TECHNICAL REPORT

AND UPDATED RESOURCE ESTIMATE

ON THE

BRUCEJACK PROPERTY

SKEENA MINING DIVISION
BRITISH COLUMBIA, CANADA

LATITUDE 56° 31’ 5” N by LONGITUDE 130° 12’ 18” W

For

PRETIUM RESOURCES INC.

By

P & E Mining Consultants Inc.

NI 43-101 & 43-101F1
TECHNICAL REPORT

Ms. Tracy Armstrong, P.Geo.
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P & E Mining Consultants Inc.
Report No. 207

Effective Date: February 18, 2011
Signing Date: March 4, 2011

IMPORTANT NOTICE

This report was prepared as a National Instrument 43-101 Technical Report, in accordance with Form 43-101F1, for Pretium Resources Inc. ("Pretivm") by P&E Mining Consultants Inc. ("P&E"). The quality of information, conclusions and estimates contained herein is consistent with the level of effort involved in P&E's services and based on: i) information available at the time of preparation, ii) data supplied by outside sources, and iii) the assumptions, conditions, and qualifications set forth in this report. This report is intended to be used by Pretivm, subject to the terms and conditions of its contract with P&E. This contract permits Pretivm to file this report as a Technical Report with Canadian Securities Regulatory Authorities pursuant to National Instrument 43-101, Standards of Disclosure for Mineral Projects. Any other use of this report by any third party is at that party's sole risk.

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EXECUTIVE SUMMARY

The following report was prepared to provide a NI 43-101 compliant Technical Report and Updated Resource Estimate of the gold and silver mineralization at the Brucejack Property, Skeena Mining Division, British Columbia (the "Property" or the "Project").

In 2010, pursuant to a purchase and sale agreement between Silver Standard Resources Inc. ("Silver Standard") and Pretium Resources Inc., ("Pretivm"), Pretivm became the owner of the Brucejack and Snowfield Projects, and retains a 100% outright interest in the two Properties.

The Brucejack Property consists of six mineral claims totalling 3,199.28 ha in area and all claims are in good standing until January 31, 2017.

The majority of the Brucejack Property falls within the boundaries of the Cassiar-Iskut-Stikine Land and Resource Management Plan (LRMP) area, with only a minor south-eastern segment of Mineral Claim No. 509506 falling outside this area. All claims located within the boundaries of the LRMP are considered as areas of General Management Direction, with none of the claims falling inside any Protected or Special Management Areas.

At present the land claims in the area are in review and subject to ongoing discussions between various native groups and the Government of British Columbia.

The Brucejack Property is situated at approximately 56°28′20″N latitude by 130°11′31″W longitude, a position approximately 950 km northwest of Vancouver, 65 km north-northwest of Stewart, and 21 km south-southeast of the Eskay Creek Mine. The coordinates used in this report are located relative to the NAD83 UTM coordinate system.

The Brucejack Property is located in the Boundary Range of the Coast Mountain Physiographic Belt along the western margin of the Intermontane Tectonic Belt. The local terrain is generally steep with local reliefs of 1000 m from valleys occupied by receding glaciers, to ridges at elevations of 1200 m asl. Elevations within the Project area range from 1000 m along the Mitchell Glacier to 1960 m asl along the ridge between the Mitchell and Hanging Glaciers. However, within several areas of the Project, such as at the gossanous Snowfield deposit, the relief is relatively low to moderate.

The Project is easily accessible with the use of a chartered helicopter from the town of Stewart, or seasonally from the settlement of Bell II. The flight time from Stewart is approximately 30 minutes and slightly less from Bell II; however, Stewart has an established year-round helicopter base.

The Brucejack Property lies immediately east of Seabridge Gold Inc.'s (Seabridge's) KSM Project and would likely be influenced by future access plans for that area, as outlined within the Preliminary Economic Assessment (PEA) study by Seabridge (McElhanney Consulting Services Ltd. [McElhanney], 2008; Wardrop, 2009. The proposed development activities for the KSM Project call for a combined 23 km tunnel for slurry delivery to the processing plant site located at the upper reaches of the Tiegen Creek Valley and a 14 km gravel road that would allow material to be trucked to the paved Cassiar highway (Highway 37). In addition, road access to Mitchell Creek itself would be provided by a 34 km continuation of the Eskay Creek Mine access road.

There are no local resources other than abundant water for any drilling work. The nearest infrastructure is the town of Stewart, approximately 65 km to the south, which has a minimum of supplies and personnel. The towns of Terrace and Smithers are also located in the same general region as the Project. Both are directly accessible by daily air service from Vancouver.

The nearest railway is the Canadian National Railway (CNR) Yellowhead route, which is located approximately 220 km to the southeast. This line runs east-west and terminates at the deep water port of Prince Rupert on the west coast of British Columbia.

Stewart, BC, the most northerly ice-free shipping port in North America is accessible to store and ship concentrates. Such material is currently being shipped from the Wolverine and Huckleberry mines via this terminal.

A proposal to have a high voltage power line run parallel with existing lines along Highway 37 is currently under review (www.highway37.com).

The initial plan calls for the new 287-kV line that would extend from the community of Terrace to the beginning of the Galore Creek access road at Bob Quinn Lake providing access for the project to the BC Hydro electric grid. The final capacity of this transmission line has yet to be determined and may be increased due to project demand.

The exploration history of the area dates back to the 1880s when placer gold was located at Sulphurets and Mitchell Creeks. Placer mining was intermittently undertaken throughout the early 1900s and remained the main focus of prospecting until the mid-1930s.

In 1935, prospectors discovered Cu-Mo mineralization on the Sulphurets property in the vicinity of the Main Copper zone, approximately six km northwest of Brucejack Lake; however, these claims were not staked until 1960.

From 1935 to 1959, the area was relatively inactive with respect to prospecting; however, it was intermittently evaluated by a number of different parties and several small Cu and Au-Ag occurrences were discovered in the Sulphurets-Mitchell Creek area.

In 1960, Granduc and Alaskan prospectors staked the main claim group covering the known Cu and Au-Ag occurrences, which collectively became known as the Sulphurets property, starting the era of modern exploration. Various operators explored the Property, and an underground program was completed on the West Zone between 1986 and 1991 by the Newcana JV.

In 1999, Silver Standard acquired Newhawk and with it, Newhawk's 60% interest and control of the Brucejack property. In 2001, Silver Standard acquired Black Hawk’s 40% direct interest in the Brucejack property, resulting in 100% interest in the property, subject to a 1.2% NSR royalty on production in excess of the resource estimate prepared by Pincock Allen & Holt Ltd. Described in Section 16.2.

Silver Standard began the first work on the Property in 2009 with a large diamond drilling campaign and resampling program of historical core, followed by a NI 43-101 compliant Technical Report and Resource Estimate completed by P&E Mining Consultants Inc.

The Brucejack Project and the surrounding Sulphurets district are underlain by the Upper Triassic and Lower to Middle Jurassic Hazelton Group of volcanic, volcaniclastic, and sedimentary rocks. According to Roach and MacDonald (1992), the stratigraphic assemblage comprises a package, from oldest to youngest, of:

- Lower Unuk River Formation: alternating siltstone and conglomerate;
- Upper Unuk River Formation: alternating intermediate volcanic rock and siltstone;
- Betty Creek Formation: alternating conglomerate, sandstone, and intermediate to mafic volcanic rock;
- Mount Dilworth Formation: felsic pyroclastic tuffaceous rock and flows.
- Salmon River and Bowser Formations: alternating siltstone and sandstone.

Britton and Alldrick (1988) described three intrusive episodes in the area including intermediate to felsic plutons that are probably coeval with volcanic and volcaniclastic supracrustal rocks, small stocks related to the Cretaceous Coast Plutonic Complex, and minor tertiary dykes and sills.

The Hazelton Group lithologies display fold styles ranging from gently warped to tight disharmonic folds. Northerly striking, steep normal faults are common and syn-volcanic, syn-sedimentary, and syn-intrusive faults have been inferred in the region. Minor thrust faults, dipping westerly, are common in the region and are important in the northern and western parts of the Sulphurets area in regard to the interpretation of mineralized zones. Metamorphic grade throughout the area is, at least, lower greenschist.

There are more than seventy documented mineral occurrences and showings in the Sulphurets area. Copper, molybdenum, gold, and silver mineralization found within gossans have affinities to both porphyry and mesothermal to epithermal types of vein deposits. Most mineral deposits occur in the upper members of the Unuk River Formation or the lower members of the Betty Creek Formation.

The current resources as reported on in this Technical Report are comprised of nine different zones on the Property; the West, West Zone Footwall, Bridge, Bridge Zone Halo, Shore, Galena Hill, Gossan Hill, SG and Valley of Kings ("VOK") Zones.

Most, if not all of the mineralization on the Brucejack Property has been classified as Epithermal Au-Ag-Cu, Low-Sulphidation Deposits (UBC deposit model No. H04): It is possible that some of the mineralization also displays characteristics of intrusion related vein systems that fall within the Intermediate-Sulphidation epithermal subtype. Pretivm will also undertake work to determine if the mineralization may be mesothermal.

Among the Brucejack Property gold and silver deposits, the West Zone has received the most exploration work to-date and accordingly can be considered somewhat typical of the general style of mineralization displayed by the various mineralizing systems comprising the area. The mineralization at the West Zone has been characterized as a structurally controlled, complex vein/breccia system related to the Brucejack Fault lying to the immediate west. Like the other Brucejack Project deposits it is considered at this time to fit the epithermal high-grade, intermediate to low-sulphidation, Au-Ag model. Other examples in British Columbia include the Blackdome and Silbak-Premier Mines.

West Zone

The West Zone gold-silver deposit is hosted by a north-westerly trending band of lower Jurassic (Unuk River member, Hazelton Group) andesitic and lesser sedimentary rocks, 400 m to 500 m wide, that pass between two intrusive bodies of plagioclase-hornblende porphyry. The supracrustal rocks are steeply inclined to the northeast and display varying degrees of brittle-ductile deformation and moderate to intense hydrothermal alteration, particularly where the precious metal deposit has been outlined.

The deposit itself comprises at least 10 quartz veins and quartz stockwork shoots, the longest of which has a strike length of 250 m and a maximum thickness of about 6 m. Most mineralized shoots have vertical extents that are greater than their strike lengths. It appears that ductile shearing generated the dilatant structures that served as conduits for the hydrothermal fluids, which deposited silica and precious metals.

West Zone Footwall Zone

The West Zone Footwall Zone is located along the entire footwall of the West Zone. It lies approximately 50 m to 200 m south-west of the West zone and was intersected by holes SU-63, SU-98 and SU-100. These holes cover an area 600 m long. Resources are currently Inferred only.

Bridge Zone

Drilling has determined that the bulk of the gold mineralization at the Bridge Zone is hosted by plagioclase-hornblende porphyry intrusive rock that in general is moderately sericite-chlorite altered, with disseminated and stringer pyrite making up a few percent of the rock by volume. Quartz ± chlorite ± sericite veins, 20-200 cm in thickness, were intermittently intersected by the drill holes, and these commonly contain minor to trace amounts of pyrite, sphalerite, galena, molybdenite and unknown dark grey, silver-bearing sulfosalt(s).

Bridge Zone Halo Zone

The Bridge Zone Halo Zone was modeled separately from the Bridge Zone as a low grade halo in order to ensure that all potentially economic mineralization was captured for mineral resource estimation. The Halo Zone was subsequently modeled using a 0.20 g/t Au grade shell.

Galena Hill Zone

The prospect area known as Galena Hill is marked by widespread iron oxide staining of altered meta-andesite. Drilling, detailed geological mapping and channel rock-sampling indicate that there is a system of east-west and NE-SW trending quartz veins and quartz stockwork which, as a whole, define a zone of hydrothermal alteration and mineralization that is at least 400 m long and 200 m wide.

As in the West Zone, gold mineralization at the Galena Hill Zone is preferentially associated with quartz veins, although the sericite-altered, andesitic host rocks are typically mineralized with disseminated pyrite and have geochemically anomalous gold contents, generally in the 100 to 500 ppb Au range. In some veins, trace amounts of native gold and electrum are accompanied by minor to occasionally substantial amounts of sphalerite, chalcopyrite and galena.

Shore Zone

The Shore Zone is a zone of quartz veining hosted by foliated, sericite-altered andesite with a strike length of roughly 500 m and a maximum width of 50 m. The NW-SE trend of the zone is coincident with a pronounced structural lineament, likely a shear fault, which extends from the Brucejack Fault south-eastwards beneath Brucejack Lake.

The veins occur as stacked, en echelon, sigmoidal lenses up to 100 m in length and 1.5 m wide, although they are typically 20-40 m long. Predominantly composed of quartz with minor carbonate and barite, the veins contain podiform sulphide mineralization consisting of varying amounts of pyrite, tetrahedrite, sphalerite, galena and arsenopyrite. Electrum has been observed in trace amounts. Silver is present in some of the highest concentrations observed in the Brucejack area.

SG Zone

The SG Zone is represented by an area of iron oxide-stained, sericite-altered rocks that occur adjacent to the northerly striking Brucejack Fault. Channel rock sampling done by Silver Standard and earlier workers tested a restricted zone of quartz stockwork veining close to the major fault as well as an east-striking, 150 m long and 20-80 cm wide quartz vein that extends westwards from the stockwork.

Valley of Kings Zone (“VOK”)

The Valley of Kings Zone was discovered by Esso in 1981 and was previously referred to as the Electrum Zone. It lies between the Bridge and Galena Hill Zones. Very little work has been completed on this zone, but what is currently known is that there are multi-kilogram intersections in parallel zones. The best intersection to date was in hole SU-12 which yielded 1.5 metres at 16,949 g/t Au and 8,697 g/t Ag, (previously reported on as being part of the Galena Hill Zone). Resources are all currently classified as Inferred in this zone.

Gossan Hill Zone

The mineralized zone known as Gossan Hill is a circular area, about 300 m in diameter, of intense quartz-sericite-pyrite alteration developed in Jurassic andesite of the Unuk River member of the Betty Creek formation. This visually impressive alteration zone is host to at least eleven quartz vein and quartz stockwork structures most of which trend east-west and dip steeply to the north. Individual structures are up to 250 m long and 20 m wide.

Precious metal mineralization at the Gossan Hill Zone is sporadic but generally best developed in the larger quartz lenses, particularly where these contain minor aggregates of pyrite, tetrahedrite, sphalerite and galena. Electrum is rarely observed, while silver also occurs in tetrahedrite, pyragyrite and polybasite.

One thousand two (1,002) drill holes were available in the database and of those, 908 were used to estimate the current resources.

Conceptual Lerchs-Grossman optimized pit shells were developed based on all available mineral resources (Measured, Indicated and Inferred). Commodity prices were based on the three-year trailing average as of December 31, 2010. The results from the optimized pit-shells are used solely for the purpose of reporting mineral resources that have reasonable prospects for economic extraction.

All mineral resources were reported against a 0.30g/t Au equivalent cut-off, as constrained within the optimized pit shell. Resources for three different pit shells were defined.

P&E 2011 Resource Estimates for the Brucejack Property

TABLE- I
BRUCEJACK ESTIMATED MINERAL RESOURCES BASED ON A CUT-OFF GRADE OF 0.30 G/T AUEQ
(1)(2)(3)

Category	Tonnes (millions)	Gold (g/t)	Silver (g/t)	Contained[3]	
				Gold ('000 oz)	Silver ('000 oz)
Measured	11.7	2.25	75.56	846	28,423
Indicated	285.3	0.80	9.57	7,338	87,782
Mea +Ind	297.0	0.86	12.17	8,184	116,205
Inferred	542.5	0.72	8.67	12,558	151,220

(1) *Mineral resources for the February 2011 estimate are defined within a Whittle optimized pit shell that incorporates project metal recoveries, estimated operating costs and metals price assumptions. Parameters used in the estimate include metals prices (and respective recoveries) of US$1,025/oz. gold (71%) and US$16.60/oz. silver (70%). The pit optimization utilized the following cost parameters: Mining US$1.75/tonne, Processing US$6.10/tonne and G&A US$0.90/tonne along with pit slopes of 45 degrees. Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues. The mineral resources in this news release were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council.*
(2) *The quantity and grade of reported Inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred resources as an Indicated or Measured mineral resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured mineral resource category.*
(3) *Contained metal may differ due to rounding.*

TABLE- II **BRUCEJACK 5.00 G/T AUEQ MINERAL RESOURCE GRADE & TONNAGE ESTIMATE (1)(2)(3)**					
Category	**Tonnes (millions)**	**Gold (g/t)**	**Silver (g/t)**	**Contained(3)**	
				Gold ('000 oz)	**Silver ('000 oz)**
Measured	1.947	7.95	241.25	498	15,102
Indicated	1.722	7.33	123.19	406	6,820
Meas +Ind	3.669	7.66	185.84	903	21,922
Inferred	4.707	12.54	49.24	1,898	7,452

***(1), (2)** and **(3),** See footnotes to Table 16-12.*
***(4)**The high-grade resource estimate is a subset of the bulk-tonnage resource estimate and as such is included within the bulk-tonnage resource estimate and is not in addition to the bulk-tonnage resource estimate.*

TABLE- III **BRUCEJACK 3.00 G/T AUEQ MINERAL RESOURCE GRADE & TONNAGE ESTIMATE (1)(2)(3)**					
Category	**Tonnes (millions)**	**Gold (g/t)**	**Silver (g/t)**	**Contained(3)**	
				Gold('000 oz)	**Silver('000 oz)**
Measured	3.495	5.43	177.98	610	19,999
Indicated	4.940	4.62	69.33	734	11,011
Mea +Ind	8.435	4.96	114.35	1,344	31,010
Inferred	9.637	7.80	40.74	2,417	12,623

***(1), (2)** and **(3)**, See footnotes to Table 16-12.*
***(4)**The high-grade resource estimate is a subset of the bulk-tonnage resource estimate and as such is included within the bulk-tonnage resource estimate and is not in addition to the bulk-tonnage resource estimate.*

A positive Preliminary Economic Assessment ("PEA") for the combined Snowfield-Brucejack Project was delivered by Wardrop Engineering in October 2010, and was based on information up to the end of 2009. The drilling completed in 2010 allowed Pretivm to redefine resources based on higher cut-off grades, and subsequently a new PEA will be required to examine the economics of a higher grade mining operation at Brucejack.

It is recommended, based on the current updated resource estimate, to undertake the following at Brucejack:

- Complete a new PEA, which examines the economics of a higher grade mining operation in the West Zone and VOK Zone;
- Complete approximately 50,000 metres of diamond drilling in the known areas of high grade mineralization with the intention of :
    - Tightening the drill spacing to increase the levels of confidence to move Inferred resources into the Measured and Indicated categories and to improve knowledge of the continuity of the high grade mineralization for the VOK and other high-grade zones;
    - Testing the high-grade mineralization to depths greater than the current 650 metres; and

    - Following up on a number of high-grade intercepts encountered in the 2009 and 2010 drill programs that are not sufficiently defined to be included in the high-grade resource.
- Continue with the metallurgical work initiated prior to the previous PEA;
- Continue with the environmental work initiated prior to the previous PEA.

This work should all be undertaken simultaneously at an approximate cost of CDN $16 M.

1.0 INTRODUCTION AND TERMS OF REFERENCE

1.1 TERMS OF REFERENCE

The following report was prepared to provide a NI 43-101 compliant Technical Report and Updated Resource Estimate of the gold and silver mineralization at the Brucejack Property, British Columbia (the "Property" or the "Project"). Pretium Resources Inc., ("Pretivm") has a 100% outright interest in the property.

This report was prepared by P&E Mining Consultants Inc., ("P&E") at the request of Mr. Kenneth McNaughton, Vice President and Chief Exploration Officer, Pretium Resources Inc. Pretivm is a Vancouver, British Columbia based company trading on the Toronto Stock Exchange (TSX) under the symbol of "PVG", with its corporate office at:

1600- 570 Granville Street,
Vancouver, British Columbia V6C 3P1

Tel: 604-558-1784

This report is considered current as of January 31, 2011.

Mr. Fred Brown, Pr.Sc.Nat., a qualified person under the terms of NI 43-101, conducted a site visit to the Property from September 3 to 5, 2010. An independent verification sampling program was conducted by Mr. Brown at that time.

In addition to the site visit, P&E carried out a study of all relevant parts of the available literature and documented results concerning the project, and held discussions with technical personnel from the company regarding all pertinent aspects of the project. The reader is referred to these data sources, which are outlined in the "Sources of Information" section of this report, for further detail on the project.

The purpose of the current report is to provide an independent Technical Report and Updated Resource Estimate of the gold and silver mineralization present on the Brucejack Property, in conformance with the standards required by NI 43-101 and Form 43-101F. The estimate of mineral resources contained in this report conforms to the CIM Mineral Resource and Mineral Reserve definitions (December, 2005) referred to in National Instrument (NI) 43-101, Standards of Disclosure for Mineral Projects.

1.2 SOURCES OF INFORMATION

This report is based, in part, on internal company technical reports, and maps, published government reports, company letters and memoranda, and public information as listed in the "References" Section 19.0 at the conclusion of this report. Several sections from reports authored by other consultants have been directly quoted in this report, and are so indicated in the appropriate sections. P&E has not conducted detailed land status evaluations, and has relied upon previous qualified reports, public documents and statements by Pretivm regarding property status and legal title to the Project.

1.3 UNITS AND CURRENCY

Unless otherwise stated all units used in this report are metric. Gold and silver assay values are reported in grams per metric tonne (g/t) unless some other unit is specifically stated. The CDN$ is used throughout this report.

1.4 GLOSSARY AND ABBREVIATION OF TERMS

In this document, in addition to the definitions contained heretofore and hereinafter, unless the context otherwise requires, the following terms have the meanings set forth below.

"$" and "C$"	means the currency of Canada.
"AA"	is an acronym for Atomic Absorption, a technique used to measure metal content subsequent to fire assay.
"asl"	means above sea level.
"Au"	means gold.
"AusIMM"	mean Australian Institute of Mining and Metallurgy.
"Azi"	means azimuth.
"BLEG"	means Bulk Leach Extractable Gold.
"CIM"	means the "Canadian Institute of Mining, Metallurgy and Petroleum."
"CSA"	means the Canadian Securities Administrators.
"DDH"	means diamond drillhole.
"DFS"	means Definitive Feasibility Study (previously termed Bankable Feasibility Study).
"E"	means east.
"el"	means elevation level.
"g/t"	means grams per tonne.
"g/t Au"	means grams of gold per tonne of rock
"ha"	means Hectare.
"IP"	means Induced Polarization.
"IRR"	means Internal Rate of Return.
"kg"	means kilogram.
"km"	means kilometre equal to 1,000 metres or approx. 0.62 statute miles.
"m"	means metric distance measurement equivalent to approximately 3.27 feet
"M"	means million.
"Ma"	means millions of years.
"mm/an"	means millimetres per annum.
"Mt"	means millions of tonnes.
"N"	means north.
"NE"	means northeast.
"NI 43-101"	means Canadian Securities Administrators National Instrument 43-101.
"NN"	means Nearest Neighbour.
"NTS"	means National Topographic System.

“NW”	means northwest.
“NSR”	is an acronym for “Net Smelter Return”, which means the amount actually paid to the mine or mill owner from the sale of ore, minerals and other materials or concentrates mined and removed from mineral properties, after deducting certain expenditures as defined in the underlying smelting
“oz/T”	means ounces per ton.
“P&E	means P&E Mining Consultants Inc.
“PEA”	means a Preliminary Economic Assessment study.
“ppm”	means parts per million.
“Project”	means Brucejack Project.
“S”	means south.
“SE”	means southeast.
“SEDAR”	means the System for Electronic Document Analysis and Retrieval.
“SW	means southwest.
“t”	means metric tonne equivalent to 1,000 kilograms or approximately 2,204.62 pounds
“T”	means Short Ton (standard measurement), equivalent to 2,000 pounds.
“t/a”	means tonnes per year.
“tpd”	means tonnes per day
“US$”	means the currency of the United States.
“UTM”	means Universal Transverse Mercator.
“W”	means west.

2.0 RELIANCE ON OTHER EXPERTS

The authors wish to make clear that they are QPs only in respect of the areas in this report identified in their "Certificates of Qualified Persons" submitted with this report to the Canadian Securities Administrators.

The report has been reviewed for factual errors by Pretivm. Hence, the statement and opinions expressed in this document are given in good faith and in the belief that such statements and opinions are neither false nor misleading at the date of this report.

Pretivm's employees, who are not QPs, provided additional information on taxes and marketing.

3.0 PROPERTY DESCRIPTION AND TENURE

3.1 DESCRIPTION AND TENURE

In 2010, pursuant to a purchase and sale agreement between 0777666 BC Ltd. (as the seller) and 0890693 BC Ltd. (as the buyer), 0777666 BC Ltd. agreed to sell to 0890693 BC Ltd. the Snowfield and Brucejack Projects, and then, pursuant to an acquisition agreement between Silver Standard (as the seller) and Pretivm (as the buyer), Silver Standard agreed to sell to Pretivm all the issued shares of 0890693 BC Ltd.

The Brucejack Property consists of six mineral claims totalling 3,199.28 ha in area (Table 3.1 and Figure 3.1) and all claims are in good standing until January 31, 2017.

Information relating to tenure was verified by means of the public information available through the Mineral Titles Branch of the BC Ministry of Energy, Mines, and Petroleum Resources MTO land tenure database. The six above-mentioned mineral claims were converted from 28 older legacy claims to BC's new MTO system in 2005.P&E has relied upon this public information, as well as information from Pretivm, and has not undertaken an independent verification of title and ownership of the Brucejack Property claims.

A legal land survey of the claims has not been undertaken.

TABLE 3.1
CLAIMS LIST FOR BRUCEJACK PROPERTY

Tenure No.	Tenure Type	Map No.	Owner	Pretivm Interest	Status	In Good Standing To	Area (ha)
509223	Mineral	104B	0890693 BC Ltd.	100%	Good	Jan. 31, 2017	428.62
509397	Mineral	104B	0890693 BC Ltd.	100%	Good	Jan. 31, 2017	375.15
509400	Mineral	104B	0890693 BC Ltd.	100%	Good	Jan. 31, 2017	178.63
509463	Mineral	104B	0890693 BC Ltd.	100%	Good	Jan. 31, 2017	482.57
509464	Mineral	104B	0890693 BC Ltd.	100%	Good	Jan. 31, 2017	1,144.53
509506	Mineral	104B	0890693 BC Ltd.	100%	Good	Jan. 31, 2017	589.78
Total							**3,199.28**

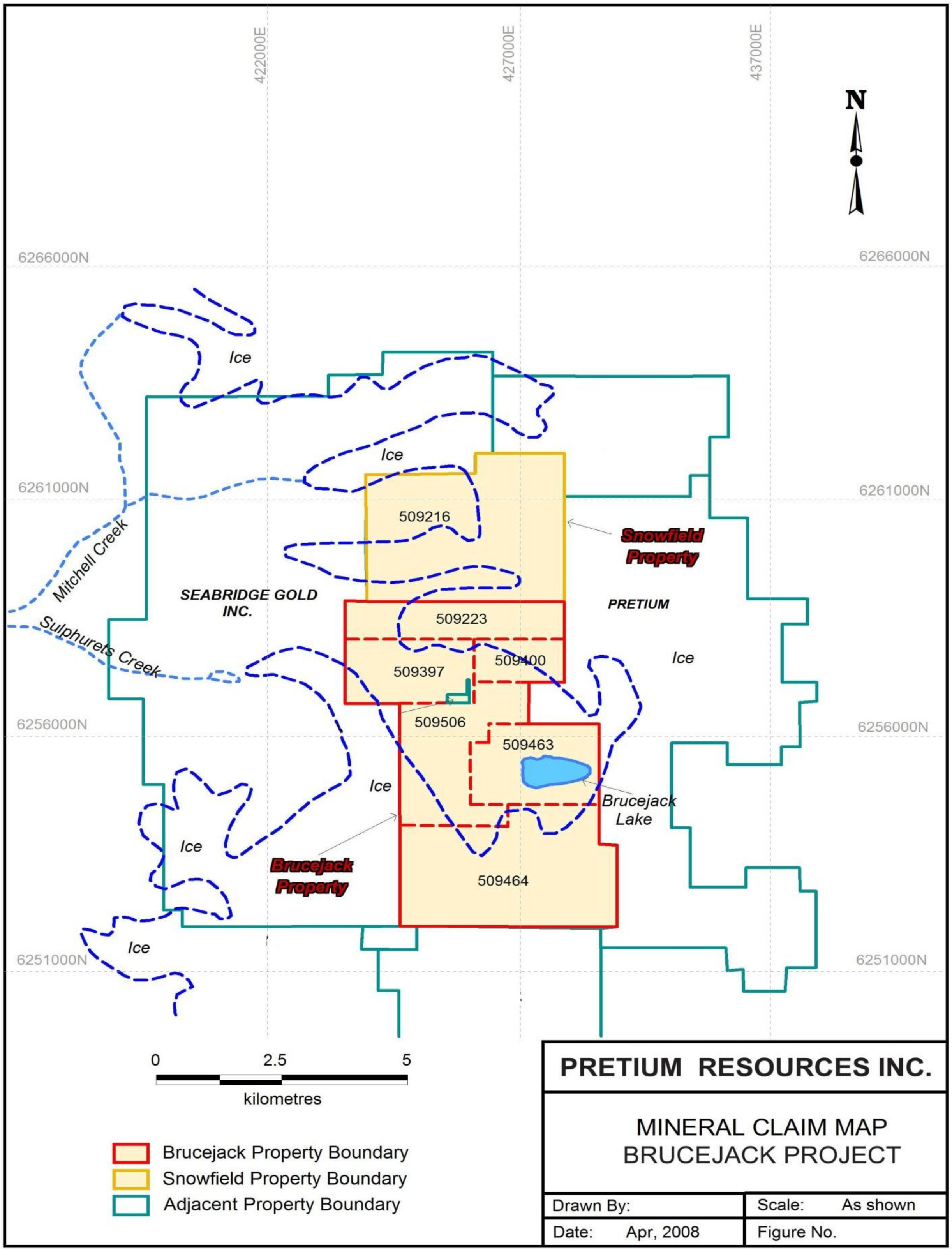
There are no annual holding costs for any of the six mineral claims at this time.

Figure 3.1 illustrates the six Brucejack Property claims in relation to the Snowfield Property, which adjoins the Brucejack Property to the north. The current report is focused on the nine highest priority mineralized zones of the Brucejack Property.

The majority of the Brucejack Property falls within the boundaries of the Cassiar-Iskut-Stikine Land and Resource Management Plan (LRMP) area, with only a minor south-eastern segment of Mineral Claim No. 509506 falling outside this area. All claims located within the boundaries of the LRMP are considered as areas of General Management Direction, with none of the claims falling inside any Protected or Special Management Areas.

At present the land claims in the area are in review and subject to ongoing discussions between various native groups and the Government of British Columbia.

Figure 3.1 Mineral Claim Map of the Brucejack Property



4.0 LOCATION, ACCESS, CLIMATE, PHYSIOGRAPHY AND INFRASTRUCTURE

4.1 LOCATION AND ACCESS

The Brucejack Property is situated at approximately 56°28′20″N latitude by 130°11′31″W longitude, a position approximately 950 km northwest of Vancouver, 65 km north-northwest of Stewart, and 21 km south-southeast of the Eskay Creek Mine. The Brucejack Property coordinates used in this report are located relative to the NAD83 UTM coordinate system.

The Brucejack Property is located in the Boundary Range of the Coast Mountain Physiographic Belt along the western margin of the Intermontane Tectonic Belt. The local terrain is generally steep with local reliefs of 1000 m from valleys occupied by receding glaciers, to ridges at elevations of 1200 m asl. Elevations within the Project area range from 1000 m along the Mitchell Glacier to 1960 m asl along the ridge between the Mitchell and Hanging Glaciers. However, within several areas of the Project, such as at the gossanous Snowfield deposit, the relief is relatively low to moderate.

