ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TITLE OF REPORT : Resistivity – Induced Polarization Survey on the Wingdam Property

TOTAL COST: $23,747.50

AUTHOR(S)Andrew Pare, Russell Hillman, Robert E. 'Ned" Reid, Fran Macpherson
SIGNATURE(S): "Signed and Sealed"
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): P–11–612: Approval Number 10-1101518-0427 (application was lost in transfer from Prince George to Kamloops; original application date was November 20, 2009)
STATEMENT OF WORK EVENT NUMBER(S)/DATE(S) 4353801; 2010 MAR/26

YEAR OF WORK: 2009
PROPERTY NAME: Wingdam
CLAIM NAME(S) (on which work was done): Mineral Tenure 552450

COMMODITIES SOUGHT: Gold

MINERAL INVENTORY MINFILE NUMBER(S),IF KNOWN: 093H 012
MINING DIVISION : Cariboo
NTS / BCGS: 093H04 / 093H.001
LATITUDE ____53______o ____02______' ____30______"
LONGITUDE ____121______o ____58______' ___20_______" (at centre of work)
UTM Zone 10 EASTING 568900 NORTHING 5878018

OWNER(S): CVG Mining Ltd.
MAILING ADDRESS: 384 Winder Street , Quesnel, B.C. V2J 1C6

OPERATOR(S) [who paid for the work] : CVG Mining Ltd.
MAILING ADDRESS: 384 Winder Street, Quesnel, B.C. V2J 1C6

REPORT KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude **do not use abbreviations or codes**)
Resistivity, Induced Polarization, Gold, Alluvial, Phyllites, Quartzites, Barkerville Terrane. Quesnel Terrane, Eureka Thrust

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: 00005, 00007, 00292, 06238, 06295, 07094, 07540, 07550, 08269, 09470, 10640,10815, 12590, 12738, 16113,16397, 17010, 17394, 18558, 18842

RESITIVITY – INDUCED POLARIZATION SURVEY ON THE WINGDAM PROPERTY

by
Andrew Pare, B.Sc. and Russell Hillman P.Eng.
of
Frontier Geoscience Inc.

on
Mineral Tenure 552450

Lat: 53º 03’30” Long: 121º58’

Cariboo Mining District

for Property Owner and Operator

CVG Mining Ltd.

30 June, 2010

Report Prepared by

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SUMMARY

The purpose of this report is to present the Resistivity – Induced Polarization data pertaining to the Wingdam area obtained by Frontier Geoscience Inc for CVG Mining Ltd. in a format acceptable for assessment credit. The Frontier Geoscience report, with applicable plans is appended.

CVG Mining Ltd's primary objective in the Wingdam area is to put the "historic" buried alluvial placer deposit into production. Prior to CVG commencing with dewatering the workings they commissioned Clifton Associates to review the historical and hydro geological reports pertaining to the existing underground workings on the property, and Frontier Geosciences Inc. to conduct test surveys on the Wingdam and Fraser Canyon properties.

The majority of the Wingdam area mineral and placer tenures held by CVG Mining Ltd. were acquired under an option agreement with John Bot of Quesnel B.C. The mineral tenures are contiguous covering several placer tenures in the area (Fig X and Table 1).

The principle reason for CVG to hold both the placer and mineral tenures is that the alluvial gold present at Wingdam occurs in fractures in the bedrock, therefore to prevent arguments as to whether it is placer or mineral ground; it is simpler to hold both types of tenure. A secondary reason is that the source of the placer gold has yet to be found.

INTRODUCTION

Len Sinclair, President of CVG Mining Ltd. requested that that Fran Macpherson of Accurate Mining Services Ltd., who carries out property management for CVG, and Robert E. "Ned" Reid as a Qualified Person, who recently completed a 43-101 on the Wingdam property, submit the Frontier Geoscience Ltd geophysical report for assessment credit on the mineral tenures held in the Wingdam area.

PROPERTY DESCRIPTION AND LOCATION

The Wingdam property of CVG Mining is situated in and surrounding the Lightning Creek valley and is roughly dissected by Highway 26, the Barkerville Highway. It is located approximately halfway, via the highway, between Quesnel and Barkerville, or on the map, 27.5 Km. west of Barkerville and 42 Km. east of Quesnel (Figure 1). The property is within the Cariboo Mining District in central British Columbia and with the recent boundary changes now reports to the Mines Branch in Kamloops.

The Wingdam property is best known as a buried alluvial gold placer property with a possible resource of 51,500 to 61,500 ounces of gold contained in 53,500 cubic yards for

Figure 1 Property Location

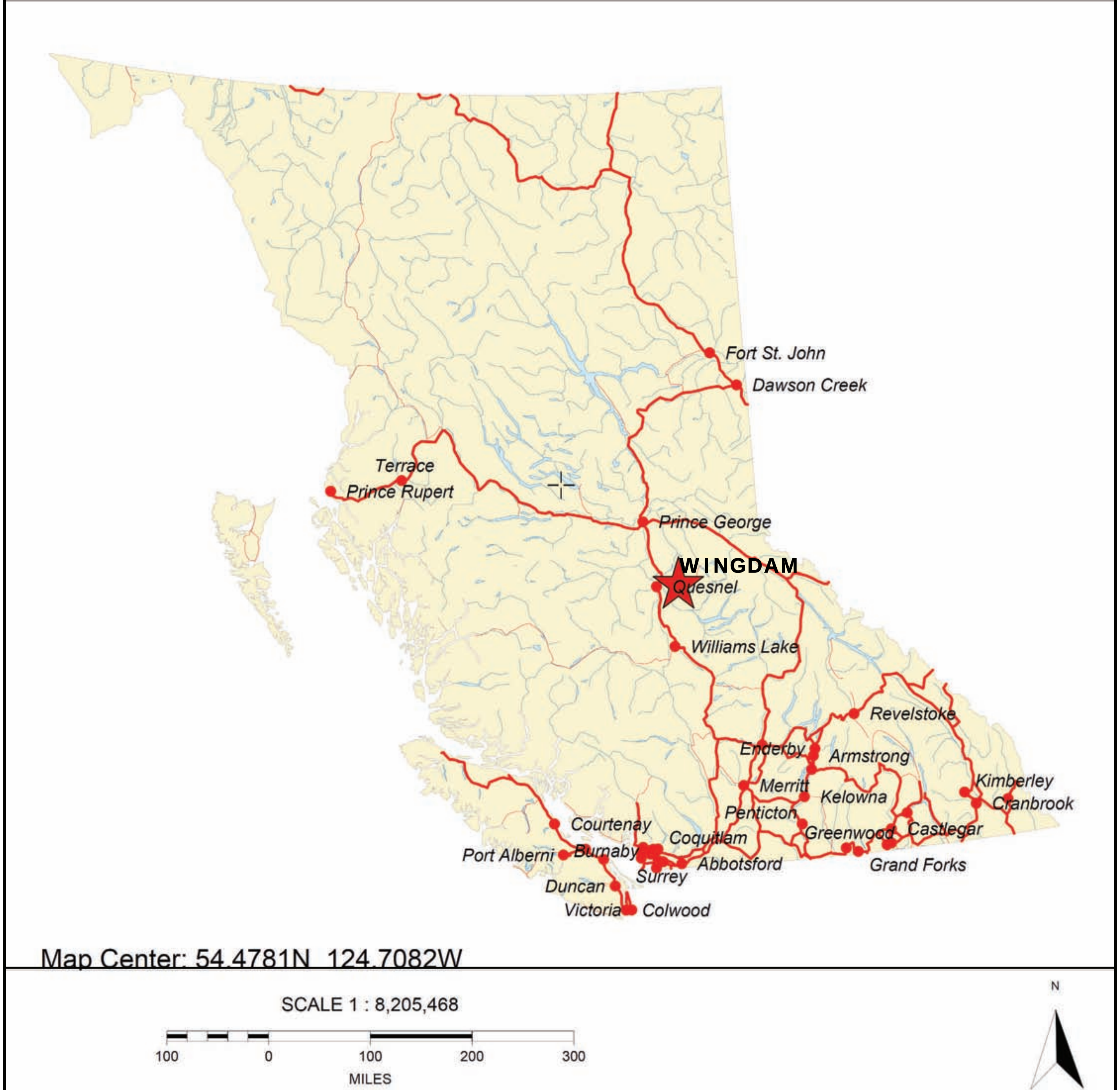
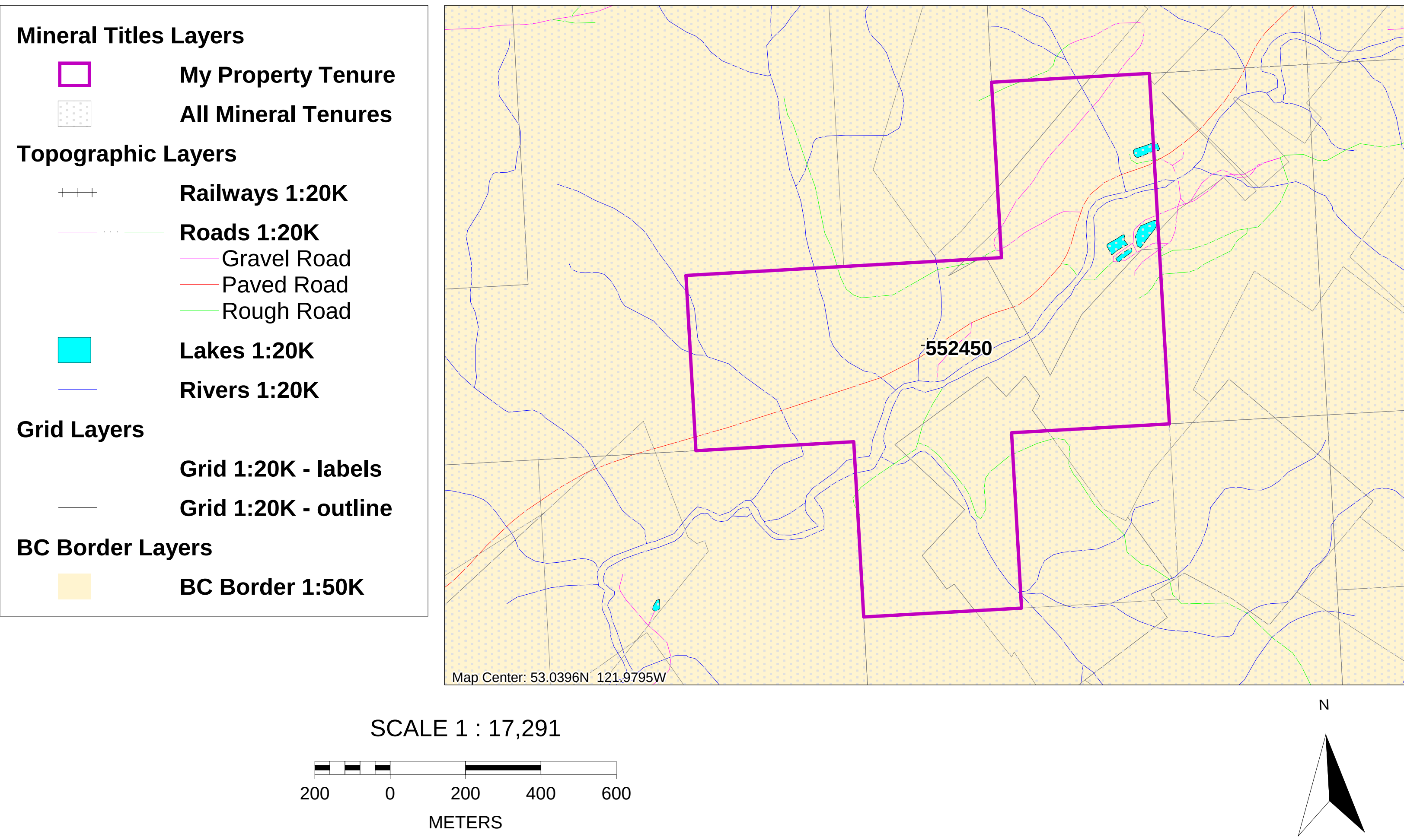


Figure 2 Claim Map

Property Claim Map



a grade of roughly 1 ounce gold per cubic yard (Reid 2010). Some historical exploration programs, as indicated in the ARIS reports on the cover page, have been dedicated to locating the bedrock "source".

The underground workings which are the focus of the present CVG program are centered at approximately:

Map Reference: NTS 93H4 Lat: 53º 02' 30" Long: 121º 58'
Trim 093H.001 Northing: 5878018 Easting: 569423
(NAD 83, Zone 10 N)

The majority of the holdings are east and south of these coordinates. (Fig. x)

CVG Mining Ltd. is the recorded holder of 100% interest in the tenures tabulated below. The majority of the tenures are subject to the terms of the option agreement with John Bot.

