ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT: Placer Gold Exploration on the Spruce Creek Property

TOTAL COST: $298,019.79

AUTHOR(S): **Stephen Kocsis, P.Geo.**
SIGNATURE(S): "signed and sealed"
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): **4:271, 1650491 - 01/04/2009 to 31/12/2009**
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S): **4407808, 22/11/2009**

YEAR OF WORK: **2009**
PROPERTY NAME: **Spruce Creek**
CLAIM NAME(S) (on which work was done): **Boots, Tenure 390268; Tenures 507118 & 507120; Placer Lease 389002**

COMMODITIES SOUGHT: **Au**

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN:
MINING DIVISION: **Atlin**
BCGS: **104N.053**
LATITUDE: **59.571583**
LONGITUDE (at centre of work): **-133.577417**
UTM Zone **8N** EASTING **580470** NORTHING **6604858**

OWNER(S): **Ross Edenoste**
MAILING ADDRESS: **P.O. Box 578, Grande Prairie, AB, T8V 3A8**

OPERATOR(S) [who paid for the work]: **Ross Edenoste**
MAILING ADDRESS: **P.O. Box 578, Grande Prairie, AB, T8V 3A8**

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude **do not use abbreviations or codes**)
Ophiolitic complex, accretionary complex, metabasalt, Mississippian, post-glacial, inter-glacial, mid-Wisconsin Tertiary, paleochannel, gold

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS
16703

Placer Gold Exploration
on the
Spruce Creek Property

Tenure Numbers 390268, 389002, 507118 and 507120
(151.19 Hectares)

UTM NAD 83 Central Location Coordinates – 580470E, 6604858N
Zone 8N, BCGS Map No. 104N053

Spruce Creek area
Atlin Mining District
Northwestern British Columbia

Report Completed for
Property Owner and Operator:

Ross Edenoste
P.O. Box 578
Grande Prairie, AB, T8V 3A8

March 27, 2010

Exploration supervision and report completed by:
Stephen Kocsis, P.Geo
301 – 776 Vaughan Street
Quesnel, BC, V2J 2T5
Phone: (250) 992-9570
Email: skocsis57@hotmail.com

Table of Contents

List of Tables

List of Figures

Appendix A: Statement of Qualifications
Appendix B: Statement of Costs
Appendix C: Seismic Reports FGI1073 & FGI1088

1.0 Introduction

The Spruce Creek Property (the Property) is located in the Atlin area along and adjacent to Spruce Creek. Spruce Creek has historically (1898-1946) yielded the largest amount of placer gold (262,603 ounces) in the Atlin area. The Property is situated on the lower end of a Tertiary paleochannel that extends more than 5.5 km upstream along Spruce Creek. The majority of the gold produced on Spruce Creek was recovered from an orangish red-brown and yellow-colored boulder-rich gravel layer that are confined to the paleochannel bottom and averages 6 feet thick. The Property is located 3.6 km northwest or upstream from the Nolan Mine where the bulk of the gold production along Spruce Creek was recovered from an underground mine operation. The Nolan Mine encountered the richest known deeply buried paleochannel bedrock-proximal gravel layer, referred as "yellow gravel", in the Atlin area with gold grades that averaged 0.54 ounces per cubic yard. The shallowest buried portions of the paleochannel have been thoroughly mined along its entire length by recent mechanical open pit operations and historic underground methods. Some paleochannel floor-gravels beneath the Spruce Creek valley-sides remain to be mine, but extend 100 to 300 feet below overburden.

The valley-bottom of Spruce Creek along the Property is entirely blanketed by tailings and overburden. There were four objectives involved in the 2009 exploration program on the Property. The first was to determine if any unworked parts of the paleochannel remain beneath the present day Spruce Creek valley floor. The second purpose was to determine how thoroughly the gold was recovered from areas directly lying over bedrock. The third was to determine if any economic gold grades remain in tailings. The fourth objective was to determine if part of the paleochannel floor extends into the western limit of the steep-sided valley-side below deep ground. The exploration work involved 7 test pits, 7 refractive seismic survey lines, and a pilot mine pit measuring 100 meters long and about 50 meters wide.

2.0 Property Description and Access

The Spruce Creek Property (the Property) is made up of three placer Tenures (390268, 389002 and 597110) and covers 118.40 hectares of land (see Table 1). The Property is located in the Atlin Mining District of northwester British Columbia (Figure 1). The majority of Tenure 390268 covers an area immediately adjacent to the east side of Spruce Creek. The Property is situated immediately upstream from the lowermost of three rock canyons located along the creek or 4.7 km upstream from the confluence with Pine Creek. A north and south section of the Tenure 390268 correspondingly covers a 150-meter and a 300-meter length of Spruce Creek. The remaining part of Spruce Creek is covered by Tenures 389002 and 507118. The central part of Tenure 390268 is located at UTM NAD 83 Zone 9 coordinates 580470E and 6604858N on NTS map sheet number 104NO53 or 7.35 km due east from the Atlin Lake shore in the central part of the Atlin town (Figure 2). Tenure 390268 is 100% owned and operated by Ross Edenoste. Ross Edenoste had an agreement and permission with owners on neighboring tenures 389002 and 507118 to conduct exploration during the 2009 mining season as acting operator. A summary of the Tenures are given in Table 1.

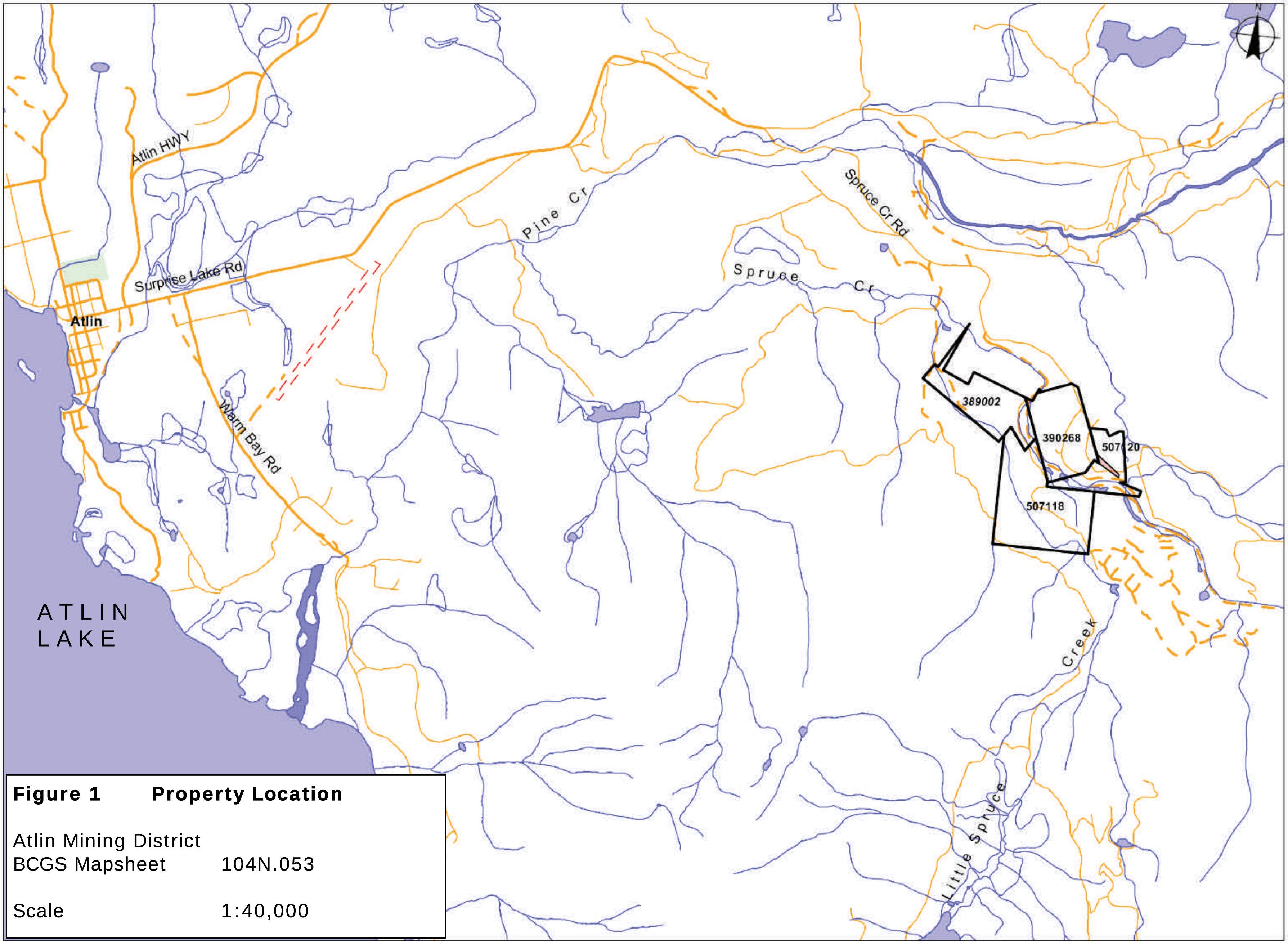


Figure 1 Property Location

Atlin Mining District
BCGS Mapsheet 104N.053

Scale 1:40,000

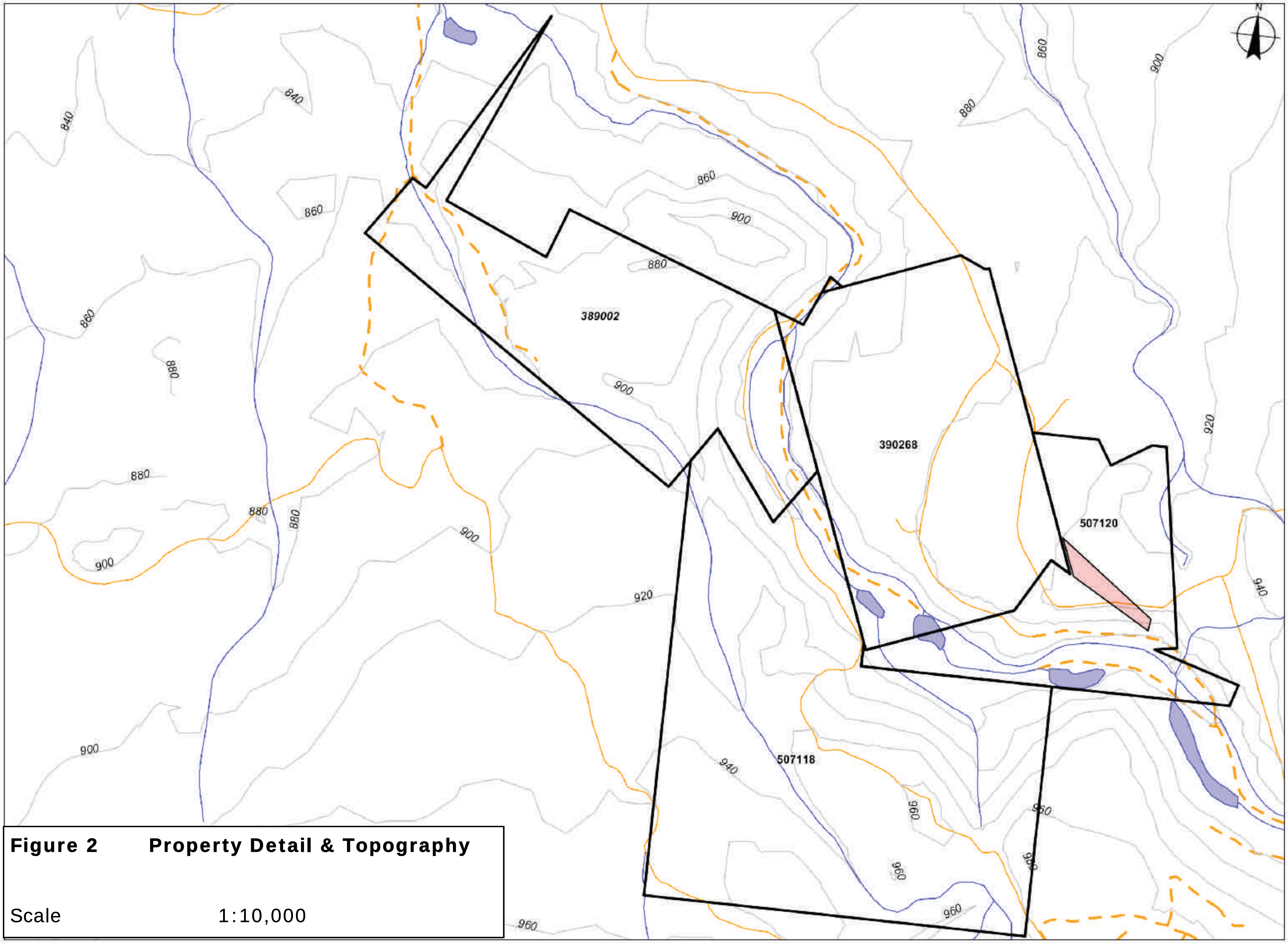


Figure 2 **Property Detail & Topography**

Scale 1:10,000

Table 1. Spruce Creek Property Tenure list

Tenure Number	Claim Name	Owner	Issue Date	Good to Date	Area (hectares)
390268	BOOTS	Ross Edenoste	2001/oct/15	2019/nov/23	50.00
389002		Randall Miller	2001/oct/15	2010/oct/15	19.21
507118		Orest Curniski	2005/feb/14	2012/nov/24	49.19
507120		Orest Curniski	2005/feb/14	2012/aug/01	32.79
Total Area (hectares)					**151.19**

The northern Property boundary can be access by driving 7 km east along the Pine Creek Road from the Town of Atlin and 3 km south-southeast along the Spruce Creek Road to a gated Property access road. The access road continues south across the entire length of the Spruce Creek along Tenure 390268.