The Project is easily accessible with the use of a chartered helicopter from the town of Stewart, or seasonally from the settlement of Bell II. The flight time from Stewart is approximately 30 minutes and slightly less from Bell II however, Stewart has an established year-round helicopter base.

Heavy exploration equipment, fuel, and camp provisions can be transported along a good gravel road from Stewart to the Granduc staging site and then flown by helicopter to the Project. This combined truck and helicopter transportation method cuts the more expensive helicopter flight time in half from Stewart.

4.2 CLIMATE AND PHYSIOGRAPHY

The climate is typical of north-western British Columbia with cool, wet summers, and relatively moderate but wet winters. Annual temperatures range from +20°C to -20°C. Precipitation is high with heavy snowfall accumulations ranging from 10 m to 15 m at higher elevations and 2 m to 3 m along the lower river valleys. Snow packs cover the higher elevations from October to May. The optimum field season is from late June to mid-October.

The tree line is at approximately 1200 m elevation. Sparse fir, spruce, and alder grow along the valley bottoms with only scrub alpine spruce, juniper, alpine grass, moss, and heather covering the steep valley walls. The Snowfield Project, at an elevation above 1500 m, has only sparse mosses along drainages. Rocky glacial moraine and polished glacial-striated outcrops dominate the terrain above tree line.

4.3 INFRASTRUCTURE AND LOCAL RESOURCES

The Brucejack Property lies immediately east of Seabridge Gold Inc.'s (Seabridge's) KSM Project and would likely be influenced by future access plans for that area, as outlined within the Preliminary Economic Assessment (PEA) study by Seabridge (McElhanney Consulting Services

Ltd. [McElhanney], 2008; Wardrop, 2009. The proposed development activities for the KSM Project call for a combined 23 km tunnel for slurry delivery to the processing plant site located at the upper reaches of the Tiegen Creek Valley and a 14 km gravel road that would allow material to be trucked to the paved Cassiar highway (Highway 37). In addition, road access to Mitchell Creek itself would be provided by a 34 km continuation of the Eskay Creek Mine access road (Figure 4.1).

There are no local resources other than abundant water for any drilling work. The nearest infrastructure is the town of Stewart, approximately 65 km to the south, which has a minimum of supplies and personnel. The towns of Terrace and Smithers are also located in the same general region as the Project. Both are directly accessible by daily air service from Vancouver.

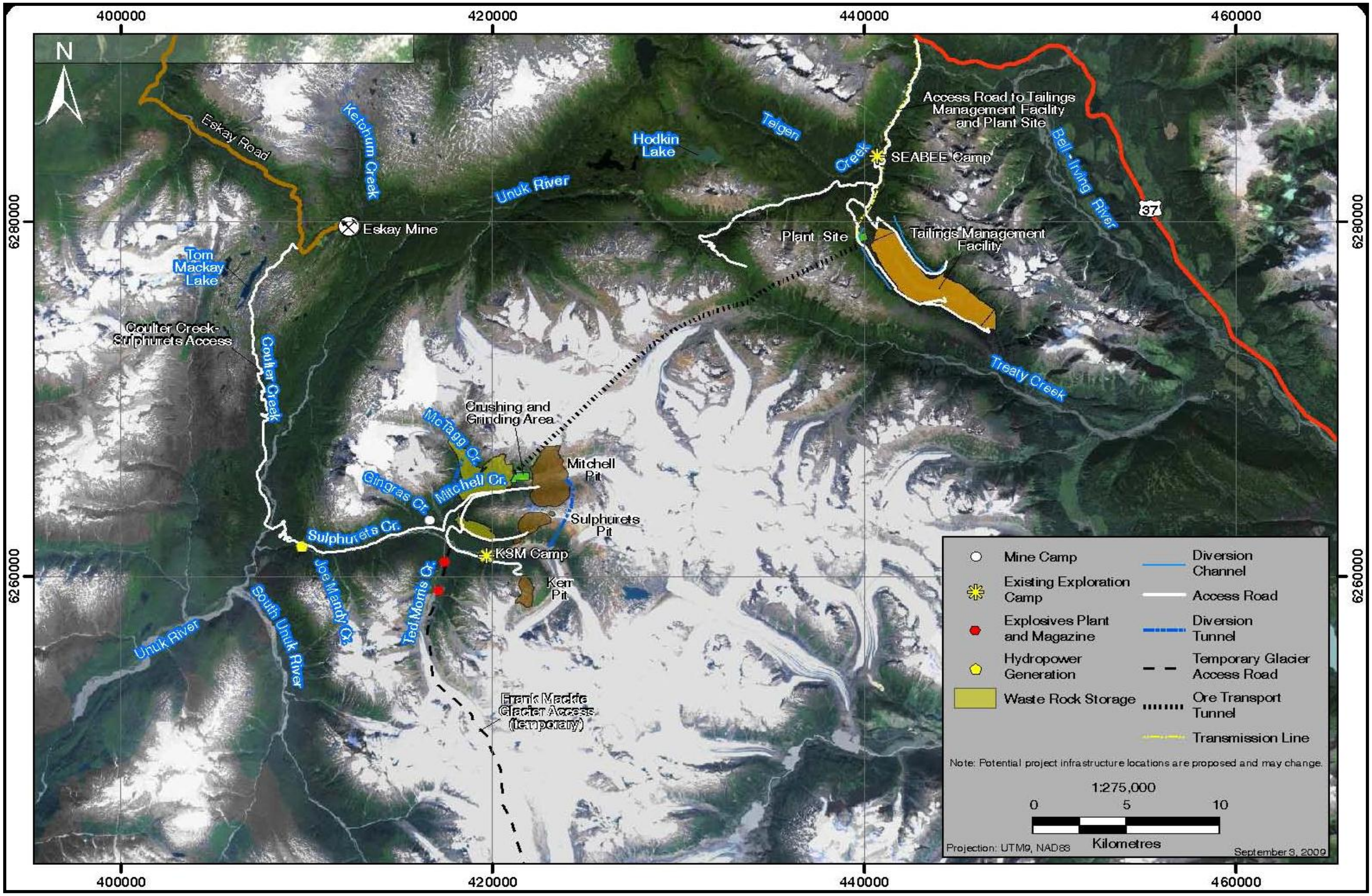
The nearest railway is the Canadian National Railway (CNR) Yellowhead route, which is located approximately 220 km to the southeast.This line runs east-west and terminates at the deep water port of Prince Rupert on the west coast of BC.

Stewart, BC, the most northerly ice-free shipping port in North America, is accessible to store and ship concentrates. Such material is currently being shipped from the Wolverine and Huckleberry mines via this terminal.

A proposal to have a high voltage power line run parallel with existing lines along Highway 37 is currently under review (www.highway37.com).

The initial plan calls for the new 287-kV line that would extend from the community of Terrace to the beginning of the Galore Creek access road at Bob Quinn Lake providing access for the project to the BC Hydro electric grid (Figure 4.2). The final capacity of this transmission line has yet to be determined and may be increased due to project demand.

Figure 4.1 KSM Project Planned Road Access



Note: *after Seabridge; Wardrop, 2009.*

Figure 4.2 Proposed High Voltage Northwest Transmission Line

Source:[*www.highway37.com*](http://www.highway37.com)

5.0 HISTORY AND PREVIOUS EXPLORATION

The Brucejack Property and the surrounding region have a history rich in exploration for precious and base metals dating back to the late 1800s. This section describes the mineral exploration, including the historical drilling carried out prior to Pretivm's acquisition of the separate Brucejack and Snowfield Properties, within the Brucejack portion of the Project itself and the surrounding region. The historical data have been summarized predominantly from various Assessment Reports available through the BC Ministry of Energy, Mines and Petroleum Resources.

5.1 HISTORY

The exploration history of the area dates back to the 1880s when placer gold was located at Sulphurets and Mitchell Creeks. Placer mining was intermittently undertaken throughout the early 1900s and remained the main focus of prospecting until the mid-1930s.

In 1935, prospectors discovered Cu-Mo mineralization on the Sulphurets Property in the vicinity of the Main Copper zone, approximately six km north-west of Brucejack Lake; however, these claims were not staked until 1960.

From 1935 to 1959, the area was relatively inactive with respect to prospecting; however, it was intermittently evaluated by a number of different parties and several small Cu and Au-Ag occurrences were made in the Sulphurets-Mitchell Creek area.

In 1960, Granduc and Alaskan prospectors staked the main claim group covering the known Cu and Au-Ag occurrences, which collectively became known as the Sulphurets Property, starting the era of modern exploration, outlined as follows:

1960-1979 – Granduc continued exploration, conducting further geological mapping, lithogeochemical sampling, trenching, and diamond drilling on known base and precious metal targets north and north-west of Brucejack Lake resulting in the discovery of Au-Ag mineralization in the Hanging Glacier area and Mo on the south side of Mitchell.

1980 – Esso optioned the property from Granduc and subsequently completed an extensive program consisting of mapping, trenching, and geochemical sampling that resulted in the discovery of several showings including the Snowfield, Shore, West, and Galena zones. Au was discovered on the peninsula at Brucejack Lake near the Shore Zone.

1982-1983 – Exploration was confined to Au and Ag-bearing vein systems in the Brucejack Lake area at the southern end of the property from 1982 to 1983.Drilling was concentrated in 12 Ag and Au-bearing structures including the Near Shore and West zones, located 800 m apart near Brucejack Lake. Drilling commenced on the Shore Zone.

- 1983 – Esso continued work on the property and (in 1984) outlined a deposit on the west Brucejack Zone.
- 1985 – Esso dropped the option on the Sulphurets property.

- 1985 – The property was optioned by Newhawk and Lacana Mining Corp. (Lacana) from Granduc under a three-way joint venture (the Newcana JV).The Newcana JV completed work on the Snowfield, Mitchell, Golden Marmot, Sulphurets Gold, and Main Copper zones, along with lesser known targets.
- 1986-1991 – Between 1986 and 1991, the Newcana JV spent approximately $21 M developing the West Zone and other smaller precious metal veins on what would later become the Bruceside Property.
- 1991-1992 – Newhawk officially subdivided the Suphurets claim group into the Sulphside and Bruceside properties and optioned the Sulphside property (including Sulphurets and Mitchell Zones) to Placer Dome Inc. (Placer Dome).Throughout the period from 1991 to 1994, joint venture exploration continued on the Sulphurets-Bruceside property including property-wide trenching, mapping, airborne surveys, and surface drilling, evaluating various surface targets including the Shore, Gossan Hill, Galena Hill, Maddux, and SG zones. Newhawk purchased Granduc's interest in the Snowfield Property in early 1992.
- 1991 – Six holes were drilled at the Shore Zone, totalling 1,200 m, to test its continuity and to determine its relationship to the West and R-8 zones. Results varied from 37 g/t Au over 1.5 m to 13 g/t Au over 4.9 m (www.infomine.com).
- 1994 – Exploration in the Brucejack area consisted of detailed mapping and sampling in the vicinity of the Gossan Hill Zone, and 7,352 m of diamond drilling (over 20 holes), primarily on the West, R8, Shore, and Gossan Hill zones. Mapping, trenching, and drilling of the highest priority targets were conducted on 10 of the best deposits (including the West Zone).
- 1996 – Granduc merged with Black Hawk to form Black Hawk Mining Inc.
- 1997-1998 – No exploration or development work was carried out on the Brucejack property (Budinski et al., 2001).
- 1999 – Silver Standard acquired Newhawk and with it, Newhawk's 60% interest and control of the Brucejack Property (www.infomine.com).
- 2001 – Silver Standard entered into an agreement with Black Hawk whereby Silver Standard acquired Black Hawk's 40% direct interest in the Brucejack property, resulting in 100% interest in the property.
- 1999-2008 – No exploration or development work was carried out on the Brucejack Property during the period from 1999 to 2008.

The historical interpretation (Pincok Allen and Holt 2001) of mineralized zones on the West Zone, prior to Silver Standard undertaking their exploration work in 2008, is shown in Figure 5-1 (vein location plan map) and Figure 5-2 (cross section map).

Figure 5.1 West Zone Vein Location Plan

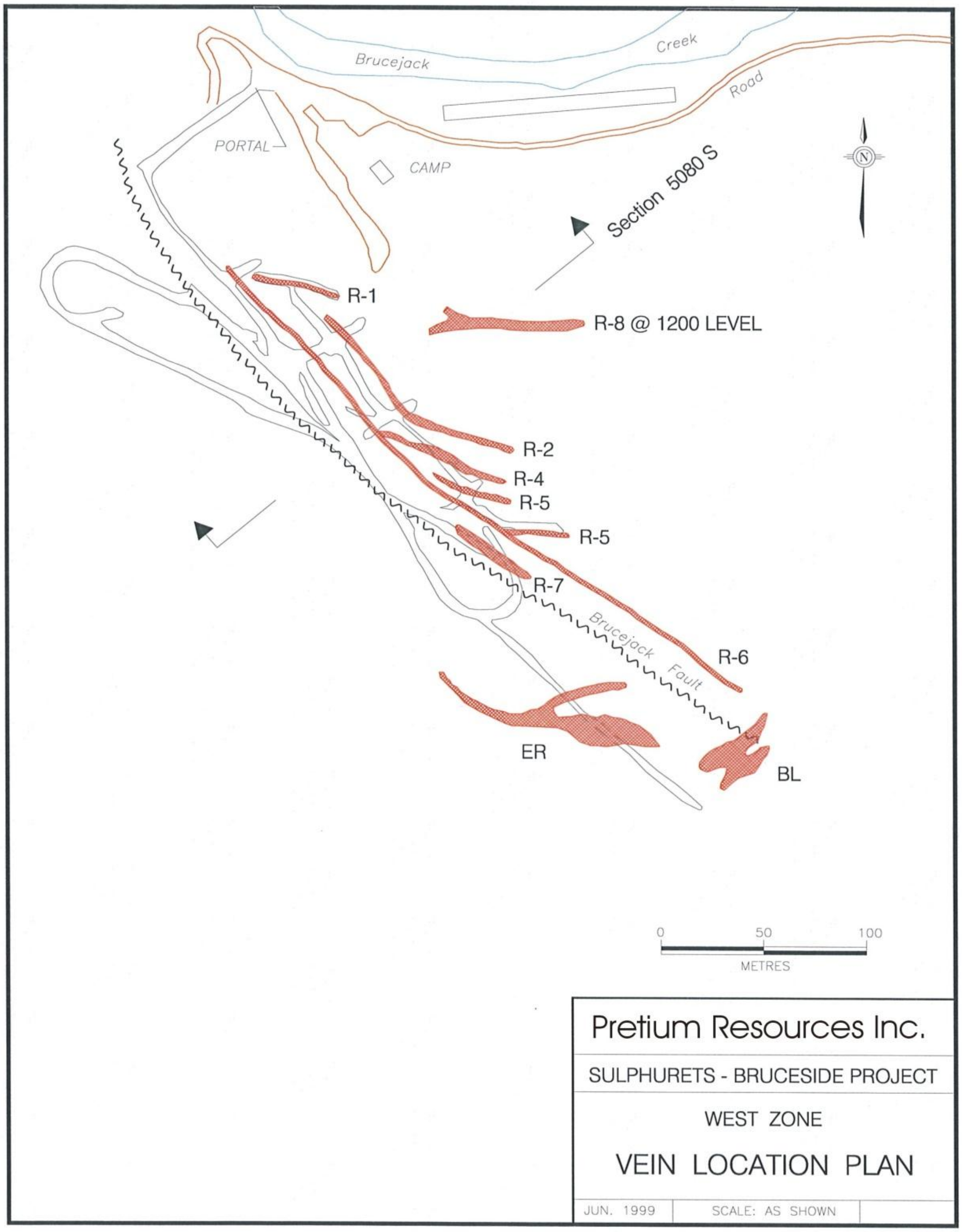
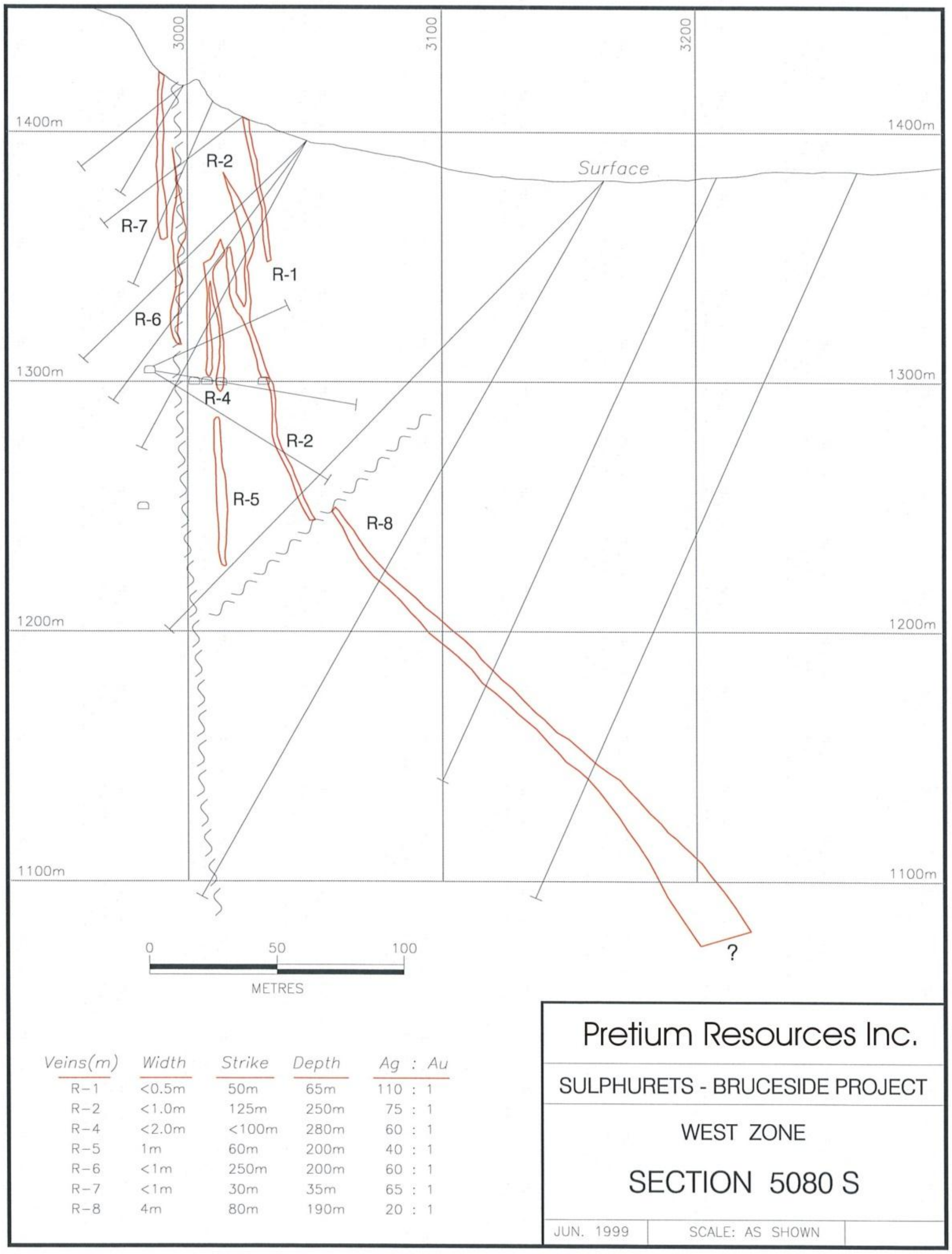


Figure 5.2 West Zone Section 5080 S



5.2 RECENT WORK COMPLETED BY SILVER STANDARD

In 2009 Silver Standard began work on the Brucejack Property, the first since its acquisition. The 2009 program included drilling, rock-chip and channel sampling, and re-sampling of historical drill core.

During the 2009 Brucejack Property field program, Silver Standard collected a total of 1,940 drill core samples from 25 historical drill holes stored onsite and sent them for analysis to ALS Chemex Laboratories Ltd. ("ALS Chemex", or "Chemex"). The samples were sent to the ALS Chemex assay laboratory in Terrace for preparation and then forwarded to the Chemex facility in Vancouver for analysis. Samples were analyzed for gold (fire assay with atomic absorption finish) as well as 33 other elements by inductively coupled plasma (ICP) analysis. The 2009 program also included re-analysis of 941 pulp samples derived from historical drill core samples. These samples were also analyzed for gold, plus 33 other elements at the Chemex facility in Vancouver.

Field work undertaken throughout the 2009 program included the collection of 2,739 rock-chip and channel samples from surface outcrops. This sampling work was mostly done at target areas that were drilled by the company in 2009, with samples generally collected along north-south oriented lines that corresponded to the surface traces of some of the 2009 drill holes. Specifically, rock-chip and channel sampling were completed at the Galena Hill, Bridge, SG, and Mammoth zones (where drilling was carried out in 2009), as well as at the Hanging Glacier Zone, where historical surface sampling had identified rocks enriched in gold and silver. The surface samples were analyzed for gold plus 33 other elements.

5.3 PREVIOUS FEASIBILITY STUDIES

Corona completed a feasibility study on a proposed underground mine with decline access for the Sulphurets Project (West and R-8 Zones only) in 1990. Total operating costs of $145 per ton were estimated based on a 350 ton-per-day mill facility for processing, a capital cost of $42.7 million and a 6.7% pre-tax return at a price of US $400/oz gold and $5/oz silver. The study concluded that higher metal prices must be realized before a production decision could be taken. A Project Approval Certificate was issued in respect of the Project by the Minister of Sustainable Resource Management and Minister of Energy and Mines for the Province of British Columbia. The certificate as amended expired in 2006.

The reader is cautioned that the abovementioned 1990 Corona Sulphurets Project Feasibility Study is no longer pertinent, is not NI 43-101 compliant and should not be relied upon.

5.4 PRELIMINARY ECONOMIC ASSESSMENT 2010

Pretivm commissioned Wardrop Engineering Inc, a Tetra Tech Company ("Wardrop"), to complete a preliminary assessment (PA) of the Snowfield and Brucejack deposits.

The following consultants were commissioned to complete the component studies for the National Instrument 43-101 (NI 43-101) Technical Report:

- Wardrop: processing, infrastructure, capital and operating cost estimates, and financial analysis;
- AMC Mining Consultants (Canada) Ltd. (AMC): mining;
- P&E Mining Consultants Inc. (P&E): mineral resource estimate;
- Rescan Environmental Services Ltd. (Rescan): environmental aspects, waste and water treatment;
- BGC Engineering Inc. (BGC): tailings impoundment facility, waste rock and water management, and geotechnical design for the open pit slopes.

Based on the results of the PA, it was recommended that Pretivm continue with the next phase of the project, a Pre-feasibility Study, in order to identify opportunities and further assess viability of the project. The full PA can be consulted at www.sedar.com.

6.0 GEOLOGICAL SETTING

The following description of the regional and local geology of the Brucejack Project is drawn heavily from the Technical Report titled, "Technical Report on the Snowfield Property, Skeena Mining Division, British Columbia, Canada", by Minorex Consulting Ltd., dated April 21, 2008.

The Sulphurets district is situated along the western margin of the Intermontane Tectonic Belt, underlain by Stikine Terrane. This district has been the subject of several geological studies since the mid-1980s when it was actively explored for porphyry copper-molybdenum and copper-gold (i.e. Kerr), exhalative volcanogenic (i.e. Eskay Creek), and lode gold-silver vein deposits (i.e. Snip). Researchers included scientists from the Geological Survey of Canada, the British Columbia Geological Survey, the University of British Columbia, and the University of Oregon. The following discussion of the regional geology is a brief summary of their findings. Figure 6.1 shows the geology of the Sulphurets area.

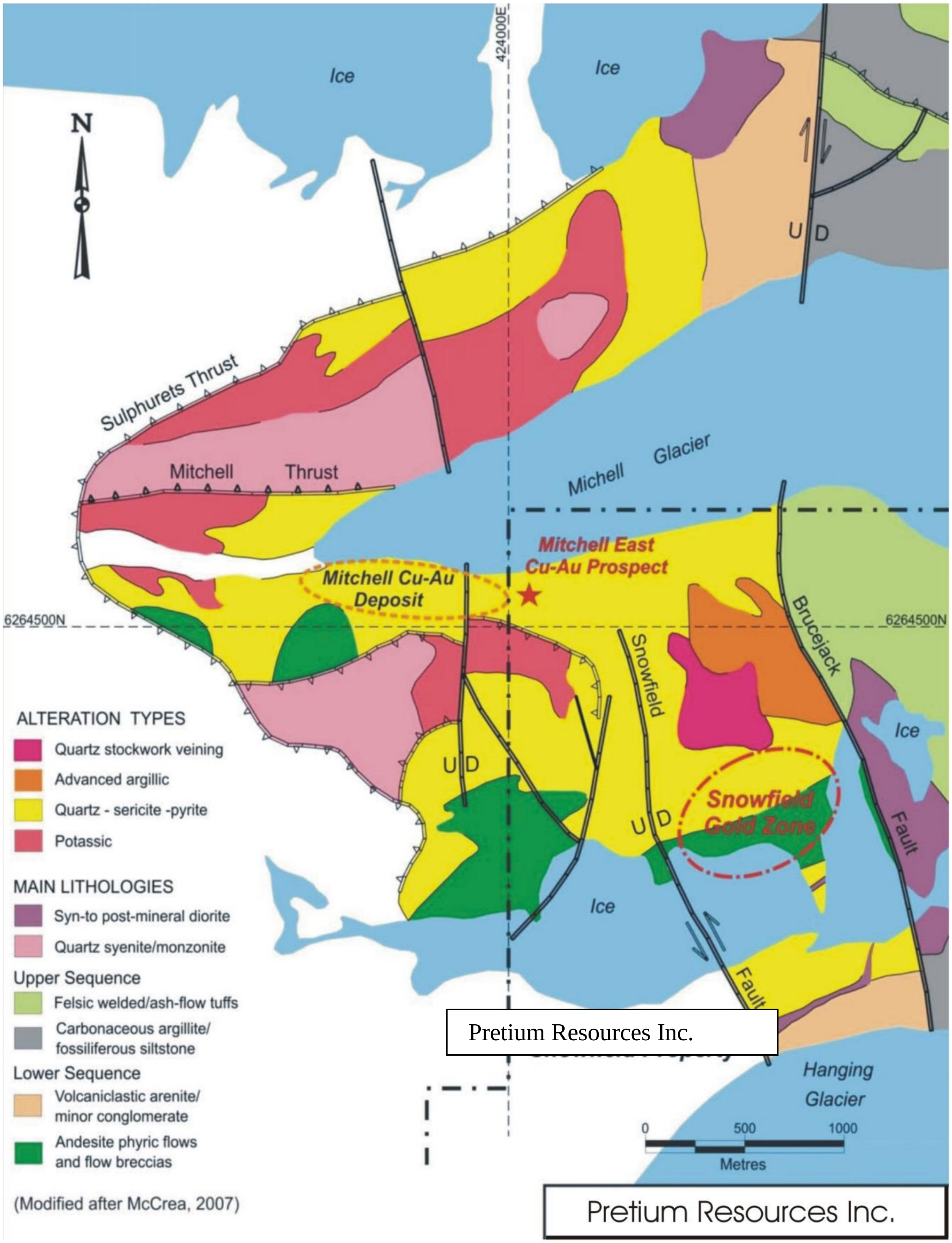
6.1 REGIONAL GEOLOGY

The Brucejack Project and the surrounding Sulphurets district are underlain by the Upper Triassic and Lower to Middle Jurassic Hazelton Group of volcanic, volcaniclastic, and sedimentary rocks. According to Roach and MacDonald (1992), the stratigraphic assemblage comprises a package, from oldest to youngest, of:

- Lower Unuk River Formation: alternating siltstone and conglomerate;
- Upper Unuk River Formation: alternating intermediate volcanic rock and siltstone;
- Betty Creek Formation: alternating conglomerate, sandstone, and intermediate to mafic volcanic rock;
- Mount Dilworth Formation: felsic pyroclastic tuffaceous rock and flows;
- Salmon River and Bowser Formations: alternating siltstone and sandstone.

Britton and Alldrick (1988) described three intrusive episodes in the area including intermediate to felsic plutons that are probably coeval with volcanic and volcaniclastic supracrustal rocks, small stocks related to the Cretaceous Coast Plutonic Complex, and minor tertiary dykes and sills.

Figure 6.1 Geology of the Sulphurets Area (Source: after Blanchflower, 2008)



The Hazelton Group lithologies display fold styles ranging from gently warped to tight disharmonic folds. Northerly striking, steep normal faults are common and syn-volcanic, syn-sedimentary, and syn-intrusive faults have been inferred in the region. Minor thrust faults, dipping westerly, are common in the region and are important in the northern and western parts of the Sulphurets area in regard to the interpretation of mineralized zones. Metamorphic grade throughout the area is, at least, lower greenschist.

There are more than seventy documented mineral occurrences and showings in the Sulphurets area. Copper, molybdenum, gold, and silver mineralization found within gossans have affinities to both porphyry and mesothermal to epithermal types of vein deposits. Most mineral deposits occur in the upper members of the Unuk River Formation or the lower members of the Betty Creek Formation.

Regional geologic mapping was completed by the Geological Survey of Canada, the British Columbia Ministry of Energy, Mines and Resources, and the Mineral Deposits Research Unit (MDRU) at the University of British Columbia. A regional geology map is depicted in Figure 6.3.

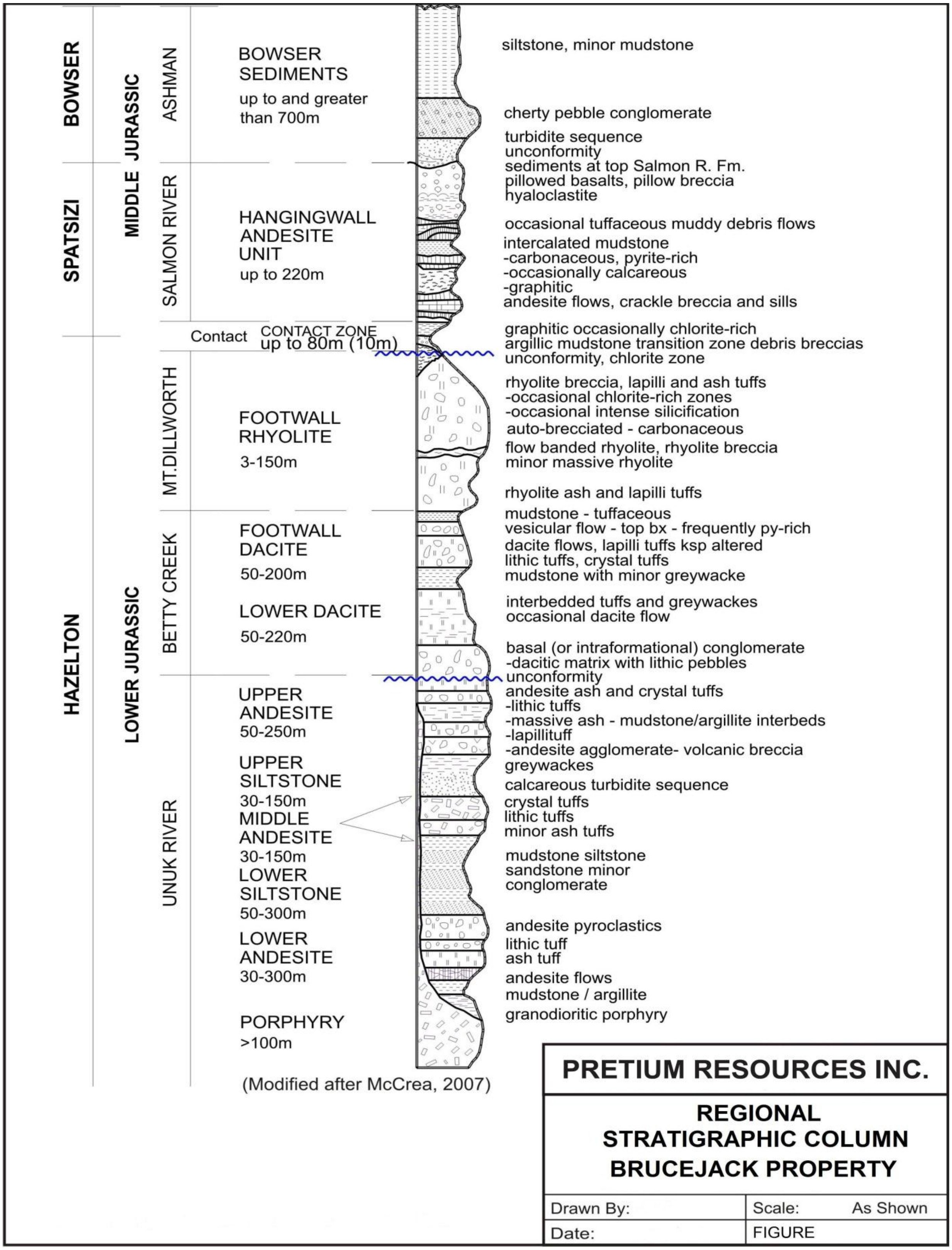
The regional stratigraphic assemblage as originally compiled by Kirkham (1963) and later modified by Britton and Alldrick (1988), Alldrick and Britton (1991), McCrea (2007) and Blanchflower (2008), is illustrated in Figure 6.2 and has been summarized in Table 6.1.

