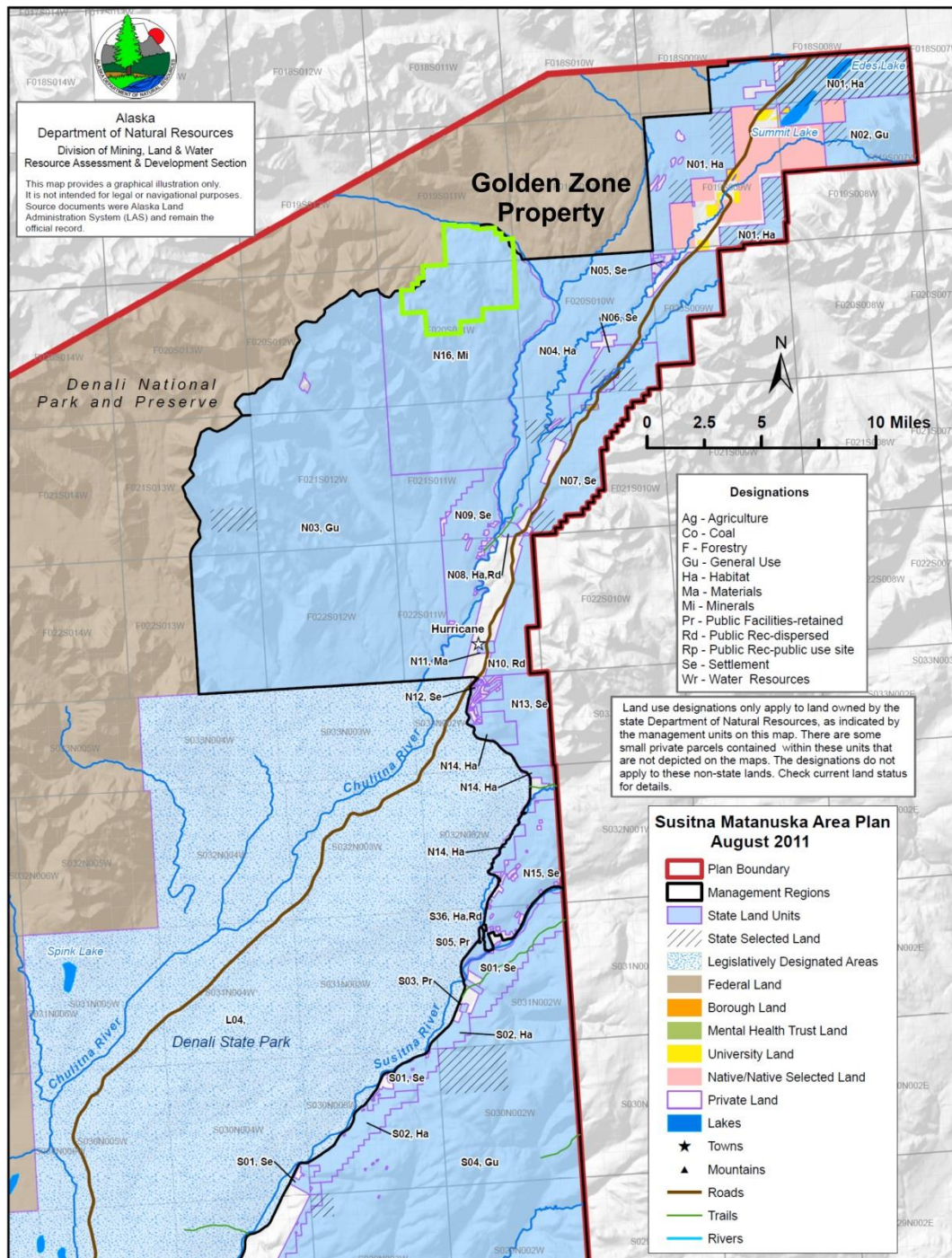
"As a part of our due diligence, we have searched the records of the Courts of the State of Alaska and the Federal District Court for Alaska for any claims being asserted against Golden Zone, Inc., Mines Trust Company and Hidefield Gold which might affect title to the subject mining or leasehold locations. Our investigation, effective through close of business July 11, 2016, discloses that Golden Zone, Inc., Mines Trust Company and Hidefield Gold is not a party to any litigation pending in any of the aforesaid courts at this time.

We have also inquired as to whether there are liens outstanding against Golden Zone, Inc., Mines Trust Company and Hidefield Gold or any of the leasehold or mining locations identified in this title report. We have searched the Uniform Commercial Code records of the District Recorder for the State of Alaska and find no liens or other encumbrances that would impact ADL 580985."

The nearest areas to the Property that are closed to mineral entry include Denali National Park and Preserve which abuts the north and northwest side of the Property and the Denali State Park located approximately 27 km south-southwest of the southern Property boundary. However, the Property is located entirely on State of Alaska owned lands and lies within the North Parks Highway Region of the Susitna Matanuska Area Plan (Alaska Department of Natural Resources, 2011) as shown in Figure 4-4. Specifically the Property lies within Unit N-16, a large area in the northwestern part of the region associated with the Alaska Range near Lookout Mountain



(approximately 14,800 ha). Unit N-16 is designated Minerals under the Plan and the intent is to manage the unit for its mineral values (Alaska Department of Natural Resources, 2011).



Alaska Department of Natural Resources, 2011

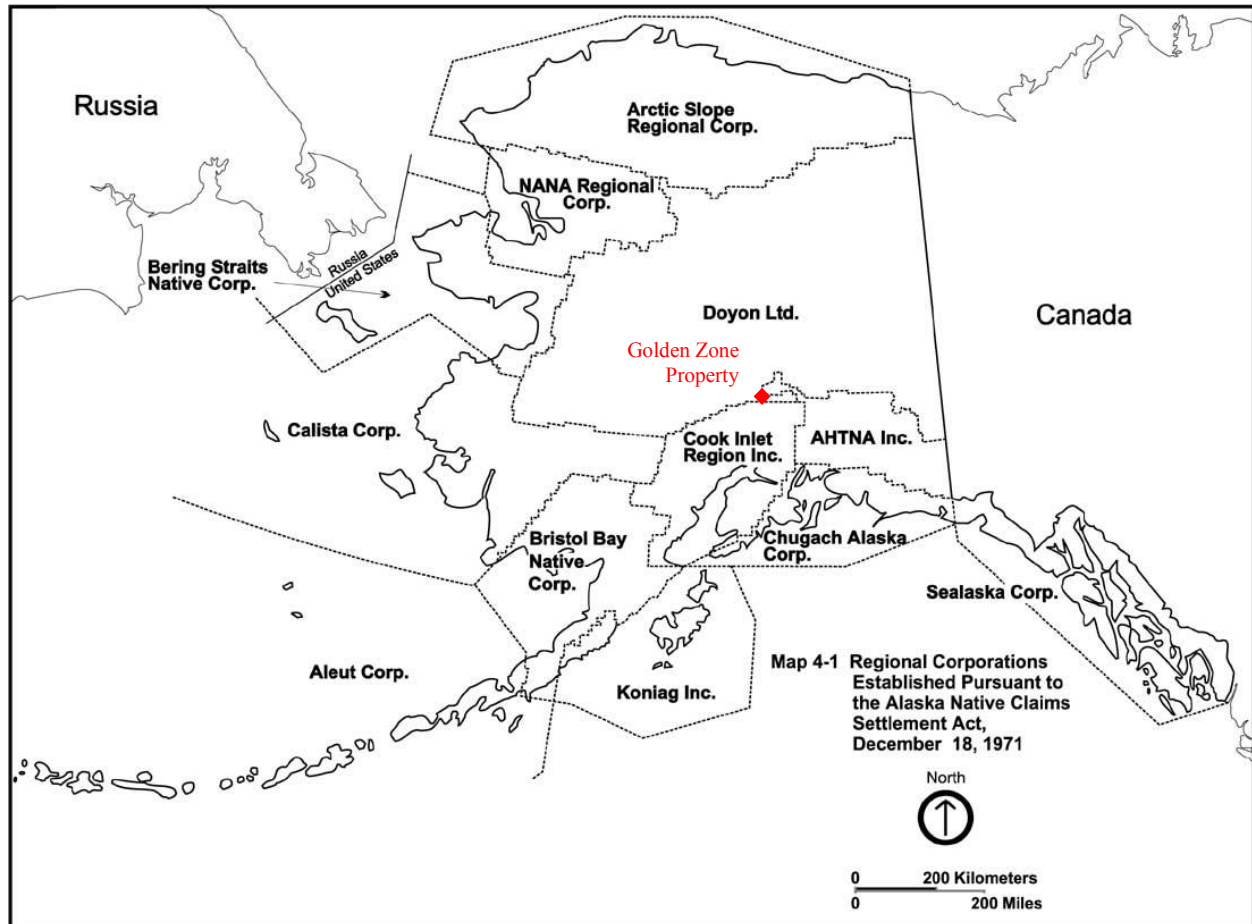
Figure 4-4: Golden Zone Property Location (green outline) in the North Parks Highway Region of the Susitna Matanuska Area Plan



The Alaska Native Regional Corporations were established in 1971 when the United States Congress passed the Alaska Native Claims Settlement Act (ANCSA) which settled land and financial claims made by the Alaska Natives and provided for the establishment of 13 regional corporations to administer those claim settlements. Under ANCSA, Alaska was originally divided into twelve regions (Figure 4-5), with each region composed as far as practicable of Natives having a common heritage and sharing common interests. Each region was represented by a "Native Association" responsible for the enrollment of past and present residents of the region. Individual Alaska Natives, alive at ANCSA's enactment on December 17, 1971, enrolled in these associations, and/or their village level equivalents were made shareholders in the Regional and/or Village Corporations created by the Act and received 100 shares of stock in the respective corporation. The twelve for-profit regional corporations, and a thirteenth region representing Alaska Natives who were no longer residents of Alaska in 1971, were awarded the monetary and property compensation created by ANCSA. Village corporations and their shareholders received compensation through the regional corporations. The regional and village corporations are now owned by Alaska Native people through privately owned shares of corporation stock.

The Golden Zone Property is located in an isolated section of the Doyon Regional Corporation area (<http://www.doyon.com/>) flanked by the Ahtna Inc. area (<http://ahtnainc.com/>) to the east-northeast and the Cook Inlet Region Inc. area (<http://www.ciri.com/>) to the south (Figure 4-5). The Property also lies within the Ahtna Traditional Use Area. The nearest local native village, the Ahtna village of Cantwell, represented by Yedetena Na Corporation, is located approximately 42 km (26 mi) to the northeast of the Property along the George Parks Highway. These Alaska Native Regional Corporations would have input into any potential future permitting for mineral development at the Property.

Minor waste dumps from underground development and tailings from the brief period of mine operation between 1941 and 1942 are present on the Property. Howe is unaware of any current environmental liabilities or clean-up orders pertaining to the property.



http://www.wikiwand.com/en/Alaska_Native_corporation, 2016
Figure 4-5: Location of the Golden Zone Property relative to the Alaska Native Regional Corporations



5. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1. ACCESSIBILITY

The property lies 16 air km west of the George Parks Highway (Alaska Route 3, commonly referred to as the Parks Highway) and 12 air km west of Colorado Station on the Alaska Railroad which are the main ground transportation corridors between Anchorage to the south and Fairbanks to the north (Figure 4-1). The Property is accessible both by ground and air transport.

The Property is linked to the George Parks Highway and the Alaska Railroad at the Colorado Station by the state owned, Colorado-Bull River Road, a seasonally improved dirt road (road distances of 24 and 19 km respectively). The Colorado-Bull River Road (DOT 87-6) leaves the George Parks Highway at approximately milepost 187.5. It is a deeded Omnibus road of the state highway system, although it has not been maintained by the state since about 1965. The road has been maintained by the operators of the Golden Zone property since about 1980 by letter agreement from the ADOT&PF. The Colorado-Bull River Road crosses the Middle Fork of the Chulitna River via a 100-ton bridge. However the two other rivers, the Bull River and the West Fork of the Chulitna River, must be forded. It is typically possible to ford these two rivers using modern off-highway trucks or tractors. The Colorado-Bull River Road ends at the historic Golden Zone Mine. From the Golden Zone Mine area, a cat trail crosses the divide to the south and descends into Long Creek where it provides access to the historic Copper King, Long Creek and South Long Creek prospects (Figure 5-1). Another ATV trail provides access to the Silver Dikes prospect area.

A 610 m gravel airstrip is located at Colorado Station and a 365 m airstrip is located within the upland lease on the access road approximately 1 km northeast of the Golden Zone camp (Figure 5-1). The latter airstrip is suitable for smaller aircraft with tundra tires.

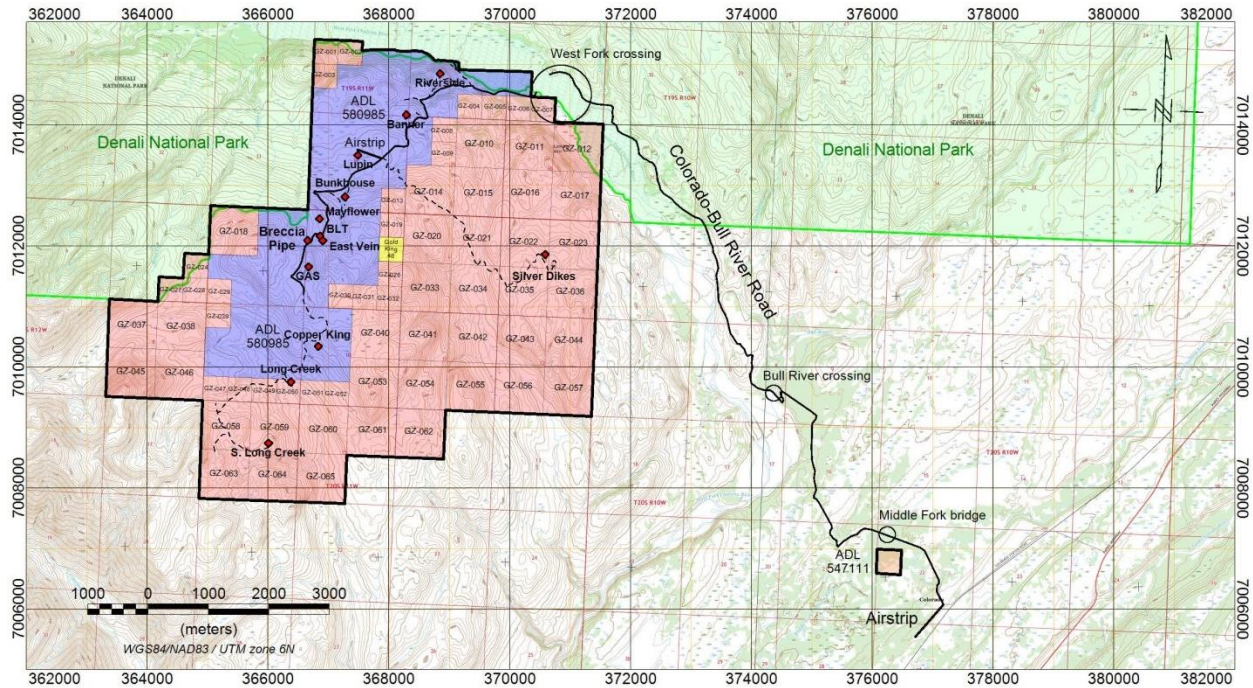


Figure 5-1: Access from George Parks Highway to Property and within Property

5.2. CLIMATE

The climate in the Project area is mountain continental but has a maritime influence in the summer because of its proximity to the coast and the warm Japanese current emanating from the Gulf of Alaska.

Cantwell is the closest centre representative of the Project area for which climatic records (Western Regional Climate Center, 2016) are available (1983-2011). The Property area is at higher elevations than Cantwell therefore some differences in average temperatures and precipitation can be expected. Mean summer temperature is approximately 11.3 degrees Celsius (°C). However, extreme daily summer temperatures can reach in excess of 30.5°C. Mean winter temperature is -15.7°C. However, extreme daily winter temperatures can reach to below -45°C. Average annual precipitation is approximately 42.55 centimetres (cm) per year. Summer has the greatest amount of precipitation at mean of 19.15 cm. Mean winter precipitation is 6.73 cm which equates to a mean winter snowfall of 147.07 cm. Mean total annual snowfall is 314.71 cm of which the majority falls in the winter, followed by fall (95.76 cm) and spring (71.12 cm). Lakes in the immediate area typically are frozen and snow remains on ridges and upper slopes until late June or early July. The Bull River and Middle and West Forks of the Chulitna River are ice-free from mid-June through October.

The effective season for field exploration operations in the Project area runs from June through late September or early October. Mine operations in the region with supporting infrastructure, can operate year-round.



5.3. LOCAL RESOURCES AND INFRASTRUCTURE

The property is located about 16 air km from the main transportation corridor between Anchorage and Fairbanks which contains the George Parks Highway (Alaska Route 3), the Alaska Railroad and the 345Kv Alaska Intertie (Figure 4-1). A year-round gravel road provides access from the highway to the Millsite Lease staging area at Colorado Station and a seasonal pioneer road is used for access from the staging area to the Property. A network of pioneer roads and 4-wheel ATV trails access most of the prospects on the Property. A 610 m gravel airstrip is located at Colorado Station and a 365 m airstrip is located within the upland lease on the access road approximately 1 km northeast of the Golden Zone camp (Figure 5-1).

No electrical power lines, gas lines, or permanent settlements exist on the Property. Facilities on the upland mining lease portion of the Property include a complete 20- to 25-man camp with a permanent crew building housing kitchen, dining, living and office quarters, two large drill core storage buildings, a warehouse, several small outbuildings, and three large on-site diesel generators. A shop and apartment are located at the Colorado Station Millsite Lease staging area.

Anchorage and Fairbanks are the nearest sources of mining related commercial services and have an abundant pool of managerial and skilled labour. Anchorage (population 291,825), is serviced by modern telecommunications, commercial airlines and ocean port and rail and truck transportation. Fairbanks is the largest city in the Interior region and second most populous metropolitan area in Alaska after Anchorage (population 32,469; Fairbanks North Star Borough 99,357). Fairbanks is also serviced by modern telecommunications, commercial airlines and rail and truck transportation.

As of the date of this Report, it appears that sufficient surface rights exist on the Property that may be necessary for any potential future mining operations including tailings storage areas, waste disposal areas and a processing plant. It also appears that sufficient water exists on the Property that may be necessary for any potential future mining operations, subject to an application and approval for water rights with the ADNRR.

5.4. PHYSIOGRAPHY

The Project area lies within the Alaska Range ecoregion (Gallant et.al., 1995; ADEC, 1999). Lying on the south foothills of the Alaska Range, relief is moderate, with elevations on the Property ranging from about 600 m above sea level (asl) at the northwest end of the property along the West Fork of the Chulitna River, to approximately 1,200 m asl at the southwestern end of the upland mining lease to over 1,500 m asl in the extreme southwestern end of the property. To the west and north of the Property the Alaska Range rises to elevations in excess of 3,000 m. Below approximately 1,400 m asl topography is open comprising subdued to moderate hills with gentle slopes, commonly mantled and surrounded by relatively flat-lying gravelly, well drained, and shallow glacial deposits. The exceptions are flanks of larger streams such as Long Creek where stream rejuvenation results in narrow rock-cut gorges. Above 1,400 m asl the topography is more rugged, and many slopes are precipitous. Lower elevation valleys on the Property comprise poorly drained muskeg with underlying gravelly alluvium or silty colluvium. The West



Fork of the Chulitna River on the north side of the Property is a braided stream carrying much silt and gravel. The water in some channels of this river can exceed 1.2 m depth in summer. Permafrost is discontinuous under the Alaska Range ecoregion.

In the lower elevation areas of the Property with gentle slopes, rock outcrop exposure is poor. Exposures are typically very good above 1,000 m except where masked by talus slopes and snow. Vegetation at lower elevations is typically dense, consisting of alder, willow, birch, aspen, and black and white spruce found up to approximately 800 m elevation. An intermediate vegetation zone, from approximately 800 up to 1,000 m, generally consists of broad areas of alder and willow growth that can be very dense on valley sides and near muskeg. Above 1,000 m, vegetation primarily consists of a thin cover tundra mat of grasses and moss.

Most birds found in the Alaska Range are limited to lower elevations. With increasing distance southward and corresponding increases in elevation, the diversity and abundance decrease dramatically. Passerine species (song and perching birds) might include wheatear, water pipit, ptarmigan, and raven, because these species are able to inhabit harsh environments. Some hawks also may be found nesting in the moderate altitude cliffs where prey is available on the valley floor (ADEC, 1999).

At lower elevations, shrews, voles, and lemmings may be present. However, at higher elevations, small to medium-size mammals may be limited to the Alaska vole, marmot, pika, and hares, all of which may inhabit rocky substrates. Caribou and moose are unlikely in all but the lowest elevations of the Alaska Range. Dall sheep may be present in the mountains but are not numerous. Larger carnivores such as wolves may be found in the mountains, but typically only in the vicinity of Dall sheep, moose, or caribou (ADEC, 1999). Bears are also present on the Property.

The ADF&G recognizes the Middle Fork of the Chulitna River and the lower reaches of the Bull and West Fork of the Chulitna Rivers (the upper reaches have not been surveyed because they extend into Denali National Park and Preserve) as anadromous (Johnson and Litchfield, 2016). Resident species, including northern pike, grayling, whitefish, sucker, inconnu (sheefish), burbot, and stickleback, are also likely (ADEC, 1999).



Figure 5-2: Local physiography – top: looking west from Copper King prospect; bottom: looking east from Copper King prospect



6. PROPERTY HISTORY

6.1. PROPERTY TENURE HISTORY

6.1.1 Historic Property Area Ownership (Pre-1992)

The Golden Zone property was first claimed in 1909 and has been subject to intermittent exploration and development ever since. The first claimants excavated several short adits and open cuts at the breccia pipe and several other prospects nearby. In the early 1930's, ASARCO began some new drift development, but dropped their interest shortly thereafter. Golden Zone Mine Inc. acquired the property in 1935, and during the next seven years completed extensive drifting and diamond drilling programs near the breccia pipe. Anaconda briefly optioned the property in 1937, but terminated their interest in 1938. Golden Zone Mine Inc. continued development, constructed a physical plant including a bulk flotation mill and produced ore and concentrates in 1941.

The Property area was essentially idle from 1942 until 1971 except for examinations by Falconbridge (Ventures, Ltd.) in 1945, the U.S. Bureau of Mines in 1951, and the U.S. Geological Survey from 1967 to 1969.

From 1971 through 1992 the property was explored by Inspiration Development Co., Rancher's Exploration Co., Homestake Mining Co., Enserch Corp., Golden Zone Inc., United Pacific Gold Co., and Placer Dome U.S. Due to the bankruptcy of United Pacific Gold Co. while they had the property under option in 1988, the property was burdened with several lawsuits and liens, which Golden Zone Inc., the underlying property owner, was unable to rectify.

6.1.2 Recently Terminated and Current Property Agreements

6.1.2.1 1992 Mines Trust Co. Property Acquisition

In 1992 Mines Trust Co. (Mines Trust) was organized to acquire the property subject to a first deed of trust and subject to its satisfying certain obligations of Golden Zone Inc.

6.1.2.2 1994 Addwest Minerals International Agreement - Terminated

Addwest Minerals International (Addwest) acquired an option on the property from Mines Trust in 1994. Addwest dropped its option on the property in 1999 during a period of very low metal prices. Following the termination of interest by Addwest Minerals, the property was returned to Mines Trust Co.

6.1.2.3 2002 Piper Capital Company Agreement

In early 2002, Piper Capital Company (Piper), organized as a Canadian Capital Pool Company, entered into discussions on acquisition of the Golden Zone prospect with Mines Trust. Piper sought the Golden Zone as its qualifying transaction. The agreement allowed Piper to earn a 51% interest in the Golden Zone property in exchange for 1.25 million shares of treasury stock. By January 2005, Piper had increased its stake in the Golden Zone property to 58.12%. Hidefield



Gold Company subsequently acquired 100% of Piper's interest in the Property (see Section 6.1.2.4 below).

6.1.2.4 2005 Hidefield Gold Company Underlying Agreement

In 2005, Hidefield Gold Company (Hidefield) formed an Option Agreement with Piper which required it to undertake \$300,000 in exploration expenditure by December 31, 2005 with further investments of \$600,000 in each of 2006 and 2007 to earn a 37.5% project interest. Hidefield and Piper each had the further option to acquire additional 12.5% interests from Mines Trust, the underlying owner and vendor of the property. Subsequently Hidefield acquired all of Piper's interest, mainly through a share transaction. This left Hidefield with a 60% interest and Mines Trust with a 40% interest in the property. Hidefield and Mines Trust subsequently entered an option agreement whereby Hidefield could acquire 100 % of the property by paying Mines Trust \$700,000 of which 50% could be in Hidefield common shares. In that event, Mines Trust's interest would be a 2.5% Net Smelter Royalty. Hidefield did not exercise the option.

6.1.2.5 2009 Fire River Gold Corporation Agreement - Terminated

In June 2009, Fire River Gold Corporation entered into an agreement with Hidefield and Mines Trust to have the option to acquire 100% interest in the Golden Zone property through a series of work expenditures, cash payments, and share transactions. Fire River Gold elected to terminate the option agreement at the end of March 2010 reportedly because of its focus on another property.

6.1.2.6 2010 Alix Resources Corporation Agreement

Alix Resources Corporation (Alix) entered into an initial option agreement with Hidefield and Mines Trust on September 29, 2010 through which it earned a 51% interest to the Golden Zone property by completing payments of \$560,000 in cash and shares, exploration expenditures totalling \$1,500,000 and maintaining the property in good standing in accordance with the agreement. All cash payments and share issuances under the agreement were allocated proportionately to Hidefield, 60% and to Mines Trust, 40%. With Alix earning its 51%, an automatic JV was formed whereby Alix had 51%, Hidefield 29.4% and Mines Trust 19.6% interest in the Property.

The agreement offered an "Additional Option" whereby Alix could elect to earn an additional 19% interest in the property (to a cumulative 70% interest) through additional expenditures and cash plus stock payments. Alix did not exercise this option.

6.1.2.7 January 7, 2014 Chulitna Mining Company LLC underlying agreement

Chulitna Mining Company LLC (Chulitna) acquired 100% of Alix's interests in the Golden Zone property and its underlying agreement through a January 7, 2014, agreement. Chulitna is an Alaskan Limited Liability Company; membership (ownership) is about 73.2% David Hedderly-Smith and 26.8% Charles C. ("Chuck") Hawley, currently the Hawley estate. David Hedderly-Smith is the managing member of the LLC with full control over the LLC's operations.

Under terms of the Chulitna-Alix agreement, Chulitna assumed all outstanding debts and obligations that Alix had that were directly related to their Golden Zone project. Chulitna was



also to pay Alix \$200,000 by December 2016 or upon completion of an option of the property to another entity.

6.1.2.8 September 3, 2014 Nortec-Chulitna agreement (terminated)

In 2014 Nortec Minerals Corporation (Nortec), a Vancouver-based Canadian Junior company, negotiated a memorandum of understanding (MOU) agreement with Chulitna for the option to acquire Chulitna's interest in the Golden Zone property. A second MOU was also negotiated among Nortec, Hidefield, Mines Trust and Chulitna, to accommodate Nortec's acquisition of 100% interest in the property. Nortec was unable to raise sufficient funds to close the deals and withdrew from both MOUs.

6.1.2.9 Property Ownership and Purchase Agreements as of the Effective Date of this Report

As per the definitive purchase agreement, effective November 21, 2016, between Avidian Chulitna and Mines Trust and the definitive purchase agreement, effective October 22, 2016, between Avidian and Hidefield, Avidian has purchased a 100% interest in the Golden Zone Property (specifically the 1,168 ha State of Alaska Uplands Mineral Lease ADL 580985 [to be expanded to 1,184 ha with the addition of cured mining claim Gold King 48 currently in progress] and 16 ha State of Alaska Millsite Lease ADL 547111) subject to certain scheduled payment terms and royalty payments as described in Sections 4.3.1 and 4.3.2.

The contiguous 64 State of Alaska MTRS mining claims within the Golden Zone Property are held 100% by Avidian subject to certain royalty payments to Chulitna and Mines Trust as per agreements described in Sections 4.3.1 and 4.3.2.

6.2. REGIONAL GOVERNMENT SURVEYS

Early Federal and State government geological surveys are reported by Clautice et al. (2001a):

"Reports by early workers in the district include Brooks and Prindle (1911), Moffit (1915), and Capps (1919, 1940). Ross (1933) recognized fault-controlled mineralization, volcanoclastic rocks, and several major faults. Wahrhaftig (1944) described the area's coal deposits and engineering geology along the nearby Alaska Railroad (Wahrhaftig and Black, 1958).

The geology and mineral deposits of the Upper Chulitna district were first described in detail in a series of papers by Hawley and others (1968, 1969), Hawley and Clark (1973, 1974), and Clark and others (1972). Mulligan and others (1967) reported on sampling of the Golden Zone mine, and mineral deposits of the region have been described and sampled by Kurtak and others (1992). Jones and others (1980) mapped (at a scale of 1:63,360) and defined the Chulitna terrane, which they considered to be one of several allochthonous terranes in the district. Rock ages in their report were established with extensive micro- and macro-fossil identifications. Csejtey and others (1992) published a compilation of the geology of the Healy Quadrangle, which showed the Chulitna district to comprise a series of allochthonous stacked blocks thrust from the north over a



basement of Cretaceous melange. Regional geology of southcentral Alaska is summarized in a paper by Nokleberg and others (1994)."

In an effort to better understand and map the geology, structure and many known mineral deposits of the Chulitna region, an airborne aeromagnetic and electromagnetic survey (magnetic and resistivity) was initiated by ADNRR's Division of Geological and Geophysical Surveys (DGGS) in 1996 (DGGS, 1997a, b, c, d; Burns, 1997; Pritchard, 1997).

The airborne geophysical survey was carried out under contract to WGM Inc., Mining and Geological Consultants, over the Chulitna and Petersville areas in the northeastern and southwestern ends of the Chulitna-Yentna mineral belt. Total coverage of the two survey blocks amounted to 5,616 line km over an area of 943 km². The geophysical data was acquired with a DIGHEM^V Electromagnetic (EM) system, a Scintrex cesium CS2 Magnetometer and a Herz VLF system installed on an AS350B-1 Squirrel helicopter. Flights were performed at a mean terrain clearance of 60 m along survey flight lines with a spacing of 400 metres.

The information from the airborne sensors was processed to produce magnetic and conductive property maps of the survey areas. The survey properties contain many anomalous features, some of which may be considered exploration targets. Most of the inferred bedrock conductors appear to warrant further investigation using appropriate surface exploration techniques (Pritchard, 1997).

DGGS initiated a two-year geologic mapping program in 1997 as follow-up to the airborne geophysical surveys. Because many of the bedrock units in the region have distinctive geophysical signatures, the airborne surveys proved to be extremely useful mapping tools to delineate both map units and structure, particularly in areas of extensive surficial cover. DGGS geologists spent total of six weeks in the field between 1997 and 1998 (Clautice et al., 2001a).

6.3. EXPLORATION HISTORY

The Golden Zone mine, Golden Zone Property area and Chulitna Mining District have a long exploration and development history. Four periods are recognized:

- 1) 1907 - 1915 — Discovery and early prospecting;
- 2) 1929 - 1942 — Exploration and development related to W.E. Dunkle;
- 3) 1971 - 1983 — Start of modern exploration; and
- 4) 1985 - present — Exploration dominated by junior exploration companies.

The following description of mineral exploration history within the Property area is adapted and updated from Hedderly-Smith (2014). Table 6-1 summarizes the known diamond drill holes, reverse circulation holes, trenches and underground chip-channel sample lines.



Table 6-1: Known diamond drill holes (DDH), reverse circulation holes (RVC), trenches and underground chip-channel sample lines (UGC)

Year	Company	DDH			RVC			Trench			UGC		
		No.	m	Ft.	No.	m	Ft.	No.	m	Ft.	No.	m	Ft.
1936-40	Dunkle and Pardners	9	479.5	1,573									
1972	Inspiration	3	1,113.4	3,653									
1974	Ranchers Exploration	6	714.8	2,345									
1976	Homestake	2	203.0	666									
1980-83	Enserch	26	3,952.0	12,966							61	678.2	2,225
1985-87	Golden Zone Dev.	31	3,732.3	12,245				13	333.5	1,094			
1988	United Pacific Gold	22	1894.6	6,216	18	1,725.8	5,662	4	68.9	226	60	410.6	1,347
1994-96	Addwest	20	3,119.9	10,236	33	3,354.3	11,005	48	3,696.9	12,129			
2005	Piper	18	2,958.0	9,705	1	58.0	190						
2005-06	Hidefield	9	1,226.8	4,025	7	360.0	1,181	45	1,516.1	4,974			
2011	Alix	13	1,923.0	6,310									
	TOTAL	159	21,317.3	69,940	59	5,498.1	18,038	110	5,615.4	18,423	121	1,088.8	3,572

6.3.1 1907—1915 — Discovery and Early Prospecting

Placer gold was discovered by prospector John Coffey circa 1907 in Bryn Mawr Creek, a tributary of the West Fork of the Chulitna River. Somewhat later Coffey and two brothers, Frank and Alonzo Wells, discovered lode gold in what they called Rusty Hill, now known to overlie the Golden Zone Breccia Pipe. The men recorded their discovery circa 1909 and the Broad Pass Gold Rush ensued. By 1915 there was a continuous block of claims 8 miles long extending from south of the Golden Zone property across the West Fork to the Dunkle Hills area in the north.

The rush ended about 1915 when the Alaska Syndicate (Guggenheims, J.P. Morgan, Kuhn Loeb, and others) sent mining engineer W.E. Dunkle to examine the area. Dunkle drove a 67 m adit into the breccia pipe about 30 m (100 ft) below its apex (the 100-ft level). Gold was detected throughout, but not in grades sufficient to warrant development in a remote region and the rush ended.

6.3.2 1929—1942 — Exploration and Development related to W.E. Dunkle

Further work by the Wells brothers triggered the second stage. In 1931, the brothers extended the 100-level adit and intersected mineralization that averaged about 13.7 g/t Au. On the strength of these results the property was optioned by American Smelting and Refining Company (ASARCO) in 1932 who drove another adit about 61 m (200 ft) below surface outcrops of mineralization (200-ft level). This adit extended 105 m into the breccia pipe and despite intersecting about 15.25 m of 7.89 g/t Au ASARCO returned the prospect to the Wells brothers. At about the same time Dunkle resampled the Wells brothers' extension and calculated that the ASARCO drive had been about 38 m short of intersecting the down-plunge extension of the



Wells brothers' discovery on the 100-level. As a result of this determination, Dunkle and Pardners Mines of New York optioned the property in 1935.

Dunkle and Pardners reopened, enlarged, and extended the ASARCO 200-level adit. This work was followed up with drilling from underground stations and additional drifting. These efforts prompted Anaconda Copper Company to option the property in mid-1937. Anaconda's efforts were hampered by difficult drilling conditions and a dispute arose over assay results from drill sludge in zones where core recoveries were poor. Anaconda returned the property in late winter of 1938, and in May 1938 Dunkle and business partners from Anchorage organized Golden Zone Mine Inc. and began to develop the property for production including construction of a physical plant with a bulk flotation mill. A crosscut adit was begun on the 500 foot level circa 1939 but was abandoned approximately 300 metres from the breccia pipe (Hawley and Clark, 1974).

The mine went into production in 1941 and in 1941 and early 1942, Golden Zone shipped 788 tonnes of flotation concentrate to the ASARCO smelter at Tacoma, Washington. The concentrate contained 1,581 oz Au, 8,617 oz Ag, 42,000 lbs Cu, and 3,000 lbs Pb. Hawley and Clark (1974) report that the concentrate was produced from 1,569 tonnes (1,730 tons) of mineralization, indicating an average grade of 31.2 g/t (0.91 oz/ton) gold, about 171.43 g/t (5 oz/ton) silver, and about 1.2 percent copper while also noting that the mineralization was stoped from the high-grade part of the deposit. Another shipped concentrate reportedly totalled 568 tonnes and contained average assays of 66.51 g/t Au, 374.06 g/t Ag, 2.7% Cu, and 28.8% As (Hedderly-Smith, 2014). ASARCO penalized As concentrations of between 1% and 17%; by maintaining an arsenopyrite-rich concentrate Golden Zone was not paid for As, but was not penalized either.

The mill as constructed, without second stage crushing and a cyanide circuit, reportedly only recovered about 55% of the gold in the mill feed.

In October 1942 the War Production Board of the U.S. Government issued Limitation Order L208 which banned all mining efforts that were not essential to the country's war efforts. Activities at Golden Zone ceased until 1944 when Alexander Smith examined the property for St. Eugene Mining Co., a subsidiary of Ventures, Ltd. An option was arranged whereby Ventures would extend workings and complete the mill in return for control of the mine. Although the option remained in place until 1947, little was accomplished because of rapidly rising costs due to post-war inflation in Alaska and the fixed price of gold at US\$35/oz.

The property was maintained by Dunkle until his death in 1957 and by his widow until her death in 1962. The property was essentially idle from 1942 until 1971 except for examinations by Falconbridge (Ventures, Ltd.) in 1945, the U.S. Bureau of Mines in 1951, and the U.S. Geological Survey from 1967 to 1969.

6.3.3 1971—1983 — Start of modern exploration

The third stage in Golden Zone's development followed the U.S. 1968 decision to allow a class of private gold to float in the open market. This led to a gradual increase in the price of the metal and indirectly to work on the property by Inspiration Development Co., Ranchers Exploration Co., and Homestake Mining Company in the 1970s



In 1972 Inspiration Development drilled 1,113.4 m in three core holes³ including the deepest hole completed in the Golden Zone property (IDC-01 with a hole length of 547.1 m). Gold-silver mineralization was encountered, however the company's primary interest was in copper and additional work was not conducted. Ranchers Exploration & Development drilled a fan of six core holes (totalling 714.8 m) into the breccia pipe in 1974 but did not conduct further exploration. In 1976 Homestake Mining completed two core holes (totalling 203 m) and conducted soil sampling on the ridge south of the main breccia pipe area (forerunner of the GAS prospect). Homestake withdrew from Alaska and dropped its option after one year of work.

Between 1980 and 1983 Enserch completed 26 core holes (totalling 3,952 m) almost exclusively in the Breccia Pipe area (24 holes) and drew up cross-sections and level plans for the project. A small controlled source audiomagnetotellurics (CSAMT) survey was conducted in 1981 over the northeastern half of the Breccia Pipe and postulated mineralized shear zones NE of the pipe. Additional surface and underground mapping and sampling including 61 underground channel sample lines totalling 678 m were completed before the company's exploration efforts in Alaska were terminated in 1983.

6.3.4 1985—present — Junior mining company exploration

After the Enserch program, work was undertaken by or on behalf of junior mining companies. Several new discoveries were made outside the breccia pipe area during these exploration programs and minor amounts of exploration were conducted on them.

Golden Zone Inc. completed 31 core holes (3,732.3 m) between 1985 and 1987. The company conducted the first grid-drilling of the Breccia Pipe and defined it to approximately 150 m below surface. Golden Zone Inc. also initiated drilling of the BLT structure which constituted the first step-out holes away from the breccia pipe. Golden Zone also completed 13 trenches totalling 333 m in 1986.

United Pacific Gold (Union Pacific) optioned the property in 1988 and eventually completed 22 core holes (1,894.6 m)⁴, 18 reverse circulation (RVC) holes (1,725.8 m), four (4) trenches totalling 69 m, 60 underground channel sample lines totalling 411 m and drove 488 m of new adit at the 325-ft level. Union Pacific's exploration at Golden Zone was terminated in 1988 when its parent company failed.

Placer Dome conducted 8,473 m of very-low frequency electromagnetic (VLF-EM) and ground magnetic surveys over the Breccia Pipe and GAS prospects in 1989-1990. Placer Dome did extensive rock sampling over many of the new discoveries away from the breccia pipe. The company also completed 2,195 m of pole-dipole induced polarization (IP) surveys over the GAS and breccia pipe before dropping the property in 1990.

Due to the bankruptcy of United Pacific while it held the Property under option in 1988, the Property was burdened with several lawsuits and liens, which Golden Zone Inc., the underlying

³ Three Inspiration holes were drilled, however only two holes totaling 998 m (IDC-01 and IDC-03) are in digital files provided to Howe.

⁴ The 2011 Norwest and previous technical reports list 22 United Pacific holes; only 21 totaling 1,809 m are in digital files provided to Howe.



property owner, was unable to rectify. In 1992 Mines Trust Co. was organized by creditors and other interested parties under the leadership of C.C. Hawley to acquire the property subject to a first deed of trust and subject to its satisfying certain obligations of Golden Zone Inc.

Addwest Minerals International acquired an option on the property from Mines Trust in 1994. Addwest's primary objective in 1994 was to define other precious metal targets, exclusive of the breccia pipe, on the property so as to determine the property's true exploration potential. A comprehensive program of geologic mapping, soil and rock sampling, and surface trenching (45 trenches totalling 3,591.4 m) was completed during this phase of exploration. Addwest was successful in defining numerous moderate to high-priority targets with the potential for hosting gold mineralization. In 1994 and 1996 Addwest completed a total of 20 core holes (3,119.9 m) and 33 reverse circulation holes (3,354.3 m). The drill programs extended mineralization at the Breccia Pipe down dip to the east and tested several other prospect areas. In 1996 Addwest also rehabilitated the 325-level adit and completed three additional trenches (105.5 m). The company completed helicopter aeromagnetic and EM geophysical surveys on 100 m spaced flightlines, along with some ground-based IP work. Portions of Addwest's efforts were at the Copper King and Bunkhouse prospects. The company conducted preliminary metallurgical sampling and testwork and in 1997 retained Western Services Engineering, Inc. to complete a mineral resource estimate (Western Services Engineering, Inc., 1997). Addwest summarized all work in a comprehensive report (Founie and Keller, 1997). Addwest dropped its option on the property in 1999 during a period of very low metal prices.

Following the termination of interest by Addwest Minerals, the property was returned to Mines Trust Co. In 2001, Mines Trust conducted controlled source audio-frequency magnetotellurics (CSAMT) and gradient array induced polarization (GRIP) reconnaissance geophysical surveys at the Banner, Bunkhouse, BLT (Blind, Little, Tunnel veins), GAS (Geochemical Anomaly South), Copper King, and Long Creek prospects. In order to compare geophysical signatures with known mineralization, a CSAMT line was run over the breccia pipe and a GRIP line was run immediately north of the pipe.

In early 2002, Piper Capital Company earned an interest in the Golden Zone property in exchange for treasury stock. In 2005, Piper completed 18 diamond drill holes totalling 2,958 m, one RVC hole totalling 58 m and commissioned an NI 43-101 report on the property containing a mineral resource estimate by Norwest Corporation (Perry et al., 2005).

In 2005, Hidefield Gold formed an option agreement with Piper and subsequently acquired all of Piper's interest. Hidefield input almost all of the historic sampling data from Golden Zone into GIS and drill databases. In 2005 and 2006 Hidefield drilled 1,227.0 m of core in 9 holes and 360 m of RVC drilling in 7 holes, as well as 1,516.1 m of trench sampling in 45 trenches⁵. Hidefield also conducted approximately 5,791.3 m of dipole-dipole IP, and collected and analysed approximately 250 rock samples, 504 soil samples and 123 stream sediment samples.

⁵ Of the 45 trenches, only data from 40 trenches totaling 1,350 m were available to Howe; trenches O5-4C-7-10, O5-4C-7-11, O5 MF-1W, O5-MF-2, O5-MF-3 were not included in digital files provided to Howe.



In May of 2006 Hidefield commissioned an updated mineral resource estimate on the property by Norwest (Sim, 2006). After their 2006 work at Golden Zone, Hidefield was acquired by a company primarily interested in a South American asset of Hidefield, and they ceased their work at Golden Zone.

In September 2010 Alix Resources optioned the Golden Zone property from Hidefield and Mines Trust and in January of 2011 commissioned Norwest Corporation to complete an updated mineral resource estimation and NI 43-101 report (Kerr and Loveday, 2011). Alix then drilled 13 HQ diamond drill holes totalling 1,923 meters⁶ at the Riverside, Breccia Pipe, GAS, Long Creek and BLT prospects during the 2011 field season (Figure 4-2). Gold mineralization was found at all of these prospects which stretch in a belt of mineralization some 6 km across the property. The company also conducted soil surveys at the GAS and Long Creek prospects and completed a first-pass stream sediment sampling program of the property which Hidefield had begun in 2006. The stream sediment program returned numerous arsenic anomalies ranging to >10,000 ppm As with two distinct clusters of anomalies; one stretches from the GAS/Breccia Pipe area northeast to the Riverside prospect area and the other is in the South Long Creek prospect area. Associated anomalous metals are Au, Ag, Bi, Cu, Pb and Sb. The camp and roads on the property were refurbished and a 365 m airstrip below the camp was completed.

The MTRS mining claims staked by previous operators around the upland mining lease were abandoned by December 2015.

6.4. SUMMARY OF HISTORIC EXPLORATION RESULTS

Approximately 26,815 m of drilling, both core and reverse circulation, has been conducted on the Golden Zone property, predominantly in the immediate area of the Golden Zone breccia pipe. Most of the 21,317.3 m of DDH core along with samples of most of the 5,498.1 m of RVC drill chips are stored on site in two dedicated storage buildings. In addition to drilling, considerable geologic mapping, ground geophysics, and geochemistry has been completed on the Property, both at the Breccia Pipe and at several other prospects on the Property. Aerial photography was completed in 1988, and a topographic map was created from this work. Addwest completed a heli-borne EM and magnetic survey in 1996. Summary results are presented in Figures 6-1 to 6-5.

⁶ Alix reported 13 DDH completed for 1,923 m which included a failed hole abandoned at 20 m, only 12 DDH totalling 1,903 m are in digital files provided to Howe.

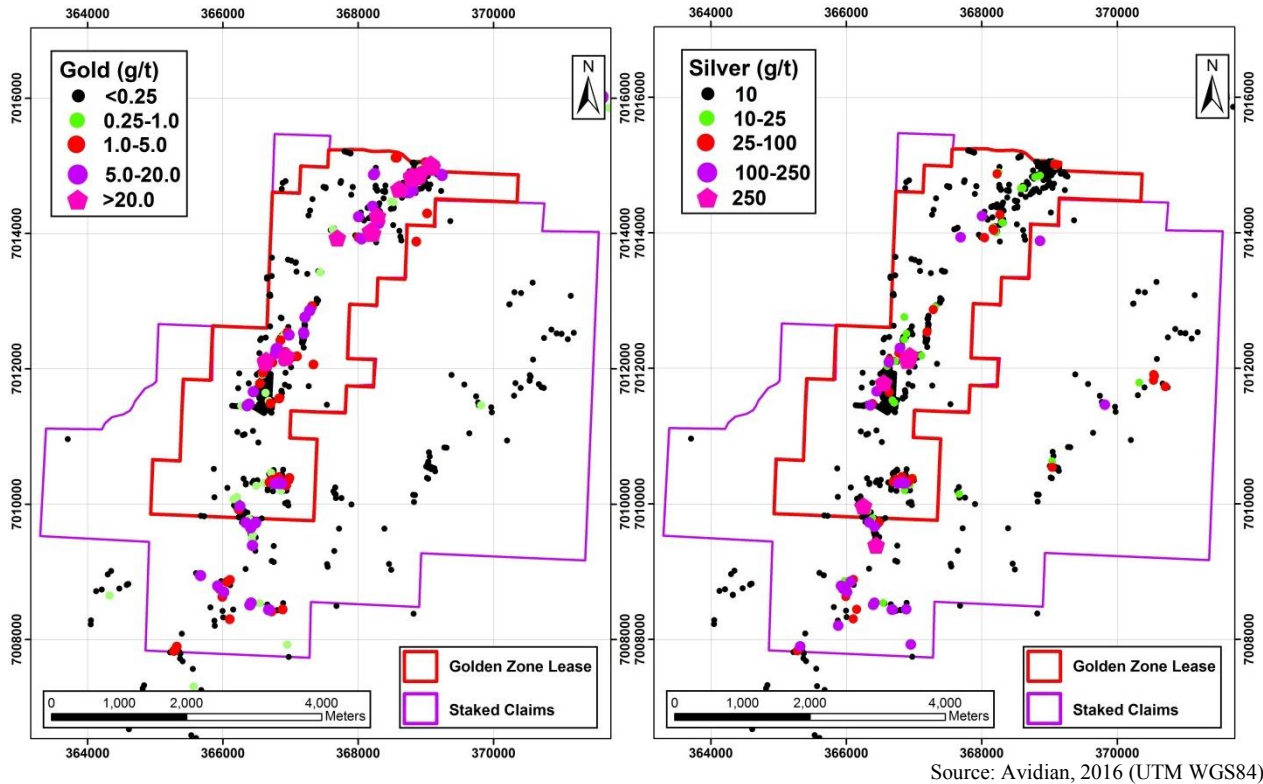


Figure 6-1: Compilation of historic surface rock grab samples - gold and silver analyses

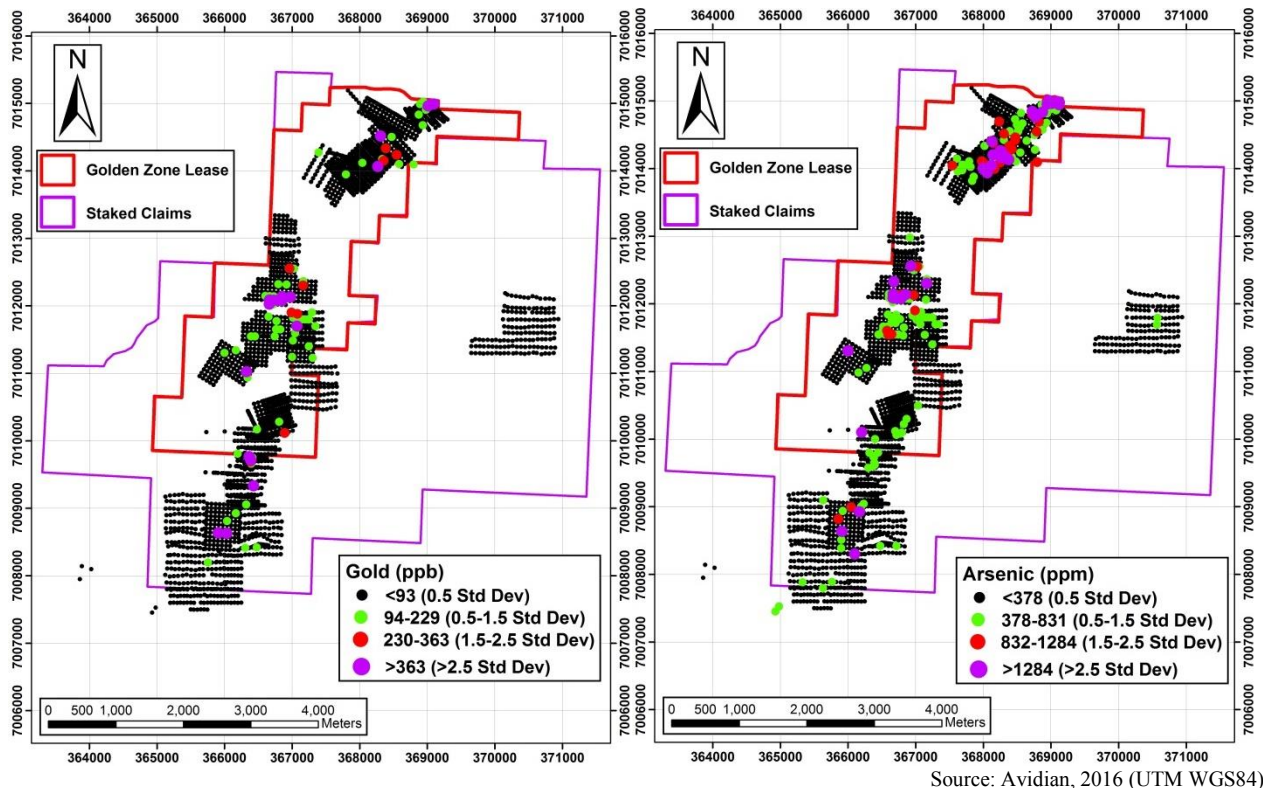


Figure 6-2: Compilation of historic soil samples - gold and arsenic analyses

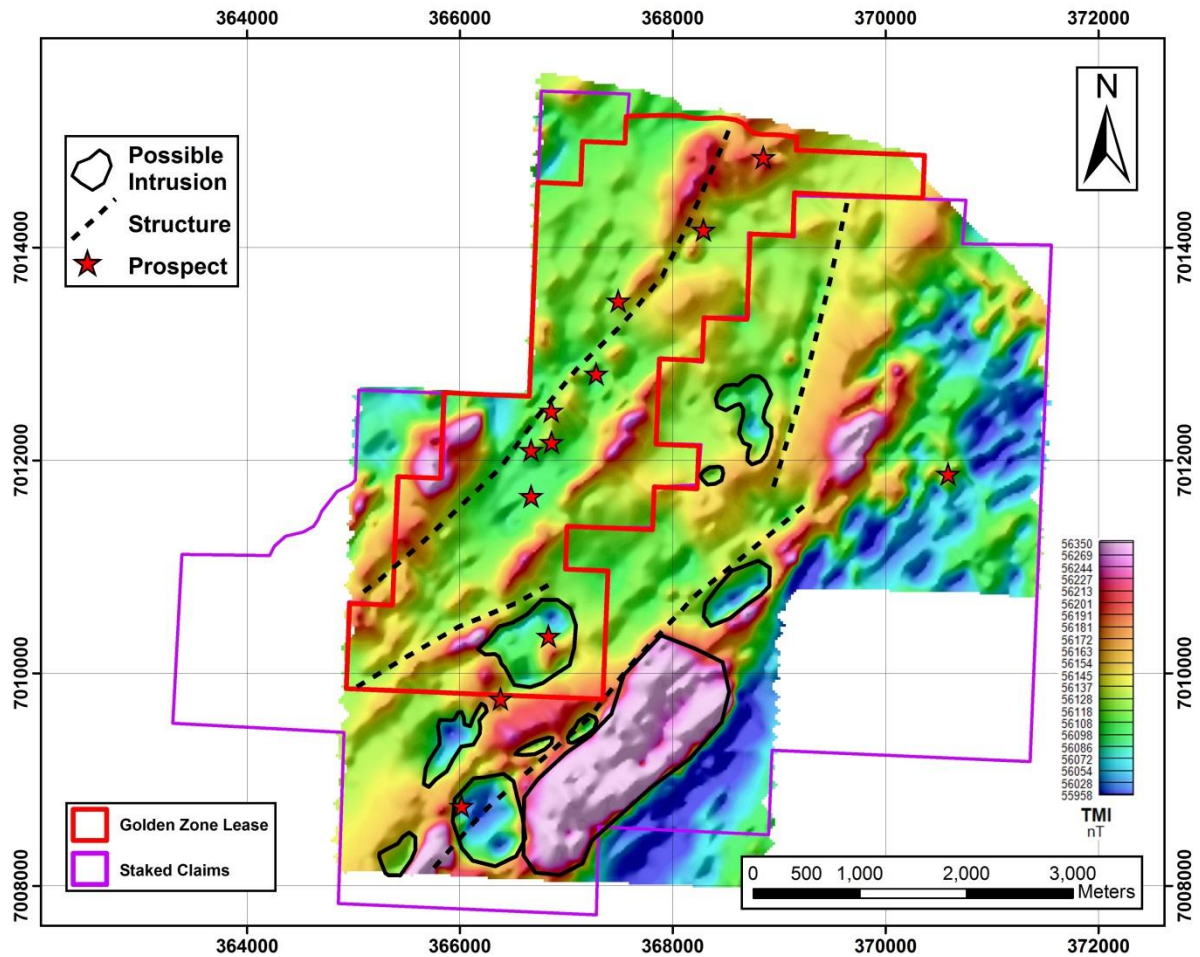


Figure 6-3: 1996 Addwest Heli-borne Shaded Total Field Magnetic Image

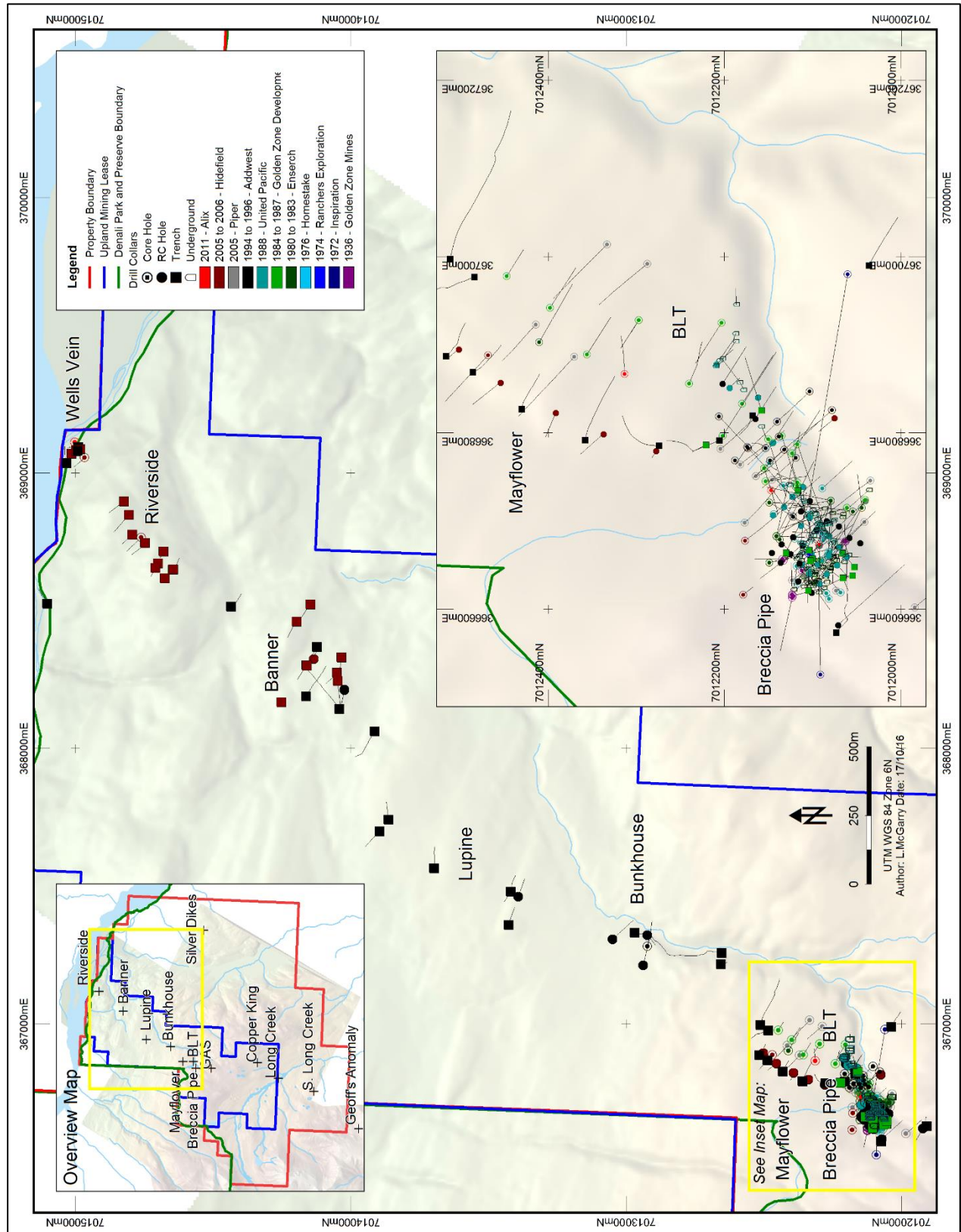


Figure 6-4: Drill Hole Collar Locations, Breccia Pipe to Wells Vein

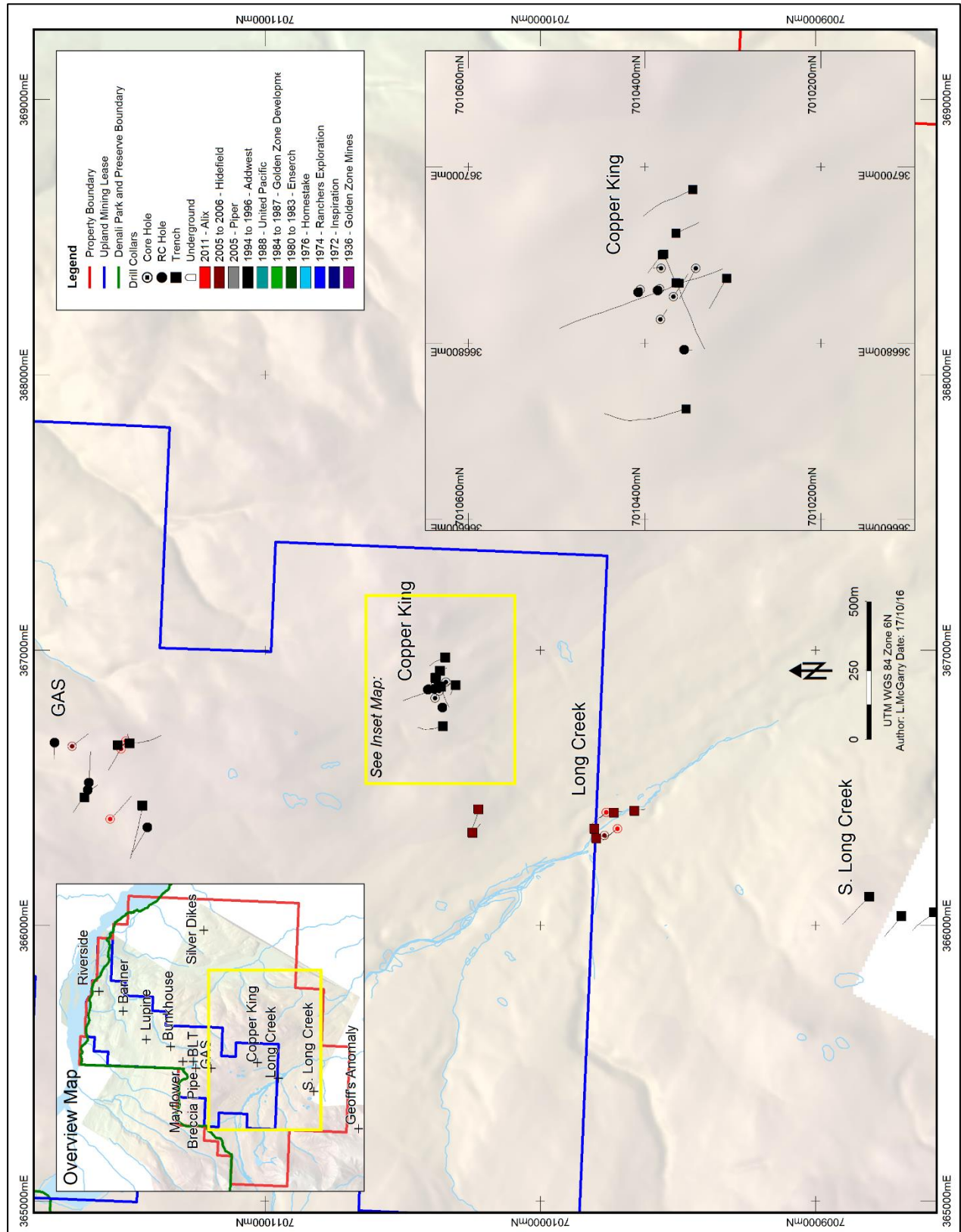


Figure 6-5: Drill Hole Collar Locations, South Long Creek to GAS



6.5. HISTORICAL METALLURGICAL STUDIES

This section has been extracted from Kerr and Loveday (2011) with minor edits.