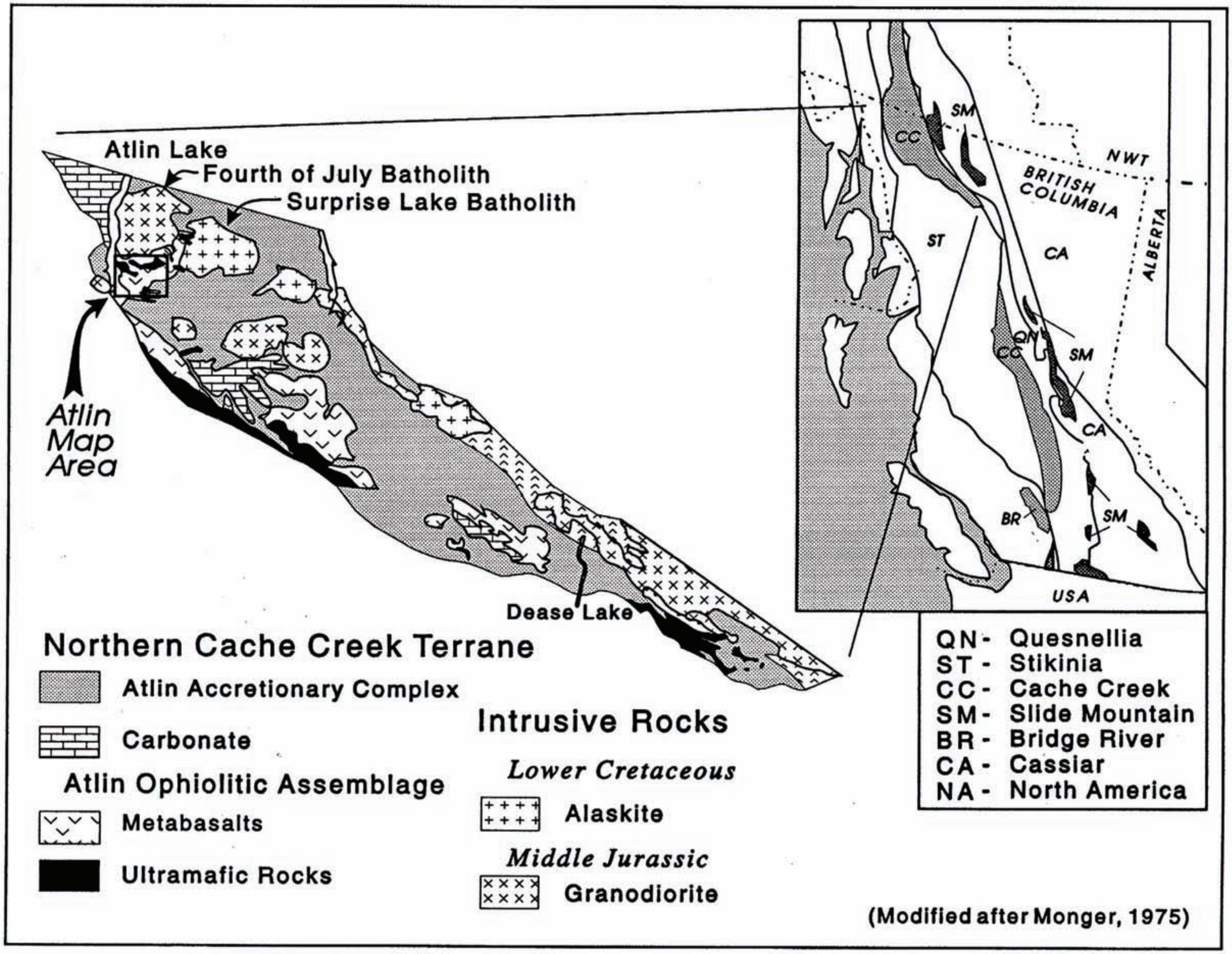
3.0 Regional Bedrock Geology (Ash, 2001)

The Atlin region lies within the north-western corner of the Cache Creek (Atlin) Terrane (Figure 3). This part of the terrane is made up of a fault-bounded package of late Paleozoic and early Mesozoic dismembered oceanic lithospheres. The lithospheres are intruded by post-collisional Middle Jurassic, Cretaceous and Tertiary felsic plutonic rocks. The terrane is predominately made up of a mixture of graphitic argillite and pelagic sedimentary rocks. Dominating rocks contain minor amounts of metabasalt and limestone occurrences in the form of pods and slivers. Oceanic crust and upper mantle lithological remnants are concentrated along the western margin of the terrane. From north to south, the Atlin, Nahlin and King Mountain assemblages have been described as dismembered ophiolitic packages. Each package contains imbricated mantle harzburgite, crustal plutonic ultramafic cumulates, gabbros and diorite, together with hypabyssal and extrusive basaltic volcanic rocks. The western part of the terrane is dominated by thick sections of late Paleozoic shallow-water limestone that are associated with alkali basalts. The limestone is interpreted as carbonate accumulations that formed ancient marine islands within the former Cache Creek oceanic basin.

A combination of plutonic and stratigraphic evidence shows that the Northern Cache Creek Terrane was positioned over the Nahlin Fault-bounded Whitehorse Trough sediments (late Triassic to lower Jurassic) during the middle Triassic. The youngest sediments deformed by the King Salmon Fault are Bajocian rocks that are underlain by organic-rich sediments of Aalenian age. The deformed sediments are interpreted to reflect loading along the western margin of Stikinia by the Cache Creek Terrane during its initial emplacement. The oldest post-collisional plutons that intrude the Cache Creek Terrane to the west of Dease Lake are dated at 173+/-4Ma by K-Ar methods and in the Atlin area they are dated at 172+/-3Ma by U-Pb zircon analyses. Considering the age of these plutons and its relationship with the orogenic event, the descriptive term late syn-collisional is preferable.

The eastern portion of the Northern Cache Creek Terrane is bordered mainly by the Thibert Fault that trends northward along the Teslin lineament. Discontinuous exposures of altered

Figure 3: Atlin Regional Geology
(Northern Cache Creek Terrane map after Monger, 1977A)



ultramafite along the fault suggest that it has previously undergone significant reverse motion and may be a reactivated thrust or transpressional fault zone. The latest movement along this fault during the pre-late Cretaceous is believed to be dextral strike-slip.

The Northern Cache Creek Terrane is mainly made up of sub-greenschist, prehnite-pumpellyite facies rocks. Local greenschist and blueschist metamorphism are recorded. The terrane is characterized by a northwesterly-trending structural grain fabric. In the Atlin-Sentinel Mountain area there is a marked deviation from this regional orientation with a dominant northeasterly trend. Reasons for the difference in structural grain fabric are poorly understood.

4.0 Local Bedrock Geology (Ash, 2001)

Two distinct lithotectonic elements make up the geology within the Atlin area. The structurally higher element is made up of an imbricated sequence of oceanic crustal and upper mantle lithologies termed the "Atlin ophiolitic assemblage". This assemblage is tectonically superimposed over a lower and lithologically diverse sequence of steeply to moderately dipping, tectonically intercalated slices of pelagic metasedimentary rocks with tectonized pods and slivers of metabasalt, limestone and greywacke termed the "Atlin accretionary complex". Locally these assemblages are intruded by the middle Jurassic calcalkaline Fourth of July batholith and associated quartz-feldspar porphyritic and melanocratic dike rocks.

Atlin Ophiolitic Assemblage

The Atlin ophiolitic assemblage comprises an imbricated sequence of relatively flat-lying, coherent thrust slices of obducted oceanic crustal and upper mantle rocks. Mantle lithologies are dominated by harzburgite tectonite containing subordinate dunite and less pyroxenite dikes. This unit forms an isolated klippe that underlies the town of Atlin and 4 km further east at Monarch Mountain. The harzburgite is also exposed on the northern and southern slopes of Union Mountain at locations 10 km south of Atlin. Ductile deformational fabrics equivalent to hypersolidus to subsolidus deformation, and the phase chemistry of primary silicates and chrome spinels in the harzburgite indicate a uniform, highly refractory composition and support a depleted mantle metamorphic origin for the unit. The least serpentinized rocks with well preserved primary structures and texture outcrop at the highest elevations on Monarch Mountain. Primary features are less preserved toward the base of the body and internally where high angle fault zones occur and the unit becomes increasingly serpentinized. Serpentinite mylonite fabrics are locally preserved near the base of the body. Commonly the basal contact of the harzburgite unit is pervasively carbonatized and tectonized over distances of several tens of metres or more wide.

Oceanic crustal lithologies in the Atlin map area are dominated by metabasalts and in decreasing order of abundance include ultramafic cumulates, diabase and gabbro. They are generally massive, fine grained to aphanitic and are commonly weather to a dull green-grey colour. Locally this unit grades to medium-grained varieties or diabase. Primary textures locally identified in the metabasalt include flow banding, autobrecciation and rare pillow structures. Where found in rare exposures the basalt contacts are commonly sheared or brecciated zones and sometimes intensely carbonatized. Petrochemical investigations of these basaltic rocks indicate they are similar in composition to basalts of normal mid ocean-ridge settings. The chemistry also suggests a genetic relationship to the associated depleted metamorphic mantle ultramafic rocks.

Serpentinized peridotite displaying ghost cumulate textures and sporadically preserved relict poikilitic texture is believed to have originated from wehrlite. The peridotite forms an isolated thrust sheet that outcrops discontinuously along a 1-3 km wide east-trending belt reaching kilometres long on the south slope of Mount Munroe at a location 4 km northeast from the town of Atlin. Extensive exploration drilling along the base of Mount Monroe at the Yellowjacket Zone indicates that the serpentinized body is structurally in contact with metabasaltic rocks along a gently northwest-dipping thrust. Hanging-wall ultramafites and foot-wall metabasalts are tectonically intercalated and carbonatized along this contact zone. Projection of this fault across the Pine Creek valley suggests that carbonatized and serpentinized ultramafic rocks on the summit of Spruce Mountain, immediately south of the Pine Creek valley in the vicinity of the Yellowjacket Zone, represent a remnant above an extension of the same tectonized and altered basal contact. The fault outcrops on the northern slope of Union Mountain and along the south-facing slope of Mount Munroe. Gabbro occurs along the Monarch Mountain thrust as isolated dismembered blocks with faulted contacts occurring on Union Mountain. Metagabbro is the least commonly seen ophiolitic component in the Atlin area.

Atlin Accretionary Complex

The Atlin accretionary complex is made up of a series of steeply to moderately dipping lenses and slices of structurally intercalated metasedimentary and metavolcanic rocks that underlie the southern half and northwest corner of the Atlin region. Pelagic metasedimentary rocks dominate the complex and consist of argillites, chert, cherty argillites, and argillaceous cherts. Limestones and greywackes makes up lesser components. This rock group range from highly mixed zones with well-developed flattening fabric indicative of tectonic melange to relatively coherent tectonic slices. Individual slices range from metres to several hundreds of meters wide. Internal deformation is moderate or lacking and in places the slices original stratigraphy is well preserved. Contact relationships between many of the individual units of the complex have not been established due to a lack of exposure, but most are inferred to be tectonic. Internal bedding within the individual lenses in places is parallel to the external contacts, but is more commonly strongly discordant. This suggests non-simple interfingering of different facies. A common feature throughout the complex, particularly in areas of moderate overburden, is the difference in lithology across closely-spaced outcrops with no clearly defined contacts. Such relationships are interpreted to represent areas of melange in which the exposed lithologies that commonly include chert, limestone and basalt are more competent than the intervening, recessive fissile and argillaceous matrix. Such relationships are confirmed where sections are exposed along road cuts and in areas of trenching.