TABLE 6.1
SUMMARY OF REGIONAL STRATIGRAPHY – OLDEST TO YOUNGEST

Formation	Stage (Triassic – Jurassic)	Description
Lower Unuk River	Norian to Hettangian	Alternating siltstone and conglomerate
Upper Unuk River	Hettangian to Pliensbachian	Alternating intermediate volcanic rock and siltstone
Betty Creek	Pliensbachian to Toarcian	Alternating conglomerate, sandstone, intermediate and mafic volcanic rock
Mount Dilworth	Toarcian	Felsic pyroclastic rocks and flows, including tuffaceous rock ranging from dust tuff to tuff breccia and localized welded ash tuff
Salmon River & Bowser	Toarcian to Bajocian	Alternating siltstone and sandstone

Source: *after Blanchflower, 2008.*

Figure 6.2 Regional Stratigraphic Column



***Source:** after Blanchflower, 2008.*

Figure 6.3 Regional Geology Map – Simplified Geology and Location of the Iskut River Region

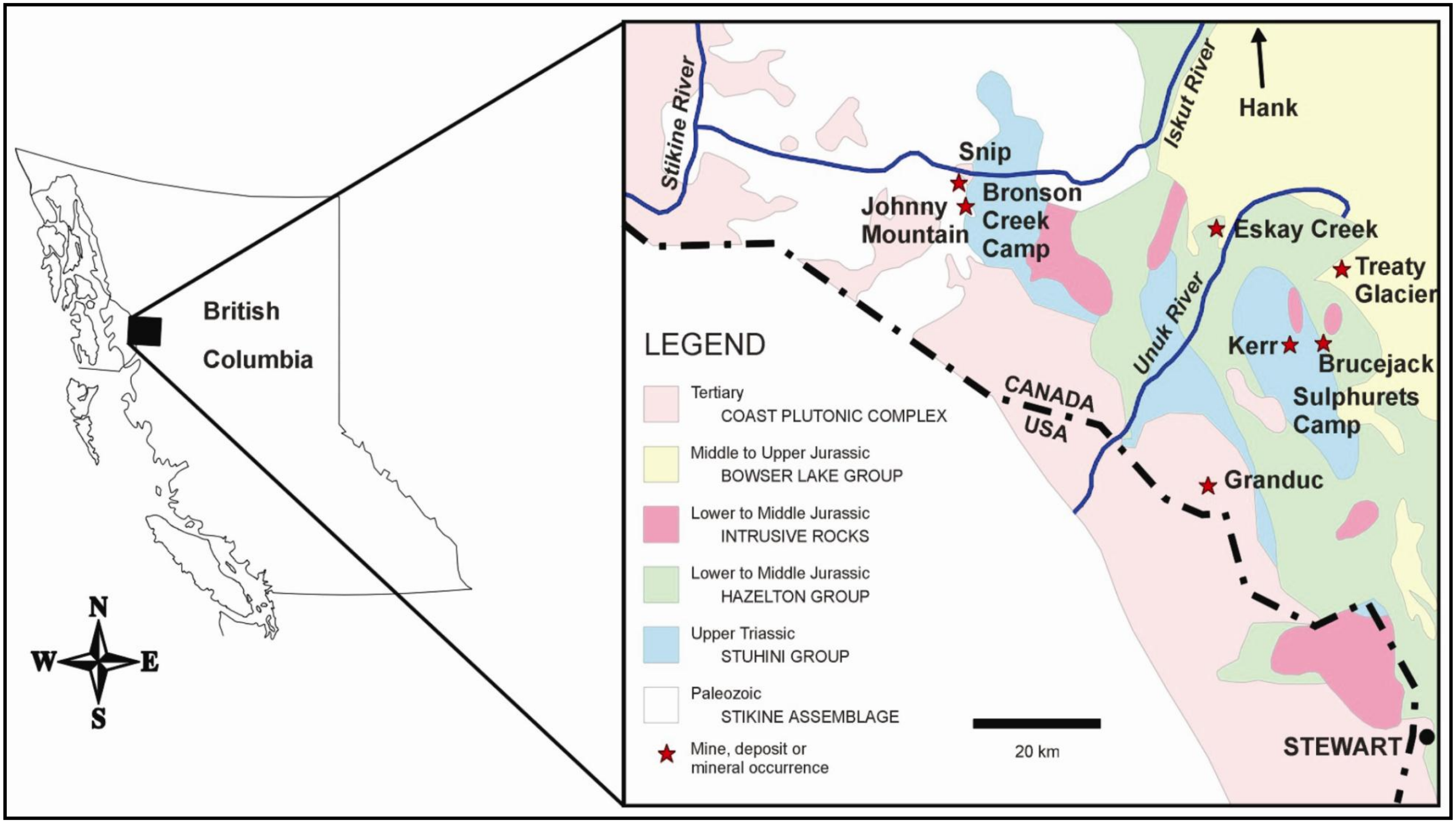
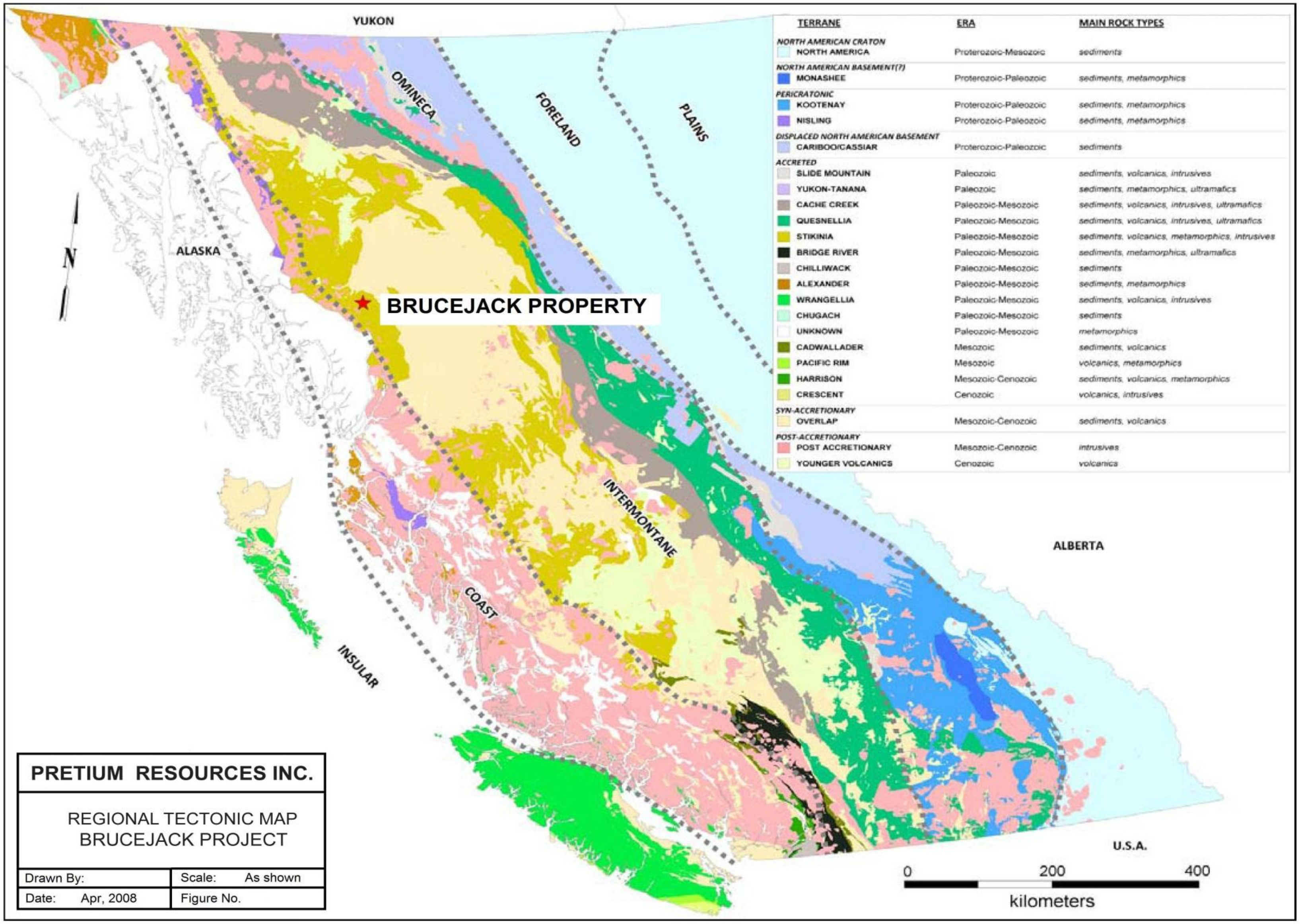


Figure 6.4 Regional Tectonic Map



6.2 GEOLOGY, STRUCTURE AND ALTERATION OF THE BRUCEJACK PROPERTY

The following description of the geology of the Brucejack Property was provided by Mr. Ron Burk, Chief Geologist of Silver Standard, in the form of an internal company report, dated December 9, 2009.

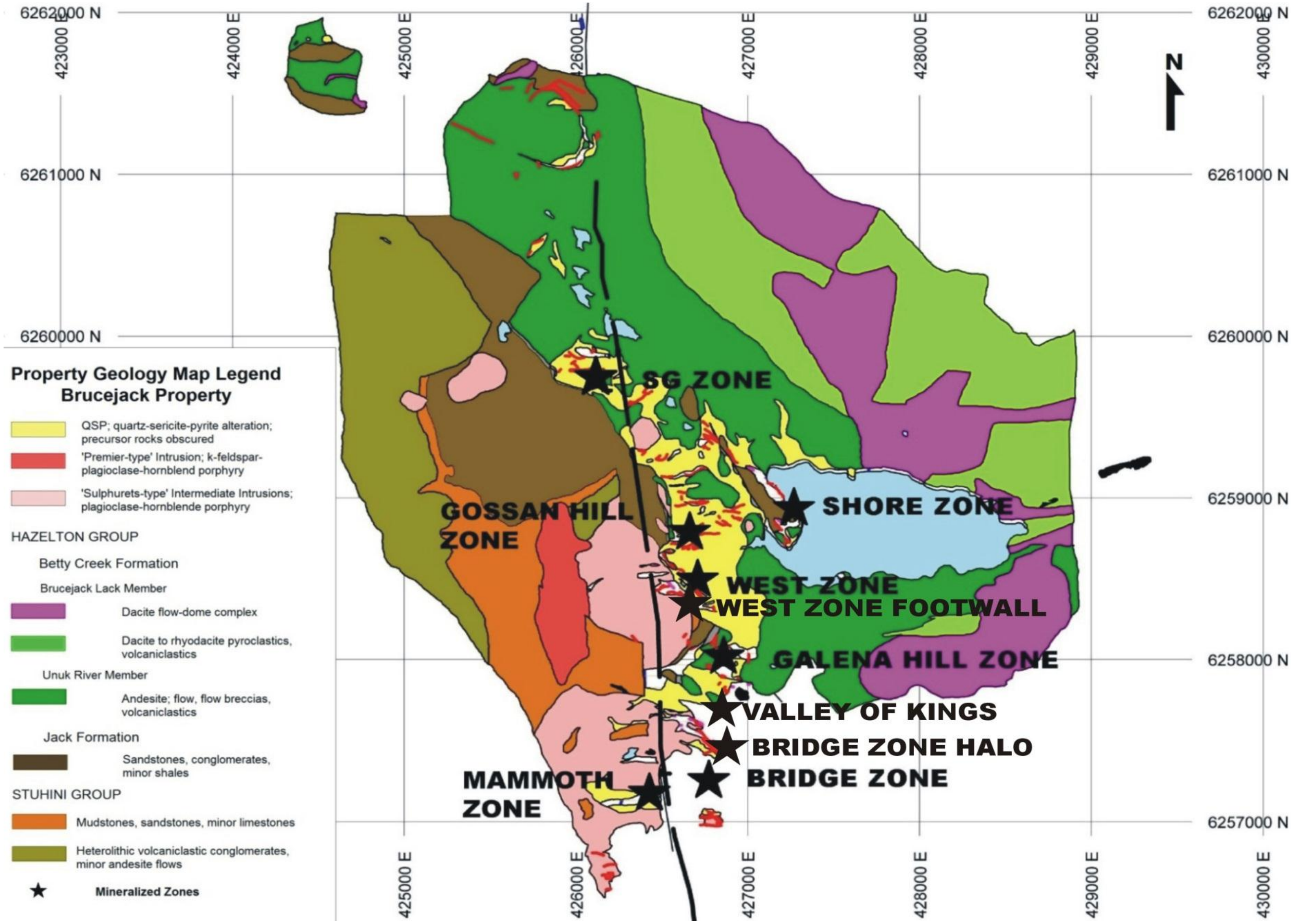
Published descriptions of the regional geology of the Sulphurets Creek-Brucejack Lake area have been presented by the Geological Survey of Canada (Henderson et al., 1992; Kirkham, 1991; Anderson, 1989), geologists working for the British Columbia government (Britten and Alldrick, 1988; Alldrick et al., 1987; Grove, 1986) and by the MDRU at the University of British Columbia (Lewis et al., 2001; Lewis, 2001). This body of work shows that the Brucejack property is underlain by Upper Triassic volcaniclastic and epiclastic sedimentary rocks of the Stuhini Group and Lower to Middle Jurassic volcanic, volcaniclastic, and sedimentary rocks of the Hazelton Group.

Since the Brucejack Property occurs within the eastern limb of the McTagg anticlinorium, the stratigraphic sequences recognized on the Snowfield and Brucejack Properties overall become younger to the east (Figure 6.5). The oldest rocks, found at lower elevations immediately east of the Sulphurets glacier, consist of heterolithic volcaniclastic conglomerate that is conformably overlain by a sequence of interbedded mudstone, sandstone, and thin limestone units of the Stuhini Group. An angular unconformity marks the contact between the Stuhini Group sedimentary rocks and medium- to coarse-grained sandstones of the Jack Formation, which is roughly the basal formation of the Hazelton Group and is dated at about 196 Ma.

Open folding and probable thrust faulting has also placed a wedge of Jack Formation sandstone and conglomerate at the western end of Brucejack Lake where these rocks are well exposed on a peninsula known as Windy Point. Using the revised Hazelton Group stratigraphy presented in MDRU's Special Publication Number 1 (Lewis et al., 2001), the Jack Formation sedimentary rocks are overlain by a 10 to 50 m-thick unit of mudstone/argillite and cherty argillite that belongs to the Unuk River Member of the Betty Creek Formation. This argillaceous unit is exposed along the southwest side of the West Zone deposit of shear-hosted, Au-Ag quartz veins and stockwork and has been traced southwards through the western part of the Galena Hill Au-Ag prospect.

Overlying the argillite unit is a greater than 500 m-thick package of hornblende and plagioclase-phyric andesitic flows, flow breccia and intermediate tuffaceous rock intercalated with volcaniclastic conglomerate, sandstone and siltstone. These rocks form the bulk of the Unuk River Member in the Brucejack Property and outcrop extensively within a northwest-trending belt that passes beneath Brucejack Lake.

Figure 6.5 Brucejack Property Geology Map Showing Simplified Geology and Mineralized Zones



The andesite of the Unuk River Member is the most important host rock to Au- and Ag-bearing quartz veins discovered in the Brucejack area and has been affected by widespread hydrothermal alteration, mainly quartz-sericite-pyrite (e.g. Gossan Hill, Galena Hill). U-Pb geochronology and biochronology done by MDRU geoscientists have determined the age of the Unuk River Member volcanics to be in the range of 196 to 194 Ma.

Still higher in the Hazelton Group stratigraphy is a thick sequence of mainly dacitic pyroclastic rocks (tuff-breccia, lapilli tuff, crystal-lithic tuff, minor ash tuff) and flows with thin argillite interbeds that are well exposed on the mountainside north of Brucejack Lake. Based on MDRU's studies and mapping, this predominantly felsic to intermediate volcanic package has been assigned to the Brucejack Lake Member of the Betty Creek Formation. (Prior to MDRU's project in the Iskut River region, these rocks were mapped as belonging to the Betty Creek Formation).

A possible vent area for the tuff and flows is a flow-dome complex identified just south of the east end of Brucejack Lake (Macdonald, 2001). Here, well developed subvertical flow-banding can be observed along with megacrystic flow-banded dacite, autobrecciated dacite and clast-supported blocky breccia with a hematitic mudstone matrix. Two U-Pb age dates have been obtained from flow-banded dacite and these show the flow-dome was emplaced 185.7 Ma. Several other U-Pb age dates obtained during the MDRU Iskut River Project for rocks assigned to the Brucejack Lake Member indicate that the episode of intermediate to felsic volcanism in the Hazelton Group spanned 8 to 10 million years.

Supracrustal rock units younger than the Brucejack Lake Member have not been reported from the Brucejack Property, although they could exist at the top of Mount John Walker on the north side of Brucejack Lake. In the area of the Eskay Creek Au-Ag mine, the youngest member of the Betty Creek Formation is the Treaty Creek Member which is a mixed sequence of sedimentary strata including sandstone, conglomerate, turbiditic siltstone, and limestone. More importantly, the high-grade exhalative Au-Ag sulphide-sulphosalt deposits are associated with or hosted by units belonging to the Salmon River Formation which directly overlies the Treaty Creek Member. To date, rhyolite flows and carbonaceous mudstone that characterize the Salmon River Formation have not been identified in the Brucejack Property but should be explored for at the highest elevations of Mount John Walker.

Apart from the high-level, synvolcanic intrusive dacite of the flow-dome complex mapped south-east of Brucejack Lake, there are three types of intrusions recognized on the Brucejack Property. The most common intrusive rock in the area consists of plagioclase- and hornblende-phyric to porphyritic rock of diorite to tonalite composition that forms two stocks found in the southern half of the claim group. Each intrusion has surface dimensions of roughly 700 m east-west by 700-1,000 m north-south. A number of smaller bodies of the same rock are scattered around these two main intrusions. These intrusions have been referred to as "Sulphurets-type" intrusions and are considered to be broadly coeval with the andesite volcanics of the Unuk River Member in the Hazelton Group.

A second type of intrusive rock forms an elongate body of about 700 m length, aligned north-south, that was emplaced along the western margin of one of the Sulphurets stocks. This intrusion is best described as potassium feldspar-plagioclase-hornblende porphyry and earlier workers have referred to it as a “two-feldspar” or “Premier-type” porphyry. Based on contact relationships, it would appear that this intrusion is younger than the Sulphurets-type intrusions. The youngest intrusive rocks observed consist of medium to dark green, fine-grained andesite to basaltic andesite dikes that are generally less than 2 m in thickness. These dikes tend to be north to northeast striking.

In terms of structural geology, the lithologies found at the Brucejack property display evidence of both ductile and brittle deformation. The oldest rocks, belonging to the Stuhini Group, are well exposed along the steep ravine of Brucejack Creek and are strongly folded with axial traces trending just west of north.

The overlying Jack Formation epiclastic units are less intensely folded, with an open syncline being the dominant fold to have affected these rocks. A second syncline defined by units of the Jack Formation lies further to the east, with its NNW-SSE axial trace passing through the West Zone Au-Ag deposit.

The Unuk River and Brucejack Lake Member lithologiesof the Hazelton Group predominate in the eastern half of the Brucejack Property and form a homoclinal rock package that dips moderately to steeply in an east to northeast direction. Penetrative fabrics are commonly developed in most lithologies. Rocks that appear to have experienced hydrothermal alteration prior to folding are generally the most intensely foliated. Shearing also appears to have occurred along structures that developed at relatively low angles to stratigraphic layering, with one example being the 140°-trending shear zone that hosts the mineralized quartz veins and stockworks of the West Zone deposit.

Post-dating the folds and the development of penetrative fabrics are numerous brittle-ductile faults with different strike orientations and variable displacements. These structures can be readily observed as lineaments in aerial photographs of the Property. One of the most prominent of these late structures is the northerly trending Brucejack Fault which bisects the two main Sulphurets-type intrusions and continues for kilometres to the north crossing the entire project area. Mapping of contact displacements suggests that right-lateral movement of about 150 m has occurred along this major structure; an unknown but probably minor amount of vertical displacement has likely also occurred. Other well-defined lineaments/faults tend to strike northwest or, as seen on the southern slope of Mount John Walker, have north-easterly alignments.

7.0 DEPOSIT TYPES

7.1 INTRODUCTION

While deposits such as Snowfield, Kerr, and Mitchell are probably best described as gold-enriched copper porphyry systems, most (if not all) of the mineralization on the Brucejack Property has been classified as an epithermal Au-Ag-Cu, low-sulphidation deposit (UBC deposit model No. H04). It is possible that some of the mineralization also displays characteristics of intrusion related vein systems that fall within the Intermediate-Sulphidation epithermal subtype of Hedenquist et al. (2000). Pretivm will also undertake work to determine if the mineralization may be mesothermal.

7.2 EPITHERMAL AU-AG-CU, LOW-SULPHIDATION DEPOSITS

A detailed description of epithermal mineralizing systems is provided by Taylor (2007) as his contribution to the most recent edition of the “Mineral Deposits of Canada”, Special Volume 5 published jointly by the Geological Association of Canada-Mineral Deposits Division and the Geological Survey of Canada. Much of the following material in this report section provides a brief overview of the subject that is synthesized from that publication.

Lindgren (1933) divided hydrothermal ore deposits, including those of gold and silver, into thermal types such as epithermal, mesothermal, and hypothermal. Lindgren fully recognized that his scheme also applied in a qualitative way to the depths in the Earth's crust at which various types of deposits form and it is this aspect of his classification scheme that has persisted to the present day. Thus, epithermal gold deposits are those for which there is evidence of a shallow crustal origin (less than 1 or 2 km), mesothermal deposits are those inferred to have formed at 1 to 3 km, and hypothermal deposits at 3 km to more than 5 km. The depth ranges implied for each of the three types are not firmly fixed but are guidelines that reflect variations in lithostatic pressure, fluid pressure, crustal temperature and metamorphic facies transitions, availability of meteoric fluids, and the vertical extent of brittle and ductile fields of deformation and seismicity (Poulsen, 1995).

Deep epithermal (or shallow mesothermal) veins ("transitional" deposits of Panteleyev, 1986) provide an example of the extended depth of formation currently included in the broad sense of epithermal. These transitional deposits are often referred to as intrusion-related vein deposits and occur in the Sulphurets, Mt. Washington, and Zeballos camps, all in British Columbia (Anon., 1992 BC MINFILE; Margolis, 1993).

The Brucejack and Snowfield Projects and surrounding properties in the Kerr-Sulphurets region host extensive mineralization and associated alteration systems that were undoubtedly developed as a result of hydrothermal activity focused on hypabyssal, Early Jurassic intermediate, porphyritic intrusions.

Among the Brucejack gold and silver deposits, the West Zone has received the most exploration work to-date and accordingly can be considered somewhat typical of the general style of mineralization displayed by the various mineralizing systems comprising the Brucejack Property.

Budinski et al. (2001) characterize the mineralization in the West Zone as a structurally controlled, complex vein/breccia system related to the Brucejack Fault lying to the immediate west. Like the other Brucejack Property deposits it is considered at this time to fit the epithermal high-grade, intermediate to low-sulphidation, Au-Ag model. Other examples in British Columbia include the Blackdome and Silbak-Premier Mines.

7.3 EPITHERMAL GENETIC MODEL

7.3.1 Introduction

Simplified Definition

Epithermal deposits of Au (±Ag) are a type of lode gold deposit that comprises veins and disseminations near the Earth's surface (≤1.5 km), in volcanic and volcaniclastic sedimentary rocks, sediment, and, in some cases, also in metamorphic rocks. The deposits may be found in association with hot springs and frequently occur at centres of young volcanism. The ores are dominated primarily by precious metals (Au, Ag) but some deposits may also contain variable amounts of base metals such as Cu, Pb, and Zn.

Epithermal Sub-systems

Epithermal Au deposits are distinguished on the basis of the sulphidation state of the sulphide mineralogy as belonging to one of three sub-types (Hedenquist et al., 2000):

- High sulphidation: previously called quartz-(kaolinite)-alunite, alunite-kaolinite, enargite-Au, or high-sulphur deposits (Ashley, 1982; Hedenquist, 1987; Bonham, 1988), these highly acidic deposits usually occur close to magmatic sources of heat and volatiles and form from acidic hydrothermal fluids containing magmatic S, C, and Cl.
- Intermediate sulphidation: some deposits with mostly low-sulphidation characteristics have sulphide ore mineral assemblages that represent a sulphidation state between that of high-sulphidation and low-sulphidation deposits. Such deposits tend to be more closely spatially associated with intrusions and Hedenquist et al. (2000) suggest the term "intermediate sulphidation" for these deposits.
- Low sulphidation: previously called adularia-sericite, these low-sulphidation subtype deposits are thought to have a near-neutral pH as a result of being dominated by meteoric waters but containing some magmatic C and S.

7.3.2 Epithermal Mineralization Characteristics

Lindgren (1922, 1933) suggested that degassing magmas are sources of many ore-forming constituents in epithermal Au deposits, and this supposition appears to be essentially correct for magmatic-hydrothermal high-sulphidation deposits (Stoffregen, 1987; Rye et al., 1992). However, for many deposits (e.g. the majority of low-sulphidation subtypes), O and H isotope data permit only a very small fraction (i.e. <10%) of the hydrothermal water to be of magmatic origin, despite the close association of some deposits with cooling magmatic rocks; whereas, C and S isotope studies indicate a significant magmatic contribution in many cases. Thus, a mineralizing fluid can have a complex origin, involving links to degassing magmas as well as the dominance of local recharge waters to fuel the hydrothermal system.

The two principal (end-member) geochemical environments of epithermal mineralization and alteration are determined largely by the dominance in each case of two different fluids. On the one hand, magmatic-hydrothermal environments that are dominated (buffered) by acidic, magmatic fluids produce high-sulphidation mineral assemblages characterized by base leaching of wall rocks leaving marked (residual) silica enrichment. This environment may overlie porphyry systems (Sillitoe and Bonham, 1984). On the other hand, near neutral, more reduced, meteoric-dominated waters containing Cl, H2S, and CO2, yield low-sulphidation (adularia/sericite) mineral assemblages through hydrolysis reactions involving feldspar in the wall rocks. The chemical state of these fluids becomes largely wall-rock buffered.

Sources of Gold

Two fundamentally different hypotheses regarding the source of Au in epithermal deposits are as follows:

- The metals are supplied directly by actively or passively degassing magma (e.g. Taylor, 1987 and 1988) that also provide heat to the paleo-hydrothermal system;
- The metals are leached from the rocks that host the geothermal system.

On the one hand, isotopic confirmation of the importance of meteoric waters has encouraged proponents of the second hypothesis. On the other hand, isotopic data also indicate that S and C are of magmatic origin in certain deposits. Alteration mineral assemblages are characteristic of two end-member chemical environments of alteration and mineralization:

- Low to very low pH, oxidized fluids (high-sulphidation subtype);
- Near neutral, more reduced fluids (low and intermediate-sulphidation subtypes).

Boiling and chemical fractionation of the hydrothermal fluid provides an explanation for the separation of precious and base metals. This separation results in a vertical zoning where fluids are upwardly flowing (Clark and Williams-Jones, 1990), or in relative temporal stages such as at Silbak-Premier, B.C., and EI Indio, Chile.

Geological, mineralogical, and geochemical features of epithermal Au deposits are listed for each of three deposit subtypes in Table 7.1.

7.3.3 Diagnostic Characteristics of Epithermal Subtypes

Grade and Tonnage Characteristics

The size and grade of the principal Canadian epithermal Au vein deposits and selected 'type' deposits elsewhere in the world are shown in Figure 7.1. The estimated sizes give an order of magnitude basis for comparison; definition of size depends on cut-off grades and economics.

Canadian epithermal Au deposits are comparable in size and grade to many global deposits (Taylor, 2007) although the largest epithermal deposits (in tonnes of ore) and the richest deposits (in g/t) are found outside of Canada.

In the Sulphurets district in British Columbia, epithermal mineralization tends to comprise disseminated Au in silicified and/or finely veined rocks. Grades are typically lower, but tonnages larger, than in other more typical vein-type epithermal deposits.