TABLE 1 – List of Properties

CVG Mining Ltd. – Wingdam Placer Tenures

Tenure No.	Name	Type	Sub Type	Map No.	Issue Date	Good To Date	Area (ha)
579200	LIGHT 1	Placer	Claim	093H	2008/mar/26	2010/sep/30	38.8581
579203	LIGHT 2	Placer	Claim	093H	2008/mar/26	2010/sep/30	38.8582
579206	LIGHT 3	Placer	Claim	093H	2008/mar/26	2010/sep/30	38.8619
579207	LIGHT 4	Placer	Claim	093H	2008/mar/26	2010/sep/30	19.431
600943	LIGHT 5	Placer	Claim	093H	2009/mar/12	2010/sep/30	19.4291
600944	LIGHT 6	Placer	Claim	093H	2009/mar/12	2010/sep/30	19.431
600945	LIGHT 7	Placer	Claim	093H	2009/mar/12	2010/sep/30	19.4291
659603	SKI	Placer	Claim	093H	2009/oct/26	2010/oct/26	19.4291
659643	LIGHT 8	Placer	Claim	093H	2009/oct/26	2010/oct/26	38.8582
665744	WD 6	Placer	Claim	093H	2009/nov/06	2010/nov/06	38.8748
791222		Placer	Lease	093H	2010/jun/11	2011/jun/11	49.62
791242		Placer	Lease	093H	2010/jun/11	2011/jun/11	128.43

Total Hectares **469.5105**

CVG Mining Ltd – Wingdam Mineral Tenures

Tenure No	Claim Name	Type	Sub Type	Map No	Issue Date	Good To Date	Area (ha)
552424	WINGDAM MINE	Mineral	Claim	093H	2007/feb/20	2012/mar/31	38.878
552450	WD 2	Mineral	Claim	093H	2007/feb/21	2012/mar/31	97.201
552451	WD 3	Mineral	Claim	093H	2007/feb/21	2012/mar/31	233.327
552453	WD 4	Mineral	Claim	093H	2007/feb/21	2012/mar/31	427.61
675223	TRAILER CAMP	Mineral	Claim	093H	2009/nov/27	2012/mar/31	19.4309
675243	WD-M	Mineral	Claim	093H	2009/nov/27	2012/mar/31	388.7622
675244	WD - M	Mineral	Claim	093H	2009/nov/27	2012/mar/31	19.4309
675246	LIGHTS ON	Mineral	Claim	093H	2009/nov/27	2012/mar/31	272.0211
675264	WD - M	Mineral	Claim	093H	2009/nov/27	2012/mar/31	485.988
675303	WD -M	Mineral	Claim	093H	2009/nov/27	2012/mar/31	155.4629
675446	ULC	Mineral	Claim	093H	2009/nov/27	2012/mar/31	116.6194
683807	WD-M 5	Mineral	Claim	093H	2009/dec/11	2010/dec/11	174.8672
684765	WD-M 5	Mineral	Claim	093H	2009/dec/14	2010/dec/14	97.1638
Total Hectares							**2526.762**

With the acceptance of this report for assessment credit the mineral tenures will have good to dates as shown in the foregoing table.

HISTORY

The history of the Sanderson and Melvin underground placer working is well documented by a number of authors indicated in the references. The local history of Wingdam and Pinegrove is available in “Trails to Gold” Volume Two “Roadhouse of the Cariboo” by Branwen Patenaude 1996.

Two names associated with Wingdam from early in its history (1904?) until 1947 are Colonel Maller and Charles H Unverzagt, who apparently, among other duties, were the key promoters of the underground placer potential of the property.

Wingdam was originally staked as a lode claim, according to Branwen Patenaude, when “On April 30, 1878, John Boyd and Angus Mcphail found a quartz ledge which they named ‘Lightning Creek Quartz Ledge’ which crosses Lightning Creek four to five miles above Cold Spring House running from Lightning Creek and across the wagon road in a North-west direction. They staked 1500 feet for themselves (called the Cold Spring Company) and an additional 1500 feet for (called the Cottonwood Company) for John Flemming. The Cold Spring Company and the Cottonwood Company were joined and with some property additions they formed the Big Bonanza Company. In 1879 the company is reported to have ‘sunk a shaft some 80 feet, obtaining at that depth a good prospect.’ From the start the water and slum seeped into the shafts and could not be controlled. The Big Bonanza Company struggled for years, always on the brink of a ‘Big Bonanza’ but was never able to control the water and slum seepage. In 1896 the claims of the Big Bonanza Company were sold to the Lightning Creek Gold Gravel & Drainage

Company, which said company through several reorganizations, controlled the placer on Lightning Creek from Stanley downstream to Wingdam for a number of years (1947?).

Unlike the Barkerville–Stanley–Wells area which has a recorded history of searching for lode deposits from shortly after the 'gold rush' there are none recorded, with the exception of the Free Lance Vein (which was originally staked by Boyd and McPhail?) in the Wingdam area. The reason for staking mineral tenures in the Wingdam area, other than to prevent arguments with placer miners is presented in ARIS 17010 for Rise Resources as being "The property was staked to cover ground believed to be the source of the placer gold found in the lower portions of Lightning Creek". There are a number of published reports, including ARIS 12950, that disagree with this theory, but who knows.

The recorded history of geophysical surveys, according to the assessment reports filed, dating back to the 1947 Resistivity Survey (ARIS 00005) in the Wingdam area is almost equally divided into the search for placer channels and the search for lode deposits. The surveys reported were plagued by a variety of reasons for poor data collection, including too steep of terrain, too thick of overburden, graphitic zones, clay horizons and the seismic included with this report, by noise created by highway repairs. Basically they have all failed their main objective, which was to define the ore zone.

GEOLOGICAL SETTING

Although the geology of the Cariboo, especially the Barkerville area, has been studied by many geologists and engineers dating back to Amos Bowman in 1895, the geologic setting of the Wingdam area was apparently first mapped by Hanson G. (1938) Willow River Sheet (W ½ & E ½) Cariboo District B.C., GSC maps 335A & 336A. Numerous previous authors on the Wingdam property have alluded to Hansen's report (GSC Memoir 181 ?) and in particular stated that the GSC Summary Report for 1933 gives an excellent review of the geology. However, finding a copy of this report has proven as elusive as finding a new gold deposit.

Fortunately Struik L.C.; GSC Memoir 421, Structural Geology of the Cariboo Gold Mining District, East-Central British Columbia 1988;(Geology Map 1635A appended) revisited the area, and was then followed by Victor M. Levson and Timothy R. Giles: Bulletin 89, Geology of Tertiary and Quaternary Gold-Bearing Placers in the Cariboo Region, British Columbia 1993. The following descriptions are excerpts from, or interpretations of, Struick's and/or Levson – Giles' work, embellished with a few of this authors personal observations. And to point out that no one reads the geology sections of these reports the author uses a line from harold Quinn's report which is: The recent discovery of an antler of a cow moose of recent geological age in the deep channel also indicates the comparatively recent deposition of this channel filling

The Wingdam property overlies the Eureka Thrust or root zone of the Slide Mountain Terrane, which in this area serves as the contact between Proterozoic to Jurassic aged, continental shelf and slope clastics, carbonates and volcaniclastics of the Barkerville

Terrane to the east, and the Upper Triassic and Lower Jurassic island arc volcaniclastics and fine grained clastics of the Quesnel Terrane to the west.

Major north-west trending faults such as the Eureka thrust presumably provided a major structural control on pre-glacial drainage patterns in the area and they are believed to be good exploration targets (Levson et al., 1993a). The trace of the Eureka thrust south east of the property is easily recognized as serpentinite. However where it crosses Highway 26, 300 meters up hill of Ramos Creek or 200 meters downhill from the easily recognized Wingdam conglomerate, the trace of the Thrust is fairly nondescript and may represent an area where rocks of the Quesnel and Barkerville Terranes are in fault contact and where recognizable Slide Mountain Terrane rocks are absent.

The Quesnel Terrane in the area consists of mainly black slate and volcaniclastic greenstone, with lesser amounts of micritic limestone, conglomerate and sandstone. The lower contact with more easterly terranes may be either tectonic or stratigraphic as no unequivocal evidence has been found to support either relationship.

Bedrock underlying the current area of interest at Wingdam is Ramos succession rocks of the Barkerville Terrane, composed of phyllite and interbedded micaceous quartzite, with subordinate siltite, amphibolite, marble and tuff. Tuff and siltite appear high in the succession whereas marble and amphibolite are mainly low. There is no designated type section for this succession, however, exposures in road cuts along Ramos Creek are representative of much of the upper part of the unit. The succession is highly sheared at its contact with the western Crooked Amphibolite. The Ramos succession may be in whole, or in part, related to the Tregillus succession.

The last two sentences have implications for Wingdam in two ways. If it is highly sheared towards the Eureka Thrust can bad ground conditions be expected in under ground development towards that area? The second being that the Tregillus, as mapped at Stanley, covers a limited area which is coincidental with the “high grade” obtained from the deep channel workings in that section.

Levson and Giles (Bulletin 89) state what is probably well known to most placer miners: On a more local scale, bedrock geology affects the accumulation of placer gold by creating river channel irregularities and bedrock traps as potholes, resistant strata (natural riffles and ledges), openings in fissile bedrock (crevices, bedding and cleavage planes) and fault zones (Maurice, 1986; Teeuw et al., 1991). In addition, stream profiles and bed conditions such as channel roughness are largely controlled by the local bedrock geology. One of the most efficient bedrock traps for collecting gold occurs in formations where alternating competent and less resistant strata, such as interbedded phyllites and quartzites in the Snowshoe Group, are steeply dipping and oriented perpendicular to stream flow.

Holland 1948 states that in the Stanley area: There is no real correlation apparent between rich placer gold occurrences and the outcrop of a particular formation. The general association appears to be with bedrock structures.

Whether the deep channel gold at Wingdam is pre-glacial, or is glacial gold remnants left over from erosion of the Sanderson bench, has been the subject of much speculation and debate over the years. Mason 1974 states: It is a moot point whether the Melvin deep channel deposits are pre-glacial. Character of the gold mined in the rich ground, between the Nos. 1 Raises Downstream and Upstream, was distinct from the Sanderson, a glacial deposit; the former being flat, bright, roughly uniform and coarser than the Sanderson "rusty gold".

The Lightning Creek valley, when looking at topography, is most definitely pre-glacial. I will suggest that Lightning Creek was dammed off prior to the time of glacial melt in the vicinity of the Eureka Thrust, thus creating a lake that extended upstream to section F or the downstream limits of the Sanderson Mine. Said lake survived, through and after, the initial depositional sequence that created the cemented gravels and hard-pan on which the Sanderson glacial gold was deposited. It would explain the somewhat increased gravel-coarse sand overlying the bedrock on the upstream sections as compared to the downstream ones as well as the fact that overall the "slum" gets closer to bedrock progressing downstream.

DEPOSIT TYPE and MINERALIZATION

Wingdam is best known as a buried paleochannel Placer Gold deposits in a modern alluvial valley, with a stream gradient similar to the modern channel.

Placer gold has been located within and along a buried sinuous paleochannel or channels as they are sometimes split by ridges or mounds of variable width, ranging from 40 to 100 feet along a length of at least 5500 feet. The channels cut steeply dipping interbedded quartzite and phyllite which strike nearly perpendicular to the flow direction. The channel(s) are covered by approximately 165 feet of lacustrine sediments.

The gold found in the deep channel is reported to be "heavy" (recoverable), coarse, bright, flat, roughly uniformly the size of flax seed, or for those of us who don't know flax seed, Gunning reported that 95% of the gold was flat and between 1 and 3 millimeters. The reported fineness is 900 to 915. There is very little flour gold found in Lightning Creek.

To date the lode source of this gold has not been located, although it is reported that due to the fineness of the gold, it is Cow Mountain gold, as is Stanley, although the logistics of transport to Stanley and Wingdam is questioned.

2009 WORK PROGRAM

During the period November 24 to December 4, 2009 Frontier Geosciences Ltd. carried out a program of geophysical investigations at the Wingdam and Fraser Canyon properties of CVG Mining Ltd near Quesnel B.C.