Figure 4: Local bedrock geology of the Altin area

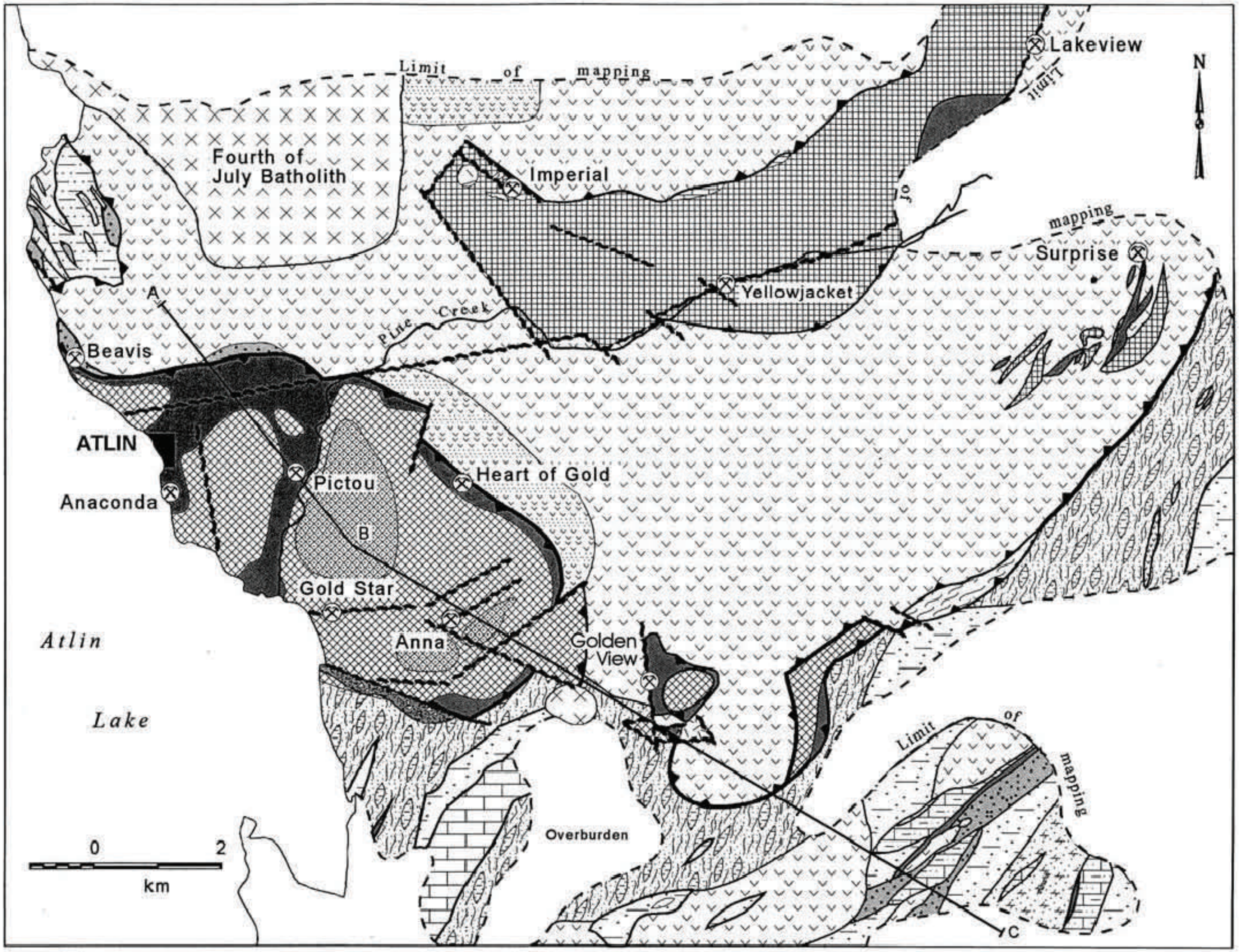
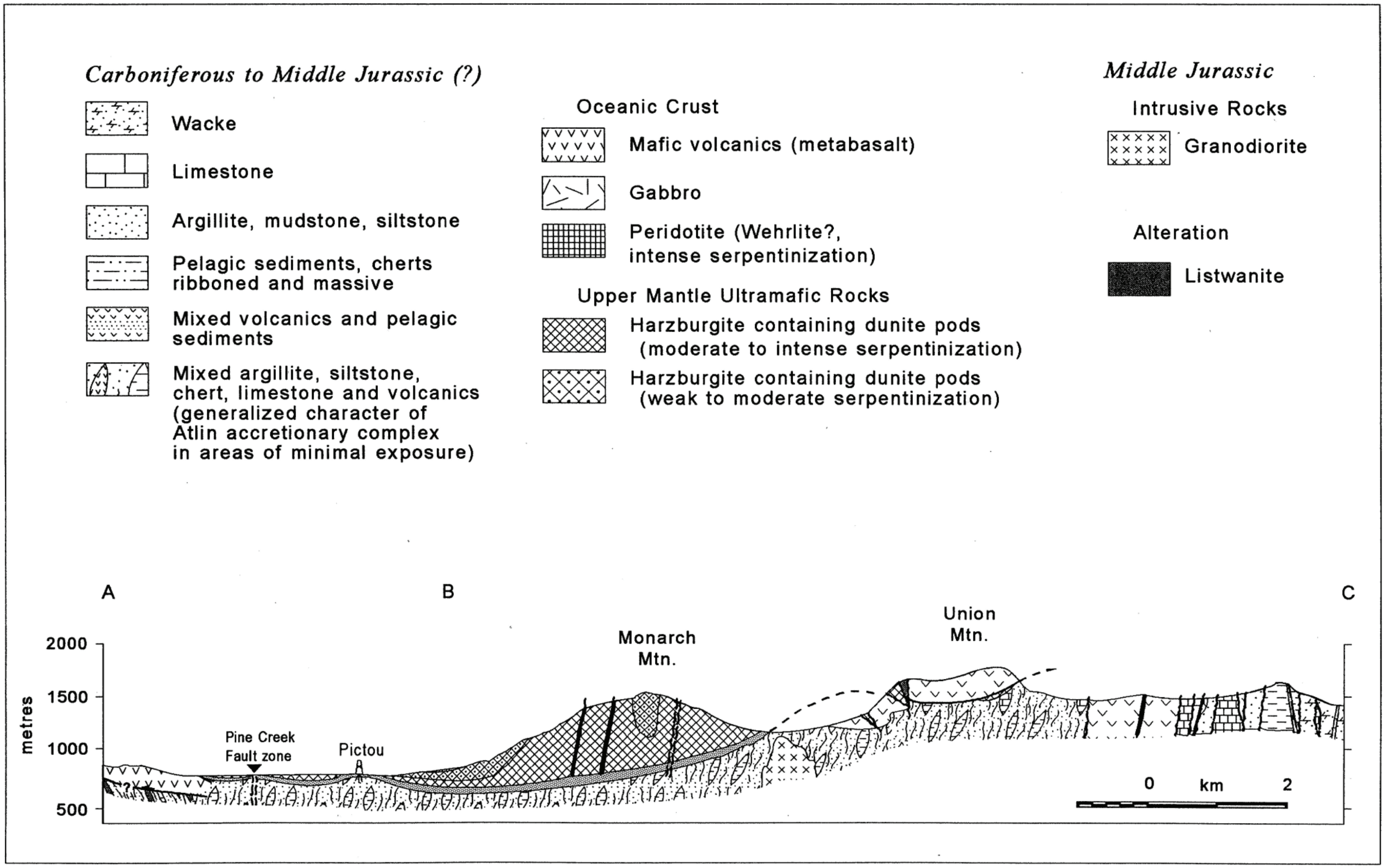


Figure 4A: Local bedrock geology legend



5.0 Property Bedrock Geology

Bedrock exposures on the Property are very rare. One exposure found in Test Pit SC-1 consisted of a decomposed weathered reddish-brown metabasalt (see section 9, Table 3). Similar rocks are exposed along the bedrock canyon located immediately upstream from the Property. The rock typically exhibits a green-grey color in non-weathered sections. Ash (2001) describes this metabasalt unit as Mississippian to middle Jurassic oceanic crustal rocks of the Atlin Accretionary Complex. The metabasalt is commonly massive, fine to medium-grained, locally autobrecciated to flow-banded and pillowed. The rock is variably 5-10% carbonatized and contains trace to 10% disseminated pyrite. Minor layers of metadiabase occur within this rock unit.

6.0 Surficial Geology

There are 5 distinct sedimentological units found at various places along the entire length of upper Spruce Creek between the Property and 3.6 km upstream to the Nolan Mine. The units are clearly identifiable along many of the steep valley-side exposures that are associated with deep abandoned mine pits. The units are described below from top to bottom or youngest to oldest.

Unit 1 is made up of surficial postglacial grey-colored gravels of varying thicknesses. The thickest part of this unit occurs as an esker, up to 45 feet thick, that parallels the immediate west side of the valley-side top and partly forms a divide between Spruce Creek and Little Spruce Creek in areas along the Property and further upstream. The esker is made up of pebble/cobble-rich gravels that locally contain very little gold concentrations.

Unit 2 is an extensive blanket of medium to dark grey-colored late-Wisconsin lodgement till that reaches a thickness up to 150-feet or more along valley-side exposures. The till unit is massive and in places contain mud-rich grey-colored subglacial gravel layers made up of well-rounded clasts varying from pebble to cobble. The till unit is clast-poor containing pebble-sized aggregate in most part and occasional isolated large cobbles and boulders.

Unit 3 consists of a medium-grey colored interglacial gravel layer ranging from 6 to 30 feet thick. The thicker sections display fining upwards into sand and pebble layers. Well imbricated layers record a paleo-flow direction parallel and slightly oblique to the present flow of Spruce Creek. The unit is more than likely confined to the buried Spruce Creek paleochannel. The lower part of the unit almost always consists of a boulder-rich layer ranging from 3 to 6-feet thick. Unit 3 overlies another till (Unit 4) and in some places is underlain by Tertiary gravels (Unit 5). Unit 3 also overlies bedrock ledges in rare places along the mid-section of the valley-wall where they form significantly high gold concentrations. The basal bouldery section of the unit has been mined thoroughly along the entire part of Spruce Creek at locations upstream from the Property. Local miners have indicated that the highest gold grades occur in places where the basal boulder-rich layer in Unit 3 has cut into and overlies Tertiary gavels in Unit 5. The age of this gravel unit is unknown, but probably belongs to the mid-Wisconsin interglacial ice-free period.

Unit 4 is an older lodgement till layer that is exposed in only a few places along Spruce Creek at locations upstream from the Property. This till unit is similar to Unit 2 with exception to an increase in the clast component. Exposures of the unit reach thicknesses up to 30 feet. The till layer must have undergone extensive fluvial erosion during the interglacial period associated with Unit 3 and for that reason Unit 4 is missing along many exposures.

Unit 5 is made up of reddish-orangish-brown Tertiary gravels that are confined to the mid and lower parts of the Spruce Creek paleochannel. The color in the lower part of the Tertiary gravel unit at the Nolan mine is described as a “yellow gravel”. The unit has been observed in exposures to reach up to 50-feet thick. The unit thins inward towards both sides of the paleochannel where bedrock commences to rise. The upper and mid sections of this unit generally consists of weakly layered cobble-sized gravels with poorly preserved imbrication that indicates paleoflow directions consistent with the present flow of Spruce Creek. Some oblique flow directions show that the Tertiary stream flowed in a slightly to moderately meandering manner in and out of the present valley-side walls of Spruce Creek. The upper and middle horizon of the unit mainly consists of cobble-gravels. It’s not uncommon to find up to three layers reaching 3-feet thick, of coarser-grained gravels made up of cobble and small boulders. The coarser layers are commonly well stained black with horizontal streaks of manganese reaching 2 feet thick. Panning within the upper and mid horizons of Unit 5 along the Property indicates the presence of weak concentration of gold. The bulk of the upper section of Unit 5 is usually wasted by mine operators. The richest or highest gold concentrations are found within boulder-rich bedrock-proximal layers that average 6-feet thick. The bulk of the gold production along Spruce Creek during historic and recent underground and open-pit mining operations has been recovered from this 6-foot basal Tertiary layer.

7.0 Mining History

Placer gold in the Atlin area was first discovered on Pine and Spruce creeks early in 1889. The discovery area on Spruce Creek is situated 2.24 km southeast of the Spruce Creek Property near the confluence of Eureka Creek. Recorded and unrecorded gold production to date in the Atlin area is believed to be somewhere around 1 million ounces. The cataloged recorded gold production for the area from 1898 to 1946 was 634,147 ounces (Table 2). About 41% of this total production came from underground mining operations on Spruce Creek along areas located upstream from the Property.

Table 2. Gold production in the Atlin area recorded from 1898 to 1946

Stream Name	Ounces of Gold Produced
Spruce Creek	262,603
Pine Creek	138,144
Boulder Creek	67,811
Ruby Creek	55,272
Mckee Creek	46,953
Otter Creek	20,113
Wright Creek	14,729
Birch Creek	12,898
All other streams (21 Creeks)	15,147
Total Ounces	634,147

Most of the shallow or easily worked gravels were depleted after the first few years of mining on Spruce Creek. Deeper ground over the small 100-foot square claims could not be mined by individual miners who experienced difficulties with tailings and waste disposal. For this reason many of the miners vacated the area and sold their claims to neighboring miners who formed companies. Mining on Spruce Creek continued to be sparse until a gold-enriched layer of "Blue Wash" gravels were discovered at moderate depths along high benches in 1901. The bench gravels were worked by underground methods and were gradually depleted.

The deepest bedrock-proximal Tertiary gravels were discovered upstream from Eureka Creek in the late 1920's. The gravel layer was referred as a "yellow wash" and by 1933 the gravels were worked underground along an extremely rich buried paleochannel exceeding 900 feet wide and 1.2 miles long. This operation was later called the Nolan Mine. The shaft access to the workings is located near the confluence of Spruce Creek and Dominion Creek or 1.44 km east-southeast from Eureka Creek. The underground working headed in a southerly direction where bedrock continued to dip downwards. High volumes of water and low pumping capabilities forced the mining operation to discontinue for a period of time. A total of 200,000 cubic yards of the basal high-grade Tertiary gravels were produced between the years 1933 and 1957 at the Nolan Mine. The gold production at the mine accounts for the majority of gold produced along the entire length of Spruce Creek. Gold grades varied from 0.49 to 0.59 ounces per cubic yard. Underground mining along Spruce Creek ceased in 1957 around the same time when mechanized open pit mining operations commenced along downstream locations (Monger, 1977A).

Bedrock exposures proximal to the valley floor of Spruce Creek were surveyed between the Property and the Nolan Mine in order to determine the trend of the east and south side of the buried paleochannel. It appears that the paleochannel trends along a straight line from the Nolan Mine towards the south end of the Property. The extension of this trend was projected onto the Property beneath the west valley-side wall and 5 refraction seismic lines were surveyed across the inferred location of the paleochannel (see Appendix C). The bedrock across each seismic profile shows that the underlying bedrock progressively rises along a moderate slope beneath the west valley-side. This information indicates that the paleochannel-bottom turns easterly somewhere at an area closely upstream from the Property. It also indicates that the paleochannel on the Property exists directly below the present day Spruce Creek valley-bottom.

There were no gold production activities along the portion of Spruce Creek extending from the Property to the Nolan Mine during the 2009 mining season. Some surface exploration was active at locations near and slightly downstream from the Nolan Mine.

8.0 Refraction Seismic Survey

Pictorial details including line locations and line profiles of the refraction seismic survey conducted across the Property are given in Appendix C. A full Seismic Report was completed by Frontier Geosciences Inc. (Porter and Hillman, 2009). A total of 5 lines were surveyed along the west side of Spruce Creek for the purpose of outlining the location of the Tertiary paleochannel bottom. Bedrock outcrops near the present creek level representing higher parts of the paleochannel sides were mapped during the earlier part of this exploration program at locations between the Property and upstream at the Nolan Mine. The mapping showed strong evidence that the paleochannel trend across the Property extends through the west hillside of the Spruce Creek valley. The inferred location of the paleochannel beneath the west valley-side across the Property is shown on the seismic line location map in Appendix C. The seismic lines were surveyed across the chosen area for this reason and for hearsay information given by the previous Property owner. The bedrock across each seismic profile shows that the underlying bedrock progressively rises along a moderate slope beneath the west valley-side. Conclusions made from the seismic survey information shows that the paleochannel bottom is actually situated beneath the present Spruce Creek valley floor where it has been nearly or completely mined-out by previous miners. This information also indicates that the paleochannel-bottom abruptly turns easterly somewhere closely upstream from the Property.