TABLE 7.1
SUMMARY OF GEOLOGICAL SETTING, DEFINITIVE CHARACTERISTICS AND EXAMPLES OF TYPICAL EPITHERMAL AU DEPOSIT SUBTYPES
(AFTER TAYLOR, 2007)

	HIGH-SULPHIDATION subtype	LOW-SULPHIDATION subtype	
	Hosted in volcanic rocks	**Hosted in volcanic and plutonic rocks**	**Hosted in sedimentary and mixed host rocks**
Geological setting	volcanic terrane, often in caldera-filling volcaniclastic rocks; hot spring deposits and acid lakes may be associated	Spatially related to instrusive centre; veins in major faults, locally ring fracture type faults; hot springs may be present	In calcareous to clastic sedimentary rocks; may be at depth by magma; can form at variety of depths
Ore mineralogy	native gold, electrum, tellurides; magmatic-hydrothermal: (+bn), en, tennantite, cv, sp, gn; Cu typically > Zn, Pb; Au-stage may be distinct, base-metal poor; steam-heated: base-metal poor; gangue: quartz (vuggy silica), barite	electrum (lower Au/Ag with depth), gold; sulphides include: sp, gn, cpy, ss); sulphosalts; gangue: quartz, adularia, calcite, chlorite; ± barite, anhydrite in deeper deposits variable metal content, high sulphide veins closer to intrusions	gold (micrometre): within or on sulphides (e.g. pyrite unoxidized ore), native (in oxidized ore), electrum, Hg-Sb-sulphides, pyrite, minor base metals; gangue: quartz, calcite
Alteration mineralogy	advanced argillic + alunite, kaolintie, pyrophyllite (deeper); ± sericite (illite); adularia, carbonate absent; chlorite and Mn-minerals rare; no selenides; barite with Au; steam-heated: vertical zoning	sericitic replaces argillic facies (adularia ± sericite ± kaolinite); Fe-chlorite, Mn-minerals, selenides present; carbonate and/or rhodochrosite) may be abundant, lamellar if boiling occurred; quartz-kaolinite-alunite-subtype minerals possible steam-heated zone; clays	silicification, decalcification, sericitization, sulphidation; alteration zones may be controlled by stratigraphic permeability rather than by faults and fractures; quartz (may be chalcedonic)-sericite (illite)-montmorillonite
Host rocks	silicic to intermediate (andesite)	intermediate to silicic intrusive/extrusive rocks	felsic intrusions; most sedimentary rocks except massive carbonates (hosts to mantos and skarns)
$^{18}O/^{16}O$ - shift in wall rocks	may be less pronounced, or superposed on earlier high-^{18}O alteration	moderate to large; pronounced in and immediately adjacent to veins	very limited ^{18}O-shift of altered rocks, if present at all
C-H-S isotopes	magmatic fluids indicated ($\delta^{13}C_{CO_2} \cong -5\pm2$; $\delta D_{H_2O} \cong -35\pm10$; $\delta^{18}O_{H_2O} \cong +7\pm2$; $\delta^{34}S_{\Sigma S} \cong 0$); magmatic-hydrothermal alunite $\delta^{34}S$>sulphide minerals; $\delta D \cong -35\pm10$; steam-heated alunite $\delta^{34}S \cong$ sulphides, $\delta^{18}O$ data indicate hydrothermal origin	magmatic water (H_2O) may be obscured by mixing; surface waters dominate; C, S typically indicate a magmatic source, but mixtures with wall rock derived C, S possible	hydrogen isotope data (sericite, clays, fluid inclusions) in some cases indicate presence of evolved surface waters; organic carbon ($\delta^{13}C \cong -26\pm2$) may be derived from wall rocks
Ore fluids (examples from fluid inclusion studies)	160-240°C; ≤1 wt.% NaCl (late fluids); possibly to 30 wt.% NaCl in early fluids; boiling common; (Nansatsu district, Japan; Hedenquist et al., 1994)	sulphide-poor: 180-31°C, ≤1 wt.% NaCl, about 1.0 molal CO_2 (Mt. Skukum: McDonald, 1987) sulphide-rich: ave. 25°C, <1 to 4 wt.% NaCl (Silbak-Premier: McDonald, 1990)	bimodal: 150-160 (most); 270-280°C, ≤15 wt.% NaCl; nonboiling: (Cinola: Shen et al., 1982); 230-250°C, ≤1 wt.% NaCl; nonboiling (Dusty Mac: Zhang et al., 1989)
Age of mineralization and host rocks	host rocks and mineralization of similar age	mineralization variably younger (>1 Ma) than host rocks	mineralization variably younger (>1 Ma) than host rocks
Deposit size	small areal extent (e.g. 1 km^2) and size (e.g. 2500-3500 kg Au)	may occur over large area (e.g. several tens of km^2); may be large (e.g. 100 000 kg Au).	may have large areal extent (e.g. >>1 km^2), large size (e.g. 58 000 kg Au), low grades (e.g. 2.5 g/t)
Examples Canadian	Equity Silver, B.C.; Mt. Skukum, Yukon (only: alunite 'cap') AI deposit, Toodoggone River, B.C.	Blackdome, B.C.; Mt. Skukum, Yukon (Cirque vein) Silbak-Premier, B.C. (intermediate sulphidation)	Cinola, B.C.
Foreign	Summitville, Colorado Kasuga, Japan	Creede, Colorado (intermediate sulphidation)	Hishikari, Japan
Modern analogues:	Matsukawa, Japan[2]	Broadlands, New Zealand[3]	Salton Sea geothermal field, California[4]

1) based, in part, on Heald et al., 1987; Taylor, 1987; Berger and Henley, 1989; Panteleyev, 1991; Rye et al., 1992; Sillitoe, 1993; Hedenquist et al., 2000; Izawa et al. 1990, 1993; and data reported for Canadaian deposits and other examples cited in the text; 2) Nakamura et al., 1970; 3) Browne in Henley and Hedenquist, 1986; 4) Williams and McKibben, 1989, but analogy not complete.
Abbreviations: bn = bornite; cpy = chalcopyrite; cv = covellite; en = enargite; gn = galena; py = pyrite; sp = sphalerite; ss = sulphosalts.

Physical Characteristics

The mineralogy, textural features, host rocks, morphology, and selected chemical properties found typically in epithermal Au deposits are summarized in this section and shown in Table 7.1 (Taylor, 2007).

Mineralogy

Quartz is the predominant gangue mineral in all epithermal Au deposits, whereas distinctive ore and gangue minerals characterize high-sulphidation and low- sulphidation deposit subtypes. Mineralogical zoning around veins or replacement zones may be present in both subtypes, recording chemical and/or thermal gradients.

Low-Sulphidation

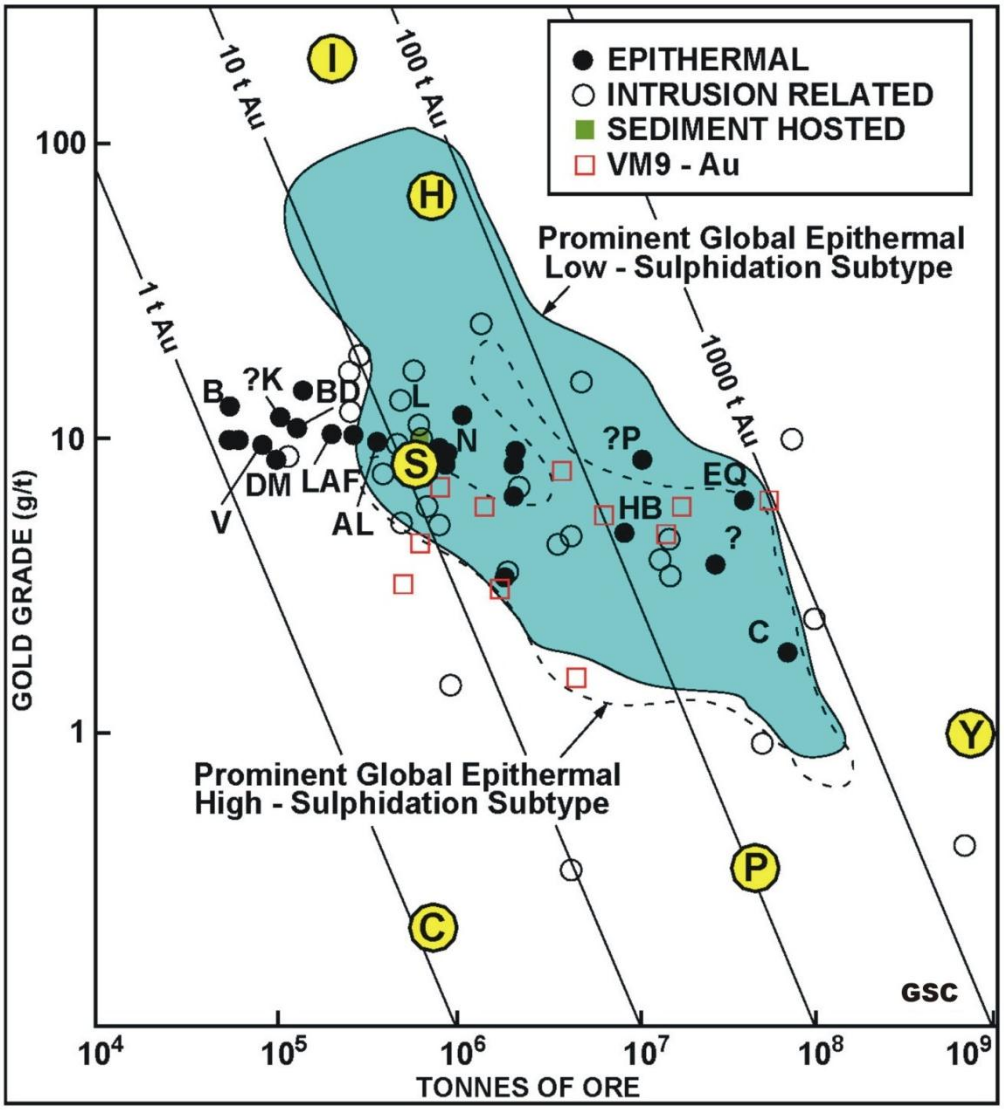
Native Au and electrum occur in low-sulphidation subtype vein deposits that often contain only a few percent or less of sulphides (usually pyrite; e.g. Blackdome, B.C.). In deposits in which sulphide minerals are abundant (e.g. Venus; Silbak-Premier: sulphide-rich stage), sulphides commonly include chalcopyrite, tetrahedrite, galena, sphalerite, and arsenopyrite in addition to pyrite. The principal gangue minerals include calcite, chlorite, adularia, barite, rhodochrosite, fluorite, and sericite.

In sediment-hosted low-sulphidation deposits, the characteristic assemblage of gangue minerals commonly includes cinnabar, orpiment-realgar, and stibnite, in addition to jasperoid, quartz, dolomite, and calcite. Chalcedonic quartz veins and jasperoid are typically associated with ore, whereas calcite veins are often more common further from ore, or are paragenetically late.

High Sulphidation

In high-sulphidation subtype deposits, native Au and electrum are typically associated with pyrite, enargite, covellite, bornite and chalcocite. In addition to sulphosalts and base metal sulphides, tellurides and bismuthinite are present in some deposits. Total sulphide contents are generally higher in high-sulphidation than low-sulphidation subtype deposits but high sulphide contents may also characterize transitional polymetallic low-sulphidation deposits (e.g. Silbak Premier, B.C.). Where base metals are present in high-sulphidation deposits, the Cu abundance can vary significantly (Sillitoe, 1993) and typically dominate that of Zn. Principal gangue minerals include quartz (“vuggy silica”), alunite, barite (especially associated with Au). Calcite is not characteristic of high-sulphidation subtype deposits due to the high acidity of the hydrothermal fluids.

Figure 7.1 Plot of Au Grade (g/t) vs. Tonnage (Economic, or Reserves + Production) for Selected Canadian Epithermal Au Deposits & Prominent Examples Worldwide (after Taylor, 2007)



Notes:

(1) Canadian epithermal deposits (filled circles) include: Al = Al, B = Baker, BD = Blackdome, C = Cinola, DM = Dusty Mac, EQ = Equity Silver, L = Lawyers, LAF = Laforma, N = Mt. Nansen, SK = Mt. Skukum, SP = Silbak Premier, S = Sulphurets, and V = Venus.

(2) Hydrothermal vein deposits of a possible 'transitional' or 'deep epithermal' deposits are represented by open circles, sediment-hosted deposits by a green square with cross, and Au-bearing VMS deposits (marine epithermal) by open red squares.

(3)The median grades and tonnages for several comparable types of deposits (yellow-filled circles) from Cox and Singer (1986) include porphyry Cu-Au (P), low-sulphidation Creede-type (C), and high-sulphidation: Summitville deposit (S); and Lawyers deposit, Toodoggone River district, BC (L) [similar to the 'Comstock-type', Nevada (no symbol) of Cox and Singer, 1986].

(4)Median values for the low-sulphidation Hishikari, Japan vein deposit [H], and for the high-sulphidation El Indio, Chile, deposit [I] are from Hedenquist et al. (2000).

(5)Fields for prominent low-sulphidation (blue shading) and high-sulphidation (dashed line) epithermal Au deposits worldwide (global) are based on data in Hedenquist et al. (1996, 2000).

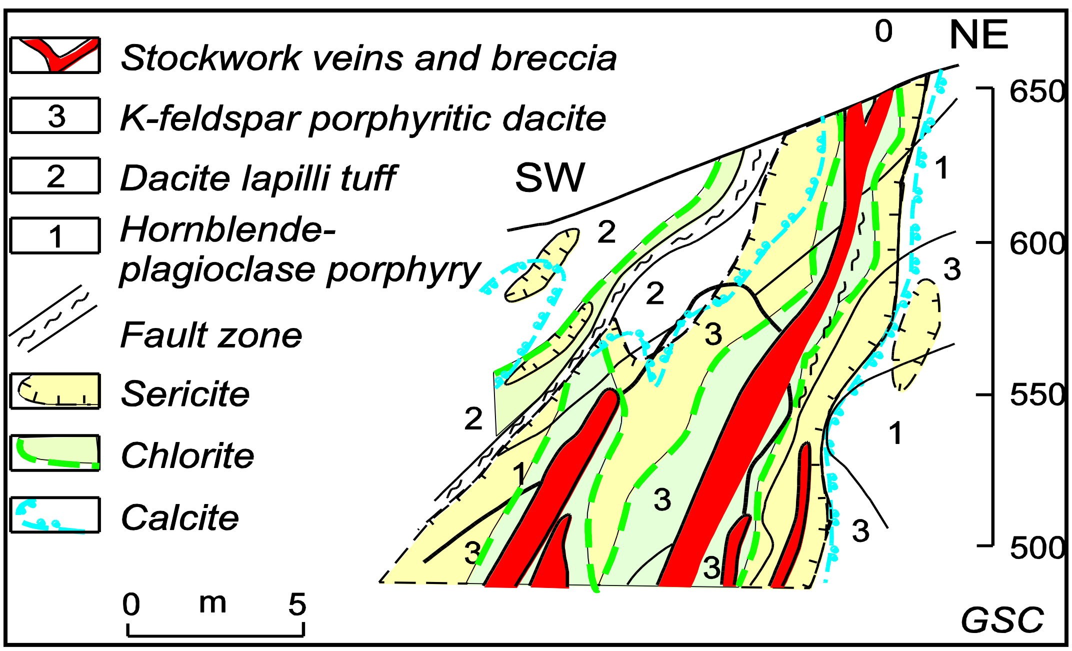
System Dimensions

High-sulphidation deposits of magmatic hydrothermal origin are typically of smaller dimension than low-sulphidation subtype deposits, and are found in close proximity to and often topographically above, a related source of magmatic heat and volatiles.

Low-sulphidation subtype deposits in most cases cover larger areas than typical high-sulphidation deposits, even though alteration mineral assemblages are restricted to generally narrow zones enclosing veins and breccias. At the Blackdome Mine, B.C., quartz veins are contained within an area approximately 2 km by 5 km. Veins and breccia zones as wide as 40 m and as long as 1,200 m comprise the Main Zone of the Silbak-Premier deposit (Figure 7.2) (McDonald, 1990).

Figure 7.2 is a cross-section through a portion of the Silbak-Premier deposit (intermediate sulphidation; after McDonald, 1990), which illustrates hydrothermal propylitic, sericitic, and potassic alteration mineral assemblages in relation to fault-controlled vein stockwork and breccia, and to porphyritic dacite.

Figure 7.2 Geological Cross-section of a Representative Canadian Epithermal Deposit Illustrating Alteration Mineral Zoning and Selected Features



Morphology

The morphology of epithermal vein-style deposits can be quite variable. Deposits may consist of roughly tabular lodes controlled by the geometry of the principal faults they occupy (e.g. Cirque vein, Mt. Skukum), or comprise a host of interrelated fracture fillings in stockwork, breccia, lesser fractures, or, when formed by replacement of rock or void space, they may take on the morphology of the lithologic unit or body of porous rock (e.g. irregular breccia pipes and lenses) replaced.

Brecciation of previously emplaced veins (e.g. Mt. Skukum, Yukon) can form permeable zones along irregularities in fault planes: vertically plunging ore zones in faults with strike-slip motion and horizontal ore zones in dip-slip faults. Topographic (i.e. paleosurface) control of boiling by hydrostatic pressure can also result in horizontal or sub-horizontal mineralized zones, limiting the vertical distribution of ore.

Host Rocks

Nearly any rock type, even metamorphic rocks, may host epithermal Au deposits, although volcanic, volcaniclastic and sedimentary rocks tend to be more common. Typically, epithermal deposits are younger than their enclosing rocks, except in the cases where deposits form in active volcanic settings and hot springs. Here, the host rocks and epithermal deposits can be essentially synchronous with spatially associated intrusive or extrusive rocks, within the uncertainty of the determined ages in some cases.

Chemical Characteristics

Ore Chemistry

Gold:silver ratios of epithermal Au deposits may vary widely both between and within deposits ranging from lows of around 0.5 for the high-sulphidation type deposit as typified by the Kasuga deposit in Japan (Hedenquist et al., 1994) to >500 in the Cerro Rico de Potosi deposit in Peru (Erickson and Cunningham, 1993). Differing magmatic metal budgets (Sillitoe, 1993) and depths of formation (Hayba et al., 1985) have been suggested to influence this ratio.

Typically, Ag:Au ratios for epithermal deposits, though variable, tend to be higher in low-sulphidation subtype deposits than in high-sulphidation subtype deposits. The deep epithermal (mesothermal) Equity Silver deposit in B.C. (e.g. Cyr et al., 1984; Wojdak and Sinclair, 1984) has the highest Ag:Au ratio (approximately 128) among Canadian epithermal deposits.

Alteration Mineralogy and Chemistry

Hydrothermal alteration mineral assemblages are commonly regularly zoned about vein or breccia-filled fluid conduits in both high and low-sulphidation deposit subtypes. Characteristic alteration mineral assemblages in both deposit subtypes can give way to propylitically altered rocks containing quartz + chlorite + albite + carbonate - sericite, epidote, and pyrite. The distribution and formation of the earlier formed propylitic mineral assemblages generally bears no obvious direct relationship to ore-related alteration mineral assemblages.

Altered rocks in low-sulphidation deposits generally comprise two mineralogical zones:

- An inner zone of silicification (replacement of wall rocks by quartz or chalcedonic silica);

- An outer zone of potassic-sericitic (phyllic) alteration [adularia is the typical K-feldspar but its prominence varies greatly and it may be absent altogether; argillic alteration (kaolinite and smectite) occurs still farther from the vein].

Silicified rocks are common in epithermal deposits, as is quartz gangue in veins. The silicified and decarbonatized host rocks that characterize Carlin type Au deposits in Nevada (e.g. Bagby and Berger, 1986) was apparently controlled by available primary permeability of bedding planes or rock fabric. Secondary permeability can also be produced by physical and chemical processes involving the hydrothermal fluids themselves. The sudden release of pressure on hydrothermal fluid (e.g. by faulting) can cause brecciation, creating pore space permeability. Dissolution of carbonate upon reaction between hydrothermal fluids and wall rocks also can produce secondary permeability.

Advanced argillic alteration mineral assemblages that characterize high-sulphidation deposits include quartz + kaolinite + alunite + dickite + pyrite in and adjacent to veins or zones of replacement in the magmatic-hydrothermal environment. Pyrophyllite occurs in place of kaolinite at the higher temperatures and pressures of deeper deposits. These alteration minerals indicate a very low pH hydrothermal environment of high oxidation state. Zones of silica replacement and 'vuggy silica' are characteristic, and carbonates are absent. Topaz and tourmaline in high-temperature zones indicate the presence of F and B in the acidic hydrothermal fluids.

Acid-sulphate (high-sulphidation) type alteration fluids form by the dissolution of large amounts of magmatic SO2 in high-temperature hydrothermal systems, and also by reaction of host rocks with steam-heated meteoric waters acidified by oxidation of H2S (probably of magmatic origin: e.g. Rye et al., 1992; Bethke et al., 2005), or by dissolution of CO2. Lower acidity, highly saline fluids are thought responsible for intermediate sulphidation deposits typically rich in base metal and Fe sulphide minerals (Hedenquist et al., 2000).

Fluids attributed to low-sulphidation hydrothermal systems are typically less saline than those in high-sulphidation systems, although fluids of two different salinities are also common. The primary fluids in low-sulphidation subtype deposits are commonly inferred to have largely evolved from meteoric rather than magmatic water, or comprise some mixture of the two (e.g. Hishikari, Japan: Faure et al., 2002).

The hydrothermal fluids responsible for alteration and mineralization largely represent altered or 'evolved' meteoric waters whose isotopic compositions have been shifted to higher 18O/16O and D/H (deuterium-to-hydrogen) ratios than those of pure local meteoric waters (compare with present day meteoric water). Such isotopic alteration or evolution of the fluids occurs during chemical, isotopic, and mineralogical hydrothermal alteration of the host rocks.

Margolis (1993) inferred progressive mixing of magmatic water and seawater during potassic, sericitic, and advanced argillic alteration at Sulphurets, B.C., on the basis of isotopic data and water-rock reaction modeling.

Fluid inclusions typically have been shown to contain predominantly fluids of low salinity and have filling temperatures of 150°C to 300°C, with maxima in the range of approximately 260°C to 280°C. Vapour-dominated systems at or near a boiling water table tend to evolve toward a rather uniform temperature of about 240°C due to the limitation imposed by a maximum in the enthalpy of steam + liquid (e.g. White et al., 1971).

Some deep epithermal (transitional) environments close to genetically related intrusions are characterized by higher temperatures, salinities, and CO2 contents (e.g. Baker, 2002).

7.4 SUMMARY – EPITHERMAL MINERALIZING SYSTEMS

The geological settings of low, intermediate and high-sulphidation subtype epithermal deposits are illustrated schematically in Figure 7.3.

The locations of epithermal Au deposits are typically determined by those features that define the hydrothermal system "plumbing". Extensional faults are especially important, whether due to local, volcanic-related features or to regional tectonism (e.g. rifting zones, or pull-apart basins associated with strike-slip faults). Fault intersections and fault plane inflections provide zones for vein thickening and zones of brecciation during synchronous movement and vein growth.

7.4.1 High-Sulphidation Epithermal Deposit Characteristics

High-sulphidation deposits are typically associated with andesitic to rhyolitic rocks and with geologic features associated with sites of active volcanic venting and doming, including among others ring fractures, caldera fill breccias, hot springs, and acidic crater lakes. It is the dominance of directly derived or evolved magmatic fluids that buffer the hydrothermal fluids to low pH and result in the distinct character of the high-sulphidation subtype. Orebodies primarily consist of zones of silica-rich replacement. Bodies of massive 'vuggy silica' and marked advanced argillic alteration mineral assemblages are typical.

7.4.2 Low-Sulphidation Epithermal Deposit Characteristics

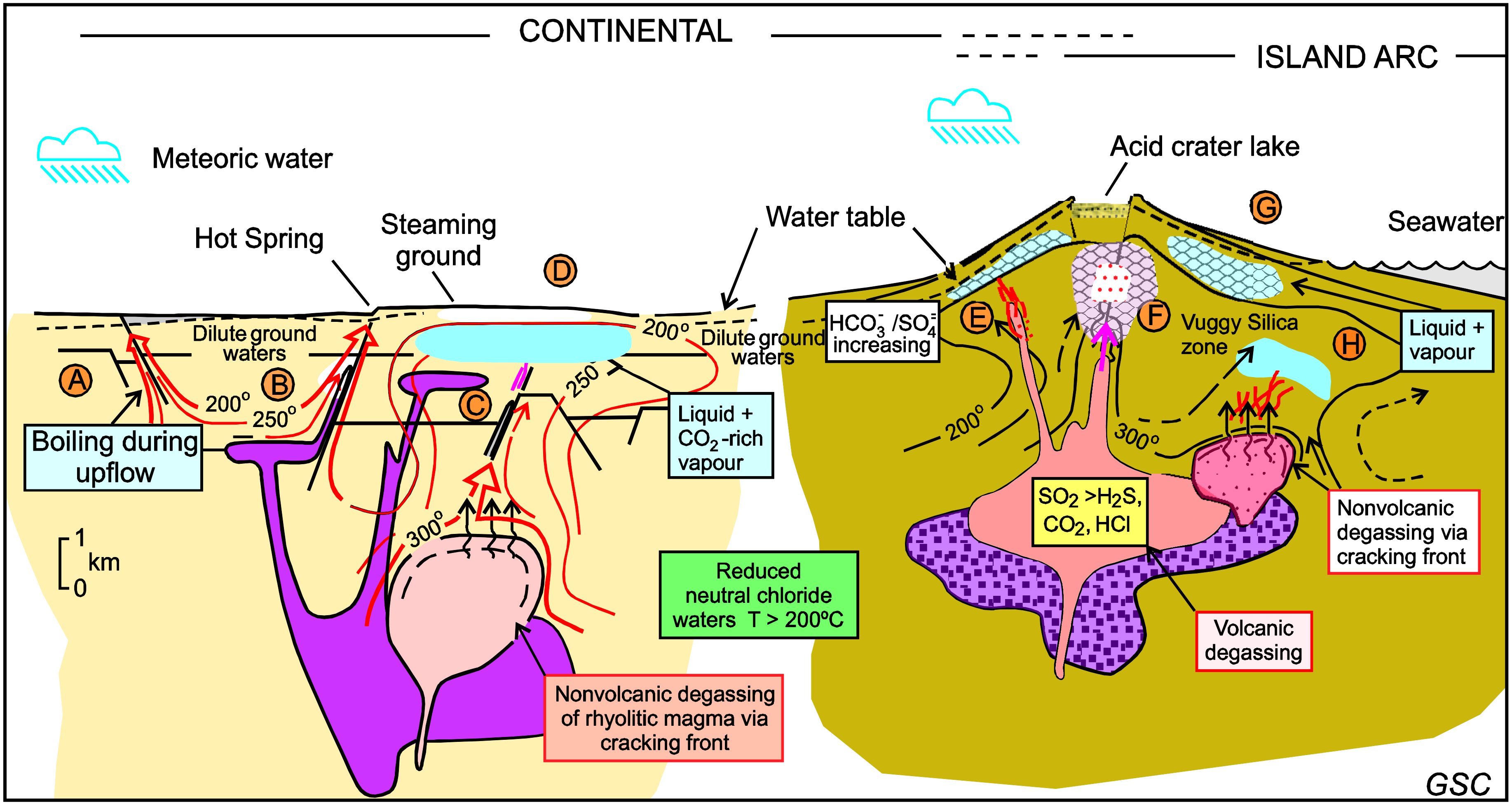
Low-sulphidation deposits that occur further removed from active magmatic vents may be more apparently controlled by structural components, zones of fluid mixing, and emplacement of smaller magmatic bodies (e.g. dykes). Meteoric waters dominate the hydrothermal systems, which are more nearly pH neutral in character. Low-sulphidation related geothermal systems are more closely linked to passive rather than to active magmatic degassing (if at all), and sustained by the energy provided by cooling, sub-volcanic intrusions or deeper sub-volcanic magma chambers.

7.4.3 Transitional-Sulphidation Epithermal Deposit Characteristics

Some deposits with mostly low-sulphidation characteristics with respect to their alteration mineral assemblages have sulphide ore mineral assemblages that represent a sulphidation state between that of high-sulphidation and low-sulphidation deposits. Such deposits tend to be more closely spatially associated with intrusions, and Hedenquist et al. (2000) suggest the term 'intermediate sulphidation' for these deposits.

The various Brucejack Property mineralized zones that are the subjects of the current report, are considered similar to the Silbak-Premier Mine which, as shown in Figure 7.3, is classified as a transitional to low sulphidation epithermal deposit.

Figure 7.3 Schematic Cross-section – General Geological & Hydrological Settings of Quartz-(Kaolinite)-Alunite & Adularia-Sericite Deposits (Note: from Taylor, 1996; partially adapted from Henley and Ellis, 1983, and Rye et al., 1992)



Characteristics shown in Figure 7.3 evolve with time; all features illustrated are not implied to be synchronous.

Local environments and examples of low-sulphidation deposits, as illustrated in Figure 7.3, include:

- (A) basin margin faults; Dusty Mac
- (B) disseminated ore in sedimentary rocks; Cinola
- (C) veins in degassing, CO_2-rich, low sulphide content, low-sulphidation systems; Blackdome, Mt. Skukum
- (E) porphyry-associated vein-stockwork, sulphide-rich (intermediate sulphidation) and sulphide-poor stages; Silbak-Premier
- (H) disseminated replacement associated with porphyry-type and stockwork deposits, involving seawater; Sulphurets.

Examples of high-sulphidation environments, as illustrated in Figure 7.3, include:

- (D and G) steam-heated advanced argillic alteration (quartz-kaolinite-alunite) zone; Toodoggone River district, B.C.
- (F) magmatic-hydrothermal, high-sulphidation vuggy quartz zone (± aluminosilicates, corundum, alunite); Summitville, Colorado, or Nansatsu district, Japan.

The following notes also apply to Figure 7.3:

- Fluid flow parallels isotherms. Up-flow zones are shown schematically by arrowhead-shaped isotherms.
- Volcanic degassing refers to magmatic degassing driven by depressurization during emplacement (‘first boiling’).
- Non-volcanic degassing refers to vapour exsolution during crystallization (‘second boiling’).
- The SO_2 disproportionates to H_2S and H_2S04 during ascent beneath environment (F).
- Note that free circulation occurs only in crust above about 400°C.
- All temperatures are shown in degrees Celsius.

8.0 MINERALIZATION

8.1 INTRODUCTION

There are more than 70 documented mineral occurrences and showings in the Sulphurets area. Copper, molybdenum, gold and silver mineralization found within gossans have affinities to both porphyry and mesothermal to epithermal types of vein deposits. Most mineral deposits occur in the upper members of Unuk River Formation or the lower members of the Betty Creek Formation (Britton and Alldrick, 1988).

Early Jurassic sub-volcanic intrusive complexes are common in the Stikinia terrane, and several host well-known precious and base metal rich hydrothermal systems. These include copper-gold porphyry deposits such as Galore Creek, Red Chris, Kemess, Mt. Milligan, and KSM. In addition, there are a number of related polymetallic deposits including skarns at Premier, epithermal veins and subaqueous vein and replacement sulphide deposits at Eskay Creek, Snip, Brucejack, and Granduc (Savell, 2008).

Within the Kerr-Sulphurets area, two basic styles of mineralization have been documented:

- Porphyry-typegold mineralization associated with fine grained syenite to syenodiorite intrusive rocks, intrusive breccias and pyritization;
- Silver-gold-base metal epithermal veins occurring within or adjacent to fine grained syenodiorite intrusions and associated with large areas of intense sericite, quartz, pyrite alteration; these structurally controlled veins may or may not have significant sulphide contents.

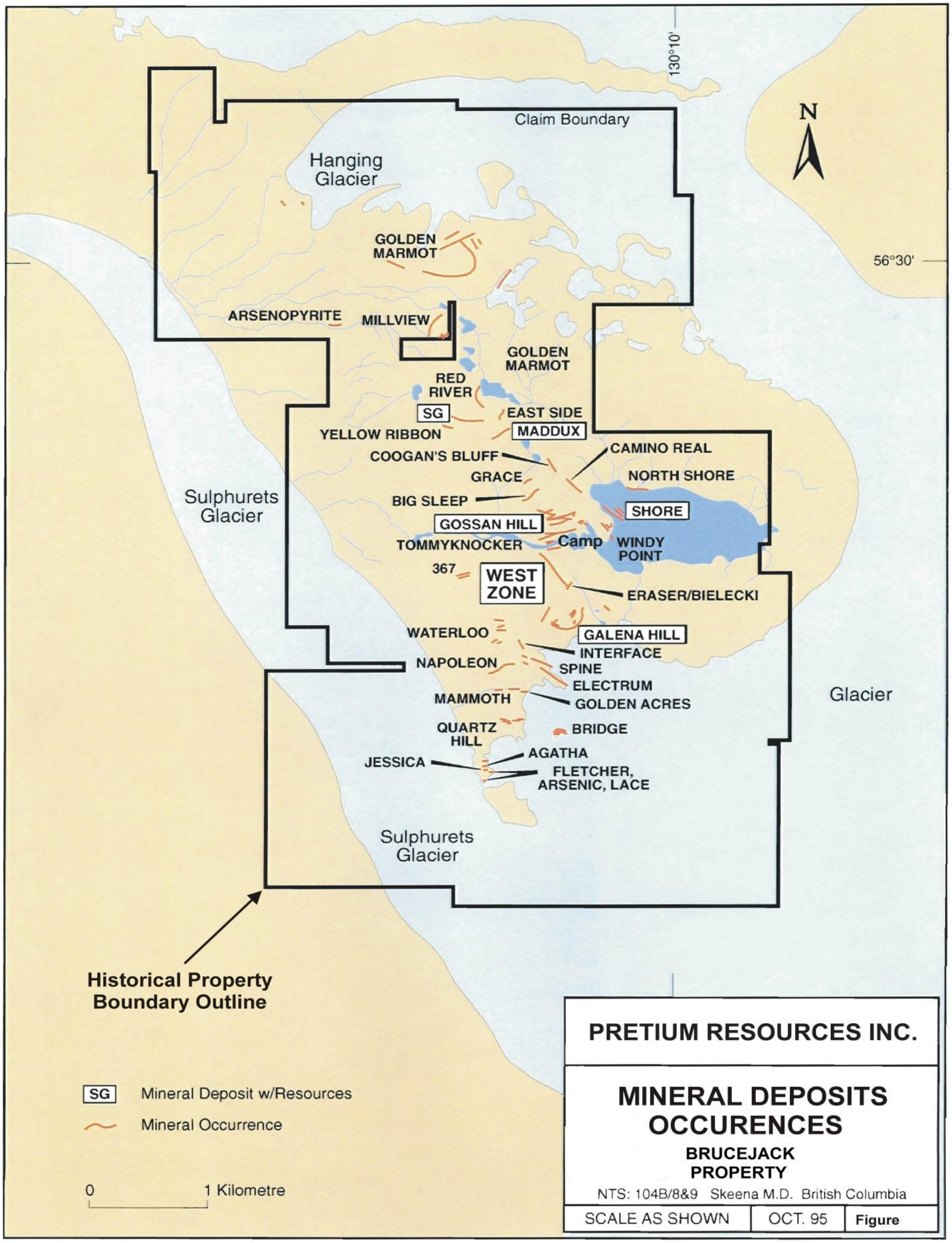
The Brucejack area is dominated by structurally controlled silver-gold-base metal bearing epithermal veins as described by Alldrick and Britton (1991).