The geophysical survey at Wingdam included 1035 meters of Resistivity Imaging and Induced Polarization together with 640 meters of seismic reflection surveying. The work was completed along three parallel lines, spaced approximately at intervals of 150 meters. Appendix B

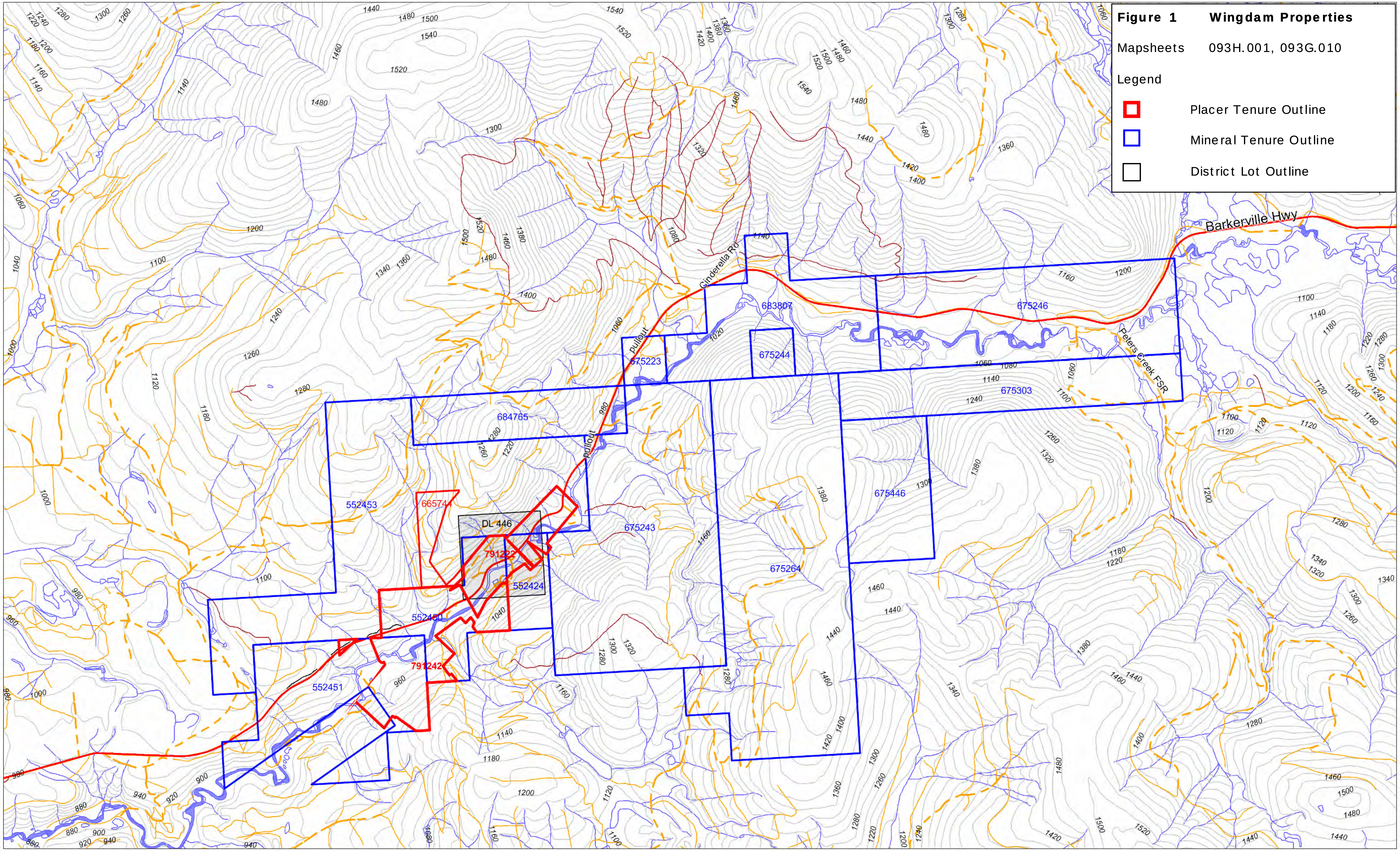


Figure 1 Wingdam Properties
Mapsheets 093H.001, 093G.010
Legend
Placer Tenure Outline
Mineral Tenure Outline
District Lot Outline
Barkerville Hwy
Cinderella Rd
Peters Creek FSR
pullout
pullout
683807
675246
675244
675223
675303
684765
675446
675243
675264
552453
552424
552450
552451
665744
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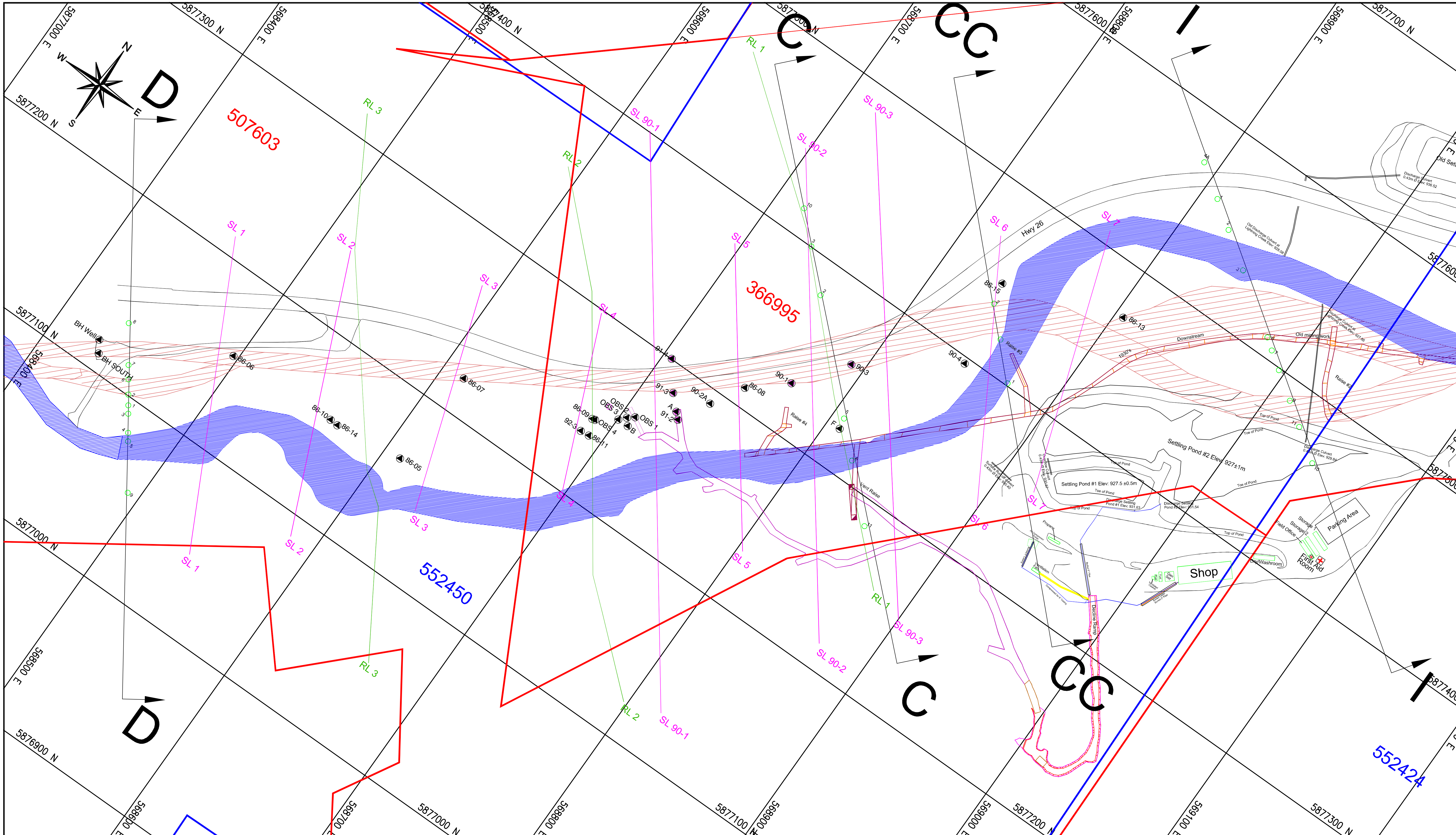

CVG Mining Ltd.

SEISMIC LINES

By: C.Boucher

SCALE: 1:2000

Date: 2010/06/04

C:\ProminePSS\ProDwg\Layers\Survey files\Overview Plans\Overview Wingdam June 4.dwg

RECOMMENDATIONS

Based on the history of geophysical surveys on the property, combined with the reports available to CVG, no further geophysical surveys are recommended for the Wingdam area.

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STATEMENT OF COSTS

Item	**Cost**
Project: 25 Person Field Days	
Frontier Geosciences Inc. (November 24 – December 4 2009)	
Mob/demob Vancouver to Wingdam & return	
1035 meters of Resistivity Imaging	
1035 meters Induced Polarization	
640 meters seismic reflection surveying	
Geophysical Report Preparation	$22,000.00
Robert E. "Ned" Reid	
Report Preparation	$ 750.00
Christian Boucher	
Drafting – 6 hours @ $75/hour	$ 450.00
Accurate Mining Services	
Report Compilation – 5 hours @ $90/hour	$ 450.00
Drafting – 1.5 hours @ $65/hour	$ 97.50
Total Cost of Program	**$23,747.50**

APPENDIX A

Statements of Qualification

Robert E. "Ned" Reid P.Geo.
#16 - 231 Hartley Street
Quesnel, BC V2J 1V8

Ph/Fax 250 992 3782
Email: nedreid@shaw.ca

Certificate of Qualifications

I, Robert E. “Ned” Reid currently residing at apt #16 – 231 Hartley Street, Quesnel, British Columbia, do hereby certify that:

1. I am a graduate of the University of British Columbia, B.Sc. 1971, geology major.
2. I have been practicing my profession as an exploration and mine geologist / mine supervisor continuously since 1971.
3. I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia.(License # 20910) with sufficient relevant experience to be a “Qualified Person” as per National Instrument 43
4. I have prepared, along with Fran Macpherson, this report entitled Resistivity-Induced Polarization Survey on the Wingdam Property for assessment credit, and reviewed the data contained in the report titled “Seismic Refraction and Reflection, Resistivity, Induced Polarization and Magnetometer Surveying, Wingdam and Fraser Canyon Projects, Quesnel Area B.C. by Frontier Geoscience Inc.” and believe that this report accurately depicts the material obtained to date.
5. I was last on the property on April 6, 2010.

Dated at Quesnel B.C. this 30th day of June, 2010

“Signed and Sealed”

Robert E. “Ned” Reid P.Geo.

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Statement of Qualifications

I, Frances J. (Fran) Macpherson currently residing at 1282 Marsh Road, Quesnel, British Columbia, V2J 6H3, Canada, do hereby certify that:

1. I graduated with a B.A. (Psychology) from McGill University, P.Q. in 1972

2. I graduated with an M.A. (Clinical Psychology) from the University of New Brunswick, Fredericton in 1975

3. I have been employed in the mining industry since 1993

4. I was employed as mine manager on a large mineral exploration and bulk sample project in Wells, B.C. from 2000 to 2005 during which period I was involved in the drafting and compilation of numerous technical reports