In April of 1994, Addwest Minerals collected approximately 159 kg of existing mineralized core from the Golden Zone property. This core was shipped to Denver for initial metallurgical testing as part of Addwest's 4-month due diligence period to evaluate the property. Mineral Resource Development, Inc. (MRDI) and IC Technologies (ICT), both of Wheat Ridge, Colorado, proposed a program to evaluate both gravity concentration and flotation on the Golden Zone ores. The first objective of the program was to determine whether the mineralized samples would concentrate effectively at coarse sizes. The second objective was to determine to what degree the gold concentrates were cyanide soluble. This "bulk" sample was divided between "Run-of-Mine" mineralization (rock type 40) and "copper-rich" mineralization (rock type 41).

Preliminary gravity tests were done on the two samples by grinding to nominal 48, 65, and 100-mesh and tabling the ground product. The "Run-of-Mine" mineralization concentrated well at all grinds, with 66% to 79% of the gold reporting to a super concentrate that was 10% to 18% of the weight. The "Copper-Rich" mineralization concentrated much better at the 48-mesh size (79%), than at 100-mesh (47%). Both the "Run-of-Mine" and "Copper-Rich" samples showed 94-98% gold recovery in concentrates containing 9% to 12% of the weight by flotation at grinds as coarse as 65-mesh.

In order to generate samples for cyanidation, larger-scale bulk flotation tests were done. A portion of the flotation concentrate was split approximately into one-third portions (concentrate, middling, and tail) using a table. The "Run-of-Mine" fractions showed a small variation in gold content, whereas the "Copper-Rich" fractions were very uniform in gold content. Cyanidation of all six fractions showed the gold to average 80% soluble, with the "Run-of-Mine" tails being higher at 90% and the "Copper-Rich" tails lower at 59%. Overall recovery from mineralization to cyanide soluble gold was 81% for the "Run-of-Mine" and 68% for the "Copper-Rich".

A composite of two samples was used to evaluate differential flotation of a bulk concentrate. In one case, a bulk flotation concentrate was cyanidated with only 66% of the gold soluble for an overall 60% recovery. In the other case, a copper concentrate was recovered first using an intense lime treatment (ILT). Almost 41% of the gold reported to this near market-grade concentrate. An arsenopyrite and a pyrite concentrate were recovered from the ILT tails. The small amount of gold (10.9%) in the arsenopyrite was 83% cyanide soluble and the larger amount (39.6%) was 69% cyanide soluble. This gave the second case a 77% recovery into soluble gold plus the copper concentrate. Additional cyanidation tests were conducted on differential flotation concentrates (except the copper-rich concentrate) which brought the overall recoveries to 90% for gold and 75% for silver.

In November of 1994, a 2,268 kg bulk sample was composited, using core and reverse circulation drill cuttings from the 1994 and previous drilling campaigns. This sample provided much more material to test with a variety of methods as a follow up of the results from the initial 1994



metallurgical program. The larger bulk sample was comprised of rock types 31 (heavy sulphide breccia), 40 (medium sulphide breccia, "Run-of-Mine"), and 41 (Copper-Rich medium sulphide breccia). Initially, sulphide bulk concentrates were generated for each rock type. This flotation program demonstrated greater than 94% concentrate recovery of gold and silver, and 88% of copper from all three composites at each grind tested (80% passing 48, 65, and 100-mesh) in concentrates containing 7% to 14% of the initial feed weight. The concentrates were ground finer (at several size fractions) and a series of cyanidation tests were then performed on each composite. Cyanide-soluble recoveries ranged from 82% to 90%, depending on rock type, and total gold recoveries ranged from 82-86%; total silver recoveries, however, ranged from 27% to 42%. Cyanide consumption was relatively high at 4.96 to 9.84 kg/t, but no optimization tests were conducted. Bond Work Indices ranged from 16 to 18.

The three rock type composites were then combined into one sample. Additional crushing, grinding, rougher flotation, selective flotation, and cleaner flotation tests were performed. The combined composite sample responds well to a rougher, selective, and cleaner flotation method.

The rougher flotation appears to recover 94% of the gold and 86% of the copper in a concentrate containing 10% of the original weight - grading 44.6 g/t Au, 0.8% copper, and 17.5% arsenic. After regrinding the rougher concentrate to approximately 100-mesh, selective flotation is employed and produces a copper-rich concentrate and arsenic-rich concentrate. The copper-rich concentrate is further cleaned and a new concentrate containing only 0.54% of the original composite weight is formed, grading approximately 617 g/t (18 oz/t) gold, 13% copper, and only 2.9% arsenic. The arsenic-rich concentrate contains 4.8% of the original composite weight and grades 17.83 g/t (0.520 oz/t) gold, 0.09% copper, but 27% arsenic.

Metallurgical testing continued on the Golden Zone breccia pipe mineralization composites in 1996 and 1997. The mineralization tested was from three composites: OT-31 (high sulphide rock type 30), OT-40 (medium sulphide rock type 40) and OT-41 (medium sulphide-Cu-rich, rock type 41). MRDI performed these tests. Results from February 1997 are shown in Table 6-2 and Table 6-3.

Table 6-2: Head Analyses of 3 Golden Zone Mineralization Composites

	OT-31 Heavy Sulphide Cu-Rich	OT-40 Medium Sulphide Rom	OT-41 Medium Sulphide Cu-Rich
Gold (oz/t)	0.044	0.137	0.036
Gold (g/t)	1.509	4.697	1.234
Silver (oz/t)	0.51	0.35	0.024
Silver (g/t)	17.48	11.99	0.822
Copper (%)	0.21	0.078	0.35
Arsenic (%)	5.4	1.95	0.58
Iron (%)	8.3	5.3	4.3
Sulfur (%)	5.96	2.93	2.86



Table 6-3: Cyanidation Tests - Golden Zone Mineralization Composites (RDI, 2/97)

Composite	Grind P80	NaCN Consumed		Ca(OH) ₂ Added		Solubilized Gold %	Solubilized Silver %
		(lb/st)	kg/t	(lb/st)	kg/t		
OT-31	120 mesh	10.2	5.10	7	3.5	85.5	34.9
	210 mesh	10.4	5.20	7	3.5	82.4	33.3
	635 mesh	14.1	7.05	7	3.5	86.2	42.5
OT-40	200 mesh	11.0	5.50	7	3.5	82.3	30.7
	270 mesh	10.5	5.25	7	3.5	86.6	31.0
	500 mesh	12.6	6.30	7	3.5	90.5	41.5
OT-41	200 mesh	15.8	7.90	7	3.5	83.2	21.2
	300 mesh	19.3	9.65	7	3.5	86.5	22.5
	500 mesh	20.7	10.35	7	3.5	85.6	27.7

lb/st = pound/short ton; kg/t = kilogram/tonne

The calculated combined recoveries of the 65-mesh flotation and the preliminary cyanidation data are presented in Table 6-4:

Table 6-4: Calculated Metal Recoveries after Processing

		Flotation (% Recovery)	Cyanidation (% Solubilized)	Total (% Recovery)
OT-31	Gold	97.5	86.2	84.1
	Silver	99.0	42.5	42.1
OT-40	Gold	94.3	90.5	85.3
	Silver	98.4	41.5	40.8
OT-41	Gold	95.8	85.6	82.0
	Silver	98.6	27.7	27.3

In summary, the historic testwork on the Golden Zone breccia mineralization suggests that total recoveries of 82% to greater than 85% of the gold and 27 % to greater than 42% of the silver may be expected using a mill - flotation - cyanidation process at a grind size of -100 mesh. Approximately 80% of the total copper may also be recoverable.

6.6. HISTORIC MINERAL RESOURCE ESTIMATIONS

Previous resource and reserve estimates discussed below are considered to be ‘historical’ in nature. The Report authors (qualified persons) have not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves in accordance with NI 43-101. Howe and Avidian are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational and comparison purposes only and should not be relied upon.

Howe has completed a mineral resource estimate update for the Golden Zone Property in accordance with Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Definition



Standards for Mineral Resources and Mineral Reserves (May 10, 2014) as per NI 43-101 requirements. The Howe mineral resource estimate update is reported in Section 14 of this Report.

6.6.1 Addwest 1997

In 1997, Addwest commissioned Western Services Engineering (WSE) to complete a mineral resource estimate for the Golden Zone breccia pipe deposit and limited portions of the BLT shear zone (Western Services Engineering, 1997). The study utilized 17,350.6 m (45,768 ft) of diamond drilling data, 3,506.5 m (11,504 ft) of reverse circulation drilling, and 1,455.4 m (4,775 ft) of channel samples from both surface trenches and underground exploration drifts. The resource estimate was completed using imperial units and a local Mine Grid with Grid North orientated at 45.5 degrees True North. The resource is presented herein as reported in 1997 to maintain its authenticity; i.e. it has not been converted to SI (metric) units which would degrade values due to rounding of converted imperial values already subject to rounding in the 1997 resource table.

Addwest geologists created a digital geologic model of the mineralized zones at the Golden Zone breccia pipe deposit to be used in the resource estimation. Initial cross sections on 25 to 50 ft centres were constructed showing downhole drill data (assays and geologic codes). The geology was interpreted from the drill data and subsequently digitized using GEMCOM software. Twenty foot level plans were then interpreted and digitized using interpolated cross sections and drill hole data. The level plan geology was utilized as the geologic basis in the block model used for reserve and resource.

A block model was then created, within the digitized polygon volume from the surface (1,112 m or 3,650 ft elevation) to the 762 m (2,500 ft) elevation (deepest drilling). The estimation incorporated a 3D block model generated in Gemcom software, utilizing 10 ft x 10 ft x 20 ft (3 m x 3 m x 6 m) blocks. Each block within the model was tagged as one of seven mineralization types, or as waste. The seven mineralization types into which grades were estimated in the block model are as follows:

1. Heavy Sulphide Breccia, rock type 30;
2. Medium Sulphide Breccia, rock type 40;
3. Cu-rich Medium Sulphide Breccia, rock type 41;
4. Siliceous Breccia, rock type 50;
5. BLT Shear/Dike Complex (low-sulphide), rock type 60;
6. BLT Shear/Dike Complex (mineralized zones), rock type 67; and
7. Peripheral Veinlet Zone, rock type 97.

Drill holes and samples were composited by bench (20 ft vertical interval). Low-angle holes and channel sample lines were composited by 20 ft lengths along the hole or traverse. No composites were used in the estimation process if the total length was less than 10 ft (1/2 the bench height). A statistical analysis was conducted on both raw assay data and composited assay data, both by rock type and for all data combined. Histograms and log probability plots were constructed for all rock types. The log probability plots showed the gold and silver to be consistently log-normally distributed within the rock types.



For grade modeling purposes, these statistics showed that certain rock types could be combined with one another. This was done to create larger composite data sets, allowing for more accurate variogram modeling. Rock types 30 and 40 (medium and high sulphide breccia) were combined, as were rock types 60 and 67 (BLT shear zone rocks). So, for example, although rock types 30 and 40 were modelled as distinct geologic units, blocks within rock type 30 could utilize composites from both 30 and 40, but not from other rock types. Also, upper cut-off (capping) values for each rock type or rock type group were established as follows:

- Rock Types 30/40: 0.800 oz/t Au
- Rock Type 50: 0.200 oz/t Au
- Rock Type 60/67: 0.100 oz/t Au
- Rock Type 97: 0.300 oz/t Au

Semi-variograms were modelled for gold, silver, and copper utilizing composites. For gold estimation, the variograms differed by rock type. Silver and copper were estimated using one variogram for all rock types.

The "ordinary kriging" method was used in all cases to estimate the grade for each block. The resource protocol used to classify both resources and reserves was at that time in accordance with the Canadian Institute of Mining and Metallurgy (CIMM); however it predated and therefore was not compliant with NI 43-101 conventions.

The resource estimate results were presented in a table at nine cut-off grades ranging from 0.001 oz/t Au to 0.100 oz/t Au. A base case cut-off for the resource was not presented however "potentially mineable in-pit Resources" were then reported at a cut-off of 0.030 oz/t Au.

The 1997 mineral resource estimates at a 0.030 oz/t cut-off are presented below:

Measured and Indicated Resources at 0.030 oz/t Au cut-off

Tons	Gold (oz/t)	Gold (oz)	Silver (oz/t)	Silver (oz)	Copper (%)	Copper (tons)
2,113,990	0.096	202,943	0.49	1,027,399	0.14	2,875

WSE also estimated a "Global Geologic Resource" presented below which combined Measured, Indicated and Inferred resources. Howe notes that the addition of Inferred to Measured and Indicated resources is not permitted under NI 43-101 rules and policies.

Global Geologic Resources (Measured+ Indicated+ Inferred) at 0.030 oz/t Au cut-off

Tons	Gold (oz/t)	Gold (oz)	Silver (oz/t)	Silver (oz)	Copper (%)	Copper (tons)
6,765,910	0.074	500,677	0.39	2,625,173	0.10	6,766

Upon completion of the grade estimation into the various block models, economic block models were created based on gold and silver grades within the blocks and a set of economic and cost



parameters estimated for mining and processing mineralization at Golden Zone. These economic parameters were provided to WSE by Addwest management.

The modeling of the deposit was entirely based on the open-pit mining scenario. WSE did note that there was excellent potential for underground mining of deeper portions of the breccia pipe, possibly by the sub-level caving or vertical-crater retreat methods and future work should focus on this possibility. Whittle 3D (Lerchs-Grossman) pits were generated based on the economic models derived from the two resource estimate models, measured + indicated, and global geologic resource (measured + indicated + inferred). The Whittle program calculates and optimizes a pit design based on the dollar values of the blocks in the economic model. Potentially mineable in-pit resources were estimated by totalling the in-situ gold and silver resources occurring within the limits of the 3D pits generated using the given resource.

Potentially Mineable in-pit Resources at 0.030 oz/t Au cut-off

	Tons	Gold (oz/t)	Gold (oz)	Silver (oz/t)	Silver (oz)	Copper Grade (%)	Copper (tons)
Proven and Probable	1,680,300	0.101	169,710	0.50	840,150	0.13	2,200
Inferred	997,740	0.052	51,882	0.23	229,480	0.07	700

The 1997 WSE mineral resource estimates are considered to be ‘historical’ in nature. The Report authors (qualified persons) have not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves in accordance with NI 43-101. Howe and Avidian are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational and comparison purposes only and should not be relied upon.

6.6.2 Piper 2005

In 2005, Norwest was commissioned by Piper to complete a mineral resource estimate and NI 43-101 Technical Report on the Golden Zone property (Perry et al., 2005). Norwest completed a mineral resource estimate utilizing a 3D block model based on a set of 15.2 m (50 ft) spaced geological cross sections provided by Piper and incorporating data from surface mapping, drill holes, trenches, and underground mapping (279 drill holes, trenches and underground sample strings). The resource estimation was conducted using imperial units and a local Mine Grid with Grid North orientated at 45.5 degrees True North. The resource is presented herein as reported in 2005 to maintain its authenticity; i.e. it has not been converted to SI (metric) units which would degrade values due to rounding of converted imperial values already subject to rounding in the 2005 resource table.

Geological data as well as drill hole, trench and underground sampling intervals and grades were exported from Piper’s GEMCOM database, and imported into Norwest’s MineSight® software. The model utilized 10 ft x 10 ft x 20 ft (3 m x 3 m x 6 m) blocks, with lithologies assigned to each block based on the rock type that had the largest volume within the block, as determined from sectional geology.



Norwest capped extreme assay values based on histograms and cumulative probability plots of composite sample gold and silver grades. Inflection points in the tails of the cumulative probability plots were chosen as the cap grades. The cap grades were 0.6 oz/t Au and 4.0 oz/t Ag.

Assays from the databases were composited over fixed lengths of 10 ft, while honouring lithological boundaries. Geostatistical analyses of this composite data were then completed to determine the spatial continuity for the grade variables. These analyses established the parameters required for ordinary kriging, the technique used to interpolate grade values into the blocks of the block model. The metal grades estimated in the block model are gold, silver, and copper.

Norwest reported that its classification of the mineral resources was accordance with NI 43-101 and CIM Standards on Mineral Resources and Reserves at that time.

The criteria used for the resource classification are listed below:

- Measured – composites from three different holes within 38 ft of the centroid of the model block, and the closest sample within 28 ft of the model block.
- Indicated – composites from three different holes within 140 ft of the centroid of the model block, and the closest sample within 90 ft of the model block, or one sample within 42 ft.
- Inferred – anything outside the measured and indicated classes, but within the domain solids generated by the Piper sectional lithology.

The resource estimate results were presented in a table at seven cut-off grades ranging from 0.02 oz/t Au to 0.10 oz/t Au. A base case cut-off for the resource, as is now required, was not presented.

2005 Norwest Mineral Resource Estimate for the Golden Zone at 0.030 oz/t Au cut-off

	Tons	Gold (oz/t)	Gold (oz) *	Silver (oz/t)	Silver (oz) *	Copper (%)	Copper (tons) *
Measured	1,827,000	0.096	175,400	0.444	811,200	0.117	2,140
Indicated	1,260,000	0.063	79,400	0.291	366,700	0.073	920
Measured & Indicated	3,088,000	0.082	253,200	0.382	1,179,600	0.099	3,060
Inferred	51,000	0.046	2,300	0.190	9,700	0.027	1

* Not reported by Norwest - approximate value calculated by Howe for clarity and comparison with other historical resource estimates

A comparison of the Norwest 2005 estimate with the WSE 1997, indicates that the Norwest 2005 estimate is in general agreement at the higher cut-off grades, but diverges at the lower cut-offs due to the 1997 model interpolating grade into only the breccia pipe lithologies. Norwest's block model included a significant volume of weakly mineralized porphyry which surrounds the breccia pipe. The weakly mineralized porphyry was included because Norwest was of the opinion that it might have some economic influence the shape of a potential pit shell.



The 2005 Norwest mineral resource estimate is considered to be ‘historical’ in nature. The Report authors (qualified persons) have not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves in accordance with NI 43-101. Howe and Avidian are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational and comparison purposes only and should not be relied upon.

6.6.3 Hidefield 2006

In April 2006, Norwest was contracted by Hidefield to update the resource model for the Golden Zone gold deposit. Norwest regenerated the block model based on new geologic interpretations and drilling database results provided by Hidefield including additional data from drilling completed by Hidefield in 2005. Though the 2006 resource update was performed according to industry standards, it was prepared as an internal document for Piper’s management and was not prepared as a NI 43-101 report (Sim, 2006). Norwest noted that the 2006 mineral resources were tabulated in two ways in an attempt to reduce the potential confusion resulting from the 2006 model having been created in imperial weights (short tons) and metric grades (ppm or grams). The resources were initially presented as derived directly from the model in imperial tons and ppm grades. The resources were then presented in imperial units for both tons and grade expressed in ounces per ton. The resource estimation was conducted using a local Mine Grid with Grid North orientated at 45.5 degrees True North. The resource is presented herein as reported in 2006 to maintain its authenticity; i.e. it has not been converted to uniform SI (metric) units which would degrade values due to rounding of converted imperial values already subject to rounding in the 2006 resource tables.

The data provided to Norwest for the 2006 resource model had gold expressed in ppm Au. A comparison of this new data with the oz/t Au data used in the 2005 model showed some inconsistencies with the conversion from gold values in oz/t to ppm (Sim, 2006). It appeared that for some portion of the data, the original data had the third decimal place value dropped from the oz/t Au grade prior to the conversion to ppm Au (i.e. 0.046 oz/t Au was changed to 0.04 oz/t Au prior to conversion to ppm Au). Ultimately, a decision was made to go back to the assay data used in the 2005 resource model and use that data in the 2006 resource model.

A total of 373 individual sample strings “holes” were in the 2006 database (trench and UG data were entered as strings of data similar to a drill hole). Of these, 191 were drill holes, 123 were surface trenches and 60 were strings of underground samples (drift wall channels). There were 16,239 samples analysed for gold ranging from 0 ppm Au to 311.385 ppm Au. There were 15,637 samples analysed for silver ranging from 0 ppm Ag to 949 ppm Ag. There were 10,642 samples analysed for copper ranging from 0% to 7.62% Cu. Analyses for other elements were in the database but this 2006 model included only resource estimations for gold, silver and copper. Sample intervals ranged from 0.1 ft to 31 ft in length, with the majority (82%) at a length of 5 ft. Samples were therefore composited to a standard length of 5 ft (1.52 m) for resource estimation purposes.

The geological model for the 2006 resource comprised four domains, Breccia, Porphyry, Shear Zone and Country Rock. The domains were interpreted on a series of N-S cross sections and linked together into 3-dimensional wireframe solids. All mineralized zones were defined using



“hard” domain boundaries. Samples from one domain were not allowed to mix with samples from outside that domain during grade estimations.

Outlier grades in composited data for both gold and silver were evaluated by zone domain in a series of log-probability plots and through a decile analysis. The following top-cuts were applied:

Domain / Zone	Top-cut limit	# samples cut
GOLD (ppm)		
Breccia	33.0	18
Porphyry	12.0	13
Shear	7.0	7
Country Rock	2.0	13
SILVER (ppm)		
Breccia	N/A	N/a
Porphyry	50.0	10
Shear	20.0	8
Country Rock	15.0	9
COPPER (%)		
Breccia	2.0	5
Porphyry	0.6	4
Shear	0.3	2
Country Rock	0.3	3

The block size in this model is similar to that used in the 2005 model (x= 10 ft, y= 10 ft, z= 20 ft) but the overall extent of the block model was extended by 100 ft west, 700 ft east and 200 ft north in order to cover the extents of new drilling information.

The protocols used to classify the mineral resources were reported at that time to be in accordance with CIM Standards on Mineral Resources and Reserves.

The criteria used for the resource classification are listed below:

- Measured Resources – Blocks in the Breccia or Porphyry domains with gold grades estimated from a minimum of three drill holes within 38 ft and the closest hole within a maximum distance of 28 ft.
- Indicated Resources – Blocks in the Breccia or Porphyry domains with gold grades estimated from a minimum of three drill holes within 140 ft and the closest hole within a maximum distance of 90 ft.
- Inferred Resources – Blocks which do not meet the criteria for measured or indicated resources but are within a maximum distance of 500 ft from a drill hole.



The 2006 resource estimate results were presented in a table at seven cut-off grades ranging from 0.02 oz/t Au to 0.10 oz/t Au. A base case cut-off for the resource, as is now required, was not presented.

**2006 Norwest Mineral Resource Estimate for the Golden Zone at 1 ppm Au cut-off
(Imperial short tons and SI grades [ppm Au and Ag])**

	Tons	Gold (ppm)	Silver (ppm)	Copper (%)	Gold (oz)	Silver (oz)	Copper (M lb)	Copper (tons) *
Measured	2,007,000	3.069	14.90	0.08	179,600	872,200	4.29	2,145
Indicated	1,251,000	2.139	14.58	0.12	78,000	531,900	3.10	1,550
Measured and Indicated	3,258,000	2.712	14.78	0.11	257,700	1,404,100	7.43	3,715
Inferred	205,000	1.381	5.89	0.02	8,300	35,200	0.15	75

* Not reported by Norwest - approximate value calculated by Howe for clarity and comparison with other historical resource estimates

**2006 Norwest Mineral Resource Estimate for the Golden Zone at 0.030 oz/t Au cut-off
(Imperial short tons and grades [oz/t Au and Ag])**

	Tons	Gold (oz/t)	Silver (oz/t)	Copper (%)	Gold (oz)	Silver (oz)	Copper (M lb)	Copper (tons) *
Measured	1,969,000	0.091	0.438	0.11	178,500	863,400	4.25	2,125
Indicated	1,201,000	0.064	0.436	0.13	76,600	523,500	3.03	1,515
Measured and Indicated	3,170,000	0.080	0.437	0.12	255,100	1,386,900	7.29	3,645
Inferred	192,000	0.041	0.177	0.04	7,900	33,900	0.14	70

* Not reported by Norwest - approximate value calculated by Howe for clarity and comparison with other historical resource estimates

Measured and Indicated resources were limited to the Breccia and Porphyry zone domains only. The degree of understanding and control over the distribution of resources in the Shear zone and Country Rocks did not support resources with any classification higher than Inferred.

The 2006 Norwest mineral resource estimate is considered to be 'historical' in nature. The Report authors (qualified persons) have not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves in accordance with NI 43-101. Howe and Avidian



are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational and comparison purposes only and should not be relied upon.

6.6.4 Alix 2011

In 2011, Norwest was contracted by Alix to update the resource model for the Golden Zone gold deposit (Kerr and Loveday, 2011). Norwest estimated resources from a 3-dimensional geological block model constructed using MineSight® geomodeling software. Norwest first constructed its block model of the Golden Zone breccia deposit in 2005. The model was updated with additional drilling data completed in 2005 and 2006 along with density data collected from drill core in 2009. Resource estimation procedures and parameters appear to be the same as those used in 2006. The resource estimation was conducted using an unconventional combination of imperial and SI units and a local Mine Grid with Grid North orientated at 45.5 degrees True North. The resource is presented herein as reported in 2011 to maintain its authenticity; i.e. it has not been converted to uniform SI (metric) units which would degrade values due to rounding of converted imperial values already subject to rounding in the 2011 resource table.

The model was based on the assays and lithologies of the 2011 drill hole database and on a series of interpreted geological cross sections constructed through the breccia deposit. The 2011 drill hole database contained a total of 434 sample strings from drill holes, trenches and underground samples. A total of 373 sample strings were within the volume of the block model developed for the breccia deposit and were subsequently used to define and quantify the deposit. Assays from the database were composited over fixed lengths of 1.52 m (5 ft), while honouring lithological boundaries.

The 2011 model utilized 3 m x 3 m x 6 m (10 ft x 10 ft x 20 ft) blocks, assigned to lithologic domains. Grade values for gold, silver and copper were interpolated into the blocks (constrained by lithologic domains), using ordinary kriging. Geostatistical analyses were used to determine the kriging parameters for each lithologic domain.

Norwest reported that its classification of mineral resources was in accordance with CIM Standards on Mineral Resources and Reserves and NI 43-101 reporting standards at that time.

The criteria used for the resource classification are listed below:

- Measured – composites from three different holes within 11.5 m of the centroid of the model block, and the closest sample within 8.5 m of the model block.
- Indicated – composites from three different holes within 43 m of the centroid of the model block, and the closest sample within 27 m of the model block, or one sample within 13 m.
- Inferred – anything outside the measured and indicated classes, but within the domain solids generated from the sectional lithology.

The 2011 resource estimate results were presented in a table at eight cut-off grades ranging from 0.05 g/short ton Au to 4.0 g/short ton Au. A base case cut-off for the resource, as is now required, was not presented in the NI 43-101 technical report. Alix subsequently established the base case cut-off at 1.0 g/short ton Au in a press release.



Howe notes that Norwest did not specifically state that they were using unconventional grades of grams/short ton in the 2011 resource table but this is the only way to reconcile the contained precious metal values with the stated tonnage (in tonnes) and grades.

2011 Norwest Mineral Resource Estimate for the Golden Zone at 1.0 g/short ton Au cut-off

	Tonnes	Gold (g/short ton)	Silver (g/short ton)	Gold (g/tonne) *	Silver (g/tonne) *	Copper (%)	Gold (oz)	Silver (oz)	Copper (tonnes)
Measured	1,973,915	3.41	16.62	3.76	18.32	0.11	196,399	957,084	2,132
Indicated	1,195,416	2.37	16.25	2.61	17.91	0.09	82,763	566,587	1,064
Measured and Indicated	3,169,331	3.02	16.48	3.33	18.17	0.10	279,166	1,523,657	3,233
Inferred	186,181	1.52	6.49	1.68	17.15	0.04	8,267	35,233	67

* Not reported by Norwest - Approximate value calculated by Howe for clarity and comparison with other historical resource estimates

Northwest noted the additional exploration and density data acquired after the 2005 Norwest resource estimate reflected an increase of approximately eight percent in Au and Ag resources and a nominal gain of approximately three percent in Cu.

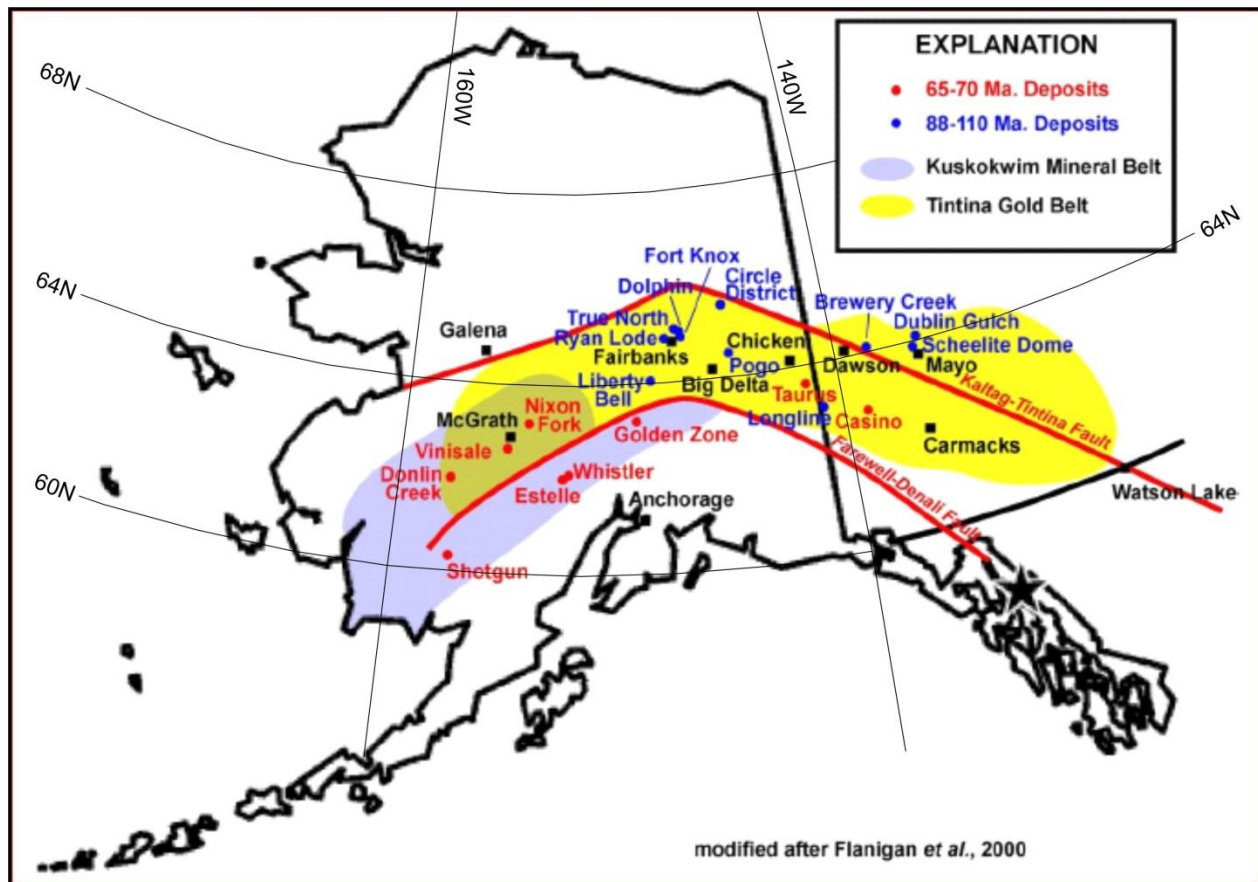
The 2011 Norwest mineral resource estimate is considered to be 'historical' in nature. The Report authors (qualified persons) have not done sufficient work to classify the historical estimates as current mineral resources or mineral reserves in accordance with NI 43-101. Howe and Avidian are not treating the historical estimates as current mineral resources or mineral reserves; they are presented for informational and comparison purposes only and should not be relied upon.



7. GEOLOGICAL SETTING AND MINERALIZATION

7.1. REGIONAL GEOLOGY

The Golden Zone lies immediately south of the Tintina Gold Province and the regional Farewell-Denali Fault (Figure 7-1)



(Avidian, 2016)

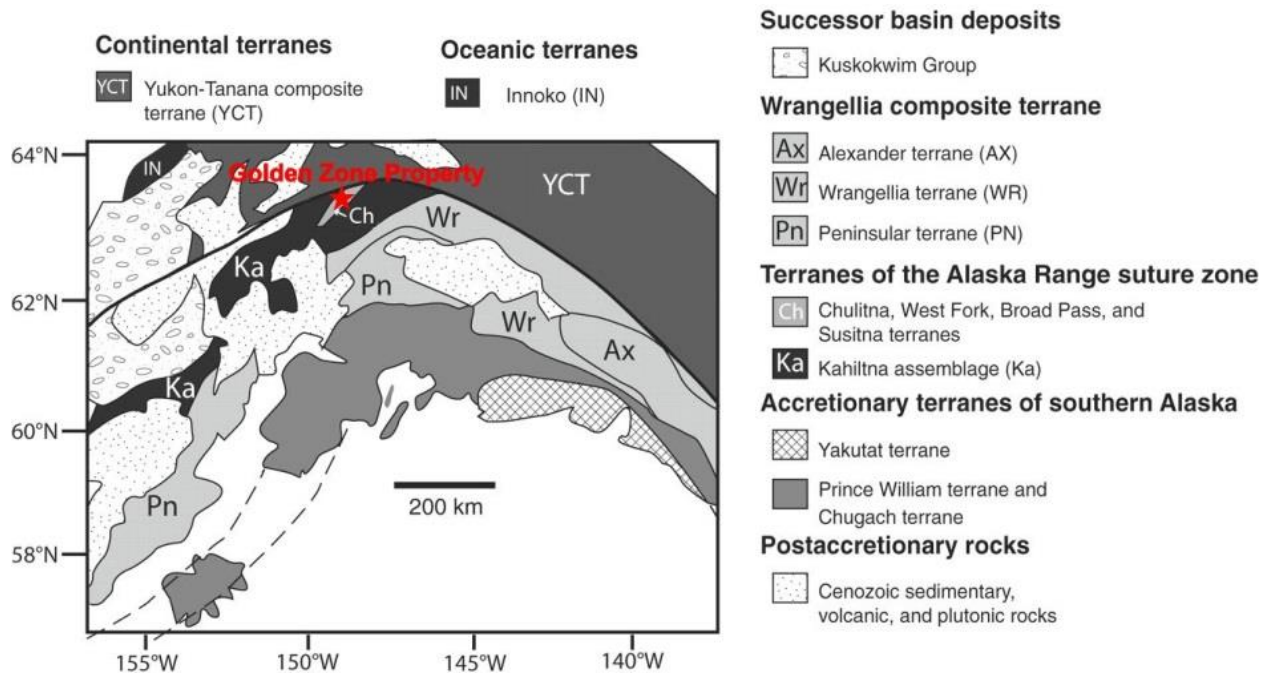
Figure 7-1: Location of Property immediately south of the Tintina Gold Province

The Property lies within the Chulitna and West Fork terranes, a poorly understood, fault-bounded package of rocks that are exotic to the North American craton (Gilman and Fisher, 2006). The Chulitna and West Fork terranes are comprised of several northeast-trending belts of volcanic and sedimentary rocks of upper Paleozoic to Cretaceous age bounded to both the northwest and southeast by Jurassic to Cretaceous flysch of the Kahiltna assemblage (Reed and Nelson, 1980). Both the Kahiltna and the older terrane assemblages are sandwiched between Wrangellia terrane (Jones et al., 1981) to the south and the Denali fault and North America craton or Yukon-Tanana terrane to the north (Figure 7-2 and Figure 7-3). Published literature describes much of the Chulitna region as allochthonous terranes most likely accreted to Wrangellia and rafted north to collide with North America in the Late Cretaceous (Csejtey et al., 1992). The Chulitna terrane



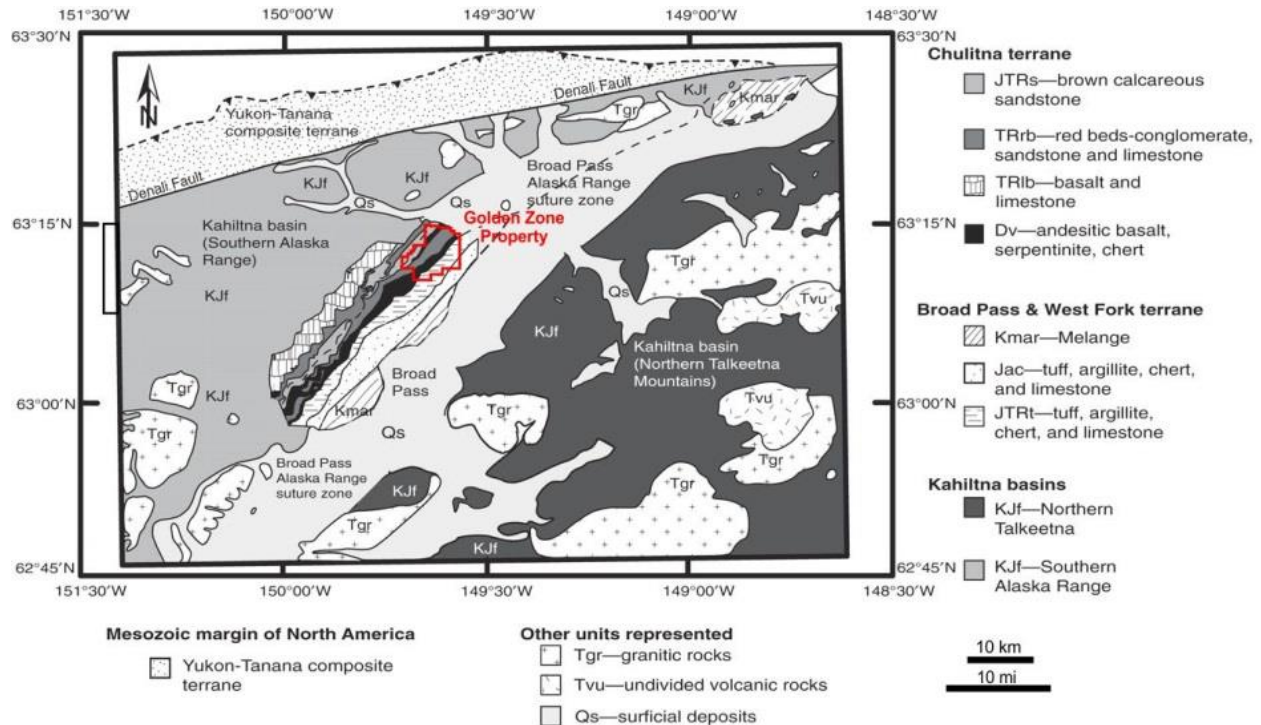
consists of Devonian volcanic and sedimentary rocks overlain by Upper Triassic volcanoclastic red beds, basalt, and limestone, and Upper Triassic to Lower Jurassic volcanoclastic sandstone and basalt (Jones et al., 1980). To the east, the West Fork terrane is faulted against the Chulitna terrane and consists of Jurassic crystal tuff, volcanoclastic sandstone, argillite, and chert (Nokleberg et al., 1994).

Intrusive rocks of the region range in composition from ultramafic to granitic (Clautice et al., 2001; Hawley and Clark, 1974). Granitic intrusive rocks fall into two age groups: Late Cretaceous (70 Ma) and Tertiary (55 Ma). The Late Cretaceous plutonic suite is predominantly monzodiorite, quartz monzodiorite and quartz porphyry granite and is genetically associated with much of the mineralization at the Golden Zone property and area. The younger Tertiary intrusives, sometimes referred to as "McKinley-age granites" locally are tourmaline-bearing. These intrusives are associated with tin - silver systems and may be present on the Golden Zone property at the Silver Dikes prospect.



Gilman et al., 2009

Figure 7-2: Geological terrane map of southern Alaska showing location of Chulitna/West Fork terranes and Golden Zone Property



Gilman et al., 2009

Figure 7-3: Regional Geologic Map (with Golden Zone Property noted)

7.1.1 Regional Structures

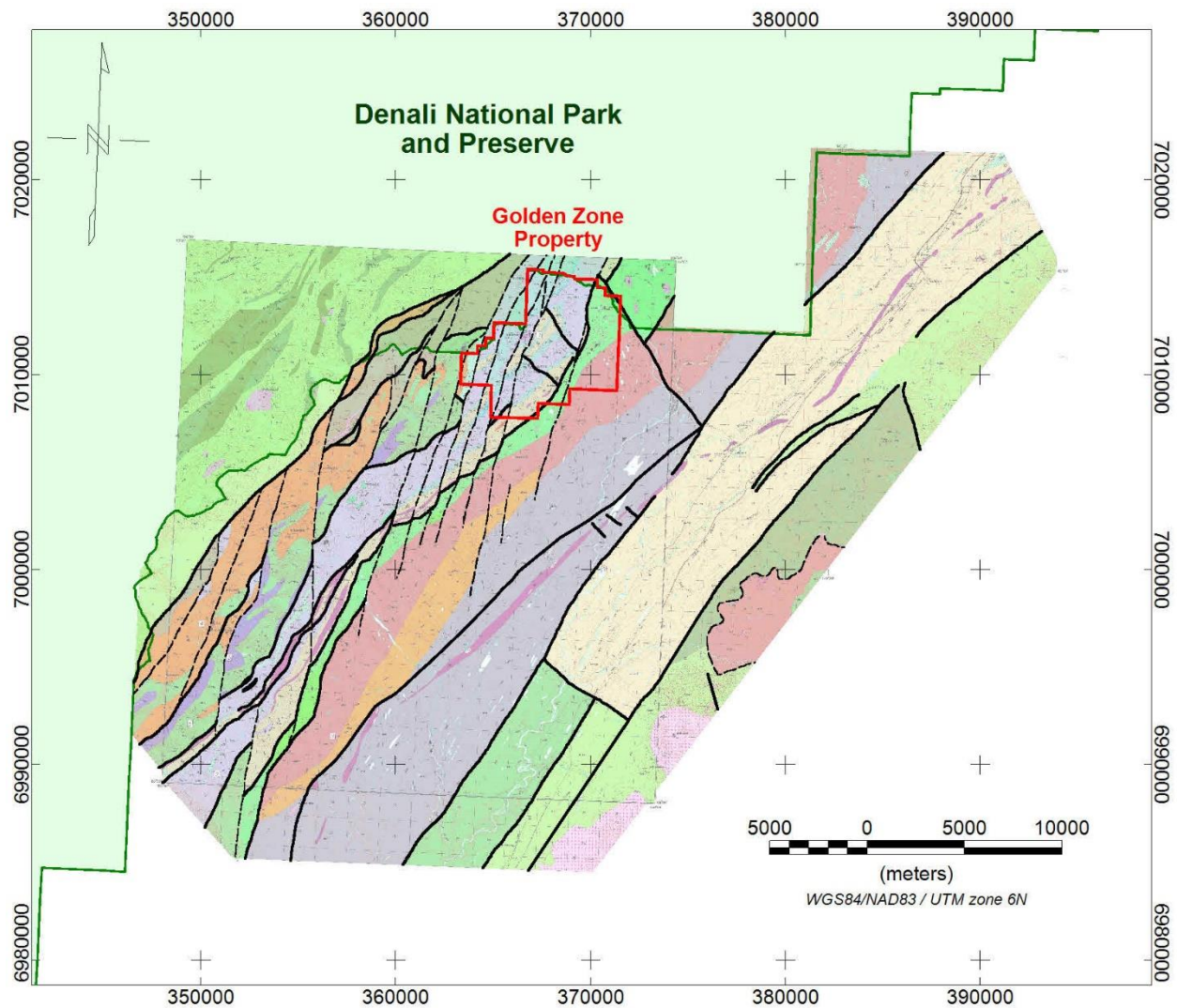
High-angle faults trend mainly northeast, northwest, and north-northeast in the Chulitna region (Claudice et al., 2001a). Northeast-trending faults are the most continuous and appear to have the greatest displacement. The northeast faults define the Broad Pass graben and the northwestern margin of the Paleozoic (Chulitna) block. Claudice et al., (2001a) note that the orientation of this northeast-trending fault set suggests that it is related to the Denali fault; thus it may have significant horizontal movement, although there is no direct evidence. Vertical displacement of more than a kilometre is suggested by Late Cretaceous and Tertiary plutons, which intrude the Chulitna block as high-level dikes and plugs, yet are well exposed and deeply eroded across the northeast bounding faults within younger structurally underlying Jurassic-Cretaceous Kahiltina assemblage flysch.

Claudice et al. (2001a) suggest that widely spaced northwest-trending are probably conjugate pairs to the northeast-trending faults. Horizontal and vertical offsets of a few kilometres are likely. Cretaceous age veins and dikes are commonly oriented parallel to the northeast-trending faults, and less commonly parallel to the northwest-trending faults which suggests that this faulting began by approximately 70 Ma (Claudice et al., 2001a).

The most abundant faults, but with smallest apparent offset, are the north-northeast-trending set (Claudice et al., 2001a). Their topographic expression and minor movement suggest a recent origin. These faults appear to have mostly strike-slip movement of less than a few kilometres and truncate against the major, block-defining, northeast-trending faults. These faults offset veins,



skarns, and mineralized Late Cretaceous plutons which also indicate a young age. The younger faults complicate mapping and interpretation of mineralization trends and patterns.



Adapted from Clautice et al. (2001a)

Figure 7-4: Interpreted northeast, northwest and north-northeast trending fault sets in the Chulitna region. Golden Zone property outlined in red

Several sets of structures pre-date the high-angle faults however it is difficult to define or trace these older structures (Clautice et al., 2001a). Late Cretaceous and early Tertiary intrusive rocks in the region provide indirect evidence that suggests the Paleozoic Chulitna block sits structurally above the younger extensive Jurassic-Cretaceous Kahiltna assemblage along a low-angle fault surface. Such intrusions cut all pre-Tertiary rocks in the region, but their outcrop sizes vary dramatically between the major fault blocks. Intrusions with indistinguishable ages and compositions occur as large plutons to batholith-sized bodies in Kahiltna assemblage rocks, but as dikes or small plugs within the Paleozoic block. Given that the intrusions into Kahiltna assemblage rocks commonly occur at higher present elevations than the dikes and plugs in the



Chulitna block, these differences can be most readily ascribed to major, post-intrusive uplift of Kahiltna assemblage blocks relative to the Paleozoic blocks. Such a relationship, in turn, requires that the Paleozoic rocks be structurally above the Kahiltna assemblage rocks, hence in thrust contact.

The major structural style within the Chulitna block is a series of northeast- to north-northeast-plunging, tight, overturned folds, with both limbs dipping to the northwest. Fold wavelength is approximately 1-2 km, and becomes tighter towards the centre of the block. Folds in the central part apparently involve the oldest units and are cored by irregular pods of partly serpentinized mafic-ultramafic rocks and serpentinite. Southeast of the strongly folded area are poorly exposed units consisting of weakly metamorphosed tuffs and sediments, which lack the detailed stratigraphy necessary to map of folds. Similarly, folds were not mapped in the Kahiltna assemblage northwest of the Chulitna block; however, lenticular distribution of subunits is consistent with the presence of relatively tight, commonly isoclinal, folds (Claudice et al., 2001a). The folding most likely accompanied structural emplacement of the Chulitna block, as the folds are cut by undeformed plutons and high-angle faults.

Claudice et al. (2001b) summarize the structural style of the Upper Devonian to Lower Cretaceous Chulitna block to be a tightly folded stratigraphy thrust and overturned toward the south, and subsequently cut by extensive high-angle fault systems. Faulting is dominated by a large northeast-trending graben, or down-dropped block, through Broad Pass in which Tertiary gravels have been preserved (Figure 7-3, Figure 7-4). Vertical faults parallel to the graben occur on either side of Broad Pass. Vertical movement between northeast-trending blocks controls the erosional level of exposure of mineralizing plutons and thus surface expressions of mineralization in the region.

7.1.2 Regional Metallogenesis

The 160 km long highly mineralized area termed the Yentna-Chulitna Mineral Belt (Hawley and Clark, 1973) encompasses an area from the town of Collinsville to just north of the Golden Zone Property (Figure 7-5). The northern third of this Belt comprises the Upper Chulitna district, which includes the Golden Zone Property. Most of the known mineralization in the Upper Chulitna district occurs in Chulitna terrane rock units.

Field descriptions and assay data for major prospects are given in Hawley and Clark (1974), Kurtak et al. (1992), and Gage et al. (1998). The only recorded metal production from the Chulitna district is from the Golden Zone deposit. Between 1941 and 1942 it produced 1,581 oz Au, 8,617 oz Ag, 21 tons Cu, and 1.5 tons Pb (Hawley and Clark, 1974). A small amount of placer gold was mined from Bryn Mawr Creek, immediately downstream from the Golden Zone, and from McCallie Creek approximately 15 km southwest of the Property (Figure 7-5). Placer gold accumulations are not significant, as the area has been eroded by multiple glaciation events in the recent past.

Very small bodies of chromite are present within serpentinite in at least two locations in the Upper Chulitna district (Hawley and Clark, 1974). Neither occurrence is of significant size; given



the extremely discontinuous and faulted nature of the serpentinite bodies, there is limited likelihood for a large chromite accumulation.

Except for the minor placer gold and serpentinite hosted chromite deposits, most known mineral prospects in the Chulitna district are spatially and temporally associated with Cretaceous and Tertiary age intermediate to felsic intrusions. Although the various prospects and deposits possess similarities, those associated with Late Cretaceous intrusions are fundamentally different from those with early Tertiary intrusions. The former contain significant Au mineralization and the latter significant Ag-Sn mineralization. Clautice et al. (2001a) subdivided the intrusion associated mineralization types within the Chulitna district as presented in Section 7.2.1 and 7.2.2 below.

7.1.2.1 Mineralization associated with Late Cretaceous Intrusions

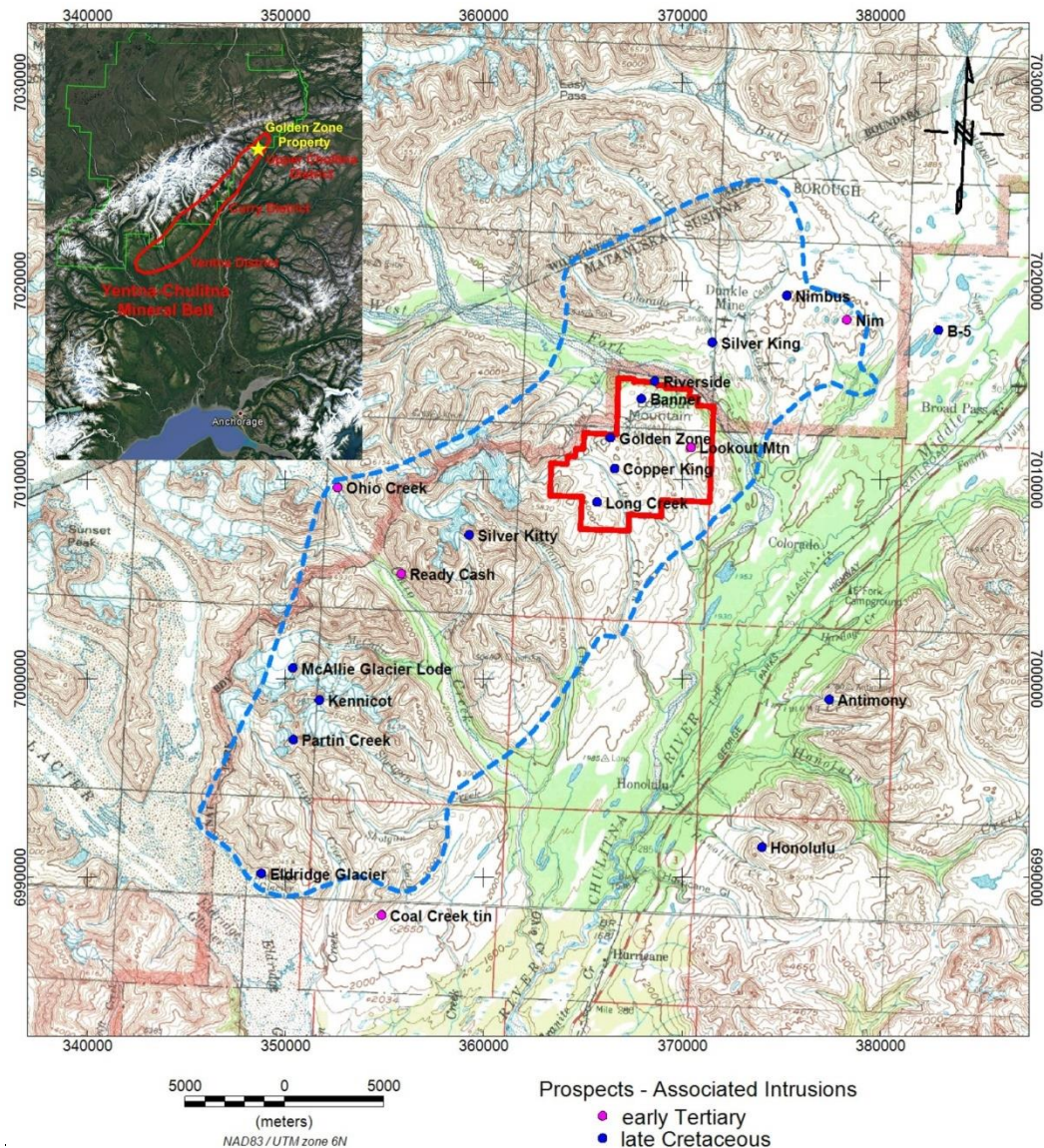
The minimum $\text{Ar}^{40}/\text{Ar}^{39}$ ages for late Cretaceous intrusion-related mineralized and associated rocks mostly fall in the 65-75 Ma period. Thermal resetting of some older mineralization by early Tertiary dikes and intrusions appears to account for the majority of overlap between the Late Cretaceous and Tertiary intrusion hosted mineralization types (Clautice et al., 2001a).