8.2 GENERAL BRUCEJACK PROPERTY MINERALIZATION

The Brucejack area has been the focus of periodic exploration over the past several decades resulting in the discovery of at least 40 gossanous zones of gold, silver, copper and molybdenum–bearing quartz/carbonate veining, stockwork and breccia hosted mineralization (Figure 8.1). Typically, these gossanous showings reflect the weathering of disseminated pyrite in argillic and phyllic alteration zones. The size of these gossans, their tectonic fabric, intensity of alteration and metallogenesis make them attractive exploration targets (Alldrick and Britton, 1991) and most have been extensively sampled and/or drill tested.

The mineralization on the Brucejack Property typically consists of structurally controlled, intrusive related quartz-carbonate, gold-silver bearing veins, stockwork and breccia zones. The veins are hosted within a broad zone of potassium feldspar alteration, overprinted by sericite-quartz-pyrite ± clay. Structural style and alteration geochemistry indicate the deposits were formed in a near surface epithermal style environment.

Figure 8.1 Historical Map with Mineral Deposits and Occurrences (Note: modified after Budinski, 1995)



Mineralization was likely a three-stage process as envisioned by Lewis (1994) in the summary below:

- Stage 1 is interpreted as an initial episode of fault-development and ground preparation. Pre-cursor structures to the West, Shore, and Valley of Kings Zones likely formed at this time, as steep northwest trending normal faults with limited displacement, cutting all rock types.
- Stage 2 involved development of syntectonic mineralization and alteration. Massive and stockwork vein systems were emplaced within an east-west compressional stress field. The main vein orientations resulting from this stress are:

  - (i) East-west dilational veins;
  - (ii) North-west trending veins localized along pre-existing structures such as the West, Shore, Bridge and Valley of Kings Zones.

  - Underground mapping at the West Zone indicated that the north-west trending structures were brecciated, while east-west trending structures were not. This would support the theory of reactivation along pre-existing north-west structures. Reactivation was probably sinistral in movement. The localization of major vein systems within the volcanic rock as opposed to the sedimentary rock is likely the result of preferential ground preparation.

- Stage 3 was marked by the development of north-west trending cleavage and local warping of smaller veins as a result of northeast-southwest shortening.

Pretivm reviewed all of the historical and ongoing exploration results, allowing the company to identify nine zones of potentially near term economically viable mineralization. This is in addition to the Snowfield Zone of porphyry-type mineralization to the north.

The following nine high–priority zones of mineralization presently comprise the Brucejack Property:

- West Zone
- West Zone Footwall Zone
- Bridge Zone
- Bridge Halo Zone
- Galena Hill Zone
- Shore Zone
- SG Zone
- Gossan Hill Zone
- Valley ofKings Zone (“VOK”)

Zones 1 through 9 are the focus of Mineral Resource Estimates outlined in Section 16.0 of this report and are discussed individually in Sections 8.2.1 through 8.2.9.

Vein Mineralization

The zones of gold-silver-copper-molybdenum mineralization comprising the Brucejack area are, for the most part, considered the product of fault and fracture-controlled hydrothermal activity related to local intrusive activity.

In general, the vein mineralization appears to represent a complex system of structurally controlled overprinting of mineralization types and multiple generations of alteration and vein assemblages. Veins can be classified on the basis of metal content and gangue mineralogy. Typically the exposed veins are thin (1 m) and short (<50 m).Individual veins may coalesce into more densely packed vein systems, especially in more intensely altered areas, and locally often represent in excess of 25% of the outcrop. Such vein systems typically grade imperceptibly into the strongly silicified host rocks.

Base-metal bearing quartz veins consist primarily of thin stringers of quartz ± carbonate which locally contain zones of disseminated to massive sulphides with varying amounts of pyrite, galena, and/or sphalerite. They are found locally around the Brucejack Plateau outside the main areas of alteration. Individual veins may be strongly gossanous.

Precious and base metal veins (e.g. West Zone) are polymetallic stockworks of thin veins and fracture fillings. Tension gash structures are common. The veins show complex crosscutting relationships that indicate repeated fracturing and filling as the host rocks underwent brittle deformation.

Precious metal mineralization may be confined to one particular episode of veining, which is not necessarily the same episode as base metal mineralization. The gold is associated with pyrite + electrum in quartz ± calcite veins. Arsenopyrite may occur peripherally in the host rock;

Barite veins were first discovered by Bruce and Jack Johnson in 1935 near the outflow of Brucejack Lake. They consist of coarsely crystalline barite with minor quartz, carbonate, and sulphides.

Porphyry-Type Mineralization

Porphyry-type disseminated pyrite-chalcopyrite-molybdenite mineralization occurs on the Snowfield and KSM Properties immediately adjacent to the north and west of the Brucejack Property. Such mineralization occurs within sub alkaline porphyritic intrusions, including monzodiorite, monzonite, syenite, and granite.

The porphyry-type gold and copper deposits (e.g. Mitchell, Sulphurets, and Snowfield Zone) usually have a higher-grade central or core area surrounded by lower-grade mineralization that is dispersed over a very large area and is related to very fine grained disseminated chalcopyrite.

Within the higher grade core area, gold and copper grades correlate closely with one another. The Cu /Au ratio tends to be slightly higher closer to the phyllic-propylitic transitional areas. In the low-grade peripheral shells, the Cu /Au grades tend to be the highest. The gold and copper distribution is remarkably smooth and continuous with grades decreasing very gradually outward from the higher grade core. These observations suggest that the deposit was generated by a large, stable hydrothermal system with a low thermal gradient within homogeneous host rocks. The distribution was minimally disrupted by late faulting with only minor offsets.

8.2.1 West Zone

The following descriptions (Sections 8.2.1 through 8.2.9) of the mineralization of the West, West Zone Footwall, Bridge, Bridge Halo, Galena Hill, Shore, SG, Gossan Hill and Valley of Kings Zones of the Brucejack Property were provided by Mr. Ron Burk, Chief Geologist at Silver Standard, and Mr. Ken McNaughton, Vice President and Chief Exploration Officer, Pretivm in the form of an internal company report, dated December 9, 2009 and recent verbal communication.

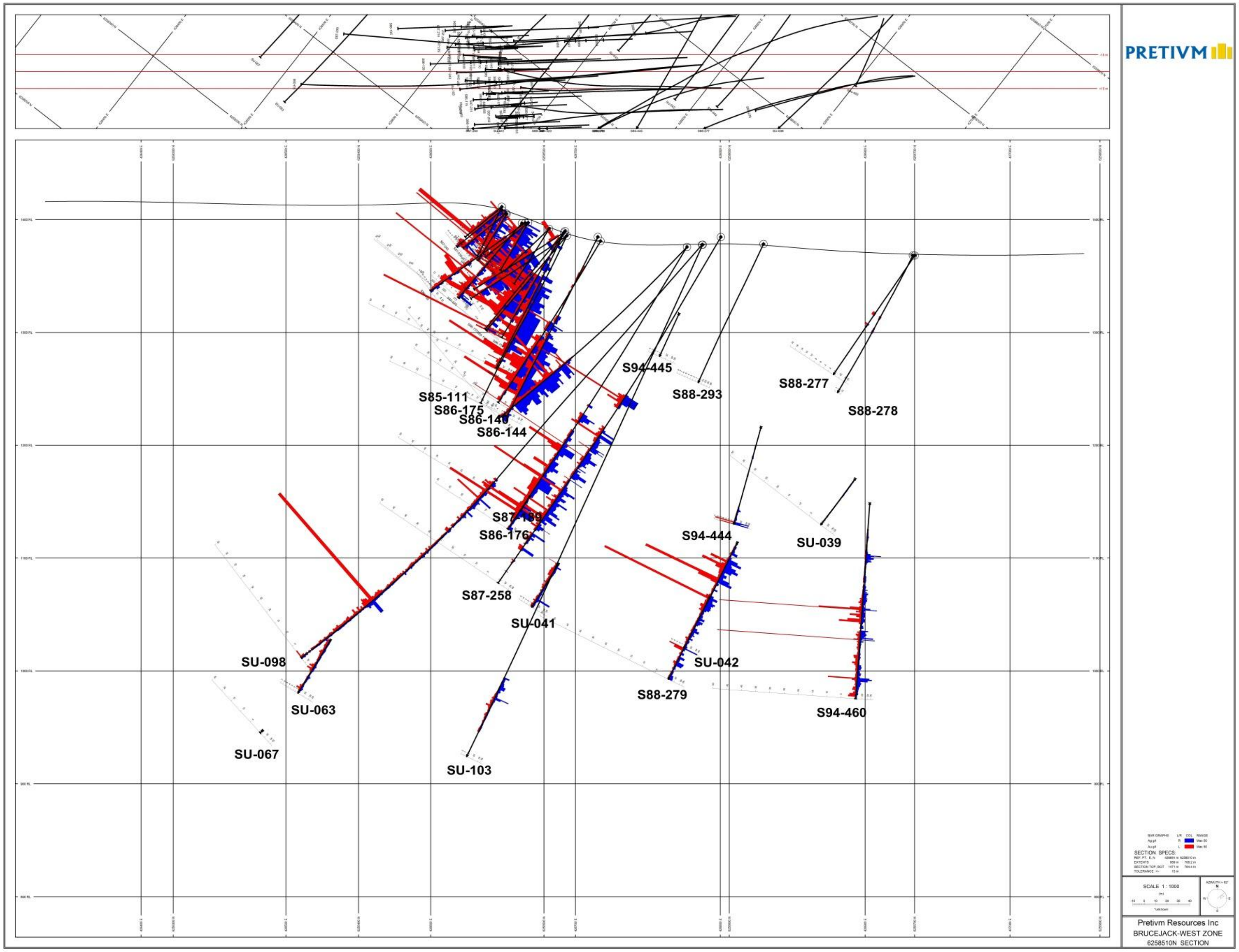
The West Zone gold-silver deposit is hosted by a north-westerly trending band of lower Jurassic (Unuk River member, Hazelton Group) andesitic and lesser sedimentary rocks (Figure 8.2), 400 m to 500 m wide, that passes between two intrusive bodies of plagioclase-hornblende porphyry.The supracrustal rocks are steeply inclined to the northeast and display varying degrees of brittle-ductile deformation and moderate to intense hydrothermal alteration, particularly where the precious metal deposit has been outlined.

The deposit itself comprises at least 10 quartz veins and quartz stockwork shoots, the longest of which has a strike length of ~250 m and a maximum thickness of about ~6 m. Most mineralized shoots have vertical extents that are greater than their strike lengths. Geometries of the main veins suggest they represent central and oblique shear veins which developed in response to transpressional strain and resulting sinistral, mainly ductile deformation (Roach and Macdonald, 1991).Crack-seal features shown by most of the veins are evidence of brittle deformation overlapping with some crystallization of gangue minerals. Thus, at the West Zone, it appears that ductile shearing generated the dilatant structures that served as conduits for the hydrothermal fluids, which deposited silica and precious metals, but hydrostatic overpressures within the conduits intermittently caused brittle failure along these structures.

In terms of hydrothermal alteration, the West Zone is marked by a central silicified zone that passes outwards to a zone of sericite ± quartz ± carbonate and then an outer zone of chlorite ± sericite ± carbonate. The combined width of these alteration zones across the central part of the deposit is 100 m to 150 m.

Gold in the West Zone occurs principally as electrum and in quartz veins and is associated with, in decreasing order of abundance, pyrite, sphalerite, chalcopyrite, and galena. Besides being found with gold in electrum, silver occurs in tetrahedrite, pyrargyrite, polybasite, and rarely stephanite and acanthtite. Gangue mineralogy of the veins is dominated by quartz, with accessory K-feldspar, albite, sericite, and minor carbonate and barite.

Figure 8.2 Section 6258510N of the West Zone, Brucejack Property, Looking West



8.2.2 West Zone Footwall Zone

The West Zone Footwall Zone is located along the entire footwall of the West Zone. It lies approximately 50 m to 200 m south-west of the West zone and was intersected by holes SU-63, SU-98 and SU-100. These holes cover an area 600 m long. Resources are currently Inferred only.

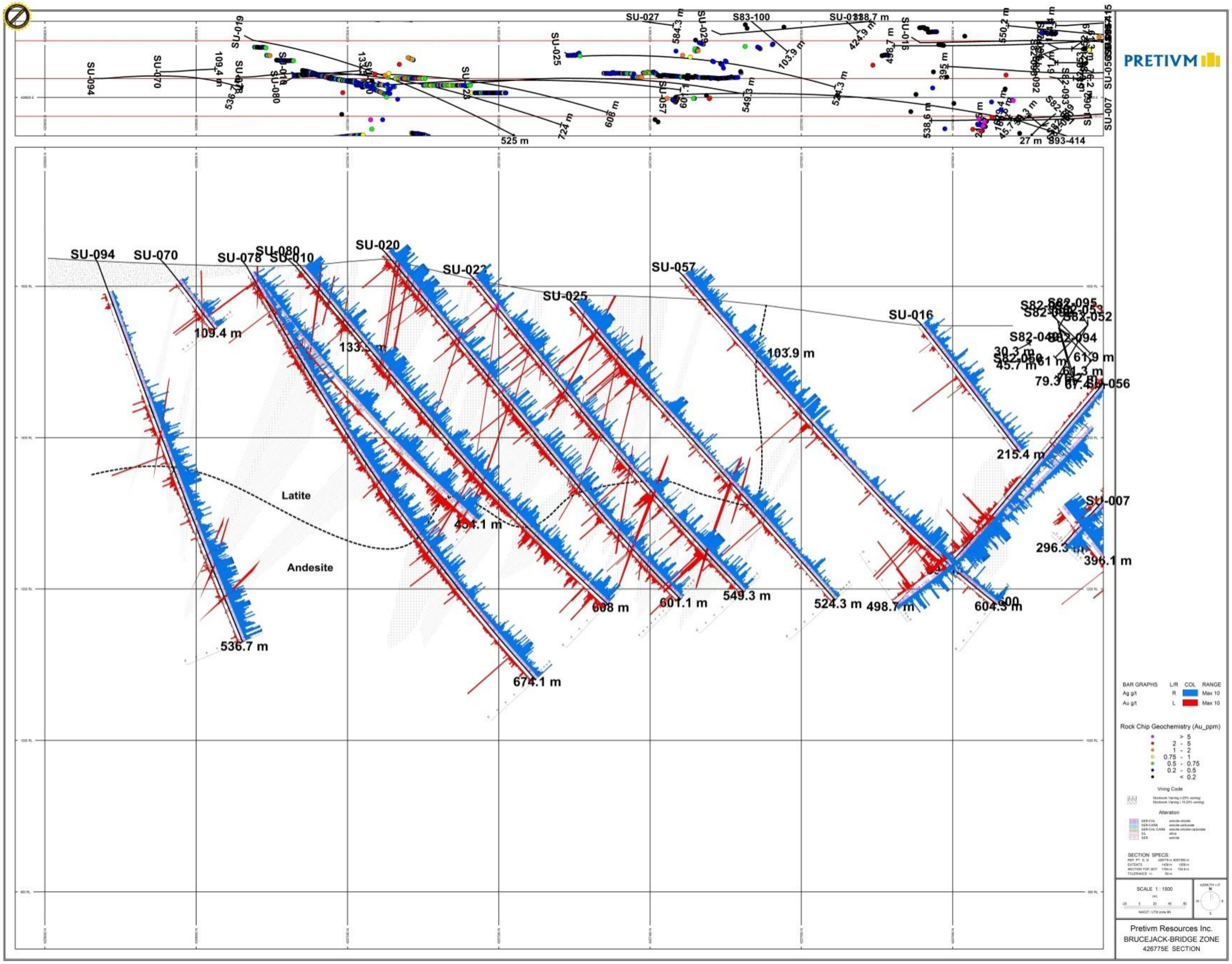
8.2.3 Bridge Zone

The Bridge Zone is located about 1,500 m north of the southern Brucejack property boundary and is centred on a 3-ha nunatak outcrop that is surrounded by ice of the eastern arm of the Sulphurets glacier. Geologists working for Newhawk and the Geological Survey of Canada had previously mapped and sampled this outcrop, recognizing that it displayed strong sericite-pyrite alteration and was transected by a number of discontinuous mineralized quartz veins. Based on the encouraging gold assays obtained in these historical rock-chip samples, decision was made to test the prospect with a single drill hole, SU-10 (Figure 8.3).Assay results for this drill hole showed that it intersected a broad zone of low-grade gold mineralization of possible economic significance.

The mineralized intercept in SU-10 was reported as being 483 m averaging 0.70 g/t Au and extended from surface. The discovery of potentially bulk-mineable gold at the Bridge Zone prompted drilling of another 12 diamond bore holes to probe for the limits of this mineralization.

These drill holes determined that the bulk of the gold mineralization is hosted by plagioclase-hornblende porphyry intrusive rock that in general is moderately sericite-chlorite altered, with disseminated and stringer pyrite making up a few percent of the rock by volume. Quartz ± chlorite ± sericite veins, 20 cm to 200 cm in thickness, were intermittently intersected by the drill holes, and these commonly contain minor to trace amounts of pyrite, sphalerite, galena, molybdenite, and unknown dark grey, silver-bearing sulfosalt(s).

Figure 8.3 Section 426775E of the Bridge Zone, Brucejack Property – Looking West



8.2.4 Bridge Zone Halo Zone

The Bridge Zone Halo Zone was modeled separately from the Bridge Zone as a low grade halo in order to ensure that all potentially economic mineralization was captured for mineral resource estimation. A secondary mineralization halo for the Bridge Zone was subsequently modeled using a 0.20 g/t Au grade shell.

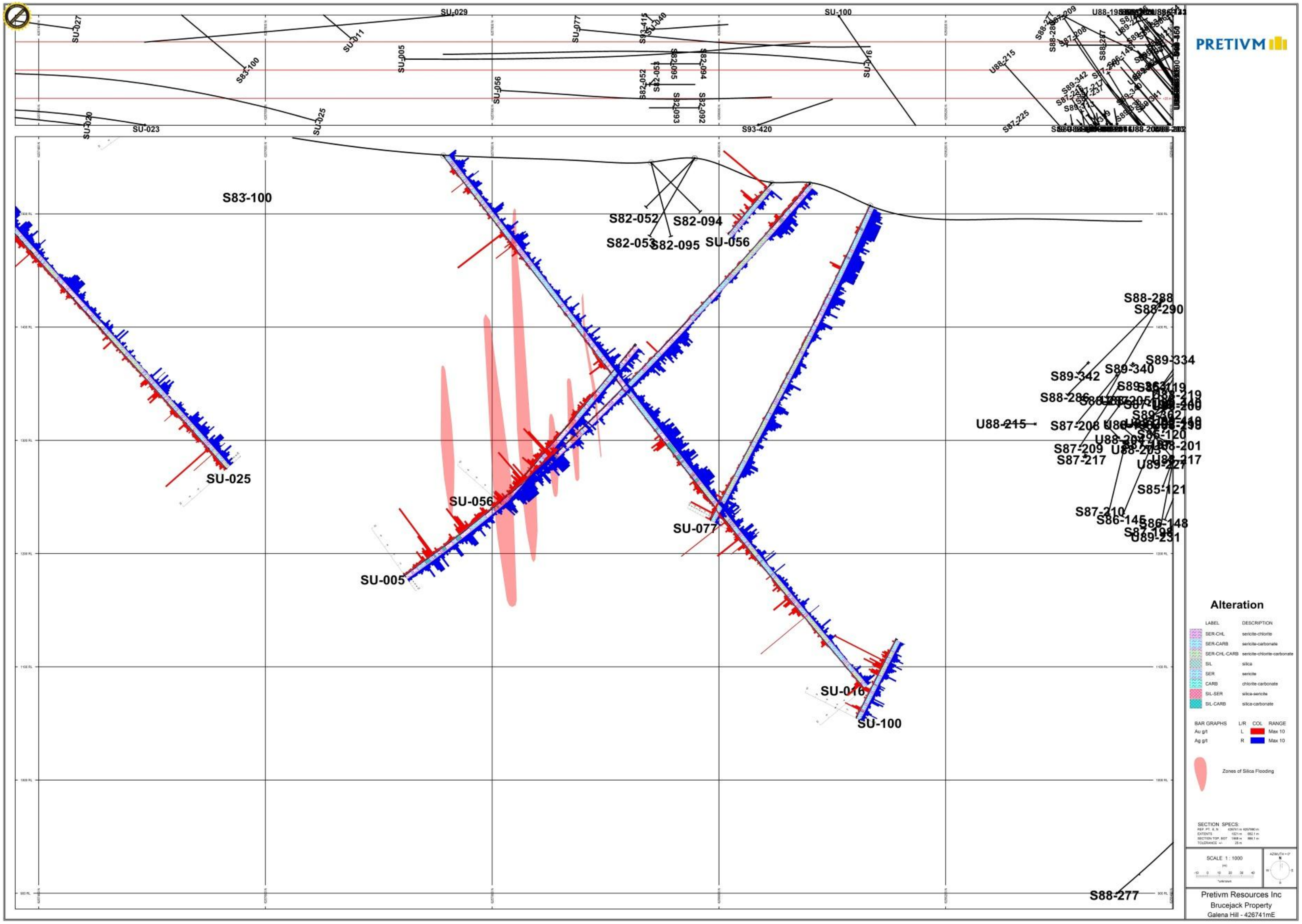
8.2.5 Galena Hill Zone

The prospect area known as Galena Hill is situated between the West Zone and Bridge Zone gold deposits on a prominent hill marked by widespread iron oxide staining of altered meta-andesites. The Galena Hill Zone had been previously tested with 27 bore holes belonging to a number of different drilling campaigns, with half of the holes being less than 100 m in length. Assays from these holes, together with detailed geological mapping and channel rock-sampling, indicated that there was a system of E-W and NE-SW-trending quartz veins and quartz stockworks at Galena Hill that, as a whole, defined a zone of hydrothermal alteration and mineralization that is at least 460 m long and 300 m wide.

Rather than target the larger quartz veins, which locally contain high-grade gold + silver mineralization on surface, a decision was made to test for the potential of a low-grade, bulk-mineable deposit. This was done with eight relatively long (>400 m) drill holes completed during the 2009 exploration program. The majority of these bore holes passed through amygdaloidal and massive andesite flows, volcaniclastic deposits rich in lapilli-sized andesitic clasts and thin units of carbonaceous and cherty mudstone. A few holes intersected rhyolitic dikes and one hole (SU-05) yielded a 50 m-long quartz vein intercept enriched in gold and silver along its margins, though it is likely that this intercept is at a low angle to the dip of the vein.

As in the West Zone, gold mineralization at the Galena Hill Zone is preferentially associated with quartz veins (Figure 8.4), although the sericite-altered, andesitic host rocks are typically mineralized with disseminated pyrite and have geochemically anomalous gold contents, generally in the 100-500 ppb Au range. In some veins, trace amounts of native gold and electrum are accompanied by minor to occasionally substantial amounts of sphalerite, chalcopyrite, and galena.

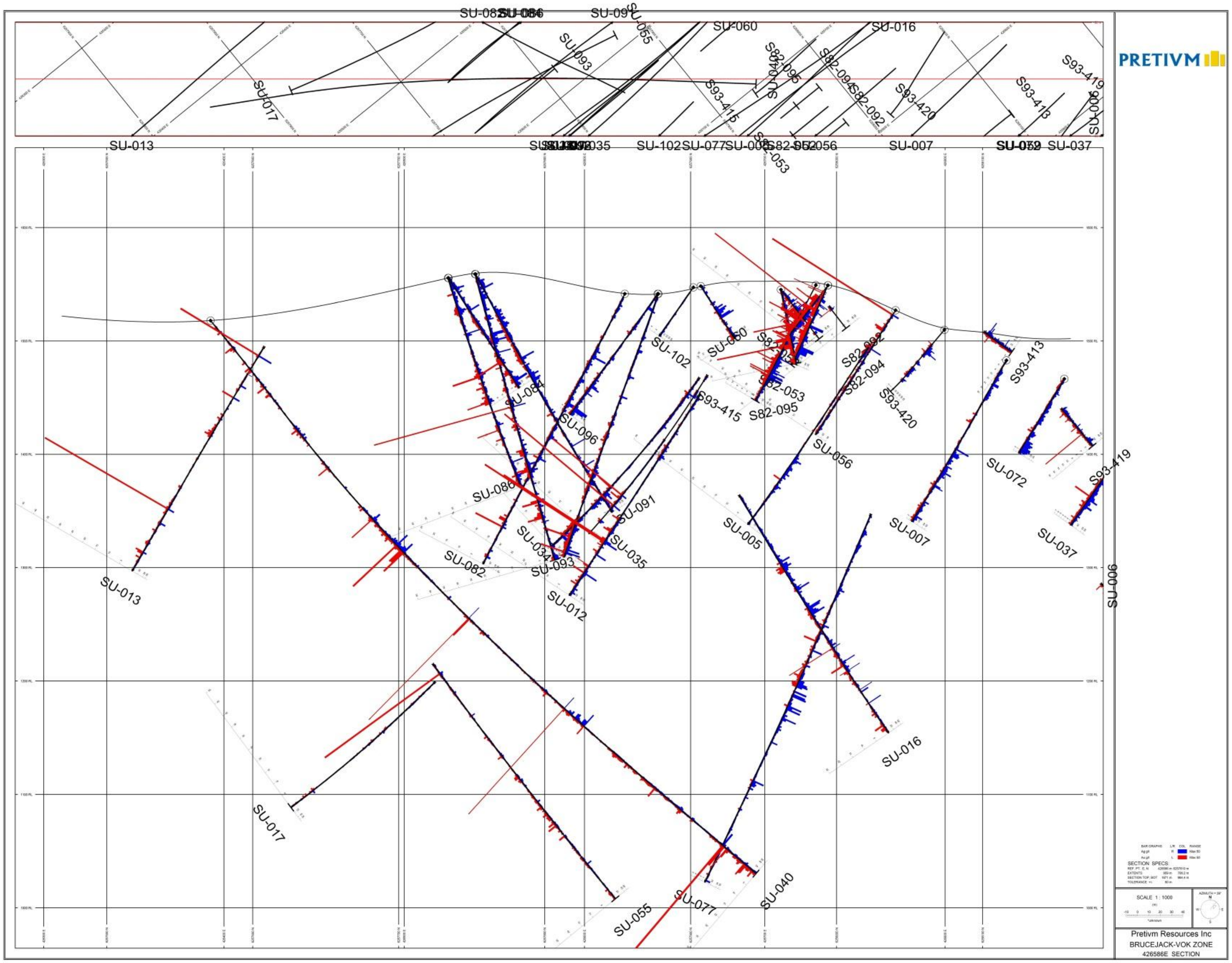
Figure 8.4 Section 426741E of the Galena Hill Zone, Brucejack Property – Looking West



8.2.6 Valley of Kings Zone

The Valley of Kings Zone (Figure 8.5) was discovered by Esso in 1981 and was previously referred to as the Electrum Zone. It lies between the Bridge and Galena Hill Zones. Very little work has been completed on this zone, but what is currently known is that there are multi-kilogram intersections in parallel zones. The best intersection to date was in hole SU-12 which yielded 1.5 metres at 16,949 g/t Au and 8,697 g/t Ag. Resources are all currently classified as Inferred in this zone.

Figure 8.5 Section 426586E Valley of Kings – Looking West

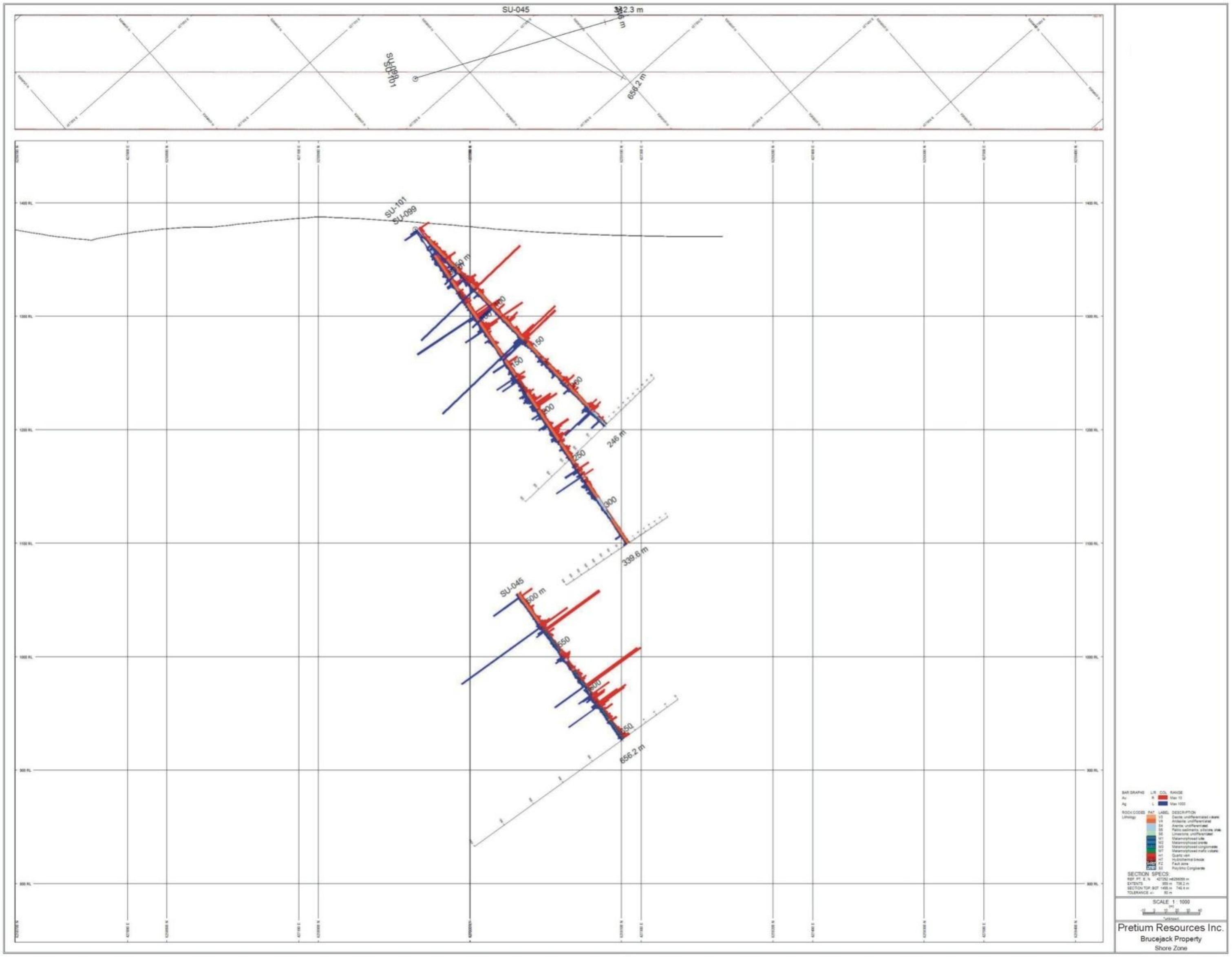


8.2.7 Shore Zone

A small gold-silver resource was identified by Newhawk along the north-eastern shore of the peninsula that extends into the west end of Brucejack Lake. Referred to as the Shore Zone, it is a zone of quartz veining hosted by foliated, sericite-altered andesite with a strike length of roughly 530 m and a maximum width of 50 m (Figure 8.6). The NW-SE trend of the zone is coincident with a pronounced structural lineament (likely a shear fault) that extends from the Brucejack Fault south-eastward beneath Brucejack Lake.