5. I have owned and operated an independent consulting firm “Accurate Mining Services Ltd.” since 2005

6. I have made several visits to the CVG Wingdam property

7. I am not a partner or shareholder in CVG Mining Ltd.

Dated at Quesnel B.C. this 30th day of June 2010

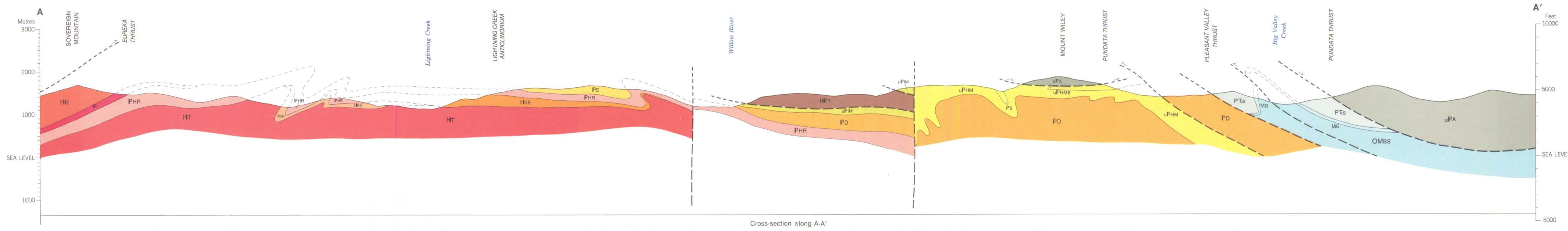
Fran Macpherson

APPENDIX B

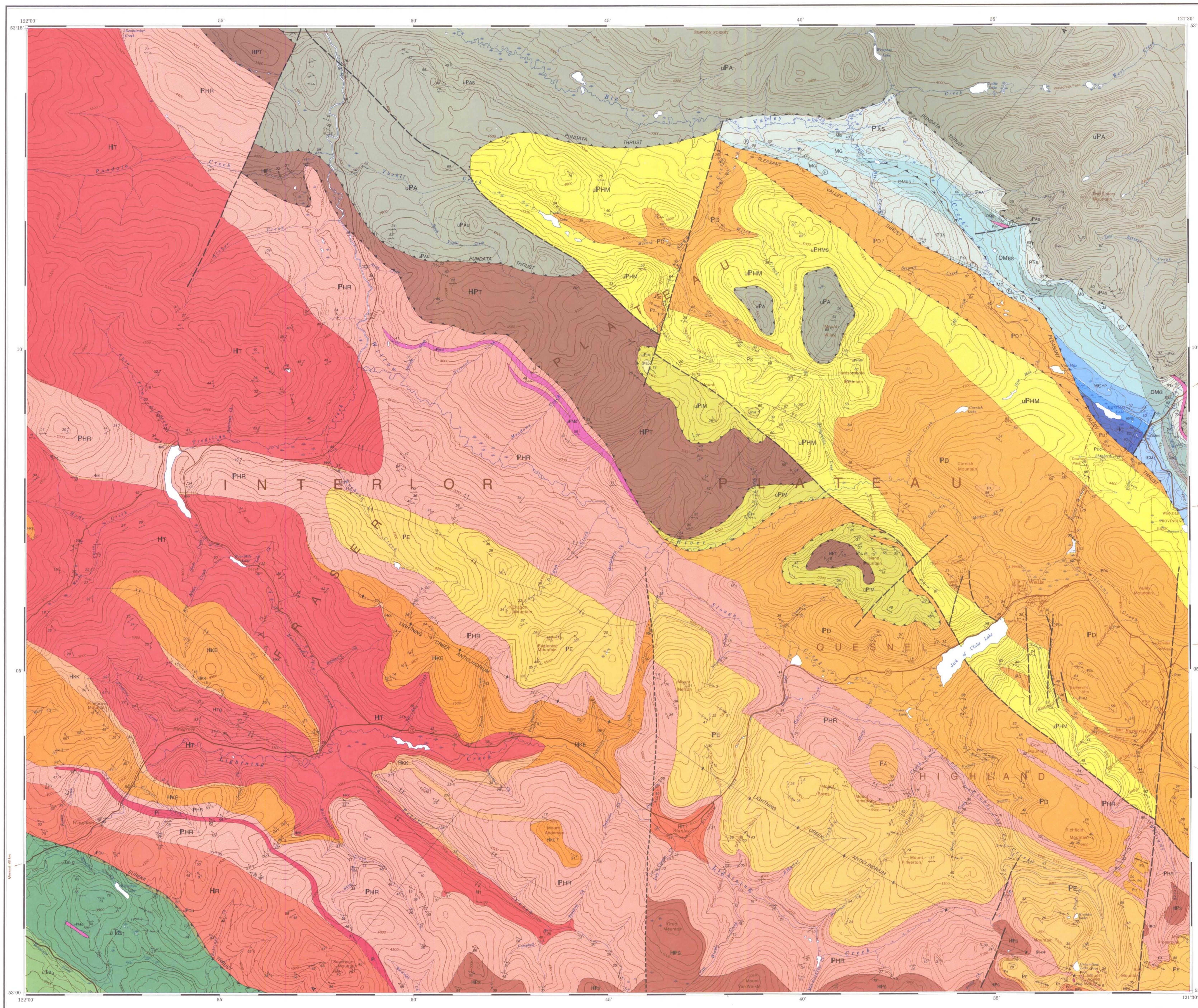
GEOLOGY MAP 1635A

(After Struick)

Energy, Mines and Resources Canada — Énergie, Mines et Ressources Canada
Geological Survey of Canada — Commission géologique du Canada



Cross-section along A-A'



LEGEND

This legend is common to maps 1635A, 1636A, 1637A, 1638A, coloured legend blocks indicate map units that appear on this map

OVERLAP ASSEMBLAGES

TERTIARY

- **Tl** — *Lamprophyre*

JURASSIC AND CRETACEOUS

- **JKLR** — *LITTLE RIVER STOCK: granodiorite and quartz monzonite*

PERMIAN OR YOUNGER

- **Pp** — *Quartz porphyry rhyolite*

QUESNEL TERRANE

TRIASSIC AND JURASSIC
NORIAN AND (?) YOUNGER
QUESNEL RIVER GROUP (uTa1-TJb)

- **TJb** — *Augite porphyry basalt breccia, minor flows, tuff and tuffaceous argillite; local andesitic basalt*
- **TJa** — *Basaltic tuff and breccia, generally fine grained; argillite, flows, chert*

UPPER TRIASSIC
KARNIAN AND (?) NORIAN

- **uTa1** — *Phyllite, argillite, slaty argillite, quartzite, schist, minor greenstone (subgreenschist to amphibolite (kyanite) facies of metamorphism); uTa1g, conglomerate*
- **uTa3** — *Undivided uTa1 and greenstone, augite-porphyry breccia, tuff breccia, tuff; possible dykes and sills (subgreenschist and greenschist facies of metamorphism)*

SLIDE MOUNTAIN TERRANE

UPPER PALEOZOIC
MISSISSIPPIAN TO PERMIAN
SLIDE MOUNTAIN GROUP (PMub-uPA)

- **uPA** — *ANTLER FORMATION: pillow basalt, breccia, diorite, chert, greywacke, (minor limestone?); uPAu, serpentinite; uPAs, chert, minor basalt and diorite*
- **uPc** — *CROOKED AMPHIBOLITE: undifferentiated; uPcu, serpentinite and sheared ultramafic rock; uPct, talcose altered ultramafic rock; uPca, amphibolite*

PALEOZOIC OR MESOZOIC

- **PMub** — *Serpentinite and peridotite (as mapped by Campbell, 1978)*

BARKERVILLE TERRANE

LOWER PERMIAN

- **PS** — *Sugar limestone: grey crinoidal limestone, minor grey chert*

UPPER PALEOZOIC?
SNOWSHOE GROUP (PB-uPIM)

- **uPIM** — *ISLAND MOUNTAIN AMPHIBOLITE: amphibolite, minor siliceous mylonite*
- **uPSc** — *Orange weathering fuchsite-bearing ankeritic carbonate*
- **uPHM** — *Hardscrabble Mountain succession: black siltite and phyllite, grey micaceous quartzite, limestone, minor metatuff?; uPHMS, greywacke, muddy conglomerate*

PALEOZOIC?

- **PB** — *Bralco succession: marble*
- **Pl** — *Foliated diorite and augite porphyry basalt, gabbroic rocks; includes undifferentiated diabase, diorite*

PALEOZOIC
QUESNEL LAKE GNEISS

- **PQL** — *Light grey potassium feldspar porphyritic granitic orthogneiss*

PALEOZOIC
SNOWSHOE GROUP (HR-PE)

- **PE** — *Eaglesnest succession: olive and grey micaceous quartzite and phyllite*
- **PD** — *Downey succession: olive and grey micaceous quartzite and phyllite, and undifferentiated rocks; PDa, amphibolite, includes some marble, quartzite and schist; PDc, marble, includes some phyllite, schist, quartzite and amphibolite; PDp, phyllite, schist, metatuff, includes some marble, quartzite and amphibolite; PDv, metatuff, metadiorite, includes some marble, phyllite, schist and amphibolite; (metamorphism ranges from chlorite to kyanite grade)*
- **PA** — *Agnes succession: quartzite clast conglomerate, quartzite, minor limy conglomerate*
- **PGP** — *Goose Peak succession: quartzite, minor conglomerate*
- **PHR** — *Harveys Ridge succession: dark grey and grey micaceous quartzite, black quartzite and interbedded dark grey phyllite, schist, siltite, and minor micritic limestone and undifferentiated rocks; PHRc, limestone and limestone conglomerate; PHRs, purple grey very micaceous quartzite and black phyllite; PHRv, grey slate and green metatuff, in part calcareous*

HADRYNIAN OR PALEOZOIC

- **HPT** — *Tom succession: olive grey micaceous quartzite, phyllite and schist*

HADRYNIAN?

- **HKE** — *Keithley succession: grey and olive, fine micaceous quartzite and phyllite, minor marble; HKEm, marble, phyllite; HKEp, grey and green phyllite, minor olive quartzite; HKEq, white to dark grey quartzite*
- **HKK** — *Kee Khan marble: marble, calcareous sandstone, micaceous quartzite, green and grey phyllite, in part calcareous*
- **HT** — *Tregillus succession: grey and olive-grey micaceous quartzite, phyllite and schist; undifferentiated HTg, conglomerate*
- **HR** — *Ramos succession: olive and olive grey micaceous quartzite, and phyllite, light brown and grey sandstone and undifferentiated rocks; HRs, phyllite, schist, quartzite, calc-silicate rocks, may be partly equivalent to HKE; HRc, limestone, calcareous quartzite; HRp, black siltite, phyllite and slate, may be partly equivalent to PHR; HRq, olive and grey slate and micaceous quartzite, may be part of HKE*
- **HPS** — *Snowshoe Group undifferentiated: HR to PE, mainly PHR to PE*

CARIBOO TERRANE

PERMIAN AND/OR TRIASSIC

- **PTs** — *Olive and grey greywacke and slate*

PENNSYLVANIAN

- **Pc** — *Grey fusulinid and pelletoidal limestone*

MIDDLE PENNSYLVANIAN

- **PAA** — *ALEX ALLAN FORMATION: black micritic limestone, grey and black shale*

ORDOVICIAN TO MISSISSIPPIAN
MISSISSIPPIAN OR YOUNGER
BLACK STUART GROUP (SDBS-MBS)

- **MBS** — *Sandstone unit: olive grey micaceous and white quartzite, black and pink chert*

LOWER MISSISSIPPIAN

- **MG** — *GREENBERRY FORMATION: crinoidal limestone, chert, dolostone*

UPPER DEVONIAN AND LOWER MISSISSIPPIAN

- **DMG** — *GUYET FORMATION: muddy and sandy conglomerate and breccia, granule quartzite and slate*

MIDDLE AND/OR UPPER DEVONIAN

- **DW** — *WAVERLY FORMATION: schistose, calcareous, basaltic tuff and volcaniclastics, pillow basalt, minor siltite*

UPPER ORDOVICIAN AND DEVONIAN TO MISSISSIPPIAN OR YOUNGER

- **OMBS** — *Black pelite unit: black slate, argillite and cherty argillite, black limestone, dolostone and silicified limestone (in part amphipora)*

UPPER SILURIAN AND LOWER DEVONIAN

- **SDBS** — *Chert-carbonate unit: light to dark grey chert breccia, grey limestone matrix, dolostone granule to pebble breccia, limestone matrix, chert-quartz-dolostone conglomerate to breccia*

CAMBRIAN TO (?) DEVONIAN

- **ЄDBS** — *Black Stuart formation (as used by Campbell, 1978)*

HADRYNIAN AND CAMBRIAN
LOWER TO (?) UPPER CAMBRIAN
CARIBOO GROUP (HЄ-ЄDC)

- **ЄDC** — *DOME CREEK FORMATION: dark shale and limy shale*

LOWER CAMBRIAN

- **lЄM** — *MURAL FORMATION: grey limestone, minor shale and argillite*

HADRYNIAN AND/OR CAMBRIAN

- **HЄM** — *MIDAS FORMATION: dark siltstone and quartzite, minor shale and argillite*
- **HЄYP** — *YANKS PEAK FORMATION: grey and white, minor pink and green quartzite, minor siltstone and argillite*
- **HЄu** — *MIDAS, YANKS PEAK AND YANKEE BELLE FORMATIONS: undivided*

HADRYNIAN (WINDERMERE)

- **HYB** — *YANKEE BELLE FORMATION: green and grey thin bedded argillite, shale, minor quartzite and limestone; local phyllite and schist*
- **HC** — *CUNNINGHAM FORMATION: grey limestone, minor shale, argillite and dolostone*
- **HI** — *ISAAC FORMATION: dark phyllite, calcareous phyllite, slate, argillite, and minor limestone and micaceous quartzite*
- **HЄCu** — *Cariboo Group undifferentiated*

HADRYNIAN
KAZA GROUP

- **HK** — *Greywacke, argillite, phyllite, schist, minor pebble conglomerate*

IGNEOUS ROCKS OF UNKNOWN TERRANE AFFINITY

MISSISSIPPIAN OR YOUNGER

- **uPMd** — *Diabase, diorite*

Calc-silicate rocks (isolated outcrops) ... CS
Geological boundary (defined, approximate, assumed)
Bedding, tops known (inclined, overturned)
Bedding, tops unknown (inclined, vertical)
Bedding parallel to cleavage (inclined, overturned)
Cleavage, first generation (horizontal, inclined, vertical)
Cleavage, second generation (inclined, vertical)
Fault (defined, approximate, assumed; solid circle indicates downthrown side)
Thrust fault (defined, approximate or assumed) hanging wall teeth
Anticline (upright, overturned) arrow indicates plunge
Syncline (upright, overturned) arrow indicates plunge
Antiform
Minor fold axes (first generation, horizontal, second generation, horizontal)
Pebble long axis, average trend and plunge
Fan axis
Fossil locality
Garnet isograd (half moon on higher grade side)
Border of detailed geology as mapped by Struik, reconnaissance geology beyond the border is from the McBride map area (Campbell, Mountjoy and Young, 1973) and the Quesnel Lake map area (Campbell, 1978)

REFERENCES

Campbell, R.B.
1978: Quesnel Lake (93A) map area; Geological Survey of Canada, Open File 574.