Known prospects associated with late Cretaceous intrusions in the Upper Chulitna district area are of two basic varieties: (1) plutonic-related vein/breccia gold deposits and (2) skarns and sulphide replacement deposits.

7.1.2.2 Mineralization associated with Tertiary Intrusions

The minimum $\text{Ar}^{40}/\text{Ar}^{39}$ ages for Tertiary intrusion related mineralized and associated rocks mostly fall in the 52-58 Ma period (Clautice et al., 2001).

Known Ag-rich prospects associated with early Tertiary granites in the Upper Chulitna district area are of two basic varieties: (1) vein/veinlet-dominated mineralization located outside of the parent granite body and (2) granite-hosted greisen deposits. The former appear to be "distal" signals of deeper, and larger mineralized plutons while the latter are large, potential bulk tonnage mineralization (Kurtak et al., 1992).



Adapted from Clautice et al., 2001 and Hawley and Clark, 1974

Figure 7-5: Select mineral prospects in the Upper Chulitna mineral district (dashed blue outline) and area associated with late Cretaceous and early Tertiary intrusions. Golden Zone property is outlined in red. Yentna-Chulitna Mineral Belt shown in inset map.

7.2. PROPERTY GEOLOGY

This section has been extracted and modified from Kerr and Loveday (2011).

The property is underlain primarily by Devonian to Triassic aged volcanics with lesser sediments and ultramafic rocks of the Chulitna terrane, sandwiched between younger Jurassic aged sediments of the West Fork terrane exposed in a narrow graben feature to the east, and Jurassic-Cretaceous Kahiltna assemblage flysch sediments to the west, as shown in Figure 7-6. Sediments



of the Permo-Triassic suite are typically shallow water sandstones, conglomerates and limestones, while the volcanic components are comprised of basalts and basalt-derived tuffs, of intra-cratonic affinity, and coarse sediments. Many of the lithologies are reddish in colour, due to oxidation of primary Fe-Ti oxides to hematite, which suggests that the volcanics at least, were in part sub-aerial.

The Devonian rocks consist of green weathering basaltic to dacitic tuffs and flows of island arc affinity, with lesser bedded chert, near the base of the unit, which in turn, overlies a bedded limestone of late Silurian to early Devonian age. This assemblage is also spatially associated with serpentinite, which commonly occurs as isolated lenses aligned within fault zones, and in fold hinges. It is similar in trace element composition to the gabbroic and basaltic phases of Devonian volcanism, and may represent feeder dikes to the volcanic units.

The rocks within the Chulitna terrane block are isoclinally folded about northeast trending, universally west dipping fold axis, with some shearing and faulting along the limbs. The Property is dominated by the younger north-northeast-trending steeply dipping regional fault set described in Section 7.1.1 (Figure 7-6). These faults offset fold axes, veins, skarns, and mineralized Late Cretaceous plutons and complicate mapping and interpretation of mineralization trends and patterns.

A number of small intrusive dikes, plugs and stocks of late Cretaceous age, ranging from diorite to granite in composition, intrude the volcano-sedimentary sequences within the Property and surrounding area, however many are too small in area to be depicted in Figure 7-6. Many of these have associated disseminated to semi-massive arsenopyrite, and chalcopyrite, along with lesser pyrite, pyrrhotite, galena and sphalerite. The best known of these is the Golden Zone plug, a 300 m x 200 m tadpole shaped intrusive body of monzodiorite porphyry within which a gold bearing breccia pipe has been developed.

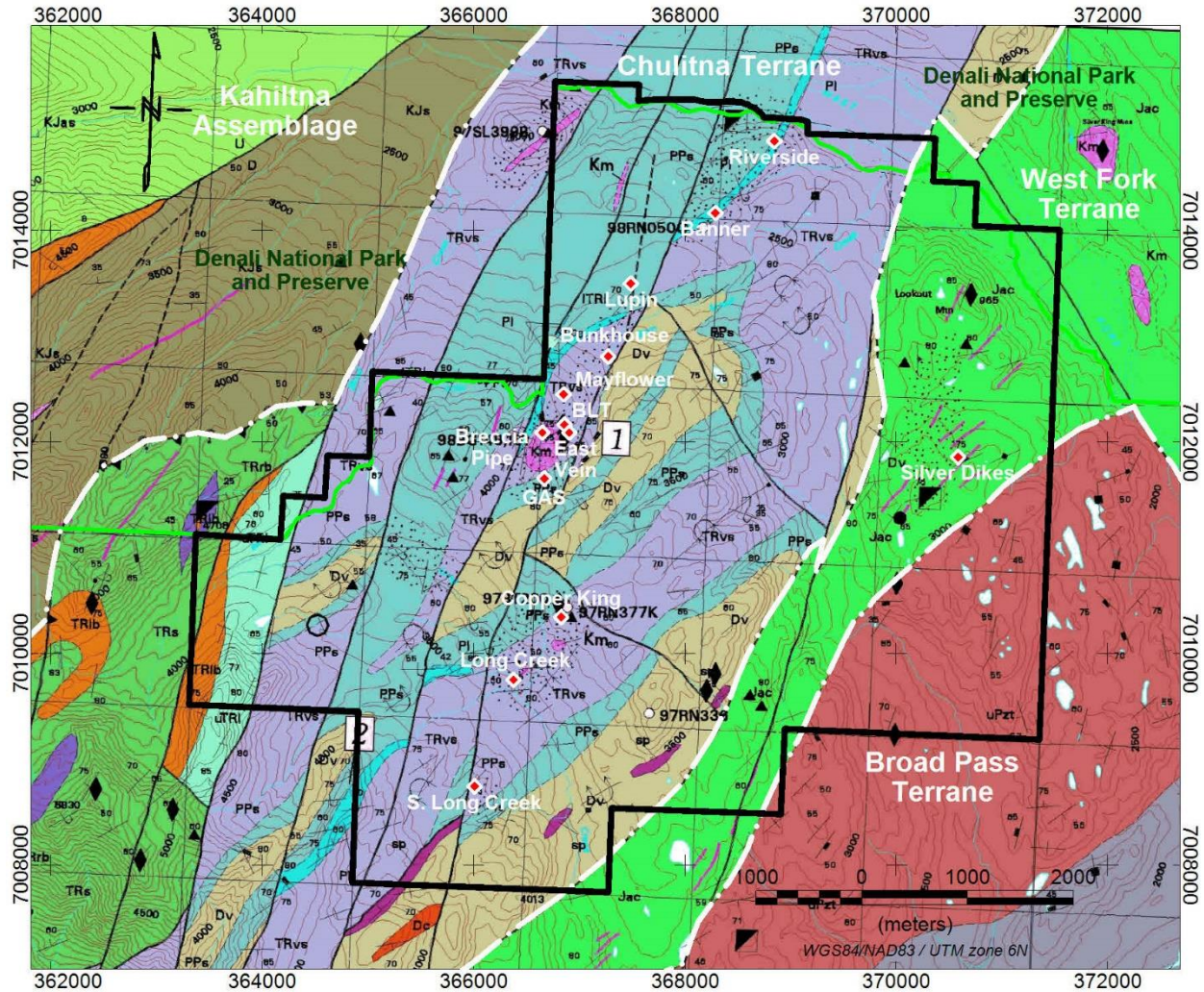
A second period of intrusive activity in the early Tertiary produced a similar set of small plugs and stocks within the Property and surrounding area; many are too small in area to be depicted in Figure 7-6. These Tertiary intrusions are virtually indistinguishable from the earlier Cretaceous intrusions, particularly when strongly altered, except for generally lower Au:Ag ratios and presence of Sn.

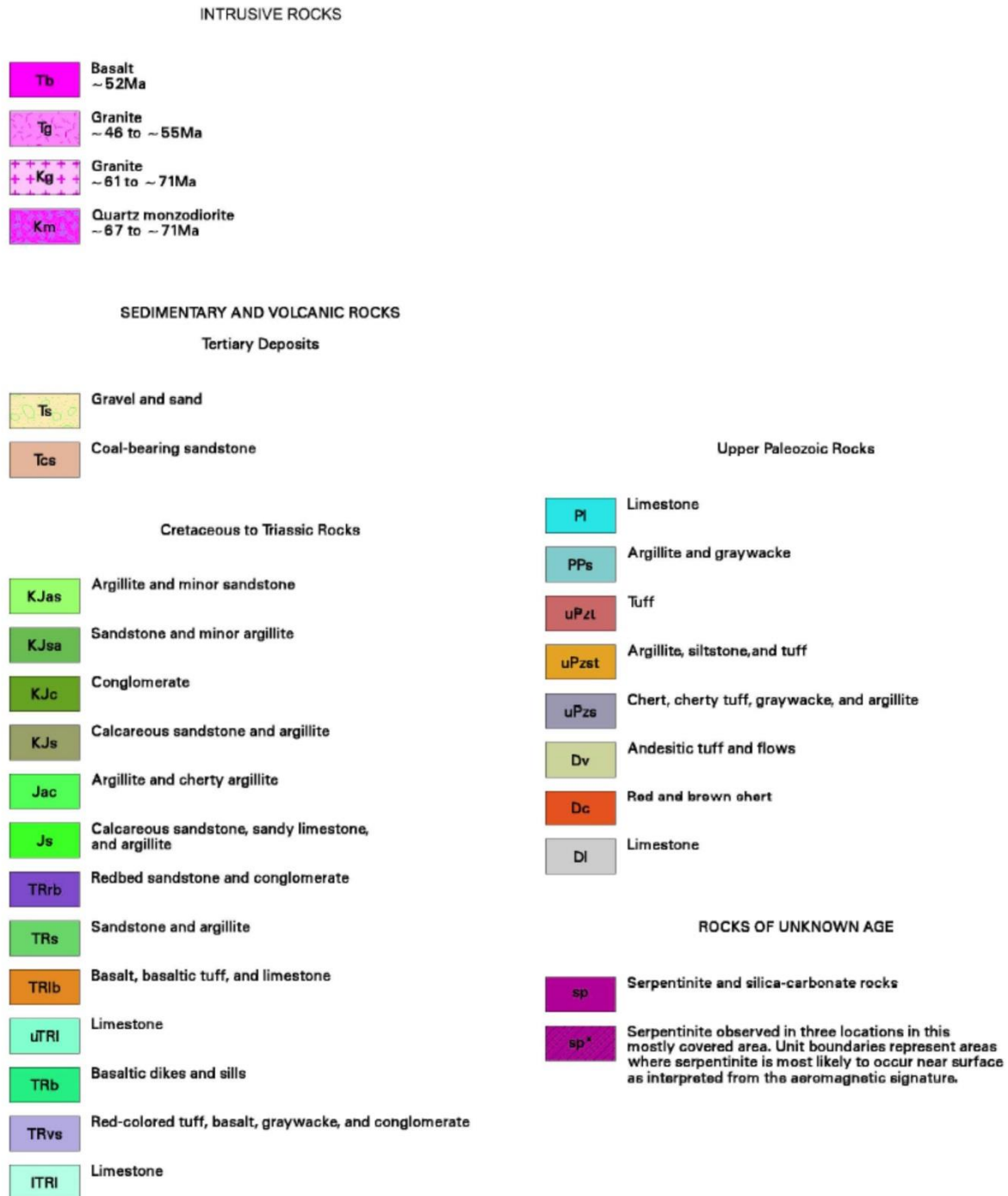
Previous workers have suggested that the intrusives are spatially associated with the intersections of faults. The monzodiorite, quartz monzodiorite, and granite porphyry of the Golden Zone property area plot within the high-potassic granitic fields on a standard K₂O - SiO₂ diagram (Hawley, C.C., and Van Wyck, N., 2002). Carbon dioxide also is somewhat enriched in the least altered of the Cretaceous igneous rocks at Golden Zone and is greatly enriched in their altered equivalents (Hawley and Clark, 1974). Intrusive rocks at Golden Zone share a highly reduced signature with similar rocks from the Yentna district, a feature that is common in mineralized intrusives in the Tintina Gold Belt and Kuskokwim Mineral Belt (Figure 7-1).

Where granitic or porphyry bodies are in contact with the calcareous units within the volcanosedimentary packages, the rocks typically show skarn development, whereas weakly calcareous units have been hornfelsed. The widespread development of both skarn and hornfels



on the property suggests that there are probably a number of additional intrusives, that either subcrop under glacial cover, or which still have a thin roof of older sedimentary and volcanic rocks.





Clautice et al. (2001a)

Figure 7-6 Continued: Geology Legend

7.3. PROPERTY MINERALIZATION AND ALTERATION

Gold mineralization on the Property is widespread and occurs within a breccia pipe, shear zones, skarns, porphyry and granitic intrusives, and vein-type geological settings, all of which relate to



the late Cretaceous intrusive event. As with many Alaskan intrusive-associated gold occurrences and deposits, the Golden Zone mineralization is rich in arsenic, and exhibits strong elements of structural control.

Hedderly-Smith (2015) and St George (2007) report that the Golden Zone property is divided into three main mineral corridors (Figure 7-7) which generally correspond to the previously described geological blocks bounded by northeast striking high-angle faults:

1. The Golden Zone Corridor is the northwestern-most block and is bounded on the east by the Bryn Mawr fault. Gold-bearing mineralized zones within the Golden Zone corridor include quartz-arsenopyrite-sulphide veins at the Riverside prospect; similar veins and skarn mineralization at the Banner prospect, veins and shears at the Lupin, Bunkhouse, Mayflower and BLT prospects, the highly mineralized breccia and mineralized porphyry at the Golden Zone Breccia Pipe deposit, and veins and shears at the GAS prospect. The mineralization in the western block area is characterized by a metal suite containing Ag-As-Au-Bi-Sb±Te±Cu±Pb±Zn.
2. The central Long Creek Corridor is separated from the Golden Zone Corridor by the Bryn Mawr fault. Mineral prospects in the central or Long Creek block have less arsenic than the Golden Zone Corridor prospects and are characterized by a metal suite containing Ag-Au-Bi-Cu. Gold-bearing mineralized zones in the Long Creek corridor include skarn, carbonate replacement, and porphyry mineralization associated with quartz-eye porphyry granite. Favourable host-rocks are carbonate-rich volcanoclastic red beds. From north to south, mineralized prospects include Copper King, Long Creek, South Long Creek and Geoff's Anomaly (which lies to the south of the current claim block).
3. The Silver Dikes corridor is contained within the graben filled with Jurassic clastic rocks. This corridor is poorly known and is not completely defined. Mineralized zones in the Silver Dikes corridor are mainly veins and shear zones associated with granitic dikes. The mineralized zones rarely contain detectable gold and are characterized by a metal suite containing Ag-Bi-Pb-Zn and possibly Sn.

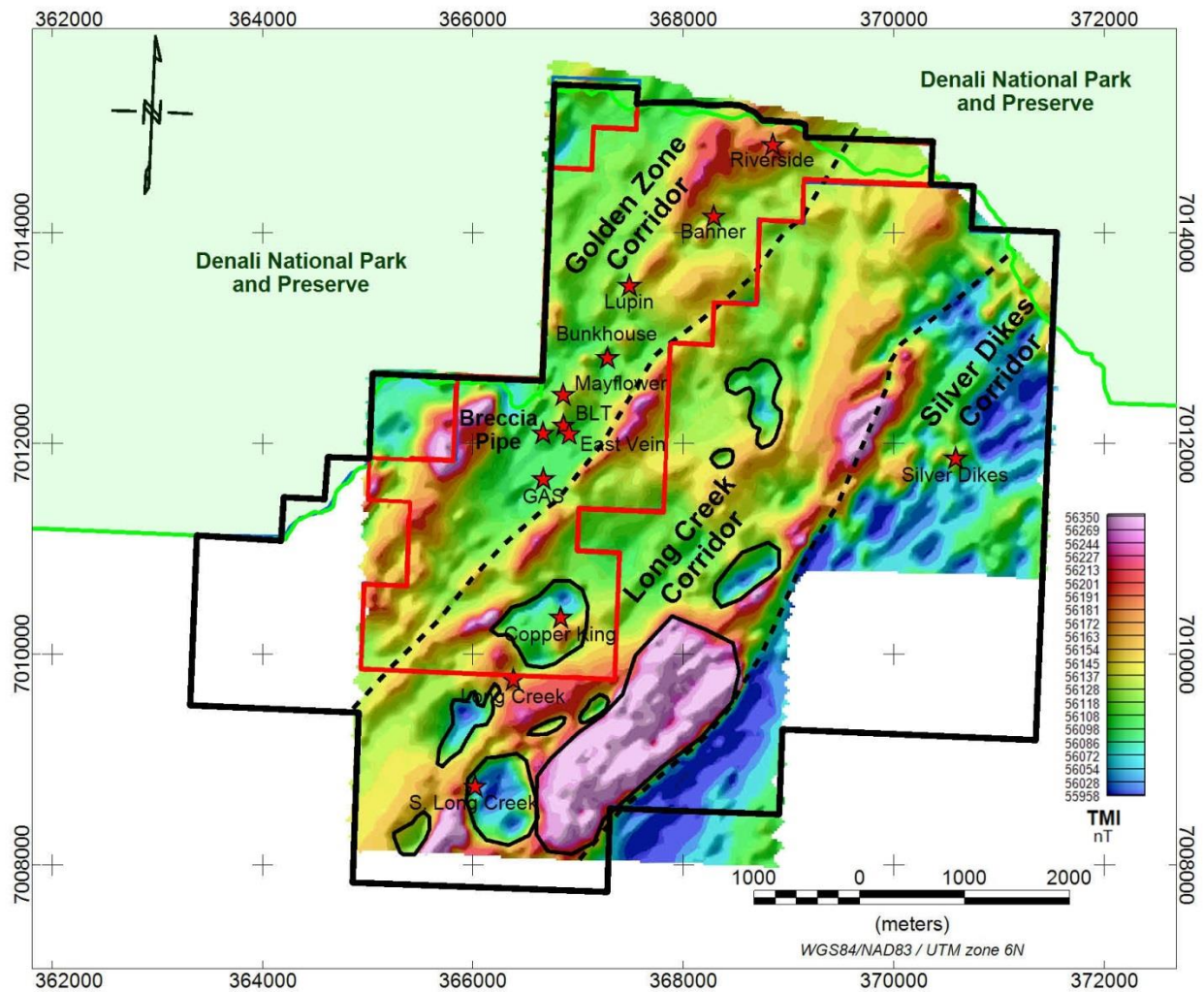


Figure 7-7: Location of Mineral Corridors on the Property and related Mineral Prospects on Addwest 1996 Heli-borne Shaded Total Field Magnetic Image basemap

The deposits and prospects in the Golden Zone and Long Creek corridors typify mineralization types common to Reduced Intrusion-Related Gold Systems (Lang, 2016) and the majority are apparently related to late-Cretaceous (65-70 Ma) monzodiorites. Mineralization in the Silver Dikes corridor may be more typical of tin-silver systems, and may be related to younger Tertiary-age (± 57 Ma) granitic rocks which are associated with other tin-silver prospects in the area; however, no age-dating has been performed on the Silver Dikes rocks at the Property.

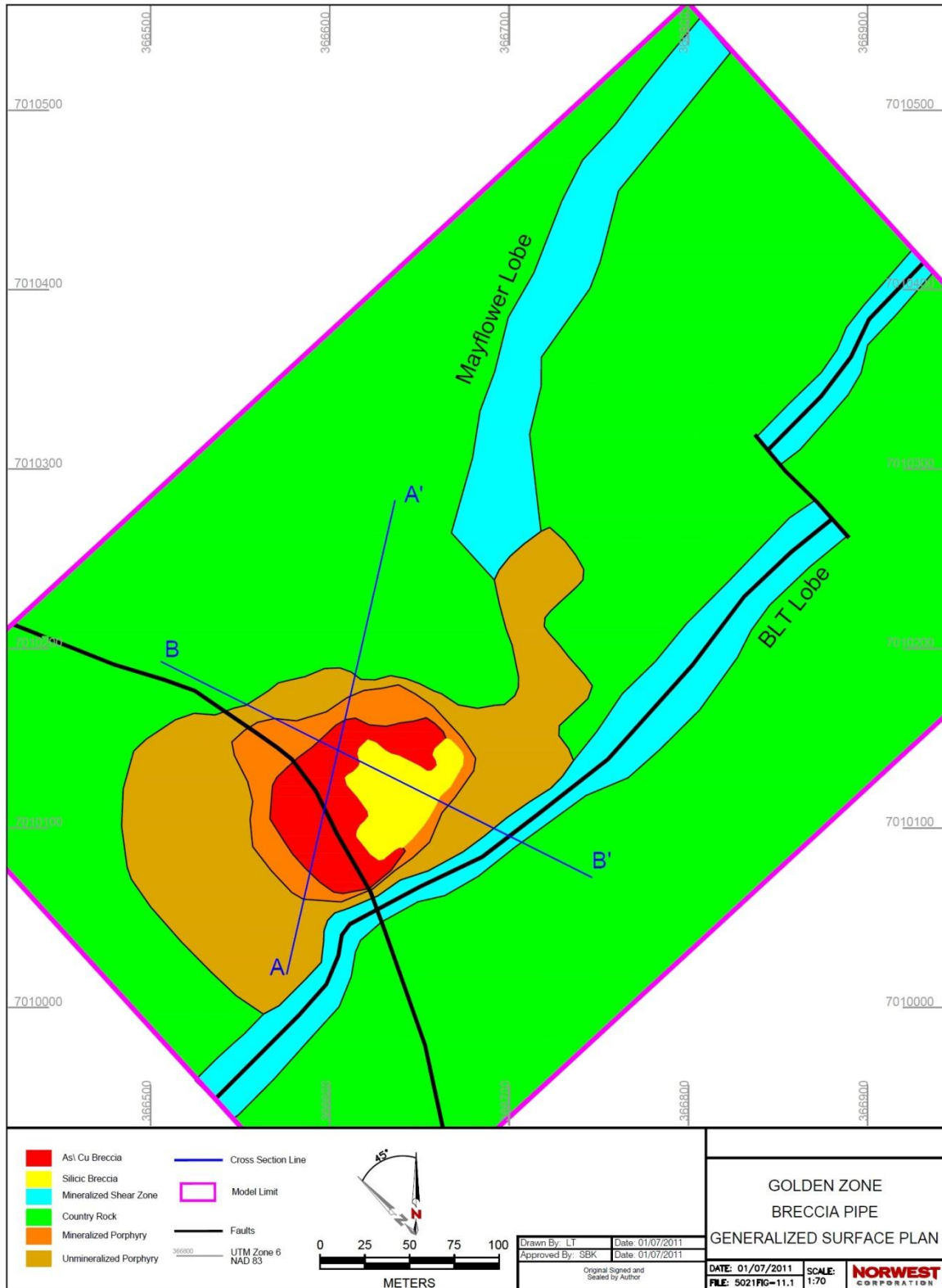
The following descriptions of Property prospects and deposit are derived primarily from reports of Founie and Keller (1997), Freeman (2004) and St. George (2007).



7.3.1 Golden Zone Corridor Deposit and Prospects

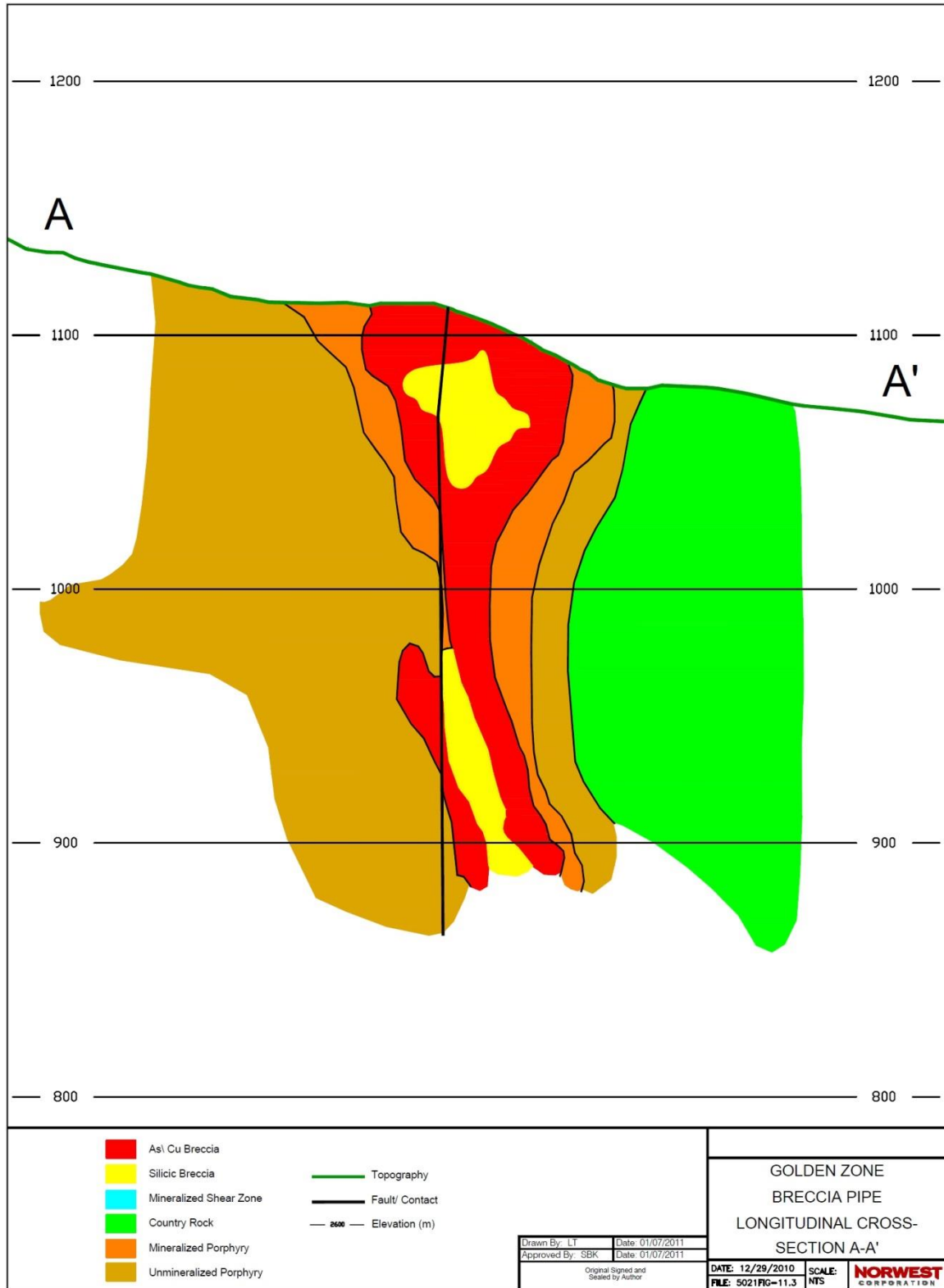
7.3.1.1 Breccia Pipe (historic Golden Zone Mine)

The main gold occurrence on the Property is the Golden Zone Mine or Golden Zone “Breccia Pipe” Deposit which was discovered circa 1909 by prospecting the drainage of Bryn Mawr Creek, upstream from a number of small placer gold occurrences. To date, follow up trenching, drilling and underground exploration from adits driven on three levels has defined gold mineralization occurring within a breccia pipe, which forms the core of a 300 m long x 200 m tadpole shaped, quartz monzodiorite porphyry stock. The breccia pipe consists of at least two phases, a high-grade arsenopyrite- or chalcopyrite- rich sulphide breccia, which carries interquartile gold values (25% of samples are lower and 25% are higher) that typically range from 1 to 10 g/t Au with occasional values in excess of 34 g/t, and a low grade siliceous breccia, which carries only minor gold with interquartile values that typically range from 0.2 g/t Au to 0.7 g/t Au. The contact of the breccia pipe with the porphyry is very sharp. There is however, a mineralized halo in the porphyry around the pipe, which carries low interquartile gold values that typically range from 0.2 g/t Au to 1.0 g/t Au, with occasional values in excess of 10 g/t. The breccia pipe outcrops over a surface area of approximately 150 m x 80 m at approximately 1,100 m asl, and plunges to the NE. At deeper levels it becomes elongated in a northeasterly direction and has been drilled down to depths of about 850 m asl (250 m below surface). Figure 7-8 is a surface plan of the Golden Zone breccia pipe. Figure 7-9 and Figure 7-10 show typical cross-sections through the breccia pipe.



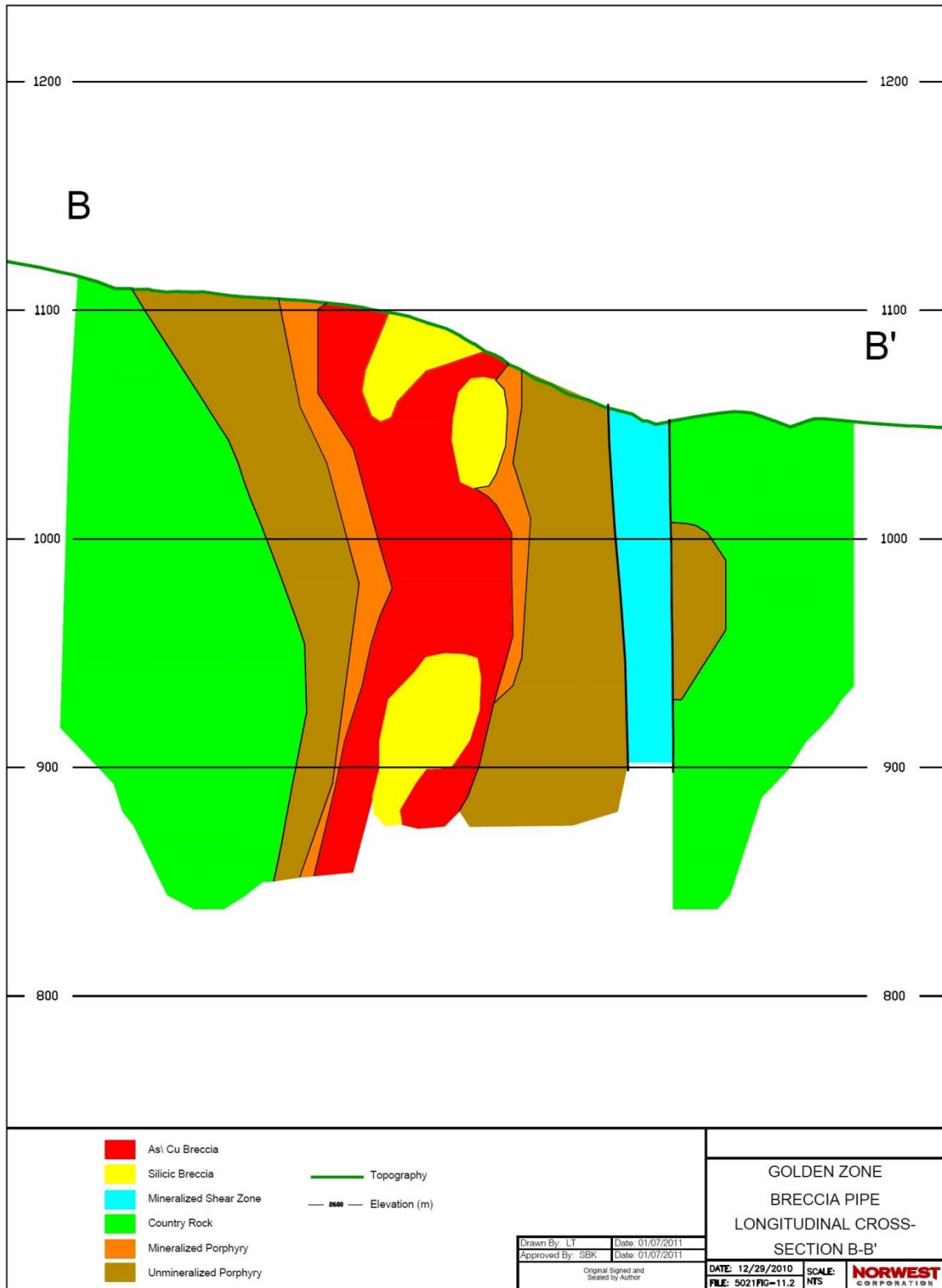
Kerr and Loveday (2011)

Figure 7-8: Plan of Golden Zone breccia pipe



Kerr and Loveday (2011)

Figure 7-9: Cross-section A-A' of Golden Zone breccia pipe



Kerr and Loveday (2011)

Figure 7-10: Cross-section B-B' of Golden Zone breccia pipe



The most common sulphides in the breccia pipe are, in order of relative abundance, arsenopyrite, pyrite, chalcopyrite, sphalerite, pyrrhotite and galena. Average sulphide content of the pipe exceeds 5%. Locally 20-30% sulphide has been intersected in diamond drill core over lengths of 1 to 2 metres. Fine-grained galena, electrum and tetrahedrite are difficult to identify in hand specimen but are relatively common in polished sections. Arsenopyrite and other minor sulphides are most abundant as interclast matrix in the pipe but also occur in quartz veins and as disseminations in the stock and the adjacent country rocks. Geochemically, bismuth exhibits a strong correlation with gold; arsenic shows a lower affinity. Copper has a low correlation with gold.

Gage and Newberry (2002) presented the following four-stage paragenetic sequence of mineralization for the breccia based on petrographic study:

“The earliest stage of mineralization at Golden Zone is characterized by inclusion-free medium-grained arsenopyrite which lacks gold mineralization. Such mineralization occurs along the margins of quartz-sericite-carbonate altered monzodiorite clasts within the breccia pipe. Pyrrhotite probably was present however it has been largely replaced by pyrite and marcasite under later, higher sulfur fugacity conditions.

In contrast, the second phase of mineralization is characterized by coarse crystalline sulfides, including abundant inclusion-bearing arsenopyrite, which comprise a major portion of the inter-clast matrix. Sulfides identified in the inter-clast matrix include arsenopyrite with minor galena, electrum, bismuthinite, native bismuth, hedleyite (Bi_7Te_3), kobellite ($\text{Pb}_5(\text{Bi,Sb})_8\text{S}_{17}$), maldonite (Au_2Bi), and complex Pb-Bi-Sb and Pb-Sb-Cu-Fe sulfosalts. Native gold, native bismuth, bismuthinite, maldonite and hedleyite occur only as inclusions in coarsely crystalline arsenopyrite of the inter-clast matrix. These minerals occurred in $<5\mu\text{m}$ anhedral clusters accompanied by coarser grained, more abundant pyrrhotite and chalcopyrite inclusions. In many cases native bismuth and bismuthinite occur together, but bismuthinite was not observed with either maldonite or hedleyite.

The third stage of mineralization at Golden Zone is characterized by sulfide veins and clast matrix containing pyrrhotite, chalcopyrite, freibergite, sphalerite, pyrite, electrum and galena. Pyrite and chalcopyrite are invariably present in this type of mineralization. The electrum present in this assemblage typically occurs as $10\text{-}100\mu\text{m}$ anhedral grains associated with ankerite, pyrite, chalcopyrite and freibergite.

The youngest stage of mineralization at the breccia pipe consists of ankerite, quartz, chalcopyrite, pyrite, tetrahedrite, kobellite and electrum as fracture-fillings in euheedral coarse grained arsenopyrite.”

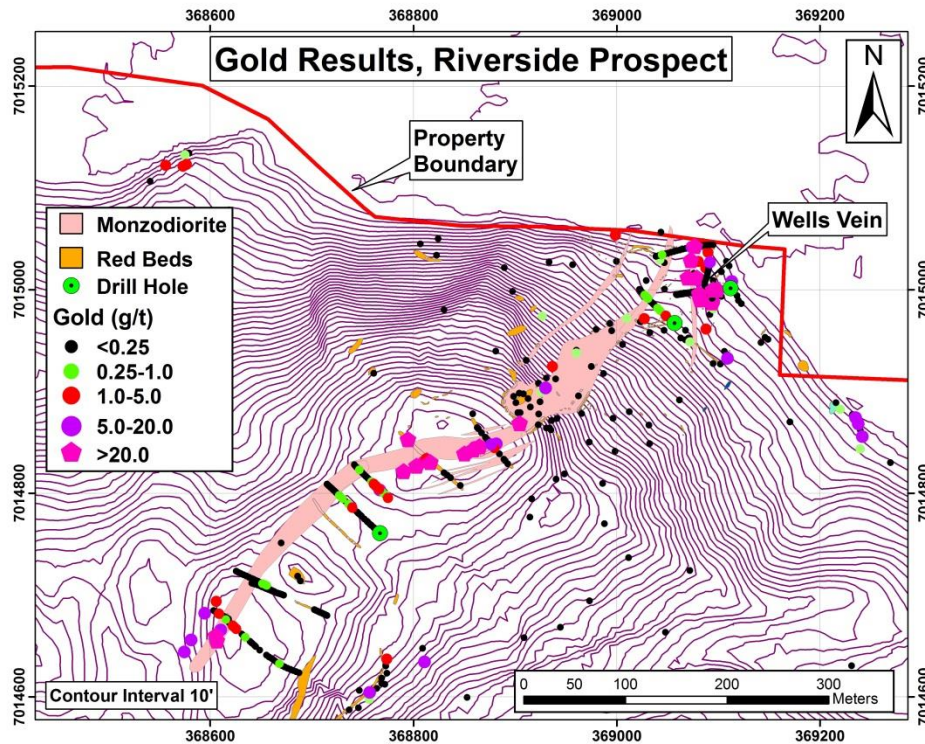
7.3.1.2 Riverside

The Riverside prospect is located approximately 3,650 m northeast of the Breccia Pipe, along the northern edge of the gravel plain of the West Fork of the Chulitna River (Figure 7-6). The prospect (Figure 7-11) has several old pits, adits and shafts that were excavated circa 1920 (Founie and Keller, 1997) or earlier (St George, 2007) and are now largely overgrown with dense



brush. The geology of the Riverside prospect consists of hornfelsed silt/sandstone/conglomerate and marble, locally intruded by gray-brown hornblende porphyritic quartz diorite porphyry dikes. The sedimentary units appear to trend N45-60°E and dip near vertical, but exposures are rare. Mineralization includes arsenopyrite + chalcopyrite + quartz veins and coarse-grained calcite + pyrite + arsenopyrite + chalcopyrite ± garnet skarns. Hawley and Clark (1974) noted two northeast-trending, 0.9 to 2.1 m wide arsenopyrite + quartz veins and documented three assay intervals of 28.11 g/t Au over 0.9 m, 3.43 g/t Au over 0.9 m and 2.06 g/t Au over 2.1 m. Trenching by Hidefield in 2006 encountered these veins over a strike length of 185 m. Trench interval grades ranged between 1 to 5 g/t Au and 0.1 to 1 g/t Ag with a maximum interval of 1.22 m at 99.30 g/t Au and 15 g/t Ag in trench T6002.

Addwest surface sampling of the Wells Vein in trench T-94-16 at the northeast end of the Riverside prospect in 1994 returned 3.1 m grading 13.30 g/t Au from a quartz-arsenopyrite vein. Trench T-94-17 returned 6.1 m grading 15.77 g/t Au in coarse-grained arsenopyrite skarn at the contact between a calc-silicate hornfels and marble unit approximately 20 m east of the Wells Vein. Subsequent sampling of the Wells Vein by Hidefield in 2006 returned assays ranging from 0.006 to 30.86 g/t Au and highly anomalous Bi and Ag. The vein is located at a northward flexure in an extensive NE trending porphyry dike swarm where it is in contact with a relatively large body of limestone. Alix drilled two diamond drill core holes at the Wells Vein in 2011 which returned 1.8 m (approximately 1.78 m true thickness) grading 19.10 g/t Au, 48.63 g/t Ag and 0.77% Cu and 1.8 m (approximately 1.50 m true thickness) grading 11.43 g/t Au, 24.57 g/t Ag and 0.23% Cu.



Avidian (2016)

Figure 7-11: Riverside Prospect - historic rock samples (surface grabs, trenches and drill holes)



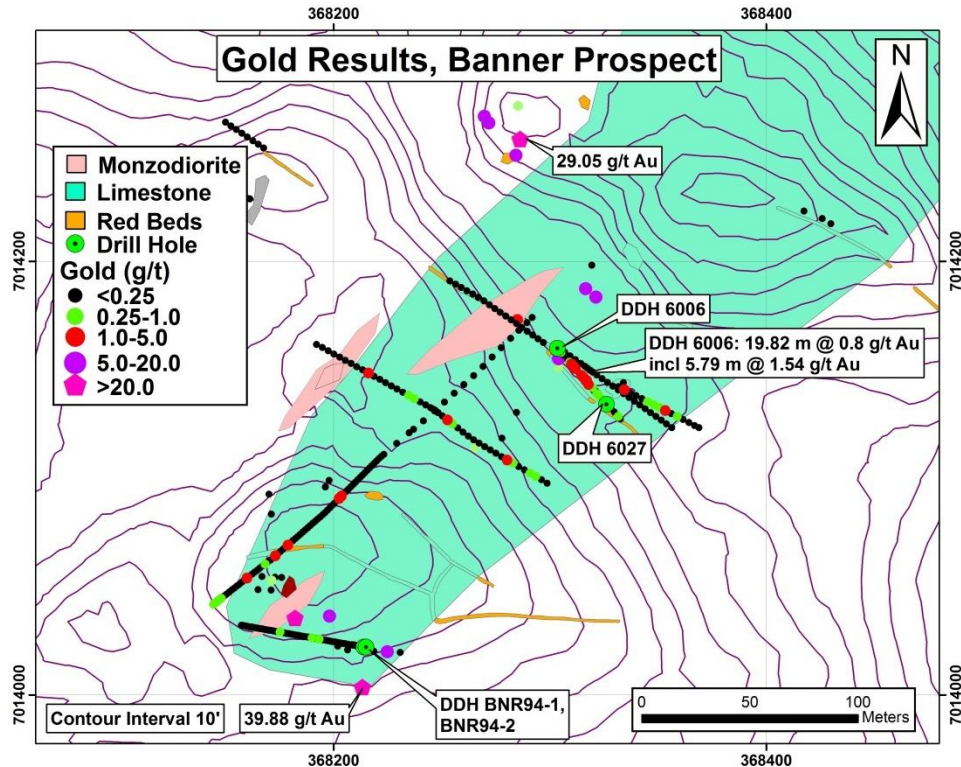
7.3.1.3 Banner

The Banner prospect, centred approximately 2,640 m northeast of the Breccia Pipe (Figure 7-6), was originally prospected for gold-copper skarn exposed in shallow pits and a partly caved shaft, probably in the first half of the twentieth century (Hawley and Van Wyck, 2002). The prospect is characterized by locally high-grade skarn mineralization within an interbedded sequence of marble, calc-silicate rock, hornfelsed conglomerate, and unaltered limy conglomerate. Small plugs of biotite quartz diorite and mafic dikes have locally intruded these sediments. The Banner fault, discovered during 1994 Addwest trenching, strikes between N50°E to N70°E and dips near vertical; it is at least six metres wide and consists of sheared rock gouge. The fault has tectonically placed and separated altered hornfelsed marble and conglomerate to the northwest from unaltered red to maroon siltstones (locally referred to as redbeds) to the southeast. The altered and hornfelsed interbedded marble and conglomerates to the northwest parallel the strike of the Banner fault and typically dip 45-80°NW. No mineralization has been observed in the redbeds southeast of the fault.

Trenches exposed numerous thin (0.3 m to 3 m thick) sub-vertical skarn bodies in a matrix of epidote-rich calc-silicate rock with interbedded marble. The observed skarn bodies appear to be structurally controlled, emplaced along fractures or small faults, and strike two directions; N50-60°E dipping 55-90°SE (less typically dipping NW) and N10-30°W dipping 60-70°NE. Skarn mineralization also locally replaces favorable bedding units. Banner skarn mineralization typically exhibits quartz-sericite-sulphide veining, similar to the skarn bodies at the Mayflower Prospect near the Golden Zone breccia pipe.

Mineralogy of the coarsely crystalline skarn bodies is generally pyrite/pyrrhotite + arsenopyrite + chalcopyrite ± quartz/sericite in a calc-silicate (epidote + actinolite ± diopside) matrix. Generally the skarn volume is 20-30% sulphide, but it can locally near 100% sulphide. Near the surface, the sulphide-rich skarns have typically been oxidized and decomposed into iron oxide-rich gossan. The skarns are locally garnetiferous. Several narrow mafic dikes were observed in close association with the skarns. Geochemically, the Banner skarns are strongly anomalous in copper, bismuth, arsenic, nickel and locally molybdenum. Historic skarn surface grab sample assay results range from 1.37 to >34.3 g/t Au, but are typically in the range of 2.40 to 4.10 g/t Au. Copper values range to greater than 1%. Addwest drilled two RVC holes in a complex area of crosscutting skarn bodies at the prospect in 1994. The holes intersected zones of sulfide/calc-silicate skarn over drill intervals of 6.1 m wide; the highest gold intercept was 1.85 g/t (0.054 oz/t) Au over 3.05 m.

Addwest trenches exposed the Banner fault or shear zone target and encountered some zones of weak gold mineralization (0.34 to 0.45 g/t Au) associated with N30°-70°E arsenopyrite-quartz veins. The best intercept of this type was 12.2 m @ 1.44 g/t Au in T94-14. Hidefield RVC drill hole 6006 tested the shear and returned a downhole interval of 19.82 m grading 0.8 g/t Au including 5.59 m grading 1.54 g/t Au (Figure 7-12).



Avidian (2016)

Figure 7-12: Banner Prospect - historic rock samples (surface grabs, trenches and drill holes)

7.3.1.4 Lupin

The Lupin prospect lies approximately 1,630 m northeast of the Breccia Pipe (Figure 7-6) and covers an area 610 m N-S by 305 m E-W with relatively flat, muskeg and glacial till and clay cover and only isolated rock outcrops along the projection of the Bryn Mawr shear zone. Till depths typically range from less than 10 cm to over 9 m. Geochemically the Lupin prospect is moderately to strongly anomalous in arsenic and antimony, and locally anomalous in mercury, bismuth, silver, and base metals.

Addwest trenches at the prospect intersected predominantly hornfelsed Triassic conglomerate and sediments and locally, intermediate to mafic dikes, limestone and phyllite. The main target of Addwest's trenches was the Bryn Mawr shear but the projected location of the shear was typically filled with deep glacial till. However, numerous subsidiary shears and fault zones, up to 9 m wide were encountered. The structural fabric at Lupin is almost exclusively northeast, generally N10°E to N60°E. Rarely, northwest trending faults are present, but they do not appear to be closely associated with mineralization. Many Addwest trenches intersected a significant number of 0.3 – 5 cm As/Fe oxide +clay fracture fillings and 2.5 – 30.5 cm arsenopyrite+quartz±chalcopyrite veins, suggesting the presence of a moderate to strong hydrothermal system. Locally, these veins assayed over 18 g/t Au.

Addwest RVC hole BH96-1 intersected a major shear zone, probably a segment of the Bryn Mawr fault, from 23.5 – 41.1 m. The best downhole intercept returned 0.21 g/t gold, 4.2 ppm Ag,



952 ppm Cu and 32 ppm Sb over an interval of 1.5 m (22.9 – 24.4 m). Addwest trench T94-2, at the south end of the Lupin prospect and closest to the Bunkhouse prospect, contains 12.9 m grading 1.03 g/t Au. This mineralization is hosted by a flat-lying, porous Fe/As oxide-quartz-arsenopyrite gossan, of undetermined thickness, in sheared and brecciated conglomerate and hornfels. The gossan horizon coincides with the water table in the area and may represent supergene-enriched gold mineralization. Low-grade gold mineralization grading 0.86 g/t Au over 3.05 m is associated with dikes in several trenches.

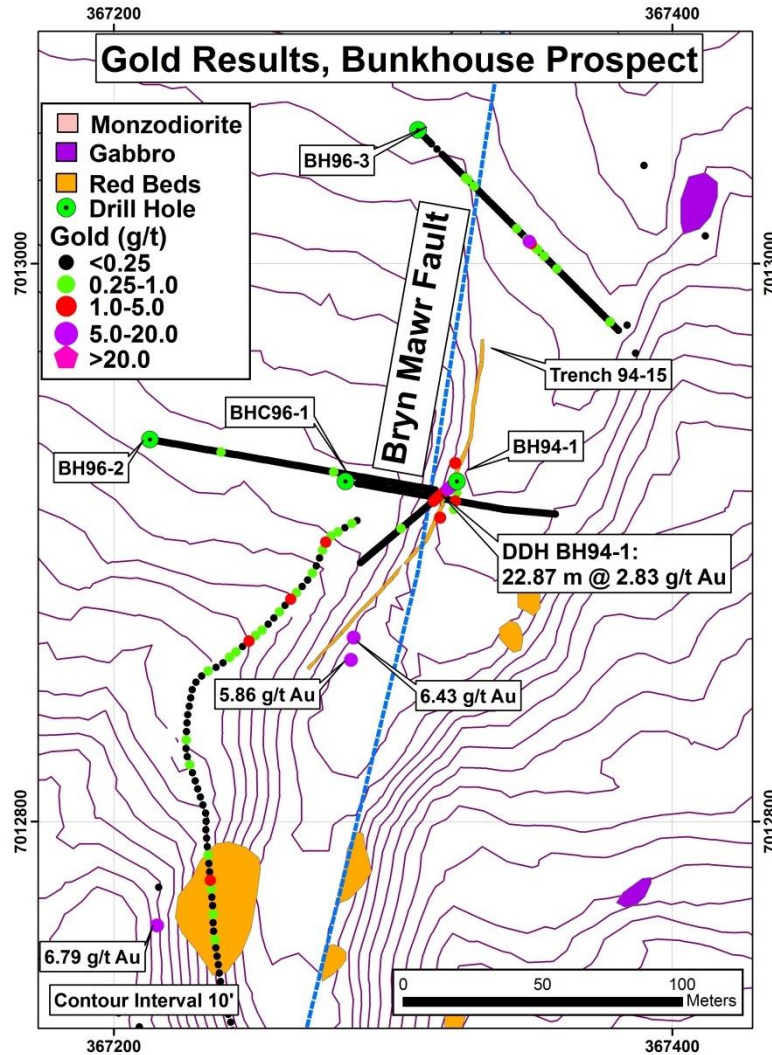
7.3.1.5 Bunkhouse

In 1994, Addwest Minerals discovered the Bunkhouse prospect, a 60 – 90 m wide mineralized zone along the Bryn Mawr fault zone (Figure 7-6). Mineralization starts about 365 m northeast of the Breccia Pipe and extends for at least 760 m to the northeast. Both shear-hosted and replacement mineralization are hosted in Triassic conglomerate and siltstone with lesser altered dikes. The intensely sheared structural fabric of the Bryn Mawr fault zone at the Bunkhouse prospect is dominantly N00°E to N30°E and the dip appears to be near vertical.

Alteration is recognized as bleaching of the sheared, locally micro-brecciated conglomeritic and hornfelsed sediments. Mineralization consists of arsenopyrite + marcasite + pyrite ± quartz occurring as disseminations, fracture fillings, stockworks, and sheared sulphide pods. Local quartz flooding has been observed in micro-brecciated mineralized red beds, with local patches of iron staining and narrow hematite veins after arsenopyrite. Shears and veins are sub-parallel and possibly conjugate to the Byrne Mawr Fault. Several N30°E-trending, 2.5 – 10 cm wide arsenopyrite-quartz veins are also present in the sheared matrix. This prospect appears to be geochemically anomalous in Ag, As, and Sb; locally anomalous in Hg and Bi; and very low in base metal values. The Bunkhouse prospect is, similar geologically to the BLT shear zone mineralization style, but it has lower base metal content and higher "epithermal" trace element chemistry than BLT.

The Bunkhouse prospect was defined in 1994 by a 59.4 m long surface trench (including 13.7 m grading 1.06 g/t Au). A drill hole (BH94-1) oriented subparallel to the Bryn Mawr mineralized trend intersected 22.9 m of sheared, sulphide-bearing rock grading 2.95 g/t Au (0 – 22.9 m) including 12.2 m of 4.57 g/t Au (1.5 – 12.2 m).

1996 trenching of the Bryn Mawr mineralized trend identified veins within but striking oblique to the mineralized trend, varying from 198°-203°, 074°-077°, and 048°-059° with a near vertical dip and spaced from 1.5 - 3.05 m apart. Anomalous gold values were obtained over a 121.9 m segment of the trench. The best values encountered were 9.1 m grading 1.37 g/t Au including 3.05 m grading 2.40 g/t Au. A fence of two holes, BHC96-1 and BH96-2 (Figure 7-13), drilled at right angles to the Bryn Mawr mineralized structure intersected only anomalous gold. BH96-3 was then drilled diagonal to the Bryn Mawr structure to test for potential cross structures in the shear. This hole intersected well-mineralized material, including 4.6 m grading 7.06 g/t Au (77.7 – 82.3 m) in sheared, arsenopyrite-bearing sediments. BH96-3 results are consistent with BH94-1 and results of surface trenching which suggest the presence of oblique mineralized structures in the main shear warranting further exploration.



Avidian (2016)

Figure 7-13: Bunkhouse Prospect - historic rock samples (surface grabs, trenches and drill holes)

7.3.1.6 BLT Shear Zone

The BLT shear zone is a major structure crossing the Golden Zone Property (Figure 7-6). Known from outcrop, drilling and underground drifting, the structure has a strike length of at least 610 m and is probably longer. The shear is sinuous, strikes between N20°E to N60°E, dips from near vertical to steeply southeast and ranges from 6.1 m to nearly 61 m wide. A large portion of the shear is adjacent to the Golden Zone quartz monzodiorite porphyry stock to the west; previous operators have suggested that the BLT shear may have had at least some control on the emplacement of the intrusive.

Intermediate to mafic dikes locally intrude the BLT shear up to approximately 100 m beyond either side of the breccia pipe and are typically altered. Sediments (conglomerate and hornfelsed conglomerate), intrusives (mafic dikes), and mineralization within the BLT zone have been strongly sheared, suggesting movement on this major fault has been pre-, syn-, and post-mineralization. Dominant alteration assemblages observed in the shear include strong bleaching,

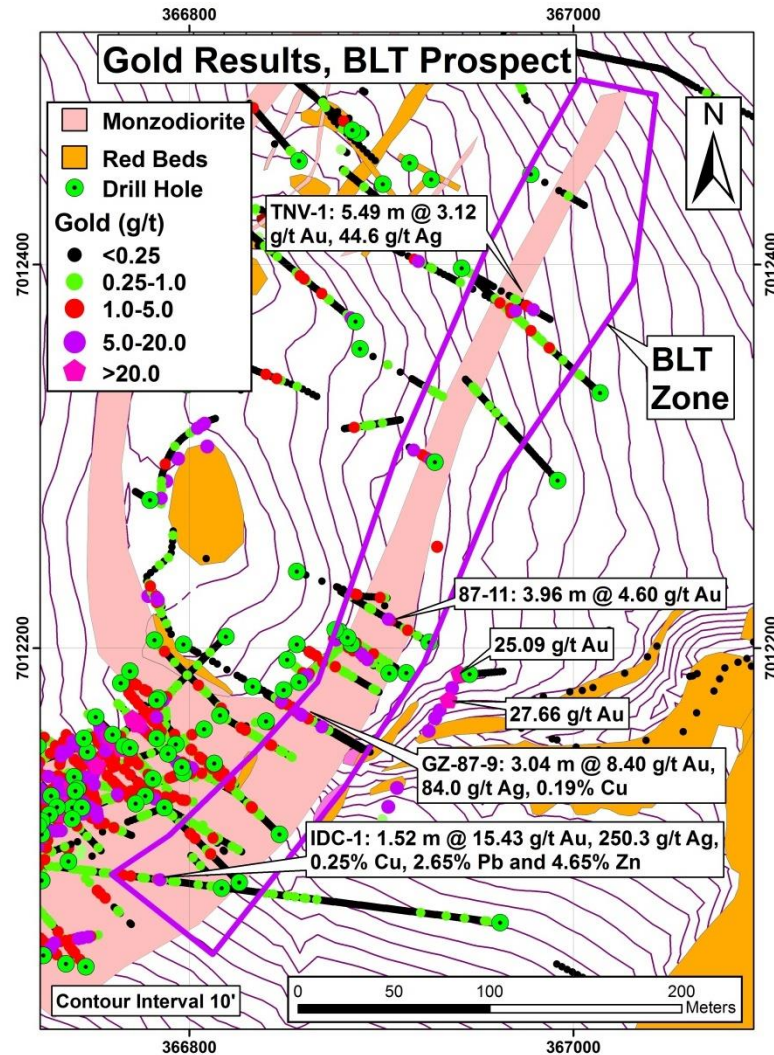


heavy carbonitization (calcite+ankerite), moderate argillization (feldspar phenocrysts altered to white clay in intrusive units), and local silica flooding.