A terrace-type target was identified along the western limits of seismic line SL-5. The target consists of a 110-meter wide bedrock depression reaching 10 meters deep along its central part. The bedrock walls on each side of the depression rise gently and the deepest part reaches 45 meters below the ground surface. Two velocity layers representing two individual sedimentological layers were identified over the bedrock depression. The upper layer reaching 10 meters thick has a velocity signature (465-760 m/s) equivalent to dry gravels more than likely of postglacial origin. The lower layer reaching 35 meters thick has a velocity signature (2070 m/s) equivalent to lodgement till that is of glacial origin. The target may be one of two structures; 1) an insignificant ice scour, or 2) an elevated terrace-type interglacial or Tertiary channel that parallels Spruce Creek or is part of an abandoned older tributary. If the target is a Type 2 structure, then it is unknown at this time if older gravels are preserved within the bedrock depression. The older gravel unit may have been glacially scoured and removed. Older gravel layers usually have a velocity signature near or lower than velocities measured in lodgement till. In this situation, know as a “velocity inversion”, the refraction seismic method cannot differentiate the two layers if they exist and the boundary is impossible to be extrapolated.

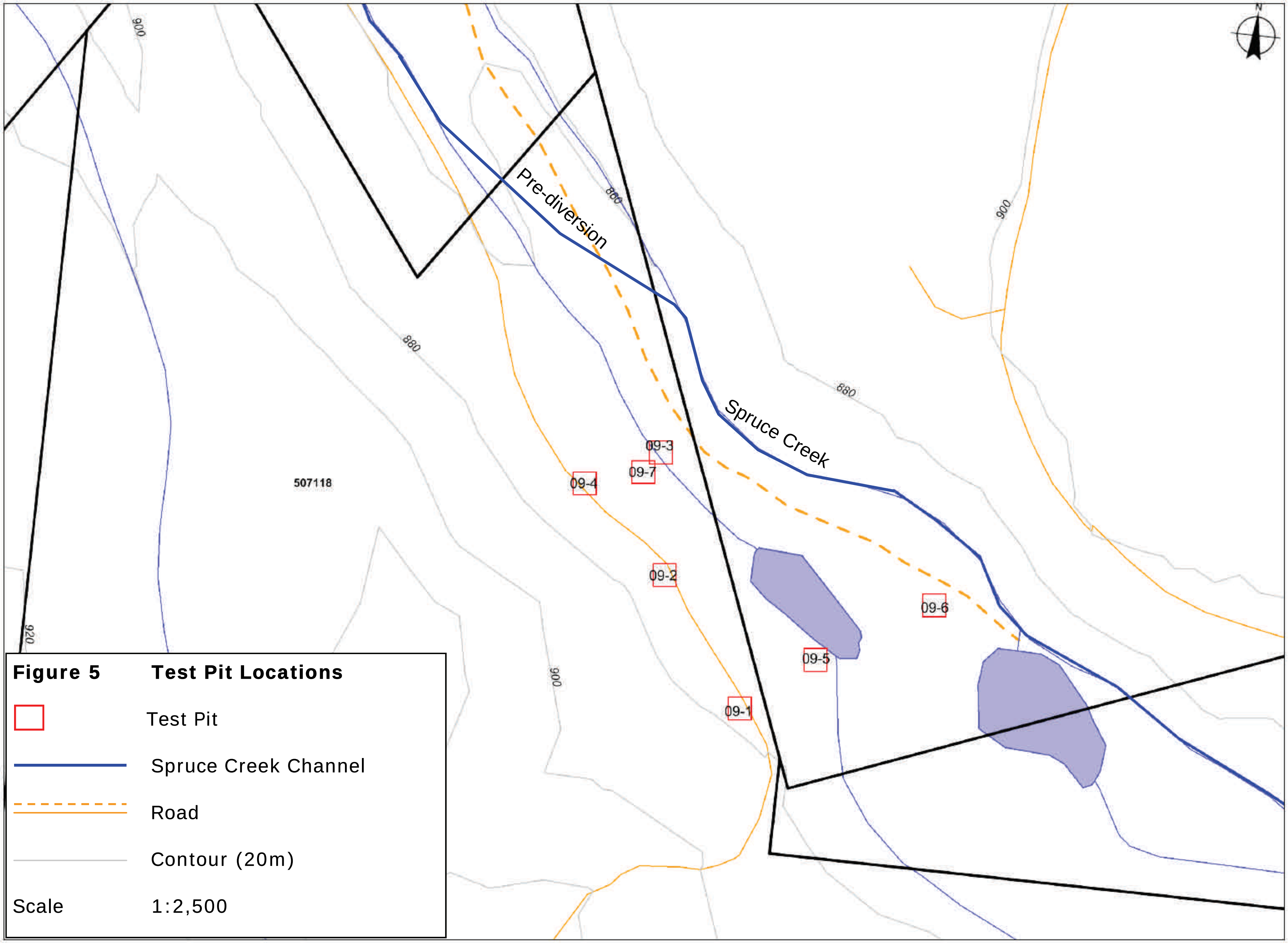


Figure 5 **Test Pit Locations**

Test Pit

Spruce Creek Channel

Road

Contour (20m)

Scale 1:2,500

9.0 Test Pit Results

A total of 7 test pits were excavated on the Property in and adjacent to an area that was previously worked by one or more mining operations. The average surface dimension of the pits averaged about 8X8 yards. Test pit SC-1 and SC-2 were the only excavations that encountered in-place gravels that were not previously mined. The two pits were cut into and below a steep bank of undisturbed sediments located on the west side of the Spruce Creek valley bottom. The remaining 5 pits were excavated across the Spruce Creek valley floor. The floor is entirely draped with fine and coarse tailings, and waste areas made up of grey-colored lodgement till, and postglacial and interglacial grey gravels (GG), and fine-grained upper parts of the Tertiary reddish-brown gravels (RBG). Almost all the gold produced on the Property throughout its mining history was recovered from bedrock-proximal boulder-rich reddish-brown Tertiary gravels that averaged about 6-feet thick. The location of each test pit (Figure 5) and all relevant information including gold grades is given in Table 3.

Table 3. Test pit descriptions and gold grades. Bedrock depths followed by "?" means questionable bedrock where no samples within an impenetrable layer could be recovered and the material is unknown.

Test Pit No.	Location Easting Northing	Total Depth	BR Depth (feet)	Depth Int. (feet)	Thick -ness (feet)	Sediment Type	Sample No.	Volume (yd3)	Gold (g)	Gold Grade (g/yd3)
SC-1	580383 6604512	12	10	0-6 6-12	4 6	GG RBG	1-1	0.52	0.375	0.72
SC-2	580341 6604567	12.5	11.5	0-8 8-12.5	8 4.5	GG GG	2-1	15	11.88	0.79
SC-3	580332 6604624	10	n/a	0-10	10	RBG tailings	3-1	6	1.6	0.27
SC-4	580299 6604606	10	10?	0-10	10	GG	4-1	15	2.51	0.17
SC-5	580415 6604537	10	10	0-10	10	RBG tailings	5-1	15	0.61	0.04
SC-6	580466 6604569	30	?	0-30	12	GG & RBG tailings	6-1	12	1.25	0.10
SC-7	580326 6604614	16	16?	0-16	16	RBG tailings	7-1	7.5	0.53	0.07

10.0 Spruce Creek Stream Diversion

A new creek bed was excavated for a distance of 320 meters along the east side of the Spruce Creek valley floor to divert waters that flowed tightly along the west side of the valley floor (Figure 6). Table 4 contains the upstream and downstream gps locations of the original and new (diverted) creek bed confluence locations.

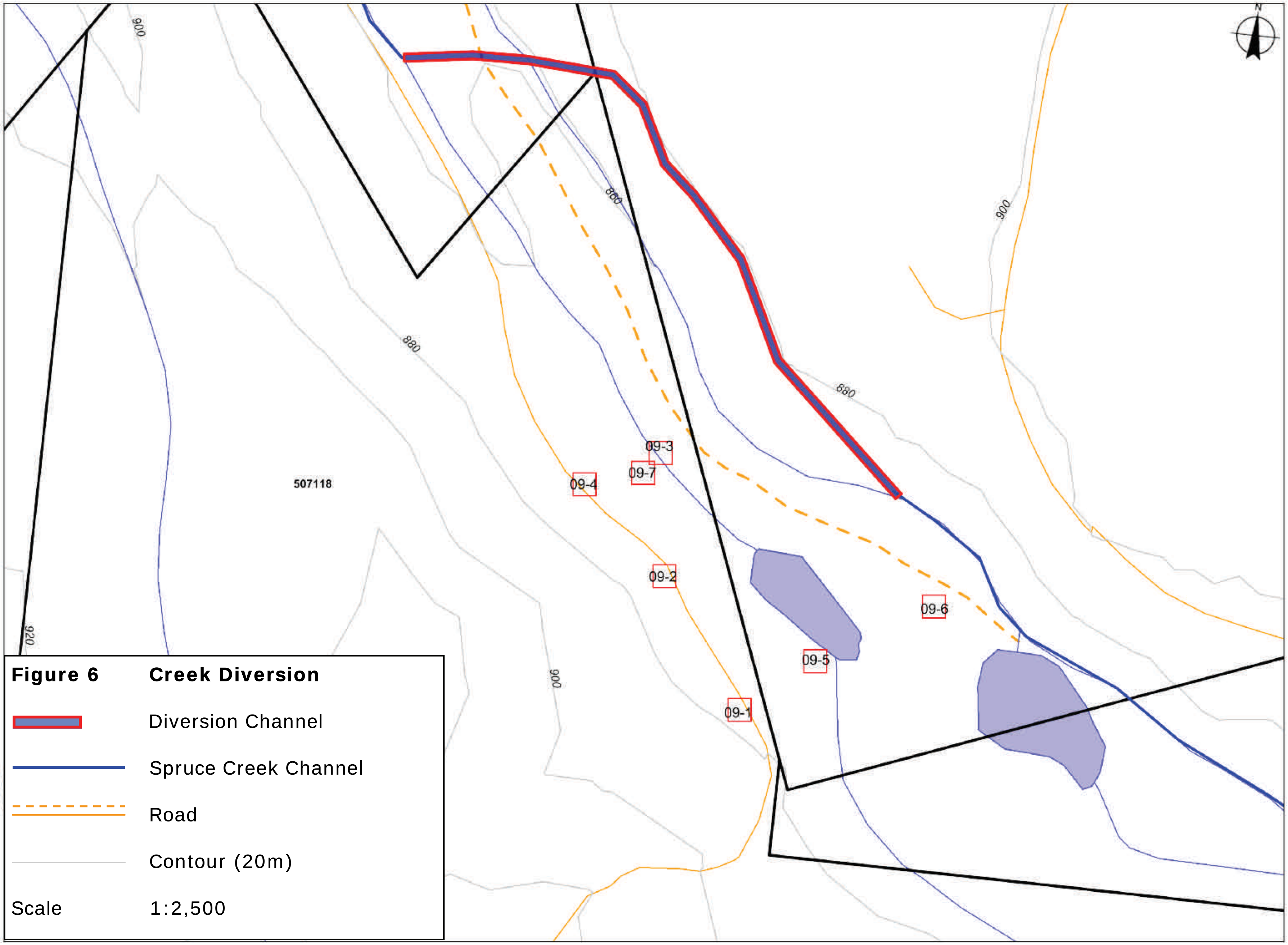


Figure 6 Creek Diversion

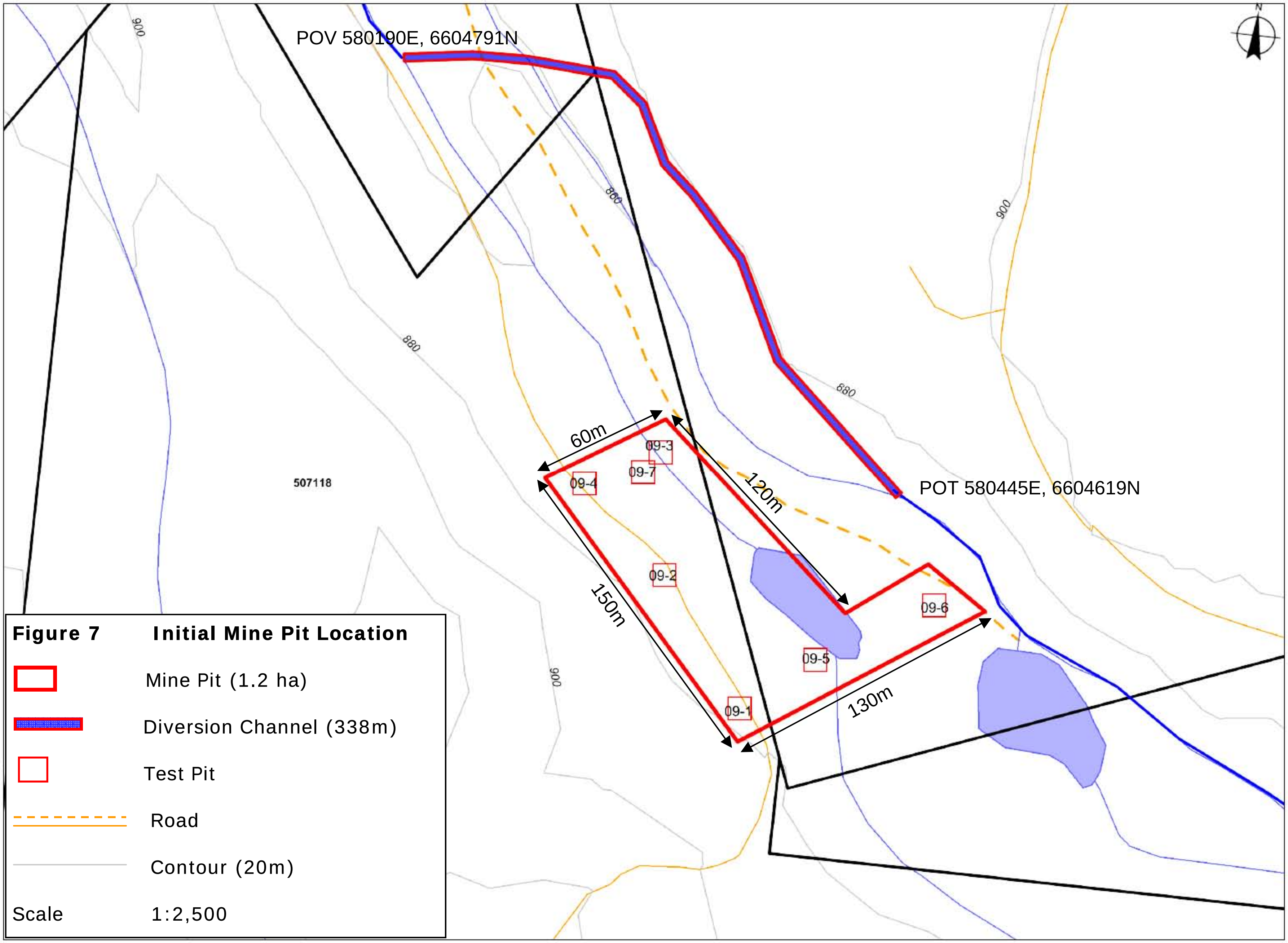
Table 4. Creek Diversion Upstream and downstream UTM NAD (83) Coordinates locations for the original and new (diverted) creek bed confluence locations.