Campbell, R.B., Mountjoy, E.W., and Young, F.G.
1973: Geology of McBride map area, British Colombia; Geological Survey of Canada, Paper 72-35

Recommended citation:
Struik, L.C.
1988: Geology, Wells, Cariboo Land District, British Colombia; Geological Survey of Canada, Map 1635A, scale 1:50 000

Canada

Copies of this map may be obtained from the Geological Survey of Canada:
601 Booth Street, Ottawa, Ontario K1A 0E8
3303-33rd Street, N.W., Calgary, Alberta T2L 2A7
100 West Pender Street, Vancouver, B.C. V6B 1R8

INDEX MAP

Geology by L.C. Struik, 1977–1982

Geological cartography by R.Y. Potvin, Geological Survey of Canada

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Base map at the same scale published by the Surveys and Mapping Branch in 1981. Roads were revised by the Geological Survey of Canada for this edition

MAP 1635A
GEOLOGY
WELLS
CARIBOO LAND DISTRICT
BRITISH COLUMBIA

Scale 1:50 000 - Échelle 1/50 000

Kilometres 1 0 1 2 3 4 Kilomètres

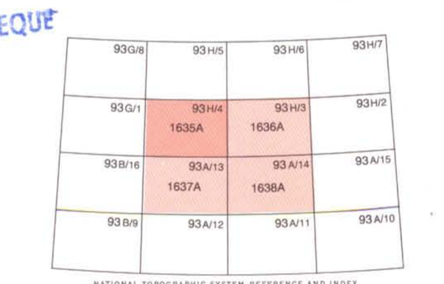
Universal Transverse Mercator Projection — Projection transverse universelle de Mercator

Printed by the Surveys and Mapping Branch. Published 1988

Copies of the topographical editions covering this map area may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa, Ontario K1A 0E9

Approximate magnetic declination 1986, 23°11' East, decreasing 15.0 annually

Elevations in feet above mean sea level



NATIONAL TOPOGRAPHIC SYSTEM REFERENCE AND INDEX TO ADJOINING GEOLOGICAL SURVEY OF CANADA MAPS

WELLS
CARIBOO LAND DISTRICT
BRITISH COLUMBIA

APPENDIX C

Relevant data regarding the Wingdam Property from
the Frontier Geosciences Inc.
Report on Wingdam and Fraser Canyon Projects. Quesnel Area B.C.
by Andrew Pare and Russell Hillman dated December 2009

CVG MINING LTD.

REPORT ON
SEISMIC REFRACTION AND REFLECTION,
RESISTIVITY, INDUCED POLARIZATION
AND MAGNETOMETER SURVEYING
WINGDAM AND FRASER CANYON PROJECTS
QUESNEL AREA, B.C.

by

Andrew Paré, B.Sc.

Russell Hillman, P.Eng.

December, 2009 **PROJECT FGI-1107**

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

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1. INTRODUCTION

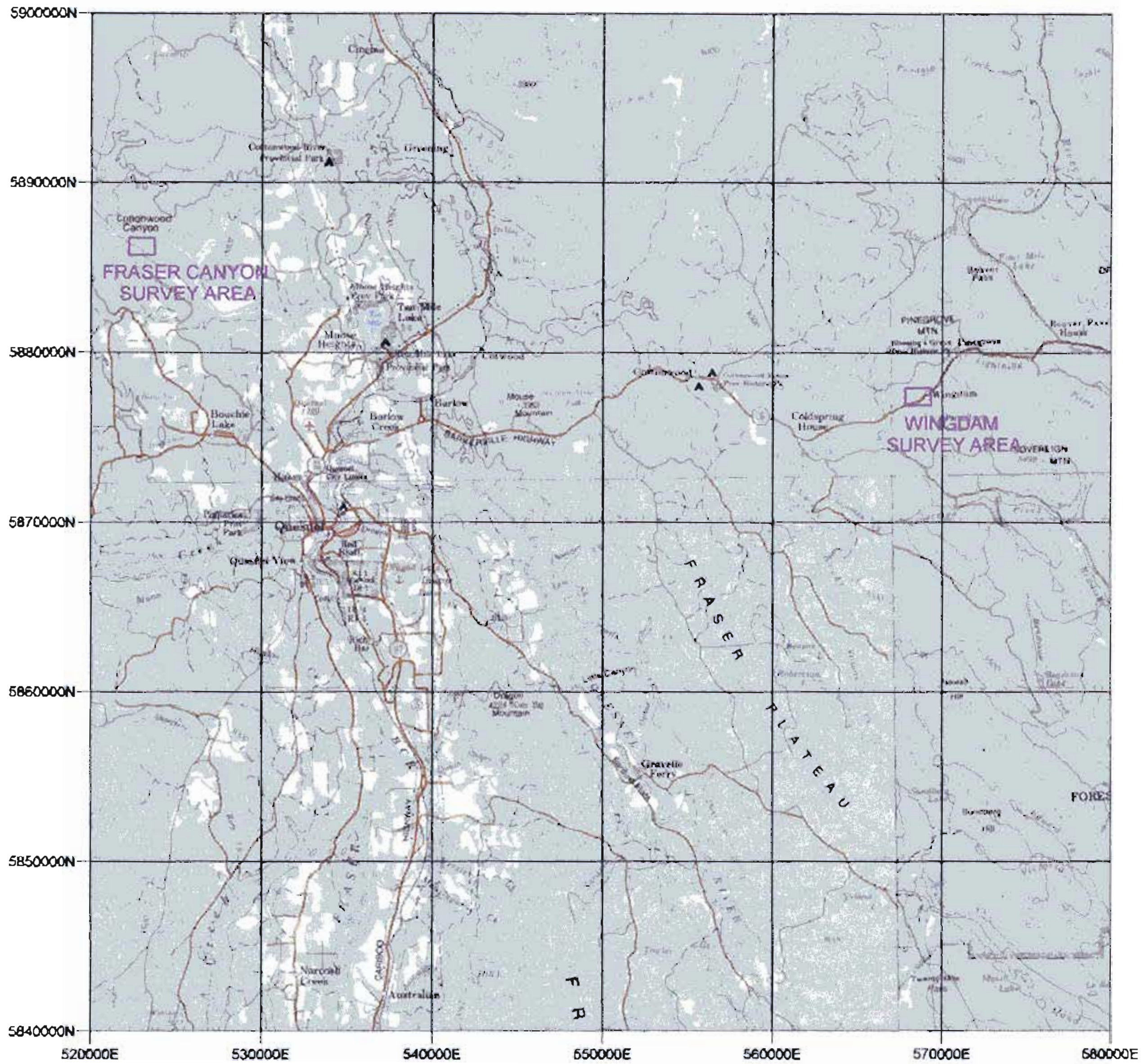
In the period November 24 to December 4, 2009, Frontier Geosciences Inc. carried out a program of geophysical investigations at the Wingdam and Fraser Canyon placer prospects near Quesnel, B.C. A Survey Location Plan of the site area is shown at a scale of 1:400,000 in Figure 1.

The geophysical surveying at Wingdam included 1035 metres of Resistivity Imaging and Induced Polarization together with 640 metres of seismic reflection surveying. The work was completed along three parallel lines, spaced approximately at intervals of 150 metres. The first line is coincident with Clifton Associates[1] line C-C', with the remaining lines downstream. Line C-C' allowed for a direct comparison of geophysical survey results with known conditions from historical drillholes. The survey area has been extensively explored through geological mapping, drillhole logging and seismic refraction surveys completed by Frontier Geosciences in 1986 and 1990. A detailed site plan of the area of investigation is illustrated at 1:2,500 scale in Figure 2, in the Appendix.

The Fraser Canyon project is located adjacent to the Fraser River. In total, 355 metres of seismic reflection and refraction together with 1455 metres of magnetometer surveying was completed at the site. The seismic surveying was completed along the access road leading to the portal entrance and continuing past the portal, along the edge of the river. Magnetometer traverse ML-0+00S is coincident with the seismic coverage and continues 200m off either end. The second traverse is uphill, south of and parallel to line ML-0+00S. A detailed site plan of the area of investigation is illustrated at 1:5000 scale in Figure 3, in the Appendix.

The Fraser Canyon property is primarily focused on the historical Tertiary Fraser River system and its geologic surroundings. The bedrock underlying the Tertiary Fraser River is composed of metasediments such as siltite, argillite, quartzite and phyllite of the Triassic Takla group. Within the paleochannel, a Tertiary conglomerate overlies the bedrock. The highest concentrations of gold are located at the bedrock/conglomerate interface, within cemented gravels. This site may also host an elevated concentration of heavy metals such as magnetite, ilmenite, and hematite.

[1]Wingdam Geologic and Hydrogeologic Investigation, Wingdam, British Columbia, Clifton Associates Ltd. File R4355.1, 30 November, 2009.



0 4 8 12 16

KILOMETRES

CVG MINING LTD. WINGDAM & FRASER CANYON PLACER PROJECTS		
GEOPHYSICAL SURVEYS		
SURVEY LOCATION PLAN		
FRONTIER GEOSCIENCES INC.		
DATE: DEC. 2009	SCALE 1:400,000	FIG. 1

2. THE SEISMIC REFLECTION SURVEY METHOD

2.1 Equipment and Field Procedure

The 2D seismic reflection method entails propagation of acoustic waves through the earth from surface pattern of source and receiver points. The seismic reflection investigation was carried out with three, Geometrics, Geode, 24 channel signal enhancement seismographs, and Oyo Geo Space. 14 Hz geophones. Geophone intervals along the multicored seismic cables were maintained at 3 metres in order to penetrate to the deep bedrock surface and produce high resolution data on subsurface layering. Energy was provided by small explosive charges buried in hand-excavated shotholes. The zero delay or instantaneous blasting caps in the small explosive charges were detonated with an IDEAL solid-state electronic blasting unit.

In this survey, a 'split-spread' configuration was used with the energy source located in the middle of an array of 48 geophone receivers, spaced at 3m intervals. Survey procedure entailed collection of a 48 geophone record, then advancing the energy source 3 metres down the survey line and repeating the process to produce another 48 channel record. This method, known as the common depth point (CDP) technique, provides a very high degree of redundancy of sampling of the energy received from a given reflector at depth. The redundancy, in this case 24 fold (48 geophones and move up rate equal to geophone spacing), is used during the data processing procedure to develop a high fidelity image of subsurface reflectors.

2.2 Data Processing

The data were recorded as a set of 2000 millisecond, SEG2 seismograms. The data was processed using WinSeis and Seismic Unix software to provide a final profile. The data were initially reformatted from the SEG2 format used by the Geode system into the floating point SU format. The raw data, known as the 'field gather' was then edited to remove noisy traces from the records. The data was then sorted using source and receiver positions to gather together each of the source and receiver pairs that were centred on a common spatial point. This 'common mid-point', or CMP gather, brings together each of the reflection ray paths that redundantly sample a given point on a subsurface reflector. These data contain small offsets that result from variations in the velocity of the lower velocity layer near the surface. This appears as a 'static' shift that is seen as a variation in the onset of the first break refractor energy. Using these offsets in the shallow refracted arrivals allows removal of thickness variations in the shallow, surficial layer. Similarly, variations in topography are removed by a shift in source and geophone statics relative to a seismic datum.

3. THE SEISMIC REFRACTION SURVEY METHOD

3.1 Equipment

The seismic refraction investigation was carried out using a Geometrics, Geode, 24 channel, signal enhancement seismograph and Oyo Geo Space, 14 Hz geophones. Geophones along the multicored seismic cables were spaced at 5m intervals 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 IDEAL, High Voltage, capacitor-type electronic blasting unit.

3.2 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.

3.3 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.

4. THE MULTI-ELECTRODE RESISTIVITY / I.P. SURVEY

4.1 Equipment

The surface multi-electrode resistivity imaging/IP survey was carried out using a Super Sting R8, automatic Resistivity and Induced Polarization system from Advanced Geosciences Inc. of Austin, Texas. This instrument has eight receiver channels, allowing measurements on multiple electrodes to proceed simultaneously, which significantly speeds up the data collection process allowing dense and detailed resistivity and IP profiles to be obtained.