An initial stage of white to grey "bull" quartz ($\pm$ pyrite) veining occurred in the BLT shear zone post dike intrusion. These veins rarely carry significant gold grades. A later pervasive veining episode overprinted and locally obliterated the initial stage, and consists of quartz+sulphide veins and stockworks, sulphide stockworks, and local sulphide pods (to several feet in diameter). Gold grades generally range from 0.69 – 3.43 g/t Au in stockworks to over 34.3 g/t Au in quartz veins and sulphide pods. At least three chalcedonic quartz+sulphide veins, designated the Blind, Little, and Tunnel veins (BLT), were encountered by drilling and underground drifting within the BLT shear zone. Veins up to 1.5 m wide were intersected in underground over a distance of 30.5 m. Underground channel samples that included these veins returned grades of 5.14 g/t Au over a true width of 1.5 m (UG-161) and 4.10 g/t Au over a true width of 4 m (UG-220). Significant drill hole intervals from the BLT shear zone are shown in Figure 7-14. A final phase of carbonate-dominated alteration in the shear resulted in carbonate replacement of groundmass and crosscutting stockworks of calcite+ankerite, typically with little or no gold content.

In contrast to the Breccia Pipe mineralization, the BLT mineralization is dominated by iron sulphides (pyrite + marcasite) and locally 7% combined zinc and lead sulphides, both associated with quartz veins or as aggregates in the sheared matrix. Sulphide-only veinlets and local sulphide pods (up to approximately 1 m in diameter) are also present in the sheared rock matrix and are dominated by arsenopyrite, sphalerite, galena, and chalcopyrite along with iron sulphides. Native gold can be observed on fractures in the arsenopyrite crystals. The large quartz veins (Blind, Little, and Tunnel) are generally white to steel-grey in color, show colloform banding, and have fine-grained iron sulphides dispersed throughout.

The BLT shear zone passes within 10 m (33 ft) of the Golden Zone breccia pipe and for at least 120 m horizontal, the shear passes within 30 m of the pipe. The BLT or "Shear Zone" part of the resource estimate averages 0.83 g/t Au and 2.65 g/t Ag.



Avidian (2016)

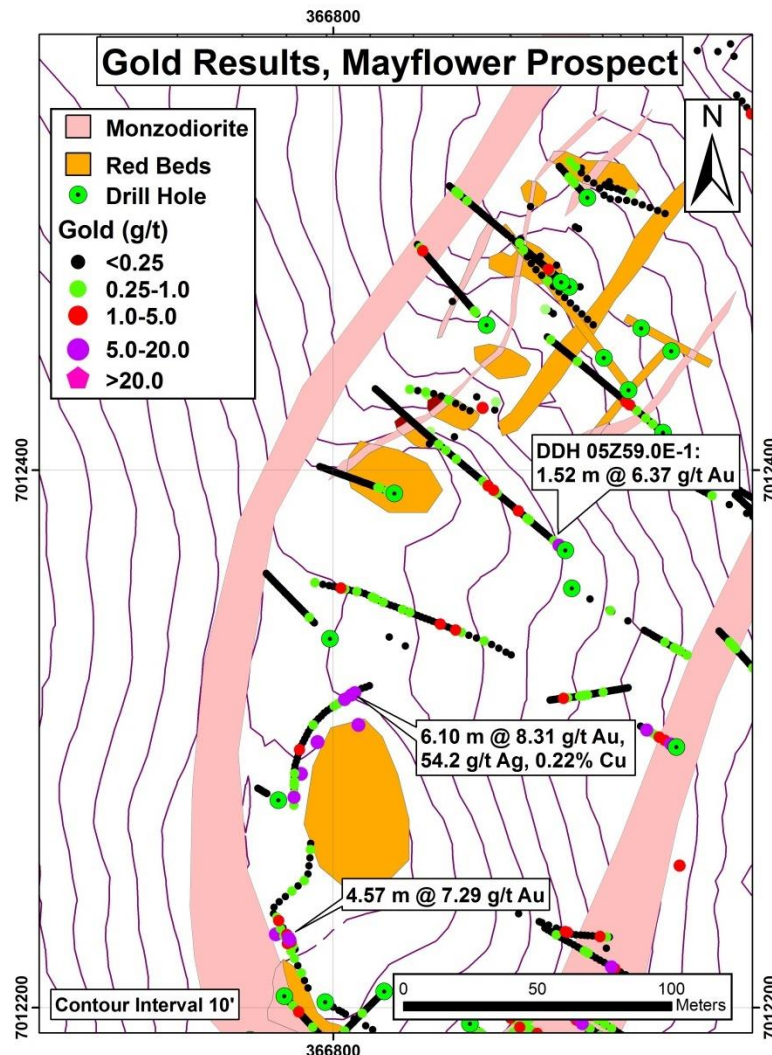
Figure 7-14: BLT Prospect - historic rock samples (surface grabs, trenches and drill holes)

7.3.1.7 Mayflower prospect

The Mayflower prospect is a composite target consisting of veins, skarn, and one or more mineralized dikes along the Mayflower lobe approximately 420 m northeast of the Breccia Pipe (Figure 7-6). The Mayflower lobe is a dike-like projection from the Golden Zone plug which trends 030°, subparallel to or an offset of the nearby BLT lobe/dike. It first follows a northwest striking pre-mineral fault which arcs northward into a northeast direction paralleling the sedimentary strata (Figure 7-15). Mineralization at Mayflower consists of steeply dipping alteration and veining; host rocks are predominantly hornfelsed conglomerate with 1 – 3% sulphides, dikes of biotite quartz monzodiorite, and zones of gossanous rock up to 5 m thick. The skarn generally contains low gold grades (<0.25 g/t Au) except for areas with quartz veins where grades can reach up to 34.3 g/t Au with minor Ag (Hawley and Van Wyck, 2002). The highest gold values tend to be along a trend paralleling the Mayflower and BLT lobes/dikes approximately mid-way between them. The best trench assays are in NNW structures within or



adjacent to thinner dikes and include high grade intervals of 7.29 g/t Au over 4.57 m and 8.31 g/t Au, 54.2 g/t Ag and 0.22% Cu over 6.10 m (Figure 7-15).



Avidian (2016)

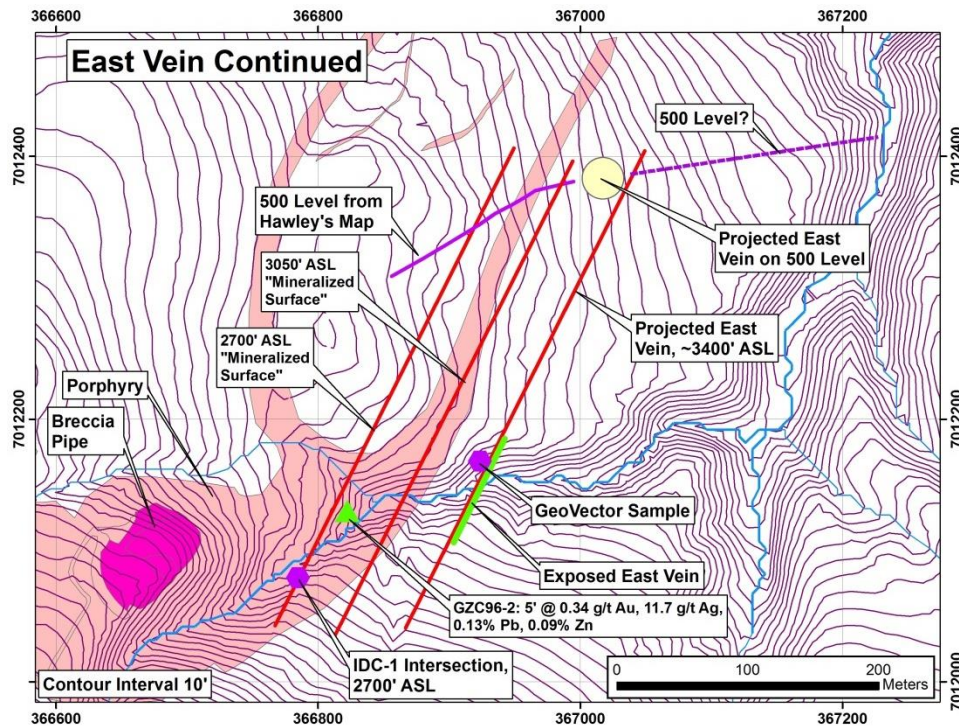
Figure 7-15: Mayflower Prospect - historic rock samples (surface grabs, trenches and drill holes)

7.3.1.8 East Vein

The East vein is located approximately 100 m northeast of the breccia pipe (Figure 7-6). This vein outcrops in Bryn Mawr Creek at 950 m asl and is also exposed in the 500-level haulage drift. The vein strikes N25°E, dips 75°NW, and is least 300 m long. The East vein ranges from about 0.3 m wide to locally greater than 2.4 m wide. The dominant mineralogy of this vein is pyrite, arsenopyrite, sphalerite, galena, and chalcopyrite. About 80% of the vein material consists of sulphide, and the other 20% is quartz or hornfelsed host rock. Samples of the vein material including grabs, taken by the U.S. Bureau of Mines and previous Golden Zone operators, range from 2.74 to 30.86 g/t Au, 41.14 to 291.43 g/t Ag, <0.1% to 4.4% Pb and <0.1% to 3.9% Zn. The plane of the vein can be projected to intersect a down hole interval of 4.57 m at 5.83 g/t Au, 89.37



g/t Ag, 0.93 % Pb and 1.60 % Zn in drill hole IDC-01 (Figure 7-16). Avidian has traced the East Vein an additional 150 m to the southwest and collected additional grab samples (Section 9).



Avidian (2016)

Figure 7-16: East Vein Prospect - historic rock samples (surface grabs, trenches and drill holes)

7.3.1.9 Geochemical Anomaly South (GAS) prospect

The GAS prospect covers an area approximately 490 m N-S by 180 m E-W approximately 440 m south of the Breccia Pipe (Figure 7-6). It is characterized by a 90 m by 120 m 1976 Homestake multi-element geochemical soil anomaly (gold, arsenic, lead, and silver) between the Golden Zone intrusive plug, host of the Breccia Pipe, and a second exposure of biotite granodiorite porphyry approximately 460 m to the south. Soil samples collected by previous operators typically were in the 5 - 50 ppb Au range, although several "bullseyes" of 50 - 200 ppb Au were defined that generally coincide with areas of breccia, small diorite dikes and plugs, and/or local skarn formation. Homestake soil samples containing values ranging from below detection to 2.2 g/t Au were collected at the northern end of the prospect and at its southern end where outcrops of altered and mineralized quartz diorite porphyry returned gold values ranging from <0.005 to 2.13 g/t Au.

The GAS prospect geology consists of northeast-trending interbedded conglomerates and hornfels sediments. At numerous locations, northeasterly trending dikes and small plugs of quartz diorite are observed intruding the sediments. Zones of breccia, up to approximately 100 m long and wide, are common. Local skarn formation (epidote + quartz) is observed in the breccia open spaces. Arsenopyrite stringers have been noted locally. Tourmaline alteration is locally common, particularly in areas of brecciated fine-grained hornfelsed sediments.



Drill hole GAS96-1 explored a series of biotite granodiorite dikes up to at least 15.2 m true thickness that are strongly anomalous in silver, lead, zinc, and arsenic. It intersected a dike averaging 5.5 g/t Ag, and approximately 700 ppm As, 657 ppm Pb, and 1287 ppm Zn over a drill intercept length of 21.3 m. A deeper 1.5 m intercept from 74.7 – 76.2 m assayed 1.17 g/t Au, 10.4 ppm Ag, >10,000 ppm As and was anomalous in Pb, Sb, and Zn. Drill hole GAS96-2 was collared about 200 m north of hole GAS96-1 and cut a 21.3 m dike that was anomalous in lead, zinc, and silver and bottomed in rocks anomalous in Au, Ag, Cu, and Bi. The highest gold assay was 0.58 g/t from 108.2 – 109.7 m. Several intervals in the hornfelsed conglomerate were weakly anomalous with respect to silver, arsenic, copper, lead and zinc including a 7 m drill interval from 108.2 – 115.2 m grading 0.21 g/t Au, 1.4 ppm silver, 86 ppm lead, and 178 ppm zinc in conglomerate cut by quartz-sulphide veinlets. In 2006, Hidefield completed drill hole 6004_ between the 96 series holes, which returned an down hole interval of 9.45 m averaging 1.89 g/t Au, 18.03 g/t Ag, and approximately 1853 ppm As, 976 ppm Pb, and 720 ppm Zn.

Based on soil geochemical distribution patterns, strong alteration of the hornfelsed topographic ridge and geophysical responses, previous workers have inferred that the Golden Zone and southern GAS intrusive bodies may be linked at shallow depth by a buried igneous mass. The brecciation and local mineralization observed at surface could signify fluid-leakage from a possible buried intrusive into the hornfelsed cap.

7.3.2 Long Creek Corridor Prospects

7.3.2.1 Copper King

The Copper King prospect was discovered in 1917 and was originally referred to as the Hector prospect (Capps, 1919). It lies approximately 1,750 m south of the Breccia Pipe. Replacement pyrrhotite-bornite-chalcopyrite mineralization is hosted by hornfels and andesite located east of a 180 to 210 m wide quartz porphyry granite body, the largest known intrusive body in the Long Creek corridor. Intense quartz stockwork occurs locally in the granite and the remainder of the intrusive contains sparsely distributed quartz veinlets. The main exposure of the granite is in a small canyon; it is largely covered by glacial drift to the west. In 2001, a rubble crop of hornfels and skarn was discovered on a steep side-hill on the west side of the intrusive. A grab sample of sulphide-rich skarn from this area returned 117.94 g/t Au, 1,044.69 g/t Ag, 3.56% Cu, 6,680 ppm Bi, 4,800 ppm Pb, 1,850 ppm Zn, and 50 ppm W (Hawley and Van Wyck, 2002).

Host rocks for the Copper King mineralization are white, green to lavender-colored very fine-grained, siliceous calc-silicate hornfels with common swirls and bands of dark green skarn minerals and disseminated pyrrhotite. Limy, well-indurated hornfelsed conglomerate or sedimentary breccia is also present. Remnant bedding of sediments typically strikes northwest and dips about 30°NE. Locally associated with bedding are dark green to black epidote-diopside gold-copper skarns as replacements on the bedding planes or on other receptive horizons. A few exposures of limy conglomerate contain disseminated chalcopyrite blebs and associated gold values ranging from <0.005 to 5.14 g/t. These represent stratigraphically controlled targets at Copper King.

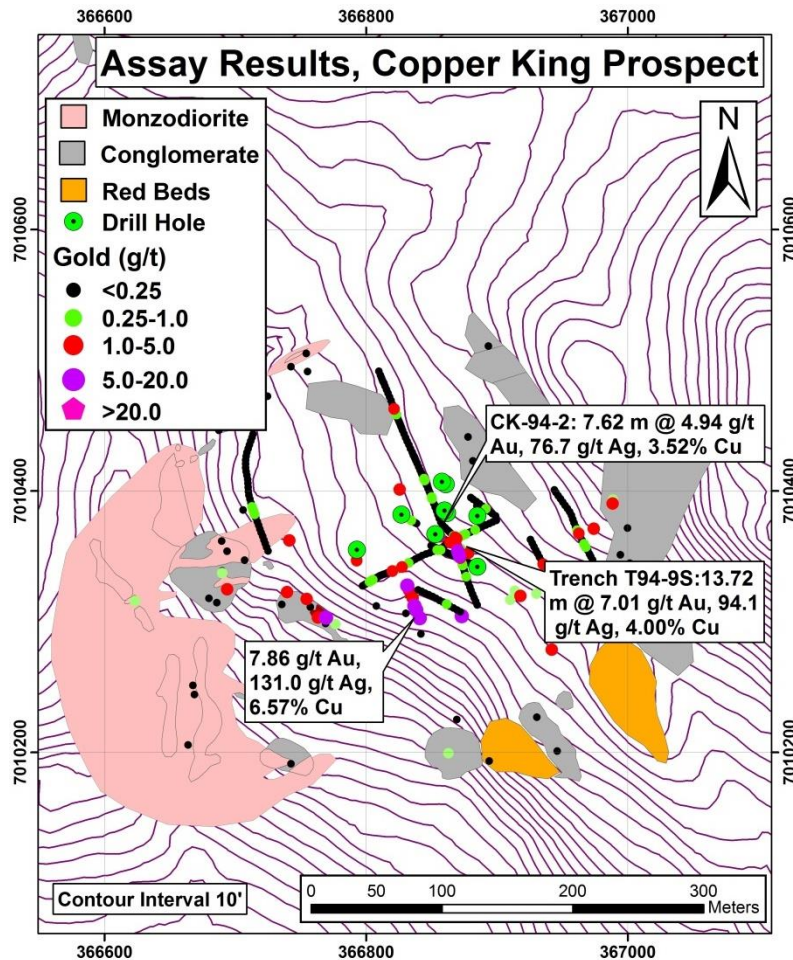


Geochemically, the Copper King skarns are strongly anomalous in gold, silver, copper, zinc, bismuth, tin, tungsten, and locally molybdenum. The skarns are almost devoid of arsenic, which is unusual compared to most Golden Zone mineralization. The average values of historical skarn rock grab samples taken at Copper King are approximately: 4.11 g/t Au, 120 g/t Ag and 3.47% Cu (Founie and Keller, 1997).

Granitic quartz-eye porphyry dikes and small plugs are commonly observed immediately north, west, and south of the Copper King prospect. These dikes are locally sulphide-bearing and can be found within the skarn bodies, suggesting a close relationship with the mineralization. Narrow but poorly exposed dikes or masses of coarse-grained gabbro were found approximately 100 m to the west of the main exposures of mineralized skarn, along strike of the bedding. Skarn-bearing hornfelsed sediments, slightly anomalous in gold and copper, host these dikes.

Other targets at the Copper King prospect include sheeted quartz+chalcopyrite veined porphyry, quartz-eye porphyry with disseminated chalcopyrite and common native copper and copper oxides on fractures, and numerous other small sulphide and calcium-magnesium silicate skarn bodies.

During 1994, Addwest Minerals completed over 457 m of surface trenching and 175.6 m of core drilling on the largely overburden-covered Copper King prospect (Figure 7-17). Drill hole CK-94-2 intersected a downhole interval of 7.62 m grading 4.94 g/t Au, 76.7 g/t Ag and 3.52% Cu including 1.52 m at 18.86 g/t Au, 180 g/t Ag and 7.29% Cu. The 1994 results were followed up in 1996 with two additional trenches (T96-12 & T96-13, totalling 94.8 m) and 6 shallow vertical drill holes (CK96-1 through CK96-6). Significant mineralization was not intersected however core from the 1996 season indicated that dips of the mineralized unit are likely to be moderate to steeply dipping, subparallel to the core.



Avidian (2016)

Figure 7-17: Copper King Prospect - historic rock samples (surface grabs, trenches and drill holes)

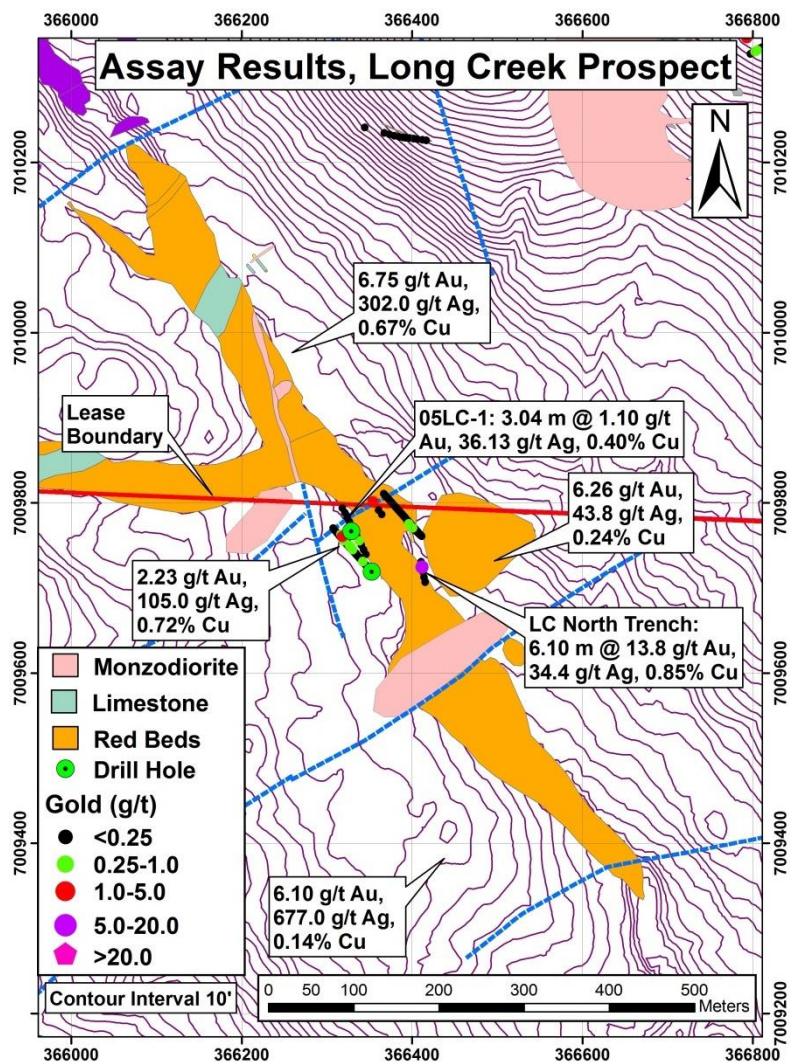
7.3.2.2 Long Creek

Before 2001, very little exploration work had been conducted in the Long Creek prospect area approximately 2,350 m south of the Breccia Pipe. A 1996 reconnaissance soil program consisting of nine east-west lines on 152 m centres was completed over what is now known as the Long Creek prospect. Anomalous copper values of 100 to >300 ppm were detected over an area measuring 245 – 305 m east-west by 455 m north-south. Unfortunately only two of the nine reconnaissance lines were in areas where glacial drift had been eroded and quality soil samples could be collected. Samples collected in glacial drift were almost invariably barren (Founie and Keller, 1997; Hawley and Van Wyck, 2002).

Bedrock exposures along the steep bluffs bordering Long Creek consist of bleached (sericite?) pyrite ± chalcopyrite-bearing conglomerate and hornfelsed argillite cut by small bodies of quartz porphyry granite. Alteration is bounded to the south and north by northeast trending faults and is covered to the northeast and southwest by glacial drift. Small isolated outcrops of sulphide-bearing hornfels and quartz porphyry have been mapped throughout the Long Creek Valley.



In 2003, 6.1 m chip channel samples were collected along 61 m of trench on the west side of Long Creek and 152.4 m on the east side of the creek. Grab samples ranged from 54 to 9,960 ppm Cu, <5 to 1,190 ppb Au and weakly anomalous silver, arsenic and bismuth (Freeman, 2004). The 6.1 m chip channel sampling returned values ranging from 27 to 8,460 ppm Cu, <0.005 to 13.8 ppm Au, 0.1 to 34.4 ppm Ag and 35 to 681 ppm As. Soil samples collected on 7.6 m centres at the interface between Quaternary glacial till and bedrock along the banks of Long Creek returned values ranging from 63 to 6,270 ppm Cu, <5 to 1,810 ppb Au, 32 to 642 As and <2 to 67 ppm Bi (Freeman, 2004). The highest metal values were hosted in Triassic "red bed" conglomerates. Piper 2005 drill hole 05LC-1 returned a 3.05 m downhole interval grading 0.79 g/t Au, 29.6 g/t Ag and 0.36% Cu including 1.52 m grading 2.05 g/t Au, 55.8 g/t Ag and 0.50% Cu (Figure 7-18).

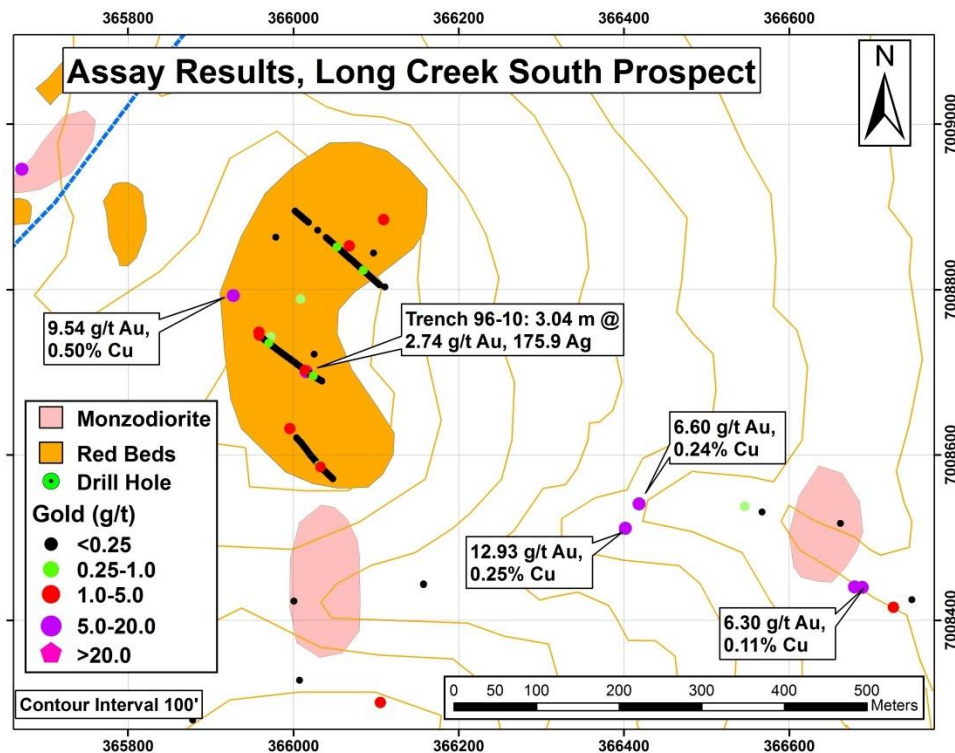


Avidian (2016)

Figure 7-18: Long Creek Prospect - historic rock samples (surface grabs, trenches and drill holes)

7.3.2.3 South Long Creek

The South Long Creek prospect is approximately 3,400 m south of the Breccia Pipe on the south side of Long Creek. It has been explored by soil sampling and three trenches with a total length of 341 m. Sulphide veins were exposed in the trenches and similar veins were found in a steep canyon east-southeast of the trenches. Veins at South Long Creek are primarily arsenopyrite but also contain visible chalcopyrite and minor sphalerite. They are anomalous in Au, Ag, Bi, Cu, Pb, Zn, Sb and locally Sn. Trench 96-10 returned a 3.05 m interval grading 2.74 g/t Au and 175.9 g/t Ag (Figure 7-19). Vein grab samples from this trench contained 4.39 – 9.53 g/t Au and up to 612 ppm Bi. A grab sample collected from a 0.6 m vein exposed about 610 m south of the trench area contained 11.9 g/t Au. The extent of mineralization at South Long Creek is currently unknown. The area is fairly well exposed by talus and outcrop with sporadic alteration or bleaching; only small patches of glacial drift are present. Soil samples from the area are sporadically anomalous in gold, arsenic and bismuth.



Avidian (2016)

Figure 7-19: South Long Prospect - historic rock samples (surface grabs, trenches and drill holes)

7.3.3 Silver Dikes Corridor Prospects

7.3.3.1 Silver Dikes

The Silver Dikes prospect was discovered in 1996 in the Silver Dikes Corridor in the eastern part of the Property approximately 4,000 metres east of the Breccia Pipe (Hawley and Van Wyck, 2002). Mineralization is associated with a series of steeply dipping, northeast striking quartz-bearing granitic dikes ranging up to 7.6 m wide hosted by Jurassic hornfelsed argillite and greywacke. The dikes are exposed in the canyon of a small creek which follows the trace of the



Chulitna Fault. Hawley and Van Wyck (2002) report that the dikes contain pyrite, galena and sphalerite and return silver values up to 58 g/t along with anomalous antimony and tin. Avidian's 2016 grab sample results ranged from <0.5 to 321 g/t silver (Section 9.2). This prospect has not been mapped and no ground geophysics has been completed over it. A 2006 soil survey showed a large area that is weakly anomalous in Zn, Pb, Ag, and Sb. The anomaly is open-ended to the north. The high silver values, anomalous tin values and the lack of associated arsenic, copper and gold suggest the Silver Dike prospect may be related to Tertiary intrusives such as those at Coal Creek, Ohio Creek and the Ready Cash prospects in the southern part of the Upper Chulitna District (Figure 7-5).



8. DEPOSIT TYPES

Mineralization at the Golden Zone property includes a hydrothermal breccia pipe, sulphide rich quartz veins, shear zones, sulphide bearing skarn alteration, brecciated porphyry intrusive, and disseminated sulphides in coarse sediments, representing different chemical and structural trap zones within a broader gold mineralizing system or systems, associated with the intrusive activity concentrated in this area. Nearly all of the gold and base metal mineralization is related to high level porphyry intrusive activity of either late Cretaceous age (primarily gold with minor copper) or early Tertiary age (primarily copper, with less gold).

The Golden Zone hydrothermal breccia pipe deposit contains three main types of breccia: (1) low-grade silica rich breccia, (2) medium to high-Au grade arsenopyrite dominated breccia, and (3) low-to moderate copper-silver chalcopyrite-pyrrhotite dominated breccia. The pipe is separated from the host monzodiorite porphyry by very sharp contacts. The porphyry outside the breccia pipe has sheeted sulphide veins concentric to the pipe and very locally disseminated chalcopyrite. The hornfelsed sedimentary and volcanic rocks at the outer porphyry contact are also mineralized with veins and disseminated sulphide deposits.

Skarn and carbonate replacement mineralization are developed at the Copper King and Long Creek prospects, at Mayflower extending north of the Breccia Pipe, at Banner, and at the Wells Vein in the Riverside prospect. The Silver Dikes Ag-Sb-Sn prospect occurs as a series of northeast-trending, quartz-bearing, granitic dikes.

Mineralization and granitic intrusions at Golden Zone Property share geologic characteristics with mineral deposits and intrusions elsewhere in the Tintina gold belt and with other alkali-rich intrusive series worldwide. Plutonic rocks appear to be the source of gold and base metals, while faults, breccias, and lithologic contacts have acted as conduits to localize the mineralization in concentrations of potential economic significance.

Based on a site visit to the Property, Lang (2016) suggests that the variety of mineralization styles at the Property (particularly the Breccia Pipe deposit and other prospects of the Golden Zone and Long Creek corridors) are best represented by the reduced intrusion related gold system (RIRGS) model. Lang reports:

- The Golden Zone Property hosts mineralization that is apparently magmatic-hydrothermal in origin and compatible with the RIRGS models.
- The mineralization styles and distribution at the Golden Zone Property can be compared favourably to Tintina Gold Province RIRGS deposit analogues including the Estelle and Donlin Creek deposits in Alaska and the Dublin Gulch deposit in the Yukon.
- The high-grade Au-As quartz veins in the Golden Zone Corridor and the Cu-Au veins in the Long Creek Corridor are a 'proximal style' of RIRGS mineralization which may be laterally and/or vertically (above) proximal to intrusion-hosted sheeted vein deposits similar to Fort Knox or Dublin Gulch.



- The most prospective settings for bulk tonnage deposit styles are where NE-trending faults are intersected by NW-trending cross faults. There is evidence that this relationship may have influenced formation of the Golden Zone deposit.
- Mineralization on the Property likely formed at a relatively shallow paleodepth, which will influence the geochemical, geophysical and mineralogical patterns and properties useful to exploration.

8.1. REDUCED INTRUSION RELATED GOLD SYSTEM DEPOSIT MODEL

As described by Hart (2007):

“Reduced intrusion-related gold systems (RIRGS) are characterized by widespread arrays of sheeted auriferous quartz veins that preferentially form in the brittle carapace at the top of small plutons, where they form bulk-tonnage, low-grade Au deposits characterized by a Au-Bi-Te-W metal assemblage, such as the Fort Knox and Dublin Gulch deposits. RIRGS also include a wide range of intrusion-related mineral deposit styles (skarns, replacements, veins) that form within the region of hydrothermal influence surrounding the causative pluton, and are characterized by proximal Au-W-As and distal Ag-Pb-Zn metal associations, thereby generating a zoned mineral system. Plutons that generate RIRGS form in tectonic settings characterized by weak post-collisional extension behind a thickened continental margin. Such settings are also conducive to the formation of W deposits, and thereby generate a regional Au-W metallogenic association, but individual plutons can generate both W and Au deposits. Associated magmas are diverse and have characteristics of I-, S-, and A-type granitoids. The most prolific Au systems comprise metaluminous, moderately reduced, moderately fractionated, biotite>>hornblende>pyroxene quartz monzonites that have mixed with volatile-rich lamprophyric melts. The magmas have a reduced primary oxidation state that form ilmenite-series plutons. This reduced state causes associated sulphide assemblages to be characterized by pyrrhotite, and quartz veins that host methane-rich inclusions. RIRGS mostly form at a depth of 5 to 7 km and generate mineralizing fluids that are low salinity, aqueous carbonic in composition and are, therefore, unlike typical porphyry Cu deposits. The RIRGS class was developed on well-studied examples in Yukon and Alaska.”

8.1.1 Empirical Model

A schematic empirical model for RIRGS (Figure 8-1) incorporates observable features from the “type” deposits and occurrences in Yukon and Alaska. The key empirical features that are considered as critically distinguishing attributes have been extracted from Hart (2007) with minor edits and are listed below.

System

Mineralization extends beyond the limits of the intrusion, and locally beyond the thermal aureole, yielding a broad mineralizing system. The size of the system is generally dictated by the limits of the thermal aureole, commonly several kilometres across, but can be dependent on the depth of erosion with the broadest and best developed mineralization at the top of or above the pluton.



Diverse Mineralization

Differing styles of mineralization emphasize not only the extent of the mineralizing system, but also the involvement of the country rock and its role in creating mineral system diversity. Chemically reactive and/or physically brittle sedimentary strata result in a diversity of mineralization styles, whereas the causative pluton is typically dominated by sheeted vein sets.

Zoned Deposit Types

RIRGS typically deposit metals in intrusion-hosted, contact, pluton-proximal, and pluton-distal settings, and thus exhibit a predictable zonation of differing deposit styles outward from the central, mineralizing pluton (Figure 8-1). Skarns and replacements are generally pluton proximal, with an increase in structural control on more distal mineralization. There is also crustal-scale vertical zonation, with epizonal occurrences forming at shallower levels.

Concentric Metal Zoning

Predictable metal signatures develop broad-scale zoning surrounding and above a central causative pluton, due primarily to the effects of steep thermal gradients on fluid chemistry (Figure 8-1). Gradients and metal zones are steeper on the sides of the pluton and broadly developed above it. Zoning is somewhat analogous to that identified in porphyry systems.

Metal Associations

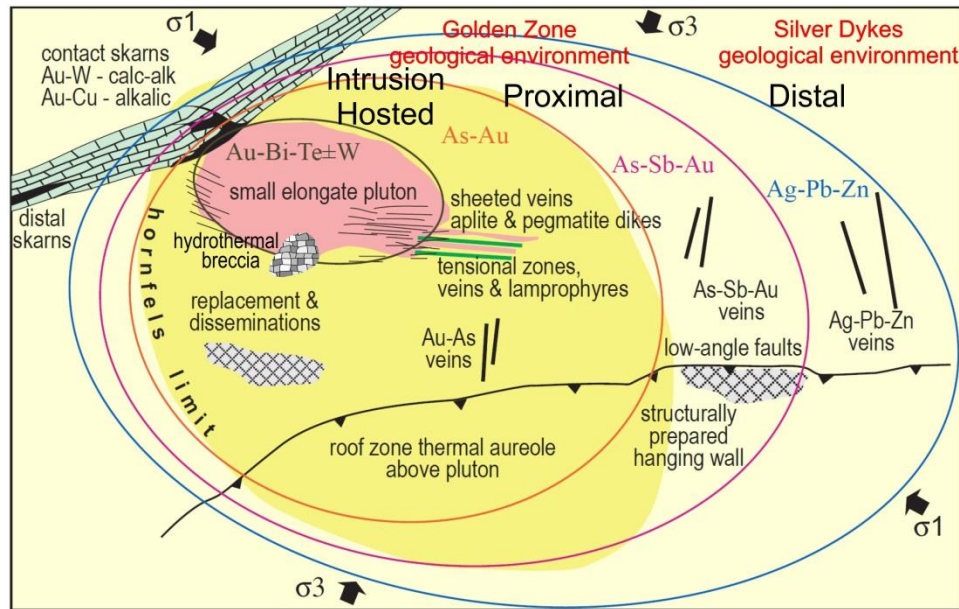
Gold, as well as W, may form ore, but Au does not directly correlate with W. Bismuth and Te are enriched in intrusion-hosted Au ores and correlate with Au. Arsenic enrichments characterize hornfels-hosted mineralization and form regional-scale geochemical anomalies.

Pluton Features

Associated plutons are generally small and solitary, with “smoking gun” characteristics that indicate they were the source of the hydrothermal fluids. Features that provide evidence of high volatile contents, fractionation, and fluid exsolution include the presence of hornblende in biotite granitoids, textural and grain-size variations, aplite and pegmatite dikes, tourmaline veins,miarolitic cavities and vugs, greisen-style alteration, unidirectional solidification textures, and cupola-hosted mineralization.

Redox State

The RIRGS are associated with felsic, ilmenite-series plutons that lack magnetite and, as such, have low magnetic susceptibilities, low ferric:ferrous ratios (<0.3), and flat aeromagnetic responses. Associated mineralization has a reduced character, with pyrrhotite commonly the dominant sulphide mineral and fluids that may locally contain methane.



Modified from Hart (2007)

Figure 8-1: General plan model of the RIRGS based on deposits from the Tintina Gold Province of Yukon and Alaska.

Of note are the wide range of mineralization styles and geochemical variations that vary predictably outward from a central pluton. Scale is dependent on the size of the exposed pluton, which is likely to range from 100 m to 5 km in diameter.

8.1.2 Key Exploration Criteria for RIRGS

Key exploration criteria for RIRGS have been extracted from Hart (2007) with minor edits and are listed below.

Geological

At the regional scale, exploration should focus on the foreland parts of orogenic belts where felsic plutons have intruded ancient continental margins, inland of accreted terranes or collisional zones. These regions may be historically better recognized for their W or Sn metal tenor, and may also host Ag-rich veins or Au placers that are associated with the plutons. All mineralizing plutons that belong to the same suite or time interval are potential targets for RIRGS. Prospective plutons were preferably intruded deeper than ~5 km to keep these low-volume hydrothermal systems contained in the melts and subsequently focused during exsolution. RIRGS associated with shallower plutons are characterized by more diffuse epizonal styles of mineralization and a Au-As-Sb-Hg signature. Associated plutons will have low primary oxidation states and are, therefore, easy to differentiate from magnetite-series plutons of true continental margin arcs that have associated Cu-Mo porphyry deposits.

At the deposit scale, targeting the pluton's carapace is critical such that those plutons that are barely unroofed are considered the best locations for RIRGS. Roof zones above plutons are also highly prospective, but may be difficult to target as they are rarely noted on geological maps. Deeply eroded plutons, recognized by their large circular-shaped



surface areas, are unlikely to yield large-tonnage intrusion-hosted sheeted vein deposits, but may nevertheless have hornfels with Au-bearing skarns or veins. Understanding the structural controls on pluton emplacement may be key to developing targets and preferred deposit orientations within a magmatic-hydrothermal system.

Geochemical

Regional geochemical surveys are very good at identifying mineralizing plutons, particularly where characterized by broad As aureoles, such as those of the Tombstone Gold Belt. Placer Au may occur in related drainages in significant amounts (>100 000 oz). Placer scheelite is also a feature of many occurrences. Soil geochemistry can be extremely effective locally at delineating potential mineralization within the area of a causative pluton, and recognizing mineralized portions of its hornfelsed zone. Soil lines should cross the extensional direction that may mimic a pluton's elongation direction. Gold grades can be up to several grams per tonne in some soils, but low anomaly thresholds (25 ppb Au) may be required for surveys with low geochemical response. Anomalous Bi, Te, or W values, or multi-element analyses using metal ratios or factor analysis can assist in interpretation of vein types or predicting more proximal (i.e., intrusion-hosted) ores in areas with poor rock exposure.

Geophysical

Geophysical methods that identify Au mineralization in RIRGS are still elusive, but potential-field methods are ideal at assisting interpretations of geological settings where ores could be found. Regional aeromagnetic surveys are effective at identifying unmapped or unexposed plutons or locating roof zones. Associated plutons have low magnetic responses; however, pyrrhotite concentrations in hornfelsed aureoles may yield doughnut-shaped signatures for exposed plutons and simple bulls-eyes for roof zones of unexposed plutons. This response is pronounced in reduced sedimentary rocks where pyrrhotite formation is more likely but otherwise may be lacking.

Within intrusion-hosted systems, geophysical exploration methods have largely yielded ambiguous to poor results. Within the hornfelsed aureoles, however, magnetic methods allow identification of major structures as lows produced by alteration of pyrrhotite. Induced polarization methods are useful for identifying reactive and sulphidized zones within the hornfels when targeting disseminated-, replacement-, or skarn-type ores."



9. EXPLORATION

As of the effective date of this Report, Avidian has conducted field exploration including due diligence related to property acquisition, prospecting and sampling programs. Mineral exploration conducted by previous operators within the Property area is discussed in Section 6 (History).

Avidian has advised Howe that as of the date of this Report, it has spent in excess of the minimum required work commitment of US\$ 200,000 as per the work commitment obligation in the purchase agreement relating to this property.

9.1. AVIDIAN 2016 REPEAT (CHECK) VERIFICATION SAMPLING PROGRAM

Avidian completed a repeat (check) verification sampling program in July and August 2016 comprising 166 samples of archived drill core collected from 9 historic diamond drill holes. This work was undertaken at the request of ACA Howe for the purpose of providing some verification and quality assurance of historical assay values obtained by Enserch, Golden Zone Inc. and Union Pacific, between 1980 and 1988 and used to inform the mineral resource estimate. Samples collected by these companies account for 78% of gold assays collected at the Golden Zone Project prior to 1994 for which no QA/QC data is available.

Table 9-1 summarizes the selected repeat sample intervals. A proportionally representative set of samples were collected for each mineralized rock type. Samples were typically taken across selected entire mineralized intervals, from one low grade edge to another, such that selection bias was minimized and samples were representative of the material they were collected from. The selected intercepts were dispersed throughout a 200 m by 150 m area centred on the Golden Zone deposit and to a depth of 150 m below surface. Check sample intercept positions are located using survey data collected by original operators.

Check samples were selected from archived core remaining after original sampling. To ensure the most representative sample and assay results, the original sample intervals were replicated and the entire remaining half core sample was collected to avoid an increased gold and silver variance associated with a smaller quarter core volume. Prior to destructive testing, Avidian took detailed photographs of the core in both a wet and dry condition. Avidian will retain coarse reject and pulps from these samples.

Enserch drill hole BXP-16 was sampled under the supervision of Mr. McGarry. Mr. McGarry collected and sealed the sample bags with ladder lock ties and maintained supervision of BXP-16 samples until delivery by hand to the ALS Chemex Fairbanks preparation facility. Subsequent drill holes were sampled under the supervision of Dr. Tom Setterfield, Avidian's Vice President of Exploration.

The results and interpretation of the repeat sampling program are presented in Section 12.2 (2016 Repeat Sampling Program).



Table 9-1: Summary of Samples Selected for Repeat Analysis

Company	Hole ID	From (ft)	To (ft)	Interval (ft)	N Samples Au	N Samples Ag
Enserch	BXP-15H	275	350	75	15	15
	BXP-16	230	370	140	28	28
	BXP-9	50	185	135	27	23
Golden Zone Inc.	GZ87-16B	432	546	114	17	17
	GZ87-21	36	118.5	82.5	15	13
	GZ87-9	87	182	95	16	15
United Pacific	GZ88-13	169	249	80	17	17
	GZ88-2B	214	276.5	62.5	13	13
	GZ88-8	45	162.5	90.5	18	18

9.2. AVIDIAN 2016 GRAB SAMPLING PROGRAM

Avidian collected 256 grab samples in July and August, 2016 from historically known and newly discovered zones of mineralization on the Property. Samples ranged from 0.60 to 3.01 kg in weight and an attempt was made to collect samples that were representative of the exposed mineralization in any given outcrop or historic trench utilizing the traditional hammer and chisel. Sample density was irregular, and sample bias may have arisen because of the inconsistency of exposure of any given zone. The grab sampling methodology was sufficient to meet the objective of the sampling program which was to confirm the property-wide distribution of mineralization as documented in historical reports, and to develop preliminary ideas on the controls of the mineralization. Analytical results ranged from below detection to 177.5 g/t Au, below detection to 2550 g/t Ag, 6 ppm to 9.54% Cu, 2 ppm to 14.3% Pb, 3 ppm to 7.17% Zn and 5 ppm to 26.9% As. Sample locations and results are shown in Figures 9-1 to 9-5; summary results by prospects are provided in Table 9-1.

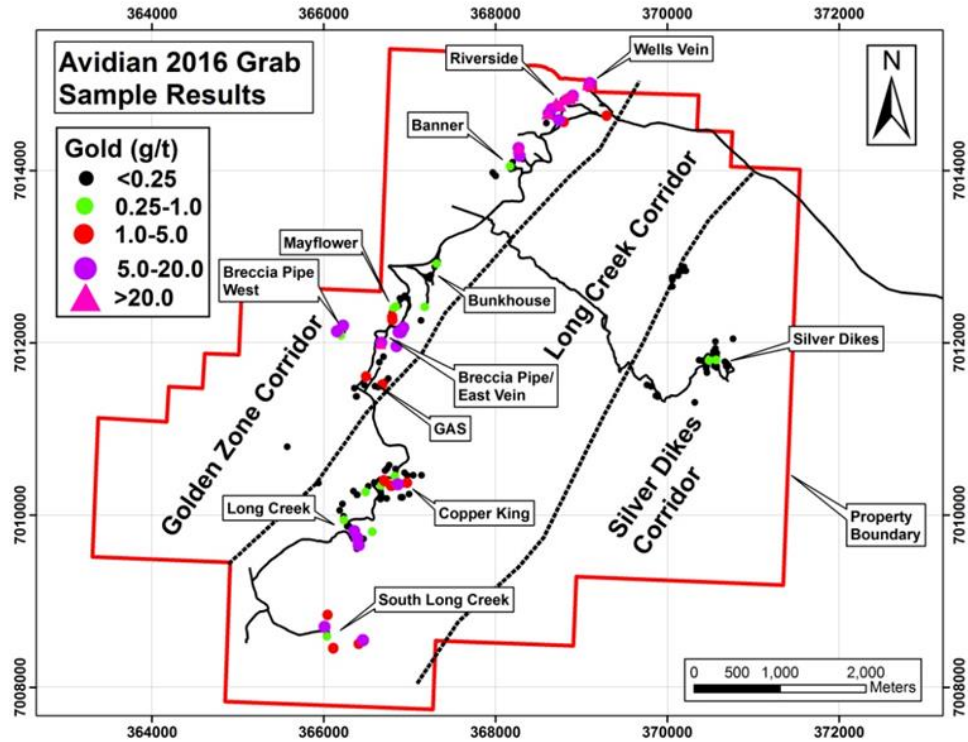


Figure 9-1: Avidian 2016 Gold Assays

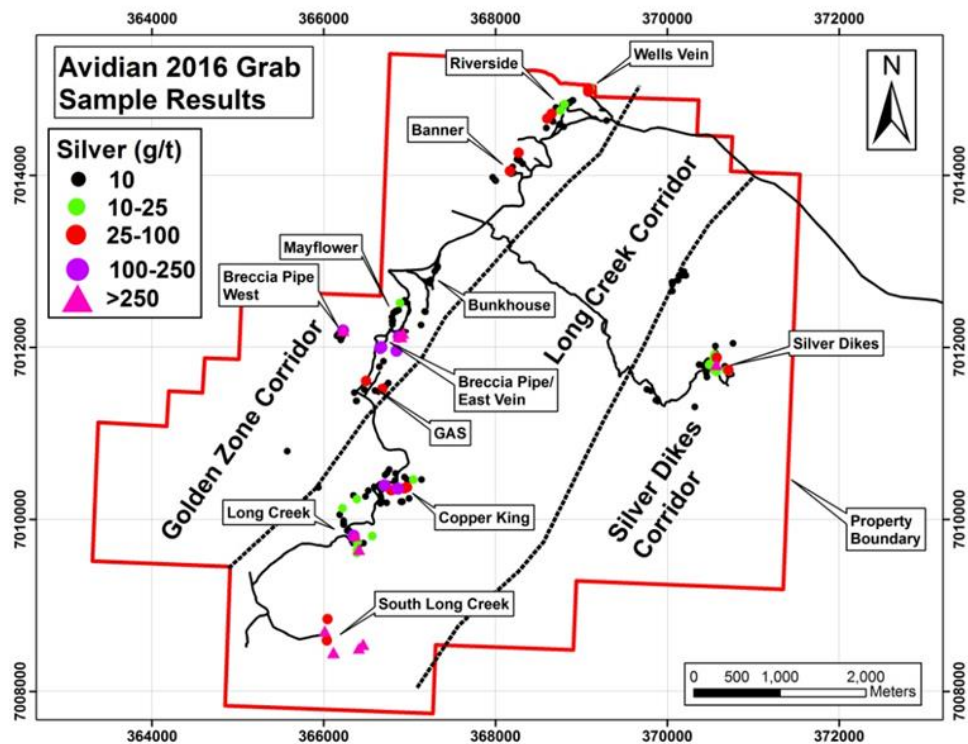


Figure 9-2: Avidian 2016 Silver Analytical Results

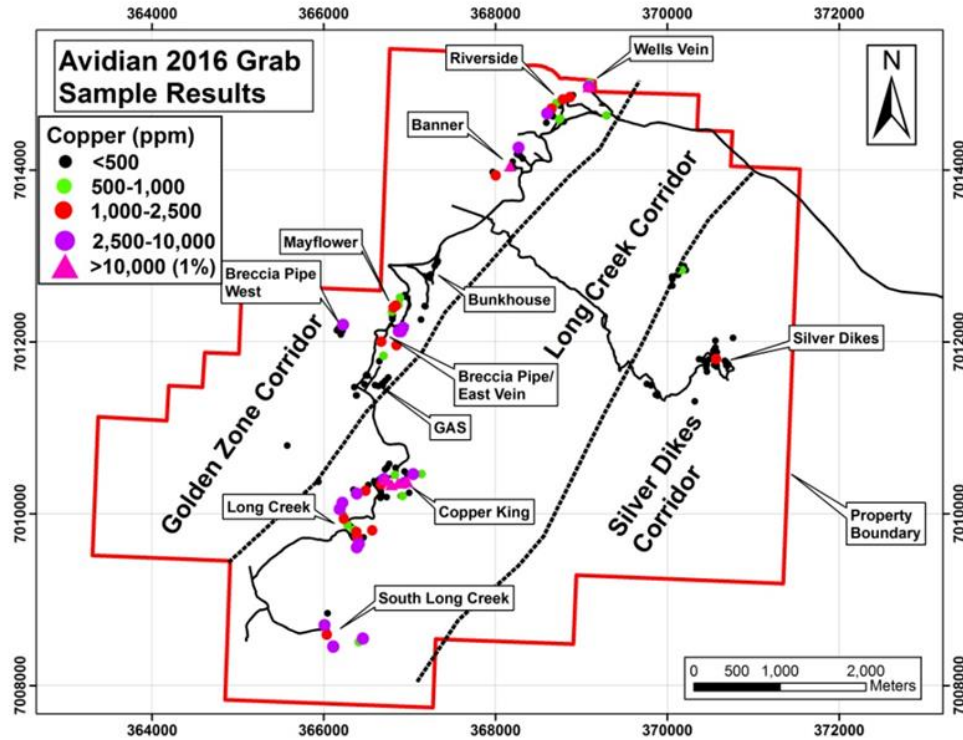


Figure 9-3: Avidian 2016 Copper Analytical Results

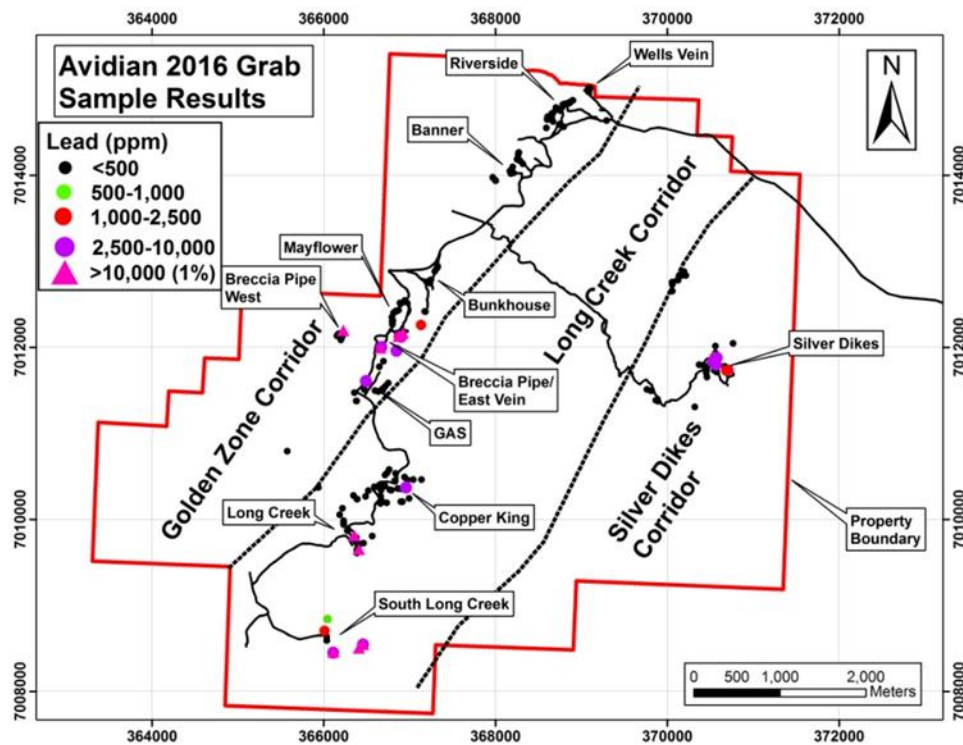


Figure 9-4: Avidian 2016 Lead Analytical Results

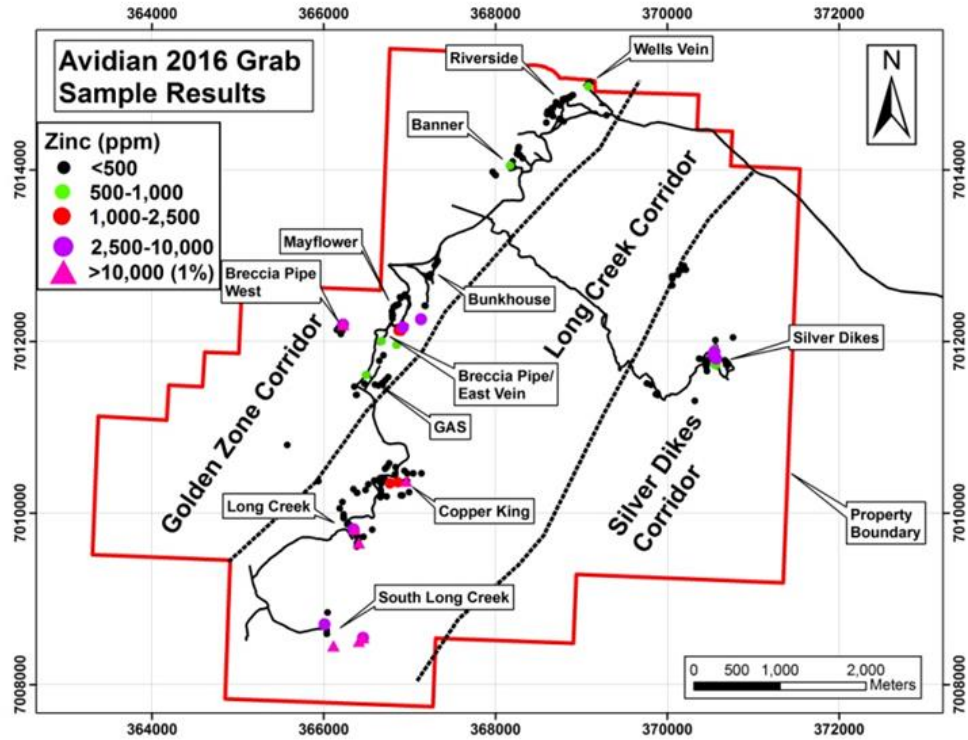


Figure 9-5: Avidian 2016 Zinc Analytical Results



Table 9-2: Avidian Grab Sample Results of Selected Elements from Named Prospects

Prospect	n	Au g/t	Ag g/t	As ppm	Bi ppm	Cu ppm	Mo ppm	Pb ppm	S %	Sb ppm	Zn ppm
Golden Zone Corridor											
Wells Vein	6	1.65 to 37.8	9.7 to 43.3	6,530 to 269,000	29 to 678	25 to 17,900	<1 to 13	2 to 333	0.81 to >10.0	10 to 448	9 to 634
Riverside	31	0.07 to 177.5	<0.5 to 49.6	290 to 224,000	<2 to 1,135	12 to 8,160	<1 to 8	7 to 323	0.05 to >10.0	<5 to 593	3 to 92
Banner	15	<0.05 to 31.3	<0.5 to 59.2	8 to >10,000	<2 to 499	16 to 17,550	<1 to 6	<2 to 71	<0.01 to >10.0	<5 to 619	21 to 603
Bunkhouse	9	<0.05 to 0.31	<0.5 to 7.2	153 to 6,080	<2 to 41	14 to 335	<1 to 1	<2 to 30	0.06 to 3.16	27 to 346	21 to 80
Mayflower	12	<0.05 to 1.61	<0.5 to 10.4	78 to >10,000	<2 to 13	41 to 1,440	<1 to 5	5 to 343	0.06 to 5.41	9 to 48	52 to 253
Breccia Pipe South	3	0.94 to 33.2	13.5 to 186	>10,000	7 to 241	65 to 2,440	1 to 2	751 to 16,300	1.15 to 6.31	241 to 1,100	301 to 512
Breccia Pipe West	9	0.16 to 19.00	<0.5 to 506	226 to >10,000	<2 to 13	31 to 4,940	1 to 3	18 to 84,800	0.15 to 7.16	14 to >10,000	30 to 37,800
East Vein	11	0.13 to 15.95	<0.5 to 463	1,310 to 212,000	<2 to 708	42 to 4,720	<1 to 8	12 to 43,600	0.08 to >10.0	19 to 2,560	44 to 7,780
GAS	14	<0.05 to 4.27	<0.5 to 47.5	18 to 4,470	<2 to 5	9 to 173	<1 to 3	15 to 5,870	<0.01 to 0.24	<5 to 1,560	34 to 501
Long Creek Corridor											
Copper King	38	<0.05 to 6.86	<0.5 to 192	<5 to 2,250	<2 to 199	6 to 95,400	<1 to 85	<2 to 6,480	0.01 to >10.0	<5 to 104	9 to 71,700
Copper King West	5	<0.05 to 0.46	<0.5 to 11.9	<5 to 62	<2 to 24	44 to 7,370	<1 to 88	4 to 12	0.16 to 5.46	<5 to 9	86 to 209
Long Creek	26	<0.05 to 9.55	<0.5 to 422	25 to >10,000	<2 to 233	24 to 8,920	<1 to 9	<2 to 36,900	0.11 to >10.0	<5 to 1,710	29 to 28,600
South Long Creek	14	<0.05 to 17.25	3.8 to 2,550	584 to >10,000	<2 to 414	275 to 5,870	<1 to 2	37 to 143,000	0.37 to >10.0	10 to >10,000	86 to 69,300
Silver Dikes Corridor											
Silver Dikes	44	<0.05 to 0.30	<0.5 to 321	25 to >10,000	<2 to 24	6 to 2,260	<1 to 12	7 to 4,540	0.01 to 1.18	<5 to 2,370	56 to 4,870

Significant gold grades (>5 g/t) occur in most prospects, from the Wells Vein in the northern tip of the Property to the South Long Creek prospect in the southern part of the Property (Figure 9-1; Table 9-2), a distance of more than 7 km. Gold values are highest in the Golden Zone Corridor, but significant gold grades also occur locally within the Long Creek Corridor. Significant silver grades (>25 g/t) occur in all prospects except Bunkhouse (Figure 9-2; Table 9-2); the best silver



values occurred in arsenopyrite-rich veins of the South Long Creek prospect. High grade silver is also a feature of veins proximal to the breccia pipe (Breccia Pipe West and East Vein; Table 9-2). All prospects on the Property contain very high arsenic with values typically increasing more or less proportionally with increasing gold.