New and old Creek Confluence Locations	GPS coordinates Easting Northing
Upstream	580632 6604623
Downstream	580175 6604774

The purpose of the creek diversion was to free-up an area along the east side of the valley floor for a pilot (initial) mine pit. The east valley-side wall consisted of near-vertical banks left behind by previous miners. Some of the steep banks reached 100 feet or more high. Large amounts of valley-floor sediments were pushed up along side of the steep bank to create slope stability and to lessen hazards. Both sides of the new creek diversion were sloped in a manner to avoid excessive caving and other erosional processes during high waters.

11.0 Pilot Mine Pit Details

An initial or pilot mine pit was marked out and excavated in a area measuring 135 meters long and 50 meters wide across the valley floor (Figure 7). About 25 feet of waste material was removed from the pit to reach bedrock-proximal gravels. The author of this report was not present during this exploration stage. The mine operator conducted further tests along the pit floor and determined that the valley bottom throughout the pit was thoroughly mined to bedrock by previous miners. The gold grade results from the pilot mine pit bottom were very comparable to grades identified in the five small test pits (SC-3 to SC-6) ranging from 0.04 to 0.17 g/yd^3 (see Table 3). The mine pit was subsequently reclaimed and abandoned by the mine operator.



POV 580190E, 6604791N
POT 580445E, 6604619N
60m
120m
150m
130m
09-1
09-2
09-3
09-4
09-5
09-6
09-7
507118
880
900
N
Figure 7 Initial Mine Pit Location
Mine Pit (1.2 ha)
Diversion Channel (338m)
Test Pit
Road
Contour (20m)
Scale 1:2,500

12.0 Conclusions

A mixture of tailing and waste piles forms a massive blanket over the Spruce Creek valley-floor across the entire Property. Results from 5 test pits (SC-3 to SC-7) excavated along the valley-floor Spruce Creek shows that the tailings and waste material created by previous miners contain uneconomic gold grades that average 0.13 g/yd^3. Bedrock was reached and scraped in each test pit and it appears that gold along the bedrock was thoroughly recovered by previous mining operations.

There were no remnants of in-place bedrock-proximal boulder-rich Tertiary gravels identified in test pits SC-3 to SC-7 or within the pilot mine pit along the Spruce Creek valley floor. Test pits SC-1 and SC-2 were able to reach in-place gravels above bedrock along the steep west valley-side wall. Significant gold grades were identified in both pits (0.72 and 0.79 g/yd^3), but these grades would be uneconomic to mine a short distances into the valley hill-side where overburden quickly reaches 100 feet and more.

Six feet of bouldery Tertiary gravels lying on partly decomposed bedrock was identified in test pit SC-1. The bedrock at this location was encountered at a fairly shallow depth equivalent to the elevation of the existing creek-bed or 50 feet above the paleochannel floor as shown in the seismic survey. Discussions with some miners who previously mined on the Property and further along upper Spruce Creek all agree that gold grades drop off dramatically as bedrock commences to rise on either side of the paleochannel bottom. This may be part of the reason why the gold grade (0.72 g/yd^3) in pit SC-1 was much lower than grades found along mined portions of the paleochannel bottom on the Property and at locations further upstream.

A layer of in-place bedrock-proximal grey-colored bouldery gravel reaching a thickness of 4.5 feet was identified in test pit SC-2. This layer is overlain by finer-grained layered postglacial gravels observed to reach 30 feet thick. The type of material higher up the valley-side is unknown where it is obscured by soil and forest growth. The presence of the postglacial gravels at this location and depth indicates that glacial meltwaters have eroded and removed older sediment layers completely to bedrock and replaced the area with younger gravels. Reddish-brown clasts remnants found near bedrock resemble postglacial fluvial reworked Tertiary gravels. Again, the gold grade found at this location would be uneconomic since the gold-bearing layer trends into and below the steep valley-side where overburden rises quickly.

13.0 Recommendations

The area explored along Spruce Creek was thoroughly worked by previous miners and the 2009 test pits and pilot mine pit shows that no economic gold grades remain. Significant bedrock-controlled gold grades (0.72 to 0.79 g/yd^3) were identified along the steep west wall of the Spruce Creek valley-side, but overburden reaching 100 feet and more makes this layer uneconomic to mine. Small and scattered remnants of intact paleochannel-bottom Tertiary gravels may have been missed by previous miners outside of the exploration area. The areas would probably be too small and too far apart to mine economically by a large-scaled production operation. It is well known that gold grades outside of the paleochannel bottom drop off dramatically throughout the length of upper Spruce Creek. This includes areas where bedrock rises along both sides of the paleochannel with exception where large-scaled bedrock benches exists part way up the valley-sides. For these reasons it is recommended that exploration along the Spruce Creek paleochannel should cease on the Property. The only target on the Property that warrants further investigation is the terrace bedrock depression identified along seismic line SL-5. If older gravels including interglacial and/or Tertiary gravels remain non-scoured by glacial ice and preserved within this depression, then it would be classified as a new discovery or a channel separate from the Spruce Creek Tertiary paleochannel. Three holes drilled along the depression to a 45-meter or more depth would be sufficient to determine if older paleochannel gravels remain intact below the thick sequence of glacial sediment. Further exploration along the terrace bedrock depression would depend on the initial drill results.

References

ASH, C.H., 2001; Ophiolite Related Gold Quartz Veins in the North American Cordillera: BC Ministry of Energy and Mines Bulletin 108.

KRUECKL, GEORGE, P., 1988; Report on the 1987 Field Exploration Program, Spruce Creek Placer Project, Atlin, British Columbia, Volume 1; Carnes Creek Exploration Ltd. Report; British Columbia Ministry of Mines Assessment Report No. 16,703

MONGER, J.W.H., 1977A; Ophiolitic Assemblages in the Canadian Cordillera; in North American Ophiolites, Coleman, R.G. and Irwin, W.P., Editors, State of Oregon, Department of Geology and Mineral Industries, Bulletin 95, pages 59-65.

PORTER, J.K. and HILLMAN, R.A., 2009; Report on Seismic Refraction Investigation, Placer Gold Exploration, Spruce Creek Project, Atlin, B.C.; Project FGI-1073; Frontier Geosciences Inc.; not published at this time.

Appendix A

Statement of Qualifications

Certificate of Qualifications

I Stephen P. Kocsis currently residing at 301-776 Vaughan Street, Quesnel, British Columbia, do hereby certify that:

I studied Earth Sciences at the University of Waterloo and graduated with a B.Sc. degree in 1983.

I am registered with the Professional Engineers and Geoscientists in the Province of British Columbia as a Professional Geoscientist (License No. 20451).

I have practiced my profession continuously for a period of 27 years since graduation.

My experience related to the content of the Technical Report includes:

- Employment as an Associate Researcher with the Glaciated Basin Research Center, University of Toronto, involving 2 years of field work and three co-authored paper publications focused on the study of placer gold deposits in the Cariboo Mining District, central British Columbia.
- Continuous work over the past 19 years involving Placer Gold Exploration throughout British Columbia, Yukon Territory, Central and South America.

I prepared the Technical Report titled "Placer Gold Exploration on the Spruce Creek Property" and dated March 27, 2010. I directed and supervised all of the exploration work described in this report, with exception to the Pilot Mine Pit activities, on behalf of the Property owner/operator Ross Edenoste.

I have no prior involvement with the Property described in the Technical Report.

In my opinion of all relevant facts, there are no circumstances that could have interfered with my judgment regarding the preparation of the Technical Report. Hence, I can be considered a qualified person who is independent of the Property Owner according to section 1.4 of NI 43-101.

Dated this 27th day of March, 2010 in Quesnel, B.C.

"Signed and Sealed"

Stephen P. Kocsis, P.Geo

Appendix B

Statement of Costs

2009 Statement of Costs
Spruce Creek Placer Project
Permit 4:271, Mine No 1650491
Work Completed between April 1 and September 15, 2009

Employee Costs				
	Jessica Edenoste	40 days @ $189.12	$7,565.00	
	Dennis Irwin	138 days @ $157.92	$21,793.20	
	Clinton Zoff	69 days @ $251.80	$17,374.80	
	Brad Dingree	47 days @ $297.06	$13,962.00	
	Cory Robitaille	16 days @ $208.65	$3,338.40	
	Glen Barthel	128 days @ $120.41	$15,412.80	
	Eleanor Favero	20 days @ $156.00	$3,120.00	
	Tammy Allison	88 days @ $143.89	$12,662.00	
	Workers Compensation		$2,419.42	
Sub-Total				**$97,647.62**
Contractor Costs				
Permits	Accurate Mining Services	3.5 days @ $650.00	$2,275.00	
Geology	Stephen Kocsis, P.Geo.	33.9 days @ $450.00	$15,252.00	
Seismic	Frontier Geosciences Inc.	10 days @ $2020.00	$20,200.00	
Seismic	Frontier Geosciences Inc.	Mob/demob/reports	$5,362.89	
Sub-Total				**$43,089.89**
Camp Costs				
	Food & groceries		$23,101.56	
Sub-Total				**$23,101.56**
Fuel & Propane				
	Fuel		$69,426.55	
	Propane		$6,421.57	
Sub-Total				**$75,848.12**
Repairs & Maintenance				
	Finning, Northern Metallic, Jacob Industries		$53,920.10	
Sub-Total				**$53,920.10**
Report Costs				
	Stephen Kocsis, P.Geo.	7.5 days @ $450.00	$3,375.00	
Drafting	Accurate Mining Services	3.5 hours @ $65.00	$227.50	
Compilation	Accurate Mining Services	9 hours @ $90.00	$810.00	
Sub-Total				**$4,412.50**
Total 2009 Costs				**$298,019.79**
Total Person Days		602.2		

Appendix C

Seismic Reports FGI1073 & FGI1088

A-1 CATS

REPORT ON

SEISMIC REFRACTION INVESTIGATION

PLACER GOLD EXPLORATION

SPRUCE CREEK PROJECT

ATLIN, B.C.

by

J.K. Porter, B.Sc.

Russell A. Hillman, P.Eng.

May, 2009 **PROJECT FGI-1073**

Frontier Geosciences Inc. 237 St. Georges Avenue, North Vancouver, B.C., Canada V7L 4T4
Tel: 604.987.3037 Fax: 604.984.3074

CONTENTS

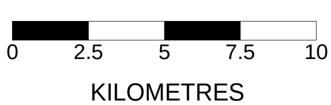
ILLUSTRATIONS

1. INTRODUCTION

In the period April 28 to May 1, 2009, Frontier Geosciences Inc. carried out a seismic refraction investigation for A-1 Cats at Spruce Creek near Atlin, British Columbia. A Survey Location Plan of the area is shown at a scale of 1:250,000 in Figure 1.

The purpose of the seismic refraction survey was to profile the basal layer and determine the location of a paleochannel with potential for placer gold reserves. The survey information would be utilised to focus further investigations, and determine the location of potential drill targets.

In all, five separate seismic traverses were completed at the Spruce Creek Project. A total of approximately 1340 metres of detailed seismic refraction surveying was carried out in the investigation on eight separate, seismic spreads. A Site Plan of the survey area showing the relative positions of the seismic traverses is shown at 1:5,000 scale in Figure 2.



A-1 CATS SPRUCE CREEK PROJECT - ATLIN, B.C.		
SEISMIC REFRACTION SURVEY		
SURVEY LOCATION PLAN		
FRONTIER GEOSCIENCES INC.		
DATE: MAY 2009	SCALE 1:250,000	FIG. 1

2. THE SEISMIC REFRACTION SURVEY METHOD

2.1 Equipment

The seismic refraction investigation was carried out using a Geometrics, Geode, 24 channel, signal enhancement seismograph and Oyo Geo Space, 10 Hz geophones. Geophone intervals along the multicored seismic cables were maintained at 7.5 metres in order to produce high resolution data on subsurface layering. The zero delay or instantaneous blasting caps in the small explosive charges used for energy input, were detonated electrically with an E.I.T. Scorpion, HB-SBS, solid-state electronic blasting unit.

2.2 Survey Procedure

For each spread, the seismic cable was stretched out in a straight line and the geophones implanted. Six separate 'shots' were then initiated: one at either end of the geophone array, two at intermediate locations along the seismic cable, and one off each end of the line to ensure adequate coverage of the basal layer. The shots were detonated individually and arrival times for each geophone were recorded digitally in the seismograph. Data recorded during field surveying operations was generally of good to excellent quality.

Throughout the survey, notes were recorded regarding seismic line positions in relation to topographic and geological features, and survey stations in the area. Relative elevations on the seismic lines were recorded by chain and inclinometer. Positioning information for each geophone was gathered during surveying using a Garmin 60Cx handheld unit. Absolute positioning data was provided by Stephen Kocsis of Cariboo Mining Services.

2.3 Interpretive Method

The final interpretation of the seismic data was arrived at using the method of differences technique. This method utilises the time taken to travel to a geophone from shotpoints located to either side of the geophone. Using the total time, a small vertical time is computed which represents the time taken to travel from the refractor up to the ground surface. This time is then multiplied by the velocity of each overburden layer to obtain the thickness of each layer at that point.

3. GEOPHYSICAL RESULTS

3.1 General

The results of the five seismic refraction traverses in the Spruce Creek area are shown at a scale of 1:1000 in Figures 3 to 7 in the Appendix. The ground surface topography on the seismic lines was produced from chain and inclinometer measurements and is approximate.