Several discrete quartz veins and quartz stockworks were traced along the zone, with historical drilling being concentrated on the southern end of the zone. The veins occur as 'stacked', en echelon, sigmoidal lenses up to 100 m in length and 1.5 m wide, although they are typically 20 to 40 m long. Predominantly composed of quartz with minor carbonate and barite, the veins contain podiform sulphide mineralization consisting of varying amounts of pyrite, tetrahedrite, sphalerite, galena, and arsenopyrite. Electrum has been observed in trace amounts. Silver is present in some of the highest concentrations observed in the Brucejack area.

Figure 8.6 Section 427252E of the Shore Zone, Brucejack Property – Looking West-Northwest



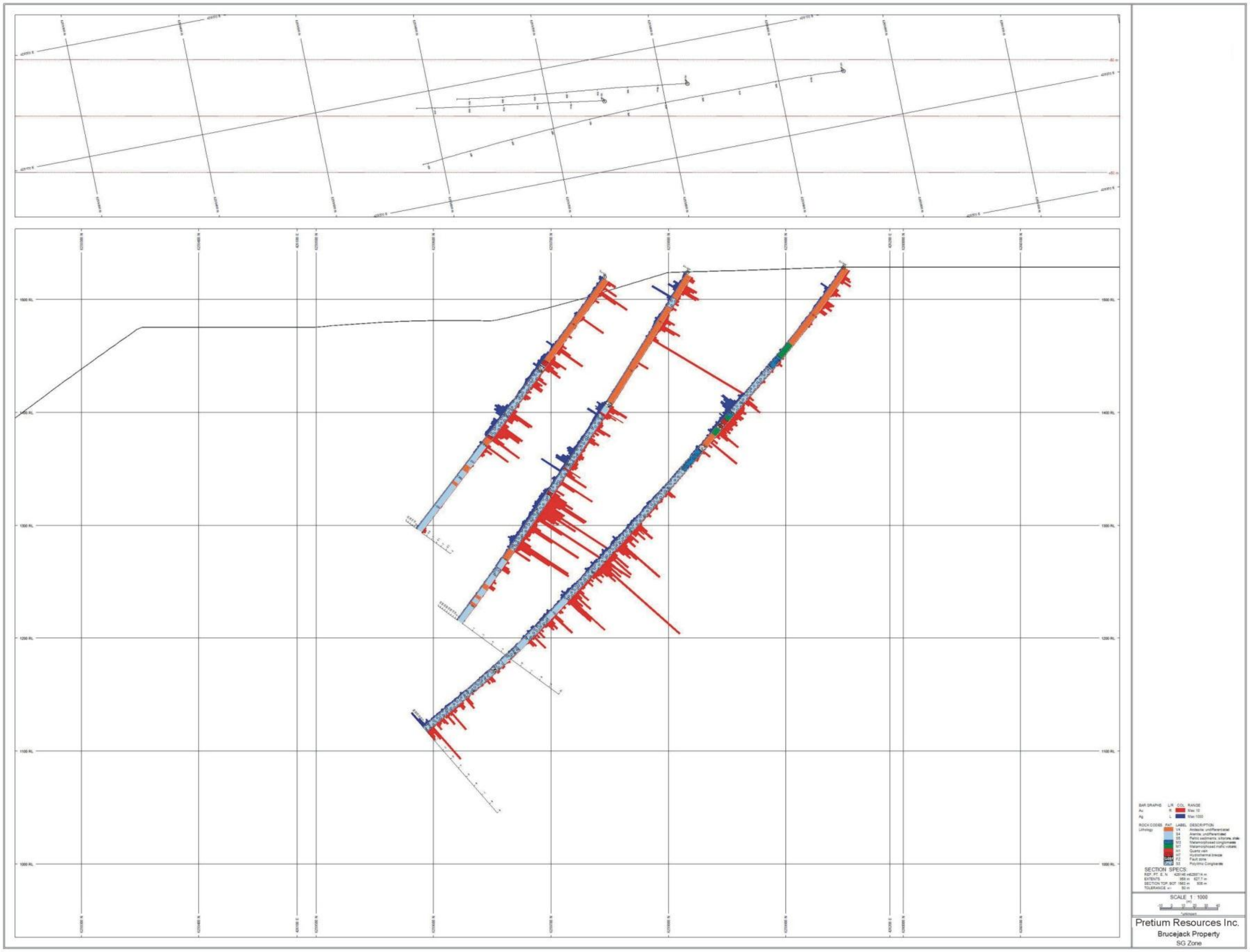
8.2.8 SG Zone

The SG Zone is located in the north-central part of the Brucejack property and is represented by an area of iron oxide-stained, sericite-altered rock that occurs adjacent to the northerly striking Brucejack Fault. Channel rock sampling done by Silver Standard and earlier workers tested a restricted zone of quartz stockwork veining close to the major fault as well as an east-striking, 150 m-long and 20 to 80 cm-wide quartz vein that extends westwards from the stockwork.

In addition, seven historic and four Silver Standard diamond drill holes tested for gold mineralization in this area. The Silver Standard boreholes passed through a sequence of mainly clastic andesitic rocks (Figure 8.7) – likely re-deposited tuff and lapilli tuff – that are intercalated with quartzo-feldspathic sandstone and minor siltstone units.

SU-004 yielded the best mineralized intersection of the four Silver Standard drillholes; 75 m averaging 1.62 g/t Au, including 27 m at 2.57 g/t Au. This intersection contains surprisingly minor quartz veining; instead, the mineralized lapilli tuff hosts minor quartz-carbonate stockwork veinlets and trace amounts of fine, acicular arsenopyrite in addition to 1-3% disseminated pyrite.

Figure 8.7 Section 426146E of the SG Zone, Brucejack Property – Looking West

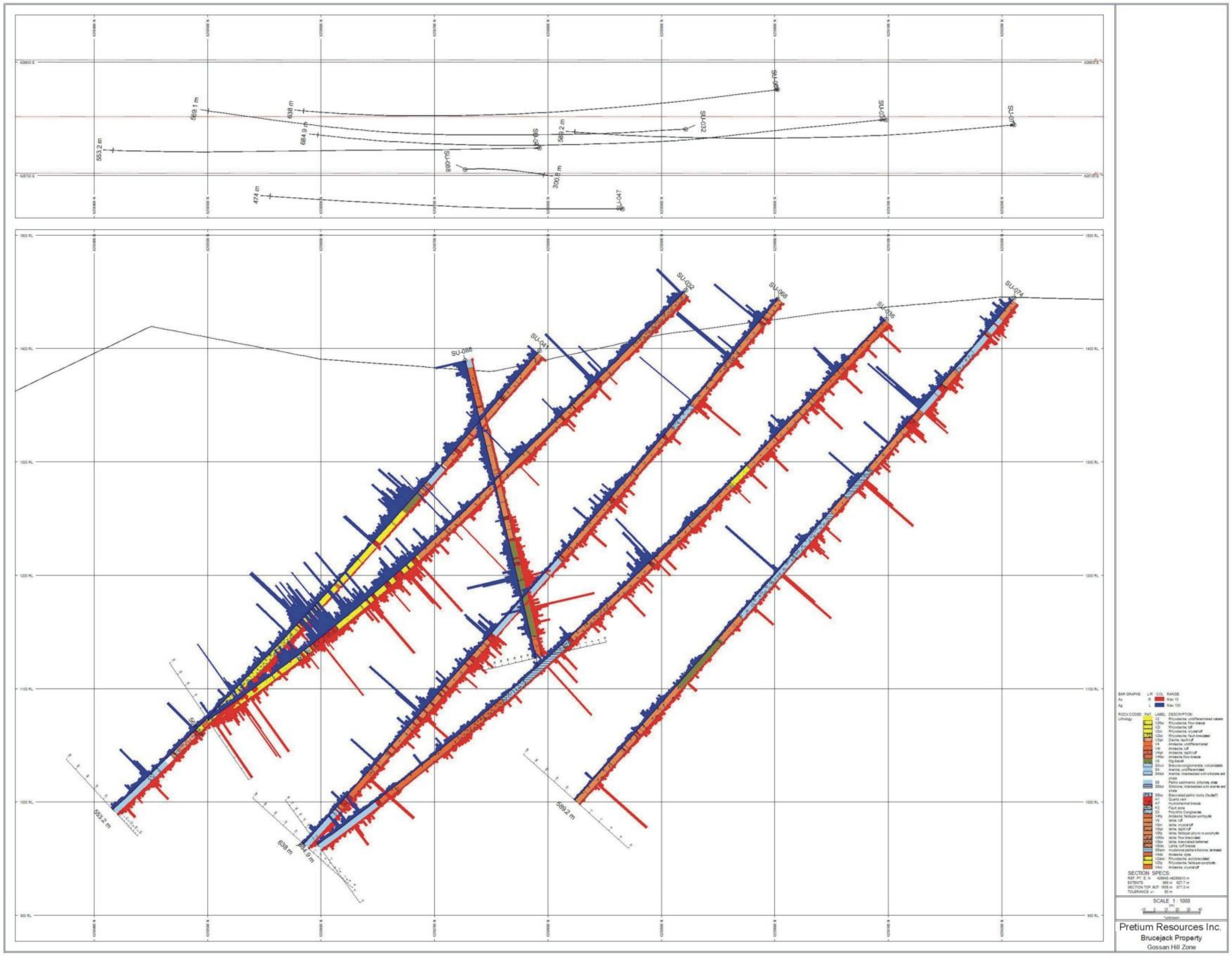


8.2.9 Gossan Hill Zone

The mineralized zone known as Gossan Hill (Figure 8.8), is a circular area, about 400 m in diameter, of intense quartz-sericite-pyrite alteration developed in Jurassic andesite of the Unuk River member of the Betty Creek formation. This visually impressive alteration zone is host to at least eleven quartz vein and quartz stockwork structures most of which trend east-west and dip steeply to the north. Individual structures are up to 250 m-long and 20 m-wide.

Historical work done at Gossan Hill consisted of rock-chip sampling, hand trenching and diamond drilling, with a few +400-m holes passing through the central part of the mineralized area. Precious metal mineralization at the Gossan Hill Zone is sporadic but generally best developed in the larger quartz lenses, particularly where these contain minor aggregates of pyrite, tetrahedrite, sphalerite, and galena. Electrum is rarely observed, while silver also occurs in tetrahedrite, pyragyrite, and polybasite.

Figure 8.8 Section 426648E Gossan Hill Zone – Looking West



9.0 EXPLORATION

The 2010 program included mapping on the Brucejack Property, preliminary geotechnical and environmental studies of the Scott Creek proposed tailings site, lay out and permit initiation of the access road into Brucejack Lake, geotechnical drilling as well as PQ metallurgical core drilling of the proposed open pits at Snowfield and Brucejack.

The preliminary geotechnical and environmental studies are referenced in Section 17 of this report. Metallurgical testing is currently in progress, with no new results to report.

10.0 DRILLING

In 2010, a total of 33,400 m of drilling was completed in 72 drill holes. The 2010 results defined a new area of mineralization in the West Zone, encountered further high-grade gold and silver mineralization in the Galena Hill Zone and expanded the known mineralization in the West, Galena Hill, Bridge and Shore Zones. A drill plan map is presented in Figure 10.1. Table 10.1 presents results of the significant intersections in 2010.

West Zone

Drilling defined a new area of mineralization in the footwall of the West Zone. Intersections in holes SU-63, SU-66, SU-67, SU-98 and SU-100 define the footwall mineralization measuring approximately 120 by 500 meters. The intersection in SU-98 was less than 50 meters from the historical West Zone which was defined by over 750 surface and underground drill holes and over 5,000 meters of underground workings.

Galena Hill Zone/VOK

The Galena Hill Zone, located 500 meters south of the West Zone, is host to disseminated gold-silver mineralization together with structurally-controlled high-grade veins. Drilling continued to confirm the location of the high-grade structures intersected in 2009 and 2010. The highlight from the latest hole, SU-106 intersected three bands of mineralization including 0.69 meters of 1,710 grams of gold per tonne and 1,080 grams of silver per tonne.

This intersection encountered the same zone as defined by the high-grade intercepts in holes SU-12, SU-29, SU-40 and SU-84 previously reported from the 2009 and 2010 programs and included in Table 10.1.

Drilling in 2010 expanded the Galena Hill Zone by 100 meters to the northeast and 250 meters to the southwest. Galena Hill is open to the east and to depth.

Bridge Zone

The Bridge Zone, which exhibits porphyry-style gold-silver mineralization, measures approximately 600 meters by 900 meters, roughly three times the area defined in the 2009 drill program. Holes SU-92, SU-94 and SU-95 expanded the zone 200 meters further south than the area defined in 2009 drilling. Holes SU-64, SU-87 and SU-90 show that the zone remains open to the east. The highlight was hole SU-87, which intersected 168 meters averaging 1.09 grams of gold per tonne and 4.04 grams of silver per tonne and ended in mineralization.

Shore Zone

Eight holes completed on the Shore Zone expanded it to the northwest, where the zone remains open and to depth.

In addition to work completed on these four zones, other targets were defined on the property that will require future follow-up sampling and drilling.

Drilling contractors in 2010 were Radius Drilling and Matrix Drilling. The average number of drill rigs on site at any given time was seven, with a maximum number of nine.

Down-hole, E-Z shot surveying of all holes showed that deviation on azimuths was a maximum of 15° for a 700 m long hole, with little movement on dip. Core recovery was excellent at ±95%. Drill hole collars were surveyed toward the end of the drilling campaign by McElhanney using a differential GPS.

Crews were de-mobilized from the project for the winter season on September 29. Most portable equipment was stored in one of several winterized buildings on site. All of the tents were flown back to Stewart for storage, as well as the core from a number of key drill holes.

The author believes that drilling has been conducted using industry best practice guidelines.

Figure 10.1 2010 Brucejack Property Diamond Drill Plan

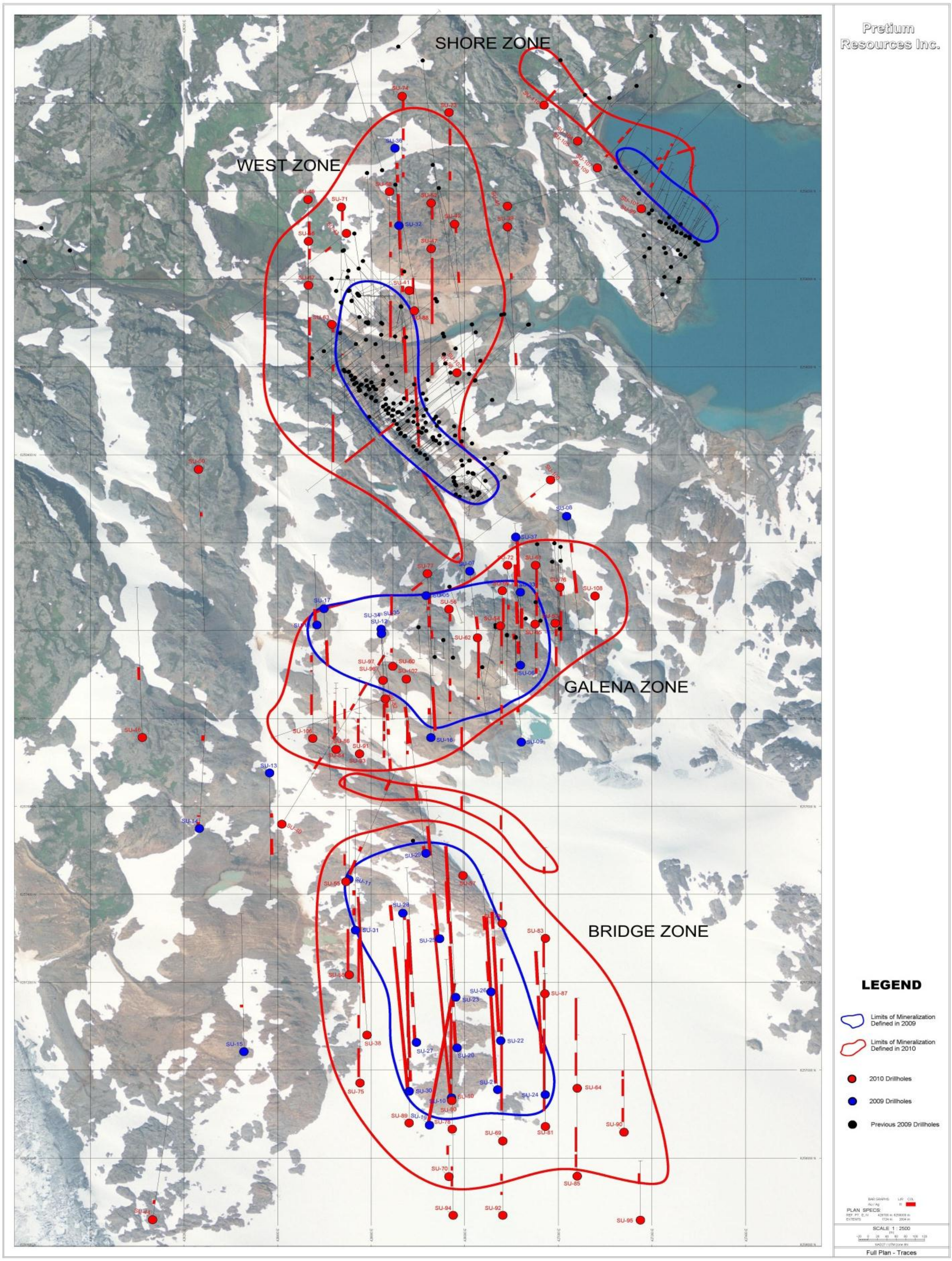


TABLE 10.1
SIGNIFICANT DRILL INTERCEPTS FROM 2010 DRILLING

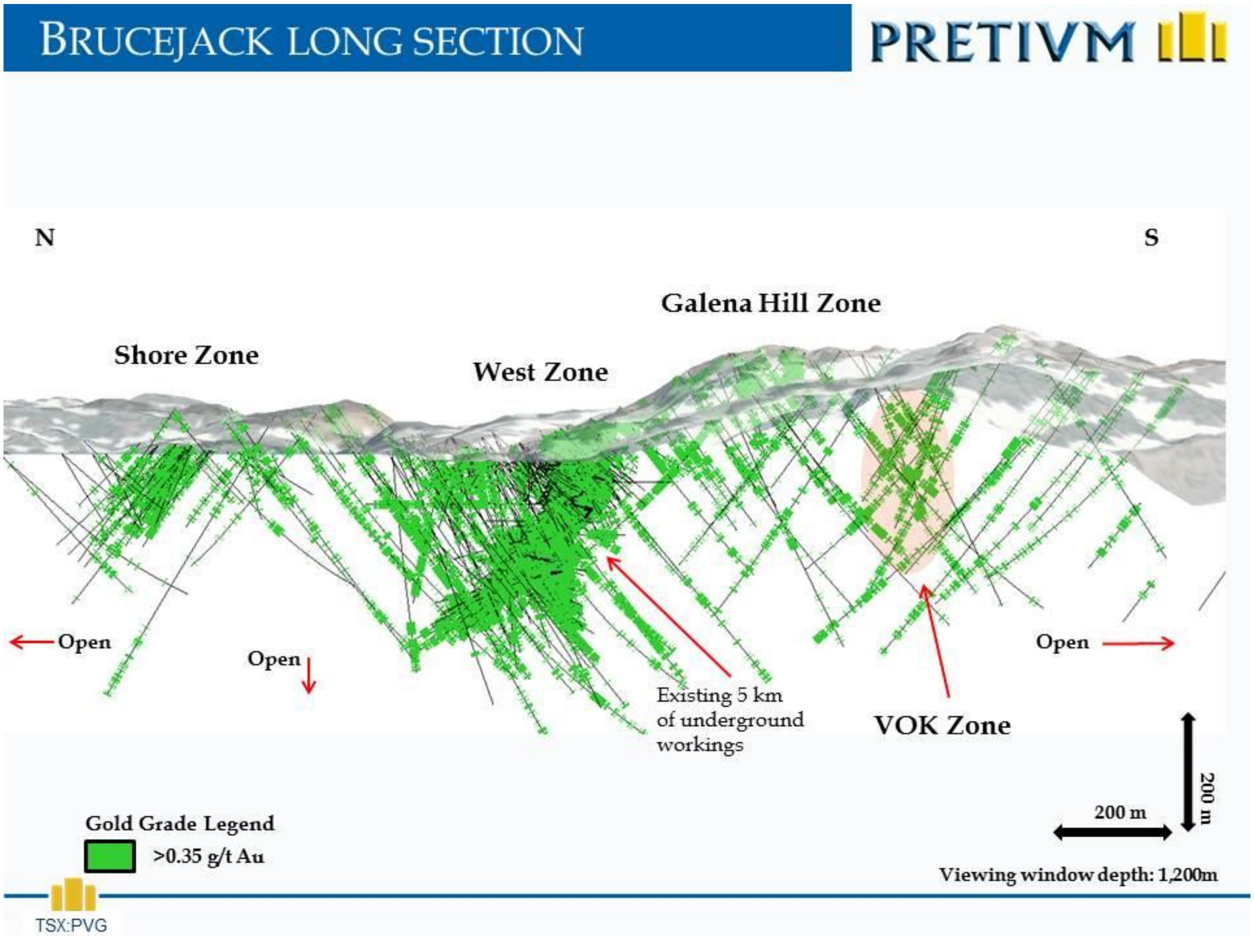
Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Zone
SU-38	114.11	489.63	375.52	0.54	3.70	Bridge
SU-39	5.00	17.00	12.00	4.30	12.29	West
	165.00	186.58	21.58	0.58	83.86	
	447.50	490.53	43.03	0.71	21.88	
SU-40	223.50	269.50	46.00	2.16	11.30	Galena Hill/VOK
	346.00	369.50	23.50	1.42	5.22	
	464.45	488.62	24.17	1.40	20.28	
	522.50	572.00	49.50	0.67	1.60	
	647.50	687.93	40.43	2.84	32.75	
SU-41	307.00	553.20	246.20	0.77	8.75	West
SU-42	0.70	32.00	31.30	0.78	44.27	West
	169.50	208.00	38.50	0.55	28.85	
	473.73	520.00	46.27	0.91	40.30	
SU-43	71.50	95.50	24.00	0.63	4.88	West
SU-44	55.50	69.50	14.00	0.57	2.20	Jewel
SU-45	521.77	540.00	18.23	4.35	51.23	Shore
	594.50	656.23	61.73	1.69	42.12	
SU-46	204.00	248.50	44.50	0.68	1.90	Waterloo
SU-47	75.00	109.00	34.00	0.65	7.16	West
	197.50	221.50	24.00	2.07	39.66	
	403.76	448.50	44.74	3.26	67.25	
SU-48	144.50	195.50	51.00	0.62	7.46	SG
	290.50	412.00	121.50	0.87	3.02	
	548.00	555.50	7.50	1.38	11.66	
SU-49	79.50	126.00	46.50	0.66	3.62	West
	550.00	590.50	40.50	1.04	2.81	
SU-50	152.00	166.50	14.50	1.35	2.19	West
SU-51	10.50	79.98	69.48	0.67	3.03	SG
	311.00	330.00	19.00	0.69	1.05	
SU-52	2.06	58.00	55.94	0.45	10.43	West
	194.49	428.31	233.82	2.26	12.54	
SU-53	21.50	45.50	24.00	2.39	49.11	Galena Hill
	83.50	152.50	69.00	0.53	6.55	
SU-54	9.14	133.50	124.36	2.04	27.13	Galena Hill/VOK
	280.50	310.00	29.50	0.58	5.90	
	336.50	349.50	13.00	1.78	14.15	
SU-55	57.50	96.50	39.00	1.61	3.60	Bridge
	331.50	367.00	35.50	0.80	4.33	
	575.00	611.00	36.00	1.20	3.04	
SU-56	16.70	44.00	27.30	0.75	1.68	Galena Hill
	245.50	270.50	25.00	0.59	4.54	
	289.50	327.80	38.30	0.71	4.77	
	364.70	370.33	5.63	1.63	12.55	

Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Zone
SU-57	233.13	279.50	46.37	1.02	74.03	Bridge
	442.00	524.50	82.50	2.00	9.50	
SU-58	0.11	162.00	161.89	2.09	7.97	Bridge
SU-59	26.50	111.50	85.00	1.37	15.53	Galena Hill
SU-60	48.00	62.71	14.71	0.74	6.84	Bridge
	180.90	250.00	69.10	0.74	13.16	
SU-61	0.00	81.00	81.00	0.65	41.66	Galena Hill
	96.02	180.00	83.98	1.02	4.90	
SU-62	14.00	143.00	129.00	1.48	14.53	Galena Hill
	210.00	218.54	8.54	1.49	14.57	
SU-63	4.20	28.50	24.30	0.72	9.25	West
	143.00	166.50	23.50	0.92	34.02	
	319.00	487.49	168.49	0.80	4.81	
SU-64	170.20	318.80	148.60	0.72	7.50	Bridge
SU-65	65.50	121.00	55.50	1.46	10.59	Galena Hill
	116.00	119.50	3.50	11.87	35.95	
	156.50	175.77	19.27	0.91	6.66	
SU-66	26.89	64.55	37.66	0.88	1.49	West
	358.34	444.00	85.66	1.16	5.39	
SU-67	114.00	177.55	63.55	0.76	4.45	West
	250.00	324.42	74.42	2.17	16.56	
SU-68	20.20	32.50	12.30	3.88	21.65	West
	107.00	125.50	18.50	2.41	8.80	
	113.00	118.24	5.24	5.85	25.61	
	213.50	232.36	18.86	0.91	8.27	
	387.50	516.50	129.00	0.89	10.11	
SU-69	108.50	351.61	243.11	0.85	8.79	Bridge
	377.00	554.00	177.00	1.07	10.40	
	600.94	644.95	44.01	0.79	8.82	
SU-70	77.50	109.42	31.92	0.88	5.45	Bridge
SU-71	5.68	48.74	43.06	0.51	2.28	West
	519.50	523.93	4.43	6.73	5.69	
SU-72	140.70	157.00	16.30	0.65	7.64	Galena Hill
SU-73	57.00	116.50	59.50	2.45	13.17	West
	208.66	240.50	31.84	0.84	22.89	
SU-74	9.00	51.00	42.00	0.76	7.50	West
	115.00	155.00	40.00	1.08	13.68	
	207.00	220.50	13.50	4.85	13.49	
	269.50	286.50	17.00	1.31	5.84	
SU-75	20.70	123.00	102.30	0.71	2.38	Bridge
	194.00	240.50	46.50	0.55	3.71	
	355.00	510.00	155.00	1.15	3.55	

Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Zone
SU-76	4.50	31.50	27.00	1.05	18.87	Galena Hill
	84.50	189.50	105.00	2.27	20.78	
SU-77	304.50	351.00	46.50	1.18	8.90	Galena Hill
SU-78	118.50	203.50	85.00	0.57	3.78	Bridge
	229.00	527.50	298.50	0.73	7.12	
	621.50	724.50	103.00	1.00	6.81	
SU-79	46.50	75.50	29.00	0.59	17.06	Bridge
	332.50	382.50	50.00	1.31	53.06	
SU-10 (EXT.)	7.00	608.08	601.08	0.76	7.91	Bridge
SU-81	71.00	444.50	373.50	0.64	12.80	Bridge
	485.00	666.50	181.50	0.53	8.54	
SU-82	227.00	239.00	12.00	2.13	4.78	Galena Hill
SU-83	430.50	476.00	45.50	0.66	2.56	Bridge
SU-84	43.00	64.00	21.00	0.58	5.81	Galena Hill
	92.00	155.50	63.50	1.01	12.61	
	198.08	198.52	0.44	5480.00	2140.00	
SU-85	48.90	116.50	67.60	0.89	7.10	Bridge
	132.00	262.50	130.50	0.83	9.29	
	541.89	664.50	122.61	0.55	14.99	
SU-86	82.50	122.00	39.50	1.38	7.09	Galena Hill
	190.50	226.50	36.00	2.01	17.74	
	238.50	260.80	22.30	1.33	7.05	
SU-87	175.50	343.20	167.70	1.09	4.04	Bridge
SU-88	144.00	288.50	144.50	0.95	7.73	West
SU-89	99.50	161.50	62.00	1.17	2.96	Bridge
	188.56	229.00	40.44	0.84	2.45	
	304.00	638.25	334.25	1.02	4.76	
SU-90	69.00	160.00	91.00	0.83	6.82	Bridge
	241.00	353.00	112.00	0.91	22.66	
	371.00	408.50	37.50	0.56	5.20	
SU-91	43.00	102.98	59.98	1.64	11.02	Galena Hill
SU-92	135.76	154.00	18.24	0.72	3.73	Bridge
	230.00	275.00	45.00	0.72	7.07	
SU-93	73.10	88.05	14.95	0.52	27.61	Galena Hill
	105.80	146.10	40.30	1.26	6.50	
	164.00	191.00	27.00	1.17	10.44	
	205.79	232.43	26.64	1.32	6.66	
SU-94	191.50	240.00	48.50	0.61	4.77	Bridge
	269.00	270.50	1.50	34.70	18.60	
	298.50	324.00	25.50	0.84	12.45	
SU-95	316.50	387.00	70.50	0.67	21.76	Bridge
	387.00	410.50	23.50	0.76	25.01	
SU-96	138.00	164.00	26.00	0.57	18.41	Galena Hill
	226.00	249.02	23.02	0.87	10.30	
SU-97	125.41	199.50	74.09	0.49	4.75	Galena Hill
	219.50	266.12	46.62	1.30	8.77	
	289.71	325.00	35.29	1.83	6.18	
SU-98	275.00	339.00	64.00	0.75	5.79	West (met hole not sampled from 0 to 275 m)
	359.00	488.50	129.50	1.40	16.60	

Hole	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Zone
SU-99	91.50	112.00	20.50	1.52	45.76	Shore
	158.50	193.50	35.00	0.73	22.80	
	212.00	240.50	28.50	0.65	10.14	
SU-100	69.50	89.00	19.50	0.49	1.74	West
	398.10	427.71	29.61	1.56	7.03	
	561.00	605.34	44.34	0.85	3.02	
SU-101	135.04	142.50	7.46	3.58	177.68	Shore
	190.00	205.00	15.00	0.57	11.95	
	221.65	229.50	7.85	0.86	46.71	
SU-102	133.00	208.50	75.50	0.64	6.88	Galena Hill
	231.00	277.50	46.50	0.59	6.53	
SU-104	38.70	79.50	40.80	0.63	7.80	Shore
	94.50	117.00	22.50	0.70	10.83	
SU-105	87.50	137.00	49.50	0.71	3.06	Shore
	198.50	212.00	13.50	2.65	63.34	
SU-106	83.00	155.47	72.47	1.37	15.00	Galena Hill
	192.50	241.12	48.62	1.06	25.75	
	269.58	294.00	24.42	0.77	7.31	
SU-107	103.00	125.93	22.93	0.70	24.31	Shore
	147.50	174.12	26.62	1.25	23.56	
SU-108	116.00	137.00	21.00	0.56	7.18	Galena Hill
SU-109	54.00	66.00	12.00	0.89	7.43	
	173.74	200.80	27.06	0.92	20.87	Shore
SU-110	15.00	58.00	43.00	1.34	35.05	Shore

Figure 10.2 Long Section Through Brucejack Zones – Looking East



Note: *All values in green >0.35 g/t Au*

11.0 SAMPLING METHOD AND APPROACH

At the end of each drill shift all core was transported by helicopter to the handling, logging, and storage facility on site. Prior to any geotechnical and geological logging, the entire drill core was photographed in detail with the digital colour photographic images for each interval of core filed with the digital geological logs.