Significant copper grades ($>0.25\%$; 2,500 ppm) are not as widespread, but do occur in many prospects over the length of the Property (Figure 9-3; Table 9-2). The Copper King prospect has the most consistently high copper values. Noteworthy lead and zinc values ($>0.25\%$) are more restricted than copper or gold and silver (Figure 9-4 and Figure 9-5; Table 9-2). Highest lead values occur in veins near the Breccia Pipe and at South Long Creek. Significant zinc also occurs at these localities, and at Copper King (Figure 9-5; Table 9-2). Molybdenum is generally very low, except for in the Copper King area, where small quantities of molybdenite were noted in quartz veins and in a quartz porphyritic intrusion. Highest bismuth values generally occur in the Golden Zone Corridor, but it is also locally anomalous within the Long Creek Corridor (Table 9-2).

Many of the Golden Zone prospects produced positive grab sample results. This is particularly true of Wells Vein/Riverside, East Vein, Breccia Pipe West and South, Copper King and South Long Creek. However, grab sample results from the Bunkhouse, Mayflower and to a lesser extent GAS prospects were less encouraging. The Silver Dikes prospect contained locally significant silver and elevated lead and zinc, but overall, the grab sample results were not encouraging. Tin, reported to occur at Silver Dikes, was not provided in the analytical package used by Avidian.

9.3. AVIDIAN 2017 GRAB SAMPLING PROGRAM

From the period of June to early August 2017, Avidian carried out a grab sampling program on a property wide scale to further refine the 2016 grab sampling program and determine if the extent of the prospects could be expanded.

As of the Amended Effective Date of this report approximately 1,000 grab and 175 channel samples had been collected of which 350 sample results are pending. Figure 9.5 shows the sample location and grades of gold results that have been received to date. Analytical results for gold ranged from below detection to 38.3 g/t Au. A new trench with 1 m channel samples at Riverside east of the main vein system returned 54.8 m @ 0.51 g/t Au including 5.0 m @ 3.82 g/t Au (true width is unknown)

No interpretation of results or an analysis of other elements has been carried out nor will be until the entire 2017 work program has been completed.

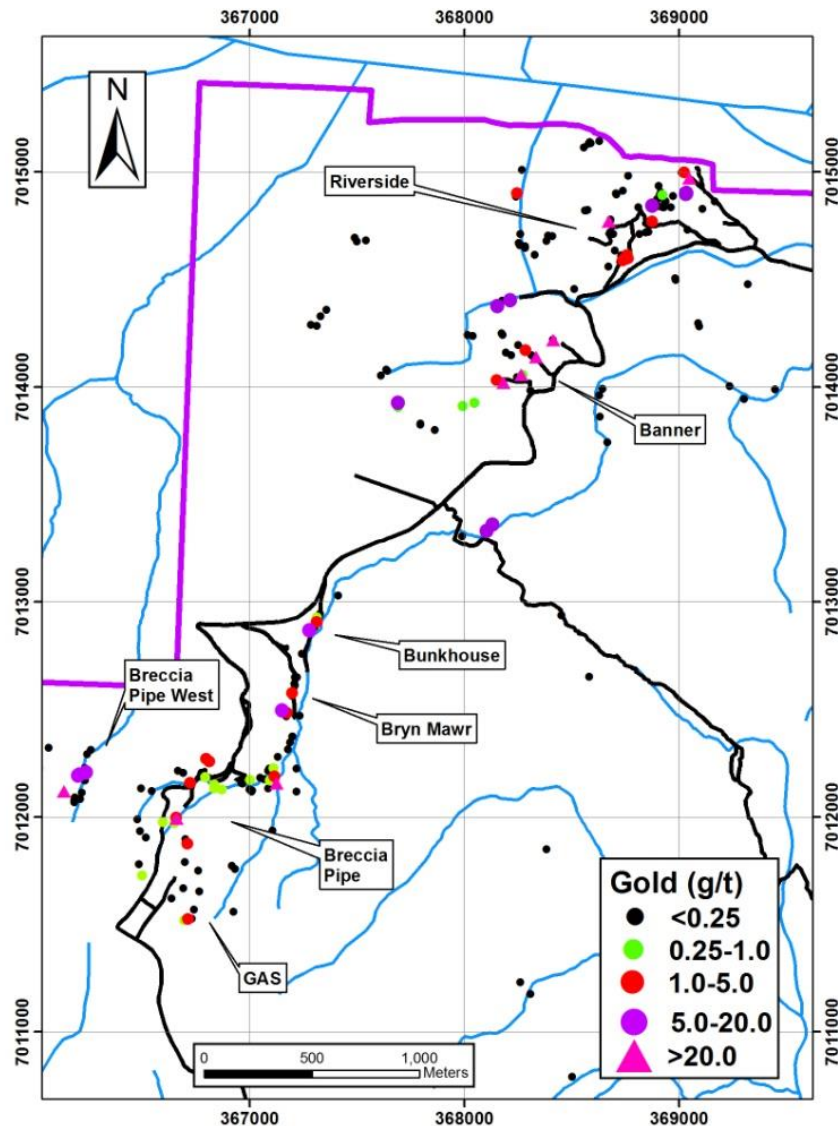


Figure 9-6: Avidian 2017 Preliminary Gold Grab Sample Results

9.4. AVIDIAN 2017 INDUCED POLARIZATION (IP) GEOPHYSICAL PROGRAM

In preparation for the 2017 field season and following the pre-program compilation and planning of the 2017 drill program, Avidian determined that an Induced Polarization (IP) ground geophysical program (approximately 43 line km) should be implemented on a property scale to better define the recommended drill target areas and assist in targeting potential intrusive rocks that are interpreted to be the source for the known mineralization and possible host to a large tonnage RIRGS deposit. Figure 9-7 shows the location of the IP lines, which is comprise 5.35 km at Riverside, 2.3 km at Bunkhouse, 16.15 km in the Breccia Pipe area, 16.6 km at Copper King/Long Creek and one 2.3 km line at South Long Creek. Line spacing was 100 m at Riverside and the Breccia Pipe, 200 m at Copper King and 250 m at Bunkhouse; in addition, 50



m spaced shorter lines were surveyed locally at Copper King. A pole-dipole array was used at Riverside, Bunkhouse and the Breccia Pipe area; a poly-pole (modified pole-dipole) array was used at Copper King/Long Creek and South Long Creek. A dipole-dipole array was used for the detailed Copper King lines. “a” spacing was 25 m at Riverside, Bunkhouse and the detailed Copper King lines, and 50 m elsewhere. Readings were completed to depths of n=10.

It is anticipated that the final geophysical interpretative report will be available to Avidian in late October 2017.

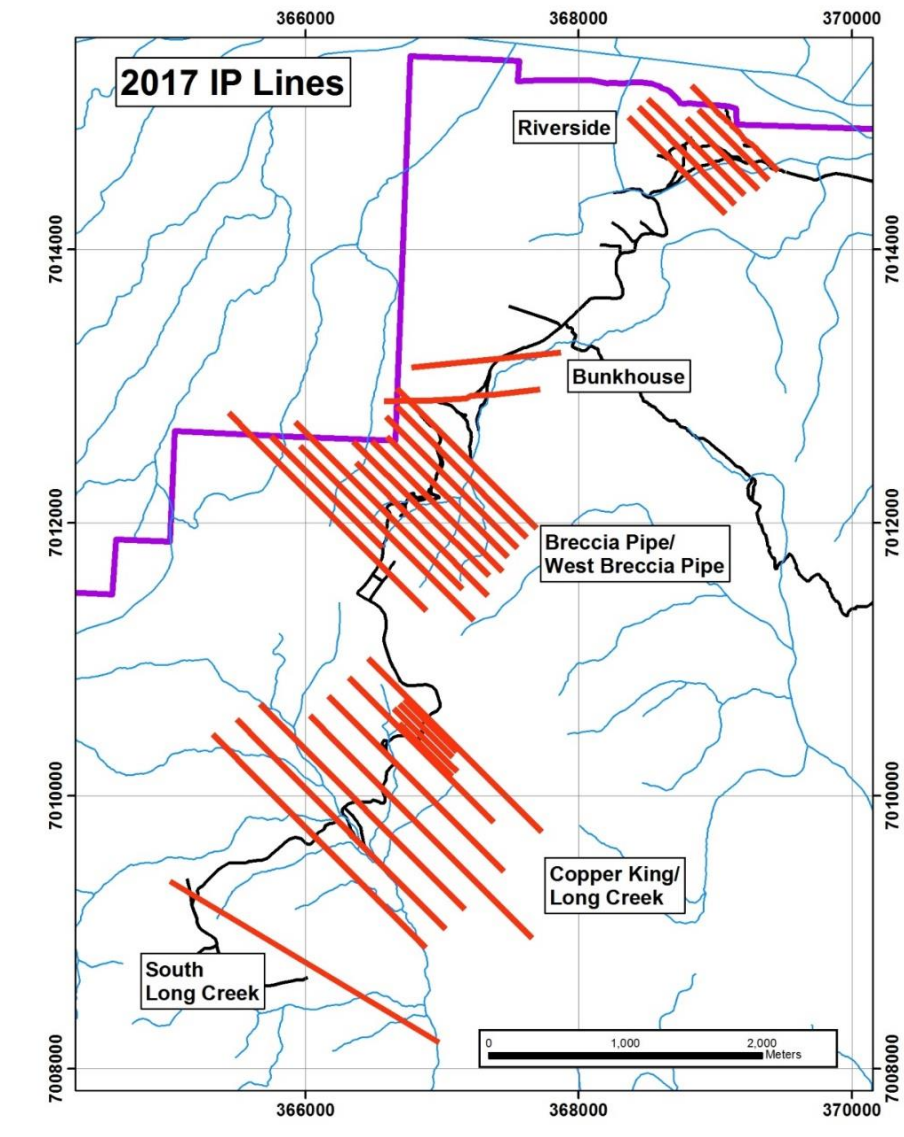


Figure 9-7: Avidian 2017 Induced Polarization Survey



10. DRILLING

As of the effective date of this Report, Avidian had not conducted any drilling on the Golden Zone Property.

Drilling conducted by previous operators on the Property is discussed in Section 6 (History).

Subsequent to the effective date of this Report, Avidian commenced its 2017 drill program in mid-June 2017 in order to be able to complete work during the short field season.

Subsequent to the effective date of this report and as of the Amended Effective Date (August 17, 2017), 2,100 m of core drilling has been completed with an estimated 200 additional metres remaining to the end of the field season for a total of 11 core holes. Figures 10-1 and 10-2 show the location of the 2017 drill holes. Drill hole collar details are presented in Table 10-1. As of the Amended Effective Date, approximately 1,500 core samples have been collected and submitted for assay, of which only 400 sample results have been received and the balance pending. Assay turnaround is approximately 4 to 6 weeks; therefore, it is expected that complete assay results from the drilling program will not be available until approximately mid-November. Partial assay results have been received for the first two holes of the program and are reported below.

Results from the upper part of hole GZ 17-01 within the Breccia Pipe mineralization returned 15.05 m @ 3.73 g/t Au and 20.3 g/t Ag (approximately 9 m true width) from 169.6 to 183.65 m including 4.0 m @ 8.15 g/t Au and 35.58 g/t Ag from 179.65 to 183.65 m (true width 2.4 m). Further downhole from 199.7 to 249.7 m disseminated mineralization in the targeted host porphyry returned 50 m @ 0.73 g/t Au and 4.2 g/t Ag (approximately 29 m true width) including 2 m @ 3.61 g/t Au and 19.2 g/t Ag from 244.7 to 246.7 m (true width 1.2 m).

Results from the upper part of hole GZ 17-02 returned 67 m @ 4.93 g/t Au and 15.3 g/t Ag (approximately 46 m true width) from 89.4 to 156.4 m within the Breccia pipe mineralization, including 46.4 m @ 6.57 g/t Au and 20.5 g/t Ag (approx. 32 m true width) from 110.0 to 156.4 m and 7.0 m @ 15.10 g/t Au and 34.91 g/t Ag from 136.0 to 143.0 m (true width 4.8 m).

As of the Amended Effective Date of this report, it is premature to comment any further on the 2017 drilling until all assays have been received and an interpretation and compilation of all results from the current drilling program has been completed including incorporation of historic drilling program results.



Table 10-1: 2017 Drill Holes

Area	Hole Number	UTM Easting	UTM Northing	Azimuth	Dip	Length (m)	Status
Breccia Pipe/BLT	GZ17-01	366672	7012219	135	-55	371.00	complete
Breccia Pipe/BLT	GZ17-02	366592	7012168	135	-45	298.20	complete
BLT	GZ17-03	366803	7012155	73	-45	53.07	complete
BLT	GZ17-03A	366803	7012156	73	-55	41.10	complete
BLT	GZ17-03B	366804	7012155	77	-50	225.40	complete
East vein	GZ17-04	366897	7012191	135	-45	275.50	complete
BLT	GZ17-05	366802	7012355	147	-45	228.00	complete
Bunkhouse	GZ17-06	367345	7012940	230	-60	153.70	complete
Bunkhouse	GZ17-07	367335	7012953	140	-70	81.30	complete
Bryn Mawr shear	GZ17-08	366966	7012108	135	-45	185.5	complete
Breccia Pipe/BLT	GZ17-09	366643	7012120	135	-45	150.0	in progress
BLT offset	GZ17-10	366919	7012608	135	-45	150.0	proposed
Riverside	GZ17-11	368851	7014858	105	-45	125.0	proposed

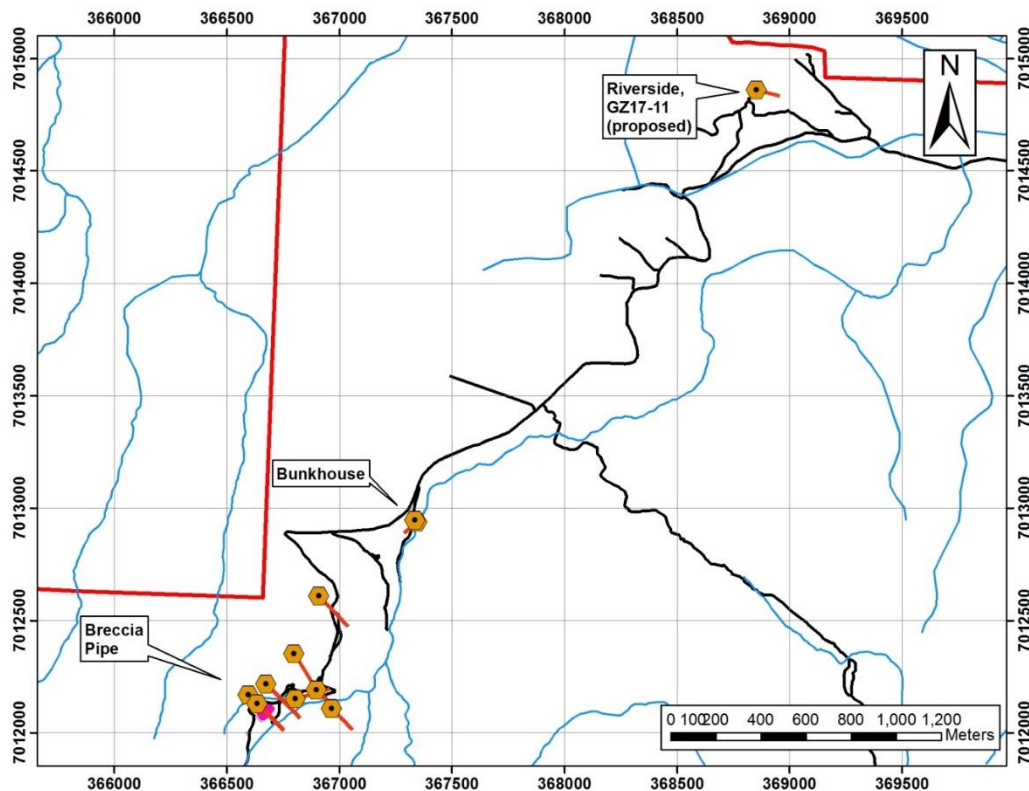


Figure 10-1: Avidian 2017 Drill Hole Locations

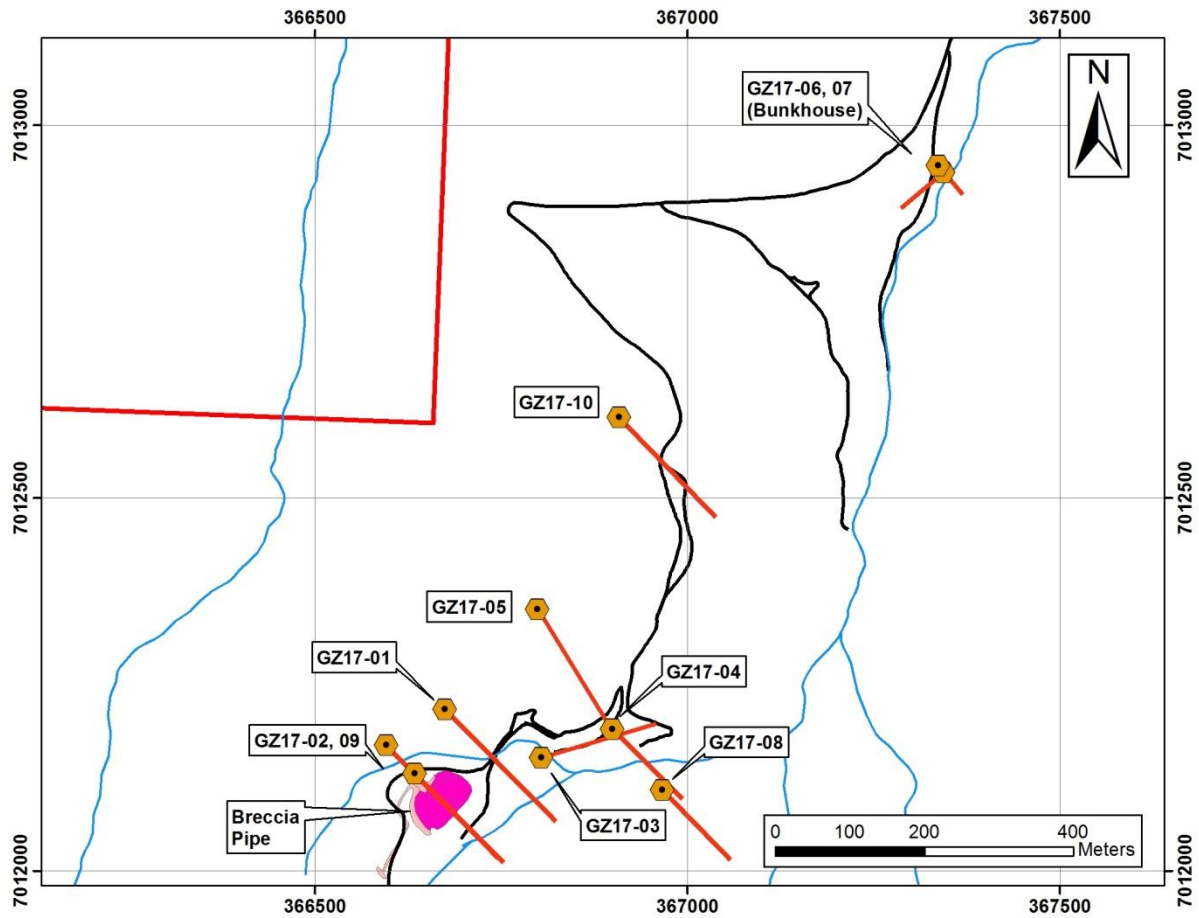


Figure 10-2: Avidian 2017 Drill Hole Locations – Bunkhouse, Breccia Pipe Area



11. SAMPLE PREPARATION, ANALYSES AND SECURITY

As of the effective date of this Report, Avidian has conducted limited field exploration including due diligence related to property acquisition and initial prospecting. Mineral exploration conducted by previous operators within the Property area is discussed in Section 6 (History).

Avidian completed a check sampling program comprising 166 samples collected from nine historic diamond drill holes in July and August 2016. Avidian also completed an initial prospecting sampling program consisting of 256 grab samples. Avidian's sample preparation, analyses and security protocols and procedures are discussed below. A brief discussion of historical sample preparation, analyses and security protocols and QA-QC procedures utilized by previous operators is also presented.

11.1. AVIDIAN 2016

11.1.1 Sample Security

Security of samples prior to dispatch to the analytical laboratory is maintained by limiting access of un-authorized persons. Samples were transported from the field and stored in a secure storage area at the base camp on the Property. Detailed records of sample numbers and sample descriptions provide integrity to the sampling process. Labelled samples bags were packed in polypropylene rice bags and sealed. Samples remained under the supervision of Avidian's consultants until the end of the field program when the samples were delivered by Avidian's consultants to ALS Minerals (ALS) Fairbanks preparation laboratory, 1060 Bush Street, Fairbanks, Alaska. ALS completed sample preparation operations at the Fairbanks location, employing bar coding and scanning technologies that provided complete chain of custody records for every sample.

Howe is of the opinion that the security and integrity of the samples submitted for analysis are uncompromised, given the adequate record keeping, storage locations, sample transport methods, and the analytical laboratories' chain of custody procedures.

11.1.2 Sample Preparation and Analysis

Samples are prepared at ALS Global's Fairbanks facility and sample pulps are forwarded to the ALS Mineral Laboratory in North Vancouver, British Columbia for analysis. The Fairbanks laboratory is individually certified to standards within ISO 9001:2008. The North Vancouver analytical facility is individually certified to standards within ISO 9001:2008 and has received accreditation to ISO/IEC 17025:2005 from the Standards Council of Canada (SCC) for methods including: Fire Assay Au by Atomic Absorption (AA); Fire Assay Au and Ag by Gravimetric finish; Aqua Regia Ag, Cu, Pb, Zn and Mo by AA; and Aqua Regia Multi-element by ICP and MS. Sample preparation follows industry best practices and procedures. The analytical methods used are routine and provide robust data associated with a high degree of analytical precision.

ALS and its employees are independent from Avidian. Avidian personnel and consultants and contractors are not involved in sample preparation and analysis.



It is Howe's opinion that security, sample collection, preparation and analytical procedures undertaken on the Golden Zone Property during 2016 by Avidian are appropriate for the sample media and mineralization type and conform to industry standards.

11.1.2.1 Rock Chip and Drill Core Samples

At the Fairbanks facility, the sample is logged in the tracking system, weighed, dried and prepared using preparation code PREP-31. The rock sample is finely crushed to better than 70% passing a 2 mm (Tyler 9 mesh) screen. A split of 250 g is taken using a riffle splitter and pulverized to better than 85% passing a 75 micron (Tyler 200 mesh) screen. Compressed air is used to clean the equipment between samples. Barren material is crushed between sample batches. ALS then forwards a split of the sample pulp to the North Vancouver Mineral Laboratory for analysis.

Rock samples are analysed as follows:

- Gold Fire Assay – Gravimetric Finish (ALS Code Au-GRA21)
 - A 30 gram prepared sample is fused with a mixture of lead oxide, sodium carbonate, borax, silica and other reagents in order to produce a lead button.
 - The lead button containing the precious metals is cupelled to remove the lead.
 - The remaining gold and silver bead is parted in dilute nitric acid, annealed and weighed as gold.
 - Lower detection limit: 0.05 ppm; Upper detection limit: 1,000 ppm
- Multi-Element 4-Acid ICP-MS/AES Analysis (ALS Code ME-ICP61)
 - A prepared sample (0.25 g) is digested with perchloric, nitric, hydrofluoric and hydrochloric acids. The residue is topped up with dilute hydrochloric acid and the resulting solution is analysed by inductively coupled plasma-atomic emission spectrometry. Results are corrected for spectral inter-element interferences.
 - Four acid digestions are able to dissolve most minerals; however, although the term “near- total” is used, depending on the sample matrix, not all elements are quantitatively extracted. Detection limits presented below:



Table 11-1: Multi-element 4-Acid ICP-AES Analysis Detection Limits – ALS Code ME-ICP61

Element	Detection Limits (ppm)	Element	Detection Limits (ppm)	Element	Detection Limits (ppm)	Element	Detection Limits (ppm)
Ag	0.5-100	Cr	1-10,000	Na	0.01%-10%	Ti	0.01%-10%
Al	0.01%-50%	Cu	1-10,000	Ni	1-10,000	Tl	10-10,000
As	5-10,000	Fe	0.01%-50%	P	10-10,000	U	10-10,000
Ba	10-10,000	Ga	10-10,000	Pb	2-10,000	V	1-10,000
Be	0.5-1,000	K	0.01%-10%	S	0.01%-10%	W	10-10,000
Bi	2-10,000	La	10-10,000	Sb	5-10,000	Zn	2-10,000
Ca	0.01%-50%	Mg	0.01%-50%	Sc	1-10,000		
Cd	0.5-1,000	Mn	5-100,000	Sr	1-10,000		
Co	1-10,000	Mo	1-10,000	Th	20-10,000		

Overlimit results (copper, lead, silver and arsenic) are analysed by the following method:

- Ore-Grade 4-Acid ICP-AES Analysis (ALS Code xx-OG62)
 - A prepared sample is digested with four acids; the resulting solution is diluted to volume (100 ml) with de-ionized water, mixed and then analysed by inductively coupled plasma - atomic emission spectrometry or by atomic absorption spectrometry.
 - Cu - Lower detection limit: 0.001%; Upper detection limit: 40%
 - Pb - Lower detection limit: 0.001%; Upper detection limit: 20%
 - Zn - Lower detection limit: 0.001%; Upper detection limit: 30%
 - Ag - Lower detection limit: 1 ppm; Upper detection limit: 1,500 ppm
 - As - Lower detection limit: 0.001%; Upper detection limit: 30%

11.1.3 Avidian Quality Assurance and Quality Control

To monitor the accuracy and precision of analyses undertaken ALS, Avidian sequentially inserted Certified Reference Materials (CRMs) into the sample stream before shipment from the field at a rate of one in every 20th samples submitted. Gold and silver CRMs were obtained from CDN Resource Laboratories Ltd. of Langley, British Columbia, Canada. CRMs were received in individually vacuum sealed tin-top kraft bags containing 60 g of pulverized blended material.

CRM results are presented in Table 11-2. Higher grade CRM CDN-GS-5G returned gold and silver values within the accepted ± 2 standard deviation control limits and showed no obvious bias. CRM CDN-ME-17 returned two poor results for gold that were higher than the control grade of 0.45 g/t Au: sample L408839 returned a value of 0.85 g/t Au and sample L408860 returned a value of 0.79 g/t Au.

The number of CRMs analysed is small and it is not possible to make definitive comments regarding accuracy and precision at the ALS laboratory. However, results indicate that the



gravimetric FA technique is appropriate for higher gold grades but may have less precision at lower gold grades as indicated by the results for CDN-ME-17. Results indicate that multi-element ICP analysis is appropriate for determination of silver grades.

Table 11-2: Summary of Avidian CRM Samples

Standard	Type	Control Grade (g/t)	Count	Mean (g/t)	Max (g/t)	Min (g/t)	Standard Dev	Avg. % Diff
CDN-ME-17	Gold	0.45	5	0.64	0.85	0.51	0.17	41%
CDN-GS-5G	Gold	4.77	4	4.95	5.05	4.73	0.15	4%
CDN-ME-17	Silver	38.20	5	38.54	39.20	37.30	0.73	1%
CDN-GS-5G	Silver	101.80	4	103.73	108.00	99.90	3.34	2%

Sample contamination may arise through cross contamination during sample preparation or laboratory analysis. Avidian monitored contamination through the routine insertion of coarse field blank material into analysis batches before shipment at a rate of approximately one every 20th sample. A total of nine (9) blank samples were submitted and returned assay values below the limit of detection for gold and silver.

11.2. PREVIOUS OPERATORS

Detailed descriptions of sample preparation, analyses and security protocols and procedures utilized by previous operators were not available in review documentation provided to the authors.

With the exception of samples analysed by Enserch, all drill and geochemical samples collected since 1972 have been analysed by independent commercial laboratories. Enserch utilized its own in-house laboratory. Drill core was logged and split on-site while reverse circulation samples were collected, split and logged on-site. Although sample security details varied from program to program, all samples were retained at the Golden Zone camp until shipped in various sized allotments to the geochemical laboratories (C.C. Hawley, oral comm. to Perry et al., 2005).

Beginning in 2005, samples from the Golden Zone property were submitted in batches of 20. Unique sample numbers were assigned to each sample to maintain anonymity of origin. Blanks were routinely inserted into the batches. Chain of custody was maintained from the Golden Zone property to the ALS Chemex (now ALS Global) preparation facility in Fairbanks.

For analyses used to estimate mineral resources at the Golden Zone deposit, approximately 62% percent of gold analyses have been determined by fire assay (“FA”) methods with a gravimetric finish, 32% have been determined by FA methods with an Atomic Adsorption Spectrometry (“AAS”) finish and 6% have been determined by FA methods with an Inductively Coupled Plasma (“ICP”) spectrometry finish. Additionally 5,376 samples were analysed by Cyanide Leach (“CN”) with an AAS finish, however these duplicate determinations are not used in the estimation of resources at the deposit.



Approximately 93% of all samples in the database are analysed for silver. Of these, 53% were determined by FA with a gravimetric finish, and 47% were determined by acid digest with an AAS finish. A small number of determinations were made by FA or acid digest with an AAS finish.

Approximately 75% of all samples in the database are analysed for copper by acid digest with an ICP or AAS finish. Approximately half of the drill hole and trench samples in the database have undergone multi-element geochemical analysis using an acid digest with an ICP finish.

Table 11-3: Number of Gold and Silver Determinations by Analysis Type

Company and Lab	Gold Analysis Type				Silver Analysis Type				QA/QC Available
	GRAV FA	AAS FA	ICP FA	AAS CN	GRAV FA	AAS FA	AAS Acid	ICP Acid	
Alix Resources Corp. (2011)									
ALS Chemex	4		1,086				2	1,086	Y
Hidefield Gold Plc. (2006 to 2007)									
ALS Chemex	1	1,016					1	1,006	N
Piper Capital Inc. (2005)									
ALS Chemex		2,135					7	2,117	Y
Addwest Minerals Inc. (1994)									
Chemex	3,232	2,246		5,376				5,471	Y
United Pacific Gold Co. (1988)									
Bondar-Clegg	2,400				2,372				N
Golden Zone Inc. (1984 -1987)									
Bondar-Clegg	984				815				N
Rainbow Labs Inc	291				272				N
Enserch Corp. (1980 - 1983)									
Enserch Liberty Mine Lab	1,847				1,653				N
Rainbow Labs Inc.	513				362				N
Homestake Mining (1976)									
Skyline	65				65				N
Rancher's Exploration Co. (1972 - 1974)									
Skyline	380				332				N
Union, SLC UT	74				74				N
Inspiration Development Co. (1972)									
Union, SLC UT	572				210				N
Golden Zone Mine Inc. (1936)									
Unknown	167					32			N
Grand Total	10,530	5,397	1,086	5,376	6,155	32	10	9,680	



It is the authors' opinion that the historic sampling programs were conducted to industry standards applicable at the time the work was conducted.

11.2.1 QA/QC Practices Employed by Previous Operators

The following section describes the various Quality Assurance and Quality Control ("QA/QC") practices employed by previous operators at the Golden Zone project. The availability of QA/QC data is described below for the following campaigns:

- **Alix** analyses at ALS Chemex account for 6% of the assay database provided to Howe: CRMs and Blanks amount to 10% of these samples.
- **Hidefield** analyses at ALS Chemex account for 6% of the sample database: Only a small number of blanks (8) and CRMS (8) submitted with holes 6005_, 6006_ and 6007 are available to Howe. It is not known if these few samples are part of a more comprehensive campaign not included in the data set provided, or if they represent the total QA/QC sampling undertaken by Hidefield.
- **Piper Capital** analyses at ALS Chemex account for 12% of the sample database: Core duplicates amount to 10% these samples.
- **Addwest** analyses at Chemex Ltd account for 31% of the sample database. Core duplicates amount to 10% these samples.

No independent QA/QC data exists for analyses of samples collected from the Golden Zone project prior to 1994 and which account for 45% of gold assays in the database. These include the Enserch, Golden Zone Inc. and United Pacific Gold exploration campaigns which together account for 35% of samples in the assay database provided to Howe, and are the subject of the data verification study described in Section 12.2.

11.2.1.1 Alix

In 2011 Alix submitted 1,086 core samples, 60 CRMs and 60 blank samples. Every tenth sample was a QA/QC sample amounting to 10% of all samples submitted.

CRMs

To monitor accuracy, CRMs are inserted sequentially into the sample stream before shipment from the field at a rate of one in every 20 samples submitted. A range of gold and silver CRMs were obtained from CDN Resource Laboratories Ltd. of Langley, British Columbia, Canada. CRMs were received in individually vacuum sealed tin-top kraft bags containing 60 g of pulverized blended material.

To check the accuracy of the 2011 laboratory results, Howe established control limits above and below the certified mean at the ± 2 standard deviations value for returned laboratory results. To maintain well constrained control limits, spurious outliers are not used to calculate standard deviations. CRM results are plotted in sequence with the control limits and the certified value of the CRM for gold and silver. The CRMs used and the assay results they returned are summarized in Table 11-4.

Control plots for gold CRMs are presented in Figure 11-1. Most CRMs returned values within the accepted ± 2 standard deviation control limits. There are a small number of outliers: CRM CDN-



GS-30B returned two values close to 10 g/t Au, significantly lower than the expected CRM grade of 29.69 g/t Au. Other results for this CRM are close to the expected grade and it is probable that the two spurious values are the result of a mislabelled CRM. Overall, CRMs indicate good assay precision with average deviations from the expected grade within 3%. A slight bias to under-reporting of gold grades is indicated in CDN-ME-2 and CDN-GS-5G with averaged assay values 3% below the expected grades of 2.10 and 4.77 g/t Au.

Control plots for silver CRMs are presented in Figure 11-2. Most CRMs returned values within the accepted ± 2 standard deviation control limits. Silver CRMs indicate reasonable assay precision but with consistent deviations from the expected grades. A bias to over-reporting of silver grades by ALS Chemex is indicated in CDN-ME-16 which returned average values 8% above the expected grade of 30.80 g/t Ag. For CDN-ME-17 which has a comparable silver grade of 38.20 g/t the bias to over-reporting of silver is 5% above the certified value.

For both gold and silver, average CRM assay results and the deviations identified, are within the certified confidence limits for each CRM.

Table 11-4: Summary of Alix CRM Samples

Standard	Type	Control Grade	Count	Mean	Max	Min	Standard Dev	Avg. % Diff
CDN-CM-11A	Gold	1.01	7	1.00	1.08	0.93	0.06	-1%
CDN-GS-30B	Gold	29.21	9	29.69	30.70	28.30	0.82	2%
CDN-GS-5G	Gold	4.77	14	4.64	4.99	4.35	0.19	-3%
CDN-ME-16	Gold	1.48	9	1.48	1.57	1.41	0.05	0%
CDN-ME-17	Gold	0.45	5	0.45	0.52	0.40	0.05	-2%
CDN-ME-2	Gold	2.10	13	2.04	2.11	1.86	0.07	-3%
CDN-GS-5G	Silver	101.80	14	99.80	105.00	92.00	2.88	-2%
CDN-ME-16	Silver	30.80	9	33.24	36.80	31.30	1.64	8%
CDN-ME-17	Silver	38.20	6	40.00	41.80	38.30	1.23	5%
CDN-ME-2	Silver	14.00	13	14.77	16.10	13.90	0.54	5%

Blanks

Alix inserted a blank sample into the drill core analysis batches before shipment at a rate of approximately one every 20th sample. Blank material was derived from sand-sized coarse reject material from barren rock samples.

As a rough guide, Howe suggests that blank samples should have analyses of less than 5x the detection limit. Howe suggests that the maximum acceptable value for the blank material be 25 ppb or 0.025 g/t gold. A blank sample that assays greater than the maximum acceptable value should be considered a failure.

Blanks sample analysis results are shown in Figure 11-3. Only one blank sample result is above 0.025 g/t Au. A value of 0.129 g/t Au was returned for blank sample 410006, which was inserted



directly after two high grade samples assaying 24.6 g/t Au and 6.35 g/t Au. This value may indicate possible contamination during sample preparation.

For silver, four blank samples returned values above 0.25 g/t Ag. Blank sample 410006 also returned a high silver value of 0.4 g/t Ag, after two high grade samples assaying 84.2 and 36.5 g/t Ag, indicating possible contamination during sample preparation. A cluster of three 0.3 g/t Ag blank samples is not associated with a high-grade batch and may be associated with poor analytical accuracy.

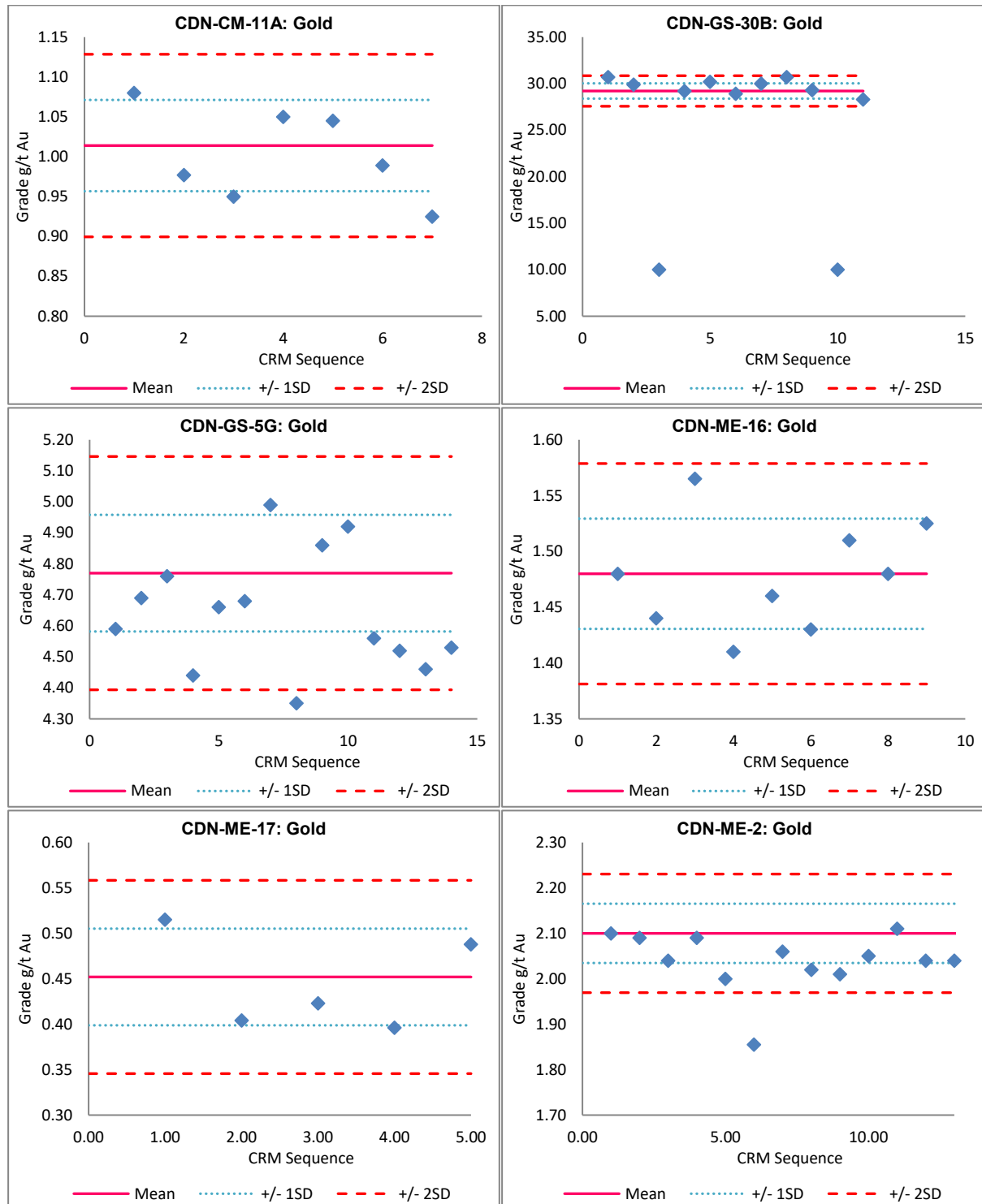


Figure 11-1: Alix CRM Plots For Gold

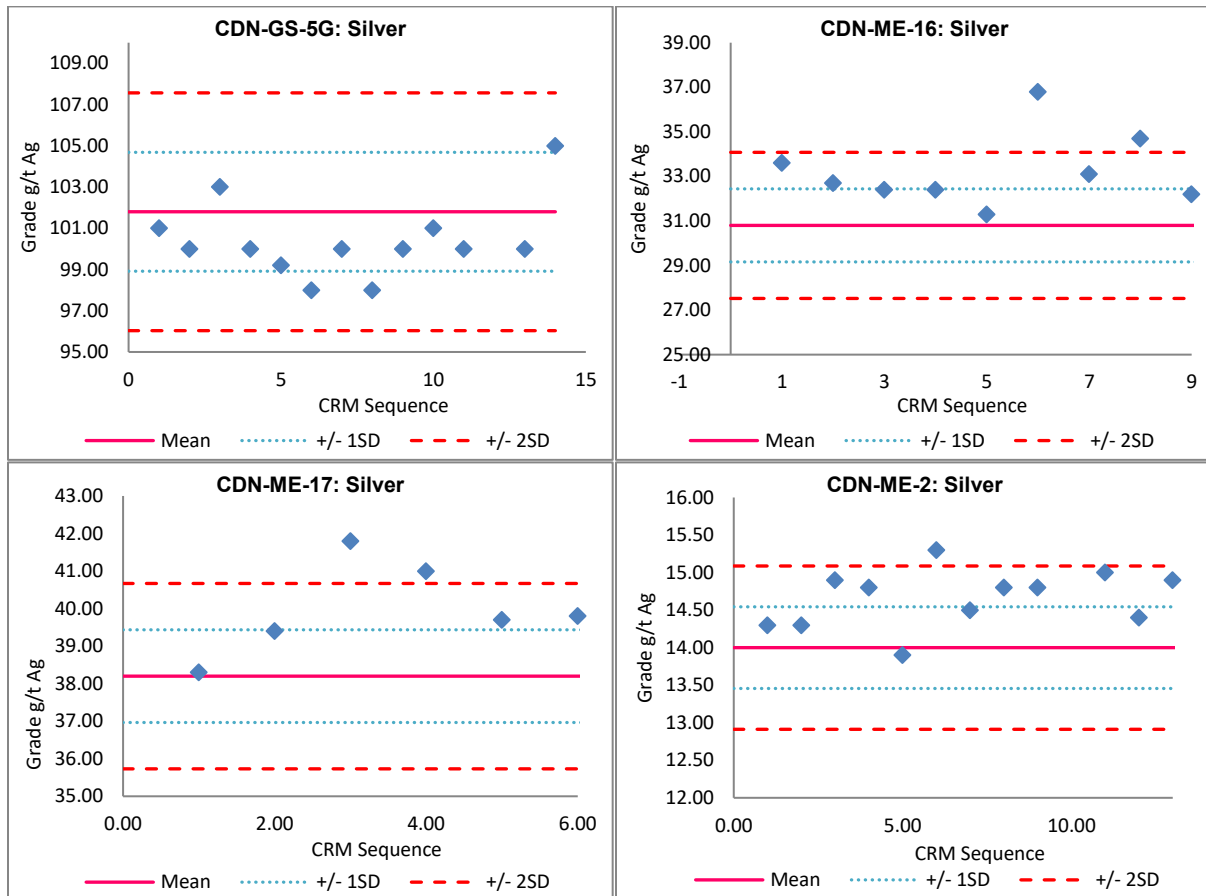


Figure 11-2: Alix CRM Plots for Silver

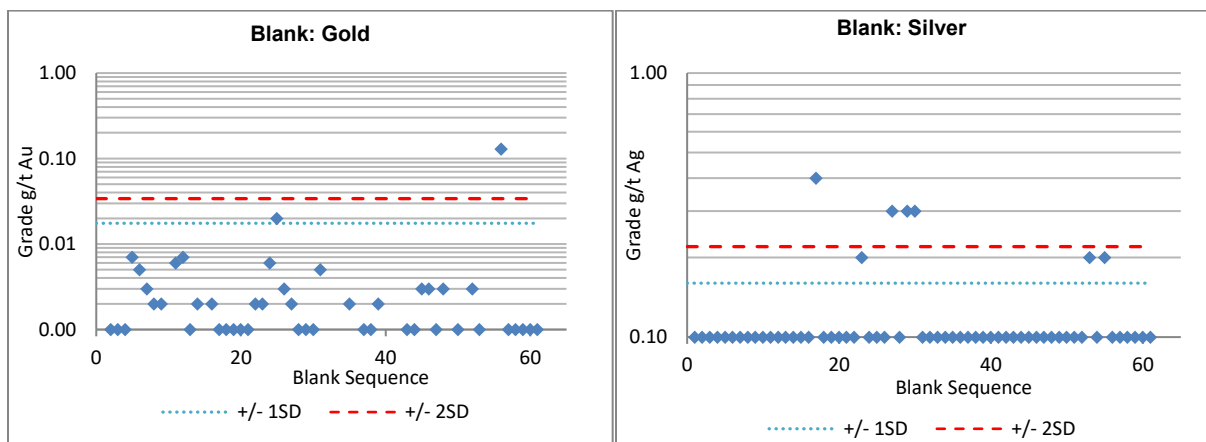


Figure 11-3: Alix Blank Plots



11.2.1.2 Piper Capital

In 2005 Piper Capital submitted 2,117 samples for analysis at ALS Chemex. An additional 210 quarter core repeat samples were also submitted and amounted to 10% of all samples submitted.

Duplicates

The 2005 drill program included quarter core duplicate samples - used to assess the presence of a 'nugget effect' or heterogeneity of gold mineralization in drill core samples. Piper inserted quarter core duplicates into the sample stream such that every 10th sample was a duplicate.

The difference between the original analysis and the quarter core duplicate analysis is presented grouped by laboratory in Table 11-5 and plotted in scatter plots and Quartile-Quartile ("QQ") plots in Figure 11-4. Any values that plot significantly away from the scatter chart correlation line may indicate a potential nugget effect or sample handling errors. Control charts show good correlation between original and quarter core duplicates.

Half the Absolute Relative Difference (HARD) is half the absolute difference between the original and the duplicate assay, expressed as percentage of the pair mean. A HARD value of 0% is an optimum result where both the first and duplicate analyses have identical results and therefore perfect precision. The larger the HARD value, the greater the difference between the two analytical results and the poorer the precision.

For gold, original and duplicate assay pairs had reasonable precision with an average HARD value of 27%, and 64% of pairs returning a HARD value less than 20%. Sample 607 had an original grade of 7.98 g/t Au and a duplicate grade 0.607 g/t Au. Sample 2222 had an original grade of 1.18 g/t Au and a duplicate grade of 0.056 g/t Au. Sample 2363 had an original grade of 0.294 g/t Au and a duplicate grade of 5.63 g/t Au.

For silver, original and duplicate assay pairs had reasonable precision with an average HARD value of 20%, and 60% of pairs returning a HARD value less than 20%. Sample 1431 had an original grade of 0.10 g/t Ag and a duplicate grade 1.9 g/t Ag. Sample 2355 had an original grade of 60 g/t Ag and a duplicate grade of 3.40 g/t Ag. Sample 2319 had an original grade of 5.8 g/t Ag and a duplicate grade of 46.7 g/t Ag.

Relative differences are considered reasonable, with more than 60% of sample pairs returning values within +/- 20% of the mean of the pair. In the scatter plot of original against repeat assay values, points trend along the $x=y$ line, as demonstrated by coefficient of determination (R^2) values of 0.70 and 0.72 where a value of 1 would indicate perfect repeatability. Where pair assay variance is high, a nugget effect with may be indicated. The presence of a nugget effect is typical in precious metal deposits and is not considered a significant problem; however, the presence of a nugget effect does necessitate the identification and treatment of outliers.



Table 11-5: Summary of Piper Capital Core Duplicate Sample Analysis

N Pairs	Original				Repeat Sample				Diff. Means	Avg. HARD %	% HARD +/-20%	Corr. Coeff.	R ²
	Mean	Min	Max	S.Dev	Mean	Min	Max	S. Dev					
Gold													
210	0.74	0.003	11.90	1.68	0.78	0.03	13.00	1.86	0.04	27%	64%	0.85	0.72
Silver													
210	4.65	0.10	104	12.98	4.41	0.10	104	11.97	0.07	24%	60%	0.83	0.70

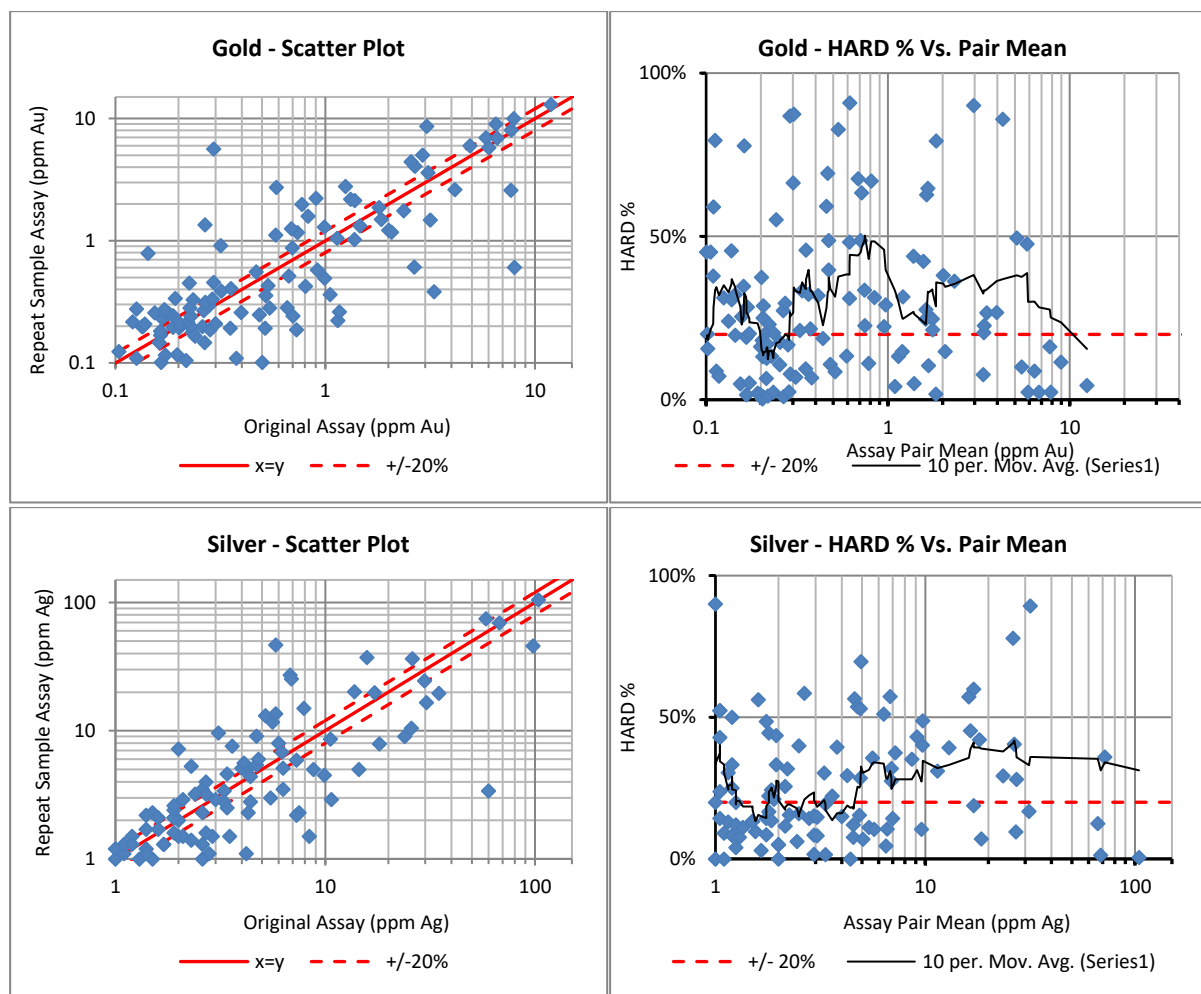


Figure 11-4: Plots of Piper Capital Duplicate Sample Results



11.2.1.3 Addwest

Duplicates

The following section is taken from the Founie and Keller (1997).

In early 1997 Addwest ran check assays on the drilling done in 1996. Chemex Labs, Ltd. of Vancouver, B.C, performed all of the original assays, including drill samples, trench samples, rock chip samples and soil samples. Addwest randomly chose 10% of the drill samples (every tenth drill core or RC sample plus some additional ore zone “mineralized” samples) and sent them to Bondar Clegg, also of Vancouver, to re-fire assay. A total of 178 samples were checked in this fashion. Statistics of the original assays verses the check assays are given below in Table 11-6.

The correlations between the original and the check assays are good, particularly the gold. The larger variation in the silver samples is due to the difference in the highest sample. This sample originally assayed 4.5 oz/t Ag and the split sent for check assayed 1.46 oz/t Ag. This difference is probably due to the nugget effect and if this sample is eliminated, the correlation would be much better.

Table 11-6: Original vs. Check Assays From 1996 Drilling - Multivariate Statistics - 178 Samples (Founie and Keller, 1997)

	<i>Original Au ppm (Chemex)</i>	<i>Original Ag ppm (Chemex)</i>	<i>Check Au ppm (Bondar Clegg)</i>	<i>Check Ag ppm (Bondar Clegg)</i>
<i>Minimum</i>	0.015	0.35	0.005	0.35
<i>Maximum</i>	187.75	154.29	201.81	50.06
<i>Mean</i>	1.63	3.43	1.68	2.78
<i>Variance</i>	6.1	4.9	7.03	1.3
<i>Standard Deviation</i>	14.43	12.99	15.5	6.69
	8.84	3.79	9.2	2.41
<i>Correlation Coefficient Table</i>				
	<i>Original Au</i>	<i>Original Ag</i>	<i>Check Au</i>	<i>Check Ag</i>
<i>Original Au</i>		0.91197	0.99942	0.57687
<i>Original Ag</i>	0.91197		0.91207	0.85751
<i>Check Au</i>	0.99942	0.91207		0.57525
<i>Check Ag</i>	0.57687	0.85751	0.57525	



11.3. QA/QC CONCLUSIONS

It is Howe's opinion that the QA/QC programs undertaken by Avidian are sufficient to provide confidence in the analyses undertaken at ALS Vancouver in 2016.

It is Howe's opinion that the independent QA/QC programs undertaken by Alix and Piper are sufficient to provide confidence in the analyses undertaken at ALS Chemex in 2011 and 2005. Whilst only very limited QA/QC data is available for the 2005 and 2006 Hidefield exploration campaign, the satisfactory results from earlier and later QA/QC analyses undertaken at the same ALS laboratory provide some support in the use of Hidefield samples for the estimation of CIM compliant resources.

The 1997 independent verification of Chemex Ltd. assay results by repeat core sample analysis at Bondar Clegg provides support in the use of the Addwest samples for the estimation of CIM compliant resources.

No quality assurance and quality control data are available for the remaining historical assays collected from the Golden Zone project prior to 1994 and which account for 45% of gold assays in the database. To address this shortcoming, Howe recommended Avidian undertake a verification sampling program for the Enserch, Golden Zone Inc. and Union Pacific programs between 1980 and 1988. This recommendation was followed and the data verification program is described in Section 12.2.