3.2 Discussion

The results of the interpretation of the data indicate the survey area is underlain by three or four distinct velocity layers. There are significant thicknesses of surficial materials at the site. These materials vary in velocity from 450 m/s to 910 m/s. With a maximum interpreted thickness of 16 metres, this layer is interpreted as unsaturated, loose to moderately dense, silt, sand, gravels, cobbles and boulders. The lower velocities are indicative of finer-grained materials with the higher velocities more consistent with coarser and denser materials.

Underlying the surficial layering is a thick intermediate layer with velocities that range from 1430 m/s to 2360 m/s. This wide velocity range suggests the intermediate layer is representative of a broad range of materials. The lower 1430 m/s to 1945 m/s velocities at the northeast ends of seismic lines SL-3 and SL-4, are interpreted as possibly saturated, sands, gravels, cobbles and boulders. The higher velocities have been correlated in the area with very dense, bedded, silt, sand, gravel, cobbles and boulders. The higher velocities detected at some locations are believed to be due to either a higher coarse content or cementation of the material.

The basal layer having velocities from 3560 m/s to 5150 m/s is the interpreted bedrock surface. These velocities likely represent several lithologies, from sedimentary to crystalline bedrock. The bedrock surface is relatively smooth and dips gently to the northeast. Interpreted bedrock elevations are higher to the south and southwest and descend through the inferred channel position to elevations of about 840 m at the northeast ends of seismic lines SL-3 and SL-4.

4. LIMITATIONS

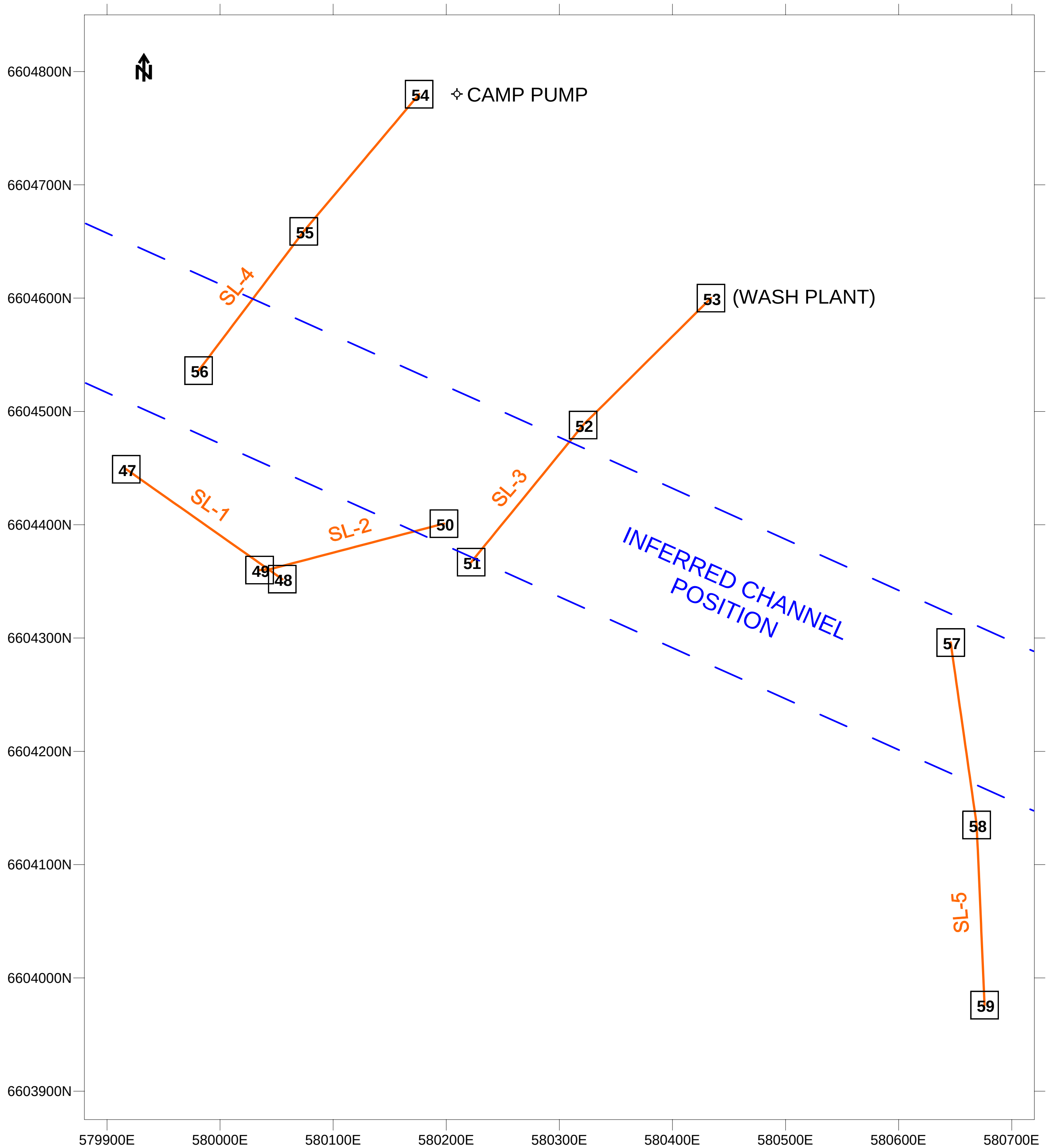
The depths to subsurface boundaries derived from seismic refraction surveys are generally accepted as accurate to within fifteen percent of the true depths to the boundaries. In some cases, unusual geological conditions may produce false or misleading data points with the result that computed depths to subsurface boundaries may be less accurate. In seismic refraction surveying difficulties with a 'hidden layer' or a velocity inversion may produce erroneous depths. The first condition is caused by the inability to detect the existence of a layer because of insufficient velocity contrasts or layer thicknesses. A velocity inversion exists when an underlying layer has a lower velocity than the layer directly above it. The interpreted depths shown on drawings are to the closest interface location, which may not be vertically below the measurement point if the refractor dip direction departs significantly from the survey line location.

The results are interpretive in nature and are considered to be a reasonably accurate representation of existing subsurface conditions within the limitations of the seismic refraction method.

For: Frontier Geosciences Inc.

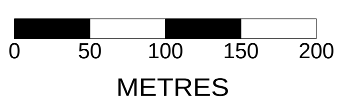
J. K. Porter, B.Sc.

Russell A. Hillman, P.Eng.

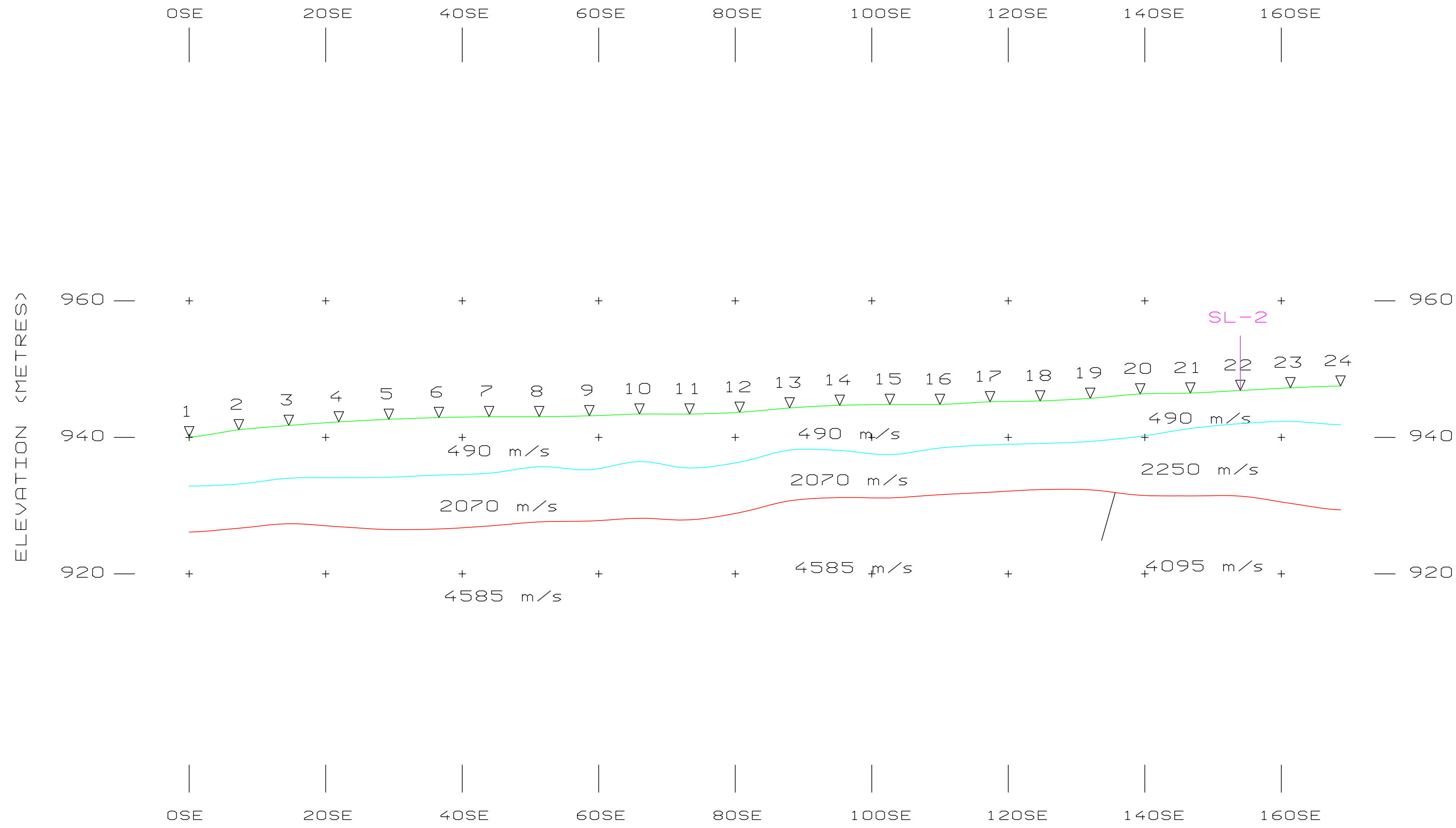


LEGEND

54 FIELD GPS POINTS



A-1 CATS SPRUCE CREEK PROJECT - ATLIN, B.C.		
SEISMIC REFRACTION SURVEY		
SITE PLAN		
FRONTIER GEOSCIENCES INC.		
DATE: MAY 2009	SCALE 1:5,000	FIG. 2

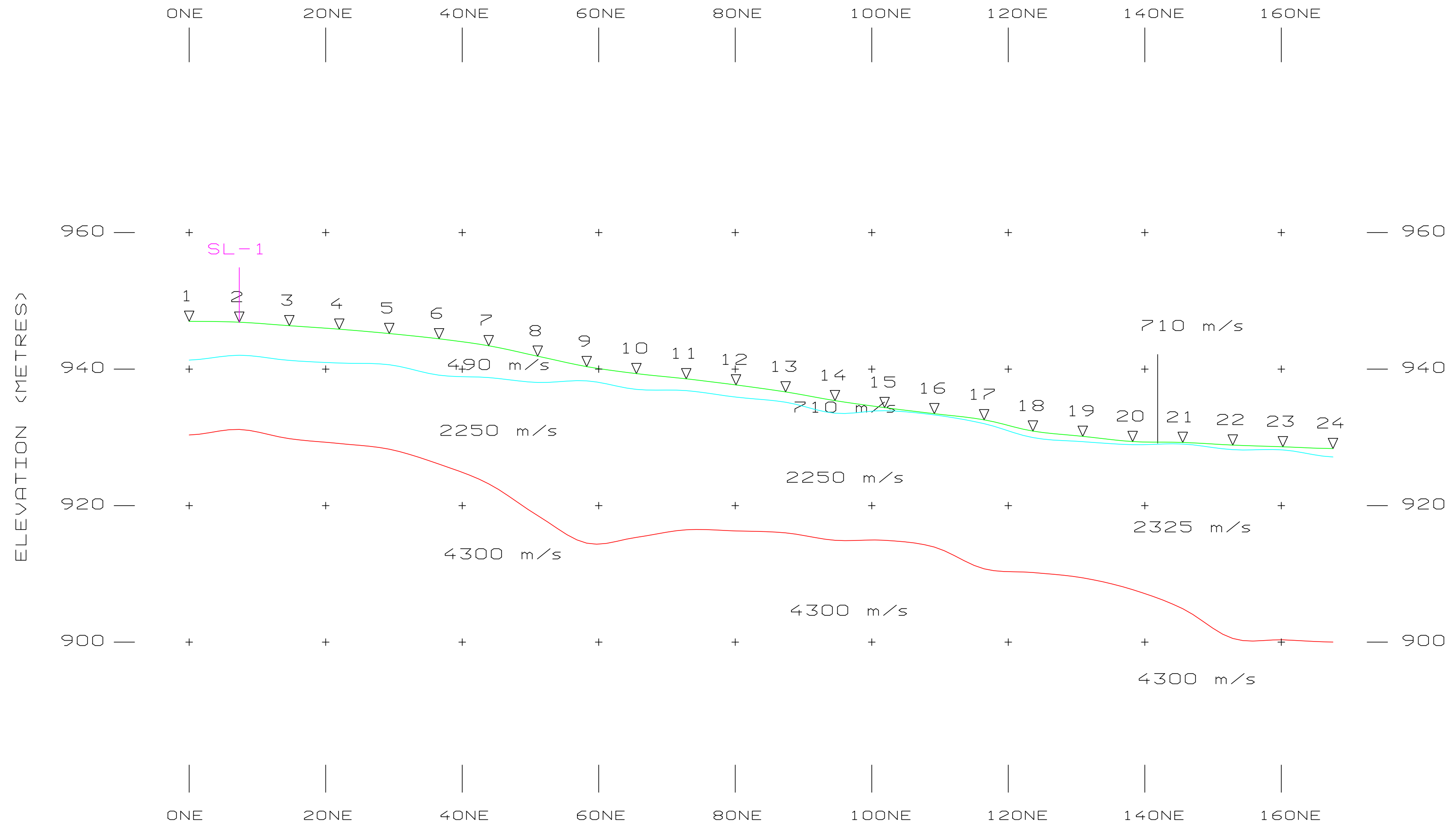


SEISMIC LINE SL-1

INSTRUMENT: GEOMETRICS GEODE

A-1 CATS SPRUCE CREEK PROJECT
SEISMIC REFRACTION SURVEY
INTERPRETED DEPTH SECTION SL-1
FRONTIER GEOSCIENCES INC.