A trained geo-technician recorded the core recovery and rock quality data for each measured drill run. All lithological, structural, alteration, and mineralogical features of the drill core were observed and recorded during the geological logging procedure. This information was later transcribed into the computer using a program that was compatible with Gemcom software.

The geologist responsible for logging assigned drill core sample intervals with the criteria that the intervals did not cross geologic contacts and the maximum sample length was two metres. Within any geologic unit, sample intervals of 1.5 m long could be extended or reduced to coincide with any geologic contact. Sample lengths were rarely greater than two metres or less than 0.5 m, and they averaged 1.52 m long.

Upon completion of the geological logging, the samples were sawn in half lengthwise. One-half of the drill core was placed in a plastic sample bag and the other half was returned to its original position in the core box. The sample bags were consolidated into larger shipping containers and delivered to the assay laboratory.

It is the author's opinion that the core logging procedures employed are thorough and provide sufficient geotechnical and geological information. There is no apparent drilling or recovery factor that would materially impact the accuracy and reliability of the drilling results.

12.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

The 2010 program on the Brucejack Project used ALS Chemex as the principal laboratory. The samples that were originally sent to ALS Chemex in Terrace, BC, for sample preparation were then forwarded to the ALS Chemex facility in Vancouver, BC, for analysis.

ALS Chemex is an internationally recognized minerals testing laboratory operating in 16 countries and has an ISO 9001:2000 certification. The laboratory in Vancouver has also been accredited to ISO 17025 standards for specific laboratory procedures by the Standards Council of Canada (SCC).

Samples at ALS Chemex were crushed to 70% passing 2 mm, (-10 mesh). Samples were riffle split and 500 g were pulverized to 85% passing 75 µm (-200 mesh). The remaining coarse reject material was returned to Pretivm for storage in their Smithers warehouse for possible future use.

Gold was determined using fire assay on a 30 gram aliquot with an atomic absorption (AA) finish. A 33 element package was completed using a four acid digest and ICP-AES analysis, which included the silver analyses.

It is the author's opinion that the sample preparation, security, and analytical procedures are satisfactory.

13.0 DATA VERIFICATION

13.1 SITE VISIT AND INDEPENDENT SAMPLING 2010

The Brucejack Property was visited by Mr. Fred Brown, CPG, Pr.Sci.Nat. from September 3 to 5, 2010. Independent verification sampling was done on diamond drill core, with ten samples distributed in ten holes collected for assay. An attempt was made to sample intervals from a variety of low and high-grade material. The chosen sample intervals were then sampled by taking the remaining half-split core. The samples were then documented, bagged, and sealed with packing tape and were brought by Mr. Brown to ALS Chemex in Terrace, British Columbia for analysis.

At no time, prior to the time of sampling, were any employees or other associates of Pretivm advised as to the location or identification of any of the samples to be collected.

A comparison of the P&E independent sample verification results versus the original assay results can be seen in Figure 13.1 and Figure 13.2.

Figure 13.1 P&E Independent Site Visit Sample Results for Gold

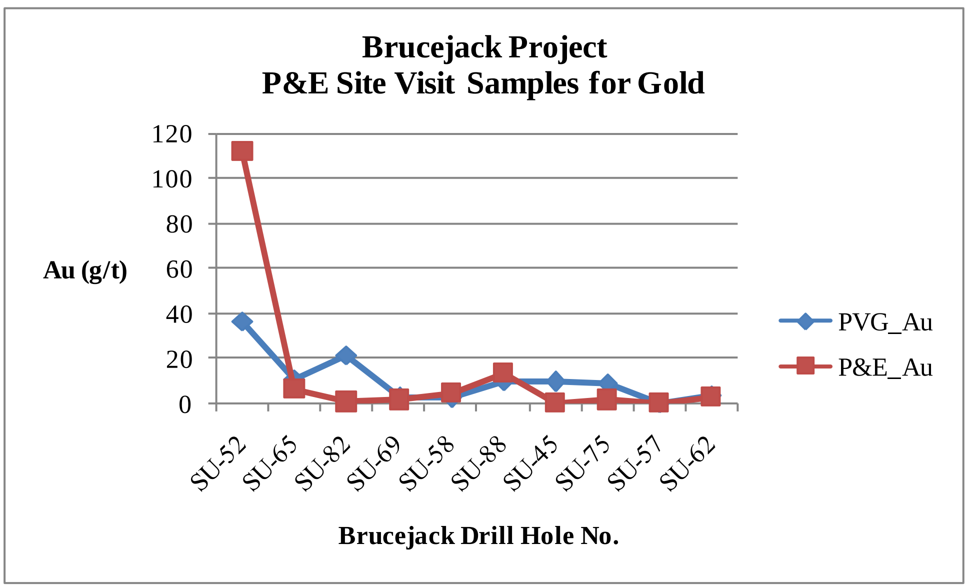
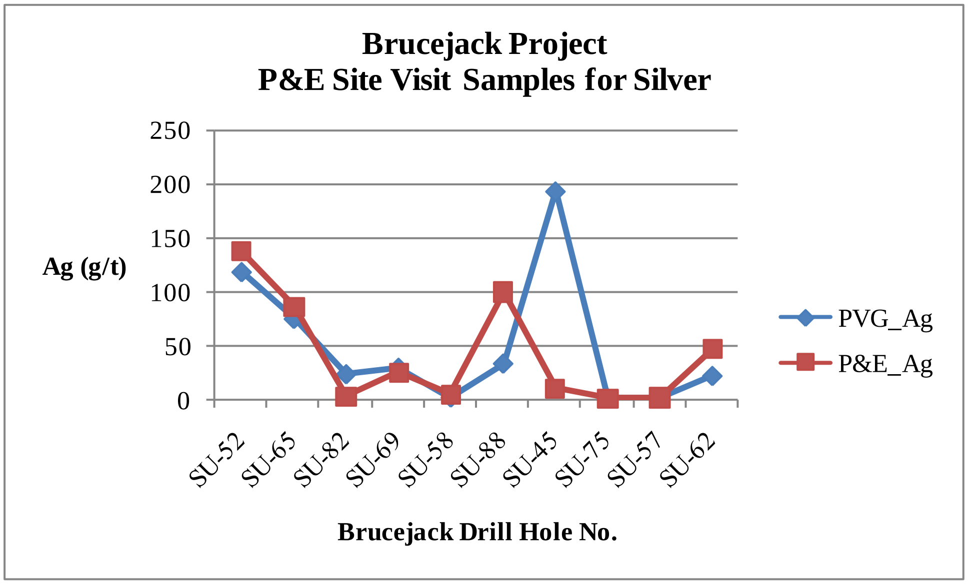


Figure 13.2 P&E Independent Site Visit Sample Results for Silver



13.2 PRETIVM QUALITY CONTROL

The QA/QC program was maintained throughout the 2010 drilling. Certified reference material standards named CDN ME-1 and CDN ME-3 were purchased from CDN Resource Labs in Langley, British Columbia. Both of these standards were certified for gold, silver and copper. One standard sample, one blank sample and one field duplicate sample (1/4split core) were inserted every 20 samples. In addition, the lab inserted their own internal QC, which included standards, blanks and both coarse reject and pulp duplicates.

13.3 2010 DATA VERIFICATION RESULTS

The QC program was monitored on a real-time basis by Pretivm throughout 2010 and any standards failing the QC protocols were re-run. The author received all the data for the 2010 drilling and verified the performance of the standards, blanks and duplicates.

13.3.1 Performance of Certified Reference Material

Standard ME-1 had 660 data points for gold and silver. None of the data points fell outside three standard deviations from the mean, though several were between two and three standard deviations. All data points for all elements passed the QC and no action was required.

The ME-3 standard had 643 data points for gold and silver. All data points passed the QC.

13.3.2 Performance of Blank Material

The blank material used for the 2008, 2009 and 2010 drill programs was ¾" crushed granite sold by Imasco Minerals as landscape material.

There were 1,115 blank samples analyzed during the 2010 program. The average gold grade in the blanks was 0.005 g/t Au. Six high values were investigated and deemed to be sampling errors.

For silver, the average grade of the blank material was 0.35 g/t Ag. One high value was investigated and no further action was required.

13.3.3 2010 Duplicate Statistics

For the 2010 drill program, there were 1,309 field core duplicate pairs, 843 pulp duplicate pairs for gold and 24 pulp duplicate pairs analyzed for silver. There were no coarse reject duplicates done.

Data for the gold duplicate types were graphed using simple scatter graphs. At the field duplicate level, the precision for gold was poor. At the pulp level the correlation was excellent.

The silver duplicates yielded poor precision at the field duplicate level and 1:1 precision at the pulp duplicate level.

13.3.4 Check Samples Assayers Canada

Approximately 524 of the 2010 pulps from Brucejack were sent to Assayers Canada Lab ("Assayers") in Vancouver as a check on the principal lab. Results were graphed for gold and silver. Precision on the gold pulps was satisfactory. Precision on the silver pulps was excellent.

The author considers that the data used in this resource estimate are of excellent quality.

14.0 ADJACENT PROPERTIES

Within the adjacent KSM property there are three notable copper-gold mineral deposits, namely Kerr, Mitchell, and Sulphurets. In 2010, a fourth deposit, name the Iron Cap Zone was discovered. All of these occurrences are situated within the claim holdings currently owned and operated by Seabridge Gold Inc., ("Seabridge").

Seabridge acquired the property from Placer Dome in June 2000. In 2009, Resource Modeling Inc. completed updated NI 43-101-compliant resource estimates for the Kerr, Sulphurets, and Mitchell zones. The Mitchell Resource was reported in a news release dated March 11, 2009, and the Kerr and Sulphurets Resources were reported in a March 25, 2009, news release.

In June 2009, a Preliminary Assessment estimated a 30-year mine life recovering 19.3 M oz of gold, 5.3 B lb of copper, 2.8 M oz of silver, and 1.9 M lb of molybdenum. In April 2010, Seabridge published the results of a subsequent Pre-feasibility Study. These results indicate an estimated Reserve statement as shown in Table 14.1.All information for this section has been taken from the Seabridge website at www.seabridgegold.net.

TABLE 14.1
KSM RESERVES AS OF APRIL 2010

Zone	Reserve	Mt	In Situ Average Grades				Contained Metal			
			Au (g/t)	Cu (%)	Ag (g/t)	Mo (ppm)	Au (M oz)	Cu (M lb)	Ag (M oz)	Mo (M lb)
Mitchell	Proven	570.6	0.64	0.17	2.95	58.0	11.7	2,101	54.1	73.0
	Probable	764.8	0.59	0.16	2.93	62.3	14.5	2,722	72.0	105.0
	Total	1,335.4	0.61	0.16	2.93	60.4	26.3	4,823	126.1	178.0
Sulphurets	Probable	142.2	0.61	0.28	0.44	101.8	2.8	883	2.0	31.9
Kerr	Probable	125.1	0.28	0.48	1.26	Nil	1.1	1,319	5.1	Nil
Totals	**Proven**	**570.6**	**0.64**	**0.17**	**2.95**	**58.0**	**11.7**	**2,101**	**54.1**	**73.0**
	Probable	**1,032.1**	**0.56**	**0.22**	**2.38**	**60.2**	**18.4**	**4,924**	**79.1**	**137.0**
	Total	**1,602.7**	**0.59**	**0.20**	**2.58**	**59.4**	**30.2**	**7,024**	**133.1**	**209.9**

On February 8, 2011, Seabridge announced an Indicated resource containing 5.1 million ounces of gold and 1.7 billion pounds of copper for the Iron Cap Zone at its 100% owned KSM project. The Iron Cap Zone is immediately adjacent to the Mitchell deposit. The Indicated resource is flanked by a halo of Inferred resources containing an additional 3.4 million ounces of gold and 1.3 billion pounds of copper. The Iron Cap resource estimate was prepared by Resource Modeling Inc. of Stites, Idaho and will be incorporated into an updated Preliminary Feasibility Study ("PFS") scheduled for completion in April 2011. The NI 43-101 compliant global resource estimate is presented in Table 14.2 below.

TABLE 14.2
2011 IRON CAP MINERAL RESOURCE ESTIMATE AT 0.50 G/T AU EQUIVALENT CUT-OFF

Resource Category	Tonnes	Au (g/t)	Au (ounces)	Cu (%)	Cu (millions of lbs.)	Ag (g/t)	Ag (ounces)	Moly (ppm)	Moly (millions of lbs.)
Indicated	361,700,000	0.44	5,117,000	0.21	1,674	5.4	62,796,000	47	37.5
Inferred	297,300,000	0.36	3,441,000	0.20	1,310	3.9	37,278,000	60	39.3

The QPs for this report have not verified the information concerning Seabridge, and the information is not necessarily indicative of the mineralization on the Brucejack Property.

15.0 MINERAL PROCESSING AND METALLURGICAL TESTING

The mineral processing and metallurgical testing written by Mr. Jianhui (John) Huang, P. Eng. is detailed in the PA by Wardrop. The title of the Technical Report is "Technical Report and Preliminary Assessment of the Snowfield-Brucejack Project, Document No. 1053750400-REP-R0001-04", dated October 28, 2010, and submitted by Pretivm.

Five holes were drilled for metallurgical test work in 2010, however there are currently no changes to report regarding any further advances in the mineral processing and metallurgical testing.

16.0 BRUCEJACK MINERAL RESOURCE ESTIMATE

16.1 INTRODUCTION

The mineral resource estimate presented herein has been prepared following the guidelines of the Canadian Securities Administrators' National Instrument 43-101 and Form 43-101F1 and in conformity with generally accepted "CIM Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Mineral resources have been classified in accordance with the "CIM Standards on Mineral Resources and Reserves: Definition and Guidelines" (2005):

- Inferred Mineral Resource:"An 'Inferred Mineral Resource' is that part of a mineral resource for which quantity and grade or quality can be estimated on the basis of geological evidence and limited sampling and reasonably assumed, but not verified, geological and grade continuity. The estimate is based on limited information and sampling gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes."
- Indicated Mineral Resource: "An 'Indicated Mineral Resource' is that part of a mineral resource for which quantity, grade or quality, densities, shape and physical characteristics, can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes that are spaced closely enough for geological and grade continuity to be reasonably assumed."
- Measured Mineral Resource: "A 'Measured Mineral Resource' is that part of a mineral resource for which quantity, grade or quality, densities, shape, and physical characteristics are so well established that they can be estimated with confidence sufficient to allow the appropriate application of technical and economic parameters, to support production planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration, sampling and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drillholes that are spaced closely enough to confirm both geological and grade continuity."

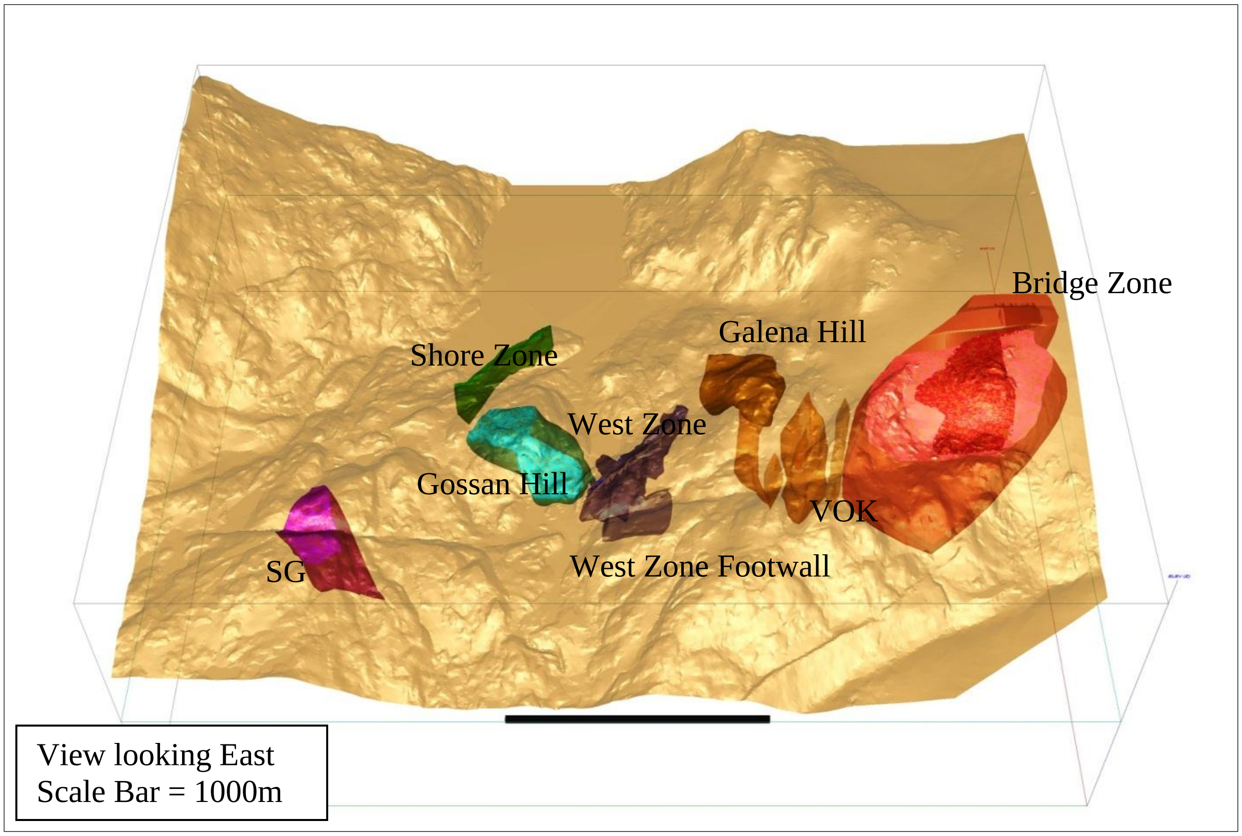
Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into mineral reserve. Confidence in the estimate of Inferred Mineral Resources is insufficient to allow the meaningful application of technical and economic parameters or to enable an evaluation of economic viability worthy of public disclosure.

All mineral resource estimation work reported herein was carried out by FH Brown, CPG, Pr.Sci.Nat., and Eugene Puritch, P.Eng., of P&E Mining Consultants Inc., independent Qualified Persons in terms of NI 43-101. This mineral resource estimate is based on information and data supplied by Pretivm. A draft copy of this report was reviewed by Pretivm for factual errors.

Mineral resource modeling and estimation were carried out using the commercially available GEMS Gemcom v5.23 and Snowden Supervisor v 7.10.11 software programs. Pit shell optimization was carried out using Whittle Four-X Single Element v 1.10.

The Brucejack mineral resource estimate encompasses nine distinct modeled mineralization domains, viz. the West Zone, West Zone Footwall Zone, Shore Zone, Gossan Hill Zone, Galena Hill Zone, SG Zone, Valley of Kings Zone (VOK), Bridge Zone and Bridge Zone Halo (Figure 16.1). The Valley of Kings zone has been modeled as four distinct sub-domains. The effective date of this estimate is February 18, 2011.

Figure 16.1 Isometric projection of the Brucejack mineralization zones



16.2 PREVIOUS RESOURCE ESTIMATES

A previous public mineral resource estimate for the Brucejack deposits dated April 16, 2001 was prepared by Pincock Allen & Holt Ltd[1]. The mineral resource estimate reported a total Measured and Indicated mineral resource of 421,400 oz Au and an Inferred mineral resource of 82,000 oz of Au (Table 16.1), based on a gold-equivalent cut-off derived from a Ag:Au equivalency ratio of 66:1.

[1] *Sulphurets-Bruceside property British Columbia technical report*, Pincock Allen & Holt Ltd., dated April 16, 2001.

TABLE 16.1 PINCOCK ALLEN & HOLT LTD. APRIL 16, 2001 MINERAL RESOURCE ESTIMATE							
Zone	**Class**	**AuEq Cut-off**	**Tonnes x 1000**	**Au g/t**	**Ag g/t**	**Au ozs x 1000**	**Ag ozs x 1000**
West	Mea	0.1 opt	144.0	15.09	594	69.8	2,750.4
West	Ind	0.1 opt	899.5	10.98	482	317.5	13,942.3
Shore	Ind	0.2 opt	92.3	11.54	143	34.2	424.6
Total	**Ind**		**991.8**	**11.03**	**451**	**351.8**	**14,366.8**
Total	**Mea + Ind**		**1,135.8**	**11.54**	**470**	**421.4**	**17,150.6**
West	Inf	0.1 opt	51.6	5.82	249	9.6	412.8
SG	Inf	0.2 opt	46.2	9.21	25	13.7	37.0
Galena Hill	Inf	0.2 opt	30.9	24.39	271	24.2	268.8
Gossan Hill	Inf	0.2 opt	22.6	47.34	62	34.4	45.2
Total	**Inf**		**51.3**	**16.86**	**156**	**82.0**	**756.5**

A mineral resource estimate dated December 1, 2009 for the Brucejack Deposit was prepared by P&E Mining Consultants Inc[2]. The mineral resource estimate reported a Measured and Indicated mineral resource of 4.04 million ounces Au and an Inferred mineral resource of 4.87 million ounces Au (Table 16.2) using a cut-off of 0.35g/t AuEq. The estimate was based on the results of 844 drillholes and constrained within an optimized conceptual pit shell.

TABLE 16.2 COMBINED MINERAL RESOURCE ESTIMATE AT A 0.35G/T AUEQ CUT-OFF (1)(2)(3)					
Class	**Tonnes x M**	**Au g/t**	**Ag g/t**	**Au ozs x M**	**Ag ozs x M**
Measured	9.9	2.06	75.0	0.66	23.8
Indicated	110.7	0.95	11.7	3.38	41.6
Measured + Indicated	120.5	1.04	16.9	4.04	65.4
Inferred	198	0.76	11.2	4.87	71.5

16.3 SAMPLE DATABASE

Sample data were provided by Silver Standard in the form of ASCII text files and Excel spreadsheets. Data included historical surface drilling records, historical underground drilling records, and current Silver Standard drilling records.

The supplied databases contain records for 1,002 drillholes. Of these, 94 drillholes were outside the block model limits or had no reported assay data.

The 908 drillhole records (Table 16.3) used for this mineral resource estimate contain collar, survey and assay data. Assay data fields consist of the drillhole ID, downhole interval distances,

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[2] *Technical report and resource estimates on the West, Bridge, Galena Hill, Shore, SG and Gossan Hill gold and silver zones of the Brucejack property*, P&E Mining Consultants Inc., dated December 1, 2009.

sample number, Au grades and Ag grades. All data are in metric units and all collar coordinates were converted by Silver Standard to the UTM NAD27 system.

TABLE 16.3 BRUCEJACK DRILLING DATABASE RECORDS	
DataType	**Record Count**
Historical Surface Drilling	362
Historical UG Drilling	439
Pretivm Surface Drilling	107
Total	**908**

The database contains a total of 76,227 Au assays and 75,291 Ag assays. Due to the varying assay protocols in use during different project phases, the following low grade conversions were used:

- For the historical drilling, Au assay grades less than 0.17g/t were converted to 0.085g/t, and Ag assay grades less than1.71g/t were converted to 0.85g/t
- For the current Silver Standard drilling program, Au assay grades less than 0.005 g/t were converted to 0.003 g/t, and Ag assay grades less than 0.5 g/t were converted to 0.25g/t.

Silver Standard also provided an AutoCAD format wireframe of the historical underground mining development at the West Zone. Historic mine plans were used to digitize the underground development. Underground workings were digitized on 44 east-west sections in the mine grid coordinate system using AutoCAD software. Section lines were generally spaced every 10 m, with a reduction to 5 m spacing in areas of more complex development (i.e., in areas of multiple tunnels, junctions etc.). The digitized data were converted to UTM NAD27 coordinates using the McElhanney conversion factors, imported into the Gemcom mining software, a single three dimensional solid to represent the underground workings generated.

16.4 DATABASE VALIDATION

Industry standard validation checks were completed on the supplied database, and minor corrections made. P&E typically validates a mineral resource database by checking for inconsistencies in naming conventions or analytical units, duplicate entries, interval, length or distance values less than or equal to zero, blank or zero-value assay results, out-of-sequence intervals, intervals or distances greater than the reported drill hole length, inappropriate collar locations, and missing interval and coordinate fields. No significant discrepancies with the supplied data were noted.

Downhole surveys for the current drilling were completed by Silver Standard with a Reflex EZ-Shot magnetic instrument. Measurements were taken every 100m unless drastic deviations occurred, in which case additional measurements were taken every 50 m to eliminate error. Downhole survey data were examined by P&E for significant deviations.

16.5 TOPOGRAPHIC CONTROL

For the Brucejack project, aerial photography specialists Aero Geometrics were contracted by Silver Standard to produce a topographic map of the property. Using high-resolution photographs taken from a small airplane in 2008, a photo-mosaic was first made of the Brucejack and adjoining Snowfield properties. Using this photo-mosaic and elevation data obtained from 1:50,000 scale national topographic maps published in 1979 by the Surveys and Mapping Branch of the Department of Energy, Mines & Resources, Aero Geometrics digitally generated a contoured topographic map with contour lines spaced at two-meter intervals and presented this map as a digital elevation model, or DEM, in dxf (AutoCAD) format. In order for this topographic map to be consistent with the NAD27, Zone 9 UTM grid system being used by Silver Standard for the projects, it was necessary to make minor adjustments (vertical and lateral shifts) to the positioning of the DEM. These adjustments were carried out by various workers, including geological consultants and McElhanney technicians, and were checked against numerous topographic points (historic and 2009 Brucejack drill hole collars, the western shoreline of Brucejack Lake, historic mine grid stations) that had been surveyed by McElhanney field crews in 2009.

16.6 DENSITY

A total of 317 bulk density measurements were provided by Silver Standard, with an average bulk density of 2.81t/m3 (Table 16.4). Bulk density measurements were obtained from core samples by ALS Chemex. For the West Zone a value of 2.75 t/m has been used historically. A global bulk density of 2.80t/m3 was assigned to all lithologies for this mineral resource estimate.

TABLE 16.4
BRUCEJACK BULK DENSITY STATISTICS

	Waste	Mineralization	Total
Count	84	233	**317**
Minimum	2.61 t/m3	2.50 t/m3	**2.50 t/m3**
Maximum	2.97 t/m3	3.34 t/m3	**3.34 t/m3**
Average	2.80 t/m3	2.81 t/m3	**2.81 t/m3**
Standard Deviation	0.08	0.09	**0.08**

16.7 BRUCEJACK DOMAIN MODELING

Several discrete mineralization domains at Brucejack have been identified by Silver Standard, with the West Zone, Shore Zone and Valley of Kings Zone considered by Silver Standard as being predominately structurally controlled vein systems related to the north-trending Brucejack Fault and associated Reidel shear structures, and the other domains tentatively defined as mineralized stockwork/breccia/vein systems. (Pers. Comm. W Board 2010).

The overall trend of the West Zone, West Zone Footwall Zone and Shore Zone mineralization is ~135°, and modeling for these domains was generating from successive polylines spaced every ten meters and oriented perpendicular to the trend of the mineralization. The outlines of the polylines were defined by the selection of mineralized material at or above 0.5g/t Au with demonstrated continuity along strike and down dip. In some cases mineralization below 0.5g/t Au was included for the purpose of maintaining continuity. All polyline vertices were snapped directly to drillhole assay intervals, in order to generate a true three-dimensional representation of the extent of the mineralization.

The general trend of the Valley of Kings mineralization has been identified by Silver Standard geologists as predominantly east-west, with high-grade zones associated with internal Reidel shear structures. Four distinct sub-domains were modeled for the Valley of Kings Zone from successive polylines spaced every ten meters perpendicular to this trend.

For the Gossan Hill Zone, Galena Hill Zone, SG Zone and Bridge Zone domains the mineralization models were generated from successive polylines spaced every 25 meters and oriented north-south. The outlines of the polylines were defined by the selection of mineralized material at or above 0.5g/t Au with demonstrated continuity along strike and down dip. In some cases mineralization below 0.5g/t Au was included for the purpose of maintaining continuity. All polyline vertices were snapped directly to drillhole assay intervals, in order to generate a true three-dimensional representation of the extent of the mineralization.

In order to ensure that all potentially economic mineralization was captured for mineral resource estimation, a secondary mineralization halo for the Bridge Zone was subsequently modeled using a Au0.2g/t grade shell. Three-dimensional models of the low-grade mineralization domain were then created by combining successive polylines into wireframes. In addition, a profile of the glacier margins at Bridge Zone was constructed from ice/bedrock contacts logged during drilling, and the Bridge Zone and Bridge Zone Halo domains were clipped to this surface.

16.8 COMPOSITING

Assay sample lengths for the database range from 0.05 m to 48 m, with an average sample length of 1.50m. A compositing length of 1.50m was therefore selected for use. Length-weighted composites were calculated for Au and Ag within the defined mineralization domains. Missing sample intervals in the historical data were assigned a nominal background grade of 0.001g/t Au or 0.001g/t Ag.

The compositing process started at the first point of intersection between the drillhole and the domain intersected, and halted upon exit from the domain wireframe. Composites that were less than 0.5m in length were discarded so as to not introduce a short sample bias into the estimation process. The wireframes that represented the interpreted mineralization domains were also used to back-tag a rock code field into the drillhole workspace. Composites were assigned a domain rock code value based on the domain wireframe that the interval midpoint fell within. The composite data were then exported to Gemcom extraction files for grade estimation.

16.9 EXPLORATORY DATA ANALYSIS

Summary assay statistics were calculated separately for surface and underground sample populations (Table 16.5), with fourteen surface drilling assay grades of 1000 g/t Au or higher, and four underground drilling assay grades reporting assays of 1000 g/t Au or higher.

The correlation coefficient for the total Au and Ag sample populations is 0.19, indicating little correlation. However, for the surface assay sample population considered separately the correlation coefficient is 0.24, rising to 0.32 for the underground population.

TABLE 16.5 BRUCEJACK SUMMARY ASSAY STATISTICS			
Surface	**Au ppm**	**Ag ppm**	**Length**
Mean	2.00	25.31	1.50
CV	47.92	13.07	0.35
Median	0.31	3.90	1.50
Mode	0.09	0.25	1.50
Standard Deviation	95.83	331.02	0.53
Sample Variance	9184.30	109574.80	0.28
Kurtosis	19247.07	7683.98	1046.00
Skewness	126.75	72.86	13.27
Range	16948.50	41678.73	47.95
Minimum	0.00	0.25	0.05
Maximum	16948.50	41678.98	48.00
Count	58613	57677	57677
Underground	**Au ppm**	**Ag ppm**	**Length**
Mean	3.33	123.75	1.40
CV	9.62	5.76	0.33
Median	0.69	20.23	1.50
Mode	0.09	0.86	1.50
Standard Deviation	32.05	712.32	0.46
Sample Variance	1027.03	507398.53	0.21
Kurtosis	2710.76	530.30	65.37
Skewness	43.93	19.42	2.92
Range	2519.82	27949.89	14.19
Minimum	0.09	0.86	0.01
Maximum	2519.90	27950.74	14.20
Count	17614	17614	17614
Total	**Au ppm**	**Ag ppm**	**Length**
Mean	**2.31**	**48.34**	**1.48**
CV	**36.99**	**9.35**	**0.35**
Median	**0.37**	**5.83**	**1.50**
Mode	**0.09**	**0.86**	**1.50**
Standard Deviation	**85.44**	**452.08**	**0.52**
Sample Variance	**7299.65**	**204375.33**	**0.27**
Kurtosis	**23438.59**	**2465.92**	**895.40**
Skewness	**138.07**	**39.91**	**11.46**
Range	**16948.50**	**41678.73**	**47.99**
Minimum	**0.00**	**0.25**	**0.01**
Maximum	**16948.50**	**41678.98**	**48.00**
Count	**76227**	**75291**	**75291**

Summary composite statistics were calculated by domain for each commodity (Table 16.6). A comparison of the domain averages demonstrates the differences in grade distributions between the defined domains, with the highest average composite grades occurring at the Valley of Kings, followed by the West Zone.