Given the historical nature of much of the drilling completed on the Property, QA/QC sampling has been limited. In future drill programs Howe recommends that the company add to the QA-QC sampling methods employed in the past. A duplicate program should be developed that includes ¼ core and coarse reject duplicate samples from mineralized intervals to help quantify gold heterogeneity within drill core and coarse crush material. Duplicate splits of pulp reject material should be undertaken to test analytical precision. In addition to the repeat assaying of pulp sample splits at the primary laboratory, pulps should be regularly submitted for repeat analysis at a secondary umpire laboratory.

Howe recommends that Avidian continue to submit CRM and blank samples and monitor and review assay results that fall outside of established control limits. Any CRMs and Blanks that fall outside of control limits should be referred back to the laboratory and the CRMs or Blanks plus coarse reject splits of core samples before and/or following the failures should be prepared and analysed to check the first run results.



12. DATA VERIFICATION

12.1. ACA HOWE 2016 SITE VISIT

Mr. McGarry completed a field visit to the Golden Zone Property from July 11th to 14th, 2016 as part of due diligence in the preparation of this Report. Travel days from Toronto to Anchorage and return included July 10th and 15th. The afternoon of July 10th and the mornings of July 11th and 15th were spent reviewing historic Property data files at Avidian's office in Anchorage. Mr. McGarry met with and was accompanied in the field by Dino Titaro, Avidian's President and CEO, and Dr. Tom Setterfield, Avidian Vice President Exploration, and with whom previous operators' exploration activities, methodologies, findings and interpretations were discussed. Mr. McGarry reviewed selected sections of the historic Golden Zone deposit drill core archived on the Property and examined the Golden Zone deposit, the East Vein, Banner, Riverside, Copper King and Long Creek prospect areas. All mineral occurrences visited and technical observations were as reported by Avidian. Several verification samples of drill core and rock outcrop were collected. Mr. McGarry stayed at the exploration camp on the upland mining lease on the nights of July 11th, 12th and 13th.

Hard copy records selected for verification included collar records, lithological logs, and assay certificates associated with drill holes spread throughout the deposit and from each major drill campaign. Digital records were cross checked against hard copy records for typographic or data entry errors.

Both hard copy geological logs and assay tables were then cross checked against drill cores to review the rationale for historically assigned lithology codes and to review the association between mineralization and metal grades. Geological logging was found to be of sufficient quality to allow the use of historical lithological codes for deposit modeling.

In the digital sample database, for samples collected prior to 2005 and above 0.010 oz/t, gold and silver oz/t values are truncated to two decimal places, whereas the corresponding assay certificates report oz/t values at three decimal places. For samples collected after 2005, values are reported in ppm suggesting that digital data values were truncated prior to this date and then carried over into the current database. Copper and other metals are unaffected. The truncation of oz/t values results in average gold and silver grades that are approximately 0.0045 oz/t less than those reported in the assay certificates, translating to an approximate mean decrease of 0.154 g/t for gold and silver grades in metric units.

The truncation of assay values was consistently applied and the underlying results are considered representative of sampled mineralization. For the purpose of this study it is not considered necessary to exclude truncated values from the Mineral Resource Estimate (MRE) database. Aside from this systematic issue, no significant typographic errors were identified, indicating a suitably accurate level of data entry.

It will be necessary for Avidian to generate an accurate sample database that can be verified back to the original assay certificates. This can be accomplished by locating a historical database with



untruncated values or by creating a new database using available hard copy certificates. A database that can pass verification tests will be a requirement for future resource estimate studies.

12.1.1 Review of Field Exploration

Howe was able to locate and verify the position of 11 drill holes and 7 trenches in the field, using a handheld Garmin GPS60TM unit (Table 12-1 and Table 12-2). A range of collar monuments are employed at the Golden Zone project. Alix and Piper Capital drill holes at Golden Zone are marked with a piece of steel rebar capped with a steel disk on which the hole name is stamped. Addwest drill holes at Copper King are marked by wooden posts approximately 15 cm square in section. Drill pads and casings were also located for holes at Riverside and Banner prospects.

Coordinate differences between database drill collars and those collected by Howe, range from 1.42 m to 8.59 m and are within the margin of error for the GPS device used.

Trenches are not marked by monuments and were located by identifying open cuts or disturbed ground in the field. Within the drill database provided to Howe, trenches are recorded as having a start position and length, with survey azimuths and dip measurements that described the trench orientation. Start positions were located for seven trenches, of which end positions were located for two trenches.

Coordinate differences between database trench start positions and those collected by Howe, range from 0 m to 14 m and are generally within the margin of error for the GPS device used. Positional differences are expected as the extent of disturbed ground is not the same as the trench itself. This was the case at Long Creek where the exact beginning of the trench could not be determined. The end locations of two trenches were compared to the projected position based on survey azimuths after correction for use in the WGS84 UTM projection. The projected and surveyed end points are close enough to provide confidence in the trench survey information and the azimuth corrections described in Section 14.3.1 *Data Editing*.



Table 12-1: ACA Howe 2016 Site Visit Drill Collar Location Check

Hole ID	Prospect	Company	Database		ACA Howe		Distance Apart (m)
			Easting	Northing	Easting	Northing	
05LC-1	Long Creek	Hidefield	366,329	7,009,767	366,330	7,009,768	1
05Z51.5E-1	GZ Breccia Pipe	Piper Capital	366,764	7,012,182	366,764	7,012,176	15
6006_	Banner	Hidefield	368,303	7,014,160	368,300	7,014,160	3
CK-94-2	Copper King	Addwest Minerals	366,853	7,010,367	366,851	7,010,368	2
CK-96-2	Copper King	Addwest Minerals	366,862	7,010,383	366,859	7,010,382	4
CK-96-3	Copper King	Addwest Minerals	366,861	7,010,405	366,858	7,010,406	3
GZ-87-12	GZ Breccia Pipe	Golden Zone Res	366,797	7,012,202	366,794	7,012,201	3
GZ-87-16	GZ Breccia Pipe	Golden Zone Res	366,745	7,012,153	366,742	7,012,145	9
GZ-96-1	GZ Breccia Pipe	Addwest Minerals	366,582	7,012,071	366,581	7,012,069	2
GZBX11004	GZ Breccia Pipe	Alix	366,735	7,012,147	366,729	7,012,145	6
GZC-96-4	GZ Breccia Pipe	Addwest Minerals	366,783	7,012,173	366,781	7,012,177	5

Table 12-2: ACA Howe Site Visit Trench Location Check

Hole ID	Prospect	Company	Database		ACA Howe		Distance Apart (m)
			Easting	Northing	Easting	Northing	
T96-1_Start	GZ Breccia Pipe	Addwest Minerals	366,791	7,012,206	366,792	7,012,202	4
T96-24_Start	GZ Breccia Pipe	Addwest Minerals	366,574	7,012,073	366,567	7,012,081	11
T96-24_End	GZ Breccia Pipe	Addwest Minerals	366,602	7,012,045	366,612	7,012,042	6
T6001_Start	Riverside	Hidefield	368,897	7,014,824	368,892	7,014,828	6
T6001_End	Riverside	Hidefield	368,856	7,014,878	368,857	7,014,874	4
T6004_Start	Riverside	Hidefield	368,747	7,014,747	368,746	7,014,749	3
T6012_Start	Banner	Hidefield	368,303	7,014,161	368,302	7,014,160	2
T6013_Start	Banner	Hidefield	368,301	7,014,160	368,301	7,014,160	0
T6020_Start	Long Creek	Hidefield	366,418	7,009,659	366,420	7,009,672	14

12.1.2 ACA Howe Verification Sampling

Howe conducted limited verification sampling during its 2016 site visit which included three rock samples from outcrop and two samples of quarter core from drill hole GZBX11003.

Mr. McGarry collected and sealed the sample bags with ladder lock ties and maintained possession of all samples until personally delivered to the ALS Fairbanks preparation facility for subsequent analysis at ALS Vancouver. The sample preparation and analysis techniques described in Section 11.1.2 - *Sample Preparation and Analysis* were also used for Howe



verification sample analysis. ALS and its employees are independent from Howe. Howe personnel are not involved in sample preparation and analysis.

The 2016 grab sample results shown in Table 12-3 provide an independent confirmation of the presence of significant gold and silver mineralization at the East Vein, Wells Vein and Riverside Vein outcrops on the Property (Figure 7-6).

Quarter core check samples collected from Alix drill hole GZBX11003 correlate with the original assay results. Along with the repeat core verification samples discussed in Section 12.2, these samples provide an independent confirmation of the presence of significant gold and silver mineralization at the Golden Zone Deposit.

Table 12-3: ACA Howe 2011 Duplicates vs. Original Samples

Howe Sample No	Location / Drill Hole	Easting*/ From (ft)	Northing*/ To (ft)	Au ppm	Ag ppm	As ppm	Cu ppm	Pb ppm	Zn ppm
L408751	East Vein Outcrop	366,926	7,012,158	9.94	273.0	96,000	2510	13,000	4290
L408754	Wells Vein Outcrop	369,078	7,014,996	10.05	36.4	248,000	1200	615	92
L408755	Riverside Vein Outcrop	368,856	7,014,843	12.55	3.8	220,900	503	35	23
L408752	GZBX11003 ¼ Core	265'	270'	2.82	17.5	8120	831	210	118
	<i>Original Value</i>			2.54	22.9	4820	806	208	154
L408753	GZBX11003 ¼ Core	270'	275'	0.42	6.4	4970	862	300	153
	<i>Original Value</i>			0.51	5.4	2840	403	54	114
L408756	Standard CDN-GS-5G	-	-	4.90	100.0	-	-	-	-
	<i>Certified Values</i>	-	-	4.77	101.8	-	-	-	-

* Coordinates in WGS84 UTM Zone 6N

12.2. 2016 REPEAT SAMPLING PROGRAM

In July and August 2016, Avidian initiated, under Howe's direction, a repeat core verification sampling program at the Golden Zone project. The program was undertaken to provide quality assurance for assay values obtained by the following companies: Enserch, Golden Zone Inc. and Union Pacific, between 1980 and 1988. Samples collected by these companies account for 78% of gold assays collected at the Golden Zone Project prior to 1994 for which no QA/QC data is available. The repeat core verification sampling methodology is described in Section 9-1. The sample preparation and analysis techniques described in Section 11.1.2 - *Sample Preparation and Analysis* were also used for the 2016 repeat sampling program.

The sample intervals in Table 12-4 were selected for repeat sampling and provide a good spread of intervals throughout the deposit and across rock types. An initial program goal was to repeat sample 5% of core intervals assayed between 1980 and 1988. This goal was only achieved for the United Pacific campaign due to the unavailability of many Enserch and Golden Zone cores. Regardless, a sufficient number of samples were collected to allow a meaningful assessment of check assay results.



Table 12-4: Summary of Samples Selected for Repeat Analysis

Company	Hole ID	From (ft)	To (ft)	Interval (ft)	N Samples Au	N Samples Ag
Enserch - 25 Holes, - 1,948 Au Samples & - 1,746 Ag Samples.	BXP-15H	275	350	75	15	15
	BXP-16	230	370	140	28	28
	BXP-9	50	185	135	27	23
	Total				70 (4%)	66 (4%)
Golden Zone Inc. - 25 Holes, - 1,208 Au Samples & - 1,021 Ag Samples.	GZ87-16B	432	546	114	17	17
	GZ87-21	36	118.5	82.5	15	13
	GZ87-9	87	182	95	16	15
	Total				48 (4%)	45 (4%)
United Pacific - 21 Holes, - 1,013 Au Samples & - 990 Ag Samples.	GZ88-13	169	249	80	17	17
	GZ88-2B	214	276.5	62.5	13	13
	GZ88-8	45	162.5	90.5	18	18
	Total				48 (5%)	48 (5%)
Total					166	159

Results of the repeat sampling program are summarized in Table 12-5. For each drill campaign, the comparison of original and 2016 ALS gold and silver analysis results are presented in a series of tables and plots.

Tables include average original assay and repeat sample grade, Pearson correlation coefficients and regression (R^2) values. The accuracy of historical samples is evaluated using the Average Relative Difference. The relative difference is estimated as the difference between a matching pair of data which is normalized to the mean of the pair. The average relative difference shows if there is an overall bias between one data set and another. A negative value indicates that the original assays are higher than repeat sample assays.

An overall visualization of precision and bias is shown in the scatter plots for gold in Figure 12-1 and for silver in Figure 12-2. Quantile-Quantile (Q-Q) plots are also presented that show a comparison of the marginal distributions of original and repeat assay datasets at decile intervals. Similar distributions are observed in unbiased data.



Table 12-5: Summary of Avidian Check Sample Analysis Results

Company	N Pairs	Original				Repeat Sample				Diff. Means	Avg Rel. Diff.%	Cor Coef	R ²
		Mean	Min	Max	S.Dev	Mean	Min	Max	S. Dev				
Gold													
Enserch	70	3.69	0.34	27.43	4.61	3.62	0.03	19.95	4.32	0.07	-11%	0.81	0.66
United Pacific	48	2.51	0.03	18.17	4.13	2.73	0.03	15.00	4.08	0.22	18%	0.92	0.84
Golden Zone	48	5.93	0.21	37.38	9.38	6.81	0.03	41.00	9.82	0.88	9%	0.91	0.84
Silver													
Enserch	66	15.35	1.03	27.43	11.39	10.99	0.90	46.90	10.03	0.07	-40%	0.81	0.66
United Pacific	45	7.80	0.34	18.17	17.97	12.37	0.25	125.0	25.52	0.22	23%	0.69	0.47
Golden Zone	48	22.97	0.69	37.38	35.39	24.56	0.25	133.0	35.21	0.88	2%	0.97	0.94

The repeat sampling program findings are summarized as follows:

- Enserch assays show a possible slight over-reporting of gold, indicated by an average relative difference of -11% between ALS and Enserch Laboratory values. This is within tolerance limits and Enserch gold values are considered suitable for the estimation of resources.
- There is a significant over-reporting of Enserch silver grades indicated by an average relative difference of -40% between ALS and Enserch Laboratory values. There is a consistent bias in grades below 20 g/t Ag. It is recommended that Enserch silver grades should be stripped from the resource database.
- Golden Zone assays show a possible under-reporting of gold and silver indicated by respective average relative differences of 18% for gold and 23% for silver between ALS and Bondar Clegg Laboratory values. These differences are within tolerance limits. Golden Zone Resource assays are considered suitable for the estimation of resources.
- United Pacific assays show a possible slight under-reporting of gold and silver indicated by respective average relative differences of 8% for gold and 9% for silver between ALS and Bondar Clegg Laboratory values. These differences are well within tolerance limits. United Pacific and gold and silver values are considered suitable for the estimation of resources at Golden Zone.
- Howe notes that some variation between the original and duplicate assay results is expected and is typical for precious metal exploration results. Heterogeneous mineralization at small scales can introduce a 'nugget effect'.

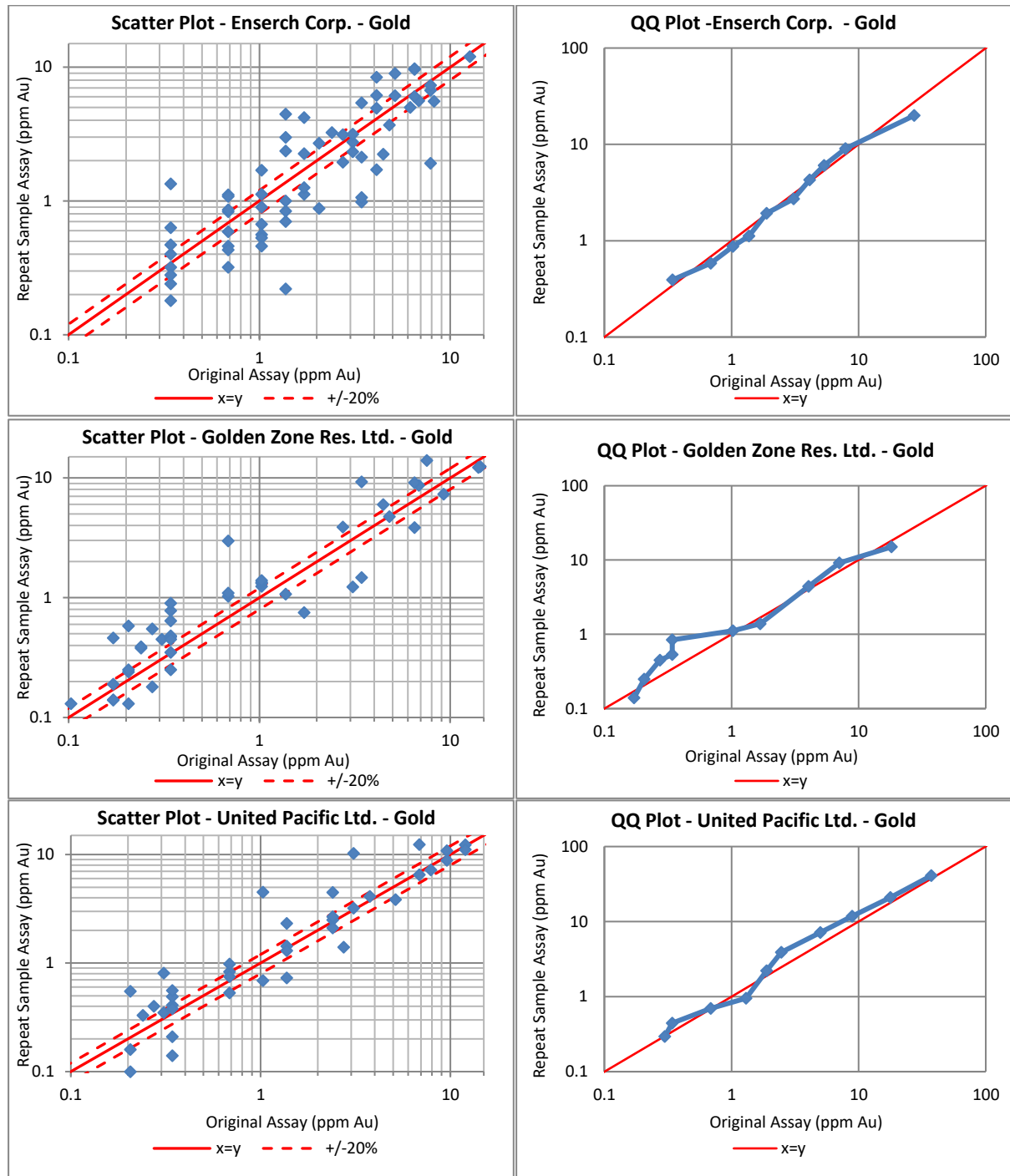


Figure 12-1: Plots of Avidian Check Sample Analysis Results -Gold

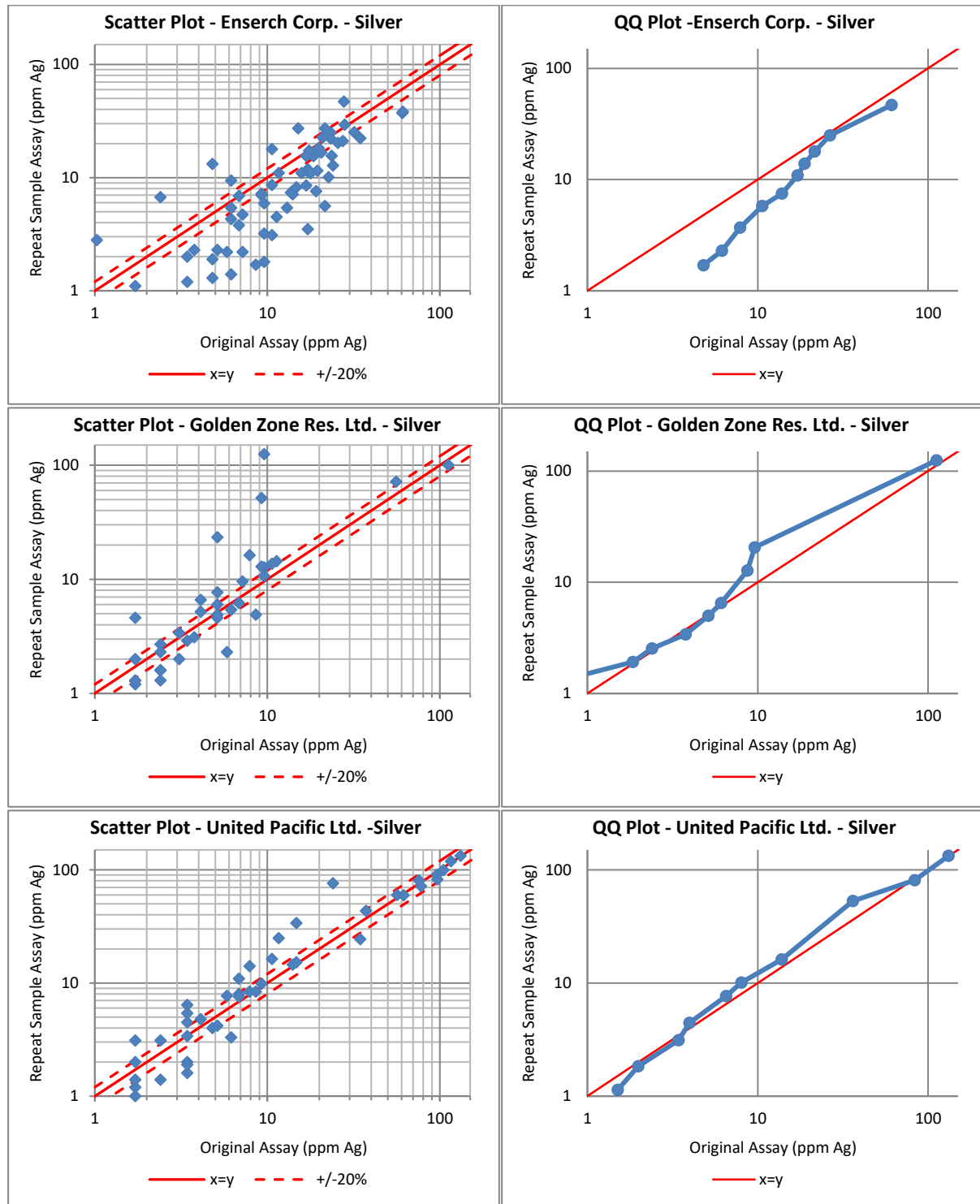


Figure 12-2: Plots of Avidian Check Sample Analysis Results -Silver



12.3. DATA VERIFICATION CONCLUSIONS

- Digital records were cross-checked against hard copy records for typographic or data entry errors. Both hard copy geological logs and assay tables were cross-checked against drill cores. Geological logging was found to be of sufficient quality to allow the use of historical lithological codes for deposit modeling.
- For samples collected prior to 2005 and above 0.010 oz/t, gold and silver oz/t values in the digital database are truncated to two decimal places. The truncation of oz/t values result in average gold and silver grades that are approximately 0.154 g/t less than reported in the assay certificates for gold and silver grades. Regardless, the underlying results are considered representative of sampled mineralization. For the purpose of this study truncated values are not excluded from the MRE database. Aside from this systematic issue, no significant typographic errors were identified indicating a suitably accurate level of data entry.
- The 2016 ACA Howe verification sample results provide an independent confirmation of the presence of significant gold and silver at the Golden Zone deposit, and of mineralization at the East Vein, Wells Vein and Riverside Vein outcrops on the Golden Zone Property (Figure 7-7).
- Howe was able to locate and verify the position of 11 drill holes and 7 trenches.
- The 2016 historic drill core repeat sampling program, provide confidence in the gold fire assay results from the Enserch exploration campaign; and gold and silver assay results from the Golden Zone Inc. and United Pacific exploration campaigns, such that they are considered suitable for the estimation of resources at Golden Zone.
- Howe recommends that if sufficient core is available the check sampling program be extended to historical holes that make up a small fraction of the assay database. Specifically, the Inspiration Development Co. (two holes), Rancher's Exploration Co. (six holes) and Homestake Mining Co. (two holes) completed between 1972 and 1976 should be check sampled.
- Howe has not attempted to verify the nine Golden Zone Mine holes completed in 1936. These samples are not used in the current estimate of mineral resources at the Golden Zone deposit.



13. MINERAL PROCESSING AND METALLURGICAL TESTING

As of the effective date of this Report, Avidian has conducted no mineral processing or metallurgical test work of mineralization from the Golden Zone Property. Historical metallurgical testing is discussed in Section 6.



14. MINERAL RESOURCE ESTIMATES

14.1. INTRODUCTION

During the period July 2016 to August 2016, Howe carried out a mineral resource estimate (“MRE”) update study for the Golden Zone deposit. This section of the Report presents MRE update methodologies, results and validations for the deposit.

In the opinion of the Authors, the resource evaluation reported herein is a reasonable representation of the gold and silver mineral resources at the Golden Zone deposits based on the current level of sampling. The updated MRE has an effective date of November 23, 2016 and is reported in accordance with the Canadian Securities Administrators’ National Instrument 43-101. The MRE is generated in conformity with generally accepted CIM “Estimation of Mineral Resource and Mineral Reserves Best Practice Guidelines” (CIM Council, 2003).

The MRE for the Golden Zone deposit is prepared L. McGarry, Howe Senior Project Geologist and a Qualified Person (QP) for the reporting of Mineral Resources as defined by NI 43-101. Mr. McGarry is responsible for the geological domaining, block modeling and pit optimization studies presented in this Report Section. Mr. McGarry visited the Golden Zone project site between the 10th and 15th of July 2016 to review diamond drill core, confirm the location of drill collars and outcrops, collect verification samples and to initiate the repeat sampling programs detailed in Section 12.2. Mineral resource modeling and estimation was carried out using the commercially available Micromine (Version 2014) software program.

Reported Mineral Resources are not Mineral Reserves and do not have demonstrated economic viability. There is no guarantee that all or any part, of a Mineral Resource will be converted into a Mineral Reserve.

Previous MREs generated for the project are described in Section 6 and include estimates presented in earlier technical reports completed for Addwest in 1997 (Founie and Keller, 1997), Piper in 2005 (Perry et al., 2005), Hidefield in 2006 (Sim, 2006) and Alix in 2011 (Kerr and Loveday, 2011). The current MRE presented in this Report supersedes all past estimates and benefits from the changes that are summarized in Section 14.13 ‘*Comparison With Previous Resource Estimate*’.

14.2. DATA SUMMARY

The Authors have reviewed sample collection methodologies adopted by Avidian and previous operators and are satisfied that data collection methodologies are of a standard that allow the estimation of resources under CIM guidelines and that mineral resource databases for Golden Zone deposit fairly represent the primary information.

Drilling comprises inclined and vertical holes predominantly drilled on a northeast - southwest grid. Historically, coordinates were collected using a plane table in a local Mine Grid. The current



database provided by Avidian contains coordinates in the UTM WGS84 Zone 6N projection system.

Howe relied on the following drill hole, trench and underground sample data provided by Avidian in the form of a digital data export containing a series of Microsoft Excel tables, AutoCAD and GIS files transferred to Howe on July, 2016.

- 155 Diamond drill holes completed between 1936 and 2011.
 - 9 Golden Zone Mine Inc. holes completed in 1936 totalling 479 m.
 - 2 Inspiration Development holes completed in 1972 totalling 998 m⁷.
 - 6 Ranchers Exploration holes completed between 1972 and 1974 totalling 715 m.
 - 2 Homestake Mining holes completed in 1976 totalling 203 m.
 - 26 Enserch holes completed between 1980 and 1983 totalling 3,952 m.
 - 31 Golden Zone Inc. holes completed between 1984 and 1987 totalling 3,732 m.
 - 21 United Pacific holes completed in 1988 totalling 1,809 m⁸.
 - 20 Addwest holes completed between 1994 and 1996 totalling 3,120 m.
 - 18 Piper Capital holes completed in 2005 totalling 2,958 m.
 - 9 Hidefield holes completed between 2005 and 2006 totalling 1,227 m.
 - 12 Alix diamond drill holes completed in 2011 totalling 1,903 m.
- 63 RC drill holes completed between 1988 and 2006 totalling 5,566 m.
 - 18 United Pacific holes completed in 1988 totalling 1,725 m.
 - 33 Addwest Minerals holes completed between 1994 and 1996 totalling 3,354 m.
 - 1 Piper Capital hole completed in 2005 totalling 58 m.
 - 7 Hidefield holes completed in 2006 totalling 360 m.
- 105 Trenches completed between 1986 and 2006 totalling 5,449 m.
 - 4 United Pacific trenches completed in 1988 totalling 69 m.⁹
 - 13 Golden Zone Inc. trenches completed in 1986 totalling 333 m.
 - 48 Addwest trenches completed between 1994 and 1996 totalling 3,697 m.
 - 40 Hidefield trenches completed between 2005 and 2006 totalling 1,350 m¹⁰.
- 121 underground channel sample lines completed between 1982 and 1988 totalling 1,089 m.
 - 61 Enserch underground channel sample lines completed between 1982 and 1983 totalling 678 m.
 - 60 United Pacific underground channel sample lines completed in 1988 totalling 411 m.

⁷ Three Inspiration holes were drilled, only two are in the digital database files provided to Howe.

⁸ The 2011 technical report lists 22 United Pacific holes; only 21 are identified in the files provided to Howe.

⁹ Four United Pacific GZ-88-N series trenches completed in 1988 are included in the files provided to Howe, but are not mentioned in earlier reports.

¹⁰ The 2011 Norwest technical report lists 45 Hidefield trenches totaling 1,516 m which included: O5-4C-7-10, O5-4C-7-11, O5 MF-1W, O5 MF-2 and O5 MF-3. These 5 trenches were not included in the digital files provided to Howe.



14.3. DATABASE VALIDATION

Howe compiled all of the drill hole, trench and underground sampling information provided as digital spreadsheet files. The exploration data was imported to Micromine and the database files described in Table 14-1 were validated. Identified errors were corrected and documented however no critical issues were detected. Howe is of the opinion that the assay database for the Golden Zone Project is of sufficient quality to provide the basis for the conclusions and recommendations reached in this Report.

14.3.1 Data Editing

Drill data were edited to resolve errors identified during data validation. Hidefield drill hole 6002 did not have location coordinates or survey data recorded in the collar file provided and was therefore removed from the drill hole database. Eight Hidefield trenches 05-BH-T-1 and TR05Z1-2 to TR05Z1-8 did not have location coordinates or survey data and were therefore also removed from the drill hole database.

Historic drill holes were surveyed in a local Mine Grid ("MG") orientated at 45.5 degrees to True North. To enable the correct relative positioning of recent and historic drilling, mine grid coordinates were converted to UTM in the dataset provided to Howe, which also included survey azimuth in True North and Mine Grid North.

At the project area there is a difference of approximately 2.76° W between True North "TN" (taken as WGS84 geodetic north) and WGS84 UTM Zone 6 Grid North "GN". Accordingly, to honour the original projections when collars are plotted in UTM, ~2.76° must be added to TN azimuths.

Once imported into Micromine, the files listed in Table 14-1 were simplified to retain only the fields required for subsequent MRE steps.



Table 14-1: Golden Zone Micromine Input Data

Data Type	Number of Records	Number of Holes	Metres	Comments
Micromine Database				
Collar				
DDH	155	155	21,053	
RC	59	59	5,497	
Trench	97	97	5,449	
UG	121	121	1,089	
Down Hole Survey				
DDH	516	155		The number of records and holes listed include 0 m depth collar records. Survey measurements that are additional to the collar record are available for 53 core holes, 3 RC holes and 56 trenches.
RC	113	59		
Trench	422	94		
UG	242	121		
Geology				
DDH	2,672	155	21,018	
RC	830	58	5,416	
Trench	1,051	65	4028	
UG	176	117	1,078	
Assay Values				
DDH	11,471	155	20,321	
RC	3,499	59	5,403	
Trench	1,819	96	4,658	
UG	668	121	10,890	
Density Determinations	421	19		
Additional Input Data				
Various geological cross sections and plan maps				
DEM file “gzdem.rrd” at 5 m contours				
Various wireframes and polyline files in .dxf from the 2011 Addwest mineral resource estimate: “Breccia Solid wireframe.dxf”, “Domain coding polylines.dxf”, “Porphyry (Monzodiorite) Solid wireframe.dxf”, “Shear Zone Solid wireframe.dxf”.				

14.4. GEOLOGICAL MODEL

At the Golden Zone deposit, well mineralized units that have been the focus of historic and ongoing exploration are modelled for inclusion in the MRE. These include: a hydrothermal breccia pipe, a mineralized porphyry, and a shear zone hosting quartz veins.

Porphyry -The quartz monzodiorite porphyry stock forms a 300 m long by 200 m wide tadpole shaped body that is cored by a hydrothermal breccia pipe. The breccia pipe / porphyry contact is very sharp. However, there is a mineralized halo in the porphyry around the pipe, which carries low gold values in sulphide-rich quartz veins.



Breccia Pipe - outcrops over a surface area of approximately 150 m x 80 m, and plunges to the NE. At deeper levels it becomes elongated in a northeasterly direction. It subcrops on the NE facing slope of a hill at about 1,110 m asl, and has been drilled down to depths of about 850 m asl. The hydrothermal breccia pipe contains three main types of breccia which are categorized during logging based on sulphide content:

1. Silica rich breccia, defined where silica is greater than sulphides in the breccia matrix and typically contains <3% total sulphides. Tends to be barren or low grade for gold and silver mineralization.
2. Medium sulphide breccia, defined where rock is composed of 3-10% total sulphides.
3. Heavy sulphide breccia, defined where rock is composed of >10% total sulphides.

Medium and heavy sulphide breccia types are classified as copper-rich where copper (-iron) sulphides are greater than arsenopyrite.

The silica-rich breccia and the sulphide breccias exhibit significant differences in gold and silver grade characteristics. Due to the discontinuous and interfingering nature of sulphide breccia sub-units it is impractical to separately model the units at the scale of the deposit and they are grouped for the purpose of geological domaining.

BLT Shear Zone - Porphyry and country rocks are cut by a steeply dipping 20 m to 40 m wide shear zone that trends broadly northeast and is modelled over a 750 m strike length.

The hornfelsed sedimentary and volcanic rocks at the outer porphyry contact are locally mineralized but are not considered economically significant. Unlike previous estimates no country rock domain is defined in the current MRE.

After a review of Porphyry and Shear zone domain models provided by Avidian, new geological interpretations were made in cross, plan and long sections. Breccia Pipe domain outlines were digitized on a series of 26 northwest to southeast orientated cross sections at 7.6 m (25 ft) line spacing. Porphyry and Shear Zone polygons were digitized on 43 cross sections at 15.24 m (50 ft) spacing. For each domain, polygons capture the logged lithological intervals in drill holes, trenches and underground developments assigned to that domain.

Outlines were combined along strike to generate three dimensional wireframes shown in Figure 14-1 and Figure 14-6. The unconstrained extents of Breccia Pipe outlines are interpreted to a maximum of 15 m strike direction and 20 m in the down dip direction. The unconstrained extents of Shear Zone and Porphyry outlines are interpreted to a maximum of 100 m in the strike direction and 100 m in the down dip direction. Where constrained by drill hole data the extrapolation distance is taken to be half the drill data spacing.

Figure 14-1 shows a surface plan of the Golden Zone deposit area. Figure 14-2 presents a typical long section through the deposit showing resource domains and the distribution of gold mineralization. Figure 14-3 shows cross sections through the deposit with resource model



domains. Figure 14-4 and Figure 14-5 show the plan section through breccia pipe at 1,060 m asl and 950 m asl.

Lithology model domains are listed in Table 14-2 with dimensions and approximate drill hole spacing. Golden Zone model domains are shown in 3D in Figure 14-6.

Table 14-2: Golden Zone Lithology Model Domain Details

Domain	Strike Azi	Dip	Pitch	Strike Length (m)	Ave Width (m)	Depth Extent (m)	Vol. (m ³)	DDH Density (m ²)	# Samples
Porphyry	55°	90°	-	325	130	330	7,818,450	10 to 50	4,199
Sulphide Breccia	55°	80-90°W	50°-60°	190	50	260	1,070,450	10 to 20	4,547
Silica Breccia	55°	70-90°W	50°-60°	150	25	270	294,330	10 to 20	1,473
Shear Zone	47°	85-90°W	--	650	30	350	2,386,690	20 to 100	617

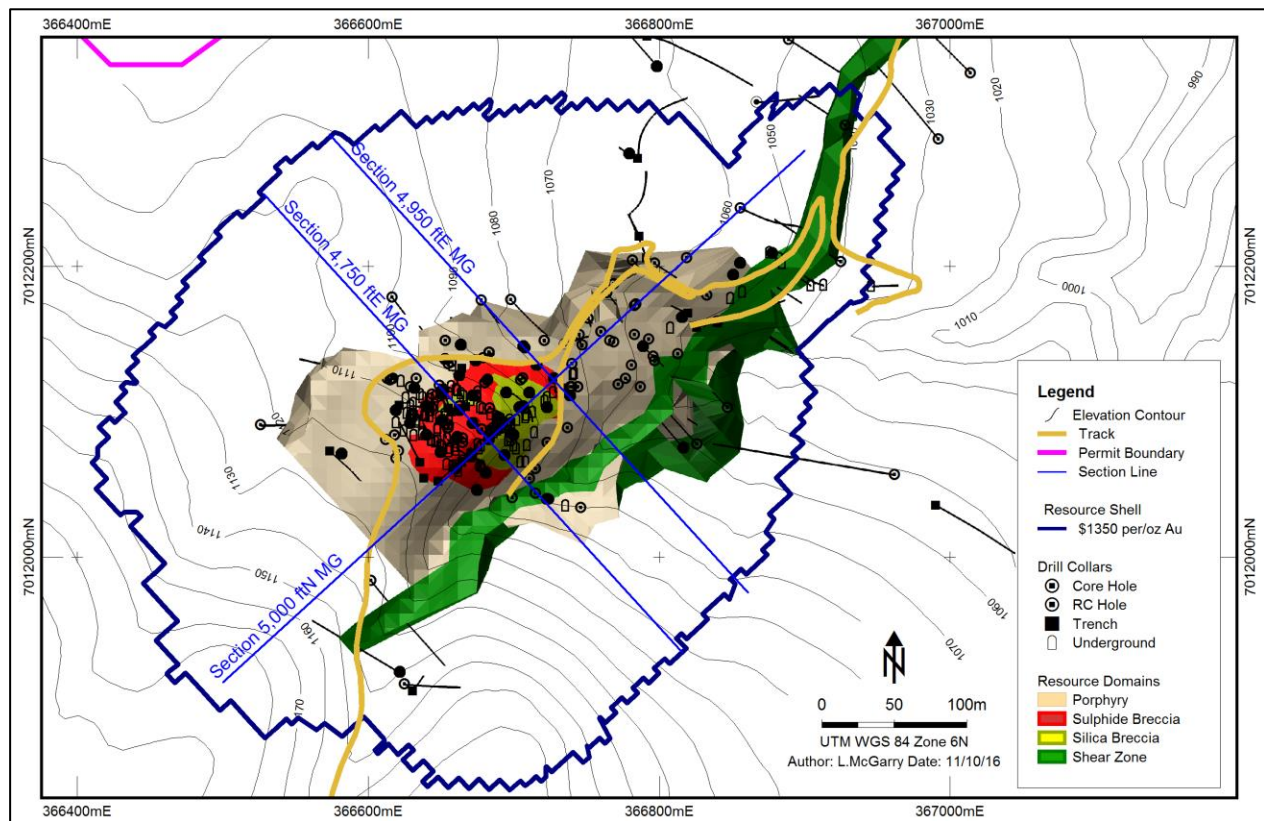


Figure 14-1: Plan View of Resource Model with Drill Collars and Whittle Shell Projected to Surface

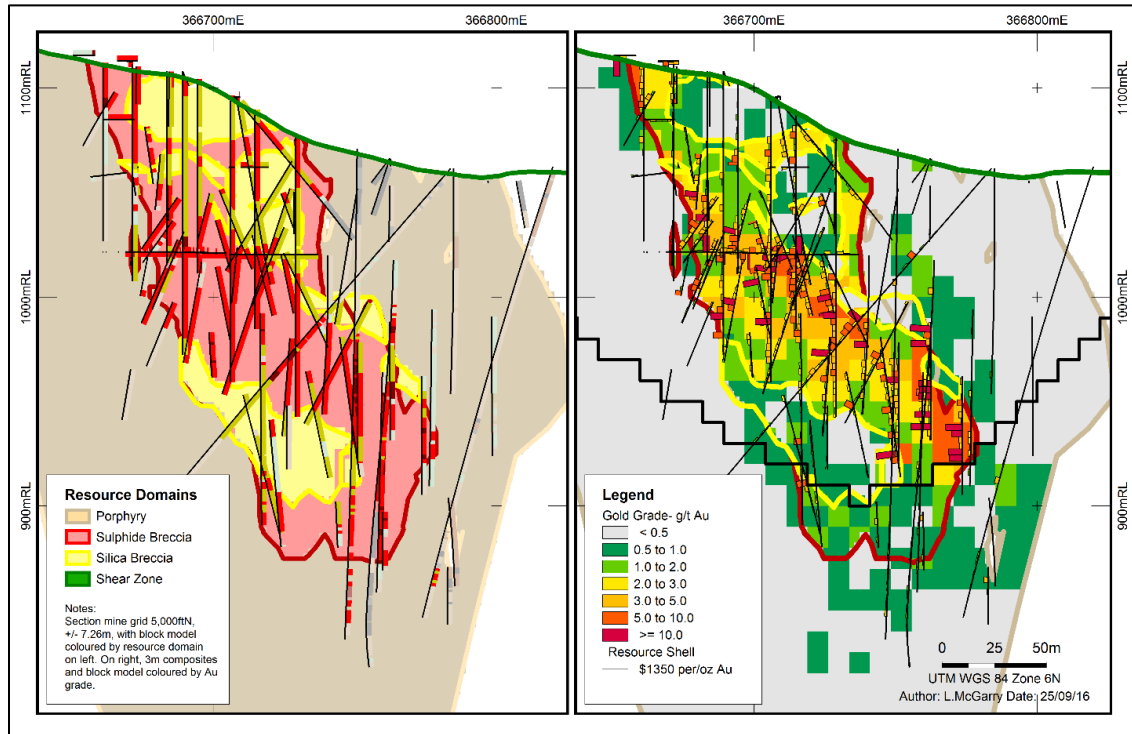


Figure 14-2: Long Sections on MG 5,000 ft N looking northeast and showing Resource Domains and Block Model

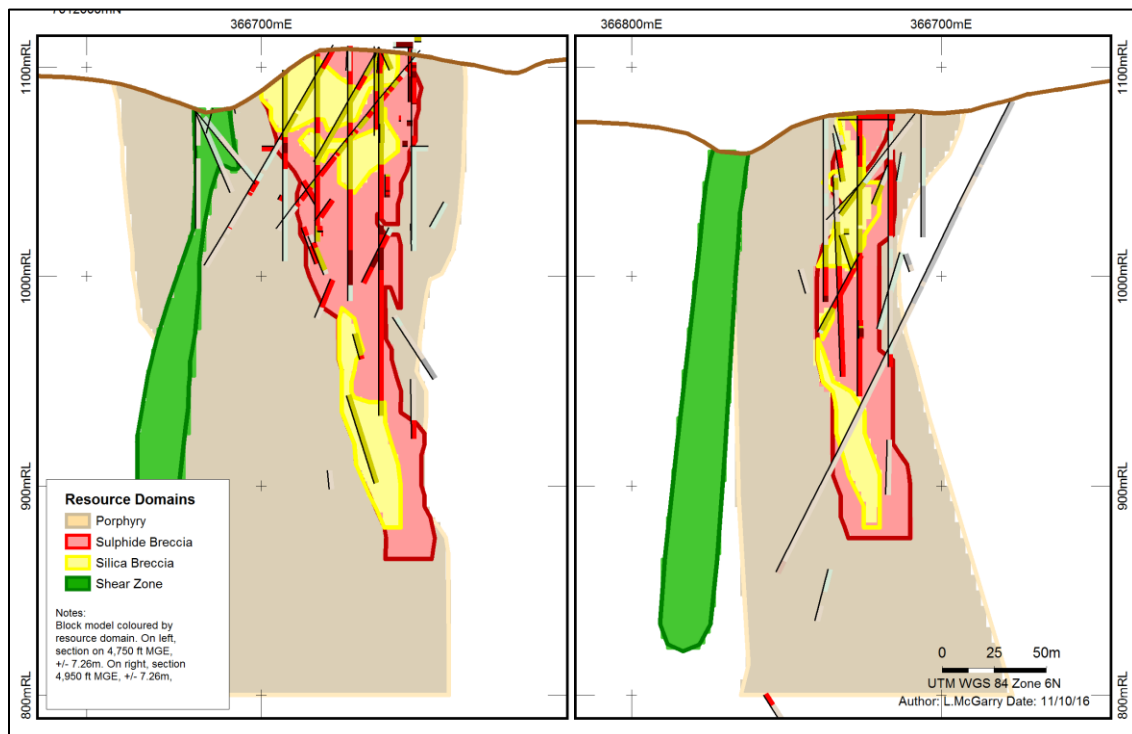


Figure 14-3: Sections on 4,750 ft MG East (left) and 4,950 ft MG East (right) looking southwest and showing Resource Model Domains

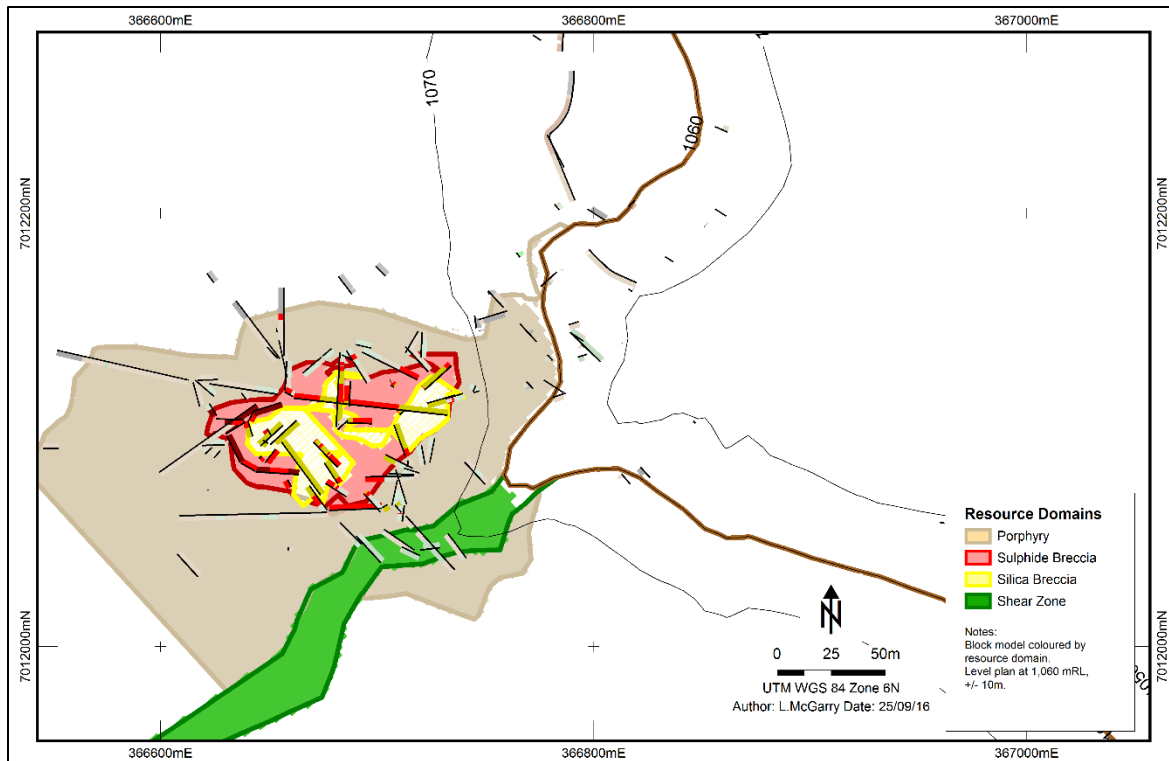


Figure 14-4: Level Plan at 1,060 m asl showing Resource Model Domains

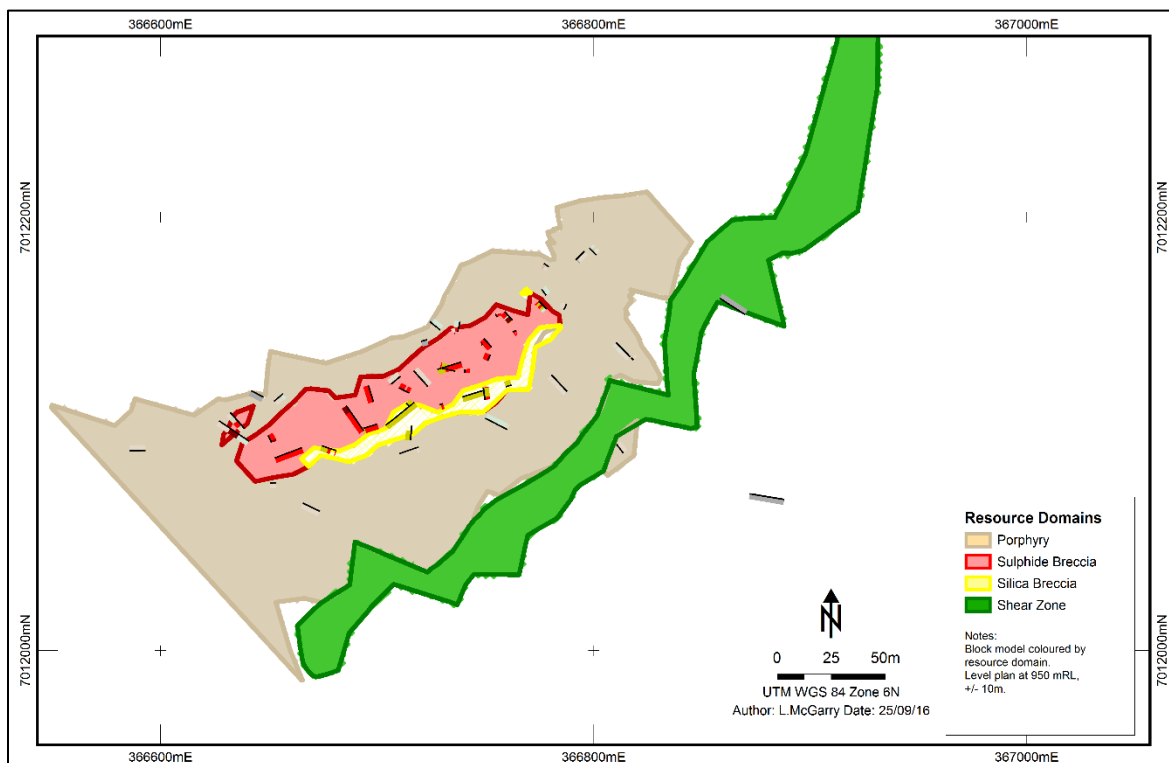


Figure 14-5: Level Plan at 950 m asl showing Resource Model Domains

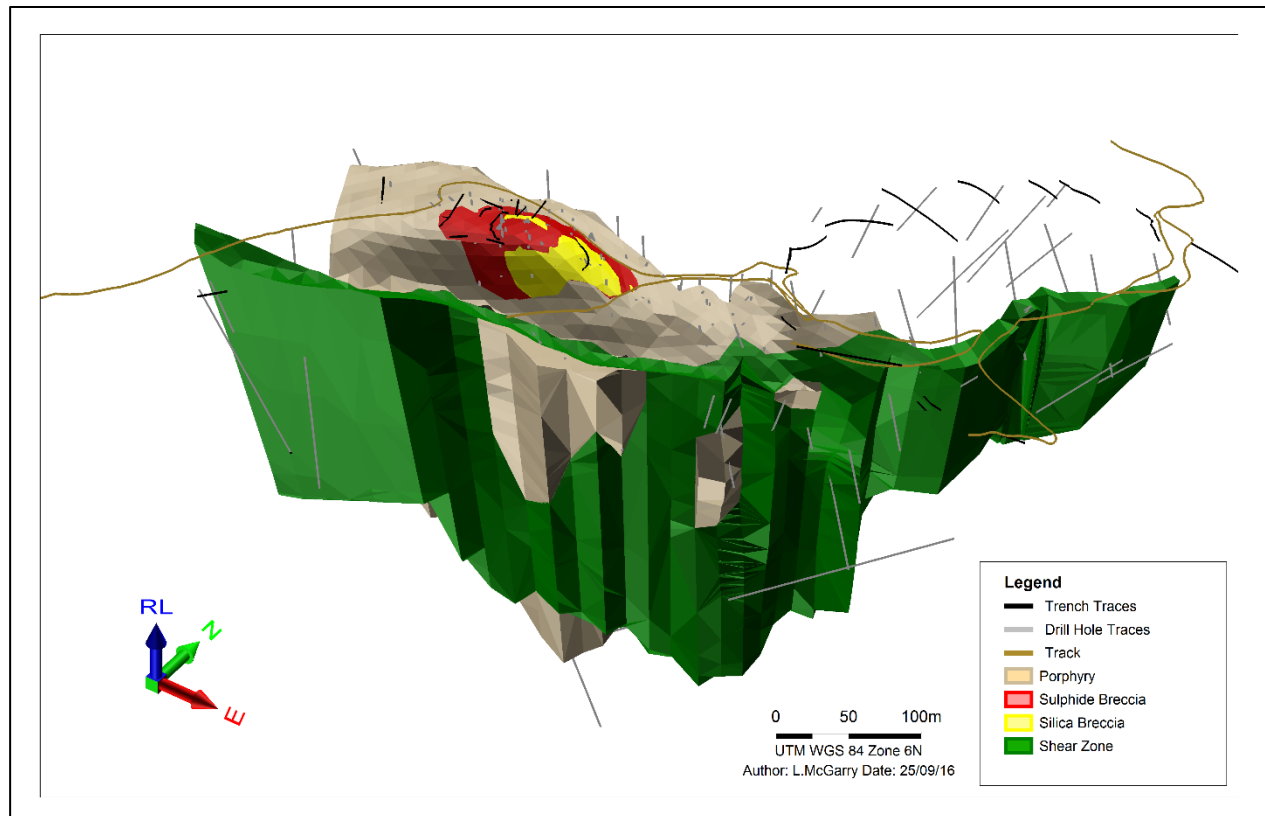


Figure 14-6: Orthogonal View to the Northwest showing All Resource Domain Wireframes

Within the Sulphide Breccia domain, towards the western contact, there are discrete zones of high intensity sulphide mineralization defined where rock composition is $>10\%$ sulphides. Presently, this material is not sufficiently defined to enable modeling as a separate resource domain. The thickness of these units is typically less than 20 m and at the current drill spacing it is necessary to incorporate these units within the sulphide breccia domain.

At depth, below 900 m asl, the main breccia body pinches out down plunge and sulphide mineralization becomes constrained to a series of discrete steeply dipping panels of some 15 m true thickness within the porphyry host. Between 800 m asl and 900 m asl these intervals are assigned to the porphyry domain. At the current drill spacing, the difficulty of modeling the continuity of this mineralization limits the inclusion of this unit into the resource model below a depth of 800 m asl.

14.5. BLOCK MODELS

At the Golden Zone deposit, a block model rotated to 47.58 degrees was created in Micromine to encompass modelled resource domains. Blocks were constrained by domain wireframe models. The “parent” block size is 5 m in the X axis by 10 m in both the Y axis and elevation Z axis. The



choice of block dimension is informed by the Kriging Neighbourhood Analysis presented in Section 14.7.1, and considers the data spacing, deposit geometry and the potential open pit mining method. To honour wireframe volumes, blocks may be divided into two sub-blocks in the X axis and four sub-blocks in the Y and Z axes, resulting in a minimum geological resolution of 2.5 m in the X, Y and Z axes. Golden Zone model definitions are presented in Table 14-3.

Table 14-3: Golden Zone Model Definitions

Axis	Min Extent (UTM East)	Max Extent (UTM North)	Block Size (m)	Sub- blocks	Number of blocks
X	366,500	367,000	5	2	60
Y	7,011,900	7,012,300	10	4	62
Z	805 asl	1,200 asl	10	4	41

14.6. EXPLORATORY DATA ANALYSIS

Sample data was grouped into lithological domains for statistical analysis of gold and silver grades and of bulk density values. Sample grades were assessed for the presence of extreme values and capping or outlier restriction strategies were identified. Composite lengths were determined. Spatial data analysis was considered prior to block model grade estimation in an attempt to generate a series of semi-variograms that define directions of anisotropy and spatial continuity of gold and silver grades.

14.6.1 Simple Statistics

Descriptive statistical analysis of the Golden Zone assay data was undertaken to understand the natural gold cut-off grade that defines the various mineralized envelopes, to determine the distribution parameters for gold and to compare assay data from different sample supports (drill campaigns, surface and underground data) and consider whether recent and historical datasets are compatible for use in resource estimation.

14.6.1.1 Drill Campaign

Unrestricted descriptive statistics were generated for all drill hole assays for the Golden Zone deposit, by company drill campaigns and are shown in Table 14-4.

- For diamond drilling, average gold grades and standard deviation are similar for most campaigns, with an overall mean grade of 1.187 g/t Au and a standard deviation of 4.611 g/t Au.
- Lower grades, noted for the Alix, Hidefield and Inspiration Development holes are due to focus of those campaigns on areas outside of the main breccia pipe.
- The 1936 Golden Zone Mine Inc. drill holes were drilled from underground workings within the core of the sulphide breccia pipe and have a significantly higher mean gold grade of 3.626 g/t Au, and a standard deviation of 5.227 g/t Au. This campaign has a large discrepancy between the number of gold assays (169) and silver assays (32). The



assigning of 'background' 0.001 g/t Ag silver grades to unassayed intervals would result in a potential bias, particularly in high grade areas.