During multi-electrode surveying, a central switching system is used to address the array of electrodes. This switching is accomplished using a multiplexer that directs the signals from any of the field electrodes to the eight input channels of the receiver. Similarly, a system of high voltage relays in the central switching system allows the transmitter to utilise any pair of electrodes for current injection. By means of a command file programmed in the receiver, electrode arrays including Schlumberger, Wenner, dipole-dipole, pole-dipole and pole-pole, or multiple combinations of arrays, may be chosen for execution by the system.

The purpose of electrical surveying is to determine the subsurface resistivity distribution by making detailed measurements along survey lines laid out on the ground surface. From these measurements, the true resistivity of the subsurface can be estimated. Ground resistivity is related to various geological parameters such as the sulphide, clay mineral and fluid content, porosity and degree of saturation.

In addition to resistivity measurements, Induced Polarization readings were collected simultaneously on each line. This measurement records the degree to which the earth materials tend to retain an apparent voltage after removal of the transmitted voltage. The effect is termed Induced Polarization (IP) and has its origins in the electrolytic nature of groundwater and the conductive nature of certain minerals. The Super Sting R8 measures the IP effect in the time domain by determining the residual decay voltage after the current is switched off. The time domain unit of measurement of chargeability is milliseconds. The IP effect is caused by two different mechanisms; 'membrane' and the 'electrode' polarization effects. The membrane polarization effect is usually created by clay minerals present in the earth. The electrode polarization effect is largely caused by conductive minerals such as sulphides in the rock and (usually) to a lesser extent by graphite. This effect is the basis for application of the IP method in surveys for the detection of metallic minerals, such as disseminated sulphides.

4.2 Survey Procedure

The field procedure consisted of driving 70 metal electrodes into the shallow subsurface at intervals of 5 metres along the survey traverse connected to the cable system. The cable system was grouped into five individual cables of 14 electrode take-outs each connected to the multiplexing controller. The controller allows the electrodes to be in either standby, current or measuring potential modes. The SuperSting system is able to make simultaneous measurements on eight electrode pairs, while a given pair are current electrodes.

The electrodes were sequenced to measure the dipole-dipole electrode configuration as well as the inverted Schlumberger configuration, where voltage electrodes are located outside the current electrode pair. The dipole-dipole configuration has the property of good sensitivity to lateral variation, and the inverted Schlumberger configuration provides improved signal to noise ratio with depth

4.3 Data Processing

The data were downloaded from the instrument and converted into the input file format for the GeoTomo 2-D Resistivity and IP inversion package. This software utilises a finite difference modelling approach to calculate the resistivity values that best fit the observed data. All inversion methods essentially try to determine a model for the subsurface whose response agrees with the measured data subject to certain restrictions. In the cell based method developed by M. H. Loke and referred to as the RES2DINV program, the model parameters are the resistivity values of the model cell, while the data is the measured apparent resistivity and apparent Induced Polarization values. The mathematical link between the model parameters and the model response is provided by the finite-difference or finite-element methods. In all optimization methods, an initial model is modified in an iterative manner so that the difference between the model response and the data values is reduced. To increase the accuracy of the modelling process, the elevation of each electrode is incorporated in the input data file.

5. THE TOTAL FIELD MAGNETOMETER SURVEY

5.1 Equipment and Field Procedure

The magnetometer survey was carried out using a GEM Systems, GSM-19, portable, high sensitivity, Overhauser-effect magnetometer. The unit is a standard for measurement of the earth's magnetic field, having 0.01 nT (nanoTesla) resolution and 0.2 nT absolute accuracy over its full temperature range. In operation, a strong RF current is passed through the sensor head mounted on an aluminum staff. This creates a polarization of the proton-rich fluid in the sensor followed by a process of "deflection" whereby a short pulse deflects the proton magnetization (secondary magnetic field) into the plane of precession (earth's magnetic field). A slight pause in the process allows the electrical transients to die off, leaving a slowly decaying proton precession signal above the noise level. The proton precession frequency is then measured and converted into magnetic field units. Essentially, the data collected is a measurement of the earth's magnetic field plus any effect on the secondary magnetic field by ferrous objects and/or high concentrations of ferromagnetic minerals. To allow for correction of temporal variations in the magnetic field, a base station was chosen in an area with a relatively uniform magnetic field and was repeatedly sampled throughout the survey traverses.

5.2 Data Processing

Magnetic data was first transferred via an RS232C interface to a laptop in raw form with no corrections performed on any of the units. The base station measurements were then analyzed and a correction factor was built to account for the time varying nature of the magnetic field. This factor was then applied to the raw data to produce a corrected total magnetic field measurement. The corrected measurements were then plotted in profile and referenced to ground conditions.

6. GEOPHYSICAL RESULTS

6.1 General

The results of the six Resistivity and Induced Polarization sections at Wingdam are shown at a scale of 1:750 in Figures 4 through 9 in the Appendix. Seismic reflection section SL-1 at the Canyon prospect is illustrated at 1:1,250 scale in Figure 10. The coincident seismic refraction line SL-1, is illustrated at 1:500 scale in Figure 11. Total field magnetometer traverses are illustrated at 1:2,500 scale in Figures 12 and 13. Survey topography along the traverses was recorded with inclinometer measurements and is approximate.

The sectional information at both the Wingdam and Canyon sites is shown in the downstream direction. For the Wingdam sections, Lightning Creek flows generally south-west through the survey site. At the Canyon property, the general flow of the Fraser River is to the south.

6.2 Discussion

6.2.1 Wingdam Survey Area

The seismic reflection data acquired during this survey was of medium to low quality due to nearby highway construction vibrations and noise in the survey area. Due to the interference between first break events, actual reflections, and coherent and non-coherent noise in the recorded dataset, no subsurface reflectors could be delineated in the interpretation. Seismic reflection lines SL-1, SL-2 and SL-3 therefore, don't provide any information on the presence of reflectors or buried sedimentary structures in the site area.

Resistivity line RL-1 is best suited for an in depth analysis as it has the most information available from previous drilling and from seismic refraction carried out in 1990. The principle geologic boundaries of C-C' (Clifton Associates Ltd.) are overlain in black in Figures 4 and 5. The resistivity section for RL-1 clearly shows three distinct geoelectric layers. The first is a shallow, conductive layer that extends to a depth of up to 20m. The IP section for RL-1 shows a similar shallow layer with low chargeability, but only extends to a depth of 15m. This boundary between low chargeability and high chargeability is interpreted to be the boundary between the Quaternary till deposits and the yellow clay layer. This chargeability boundary shallows and pinches to the SE and the NW with increasing distance from the Tertiary river channel. The discrepancy between the resistivity and chargeability boundaries is explained by a clay layer that is uniformly chargeable but has variable resistivity. The shallow clay likely has sufficiently high porosity to be conductive whereas with depth, a decrease in porosity will produce higher resistivity values. This interpretation agrees with hydrogeological studies showing the clay to inhibit groundwater flow (Piteau Associates).

The second layer is a highly resistive and highly chargeable body that extends to a maximum depth of 50m. This body is a combination of the clay layer and the Tertiary conglomerate which have sufficiently similar chargeability to have an indistinguishable geoelectric boundary between them. The IP section most clearly shows the pinching behaviour of these units as the valley gives way to the surrounding hillsides.

The third and deepest layer is the Precambrian metasedimentary bedrock that surrounds the more recent sedimentary deposits. It is characterised by highly resistive and low chargeability values. An exception is the shear zone located beneath the thalwag of the river channel and identified in previous seismic refraction studies. This shear zone is bounded to each side by more competent bedrock and due to groundwater, is resolved by a zone of low resistivity and moderate to high chargeability values.

There is also a zone between 180m and 220m with low resistivity and variable chargeability which span the till, clay, conglomerate, and bedrock layers. This is probably due to a thin, pinching, resistive layer of clay and conglomerate that is bounded above by conductive till and bounded below by conductive, sheared and fractured bedrock. In this case, the conductive layers overwhelms the effect of a thin resistive layer. This also indicates that the fractured shear zone, dips down to the northwest at a shallow angle from 150m to 200m producing the vertical boundary at 225m. Fortunately, the IP section more clearly shows the highly chargeable clay and conglomerate extending and pinching to the NW in agreement with this interpretation.

The resistivity and IP sections for RL-2 have strong similarities to line RL-1. A shallow, conductive, and low chargeability layer exists with a maximum depth of 20m at the centre of the Tertiary river channel and tapers to a maximum depth of 10m at the valley edges. This layer represents the alluvium and till deposits. A more resistive and highly chargeable body is centred at 140m and is composed of the clay and conglomerate layers. This body with a minimum depth of 10m at the SE and NW ends of the line, dips sharply towards the centre of the paleochannel to a maximum depth of 55m. The bedrock is shown by the highly resistive, low chargeability areas from 0 to 90m and from 230 to 320m with a minimum depth of 15m at the edges and a minimum depth of 55m at the thalweg. There is an unusual zone located below and west of the main chargeable body from 170m to 220m NW. This zone is interpreted as bedrock with increased permeability or fracturing, explaining the unusually low resistivity.

The till to clay interface of line RL-3 is once again best delineated by the shallow boundary between low chargeability and high chargeability in the IP section. It is located at approximately 10m depth on the hillsides but dips to a maximum depth of 26m at 150m NW. The clay and conglomerate units are described by an upper conductive layer that transitions to a deeper resistive body with consistently high chargeability. The boundary between conglomerate and bedrock is characterised by a transition to higher resistivity and deep low chargeability rock. To the eastern side of the valley, the boundary is located at a depth of 20m but dips to a maximum depth of 56m at 125m NW. There is a subtle boundary between moderate resistivity values and low resistivity that indicates, as in RL-2, another fractured and permeable zone of bedrock between 200mW and 240mW. Further west, the bedrock displays the more conventional high resistivity, low chargeability behaviour with the contact located at depths between 20m and 25m.

6.2.2 Fraser Canyon Area

The seismic reflection data at the Fraser Canyon site shows a clearly defined reflector at depth. Unfortunately, the line location was along the portal access road at mine entry level or the base of the portal. The line orientation is sub-parallel to the buried channel direction. The recorded dataset shows no shallow information on the buried conglomerate/bedrock channel bottom and only shows deeper information. Figure 10 presents a single channel processed and interpreted seismic section for line SL-1 at a scale of 1:2,500. The time-depth conversion was carried out using an overburden velocity of 900 m/s.

One well-defined and continuous reflector indicated in red, appears along the line. No additional events on the seismic section were identified in the data. Despite the wide range of filtering tools utilized to improve the final section, low vertical resolution and noisy background conditions limited further clarity of the data. The main reflector was delineated over the extent of the line beginning at approximately 52 metres and dipping to the east at about 4 degrees. This reflector cannot be associated with the Tertiary and Quaternary sedimentary events and seems to be strongly linked to topography. This reflector is interpreted as an interface within the paleozoic basement stratigraphy.

The seismic refraction interpretation for line SL-1 is shown at 1:500 scale in Figure 11. This line was surveyed separately from the reflection surveying and consists of a single, 72 channel, high resolution traverse with geophone spacings of 5 metres.

There are four distinct velocity layers underlying SL-1. There is a thin surficial layer with a velocity of 550m/s. This layer which has a maximum interpreted thickness of 5m, is consistent with surface exposures of loose, unsaturated silts, sands, gravels and cobbles.

Underlying the surficial layer is a thicker intermediate layer with a velocity range of 740m/s to 900m/s. Varying up to 12m in thickness, this layer is interpreted as unsaturated sands, gravels and some cobbles.

A discontinuous, deeper intermediate layer of 1800m/s is evident underlying the later, uphill segment of the line. This layer is believed to be either saturated sands, gravels and cobbles or partially cemented fine to coarse alluvial materials.

The basal layer with velocities of 2690m/s to 4000m/s is the interpreted bedrock surface. Velocities of 3080m/s to 4000m/s are interpreted as argillite, phyllite, quartzite or siltite, that are predominant in the survey area.

The low velocity 2690 m/s bedrock zone may be indicative of lower velocity conglomerate and may indicate the presence of a second channel in the area. Velocities of 2400m/s to 2800m/s were predominant in the interpreted channel areas, at the Tertiary property to the north.

Magnetometer traverse ML-0+00S was recorded along seismic line SL-1. The data illustrated at 1:2,500 scale in Figure 12, shows a direct correlation between proximity to mining operations and the anomalous magnetic field data. In proximity to surface or buried ferrous materials, the magnetic readings indicate a dipole effect, where a high magnetic reading is accompanied by a magnetic low reading. The data collected on the road and beside the pond display this high/low behaviour, with pipes visible within 5m of the traverse stations. The sections labelled 'forrest' and 'beach' behave in a more regular manner and display only a single anomaly near station -225mW. This anomaly is probably due to a small creek that drains into the Fraser River and had oxidized sulphides visible in the creek bed.

The magnetometer data for line ML-0+00S show little indication of the gold-bearing conglomerate channel in the data. This may be attributed to the placement of the line at the base of the channel and the effects of a large ammount of metal in the vicinity of the portal entrance.