TABLE 16.6
BRUCEJACK SUMMARY COMPOSITE STATISTICS BY DOMAIN

Ag Composites	*TOTAL*	*WZ*	*WZFW*	*SZ*	*GO*	*G4*	*SG*	*BZ*	*BZLG*	*VOK*
Mean	46.37	82.89	9.30	24.84	8.52	14.80	4.43	8.14	6.58	12.98
CV	5.64	4.39	2.06	3.28	5.65	2.96	1.48	2.43	3.49	9.72
Median	7.57	17.83	4.55	7.97	3.91	6.44	2.61	3.95	2.57	3.90
Mode	0.00	0.00	0.86	0.00	0.00	0.00	0.25	1.60	0.25	2.00
Standard Deviation	261.55	364.17	19.20	81.49	48.12	43.85	6.55	19.76	22.94	126.23
Sample Variance	68410.32	132619.88	368.49	6641.13	2315.93	1922.44	42.96	390.44	526.02	15932.86
Kurtosis	554.13	289.46	49.32	164.05	3254.63	272.44	36.24	265.00	653.94	1089.78
Skewness	20.07	14.58	6.38	11.22	53.18	13.90	4.73	12.87	21.40	31.82
Range	11517.18	11517.18	189.41	1612.38	2982.86	1185.73	85.23	651.17	822.94	4574.37
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.25
Maximum	11517.18	11517.18	189.41	1612.38	2982.86	1185.73	85.23	651.17	822.94	4574.62
Count	48990	24193	333	2322	4491	3202	1059	6592	4183	2615

Au Composites	*TOTAL*	*WZ*	*WZFW*	*SZ*	*GO*	*G4*	*SG*	*BZ*	*BZLG*	*VOK*
Mean	2.32	2.41	1.28	2.26	1.03	2.17	0.70	0.83	0.43	11.62
CV	27.56	9.04	3.25	8.62	6.85	17.98	1.76	3.17	3.70	22.79
Median	0.51	0.65	0.66	0.47	0.35	0.46	0.31	0.54	0.23	0.41
Mode	0.00	0.00	0.75	0.00	0.00	0.00	0.00	0.54	0.00	0.17
Standard Deviation	64.07	21.75	4.16	19.48	7.02	39.09	1.23	2.63	1.61	264.81
Sample Variance	4104.50	473.10	17.31	379.48	49.29	1527.66	1.51	6.90	2.58	70125.53
Kurtosis	14199.09	2421.59	156.20	810.73	365.29	1923.97	30.37	1192.18	733.47	904.49
Skewness	112.98	42.57	11.64	25.69	18.17	41.70	4.64	29.36	23.67	29.51
Range	8909.85	1676.35	62.80	705.80	173.32	1928.79	14.01	134.40	57.02	8909.85
Minimum	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Maximum	8909.85	1676.35	62.80	705.80	173.32	1928.79	14.01	134.40	57.02	8909.85
Count	48990	24193	333	2322	4491	3202	1059	6592	4183	2615

16.10 TREATMENT OF EXTREME VALUES

The presence of high-grade outliers was evaluated by examining histograms and log-probability graphs of the domain-coded and composited grade data for the defined mineralization domains, and where possible the observed correlations between Au and Ag were also taken into account. For the West Zone, West Zone Footwall, Shore Zone and Valley of Kings Zone, estimation was done using Median Indicator Kriging, and thresholds for these domains were derived from the high-grade bin. Threshold values were selected that reduce the influence of high-grade outliers during linear estimation while minimizing changes in the composite sample distribution, and composites were capped to this value prior to estimation (Table 16.7).

TABLE 16.7
BRUCEJACK CAPPING AND THRESHOLD VALUES

Commodity	Au g/t	Ag g/t
Bridge Zone	8	200
Bridge Zone Halo	8	80
Galena Hill	20	200
Gossan Hill	20	200
SG Zone	10	200
Shore Zone	80	2100
West Zone	130	4000
West Zone Footwall	130	4000
Valley of Kings	130	1000

16.11 CONTINUITY ANALYSIS

For the Bridge Zone, Bridge Zone Halo, Galena Hill, Gossan Hill and SG Zone domains omni-directional experimental semi-variograms were modeled from uncapped composite data using a normal-scores transformation (Table 16.8). The downhole variogram was viewed at a 1.5 m lag spacing (equivalent to the composite length) to assess the nugget variance. Nugget and standardized spherical models were used to model the experimental semi-variograms in normal-score transformed space. Semi-variogram model ranges were then checked and iteratively refined for each model relative to the overall nugget variance. Back-transformed variance contributions were calculated for grade interpolation. Continuity ellipses based on the semi-variogram models were then generated for each variable in each domain and used to define the appropriate search ellipses.

TABLE 16.8
BRUCEJACK EXPERIMENTAL SEMI-VARIOGRAMS

Domain	Element	Experimental Semi-Variogram
Bridge Zone	Ag	0.09 + sph(0.75, 15) + sph(0.15, 260)
	Au	0.30 + sph(0.64, 10) + (0.06, 160)
Bridge Zone Halo	Ag	0.14 + sph(0.63, 15) + sph(0.23, 280)
	Au	0.28 + (sph(0.62, 9) + sph(0.09, 50)
Galena Hill	Ag	0.23 + sph(0.70, 13) + sph(0.07, 100)
	Au	0.40 + sph(0.58, 10) + sph(0.02, 70)
Gossan Hill	Ag	0.23 + sph(0.73, 13) + sph(0.03, 150)
	Au	0.32 + sph(0.61, 12) + sph(0.07, 120)
SG	Ag	0.03 + sph(0.46, 6) + sph(0.51, 20)
	Au	0.15 + sph(0.59, 6) + sph(0.26, 20)

For the West Zone, West Zone Footwall, Shore Zone and Valley of Kings domains, median indicator semi-variograms were modeled from uncapped composite data based on observed breaks between high-grade and low-grade sample populations (Table 16.9). Normal-score semi-variograms for each of the three principle directions were calculated, and in general the horizontal and across-strike directions were aligned with observed mineralization trends, with the dip-plane direction being variable.

TABLE 16.9
BRUCEJACK MEDIAN INDICATOR SEMI-VARIOGRAMS

Domain	Element	Ind	Experimental Semi-Variogram
West Zone	Ag	66 g/t	0.3 + sph(0.4, 5/5/5) + sph(10/10/10)
	Au	4 g/t	0.3 + sph(0.5, 10/10/5) + sph(0.2, 20/50/10)
West Zone Footwall	Ag	66 g/t	0.3 + sph(0.4, 5/5/5) + sph(10/10/10)
	Au	4 g/t	0.3 + sph(0.5, 10/10/5) + sph(0.2, 20/50/10)
Shore Zone	Ag	80 g/t	0.3 + sph(0.40, 30/20/5) + sph(0.30, 50/30/10)
	Au	4 g/t	0.2 + sph(0.55, 15/10/5) + sph(0.25, 50/30/10)
Valley of Kings	Ag	68 g/t	0.30 + sph(0.70, 100/100/20)
	Au	10 g/t	0.30 + sph(0.70, 100/100/20)

16.12 BLOCK MODELS

The identified Brucejack mineralization domains extend along a corridor 500 m wide and 3,500 m in length. In order to facilitate mine planning and optimization, a single orthogonal block model was established across the property using a 10m x 10m x 10m block size (Table 16.10). The block model consists of separate models for Au estimated grades, Ag estimated grades, indicator kriging probabilities, associated rock codes, percent, density and classification attributes and a calculated Au-equivalent ("AuEq") grade. A percent block model was used to accurately represent the volumes and tonnages that were contained within the respective mineralization domains. As a result, domain boundaries are properly represented by the percent model's capacity to measure infinitely variable inclusion percentages within a specific domain. The volume of the defined historical workings was also calculated for the West Zone and depleted from the model prior to estimation.

TABLE 16.10
BRUCEJACK BLOCK MODEL SETUP

	Origin	Blocks	Size
X	425,800	200	10 m
Y	6,256,500	350	10 m
Z	2,000	140	10m
Rotation	0°		

16.13 ESTIMATION& CLASSIFICATION

The mineral resource estimate was constrained by wireframes that form hard boundaries between the respective composite data files. Individual block grades were used to calculate a Au-equivalent (AuEq) block grade model.

For the Bridge Zone, Bridge Zone Halo, Galena Hill, Gossan Hill and SG Zone mineralization domains, block grades were estimated using Ordinary Kriging of composite values. A two-pass series of expanding search ellipses with varying minimum sample requirements was used for sample selection, estimation and classification.

During the first pass, eight to twelve composite values from three or more drillholes within a search ellipse corresponding to the defined ranges were required for estimation. All block grades estimated during the first pass were classified as Indicated.

During the second pass, blocks not populated during the first pass were estimated. Three to twelve composite values from one or more drillholes within a search ellipse corresponding to about 200% of the defined range were required for estimation. All block grades estimated during the second pass were classified as Inferred. All SG Zone and Bridge Zone Halo mineral resources were all classified as Inferred.

For the West Zone, West Zone Footwall, Shore Zone and Valley of Kings mineralization domains the block estimates were calculated using Median Indicator Kriging. Based on the defined indicator semi-variograms, for each block a high-grade probability, high grade estimate and low-grade estimate were calculated and then combined into a single block estimate. A three-pass series of expanding search ellipses with varying minimum sample requirements was used for sample selection, estimation and classification:

During the first pass, six to twelve composite values from two or more drillholes within a search ellipse corresponding to 50% of the defined range were required for estimation. All block grades estimated during the first pass were classified as Measured. This level of classification was applied only to the West Zone, where extensive surface and underground drilling has defined the continuity of the mineralization.

During the second pass, blocks not populated during the first pass were estimated. Four to twelve composite values from two or more drillholes within a search ellipse corresponding to 100% of the defined range were required for estimation. All block grades estimated during the second pass were classified as Indicated.

During the third pass, blocks not populated during the first or second pass were estimated. Three to twelve composite values from one or more drillholes within a search ellipse corresponding to about 200% of the defined range were required for estimation. All block grades estimated during the third pass were classified as Inferred. All Valley of Kings mineral resources were classified as Inferred.

16.14 BRUCEJACK MINERAL RESOURCE ESTIMATE

In order to ensure that the reported mineral resources meet the CIM requirement for "reasonable prospects for economic extraction", conceptual Lerchs-Grossman optimized pit shells were developed based on all available mineral resources (Measured, Indicated and Inferred), using the economic parameters listed in Table 16.11. Commodity prices are based on the three-year trailing average as of 31 December 2010. The results from the optimized pit-shells are used solely for the purpose of reporting mineral resources that have reasonable prospects for economic extraction.

TABLE 16.11
ECONOMIC PARAMETERS

Mining Cost	US$1.75/t
Processing Cost + G&A	US$7.00/t
Pit Wall Slope Angle	45°
Au Price	US$1,025.00/oz
Ag Price	US$16.60/oz
Au Recovery	71%
Ag Recovery	70%
AuEq Cutoff	0.299 g/t

All mineral resources were reported against a 0.30g/t Au equivalent cut-off, as constrained within the optimized pit shell (Table 16.12, Table 16.13 and Table 16.14).

TABLE 16.12 BRUCEJACK ESTIMATED MINERAL RESOURCES BASED ON A CUT-OFF GRADE OF 0.30 G/T AUEQ (1)(2)(3)					
Category	**Tonnes (millions)**	**Gold (g/t)**	**Silver (g/t)**	**Contained(3)**	
				Gold ('000 oz)	**Silver ('000 oz)**
Measured	11.7	2.25	75.56	846	28,423
Indicated	285.3	0.80	9.57	7,338	87,782
Mea +Ind	297.0	0.86	12.17	8,184	116,205
Inferred	542.5	0.72	8.67	12,558	151,220

(1) *Mineral resources for the February 2011 estimate are defined within a Whittle optimized pit shell that incorporates project metal recoveries, estimated operating costs and metals price assumptions. Parameters used in the estimate include metals prices (and respective recoveries) of US$1,025/oz. gold (71%) and US$16.60/oz. silver (70%). The pit optimization utilized the following cost parameters: Mining US$1.75/tonne, Processing US$6.10/tonne and G&A US$0.90/tonne along with pit slopes of 45 degrees.. Mineral resources which are not mineral reserves do not have demonstrated economic viability. The estimate of mineral resources may be materially affected by environmental, permitting, legal, marketing, or other relevant issues. The mineral resources in this news release were estimated using the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), CIM Standards on Mineral Resources and Reserves, Definitions and Guidelines prepared by the CIM Standing Committee on Reserve Definitions and adopted by CIM Council.*

(2) *The quantity and grade of reported Inferred resources in this estimation are uncertain in nature and there has been insufficient exploration to define these inferred resources as an Indicated or Measured mineral resource and it is uncertain if further exploration will result in upgrading them to an Indicated or Measured mineral resource category.*

(3) *Contained metal may differ due to rounding.*

TABLE 16.13 BRUCEJACK 5.00 G/T AUEQ MINERAL RESOURCE GRADE & TONNAGE ESTIMATE (1)(2)(3)					
Category	**Tonnes (millions)**	**Gold (g/t)**	**Silver (g/t)**	**Contained(3)**	
				Gold ('000 oz)	**Silver ('000 oz)**
Measured	1.947	7.95	241.25	498	15,102
Indicated	1.722	7.33	123.19	406	6,820
Meas +Ind	3.669	7.66	185.84	903	21,922
Inferred	4.707	12.54	49.24	1,898	7,452

(1), (2) *and* ***(3),*** *See footnotes to Table 16.12.*

(4)*The high-grade resource estimate is a subset of the bulk-tonnage resource estimate and as such is included within the bulk-tonnage resource estimate and is not in addition to the bulk-tonnage resource estimate.*

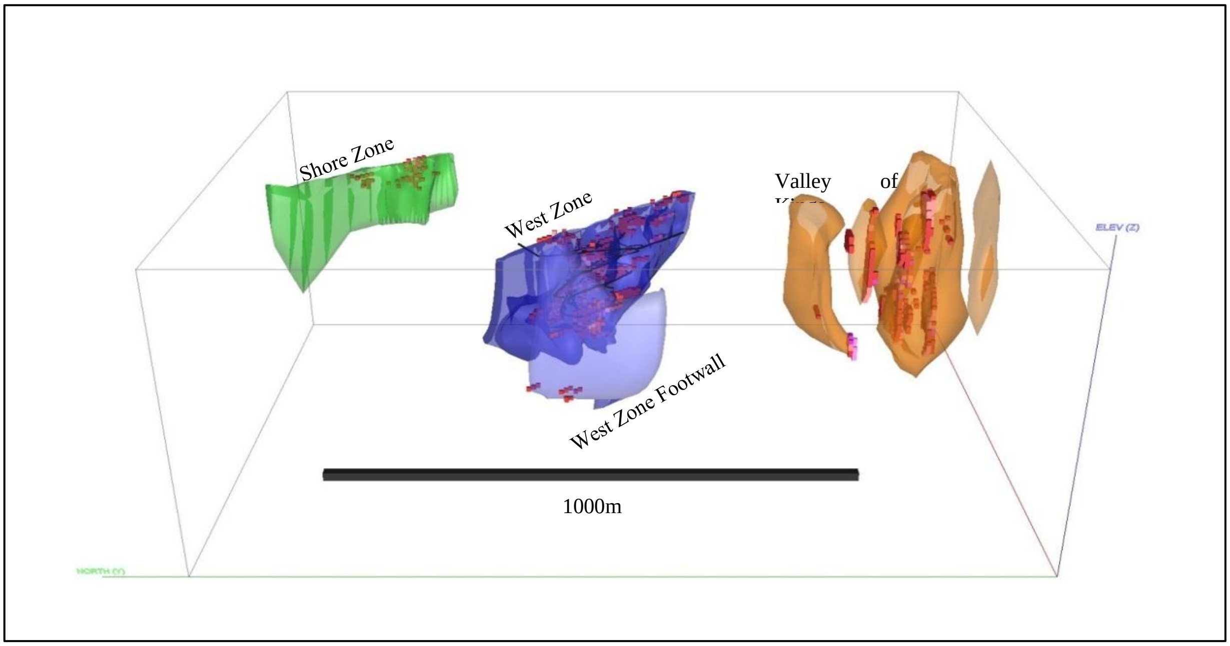
TABLE 16.14 BRUCEJACK 3.00 G/T AUEQ MINERAL RESOURCE GRADE & TONNAGE ESTIMATE (1)(2)(3)					
Category	**Tonnes (millions)**	**Gold (g/t)**	**Silver (g/t)**	**Contained(3)**	
				Gold ('000 oz)	**Silver ('000 oz)**
Measured	3.495	5.43	177.98	610	19,999
Indicated	4.940	4.62	69.33	734	11,011
Mea +Ind	8.435	4.96	114.35	1,344	31,010
Inferred	9.637	7.80	40.74	2,417	12,623

(1), (2) *and* ***(3)****, See footnotes to Table 16.12.*

(4)*The high-grade resource estimate is a subset of the bulk-tonnage resource estimate and as such is included within the bulk-tonnage resource estimate and is not in addition to the bulk-tonnage resource estimate.*

An isometric drawing looking east showing the Shore Zone, West Zone, West Zone Footwall and Valley of Kings is shown below in Figure 16.2. Blocks estimated at 10g/t AuEq or higher have been displayed.

Figure 16.2 Isometric View of Shore, West, West Footwall and Valley of the Kings Zones



16.15 VALIDATION

The block model was validated visually by the inspection of successive section lines in order to confirm that the block model correctly reflects the distribution of high-grade and low-grade samples.

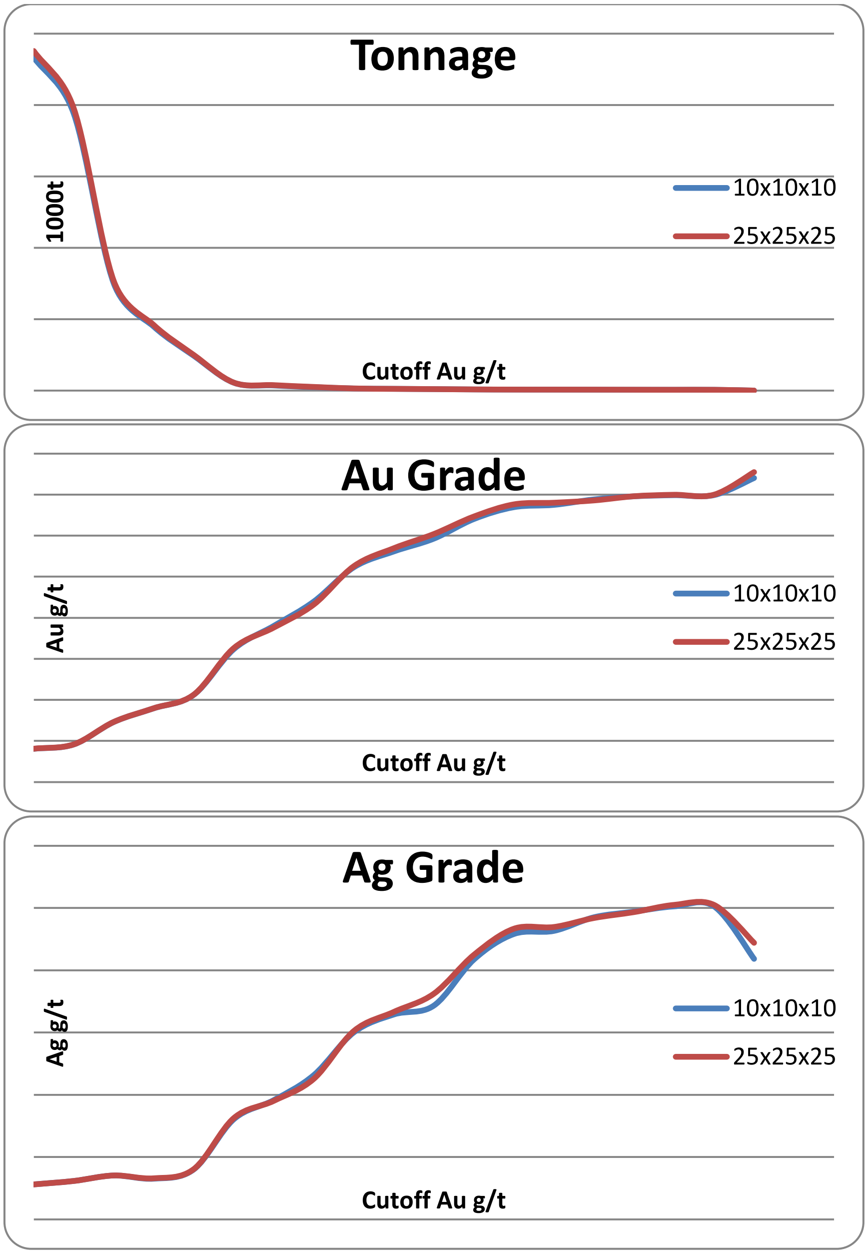
An additional validation check was completed by comparing model block grade estimates to the average grade of capped composites within a corresponding block (Table 16.15). For the domains estimated by Ordinary Kriging the observed differences in grades suggest a minimal bias. For the West Zone, West Zone Footwall and Shore Zone a high degree of correlation between the composite average grades and model block estimates was also observed. For the Valley of Kings model the presence of multiple very high-grade samples and mixed sample populations has biased the overall comparison of average grades, and indicates that moving forward additional work is indicated in order to further differentiate the high and low grade sample populations.

TABLE 16.15
VALIDATION STATISTICS AND CORRELATION COEFFICIENTS FOR COMPOSITE AND BLOCK ESTIMATES

Galena Hill, Gossan Hill, SG Zone, Bridge Zone				
	Ag Comps	**Ag Block**	**Au Comps**	**Au Block**
Mean g/t	8.10	7.93	0.64	0.67
CV	1.72	1.11	1.16	0.84
Median g/t	4.43	5.22	0.46	0.54
Mode	0.00	0.76	0.00	0.26
Standard Deviation	13.90	8.81	0.75	0.57
Sample Variance	193.08	77.67	0.56	0.32
Kurtosis	57.00	22.12	25.69	16.93
Skewness	6.43	3.76	4.22	3.20
Range	195.30	111.54	7.93	6.70
Minimum g/t	0.00	0.04	0.00	0.00
Maximum g/t	195.31	111.58	7.93	6.70
Count	4035	4035	4002	4002
Correlation Coef.	0.61		0.75	
West Zone, West Zone Footwall, Shore Zone				
	Ag Comps	**Ag Block**	**Au Comps**	**Au Block**
Mean g/t	72.85	69.40	2.11	2.02
CV	3.43	1.67	4.04	1.76
Median g/t	19.69	29.71	0.75	0.96
Mode	0.00	0.00	0.00	0.00
Standard Deviation	249.63	115.71	8.53	3.57
Sample Variance	62313.05	13387.88	72.80	12.75
Kurtosis	456.01	23.08	316.94	37.78
Skewness	16.71	4.04	15.64	5.25
Range	9006.84	1361.20	217.86	47.92
Minimum g/t	0.00	0.00	0.00	0.00
Maximum g/t	9006.84	1361.20	217.86	47.92
Count	4447	4447	4447	4447
Correlation Coef.	0.50		0.51	
Valley of Kings				
	Ag Comps	**Ag Block**	**Au Comps**	**Au Block**
Mean g/t	12.45	10.99	14.09	1.73
CV	5.33	1.80	12.87	3.09
Median g/t	4.69	6.09	0.51	0.57
Mode	4.35	3.23	0.54	0.13
Standard Deviation	66.36	19.75	181.35	5.33
Sample Variance	4403.69	389.87	32886.05	28.36
Kurtosis	406.57	35.74	256.39	174.64
Skewness	19.13	5.42	15.83	11.10
Range	1455.36	184.44	3101.27	95.15
Minimum g/t	0.42	0.72	0.01	0.04
Maximum g/t	1455.78	185.15	3101.28	95.20
Count	557	557	557	557
Correlation Coef.	0.36		0.54	

In order to evaluate the conditional bias associated with the use of small blocks across the project area, grade/tonnage curves were calculated against a series of Au cut-offs for both the 10m x10m x10m estimates, and for a series of 25m x25m x10m estimates for the Bridge Zone, Bridge Zone Halo, Galena Hill, Gossan Hill and SG domains. The results indicate that on a global scale the conditional bias is not significant at this stage (Figure 16.3).

Figure 16.3 Global conditional bias check



17.0 OTHER RELEVANT DATA AND INFORMATION

There are no other relevant data to this project that have not already been discussed in this Technical Report.

18.0 CONCLUSIONS AND RECOMMENDATIONS

18.1 CONCLUSIONS

The current, updated resources at Brucejack were derived from modeling nine zones on the Property and subsequently defining resources in optimized pits at 0.30 g/t AuEq cut-off, 3.0 g/t AuEq cut-off and 5.0 g/t AuEq cut-off. The resources are defined within Whittle optimized pit shells that incorporate project metal recoveries, estimated operating costs and metals price assumptions.

A positive Preliminary Economic Assessment ("PEA") for the combined Snowfield-Brucejack Project was delivered by Wardrop Engineering in October 2010, and was based on information up to the end of 2009. The drilling completed in 2010 allowed Pretivm to redefine resources based on higher cut-off grades, and subsequently a new PEA will be required to examine the economics of a higher grade mining operation at Brucejack.

18.2 RECOMMENDATIONS

It is recommended, based on the current updated resource estimate, to undertake the following at Brucejack:

- Complete a new PEA, which examines the economics of a higher grade mining operation in the West Zone and VOK Zone;
- Complete approximately 50,000 metres of diamond drilling in the known areas of high grade mineralization with the intention of :
    - Tightening the drill spacing to increase the levels of confidence to move Inferred resources into the Measured and Indicated categories and to improve knowledge of the continuity of the high grade mineralization for the VOK and other high-grade zones;
    - Testing the high-grade mineralization to depths greater than the current 650 metres; and
    - Following up on a number of high-grade intercepts encountered in the 2009 and 2010 drill programs that are not sufficiently defined to be included in the high-grade resource.
- Continue with the metallurgical work initiated prior to the previous PEA;
- Continue with the environmental work initiated prior to the previous PEA.

This work should all be undertaken simultaneously at an approximate cost of $16 M.

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20.0 CERTIFICATES

CERTIFICATE of AUTHOR

TRACY J. ARMSTRONG, P.GEO.

I, Tracy J. Armstrong, P.Geo., residing at 2007 Chemin Georgeville, res. 22, Magog, QC J1X 0M8, do hereby certify that:

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

2. This certificate applies to the Technical Report titled, "Technical Report and Updated Resource Estimate for the Brucejack Property, Skeena Mining Division, British Columbia, Canada" (the "Technical Report") with an effective date of February 18, 2011;

3. I am a graduate of Queen's University at Kingston, Ontario with a B.Sc (HONS) in Geological Sciences (1982) and have worked continuously since that time;

4. I am a geological consultant currently licensed by the Order of Geologists of Québec (License No. 566), the Association ofProfessional Geoscientists of Ontario (License No. 1204) and the Association of Professional Engineers and Geoscientists of British Columbia (License No. 34720);

5. I am responsible for Sections 1 through 15, 17, and co-authored Section 18, as well as the overall structuring of the Technical Report;

6. I did not visit the Brucejack Property;

7. I have had prior involvement with the Brucejack Property that is the subject of this Technical Report. My prior involvement was as co-author on several previous Technical Reports;

8. 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 and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. This report is based on my personal review of information provided by the Issuer and on discussions with the Issuer's representatives. My relevant experience for the purpose of the Technical Report is:
    - Underground production geologist, Agnico-Eagle LaRonde Mine 1988-1993;
    - Exploration geologist, Laronde Mine 1993-1995;
    - Exploration coordinator, Placer Dome 1995-1997;
    - Senior Exploration Geologist, Barrick Exploration 1997-1998;
    - Exploration Manager, McWatters Mining 1998-2003;
    - Chief Geologist Sigma Mine 2003;
    - Consulting Geologist 2003 to present.

9. I am independent of the issuer applying the test in Section 1.4 of NI 43-101;

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

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

Effective date: February 18, 2011

Signing date: March 4, 2011

[SIGNED and SEALED]

{Tracy Armstrong}

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Tracy J. Armstrong, P.Geo.

CERTIFICATE of AUTHOR

EUGENE J. PURITCH, P.ENG.

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

1. I am President of P&E Mining Consultants Inc. under contract by Pretium Resources Inc. (the "Issuer");
2. This certificate applies to the technical report titled "Technical Report and Updated Resource Estimate on the Brucejack Property, Skeena Mining Division, British Columbia, Canada" (the "Technical Report") with an effective date of February 18, 2011;
3. I am a graduate of The Haileybury School of Mines, with a Technologist Diploma in Mining, as well as obtaining an additional year of undergraduate education in Mine Engineering at Queen's University. In addition, I have met the Professional Engineers of Ontario Academic Requirement Committee's Examination requirement for Bachelor's Degree in Engineering Equivalency. I am currently licensed by the Professional Engineers of Ontario (License No. 100014010) and the Association of Professional Engineers and Geoscientists of Saskatchewan (License No. 16216) and registered with the Ontario Association of Certified Engineering Technicians and Technologists as a Senior Engineering Technologist. I am also a member of the National and Toronto CIM. I have practiced my profession continuously since 1978.

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

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

   During the past 21 years, I have undertaken numerous resource estimates and mine designs for deposits similar to that at the Brucejack Project. These projects have ranged from large open pit to small underground potential and existing mining operations. My involvement was specifically with the actual database management, geologic interpretation, geostatistics and grade estimation involved in resource estimation. In the mine design aspects, I was directly involved with cut-off grade determination, cost modeling, pit and stope design and development of mineable reserves via dilution and extraction calculations.

4. I have not visited the Brucejack Property;
5. I am responsible for co-authoring Section 16 of the Technical Report;
6. I am independent of the Issuer applying the test in Section 1.4 of NI 43-101;
7. I have had prior involvement with the Brucejack Property that is the subject of this Technical Report. The nature of my prior involvement is as co-author on several previous Technical Reports;
8. I have read NI 43-101 and Form 43-101F1 and the Technical Report has been prepared in compliance therewith;
9. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make the Technical Report not misleading.

Effective Date: February 18, 2011

Signing Date: March 4, 2011

[SIGNED and SEALED]

{Eugene Puritch}

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Eugene J. Puritch, P.Eng

CERTIFICATE of AUTHOR

Fred H. Brown, MSc. (Eng), CPG, Pr. Sci. Nat.

I, Fred H Brown, of Suite B-10, 1610 Grover St., Lynden Washington, do hereby certify that:

1. I am an independent geological consultant;

2. This certificate applies to the technical report titled, "Technical Report and Updated Resource Estimate for the Brucejack Property, Skeena Mining Division, British Columbia, Canada" (the "Technical Report") with an effective date of February 18, 2011;

3. I graduated with a Bachelor of Science degree in Geology from New Mexico State University, USA in 1987. I obtained a Graduate Diploma in Engineering (Mining) in 1997 from the University of the Witwatersrand and a Master of Science in Engineering (Civil) from the University of the Witwatersrand in 2005.I have worked as an economic geologist continuously since my graduation from university in 1987;

4. I am registered with the South African Council for Natural Scientific Professions as a Professional Geological Scientist (registration number 400008/04), the American Institute of Professional Geologists as a Certified Professional Geologist (certificate number 11015) and the Society for Mining, Metallurgy and Engineering as a Registered Member (#4152172);

5. I visited the Brucejack Project in 2009 and 2010;

6. I am responsible for the co-authoring section 16 of the Technical Report;

7. I have read the definition of "qualified person" as set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101. I have practiced my profession continuously for over twenty years, and during this time I have been involved in the estimation of numerous mineral resources worldwide, including Canada, Peru, Mexico, South Africa and the USA. This report is based on my personal review of information provided by the Issuer and on discussions with the Issuer's representatives;

8. I have had prior involvement with the Brucejack Property that is the subject of this Technical Report. My prior involvement was as co-author on several previous Technical Reports;

9. I am independent of the issuer applying the test in Section 1.4 of NI 43-101;

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

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

Effective date: February 18, 2011

Signing date: March 4, 2011

[SIGNED and SEALED]

{Fred H. Brown}

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Fred H Brown CPG, Pr.Sci.Nat.