- The vertical RC drill holes are centred on the Golden Zone deposit and have a mean grade of 1.196 g/t Au which is comparable to core holes, but with a lower standard deviation of 2.699 g/t Au. This is likely due to the smoothing effect of RC drilling associated with larger sample volumes.
- Overall trench grades are slightly lower than diamond drill hole grades but have a comparable standard deviation.
- Underground channel samples collected from within the sulphide breccia portion have a mean grade of 3.648 g/t Au, which is significantly higher than core and RC holes but considered acceptable on the basis that these samples are collected from within the well mineralized heavy sulphide breccia portion of pipe.

With the exception of Golden Zone Mine Inc. drill data, the QP considers that diamond drill sample populations are sufficiently comparable to permit the use of assay data derived from different drill campaigns for the estimation of mineral resources at the Golden Zone deposit. The Golden Zone Mine Inc. drill core assay data collected in 1936 are excluded from subsequent analysis due to their historical nature, lack of assay certificates and inconsistent silver analysis.

Following a visual assessment of RC drill hole data, it was decided to retain these holes for this study on the basis that locally they compare well with core holes. However, it is recommended that Avidian undertake a program of twinned core holes in order to provide validation of RC holes to allow the estimation of resource beyond the Indicated category. Assay values from Trench and Underground samples are incorporated into the MRE database.



Table 14-4: Golden Zone Raw Assay Statistics - Gold

Row Labels	Count	Min	Max	Average	Std Dev	Var
Diamond Drill	10,923	0.001	311.314	1.187	4.611	21.26
Addwest	1,989	0.017	311.314	1.053	8.583	73.66
Alix	1,085	0.001	24.600	0.435	1.551	2.41
Enserch	1,948	0.034	86.743	1.986	4.374	19.13
Golden Zone Mine.	167	0.343	25.714	3.626	5.227	27.32
Golden Zone Inc.	1,208	0.034	35.314	1.532	3.302	10.90
Hidefield	563	0.003	7.660	0.223	0.588	0.35
Homestake Mining	65	0.034	12.343	1.432	2.293	5.26
Inspiration	572	0.034	17.486	0.237	1.082	1.17
Piper Capital	1,859	0.003	27.400	0.776	1.909	3.64
Ranchers Exploration	454	0.034	21.600	1.756	3.219	10.36
United Pacific	1,013	0.034	37.371	1.455	3.287	10.80
RC	3,461	0.003	51.429	1.196	2.699	7.283
Addwest	2,142	0.017	33.600	0.714	1.959	3.84
Hidefield	189	0.003	1.320	0.111	0.168	0.03
Piper Capital	30	0.077	1.260	0.425	0.310	0.10
United Pacific	1100	0.034	51.429	2.341	3.669	13.464
Trench	1682	0.003	99.3	0.763	4.707	22.157
Addwest	1,340	0.017	22.971	0.279	1.238	1.53
Golden Zone Inc.	67	0.171	68.571	6.101	13.070	170.81
Hidefield	230	0.003	99.300	2.043	9.636	92.85
United Pacific	45	0.034	5.486	0.690	1.147	1.315
Underground Channel	654	0.034	216.686	3.648	9.677	93.65
Enserch.	412	0.103	216.686	4.660	11.737	137.75
United Pacific	242	0.034	34.971	1.926	3.755	14.10
Total	16,720	0.001	311.314	1.242	4.640	21.53



Table 14-5: Golden Zone Raw Assay Statistics - Silver

Row Labels	Count	Min	Max	Average	Std Dev	Var
Diamond Drill	8,220	0.100	949.000	6.540	20.248	409.965
Addwest	1,989	0.343	246.514	4.067	13.055	170.43
Alix	1,085	0.100	100.000	3.207	8.914	79.45
Enserch						
Golden Zone.	32	5.143	149.486	29.207	35.840	1284.53
Golden Zone Inc.	1,021	0.343	225.943	10.072	20.292	411.76
Hidefield	563	0.100	66.700	2.353	6.091	37.10
Homestake Mining	65	0.343	164.571	11.019	25.570	653.84
Inspiration	210	0.343	250.286	3.447	17.769	315.73
Piper Capital	1,859	0.100	949.000	5.181	25.982	675.06
Ranchers Exploration	406	0.343	158.743	13.046	19.896	395.87
United Pacific	990	0.343	373.714	13.415	28.574	816.48
RC	3,461	0.100	214.628	6.946	16.800	282.237
Addwest	2,142	0.343	116.571	3.340	8.070	65.13
Hidefield	189	0.100	22.300	0.767	1.999	4.00
Piper Capital	30	0.100	8.100	2.507	1.919	3.68
United Pacific	1,100	0.343	214.628	15.150	25.712	661.103
Trench	1,636	0.100	250.286	4.516	17.449	304.47
Addwest	1,340	0.343	175.886	3.319	13.945	194.45
Golden Zone Inc.	66	0.343	250.286	32.234	46.385	2151.58
Hidefield	230	0.100	111.000	3.536	13.977	195.36
United Pacific	41	0.343	48.686	4.532	9.238	85.345
Underground Channel	510	0.343	537.943	20.835	39.121	1530.44
United Pacific	241	0.343	537.943	11.385	39.326	1546.56
Grand Total	13,599	0.100	949.000	6.480	19.614	384.724

14.6.1.2 Domain Statistics

Univariate statistics for gold and silver grades in g/t, collected from each mineralized resource domain, are presented in Table 14-6 and histograms are presented in Figure 14-10 and Figure 14-11. The following features are observed:

- The Porphyry domain has mean grades of 0.658 g/t Au and 2.315 g/t Ag. Both metals show a reasonably symmetric distribution for logarithmic gold and silver grades that are slightly skewed toward lower values.
- The Silica Breccia domain has a mean grade of 0.774 g/t Au and 7.992 g/t Ag. Both metals show a reasonably symmetric distribution for logarithmic gold and silver grades.
- The Sulphide Breccia domain shows a log normally distributed population with average grades of 3.388 g/t Au and 18.451 g/t Ag.



- The Shear Zone domain has mean grades of 0.775 g/t Au and 4.619 g/t Ag. Both metals show a reasonably symmetric distribution for logarithmic gold and silver grades that are slightly skewed to lower values.

Table 14-6: Simple Statistics for Golden Zone Domains

	Count	Min	Max	Average	Std Dev	Coeff. Var.
Gold Grades						
Porphyry	4,441	0.005	84.343	0.658	2.036	3.095
Sulphide Breccia	4,130	0.034	311.314	3.388	8.013	2.365
Silica Breccia	1,473	0.007	86.743	0.774	3.181	4.108
Shear	617	0.014	11.657	0.775	1.547	1.995
All	10,661	0.01	311.31	1.74	5.46	3.143
Silver Grades						
Porphyry	3,342	0.100	88.500	2.315	5.742	2.480
Sulphide Breccia	3,078	0.100	373.714	18.451	28.419	1.540
Silica Breccia	1,098	0.100	250.286	7.992	15.822	1.980
Shear	507	0.100	537.943	4.619	25.651	5.553
All	8,025	0.100	537.943	9.426	21.288	2.258

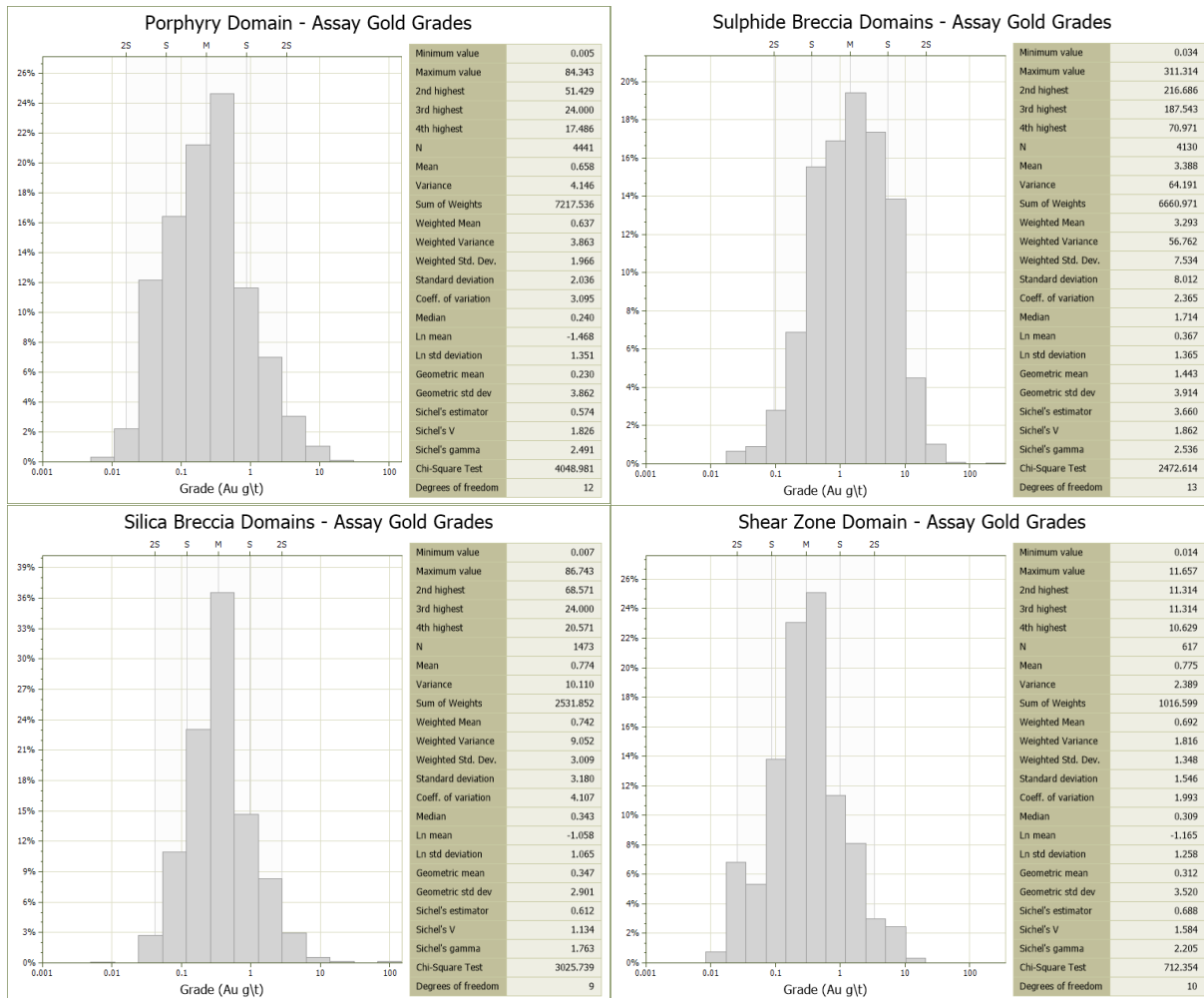


Figure 14-7: Golden Zone Gold Assay Histograms

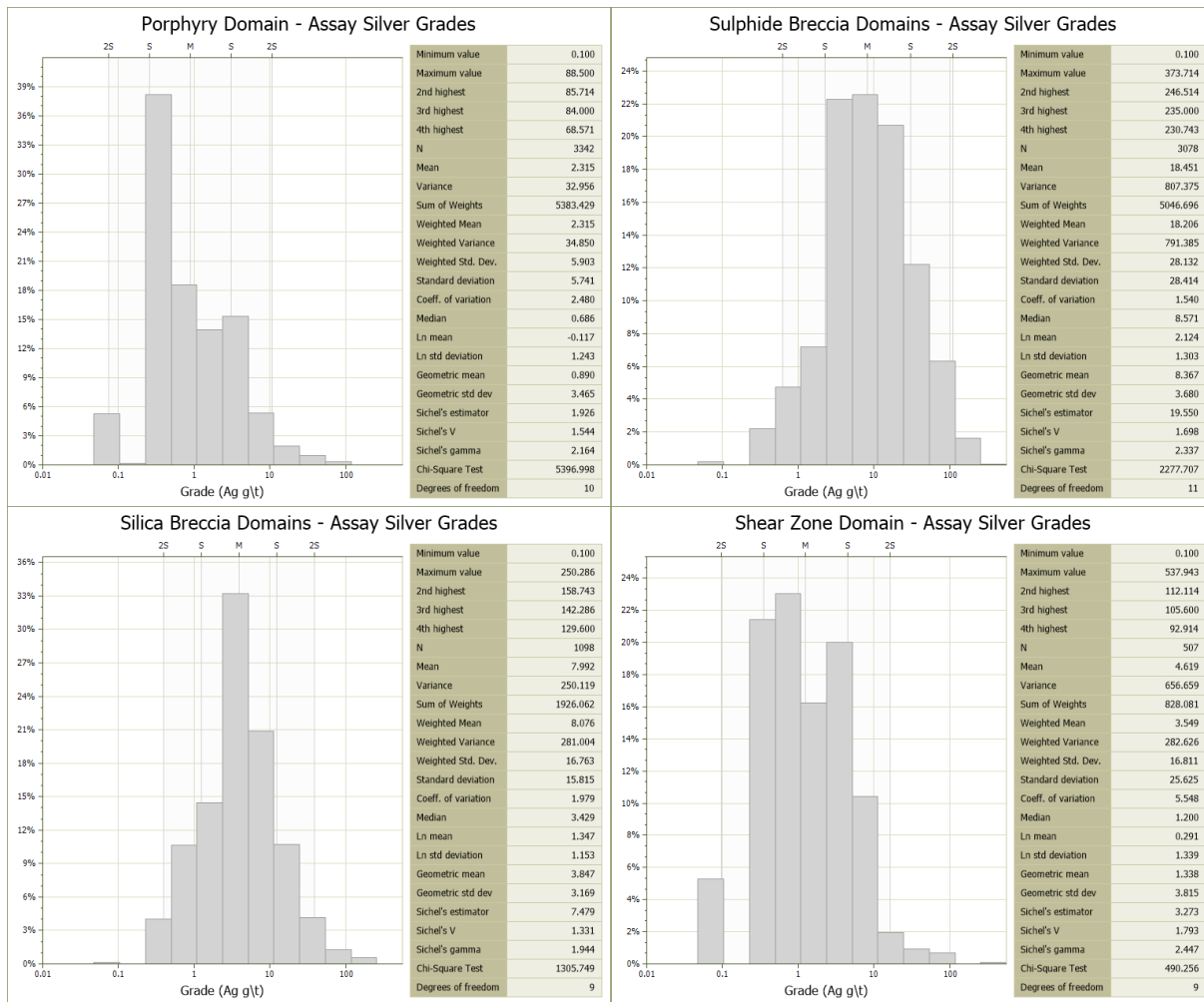


Figure 14-8: Golden Zone Silver Assay Histograms

14.6.2 Grade Capping

Grade capping analysis was performed on raw gold and silver assay data to assess the influence spurious or extreme grade outliers have on sample population statistics. Spurious values may be a high grade occurrence of gold or silver, but they may also arise through the presence of a nugget effect. Extreme values may be reasonable within the context of the whole deposit or analogous deposits but may be unreasonable within the geological domain in which they are located and have the potential to locally overestimate deposit grades if left un-capped.

The sample histograms for domained assays are reviewed in order to identify a point at which the histogram tail deteriorates, i.e. where grades become non-representative for each domain. In addition, sample data were sorted into descending order and several top-cut values applied in order to see what effect the top-cut value has on the mean, standard deviation and coefficient of variation, as well as the loss of metal from the sample population. The capping thresholds



presented in Table 14-7 were selected, resulting in the capping of 20 gold assay values and 40 silver values samples prior to estimation.

Table 14-7: Gold Zone Grade Capping Summary

Domains	Total # of Samples	Capping Value Au (g/t)	Per-centile	# of Capped	% of Metal Capped	Mean of Assays	Capped Mean	CV* of Assays	CV* of Capped Assays
Gold Grades									
Porphyry	4,441	20	99.80	5	4 %	0.66	0.64	3.18	2.54
Sulphide Breccia	4,130	35	99.60	12	5 %	3.39	3.22	2.36	1.63
Silica Breccia	1,473	25	99.80	3	9 %	0.77	0.70	4.11	2.37
Shear	617	-	-	-		0.78	-	1.95	-
Silver Grades									
Porphyry	3,342	60	99.80	10	3 %	2.32	2.31	2.48	2.44
Sulphide Breccia	3,078	200	99.70	8	1 %	18.45	18.33	1.54	1.52
Silica Breccia	1,098	130	99.30	12	2 %	7.99	7.85	1.98	1.83
Shear	507	30	98.20	9	36 %	4.62	2.98	5.55	2.52

* Coefficient of Variation

14.6.3 Sample Regularizing/Compositing

To generate representative length weighted composites and honour lithological boundaries, assays that fall within the host domain wireframes were coded by domain. Constrained assay sample lengths range from 5 ft to 20 ft, with an average sample length of 5.44 ft. Two distinct sample length populations are evident, averaging 5 ft and 10 ft. In order to ensure equal sample support, domained assays were regularized to 5 ft intervals, equal to 1.524 m, the dominant assay interval length at the Golden Zone deposit using the length weighted averages of gold and silver grades.

Nearly 900 ten foot long samples of were split into two intervals of the same grade, resulting in a greater number of composites than assay values. A smoothing effect can be seen by the lower standard deviation and average grade of composite samples relative to the original assays for both gold and silver. Although the splitting of samples has the potential to increase the influence of assay values from long samples, this was considered preferable to the smoothing effect of using larger 3 m (10 ft) composites.

Within the breccia pipe, underground channel sample 3560-6 was collected over a length of 9.45 m and has a recorded grade of 7.2 g/t Au and 67.89 g/t Ag. The atypical length of this sample and its division into six smaller composites would result in a significant local bias. It was decided to remove this sample from the composites used in grade interpolation.

A nominal grade of 0.001 g/t was used to populate un-sampled assay intervals for gold and silver on the basis that unsampled core was perceived as barren by past operators. These samples can be seen in the histograms in Figure 14-10 and Figure 14-11, where there is a peak at the 0.001 grade



bin for each domain. The number of samples added for gold included: Sulphide Breccia - 145, Porphyry - 975, Silica Breccia - 41, Shear - 99; and for silver: Sulphide Breccia - 141, Porphyry - 780, Silica Breccia - 78, Shear - 135. For intervals located within mineralized portions of the deposit, Avidian should obtain and sample available core to minimize the application of default barren grades.

Composites that were less than 0.5 m in length were discarded so as to not introduce a short sample bias into the estimation process. Composite statistics for each domain are presented in Table 14-8.

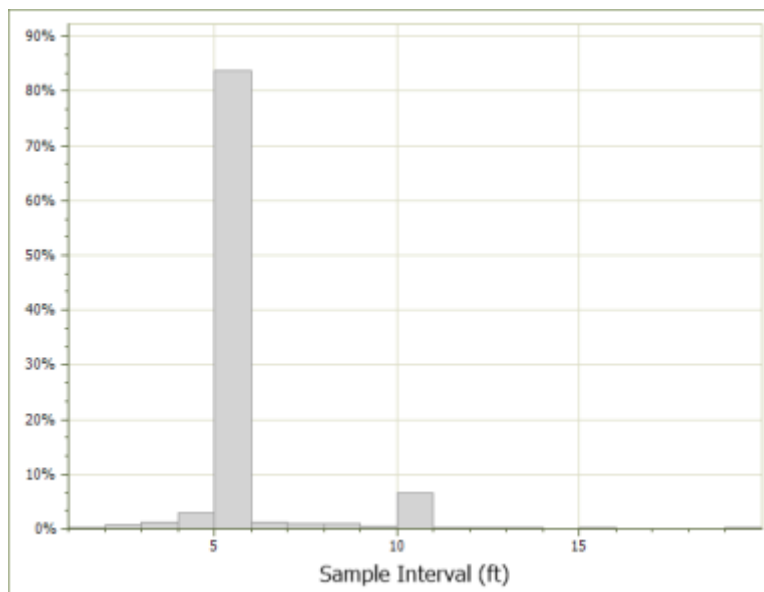


Figure 14-9 Golden Zone Histogram of Sample Lengths

Table 14-8 Gold Zone Deposit Composite Summary

	Capped Assays					1.5 m Compositing Assays				
	Count	Min	Max	Average	Std. Dev	Count	Min	Max	Average	Std. Dev
Gold Grades (Au g/t)										
Porphyry	4,441	0.005	20	0.636	1.46	5,793	0.001	20.000	0.506	1.258
Sulphide Breccia	4,130	0.034	35	3.221	4.59	4,553	0.001	35.000	3.033	4.325
Silica Breccia	1,473	0.007	25	0.703	1.66	782	0.001	11.657	0.599	1.224
Shear	617	0.014	11	0.775	1.55	1,713	0.001	25.000	0.659	1.567
All	10,661	0.005	35	1.655	3.33	12,841	0.000	35.000	1.428	3.030
Silver Grades (Ag g/t)										
Porphyry	3,342	0.100	60	2.287	5.386	4,386	0.001	60.000	1.841	4.862
Sulphide Breccia	3,078	0.100	200	18.329	27.414	3,494	0.001	200.000	17.199	26.432
Silica Breccia	1,098	0.100	130	7.845	14.155	703	0.001	40.000	2.201	4.488
Shear	507	0.100	40	3.146	5.849	1,355	0.001	130.000	7.343	13.875
All	8,025	0.100	200	9.254	19.602	9,938	0.000	200.000	8.016	18.238

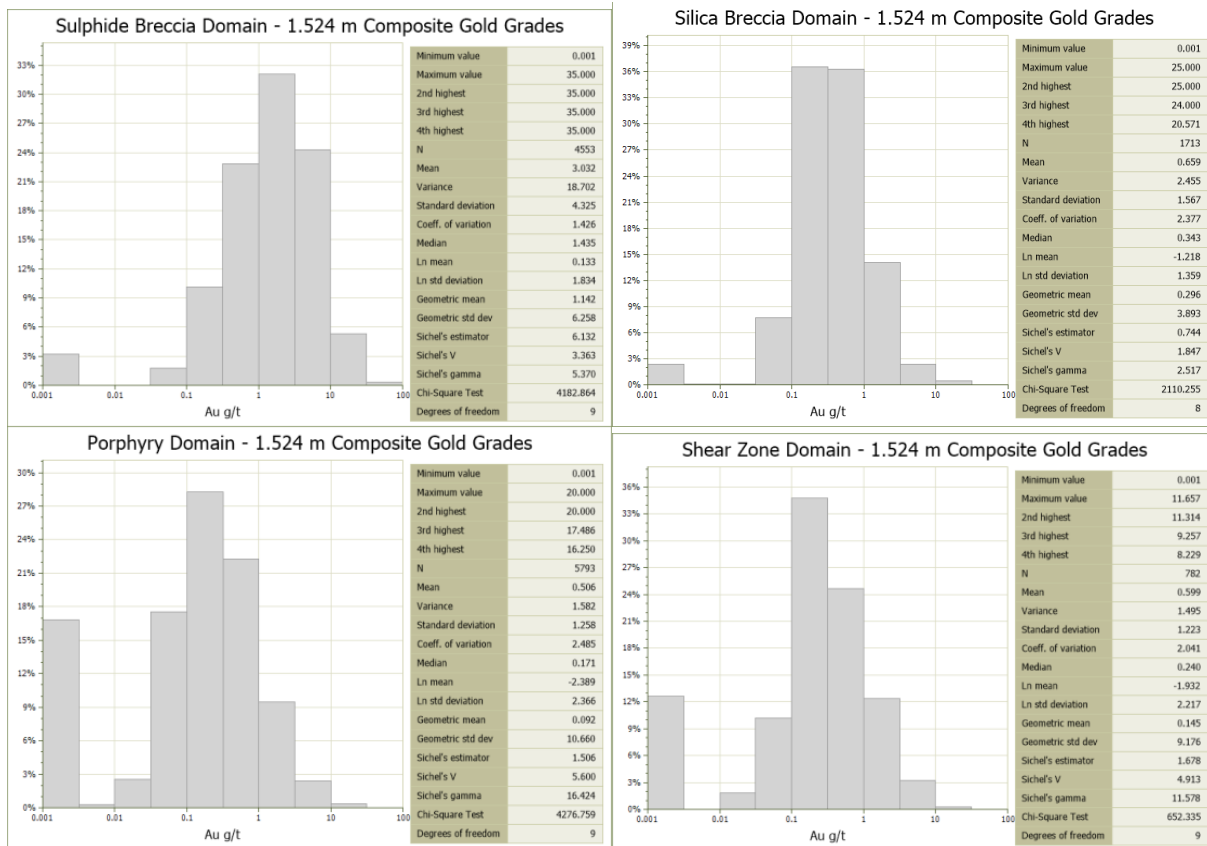


Figure 14-10: Golden Zone Composite Gold Grade Histograms

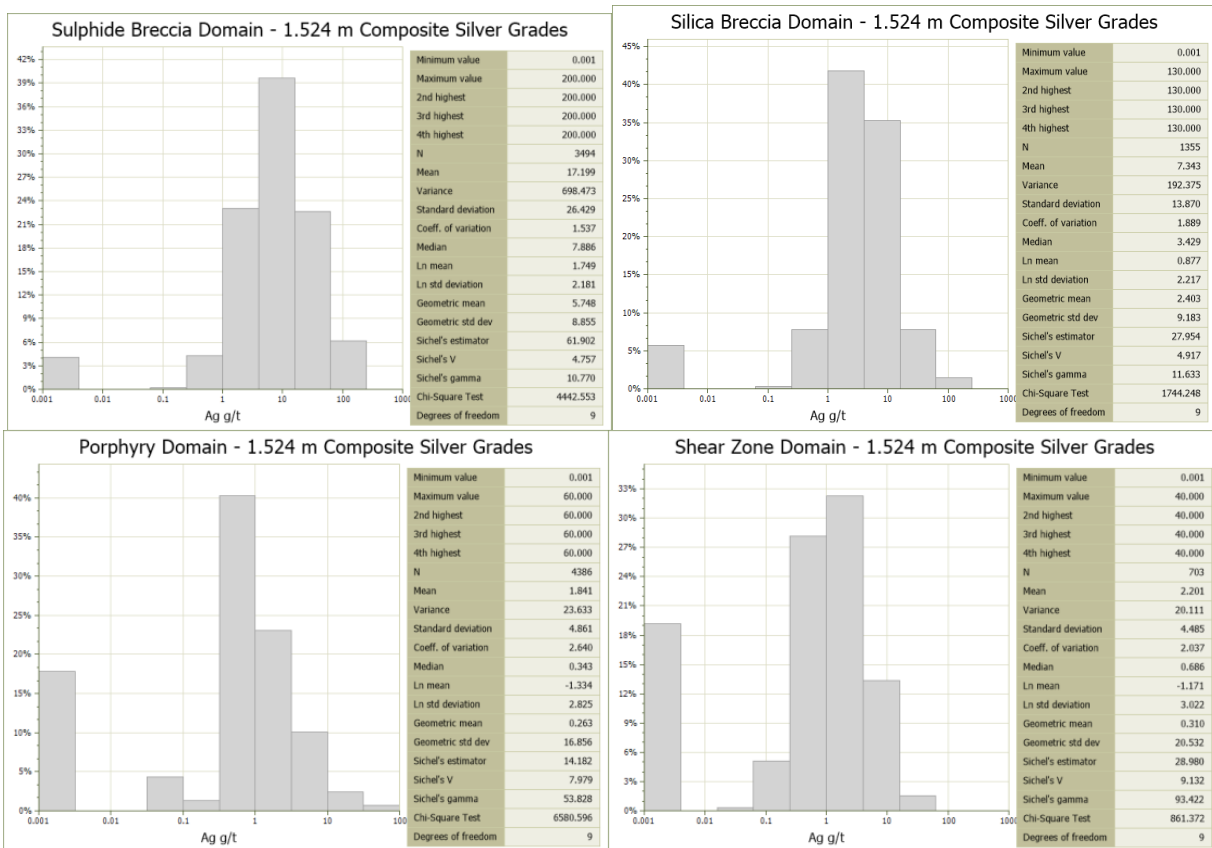


Figure 14-11: Golden Zone Composite Silver Grade Histograms

14.6.4 Geostatistics

All domains have a sufficient number of samples to generate meaningful variation models for both gold and silver composite grades. To honour the population distributions shown in the histograms in Figure 14-10 and Figure 14-11, composite gold and silver values are log normally transformed prior to being assessed for anisotropy, or directional dependence. Maps of assay value continuity were used to define the strike and dip direction axis of the mineralization body, along with the pitch direction axis of the main mineralization axis. These orientations are presented in Table 14-9.

The grade variation between sample pairs orientated along each direction axis $\pm 30^\circ$ was reviewed using semi-variogram charts. Example semi-variograms for the Sulphide Breccia domain are shown Figure 14-12. Sample pairs are grouped by their separation distance, or 'lag interval' on the X axis. For each lag interval assessed, half of average variance value of paired assays is plotted on the Y axis. The resulting empirical semi-variogram chart can show if there is a relationship between grade variance and distance along each axis that can be modelled.

Lag distances are at 5 m intervals for the well drilled Breccia domains, 10 m intervals in the Porphyry domain, and up to 24 m intervals in the more sparsely drilled Shear Zone domain. To improve variography, a bottom limit of 0.001 g/t Au and Ag was applied.

For all domains, semi-variogram charts for gold and silver were modelled using two spherical functions. The semi-variogram models described in Table 14-9 are sufficiently well defined to allow meaningful kriging calculations.

Breccia domain semi-variograms models for gold have high nugget values, describing expected variation between samples at the same place, ranging from 43% to 44% of the total variance¹¹. The first spherical model describes a large increase in variation between samples spaced 5 m to 15 m apart. The ranges of the second model define the broader anisotropy of each domain.

Breccia domain semi-variograms for silver are poorly defined. Silver semi-variogram models are harder to fit but are similar to those modelled for gold with: high nugget values, short initial ranges accounting for most of the total variance, and longer second model ranges that define the broader anisotropy of each domain.

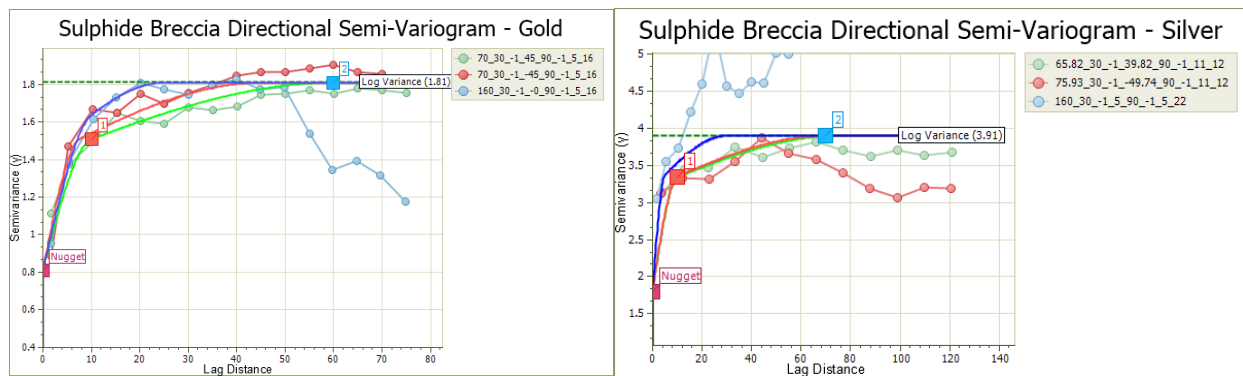


Figure 14-12: Golden Zone Sulphide Breccia Domain Variography

¹¹ The total log normal population variance is used to define the sill and is equal to the nugget value plus the partial variance of each modelled function.



Table 14-9: Modelled Semi-Variogram Parameters for Golden Zone Grade Interpolation

Zone	Ellipse Rotation			Nugget Value	Model	Partial Sill	Range (m)		
	z	y	x				Major	Semi-Major	Minor
Gold Semi Variogram Parameters									
Porphyry	50	74	-90	0.80 (45%)	1. Spher	0.44	30	12	20
					2. Spher	0.54	120	70	50
Sulphide Breccia	70	45	90	0.81 (44%)	1. Spher	0.60	10	10	15
					2. Spher	0.45	60	45	25
Silica Breccia	70	65	-90	0.50 (43%)	1. Spher	0.35	10	15	5
					2. Spher	0.30	30	30	30
Shear	42	0	-90	0.73 (48%)	1. Spher	0.44	40	10	15
					2. Spher	0.35	100	60	30
Silver Semi Variogram Parameters									
Porphyry	50	77	-90	1.20 (20%)	1. Spher	2.59	30	10	10
					2. Spher	2.12	100	70	45
Sulphide Breccia	66	40	84	1.80 (63%)	1. Spher	0.66	10	10	5
					2. Spher	0.40	75	70	30
Silica Breccia	66	54	73	2.50 (44%)	1. Spher	1.54	15	10	15
					2. Spher	1.70	35	40	35
Shear	40	0	-90	3.0 (41%)	1. Spher	1.88	40	20	15
					2. Spher	2.50	105	65	40

14.6.4.1 Boundary Analysis

Boundary analysis was undertaken to identify the relationship of metal grades across modelled contacts.

The Porphyry domain to Sulphide Breccia domain boundary represents a change from host rock to mineralized breccia. The contact analysis presented in Figure 14-13 shows a sharp increase in gold and silver grades when moving from the porphyry domain (negative distance from contact) across the boundary into the sulphide breccia domain (positive distance from contact).

The Sulphide Breccia Domain to Silica Breccia Domain boundary represents a change from well mineralized to poorly mineralized breccia. The contact analysis presented in Figure 14-14 shows a sharp increase in gold and silver grades when moving from the silica domain (negative distance from contact) across the boundary into the sulphide breccia domain (positive distance from contact).

Low drilling density prevents the meaningful assessment of the boundary conditions between shear zone and porphyry domains. The boundary analysis indicates that all domain boundaries are hard for geostatistical analysis and grade interpolation, such that sample grades in one domain may not inform the block grade in another.

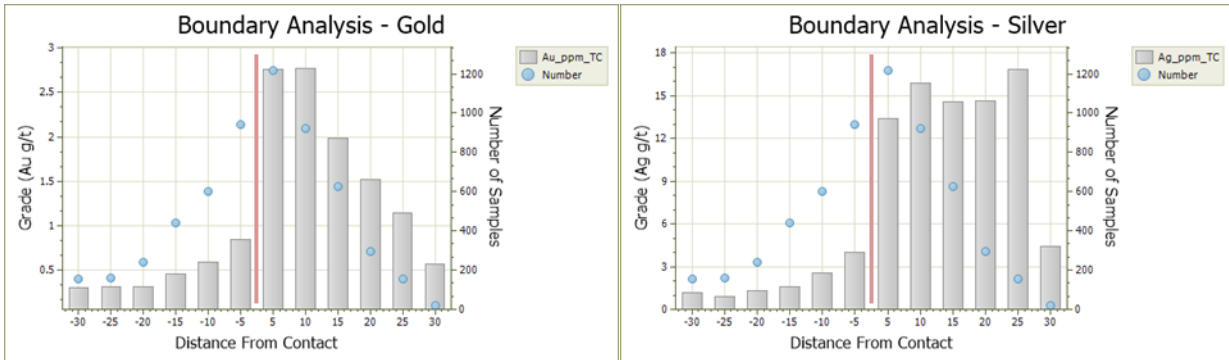


Figure 14-13: Boundary Analysis Porphyry to Sulphide Breccia Domains

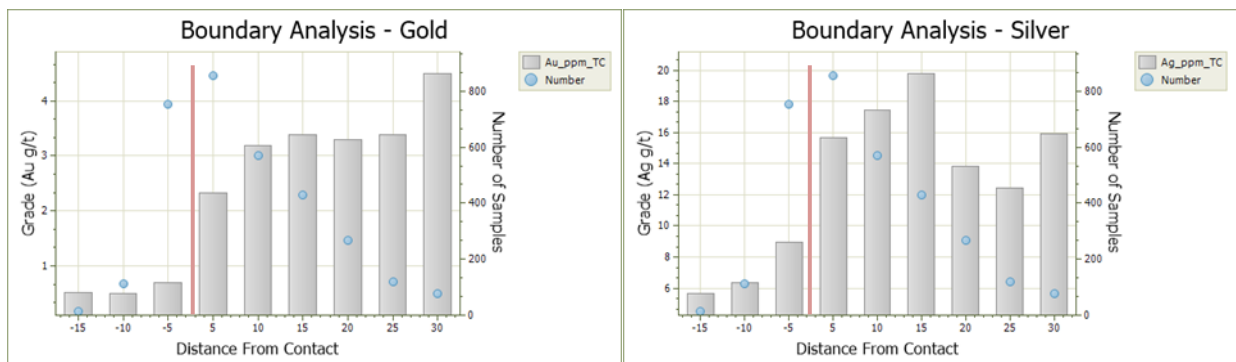


Figure 14-14: Boundary Analysis Silica to Sulphide Breccia Domains

14.7. GRADE INTERPOLATION

Kriging is considered to be an appropriate method for estimating block grades at the Golden Zone deposit. The kriging interpolation method is a linear geostatistical method that uses the measured anisotropy of the deposit to weight composite assay values in the three orientation axes of mineralization within the deposit. At the Golden Zone deposit, gold and silver mineralization has a locally variable nature. In this scenario the Ordinary Kriging (“OK”) method and the utilization of a local mean within the search neighborhood is preferred.

14.7.1 Kriging Neighbourhood Analysis

A kriging neighbourhood analysis (KNA) was undertaken to inform the choice of block size and to investigate the appropriate minimum and maximum number of samples required for grade estimation. The KNA uses the semi-variogram model parameters and an iterative series of block interpolations with varying block size and sample numbers. Kriging efficiency (KE) and slope of regression (Slope) values derived from each iteration provide a measure of interpolation effectiveness.

Discrete areas that represent well informed (4 to 15 m sample spacing) and poorly informed (>50 m sample spacing) areas are identified for the Sulphide Breccia, Porphyry and Shear Zone domains and used for the iterative block interpolations described below. Sample spacing in the



Sulphide Breccia domain is similar to the Silica Breccia domain and a KNA assessment of the Silica Breccia domain was not undertaken.

14.7.1.1 Block Model

Block configurations varying from 3 m to 20 m in the X axis and 5 m to 30 m in the Y and Z axes were tested using a single sector search ellipse with search radii derived from semi-variogram parameters identified in Table 14-9. The results are shown in Figure 14-15 and Figure 14-16 and indicate that the KE is generally high for well-informed blocks regardless of the block configuration, but that the Slope decreases as the block size increases. For poorly informed Sulphide Breccia and Shear Zone blocks, KE and Slope values are low regardless of block size. All metrics show that an estimate using blocks larger than 10 m in the X axis and 15 m in the Y and Z axis results in a poorer overall estimate.

14.7.1.2 Sample Numbers

For the subsequent sample number testing, a block dimension of 5 m in the X axis and 10 m in the Y and Z axes was selected. All tested domains exhibited a similar pattern in regards to the number of samples. For well-informed domains, and the Sulphide Breccia domain in particular, there is a rapid improvement in kriging efficiency and slope up to 14 samples. More than 24 samples resulted in only marginal improvement in the estimation metrics.

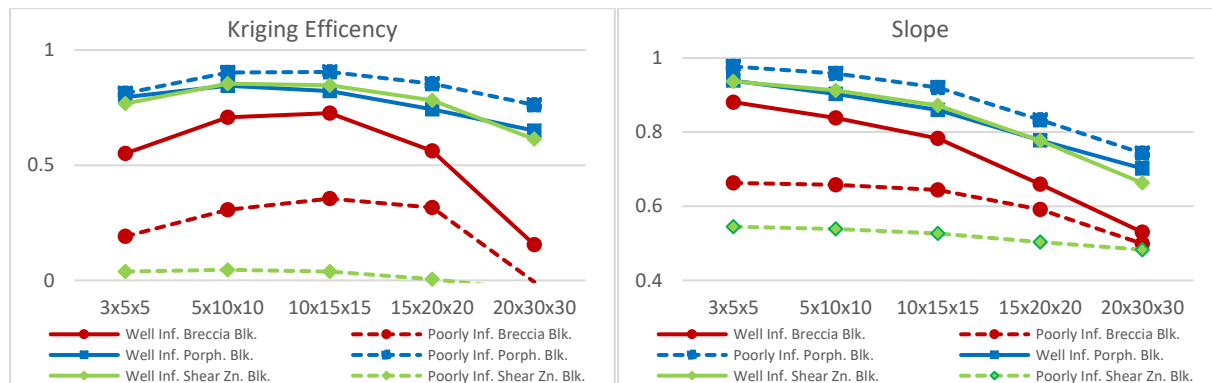


Figure 14-15: KNA Analysis Results for Block Sizes

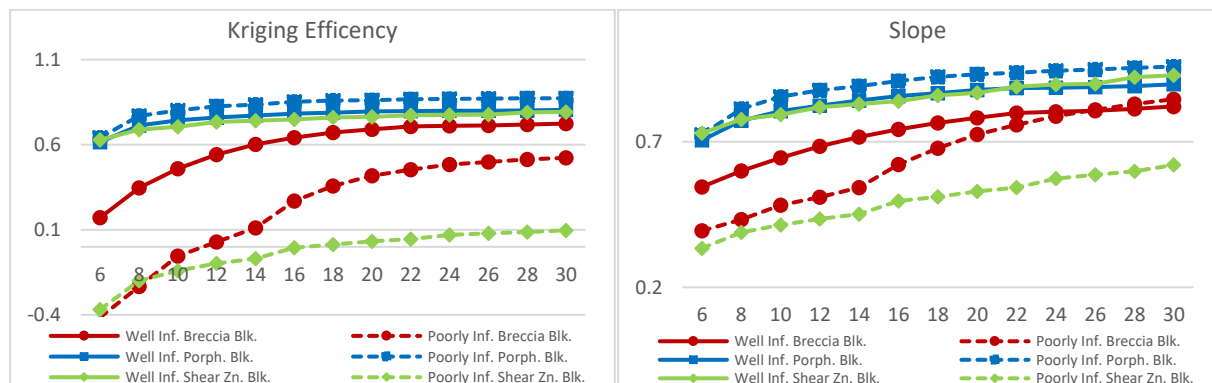


Figure 14-16: KNA Analysis Results for Sample Numbers



14.7.2 Interpolation Parameters

Data used to interpolate grade into the Golden Zone block model contains locally clustered trench, drill hole and underground samples that may unduly influence or bias interpolated block grades. To address this issue, a restriction was applied that limits the maximum number of samples used to estimate block grades.

Search ellipse parameters for each run were determined by means of the evaluation of the geological model, exploration data spacing and by analysis of the semi-variogram model parameters described in Section 14.6. Search ellipses were aligned to the directions of gold grade continuity determined by the variography.

At the Golden Zone, for each domain, the OK interpolation technique was used to interpolate block grades in passes at half the semi-variogram range, at the semi-variogram range, and at twice the semi-variogram range. During grade interpolation, blocks are discretized (subdivided) twice in the X axis dimension and four times in Y and Z axis dimensions resulting in a matrix of nodes spaced at 2.5 m intervals on the X, Y and Z axes within each block. Grades are estimated for each node and averaged to generate a grade for the parent block. In order to de-cluster the data, the search ellipse was divided into four sectors and a constraint of a maximum of seven samples per sector, and twenty-four samples in total was applied.

The OK interpolation utilized the variogram models contained in Table 14-9 and the search ellipse and sample constraint parameters detailed in Table 14-10. For validation purposes, an Inverse Distance Weighted interpolation was undertaken, whereby samples were weighted proportionally to the inverse of their distance from the block raised by a power of three (IDW³). The IDW³ used the same search ellipse and sample constraint parameters as the OK interpolation. A Nearest Neighbor (NN) interpolation using the same search ellipse dimensions as other interpolation methods was also undertaken.

At the Golden Zone deposit lithological contacts are hard boundaries for grade interpolation, such that gold and silver grades in one domain cannot inform blocks in another.



Table 14-10: Golden Zone Estimation Parameters

Interpolation Method	Ordinary Kriging		
Interpolation Run #	1	2	3
Search Radii	1/2 range* in main directions	Equal to the range in main directions	Twice the range in main directions
Number of Sectors	4	4	4
Max no of Samples per Sector	7	7	7
Min Number of Drill Holes	3	3	3
Min Number of Samples per Hole	2	2	2
Max Number of Samples per Hole	10	10	10
Min number of Samples (Total)	14	14	14
Max number of Samples (Total)	28	28	28
Discretization	2*4*4	2*4*4	2*4*4

* search ranges are defined by the semi-variogram models in Table 14-9

14.8. BULK DENSITY

The methods used for bulk density determination are described in a 2009 memo on Density Measurements at Golden Zone prepared by Gillam et al. as follows:

"As part of ore [sic] body characterization of the Golden Zone Breccia Pipe, density measurements were conducted on a range of drill core samples in and near the Breccia Pipe. Rock types included both mineralized and unmineralized samples. Emphasis was placed on the units that make up the bulk of the Breccia Pipe: Sulphide and Silica Breccia. The most mineralized Sulphide Breccia, as expected, returned the highest density values. The lowest values were returned by unmineralized porphyry, also as expected".

"To obtain the measurements, rock samples were selected throughout the length of nineteen holes. The samples were weighed dry (w). Then samples were suspended by pure copper wire from the pan of the scale into water, and a weight was determined (w').

A reference was provided of SPG of general igneous rocks and used as a check on measurements collected at Golden Zone. The device used to suspend the sample in water was reweighed every 10 samples. The scale was zeroed at the beginning of a data collecting session and was checked at least once a day."

The Authors received bulk density measurements recorded in an Excel spreadsheet. A total of 418 bulk density determinations were collected from August 27th through September 9th, 2009, of which 365 determinations are from the mineralized domains generated as part of this study. Howe has reviewed the bulk density data and considers it suitable for use in mineral resource estimation. The average bulk density values contained in Table 14-11 are assigned to the mineral resource model according to lithological domain.



Table 14-11: Density Values used in 2016 Resource Estimate for the Golden Zone Deposit

Domain	Count	Min (t/m ³)	Max (t/m ³)	Average (t/m ³)	Std Dev
Porphyry	106	2.43	3.28	2.73	0.12
Sulphide Breccia	139	2.59	5.31	3.22	0.50
Silica Breccia	110	2.48	3.72	2.80	0.17
Shear	20	2.48	2.97	2.69	0.13

14.9. BLOCK MODEL VALIDATION

Block model validation procedures were undertaken to ensure that blocks represent interpreted geology and the input data and that selected interpolation methodologies do not introduce significant biases. The block model was displayed in 2D Slices along with sample point data in order to assess whether block grades honour the general sense of sample grades, that is to say that high grade blocks are located around high sample grades, and vice versa. A global statistical comparison of the global means of all estimation methods was undertaken. In well informed domains the difference between global means for each interpolation technique should not exceed 10%. Using sectional validation or swath plots, the mean bulk sample grade and the mean grade of blocks from each interpolation model were reported at 10 m elevation slices. For each slice, mean bulk sample and block grades for the OK, IDW³ and NN models were compared.

14.9.1 Local Validation

A degree of smoothing is apparent but on the whole, block grades correlate very well with input sample grades. Example cross sections through the deposit at 4,750 and 4,950 ft Mine Grid east are shown in Figure 14-17. An example level plan through the deposit at the 1,060 m asl is shown in Figure 14-18.

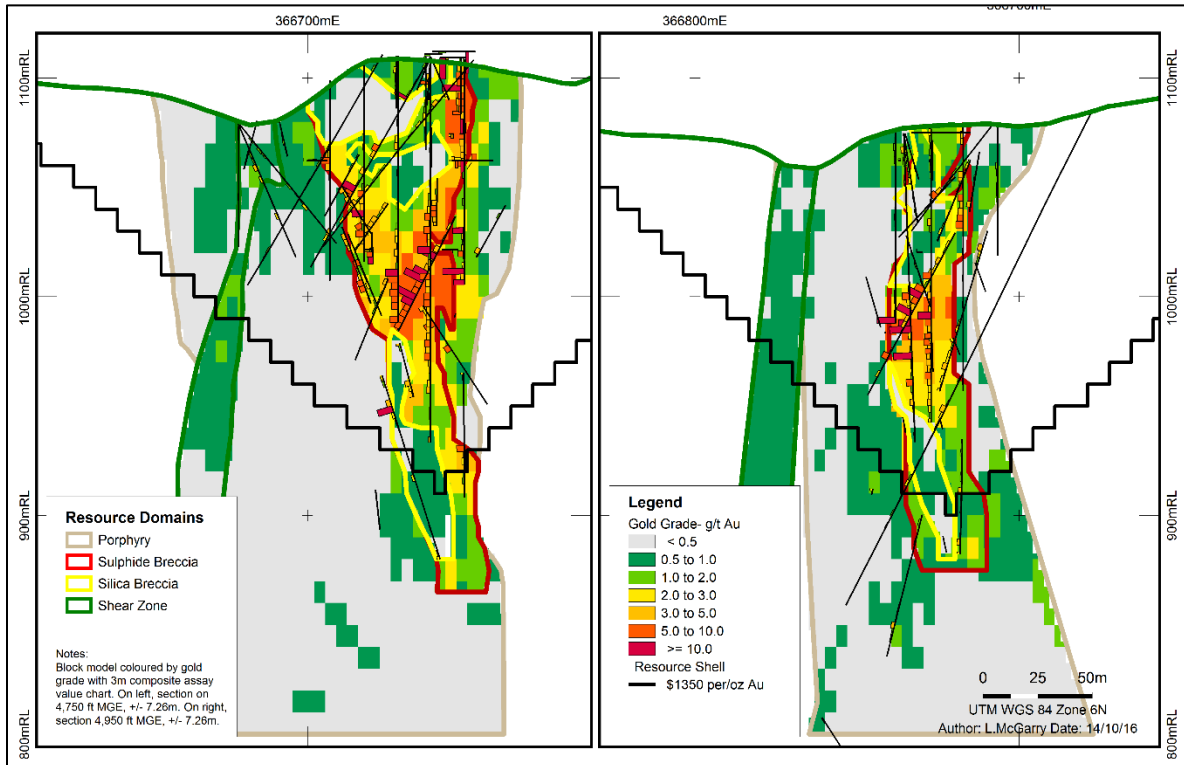


Figure 14-17: Sections 4,750 MG East (left) and 4,950 ft MG East (right) looking southwest and showing Block Model Coloured by Gold Grade

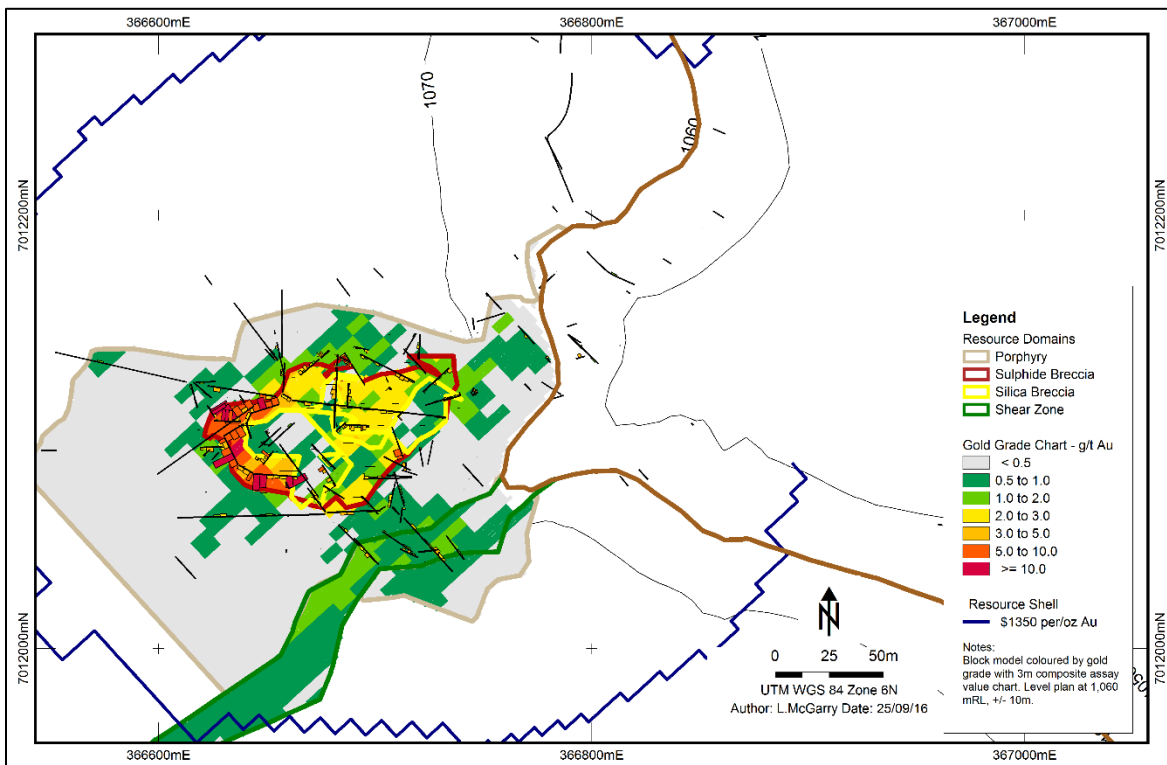


Figure 14-18: Level Plan at 1,060 m als showing the Block Model Coloured by Gold Grade



14.9.2 Alternative interpolation techniques

The result of each model interpolation technique is presented in Table 14-12. There is good agreement between overall gold mean grades for OK and IDW³ techniques with no difference in gold grades for the Sulphide Breccia and Porphyry domains, and with -8.7% and -3.1% differences for the Shear Zone and Silica Breccia Domains. There is acceptable correlation between OK values and the more erratic NN values with differences of 1% for the Sulphide Breccia Domain and less than +/- 15% for the other Domains.

As described in Section 14.6.1 *Simple Statistics*, silver grades have a much higher standard deviation and grade variability. Accordingly, the correlation of OK and IDW³ silver grades is worse than for gold, with differences of: 5.6% for the Sulphide Breccia Domain, -17.7% for the Silica Breccia Domain, -19.3% for the Porphyry Domain, and -21.9% for the Shear Zone Domain.

Table 14-12: Golden Zone Interpolation Technique Comparison

Domain	Density	Value	OK	IDW ³	NN
Porphyry	2.73	Tonnes (Mt)	17.20	17.31	17.32
		Gold (g/t Au)	0.31	0.31	0.28
		Silver (g/t Ag)	1.98	1.66	0.99
Sulphide Breccia	3.22	Tonnes (Mt)	2.41	2.42	2.42
		Gold (g/t Au)	2.87	2.87	2.89
		Silver (g/t Ag)	16.40	17.38	12.23
Silica Breccia	2.8	Tonnes (Mt)	0.74	0.74	0.75
		Gold (g/t Au)	0.67	0.65	0.76
		Silver (g/t Ag)	7.83	6.65	5.65
Shear	2.69	Tonnes (Mt)	4.62	4.64	5.26
		Gold (g/t Au)	0.50	0.46	0.44
		Silver (g/t Ag)	1.67	1.37	1.19

14.9.3 Sectional Validation Plots

The Sulphide Breccia Domain has the highest sample density and accounts for largest proportion of defined resources. This domain is selected for the sectional validation plot analysis shown in Figure 14-19. Sectional validation plots compare the gold and silver grades of composites (bars) and OK, IDW³ and NN model blocks (lines) that fall within a 10 m elevation interval slice (X axis). The plot will identify depth intervals that contain high-grade samples and low-grade blocks, or vice versa, which might indicate a problem with the estimation technique.

Block grades estimated by ordinary kriging have a smoother profile relative to input samples. Where there are more samples, good agreement is seen between the input composites and block grades estimated by each technique. The OK profile is the least erratic and honours the input composites well.

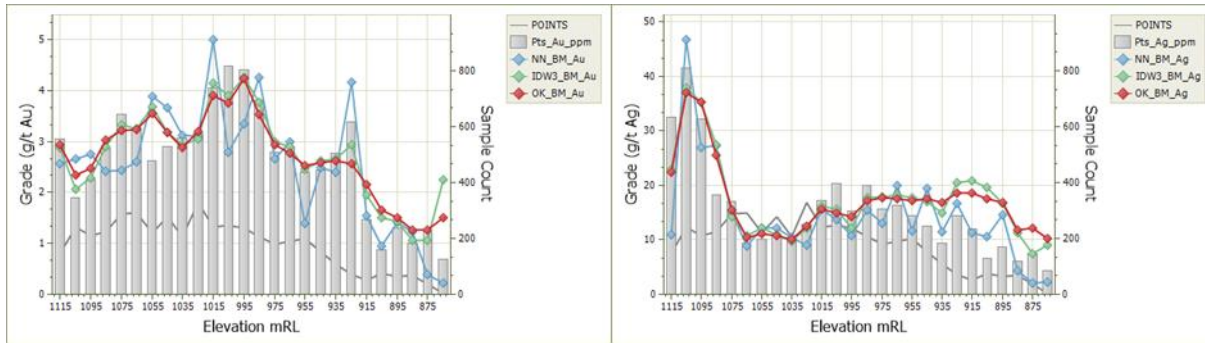


Figure 14-19: Sulphide Breccia Domain Composite Sample vs. Block Model Grade Variation By Elevation

14.10. MINERAL RESOURCE REPORTING

The resource estimate is prepared in accordance with CIM Definition Standards- For Mineral Resources and Mineral Reserves, adopted by the CIM Council on May 10, 2014 where:

- An Inferred Mineral Resource as defined by the CIM Standing Committee is *“that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity.*
- *An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration.”*
- An Indicated Mineral Resource has a higher level of confidence than that applying to an Inferred Mineral Resource. It may be converted to a Probable Mineral Reserve. An Indicated Mineral Resource as defined by the CIM Standing Committee is *“that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit.*
- *Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation. An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve.”* and,
- A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve. A Measured



Mineral Resource, as defined by the CIM Standing Committee is “*that part of a Mineral Resource for which quantity, grade or quality, densities, shape, and physical characteristics are estimated with confidence sufficient to allow the application of Modifying Factors to support detailed mine planning and final evaluation of the economic viability of the deposit.*”

- *Geological evidence is derived from detailed and reliable exploration, sampling and testing and is sufficient to confirm geological and grade or quality continuity between points of observation.*
- *A Measured Mineral Resource has a higher level of confidence than that applying to either an Indicated Mineral Resource or an Inferred Mineral Resource. It may be converted to a Proven Mineral Reserve or to a Probable Mineral Reserve.”*

Only mineral resources are identified in this Report. No economic work that would enable the identification of mineral reserves is carried out and no mineral reserves are defined. Mineral resources that are not mineral reserves do not account for mineability, selectivity, mining loss and dilution and do not have demonstrated economic viability. These mineral resource estimates include Inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is also no certainty that these Inferred and Indicated mineral resources will be converted to the Indicated and Measured categories through further drilling, or into mineral reserves, once economic considerations are applied.