Magnetometer traverse ML-1+00S in Figure 13, was surveyed uphill and along the plateau south of the portal access road. This traverse had little or no interference from mine infrastructure and metals, as it was surveyed through mostly undisturbed forest.

Traverse ML-1+00S doesn't indicate any apparent high magnetic anomaly suggestive of a buried river channel. This is likely due to the depth of the channel below the traverse and the strength of the channel anomaly.

The magnitude of an anomaly due to magnetite concentrations in alluvial placer deposits can be approximated by a relatively weakly magnetized body at depth. Forward modelling of a channel-shaped structure at a depth of 55m below line ML-1+00S results in a peak anomaly of 15nT (nanoTeslas). An anomaly of 15nT is considered too small to detect in a background of relatively high susceptibility bedrock where basal anomalies can readily exceed 50nT.

7. LIMITATIONS

The depths to subsurface boundaries derived from seismic refraction and reflection 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.

In seismic reflection, a range of errors from digitising, velocity modelling and data gridding are expected. The lack of sonic logs or vertical compressional wave velocities places a high reliance on geological information to build a reliable velocity model. Reflections can occur from surfaces not in the plane of the seismic reflection profile. As well, some uncertainty is present in correlating reflectors between profiles where there is a lack of cross points.

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

The multi-electrode resistivity/I.P. method results in repeatable measurements of the geoelectric section. The methods are successful providing adequate contrasts exist in the subsurface in electrical resistivity and chargeability between distinct geological materials. Conductors identified in resistivity surveying are diverse and depending on geological settings, may include mineralisation, graphite, argillite, shear or fault zones, clay beds, marl, saturated materials, clay shale, clay till, mineralised leachate and zones of salt water intrusion. Electrically resistive materials include but are not limited to, sand and gravel, dry soils, glacial moraine, coarse glacial till, permafrost, underground voids and competent bedrock. Also affecting resistivity are the degree of saturation of materials and the porosity, the concentration of dissolved electrolytes, the temperature and the amount and composition of colloids. With few exceptions, no unique resistivity value defines a specific geological material.

Sources of I.P. response include almost all the sulphides, oxides such as magnetite, graphite and clay materials. Penetration depths may be affected by the presence of highly conductive surficial materials that may partially mask deeper geological layering. In addition, the resolution of the resistivity and I.P. methods decreases exponentially with depth. Given the diffuse nature of the methods, resolution is inherently poorer at depth. The survey results can also be influenced by electrode coupling, presence of noise such as SP, capacitive coupling, electromagnetic coupling and the presence of power lines.

In the modelling process, a number of limitations constrain modelling of subsurface resistivity and chargeability. For instance, due to non-uniqueness, more than one model can produce the same response that agrees with the observed data. The resulting model thus depends to a significant extent on the constraints used and will closely approximate the true subsurface conditions only if the constraints closely correspond to actual subsurface conditions.

Individual magnetic readings may in some instances, be erroneous due to noise occurring simultaneously with the measurement. These errors together with erratic variations in the magnetic field and changes in the instrument due to temperature and drift are largely corrected by frequent readings at a previously occupied base station.

Magnetometer surveying is limited to the detection of only ferrimagnetic materials and minerals such as magnetite, pyrrhotite and ilmenite. These minerals are widespread in variable concentrations but are largely found in basic igneous rocks. Diamagnetic materials such as rock salt and anhydrite have negative magnetic susceptibilities.

Differentiation of shallow versus deeper anomalies is often difficult in interpretation. The influence of topography can be very significant. An anomaly may indicate either relief in a subsurface horizon or a lateral change in susceptibility. Separation of remnant magnetization from induced magnetization is impossible in the field. This may be mitigated by careful laboratory measurements of oriented rock outcroppings and drillcore.

Magnetic anomaly detectability is strongly influenced by the depth to the causative body. Most anomalies vary inversely with the cube of the distance to the source. Magnetometer readings in close proximity to metallic objects can be adversely affected due to the poor lateral rejection characteristics of the magnetometer.

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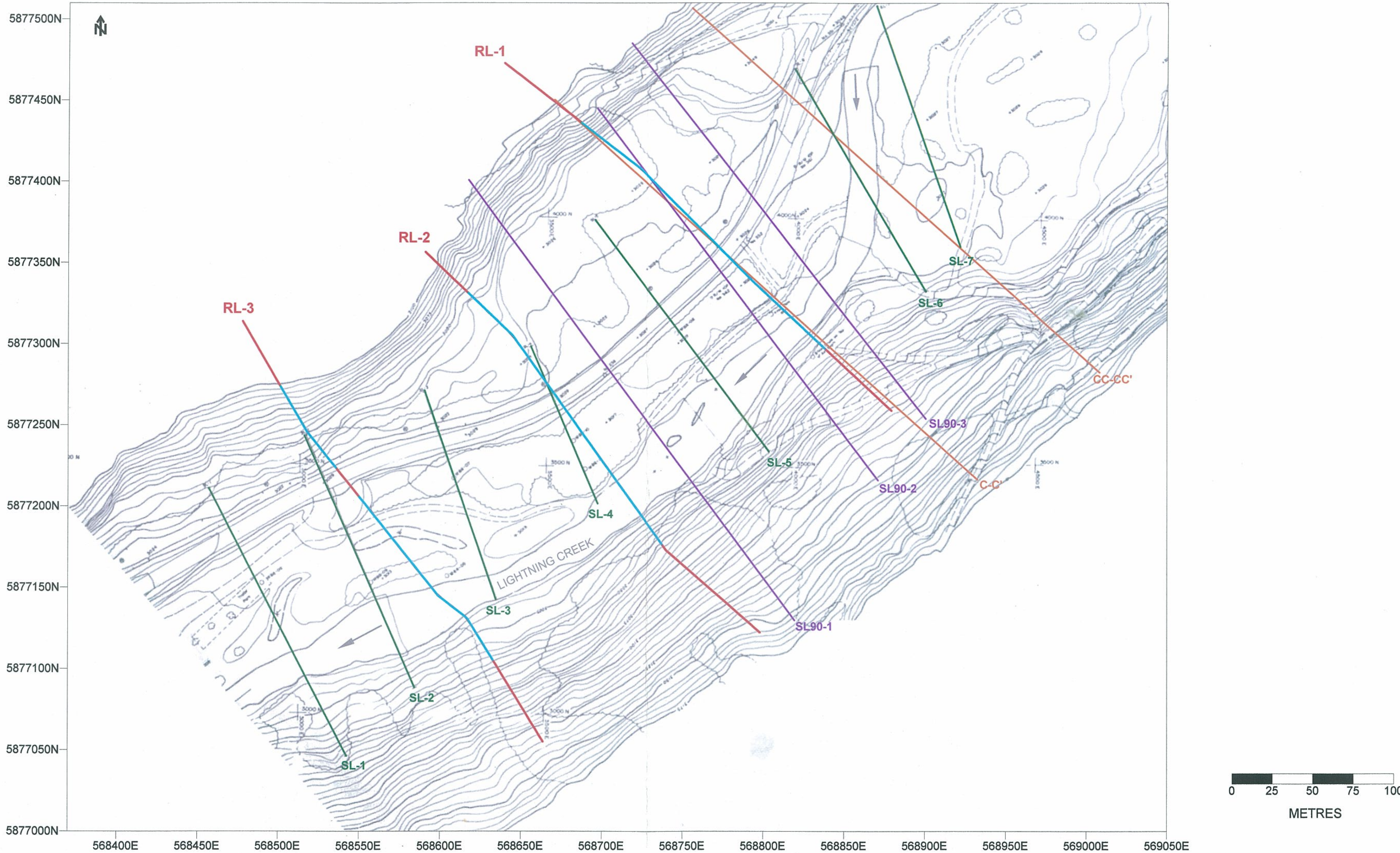


2009 RESISTIVITY LINE

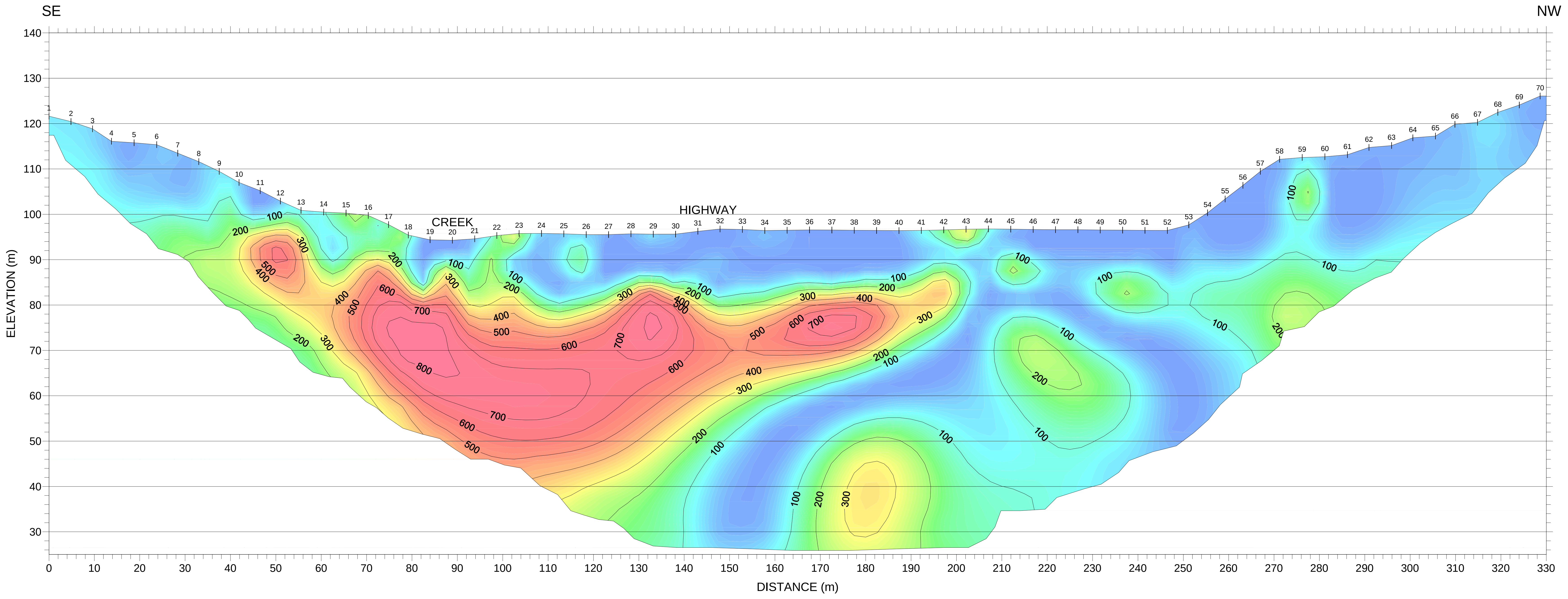
2009 RESISTIVITY AND SEISMIC REFLECTION LINE

1986 SEISMIC REFRACTION LINE

1990 SEISMIC REFRACTION LINE

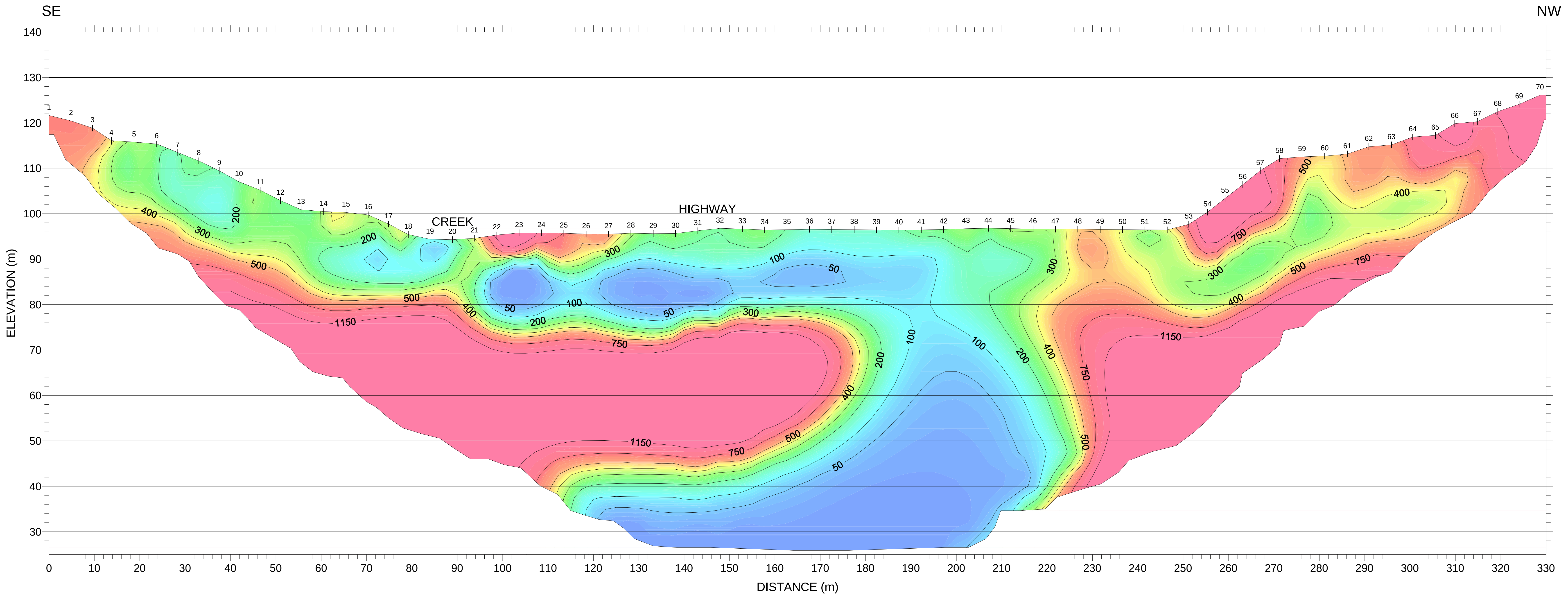
2009 CLIFTON ASSOCIATES DRILLHOLE SECTION