DATE: MAY 2009	SCALE 1:1000	FIG. 3



SEISMIC LINE SL-2

INSTRUMENT: GEOMETRICS GEODE

A-1 CATS

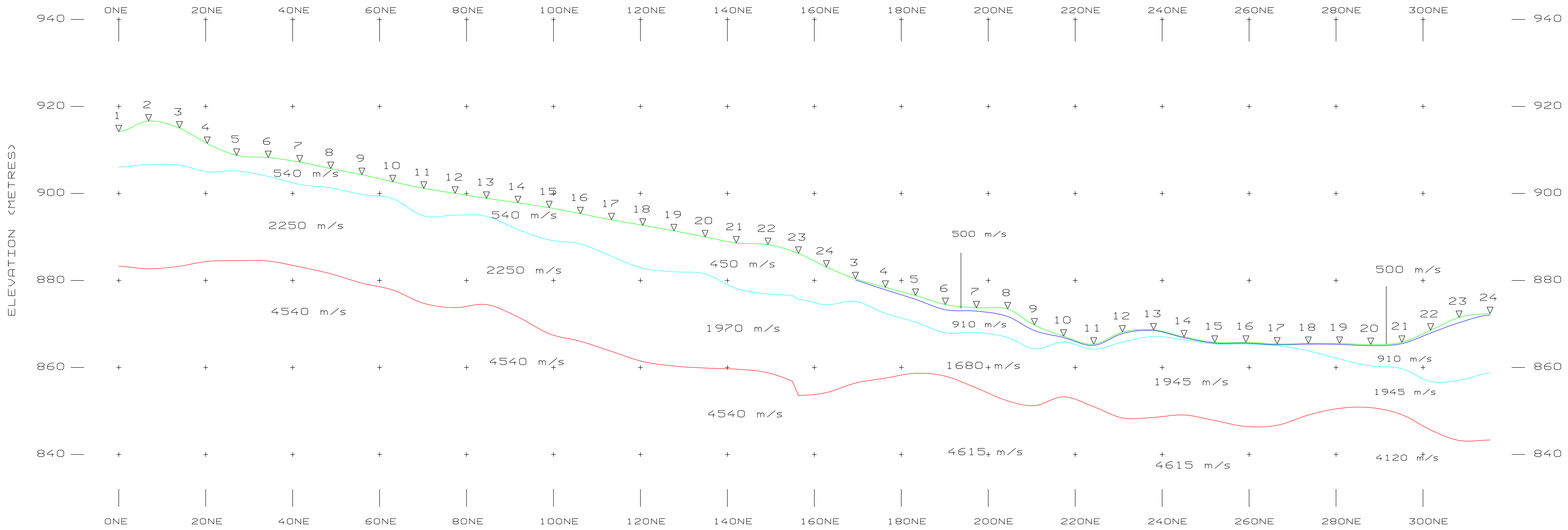
SPRUCE CREEK PROJECT

SEISMIC REFRACTION SURVEY

INTERPRETED DEPTH SECTION SL-2

FRONTIER GEOSCIENCES INC.

DATE: MAY 2009	SCALE 1:1000	FIG. 4



SEISMIC LINE SL-3

INSTRUMENT: GEOMETRICS GEODE

A-1 CATS

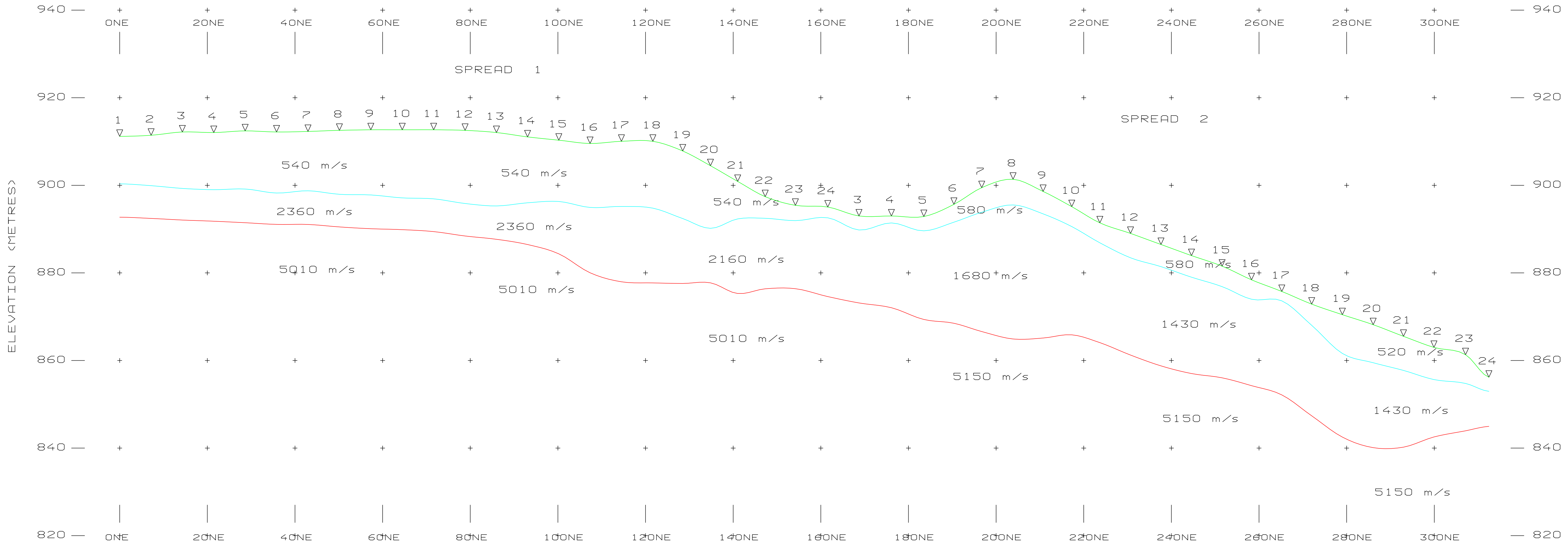
SPRUCE CREEK PROJECT

SEISMIC REFRACTION SURVEY

INTERPRETED DEPTH SECTION SL-3

FRONTIER GEOSCIENCES INC.

DATE: MAY 2009	SCALE 1:1000	FIG. 5



SEISMIC LINE SL-4

INSTRUMENT: GEOMETRICS GEODE

A-1 CATS

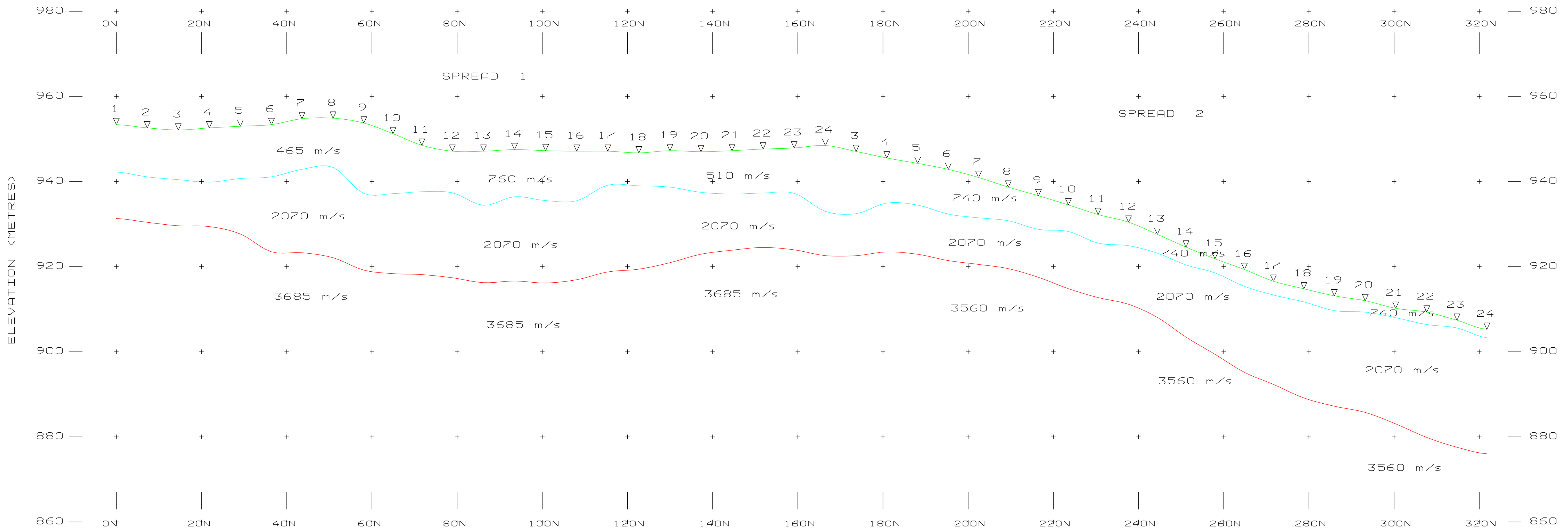
SPRUCE CREEK PROJECT

SEISMIC REFRACTION SURVEY

INTERPRETED DEPTH SECTION SL-4

FRONTIER GEOSCIENCES INC.

DATE: MAY 2009	SCALE 1:1000	FIG. 6



SEISMIC LINE SL-5

INSTRUMENT: GEOMETRICS GEODE

A-1 CATS

SPRUCE CREEK PROJECT

SEISMIC REFRACTION SURVEY

INTERPRETED DEPTH SECTION SL-5

FRONTIER GEOSCIENCES INC.

DATE: MAY 2009	SCALE 1:1000	FIG. 7

A-1 CATS

REPORT ON

SEISMIC REFRACTION INVESTIGATION

PLACER GOLD EXPLORATION

SPRUCE CREEK PROJECT

ATLIN, B.C.

by

Russell A. Hillman, P.Eng.

August, 2009 **PROJECT FGI-1088**

Frontier Geosciences Inc. 237 St. Georges Avenue, North Vancouver, B.C., Canada V7L 4T4
Tel: 604.987.3037 Fax: 604.984.3074

CONTENTS

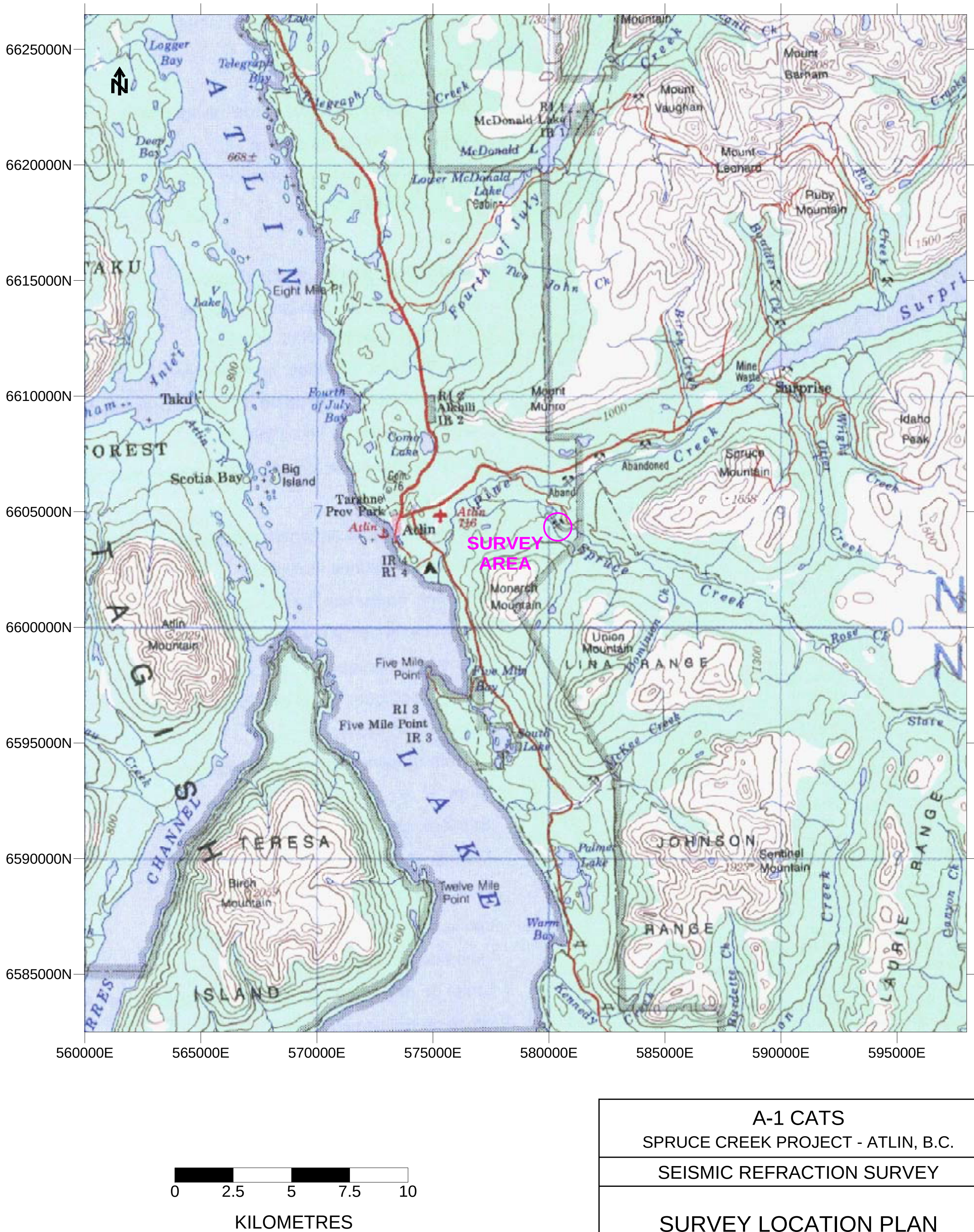
ILLUSTRATIONS

1. INTRODUCTION

In the period August 19 to August 21, 2009, Frontier Geosciences Inc. carried out a seismic refraction investigation for A-1 Cats at Spruce Creek near Atlin, British Columbia. A Survey Location Plan of the area is shown at a scale of 1:250,000 in Figure 1.