Classification, or assigning a level of confidence to Mineral Resources, is undertaken in strict adherence to the CIM Definition Standards for Mineral Resources and Mineral Reserves (CIM Council, 2014). The Mineral Resource Estimate for the Golden Zone Deposit was prepared by L. McGarry, ACA Howe Senior Project Geologist and Qualified Person for the reporting of Mineral Resources as defined by NI 43-101.

14.10.1 Reasonable Prospects of Economic Extraction

CIM Definition Standards for Mineral Resources and Mineral Reserves, adopted by the CIM Council on May 10, 2014 require that resources have “reasonable prospects for economic extraction”. This generally implies that the quantity and grade estimates meet certain economic thresholds and that the mineral resources are reported at an appropriate cut-off grade taking into account possible extraction scenarios and processing recoveries.

To ensure that reported resources have a reasonable prospect of economic extraction, during the month of August 2016, a conceptual pit shell was developed. Estimated block values and economic parameters provided by Avidian and deemed reasonable by Howe were used to generate a Whittle pit shell analysis that incorporates all available blocks. The results from the Whittle pit shell analysis were used solely for the purpose of reporting mineral resources that have reasonable prospects for economic extraction.

During the month of August 2016, the average spot price for gold was \$1,341 per ounce and for silver was \$20 per ounce in US dollars (London Bullion Market Association (LBMA), 2016). For



the purpose of reporting resources at the Golden Zone deposit a gold price of \$1,350 per ounce of gold, and a silver price of \$22 per ounce in US dollars is selected. Howe considers the selected gold and silver prices remain reasonable for the purpose of the Whittle pit shell analysis as of the November 23, 2016 effective date of this Report (which was chosen to incorporate various corporate and property agreements), despite the fact that the LBMA daily spot gold and silver prices had declined to approximately \$1,213 and \$17 per ounce respectively as of the effective date. Block tonnages are estimated using the assigned block densities contained in Table 14-11. Selected mining, processing and G&A costs are presented in Table 14-13 along with dilution and recovery parameters. A default pit slope of 45 degrees was selected.

Table 14-13: Golden Zone Whittle Pit Shell Parameters

Item	Value
Gold Price	\$1,350/ounce
Silver Price	\$22/ounce
Mineralization Mining Cost	\$3.00/tonne
Waste Mining Cost	\$2.50/tonne
Dilution	10%
Processing Cost	\$13.5/tonne
Gold Recovery	90%
Silver Recovery	35%
General & Administration Cost	\$2.50/tonne
Pit Slope Angle	45°

The resultant pit shell used to define mineral resources (Figure 14-20) has a volume of 0.524 km³ and captures 89% of modelled blocks that received an estimated grade.

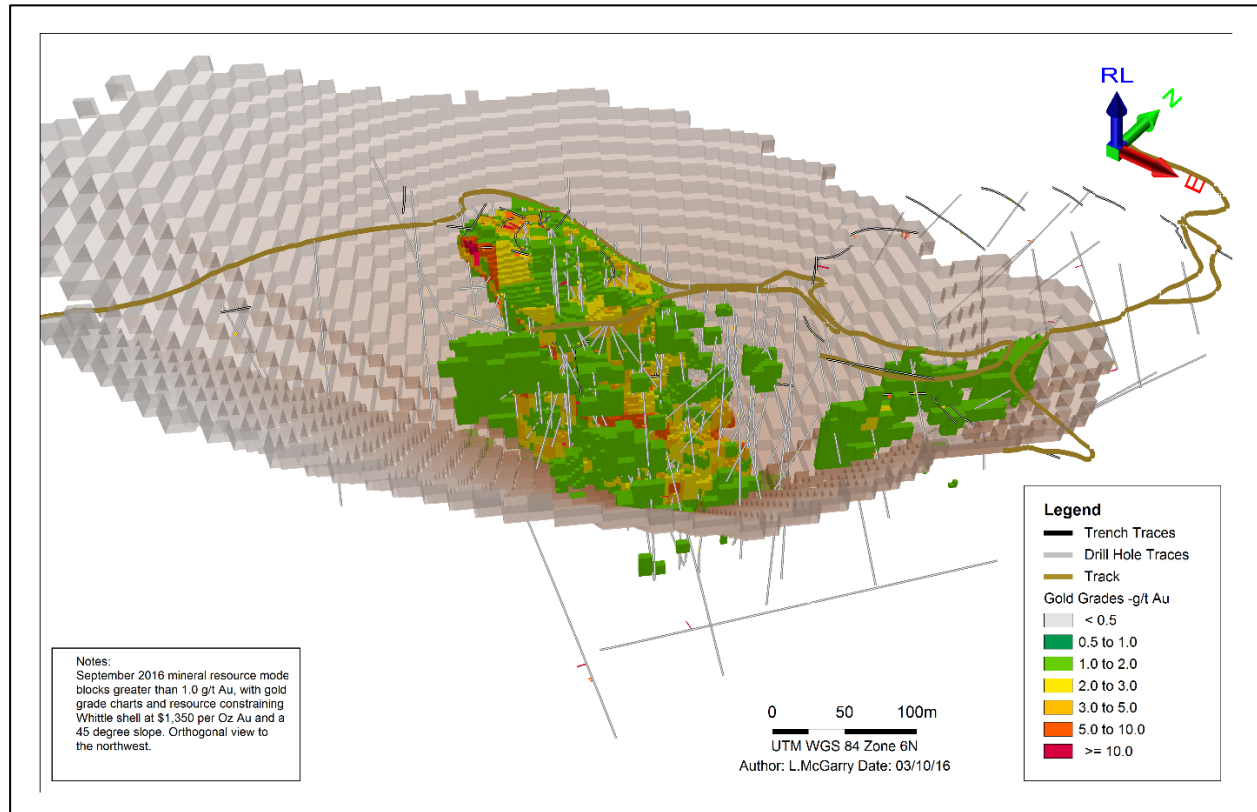


Figure 14-20: Orthogonal View to the Northwest Resource Model Blocks >0.5 g/t Au

14.10.2 Resource Classification Parameters

Resources are reported in adherence to National Instrument 43-101 Standards of Disclosure for Mineral Projects (Canadian Securities Administrators, 2011), and to the CIM Definition Standards on Minerals Resources and Reserves (CIM Council, 2014).

Resource classification parameters are based on the validity and robustness of input data and the QP's judgment with respect to the proximity of resource blocks to sample locations and the kriging variance recorded during grade estimation.

At the Golden Zone Deposit, a significant proportion of sampling is historical and has undergone variable amounts of QA/QC sampling. Overall, sample data is considered to be of reasonable quality. The Authors are confident that core, trench and underground samples and the gold and silver assays derived from them are representative of the material drilled and can be used in resource estimation studies.

The following is taken into account when classifying resources at the Golden Zone deposit.

- For 2005 drilling, high core recoveries provide confidence that core samples, and the assay values derived from them, are representative of the material drilled and suitable for inclusion in resource estimation studies.



- Digital records for core recovery and geotechnical data are only available for 19 Piper Capital 2005 holes; recovery averages 98%. A quantitative assessment of core and RC sample recoveries that includes historical drilling could not be undertaken, however, a qualitative review of hard copy logs from the United Pacific and Golden Zone Inc. drill campaigns show that drill recoveries were high.
- Digital lithology files have sufficient information to enable broad interpretations of geology. However there are a number of internal dilution zones that are not yet properly defined. Core logging practices and lithology codes for the two 2011 Alix drill holes used in the MRE are inconsistent with earlier campaigns.
- Lithology domain and gold and silver grade continuity are well established where drill density is greater than 30 m x 30 m meters, however there remain portions of the deposit where sample density is insufficient to establish continuity beyond an Inferred level, specifically:
 - the Shear Zone domain,
 - peripheral portions of the Porphyry domain.
- Original QA/QC data is available for assays undertaken since 1994, except for the Hidefield program.
- Check sampling was undertaken on drill core assays from programs completed between 1980 and 1988. Independent check sampling was not undertaken on historical RC, trench and drill hole samples collected between 1972 and 1980, however population statistics, and a visual comparison of mineralized intervals in proximal holes, indicates that these samples are representative of in situ mineralization
- The field checking of historic drill and trench collars show that historical location data is sufficiently accurate so as to allow the modeling of resources.
- Unique down-the-hole survey, i.e. azimuth and dip values that are different to the collar values, are available for 40% of diamond drill holes, 5% of RC holes and 60% of trenches.
- The estimation and modeling technique is considered robust.

Classification boundaries are defined using a combination of modelled domain boundaries and block variables generated during the estimation process. The following classification criteria are used in the estimation of mineral resources at Golden Zone:

- Blocks informed by three or more drill holes and within 30 m of the nearest sample are assigned the Indicated category.
- All remaining blocks within the Whittle pit shell are classified as Inferred. Blocks outside of the \$1350 per oz Au Whittle pit shell are not classified.



- The entire Shear Zone domain is classified as Inferred.

Measured resources are not defined. To define Measured resources the company should undertake the recommended actions, presented in Section 18 to: construct a complete and error free exploration database from primary sources; undertake a validation drill program of core holes twinned to historic RC holes; and re-log available core using a consistent rock classification system.

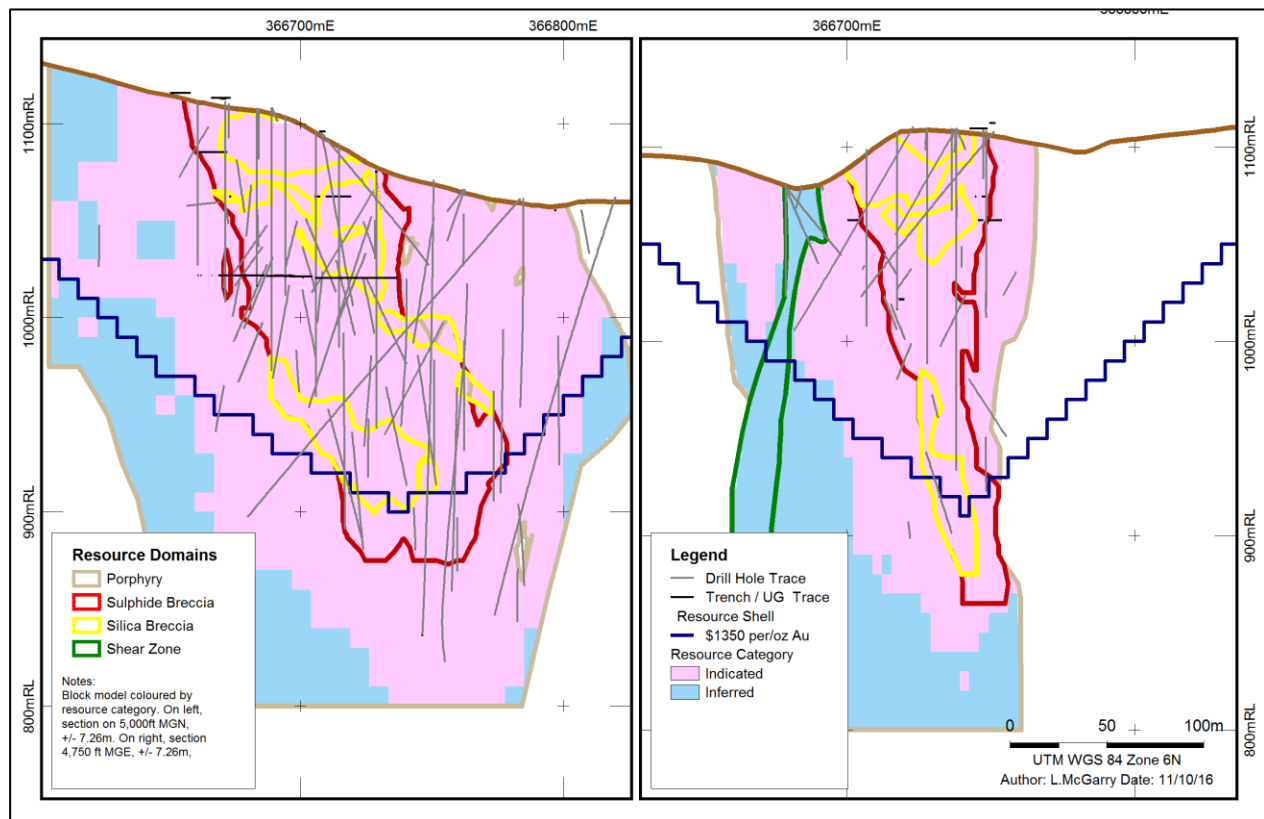


Figure 14-21: Sections on 5,000 ft MG North (left - looking northwest) and 4,950 ft MG East (right - looking southwest) showing the Block Model Coloured by Resource Category.

14.11. MINERAL RESOURCE STATEMENT

The 2016 non-diluted Mineral Resource Estimate for the Golden Zone Deposit is presented in Table 14-14. This Revised Mineral Resource Estimate uses a reporting cut-off of 0.5 g/t Au after consideration of possible mining and processing costs and a gold price of \$1350 per ounce, and considers all breccia pipe, porphyry and shear zone resources above 800 m asl or to a depth of up to 320 metres below surface. Howe considers historical underground adits, drifts, crosscuts and raises on the 100, 200 and 320-ft levels volumetrically insignificant and the volume/tonnes of these underground workings have not been subtracted from this mineral resource estimate.

Non-diluted Indicated Mineral Resources considered amenable to open pit mining, within a preliminary pit shell at a 0.5 g/t Au reporting cut-off and within the Porphyry, Sulphide Breccia



and Silica Breccia domains total 4.187 million tonnes with an average gold grade of 1.99 g/t for 267,400 oz Au and an average silver grade of 10.42 g/t for 1,397,800 oz Ag.

Non-diluted Inferred Mineral Resources considered amenable to open pit mining, within a preliminary pit shell at a 0.5 g/t Au reporting cut off and within the Porphyry and Shear Zone domains total 1.353 million tonnes with an average gold grade of 0.82 g/t for 35,900 oz Au and an average silver grade of 2.56 g/t for 111,400 oz Ag.



Table 14-14: Mineral Resource Estimate for the Golden Zone Deposit

Category	Domain	Density	Tonnes	Au g/t	Ounces Au	Ag g/t	Ounces Ag
Indicated	Porphyry	2.73	1,811,000	0.89	52,000	3.20	186,300
	Sulphide Breccia	3.22	2,007,000	3.17	204,300	17.19	1,109,000
	Silica Breccia	2.80	369,000	0.93	11,100	8.64	102,500
	Total		4,187,000	1.99	267,400	10.38	1,397,800
Inferred	Porphyry	2.73	142,000	0.75	3,400	1.84	8,400
	Shear Zone	2.69	1,216,000	0.83	32,600	2.65	103,400
	Total		1,353,000	0.83	35,900	2.56	111,400

Notes:

- 1) The resource estimate was prepared by Leon McGarry, B.Sc., P.Geo, Geologist, ACA Howe.
- 2) A block cut-off value of 0.5 g/t Au is applied to all resource blocks.
- 3) Tonnes and ounces are rounded to reflect the relative accuracy of the mineral resource estimate; therefore, numbers may not total correctly.
- 4) Mineral Resources were calculated using Micromine Ver. 2014. Drill hole traces showing lithology and gold grade were reviewed in plan and cross section. 3D polygons, digitized in cross sections spaced at 50 and 25 ft, are connected to create 3D wireframe solids. After capping, assays within each domain are composited to regular 1.524 m intervals. For each domain, gold and silver grades were interpolated using Ordinary Kriging into a block model rotated to 47.5 degrees and with dimensions of 5 mX x 10 mY x 10 mZ.
- 5) Assay capping values for gold: Porphyry- 20 g/t Au, Silica Breccia- 25 g/t Au, Sulphide Breccia- 35 g/t Au, Shear Zone- uncapped; and for silver: Porphyry- 60 g/t Ag, Silica Breccia- 130 g/t Ag, Sulphide Breccia- 200 g/t Ag, Shear Zone- 60 g/t Ag.
- 6) Bulk densities used for tonnage estimates: Porphyry - 2.73 t/m³, Silica Breccia - 2.80 t/m³, Sulphide Breccia - 3.22 t/m³, Shear Zone - 2.69 t/m³.
- 7) Resources were defined by a Whittle shell generated using a \$1,350 per oz gold price. Blocks informed by three or more drill holes and within 30 m of the nearest sample are assigned the Indicated category. All other and Shear Zone domain blocks are classified as Inferred. Blocks outside of the floating cone are unclassified.
- 8) Mineral Resource tonnes quoted are not diluted.
- 9) No Measured Resources or Mineral Reserves of any category were identified.
- 10) Mineral resources are not mineral reserves and by definition do not demonstrate economic viability. This mineral resource estimate includes inferred mineral resources that are normally considered too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves. There is also no certainty that these inferred mineral resources will be converted to the measured and indicated resource categories through further drilling, or into mineral reserves, once economic considerations are applied.
- 11) 1 troy ounce equals 31.10348 grams.
- 12) The volume/tonnes of volumetrically insignificant historical underground adits, drifts, crosscuts and raises on the 100, 200 and 320-ft levels have not been subtracted from this mineral resource estimate.

14.12. FACTORS THAT MAY AFFECT THE MINERAL RESOURCE ESTIMATES

Howe is not aware of any known environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant issues that could potentially affect this mineral resource



estimate. The mineral resources may be affected by potential future conceptual study assessments of mining, processing, environmental, permitting, taxation, socio-economic and other factors.

Additional technical factors which may affect the Mineral Resource estimates include:

- Gold and silver price and valuation assumptions;
- Changes to the assumptions used to estimate gold and silver content (e.g. bulk density estimation, grade model methodology);
- Geological interpretation (revision of breccia pipe contacts, definition of heavy sulphide breccia domain, modeling of internal waste domains e.g. dikes);
- Changes to design parameter assumptions that pertain to the resource constraining Whittle pit shell;
- Changes to geotechnical and mining assumptions, including the maximum pit slope angle; or the identification of alternative mining methods such as open stoping;
- Changes to process plant recovery estimates if the metallurgical recovery in certain domains is lesser or greater than currently assumed;
- The effect of different sample-support sizes between core drilling, RC drilling and underground sampling.

There is insufficient information at this early stage of study to assess the extent to which the resources might be affected by these factors.

14.13. COMPARISON WITH PREVIOUS RESOURCE ESTIMATE

Previous MREs generated for the project are described in earlier technical reports for the Deposit (Kerr and Loveday, 2011 and Perry *et al.*, 2005). The 2011 estimate includes a mineral resource report table that includes a 0.5 g/ton (0.45 g/tonne) Au cut-off scenario. The use of an imperial unit reporting cut-off prevents the exact comparison of the 2011 estimate with the current estimate reported in metric units.

For the current 2016 mineral resource estimate, the requirement that resources show a reasonable prospect of economic extraction is met through the use of a Whittle pit shell, whereas mineral resources reported in 2011 were unconstrained. Accordingly, there is a significant decrease in mineral resources reported, particularly for the Inferred category resource at the periphery of the deposit. The metric gold and silver g/tonne grade values below are converted from the imperial g/ton values quoted in the 2011 report. Current 2016 Indicated category resources are compared with combined Measured and Indicated category resources reported in 2011 using a 0.5 g/ton Au cut-off:

- Indicated- Tonnages have decreased by 33% from 6.33 to 4.23 million tonnes. Gold grades have increased from 1.71 to 1.99 g/t. Reported gold ounces have decreased by 22% from 349,320 to 270,800. Silver grades have increased from 9.46 to 10.42 g/t. Reported silver ounces have decreased by 26% from 1,926,596 to 1,416,100.
- Inferred- Tonnages have decreased by 65% from 3.9 to 1.36 million tonnes. Gold grades have increased from 0.72 to 0.82 g/t. Reported gold ounces have decreased by 56% from



82,673 to 36,000. Silver grades have increased from 2.28 to 2.56 g/t. Reported silver ounces have decreased by 61% from 288,014 to 111,900.

- Copper resources, reported for all categories in 2011, are not reported in the current 2016 estimate. The 2011 estimate of copper resources should not be relied upon.

In addition to the application of a constraining pit shell, specific changes that affect the current Golden Zone mineral resource estimate study include:

- Geological modelling was undertaken at a greater resolution for breccia domains, on sections spaced at 7.62 m instead of 15.24 m. The model was refined to include the Silica Breccia domain. Domain interpretations for the Sulphide Breccia, Porphyry and Shear Zone domains are not changed significantly and the wireframe modeling technique is broadly comparable the 2011 estimate.
- The assay database was modified to exclude all Golden Zone Mines gold and silver assays and Enserch silver assays. In addition, underground sample 3560-6 was excluded from grade estimation.
- Gold assay top cuts were increased from 33 g/t Au to 35 g/t for the Breccia domains and from 12 g/t Au to 20 g/t Au for the Porphyry domain. The 7 g/t Au top cut applied to the shear zone domain was removed. Previously uncapped silver values for the Breccia domains are now capped at 200 g/t Au. Silver assay top cuts have increased from 50 g/t Au to 60 g/t for the Porphyry Domain and from 20 g/t Au to 130 g/t for the Shear Zone Domain. Assay composite lengths remain the same.
- Following the completion of a KNA, block sizes were increased from 3.05 m x 3.05 m x 6.1 m, to 5 m x 10 m x 10 m and the minimum number of samples used for block estimation is increased from five (Breccia Domains) and three (Porphyry and Shear Zone) to 14. The maximum number of samples used for block estimation is increased from 16 (Breccia Domains) and 9 (Porphyry and Shear Zone) to 24.

14.14. TARGETS FOR ADDITIONAL EXPLORATION

The 2016 mineral resource estimate for the Golden Zone deposit is contained within a surface footprint of 50,000 m² that falls within the center of a \$1,350 Whittle pit shell that has a surface footprint of 175,000 m². As shown in Figure 14-1 and Figure 14-20 there is a significant amount of unexplored ground that falls within the resource constraining pit. The Company should undertake systematic exploration across the full width of the Golden Zone deposit trend with a particular focus on:

- The BLT Shear Zone between 366,600 E and 366,930 E falls within the \$1,350 pit shell to a depth of up to 120 m below surface. Infill and definition drilling within this window should seek to define shear zone hosted veins that can contribute to open pit resources.



- Shallow mineralization encountered in trenches T94-11 and Trench 11 to the northeast of the breccia pipe in the Mayflower prospect is not incorporated into the block model. The area below and to the southwest of these trenches falls within the \$1,350 resource shell to a depth of up to 80 m below surface.
- The thin sheared mafic diorite interval encountered in hole GZ-2 (1.52 m at 3.43 g/t Au) falls within the resource shell and can be traced 50 m along strike and 25 m down dip to hole IDC-3 (also 1.52 m at 3.43 g/t Au). The extent of this feature and its possible projection to surface along the drainage channel to the northwest of the Breccia Pipe should be investigated.
- The East Vein outcrops on the eastern edge of the resource constraining pit shell. Grab sampling of quartz sulphide vein material by ACA Howe returned assay values of 9.94 g/t Au and 273 g/t Ag (See Table 12-3). The vein should be tested by core drilling.

In addition to shallow targets there is some potential for the expansion of the resource model at depth. The high grade intervals in drill holes BXP-17 (7.62 m @ 8.16 g/t Au and 10.22 g/t Ag) and 05Z48.5E-1 (13.72 m @ 4.02 g/t Au and 64.52 g/t Ag) are not constrained at depth and have a significant influence on the block model at the base of the pit. The further definition of high grade mineralization encountered in the Sulphide Breccia domains may increase in-pit resources.

In addition to targets at the Golden Zone deposit, significant potential for resource development exists at surrounding prospects:

- At the Wells vein quartz sulphide intervals encountered in 2006 trenches and 2011 Alix drill holes GZRS11001 (2.0 m at 19.1 g/t Au, 49 g/t Ag, and 0.77% Cu) and GZRS11002 (6.0 m at 5.69 g/t Au, 8 g/t Ag, and 0.07% Cu) are open to the south and north. The strike and depth extent of the vein should be investigated by step-out drilling to the south.
- At the Riverside vein, trenches T6001 to T6004 encountered a 10 to 20 m wide zone with thin quartz sulphide veins (maximum interval of 1.22 m at 99.30 g/t Au and 15 g/t Ag in trench T6002) over a strike length of 185 m. The continuity of these features at depth and along strike to the northeast should be tested.
- At Copper King, the high grade near-surface intervals in trench T94-9S (12 m at 7.71 g/t Au, 97 g/t Ag and 4.1 % Cu) and hole CK-94-2 (1.52 m @ 18.86 g/t Au, 180 g/t Ag) should be followed up with inclined drill holes.

Avidian's 2016 reconnaissance/sampling program examined these and other areas (Section 9). Avidian's recent results need to be fully interpreted and incorporated into future planning.



15. ADJACENT PROPERTIES

There are currently no significant exploration or development properties in the immediate area of the Golden Zone Property.



16. OTHER RELEVANT DATA AND INFORMATION

Subsequent the effective date of this report, Avidian commenced a field program on the Golden Zone property in mid-May of 2017 as the field season is relatively short and generally ends towards the end of August to early September.

As this report has been written to fulfill the requirements of the TSXV in respect of the Proposed Transaction between Avidian and MMCC, the TSXV has requested that the report be updated and amended to include a description of the work done during the summer of 2017 on the project and where results are available to include them in the Report as of the Amended Effective Date (August 17, 2017). It is understood that while work has been carried out, the results of the work program are incomplete and that the final analyses, compilation and interpretation of the work will not be completed until late fall of 2017.

Subsequent to the effective date of this report and as of Amended Effective Date (August 17, 2017), the following major activities have taken place on the Golden Zone project.

- 1) Pre-program compilation and planning.
- 2) Property wide mapping/sampling/prospecting/soil surveys, with 1,000 analytical samples collected of which 350 sample results are still pending (see Section 9.3).
- 3) 2,100 m of core drilling with an estimated 200 additional metres to still be completed; 11 core holes in total (see Section 10).
- 4) 400 core analytical samples received with an additional 1,100 sample results still pending (note: assay turn-around is approximately 4 to 6 week) (see Section 10).
- 5) 43 line kilometres of IP (see Section 9.4).

In preparation for the 2017 field season and following the pre-program compilation and planning of the 2017 drill program, Avidian determined that an Induced Polarization (IP) ground geophysical program (approximately 43 line km) should be implemented on a property scale to better define the recommended drill target areas and assist in targeting the intrusive rocks that are interpreted to be the potential source for the known mineralization and possible host to a large tonnage RIRGS deposit. While this geophysical program was not initially contemplated in the recommended work program of this Report as of its effective date, Howe concurs with the addition of a ground IP survey to the work program.

In reviewing the pre-program compilation and the timing of the geophysical program, Avidian determined that the Copper King area geophysics could only be completed towards the latter part of the field season and that the planned drilling for this area as originally recommended should be deferred to a later phase of drilling. Avidian elected to direct this portion of the drilling program to the mineralized trends surrounding the Breccia Pipe area examining the BLT Zone, the quartz monzodiorite porphyry, Bunkhouse as well as the Riverside prospect.



There is no other relevant information on the Golden Zone Property known to Howe that would make this Report more understandable or if undisclosed would make this Report misleading.



17. INTERPRETATION AND CONCLUSIONS

17.1. GENERAL

Ongoing work by the Avidian has confirmed the results of previous workers and provided further detail on the nature of the geology and mineralized zones within the Property. Significant gold and multi-element bedrock prospects, soil and stream sediment anomalies are present on the Golden Zone Property. The Golden Zone Breccia Pipe deposit is the most significant mineralization on the Property and several other prospect areas have consistent gold mineralization in rock chip samples associated with felsic dike and sill-like intrusions, fault zones as well as high grade quartz-sulphide veins.

Howe considers the most recent sampling and analytical protocols utilized by Avidian to be acceptable and to industry standards. Howe has completed independent QA/QC and data verification studies, including a visit to the project site. The QA/QC programs undertaken by Addwest and Alix and Piper Capital are sufficient to provide confidence in the analyses obtained by those companies. The results of the 2016 repeat sampling program provide verification of results from historical campaigns completed between 1980 and 1988. For samples collected prior to 2005 truncation of assay values in the sample database result in a mean decrease of 0.154 g/t for gold and silver grades relative to original assay results, however the underlying values are considered representative of sampled mineralization. All mineral occurrences visited, and technical observations made, during the site visit were as reported by Avidian. Geological logging, sampling and assaying undertaken by past operators were generally found to be of sufficient quality to allow the use of historical lithological codes for deposit modeling.

Howe believes that the Golden Zone Property data presented by Avidian and underlying current claim holders are generally an accurate and reasonable representation of the Golden Zone Property and are of sufficient quality to provide the basis for the conclusions and recommendations reached in this Report.

At the Golden Zone Deposit, well mineralized units modelled for inclusion in Howe's 2016 MRE include:

1. a quartz monzodiorite porphyry stock, cored by a hydrothermal breccia pipe comprised of units that are distinguished by sulphide content and include
 - a low grade silica-rich breccia and
 - well mineralized sulphide-rich breccias
2. a steeply dipping, broadly northeast trending shear zone that cuts porphyry and country rocks.

The 2016 non-diluted MRE for the Golden Zone Deposit was prepared in accordance with CIM "Estimation of Mineral Resource and Mineral Reserves Best Practice Guidelines" (CIM Council,



2003), CIM “Definition Standards for Mineral Resources and Mineral Reserves”¹² and reported in accordance to NI 43-101¹³.

Non-diluted Mineral Resources considered amenable to open pit mining, within a preliminary pit shell at a 0.5 g/t Au reporting cut-off and within the Porphyry, Sulphide Breccia and Silica Breccia domains are categorised as Indicated: 4.187 million tonnes with an average gold grade of 1.99 g/t for 267,400 oz Au and an average silver grade of 10.42 g/t for 1,397,800 oz Ag; and Inferred: 1.353 million tonnes with an average gold grade of 0.82 g/t for 35,900 oz Au and an average silver grade of 2.56 g/t for 111,400 oz Ag.

Decreases in mineral resources presented in this Report, relative to the 2011 Norwest estimate, are principally attributed to the application of a constraining Whittle pit shell used to demonstrate a reasonable prospect of economic extraction which was not reported with the 2011MRE.

Relative to the surface extent of the Golden Zone deposit, there is a significant amount of unexplored ground that offers potential to discover additional mineralization in several different settings within the resource constaining Whittle pit shell. Specific resource development targets for follow up exploration within the pit shell include: portions of the BLT shear zone and East Vein, the area northeast of the breccia pipe in the Mayflower prospect; and sheared units to the northwest of the Breccia pipe.

Aside from extensive diamond and reverse circulation drilling, trenching and underground sampling at the Golden Zone Breccia Pipe deposit, exploration elsewhere on the Property area has to date been largely at a mineral occurrence identification stage, comprising mapping, rock and soil sampling, trenching and geophysics with limited drill testing. The Property contains three mineralized corridors, namely Golden Zone, Long Creek and Silver Dikes. Strongly mineralized samples have been returned from all three corridors, particularly the first two. Numerous polymetallic showings warrant initial or additional drill testing.

17.2. RISKS AND UNCERTAINTIES

As exploration on the Property proceeds, areas of uncertainty that might impact the mineral resource estimate include but are not necessarily limited to:

- Commodity price changes;
- Changes to cut-off grades, bulk density estimation, grade model methodology etc;
- Changes to geological interpretations;
- Changes to design parameter assumptions for the resource constraining Whittle pit shell;
- Changes to geotechnical and mining assumptions;
- Changes to estimated process plant recoveries;
- The effect of different sample-support sizes for core drilling, RC drilling and underground sampling.

¹² CIM Definition Standards - For Mineral Resources and Mineral Reserves, adopted by CIM Council on May 10, 2014.

¹³ National Instrument 43-101 Standards Of Disclosure For Mineral Projects and Form 43101F1 Technical Report, June 24, 2011



There is insufficient information at this early stage of study to assess the extent to which the resources might be affected by these factors.

17.3. CONCLUSIONS

Howe concludes that Avidian's Golden Zone Property is prospective for the potential discovery of a large tonnage reduced intrusion-related gold systems (RIRGS) deposit, such as those present within the Tintina Gold Province and is a property that warrants significant additional expenditures. Avidian has indicated that it intends to focus its preliminary exploration efforts on the assessing the Property for its potential to host a large tonnage RIRGS deposit. Howe concurs with this decision.



18. RECOMMENDATIONS

Howe recommends that additional exploration work be conducted on the Property area. Suggested work includes:

General

- A historical assay database with unrounded and untruncated values should be located. If not available, a new assay database should be compiled from hard copy logs and certificates. An assay database that can pass more stringent verification tests is a requirement for future resource estimate classification upgrades at the Golden Zone Deposit.
- Historic geotechnical and recovery logs should be digitized to allow a quantitative assessment of relationships between grade, recovery and rock quality.
- Historic exploration results are currently stored and managed in spreadsheets which increase the risk of transcription errors and data loss. A relational database should be implemented to allow efficient management, querying and validation of large amounts of data and study information.
- Continue verification and update of the historic GIS database.
- Continue interpretation/re-interpretation of historic geological, geochemical and geophysical datasets.
- In light of available historic baseline data, investigate current environmental baseline requirements necessary to advance potential permitting of Breccia Pipe deposit.

Golden Zone Breccia Pipe

- The effectiveness of rock classification techniques employed by previous operators should be evaluated.
 - A core re-logging exercise should be undertaken using a consistent coding system.
 - Document alteration assemblages in detail.
 - Definition of breccia sub-domains should be investigated to potentially allow more effective modeling of higher grade portions of the deposit.
- The quality of assays and geological data derived from RC drill holes should be investigated by undertaking a program of twinned diamond drill holes.
- A quality assessment of historical collar UTM coordinates should be undertaken. Where possible, drill hole collars that were originally surveyed by plane table in mine grid coordinates should be identified. Collar locations should be surveyed by differential GPS and relative location errors associated with historical holes should be quantified.
- A study of the structural geology, jointing system and the geotechnical properties of rock types at the Golden Zone Deposit should be investigated. A suite of samples representing different parts of the deposit and each rock type should be tested at a rock mechanics laboratory.
- Follow-up previous metallurgical testwork and processing recoveries. Test the Breccia Pipe deposit for potential Acid Rock Drainage (ARD) and deleterious elements.



- The Resulting Issuer should undertake systematic surface exploration across the full width of the Golden Zone deposit trend. Subsequent drilling at the Golden Zone deposit should focus on mineralized features within the current resource constraining pit shell that can expand the mineral resource model.

Property Scale and Prospects

- Property-wide mapping and prospecting/sampling based on the Reduced Intrusion-Related Gold system model.
- Alteration mapping techniques such as portable Short Wave Infrared Spectroscopy (SWIR) should be considered for both surface mapping and drill hole logging/relogging.
- Detailed mapping, sampling and infill soil sampling of historic and new prospect areas.
- Preliminary shallow diamond drill (core) testing of significant prospects.

18.1. PROPOSED 2017 EXPLORATION PROGRAM AND BUDGET

Based on Howe's recommendations, Avidian has proposed a preliminary exploration program which focusses on the assessment of the potential for the Property to host a significant large tonnage RIRGS deposit.

As of the Amended Effective Date of this report, Howe concurs with Avidian's amended proposed 2017 program as outlined below:

- Data compilation and planning
- Property-wide mapping, prospecting/sampling and infill soil sampling of historic and potentially newly discovered prospect areas. Approximately 1,000 rock and soil samples are proposed.
- Shallow diamond drill testing of significant prospects totaling approximately 2,300 m at Riverside, Bunkhouse and the surrounding Breccia Pipe area. Drill hole locations are shown on Figure 10.1 and 10.2 and collar details provided in Table 10-1. Approximately 1,500 core samples would be collected.
- Induced Polarization Survey over the main prospect area; Riverside, Breccia Pipe area, Copper King, Long Creek and South Long Creek.
- Preliminary assessment of previous Base Line studies.
- Camp improvements and equipment purchases.
- Compilation and reporting of 2017 exploration results.

18.1.1 Budget

Avidian and MMCC's proposed 2017 exploration program and budget as of the Amended Effective Date of this report is shown in Table 18-1. Howe considers the proposed budget reasonable and recommends that the Resulting Issuer proceed with the proposed work programs.



Table 18-1: Avidian Golden Zone Property - Proposed 2017 Exploration Program and Budget

ITEM			Cost \$US
Pre-program compilation and planning (60 days @ \$600/day)			\$ 36,000
Property wide mapping/sampling/prospecting/soil surveys (in-fill)			
	2 months (4 @ \$600/day)		\$ 144,000
	Analyses	1,000 samples @ \$30/sample	\$ 30,000
IP Survey (approx. 43 line km)			\$ 165,000
Preliminary Environmental Assessment Report			\$ 30,000
DDH Core Drilling			
	Prospects outside of the Golden Zone Deposit – preliminary DDH testing		
		2,300 m @ approx. 200/m	\$ 460,000
	Analyses	1,500 samples @ \$30/sample	\$ 45,000
Support costs			
	Camp	Pre-program Preparation	\$ 30,000
		Ongoing Camp Costs \$600/day (3 months)	\$ 54,000
	Personnel	5 @ \$500/day (3 months)	\$ 225,000
Interpretation and reporting (25 days @ \$600/day)			\$ 15,000
Contingency	Approx. 14%	Includes capital purchases, rentals, etc.	\$ 164,560
Total			\$ 1,398,560

As of August 17, 2017, Avidian had spent US\$ 1,121,000 on the above work program. The work remaining to be completed is an additional 200 m of core drilling, receipt of approximately 1,450 outstanding analytical results, the geophysical report with interpretations and recommendations, the environmental preliminary assessment report and the final overall compilation and interpretation of all the program results and final report. It is expected that all this work should be completed by mid to end of November and will require the balance of the budget of US\$ 277,560 to complete.

Table 18-2 below shows what has been completed as of August 17, 2017 and what work remains to be completed and the balance of the budget that will be required to complete the project, totalling US\$ 277,560.



Table 18-2: Avidian Golden Zone Property - Proposed 2017 Exploration Program and Budget to Completion

ITEM			Recommended Cost \$US	% Completed	Budget to Completion \$US
Pre-program compilation and planning (60 days @ \$600/day)			\$36,000	100%	\$0
Property wide mapping/sampling/prospecting/soil surveys (in-fill)					
	2 months (4 @ \$600/day)		\$144,000	100%	\$0
	Analyses	1,000 samples @ \$30/sample	\$30,000	\$35% (350 samples)	\$19,500
IP Survey (approx. 43 line km)			\$165,000	90%	\$16,500
Preliminary Environmental Assessment Report			\$30,000	0%	\$30,000
DDH Core Drilling					
	Prospects outside of the Golden Zone Deposit – preliminary DDH testing				
		2,300 m @ approx. 200/m	\$460,000	90% (2,100 m)	\$50,000
	Analyses	1,500 samples @ \$30/sample	\$45,000	36% (400 samples)	\$33,000
Support costs					
	Camp	Pre-program Preparation	\$30,000	100%	\$0
		Ongoing Camp Costs \$600/day (3 months)	\$54,000	83%	\$9,000
	Personnel	5 @ \$500/day (3 months)	\$225,000	83%	\$37,500
Interpretation and reporting (25 days @ \$600/day)			\$15,000	0%	\$15,000
Contingency	Approx. 14%	Includes capital purchases, rentals, etc.	\$164,560	74%	\$60,060
Total			\$1,398,560		\$277,560



19. REFERENCES

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20. DATE AND SIGNATURE PAGE

This report titled “Technical Report on the Golden Zone Property, Valdez Creek Mining District, Central Alaska Range, South-Central Alaska for Avidian Gold Inc.” dated November 23, 2016 was prepared and signed by the following authors:

[“SIGNED AND SEALED”]

{Leon McGarry}

Dated at Toronto, Ontario
August 17, 2017

Leon McGarry, B.Sc., P.Geo.
Senior Project Geologist
A.C.A. Howe International Limited

[“SIGNED AND SEALED”]

{Ian Trinder}

Dated at Toronto, Ontario
August 17, 2017

Ian D. Trinder, M.Sc., P.Geo.
Senior Geologist
A.C.A. Howe International Limited



21. CERTIFICATES OF QUALIFICATION OF AUTHORS



CERTIFICATE OF QUALIFICATION OF AUTHOR: Leon McGarry B.Sc., P.Geo

I, Leon McGarry B.Sc., P.Geo. (ON, SASK), do hereby certify that:

1. I reside at 801 King Street West, Toronto, Ontario, M5V 3C9.
2. I am employed as a Senior Project Geologist with the firm of A.C.A. Howe International Limited, Mining and Geological Consultants (“Howe”) located at 365 Bay St., Suite 501, Toronto, Ontario, Canada, M5H 2V1.
3. I graduated with a degree in Bachelor of Science Honours, Earth Science, from Brunel University, London, United Kingdom, in 2005 and have practiced the profession of geoscience since my graduation.
4. I am a Professional Geoscientist (P. Geo.) registered with the Association of Professional Geoscientists of Ontario (APGO, No. 2348) and with the Association of Professional Geoscientists of Saskatchewan (APEGS, No.34929).
5. I have practiced my profession for over 9 years and have been employed with ACA Howe since 2007. I have over six years of direct experience with the preparation of mineral resource estimations for precious and base metal deposits. Additional experience includes over seven years of direct experience in the exploration, geological modeling of precious and base metal projects, and the completion of NI 43-101 technical reports.
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 have completed a site to the Golden Zone deposit and the East Vein and Banner, Riverside, Copper King and Long Creek prospect areas between July 11th and the 13th, 2016.
8. I am an author of the technical report titled: “Technical Report on the Golden Zone Property, Valdez Creek Mining District, Central Alaska Range, South-Central Alaska for Avidian Gold Inc. with amended date August 17th, 2017 (the “Report”). I am responsible for Sections 11.2, 11.3, 12 and 14 of the Report. I have contributed to the parts of Sections 1, 17, 18, 20 and 21 that pertain to the Report sections for which I am responsible.
9. I have no prior involvement with the Issuer, Vendor or the Property.
10. As of the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
11. I am independent of the Issuer applying all of the tests in section 1.5 of National Instrument 43-101. I am independent of the Vendor and the Property applying all of the tests in section 1.5 of National Instrument 43-101.
12. 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.



13. 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 accessible by the public, of the Technical Report.

DATED this 17th Day of August 2017

["SIGNED AND SEALED"]

{*Leon McGarry*}

Leon McGarry, B.Sc., P. Geo.



CERTIFICATE OF QUALIFICATION OF AUTHOR – Ian Trinder, M.Sc., P.Geo.

I, Ian D. Trinder, M.Sc., P.Geo. (ON, MAN), do hereby certify that:

1. I reside at 4185 Taffey Crescent, Mississauga, Ontario, L5L 2A6.
2. I am employed as a Senior Geologist with the firm of A.C.A. Howe International Limited, Mining and Geological Consultants located at 365 Bay St., Suite 501, Toronto, Ontario, Canada. M5H 2V1.
3. I graduated with a degree in Bachelor of Science Honours, Geology, from the University of Manitoba in 1983 and a Master of Science, Geology, from the University of Western Ontario in 1989.
4. I am a Professional Geoscientist (P.Geo.) registered with the Association of Professional Engineers and Geoscientists of Manitoba (APEGM, No. 22924) and with the Association of Professional Geoscientists of Ontario (APGO, No. 452). I am a member of the Society of Economic Geologists and of the Prospectors and Developers Association of Canada.
5. I have approximately 30 years of direct experience with precious and base metals mineral exploration in Canada, USA and the Philippines including project evaluation and management. Additional experience includes the completion of various National Policy 2A and NI 43-101 technical reports for gold and base metal projects.
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 have not visited the Golden Zone Property.
8. I am author of the technical report titled: “Technical Report on the Golden Zone Property, Valdez Creek Mining District, Central Alaska Range, South-Central Alaska for Avidian Gold Inc. with amended date August 17th, 2017 (the “Report”). I am responsible for Sections 2 to 10, 11-1, 13, 15 to 16, and 19 of the Report. I have contributed to the parts of Sections 1, 17, 18, 20 and 21 that pertain to the Report sections for which I am responsible.
9. I have no prior involvement with the Issuer, Vendor or the Property.
10. As of the effective date of the technical report, to the best of my knowledge, information, and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
11. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101. I am independent of the Vendor and the Property applying all of the tests in section 1.5 of National Instrument 43-101.
12. 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.



13. 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 accessible by the public, of the Technical Report.

DATED this 17th Day of August 2017

["SIGNED AND SEALED"]

{*Ian Trinder*}

Ian D. Trinder, M.Sc., P. Geo.



APPENDIX A

Golden Zone Property

Mining Lease

Millsite Lease

State MTRS Mining Claims



**MINES TRUST CO. – Golden Zone Property
Alaska State Upland Mining Lease**

Lease	ADL	Township	Range	Section	QSection	QQSect	Acreage	Hectares	Issued
Upland Mining	580985	019S	011W	25			40	16	07/01/1997
		019S	011W	26			320	128	
		019S	011W	27			360	144	
		019S	011W	34			600	240	
		019S	011W	35			80	32	
		020S	011W	03			400	160	
		020S	011W	04			440	176	
		020S	011W	09			440	176	
		020S	011W	10			240	96	
						Total	2920	1168	

**MINES TRUST CO. – Golden Zone Property
Alaska State Millsite Lease**

Lease	ADL	Township	Range	Section	QSection	QQSect	Acreage	Hectares	Issued
Millsite	547111	020S	010W	22	NW	SW	40	16	05/06/2016
						Total	40		

**MINES TRUST CO. – Golden Zone Property
Alaska State MTRS Mining Claims**

Claim	ADL	Township	Range	Section	QSection	QQSect	Acreage	Hectares	Post Date
Gold King 48	721928	20S	11W	03	NE	SE	40	16	04/28/1995

As of the date of this Report, Gold King 48 is in the process of being reactivated (“cured”) by the ADNR. Upon reactivation Mines Trust will file application to add the mining claim to Upland Mining Lease 580985.



AVIDIAN GOLD INC. – Golden Zone Property
Alaska State MTRS Mining Claims

Claim	ADL	Township	Range	Section	QSection	QQSect	Acreage	Hectares	Post Date
GZ 001	721928	19S	11W	27	NW	SW	40	16	05/06/2016
GZ 002	721929	19S	11W	27	NW	SE	40	16	05/06/2016
GZ 003	721930	19S	11W	27	SW	NW	40	16	05/06/2016
GZ 004	721931	19S	11W	26	SE	SW	40	16	05/06/2016
GZ 005	721932	19S	11W	26	SE	SE	40	16	05/06/2016
GZ 006	721933	19S	11W	25	SW	SW	40	16	05/06/2016
GZ 007	721934	19S	11W	25	SW	SE	40	16	05/06/2016
GZ 008	721935	19S	11W	35	NW	NE	40	16	05/06/2016
GZ 009	721936	19S	11W	35	NW	SE	40	16	05/06/2016
GZ 010	721937	19S	11W	35	NE		160	64	05/06/2016
GZ 011	721938	19S	11W	36	NW		160	64	05/06/2016
GZ 012	721939	19S	11W	36	NE		160	64	05/06/2016
GZ 013	721940	19S	11W	34	SE	SE	40	16	05/06/2016
GZ 014	721941	19S	11W	35	SW		160	64	05/06/2016
GZ 015	721942	19S	11W	35	SE		160	64	05/06/2016
GZ 016	721943	19S	11W	36	SW		160	64	05/06/2016
GZ 017	721944	19S	11W	36	SE		160	64	05/06/2016
GZ 018	721945	20S	11W	04	NW		160	64	05/06/2016
GZ 019	721946	20S	11W	03	NE	NE	40	16	05/06/2016
GZ 020	721947	20S	11W	02	NW		160	64	05/06/2016
GZ 021	721948	20S	11W	02	NE		160	64	05/06/2016
GZ 022	721949	20S	11W	01	NW		160	64	05/06/2016
GZ 023	721950	20S	11W	01	NE		160	64	05/06/2016
GZ 024	721951	20S	11W	05	SE	NE	40	16	05/06/2016



Claim	ADL	Township	Range	Section	QSection	QQSect	Acreage	Hectares	Post Date
GZ 026	721953	20S	11W	03	SE	NE	40	16	05/06/2016
GZ 027	721954	20S	11W	05	SE	SW	40	16	05/06/2016
GZ 028	721955	20S	11W	05	SE	SE	40	16	05/06/2016
GZ 029	721956	20S	11W	04	SW	SW	40	16	05/06/2016
GZ 030	721957	20S	11W	03	SW	SE	40	16	05/06/2016
GZ 031	721958	20S	11W	03	SE	SW	40	16	05/06/2016
GZ 032	721959	20S	11W	03	SE	SE	40	16	05/06/2016
GZ 033	721960	20S	11W	02	SW		160	64	05/06/2016
GZ 034	721961	20S	11W	02	SE		160	64	05/06/2016
GZ 035	721962	20S	11W	01	SW		160	64	05/06/2016
GZ 036	721963	20S	11W	01	SE		160	64	05/06/2016
GZ 037	721964	20S	11W	08	NW		160	64	05/06/2016
GZ 038	721965	20S	11W	08	NE		160	64	05/06/2016
GZ 039	721966	20S	11W	09	NW	NW	40	16	05/06/2016
GZ 040	721967	20S	11W	10	NE		160	64	05/06/2016
GZ 041	721968	20S	11W	11	NW		160	64	05/06/2016
GZ 042	721969	20S	11W	11	NE		160	64	05/06/2016
GZ 043	721970	20S	11W	12	NW		160	64	05/06/2016
GZ 044	721971	20S	11W	12	NE		160	64	05/06/2016
GZ 045	721972	20S	11W	08	SW		160	64	05/06/2016
GZ 046	721973	20S	11W	08	SE		160	64	05/06/2016
GZ 047	721974	20S	11W	09	SW	SW	40	16	05/06/2016
GZ 048	721975	20S	11W	09	SW	SE	40	16	05/06/2016
GZ 049	721976	20S	11W	09	SE	SW	40	16	05/06/2016
GZ 050	721977	20S	11W	09	SE	SE	40	16	05/06/2016
GZ 051	721978	20S	11W	10	SW	SW	40	16	05/06/2016
GZ	721979	20S	11W	10	SW	SE	40	16	05/06/2016



Claim	ADL	Township	Range	Section	QSection	QQSect	Acreage	Hectares	Post Date
052									
GZ 053	721980	20S	11W	10	SE		160	64	05/06/2016
GZ 054	721981	20S	11W	11	SW		160	64	05/06/2016
GZ 055	721982	20S	11W	11	SE		160	64	05/06/2016
GZ 056	721983	20S	11W	12	SW		160	64	05/06/2016
GZ 057	721984	20S	11W	12	SE		160	64	05/06/2016
GZ 058	721985	20S	11W	16	NW		160	64	05/06/2016
GZ 059	721986	20S	11W	16	NE		160	64	05/06/2016
GZ 060	721987	20S	11W	15	NW		160	64	05/06/2016
GZ 061	721988	20S	11W	15	NE		160	64	05/06/2016
GZ 062	721989	20S	11W	14	NW		160	64	05/06/2016
GZ 063	721990	20S	11W	16	SW		160	64	05/06/2016
GZ 064	721991	20S	11W	16	SE		160	64	05/06/2016
GZ 065	721992	20S	11W	15	SW		160	64	05/06/2016

1. Acreages are approximate, in event of discrepancies between table and on-the-ground locations, the on-the ground locations take precedence
2. All Public Land System descriptions are relative to Fairbanks Meridian
3. Recording District: T=Talkeetna
4. Location date and Discovery date may be different
5. GZ 025 (ADL 721952) was staked at Twp 20S, R 11W, Sec 04, NW ¼ of the SW ¼ however it was not recorded due to overstaking of mining lease ADL 580985

A-1 Establishing Mineral Rights under Alaska State Laws and Regulations

About 92 percent of the 91 million acres to which the State of Alaska has received title is open to mineral entry and the acquiring of mineral rights. Alaska mining laws provide for nonexclusive access to State-owned lands for prospecting, an exclusive right to develop a discovery, and security of tenure. Rights to locatable minerals on lands owned by the State of Alaska are obtained by making a mineral discovery, staking the boundaries of the location, and recording a certificate of location within 45 days. A mining location may be staked for any locatable mineral (all metallic and most non-metallic industrial minerals) under Alaska mining law.

A discovery is required in order to stake a valid mining claim or leasehold location. A discovery means that locatable minerals have been found and the evidence is of such a character that an



ordinarily prudent person would be justified in expending further time, labour and money upon the property with a reasonable expectation of developing a paying mine.

Under Alaska mining laws (Alaska Statute (“AS”) 38.05.185-275) and regulations (11 AAC 86.100-600) (<http://www.legis.state.ak.us/folhome.htm>), there are three general kinds of mining locations: mining claims, leasehold location and prospecting sites.

In most areas, a location is a “mining claim”, which gives the owner an immediate property right to mine the deposits. However, in areas of the state that have been restricted to leasing (typically referred to as “lease-only”), the location is a “leasehold location”, not a mining claim. The leasehold location must be converted to an upland mining lease before mining begins. State lands are designated for leasehold location only if there may be other valuable resources present or if the surface has already been leased or sold for other uses. Converting a leasehold location to a lease is done to mitigate other resource use conflicts that may exist, and to provide for exclusive mineral title from other competing mineral locators. A mining lease will likely contain stipulations to reduce or resolve potential conflicts between mining and competing resource uses. The fee to apply for a lease is \$250, and processing takes about three months. In unrestricted areas, locators may convert their mining claims to leases if they wish.

Prior to discovery, a locator may locate a prospecting site which grants exclusive prospecting rights for a term of two years, and exclusive right to convert to a claim upon discovery.

Mining claims may be located by what is known as aliquot part legal description, which is meridian, township, range, section, quarter section, and if applicable quarter-quarter section. These claims are known as MTRSC locations, and they are generally located using GPS latitude and longitude coordinates. A quarter section location is typically about 160 acres in size, and a quarter-quarter section location is typically 40 acres in size.

In addition, traditional or non-MTRSC locations may be located. These are not restricted to precise aliquot part quarter or quarter-quarter section areas, and generally overlap these dividing lines on the maps. These locations may be any size up to 1,320 ft by 1,320 ft (40 acres) with the claim lines running in the cardinal directions. Traditional or non-MTRSC locations may be converted to MTRSC locations at any time using a conversion location.

A-2 Maintaining Mineral Rights under Alaska State Laws and Regulations

A-2.1 Cash Rental

Alaska Statute (“AS”) 38.05.211 requires locators and holders of State mining locations to pay an annual cash rental. The annual rental requirement applies to mining claims, leasehold locations, upland mining leases, offshore mining leases and prospecting sites on State land.

For all traditional mining claims and ¼-¼ section MTRSC locations (~40 acres), the annual rental amount is \$35/year for the first five years, \$70/year for the second five years and \$170/year thereafter. For all ¼ section MTRSC locations (~160 acres), the annual rental amount is \$140/year for the first five years, \$280/year for the second five years and \$680/year thereafter.



For all leases, the annual rent is \$0.88/acre per year for the first five years, \$1.75/acre for the second five years, and \$4.25/acre per year thereafter. For prospecting sites, there is a one-time up front requirement for a rental payment of \$255 which covers the two year term of the site.

The first annual rental payment for a location must be paid within 45 days of posting the location. Subsequent annual rental payments are based on the annual rental year which begins at noon on the first September 1 after posting, and ends at noon on September 1 of the following year. The payment for each rental year is due September 1 and payable no later than November 30 of that year. The penalty for failure to make a timely payment is forfeiture (abandonment) of the location, except in the case of a lease, in which the lease is deemed in default. The rental payment is subject to adjustment every 10 years.

A-2.2 Annual Labour

Annual labour must be performed on the location each year in the further development of the locatable mineral so that it can be mined. The minimum amount of labour that must be performed is dependent upon the size of the location. For traditional or $\frac{1}{4}$ - $\frac{1}{4}$ section MTRSC locations, \$100 worth of work or more is necessary. For $\frac{1}{4}$ section MTRSC locations, \$400 worth of work or more is necessary.

The first labour year for a claim begins at noon the first September 1 following the date the location notice is posted. Thereafter, each annual labour year begins at noon on September 1 and ends the following September 1. During the labour year, or within 90 days after the close of that year, the owner of the mining claim/leasehold location or other person having knowledge of the facts must record an affidavit describing the labour or improvements made within the assessment year (including any labour in excess of the requirement for that year). Failure to timely record an affidavit of annual labour constitutes abandonment of all rights acquired under the mining claim or leasehold location.

If more than the required minimum annual labour is performed in any one year, the excess value may be carried forward and applied against labour requirements in the subsequent year or years for as many as four years. In order to receive credit for this excess labour, the description and value of the labour must be included on the affidavit filed for the year in which the excess work is performed. If excess labour is being used to fulfill an annual labour requirement for a mining claim, leasehold location, or mining lease, an affidavit must be timely recorded in order to receive credit against the labour due.

The holder of a mining claim, leasehold location, or mining lease may make a cash payment to the State equal to the value of labour required (\$100 or \$400 per claim). A cash payment made instead of performing annual labour may only be made for one labour year at a time. In addition, cash-in-lieu payments may only be made for up to five consecutive years before labour must be performed again. The cash payment must be described on the recorded affidavit of annual labour.

A-2.3 State Royalty



Any state mining claims, which are placed into production, are subject to a 3% net proceeds production royalty as per AS 38.05.212. This royalty can be offset by qualified exploration incentive credits up to \$20 million in accordance with AS 27.30. Mines within the state are also subject to a sliding scale mining license tax, which is waived for the first 3.5 years of production as per AS 43.65.010.