The purpose of the seismic refraction survey was to profile the basal layer and determine the location of a paleochannel with potential for placer gold reserves. The survey information would be utilised to focus further investigations, and determine the location of potential drill targets.

In all, three separate seismic traverses were completed at the Spruce Creek Project. A total of approximately 1700 metres of detailed seismic refraction surveying was carried out in the investigation on five separate, seismic spreads. A Site Plan of the survey area showing the relative positions of the seismic traverses is shown at 1:10,000 scale in Figure 2.



A-1 CATS SPRUCE CREEK PROJECT - ATLIN, B.C.		
SEISMIC REFRACTION SURVEY		
SURVEY LOCATION PLAN		
FRONTIER GEOSCIENCES INC.		
DATE: AUG 2009	SCALE 1:250,000	FIG. 1

2. THE SEISMIC REFRACTION SURVEY METHOD

2.1 Equipment

The seismic refraction investigation was carried out using a Geometrics, Geode, 24 channel, signal enhancement seismograph and Oyo Geo Space, 10 Hz geophones. Geophone intervals along the multicored seismic cables were maintained at 15 metres in order to penetrate to the deep bedrock surface and produce high resolution data on subsurface layering. The zero delay or instantaneous blasting caps in the small explosive charges used for energy input, were detonated electrically with an E.I.T. Scorpion, HB-SBS, solid-state electronic blasting unit.

2.2 Survey Procedure

For each spread, the seismic cable was stretched out in a straight line and the geophones implanted. Six separate ‘shots’ were then initiated: one at either end of the geophone array, two at intermediate locations along the seismic cable, and one off each end of the line to ensure adequate coverage of the basal layer. The shots were detonated individually and arrival times for each geophone were recorded digitally in the seismograph.

Throughout the survey, notes were recorded regarding seismic line positions in relation to topographic and geological features, and survey stations in the area. Relative elevations on the seismic lines were recorded by chain and inclinometer. Positioning information for each geophone was gathered during surveying using a Garmin 60Cx handheld unit.

2.3 Interpretive Method

The final interpretation of the seismic data was arrived at using the method of differences technique. This method utilises the time taken to travel to a geophone from shotpoints located to either side of the geophone. Using the total time, a small vertical time is computed which represents the time taken to travel from the refractor up to the ground surface. This time is then multiplied by the velocity of each overburden layer to obtain the thickness of each layer at that point.

3. GEOPHYSICAL RESULTS

3.1 General

The results of the three seismic refraction traverses in the Spruce Creek area are shown at a scale of 1:1000 in Figures 3 to 5 in the Appendix. The ground surface topography on the seismic lines was produced from chain and inclinometer measurements and is approximate.

3.2 Discussion

The results of the interpretations of the data indicate the survey area is underlain by three or four distinct velocity layers. There is a thin surficial layer underlying the site area with velocities in the narrow range of 400 m/s to 450 m/s. This layer which ranges up to 5.5 m in thickness, has been correlated with loose silt, sand, gravel, cobbles and occasional boulders.

Underlying the surficial layer on seismic lines SL-2 and SL-3, is a thicker intermediate layer with velocities of 800 m/s to 1100 m/s. Varying in interpreted thickness from 1 m to 12 m, this layer is interpreted as sand and gravel with cobbles and boulders. No indication of this intermediate layer was evident on line SL-1, likely due to the limited thickness of the layer.

A thick, intermediate layer with velocities of 1900 m/s to 2100 m/s underlies all three seismic lines. This layer which attains thicknesses of up to 41.5 m in the northeast, is believed to be consistent with very dense, bedded, silt, sand, gravel and cobble layers. The relatively high velocities determined for this layer may in part, be due to cementation of the materials.

The basal layer having velocities ranging from 4275 m/s to 4900 m/s is the interpreted competent bedrock surface. The relatively high velocities recorded for this layer indicate the basal layer is competent crystalline bedrock.

The interpreted bedrock surface for lines SL-1 and SL-2 rises from northeast to southwest. The interpreted bedrock on these traverses is relatively flat-lying from approximate station 280 SW to the southwest extremities of the lines. Seismic line SL-3 also shows a rise to the southwest at about station 300 SW, then dips to the northeast. There is no indication on the seismic traverses of a sharp rise in the bedrock surface indicating a possible channel bedrock rim, to the northeast.

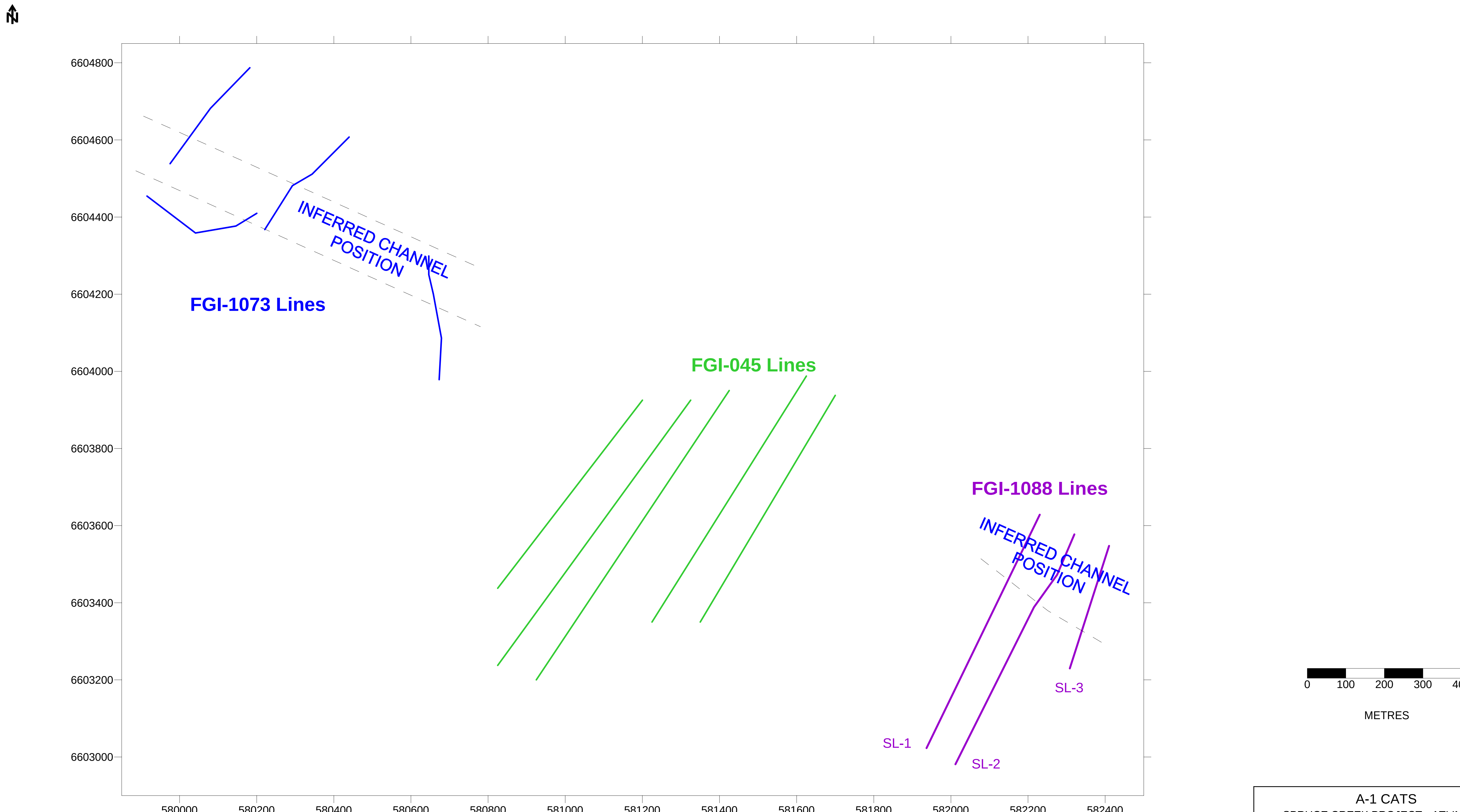
4. LIMITATIONS

The depths to subsurface boundaries derived from seismic refraction surveys are generally accepted as accurate to within fifteen percent of the true depths to the boundaries. In some cases, unusual geological conditions may produce false or misleading data points with the result that computed depths to subsurface boundaries may be less accurate. In seismic refraction surveying difficulties with a ‘hidden layer’ or a velocity inversion may produce erroneous depths. The first condition is caused by the inability to detect the existence of a layer because of insufficient velocity contrasts or layer thicknesses. A velocity inversion exists when an underlying layer has a lower velocity than the layer directly above it. The interpreted depths shown on drawings are to the closest interface location, which may not be vertically below the measurement point if the refractor dip direction departs significantly from the survey line location.

The results are interpretive in nature and are considered to be a reasonably accurate representation of existing subsurface conditions within the limitations of the seismic refraction method.

For: Frontier Geosciences Inc.

Russell A. Hillman, P.Eng.



A-1 CATS
SPRUCE CREEK PROJECT - ATLIN, B.C.

SEISMIC REFRACTION SURVEY

SITE PLAN

FRONTIER GEOSCIENCES INC.

DATE: AUGUST 2009	SCALE 1:10,000	FIG. 2

SEISMIC LINE SL-1

INSTRUMENT: GEOMETRICS GEODE

A-1 CATS SPRUCE CREEK PROJECT		
SEISMIC REFRACTION SURVEY		
INTERPRETED DEPTH SECTION SL-1		
FRONTIER GEOSCIENCES INC.		
DATE: AUG 2009	SCALE 1:1000	FIG. 3

SEISMIC LINE SL-2

INSTRUMENT: GEOMETRICS GEODE

A-1 CATS

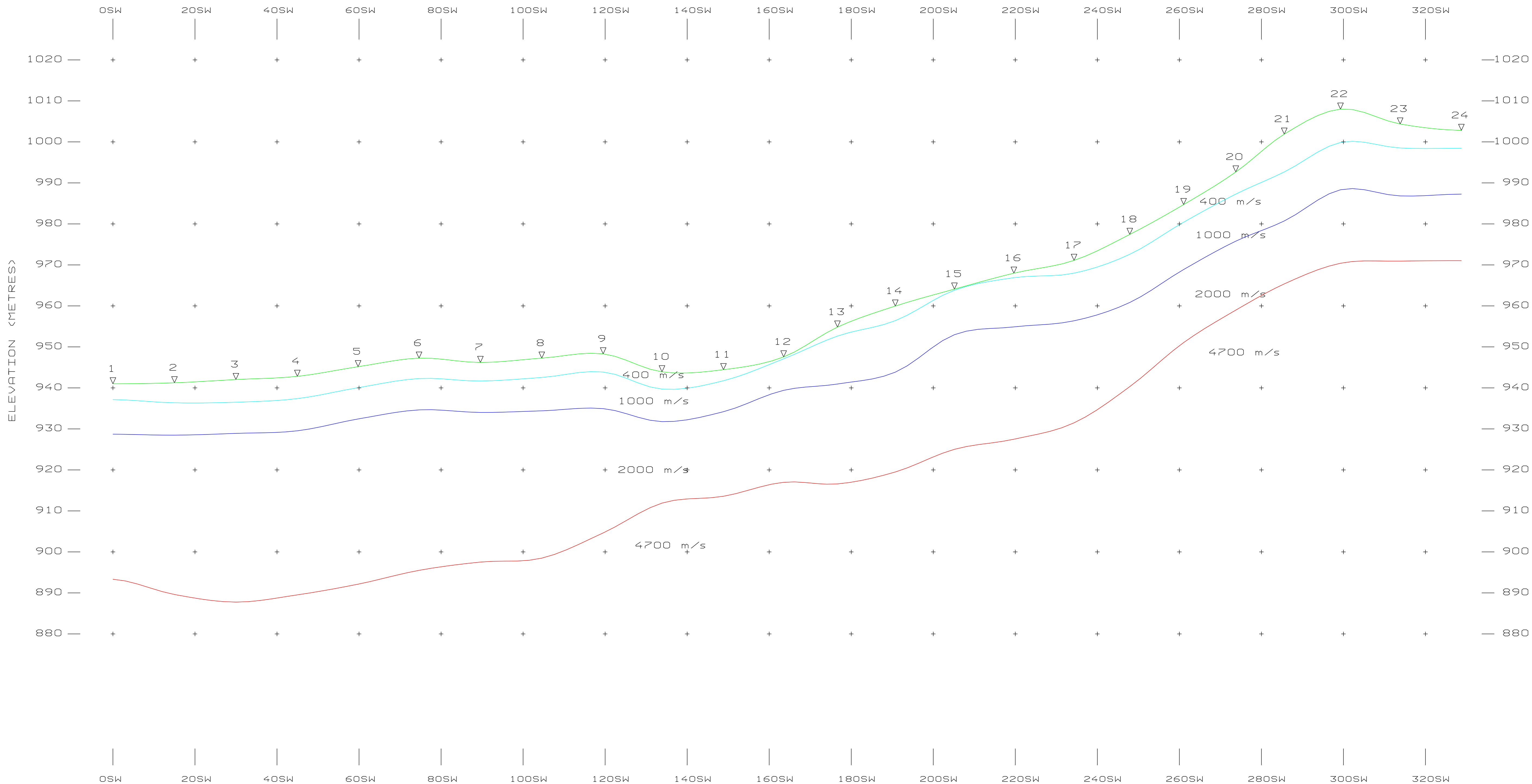
SPRUCE CREEK PROJECT

SEISMIC REFRACTION SURVEY

INTERPRETED DEPTH SECTION SL-2

FRONTIER GEOSCIENCES INC.

DATE: AUG 2009	SCALE 1:1000	FIG. 4



SEISMIC LINE SL-3

INSTRUMENT: GEOMETRICS GEODE

A-1 CATS

SPRUCE CREEK PROJECT

SEISMIC REFRACTION SURVEY

INTERPRETED DEPTH SECTION SL-3

FRONTIER GEOSCIENCES INC.

DATE: AUG 2009	SCALE 1:1000	FIG. 5