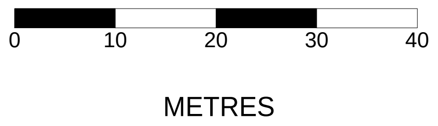
CVG MINING LTD. WINGDAM PLACER PROJECT		
GEOPHYSICAL SURVEYS		
SITE PLAN		
FRONTIER GEOSCIENCES INC.		
DATE: DEC. 2009	SCALE 1:2,500	FIG. 2

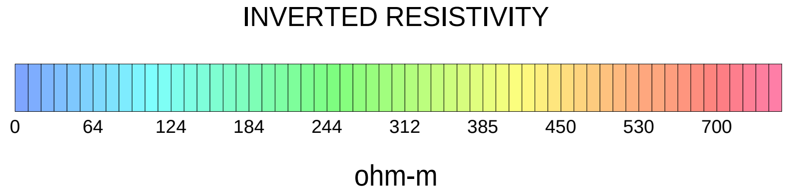


CVJ MINING WINGDAM PLACER PROJECT
GEOPHYSICAL SURVEY
IP INVERTED SECTION SL-1
FRONTIER GEOSCIENCES INC.

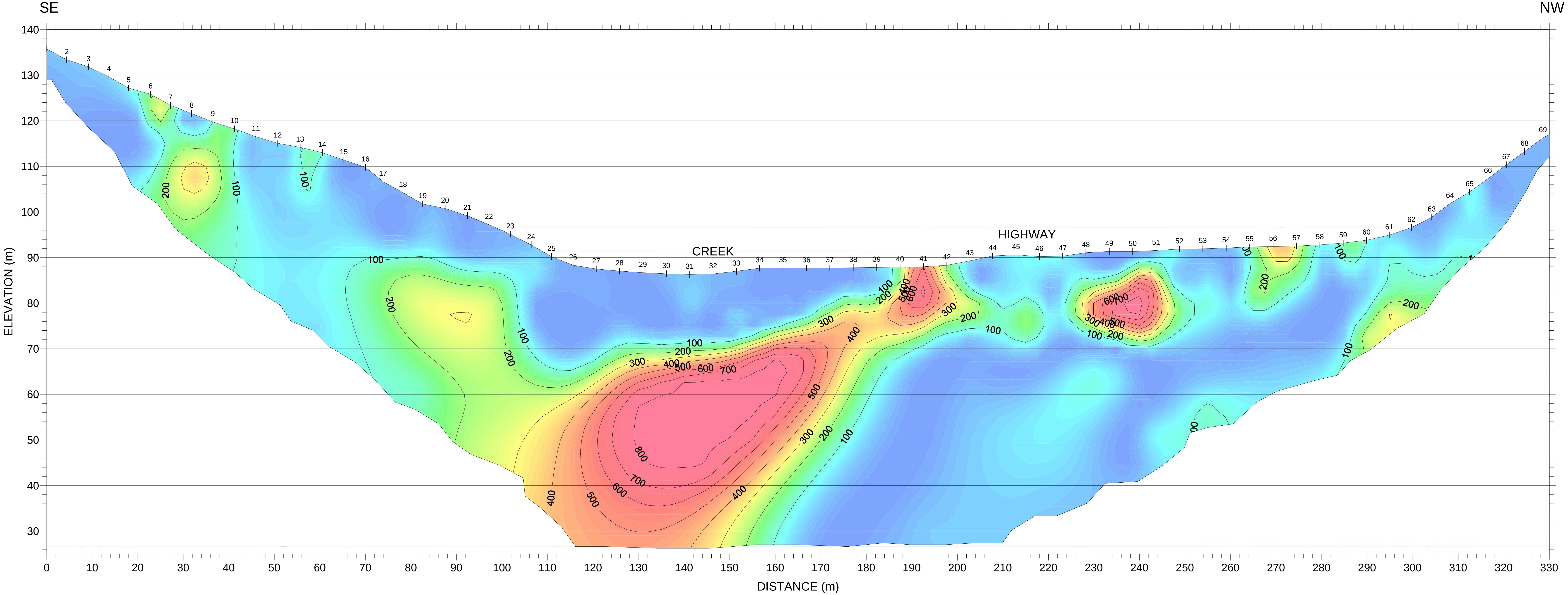
DATE: DEC. 2009	SCALE 1:750	FIG. 1







CVJ MINING WINGDAM PLACER PROJECT		
GEOPHYSICAL SURVEY		
RESISTIVITY INVERTED SECTION SL-1		
FRONTIER GEOSCIENCES INC.		
DATE: DEC. 2009	SCALE 1:750	FIG. 1



0 10 20 30 40

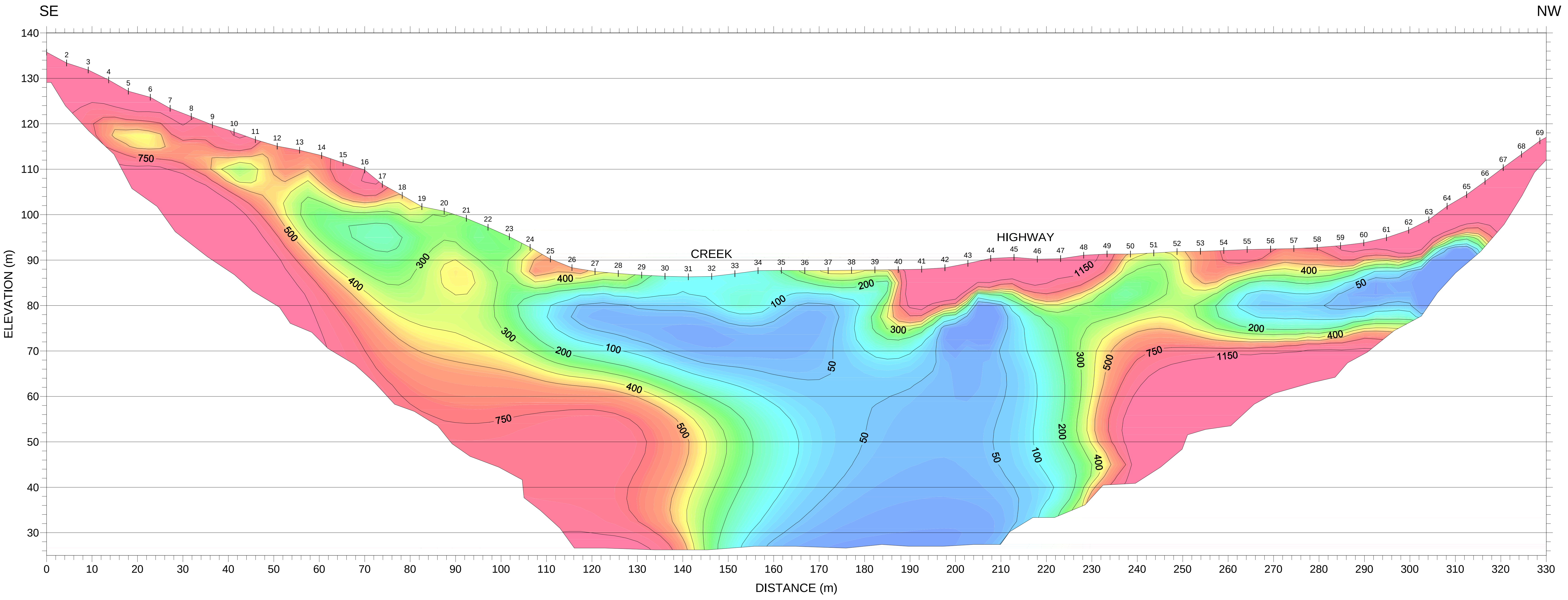
METRES

INVERTED CHARGEABILITY

0 43 86 121 161 200 251 300 389 494 663 975

ms

CVJ MINING WINGDAM PLACER PROJECT		
GEOPHYSICAL SURVEY		
IP INVERTED SECTION SL-2		
FRONTIER GEOSCIENCES INC.		
DATE: DEC. 2009	SCALE 1:750	FIG. 1



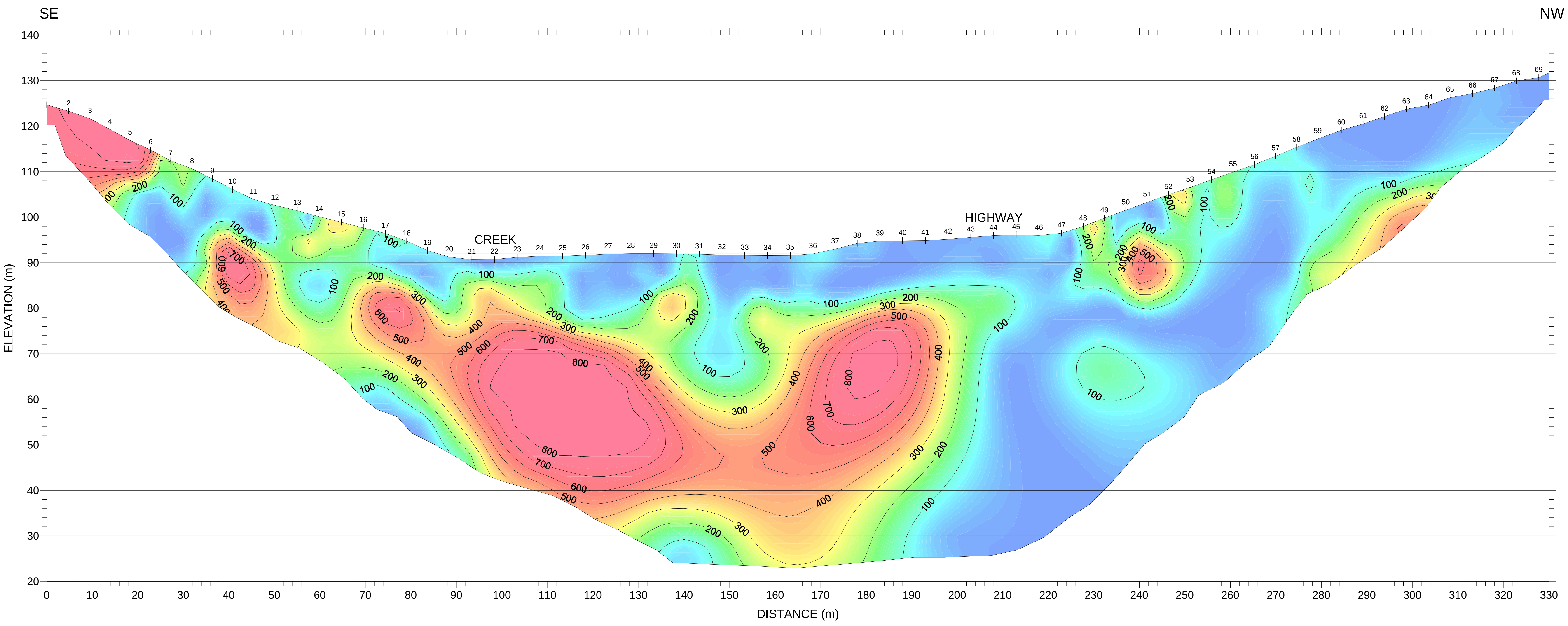
CVJ MINING
WINGDAM PLACER PROJECT

GEOPHYSICAL SURVEY

RESISTIVITY INVERTED SECTION
SL-2

FRONTIER GEOSCIENCES INC.

DATE: DEC. 2009	SCALE 1:750	FIG. 1



0 10 20 30 40

METRES

INVERTED CHARGEABILITY

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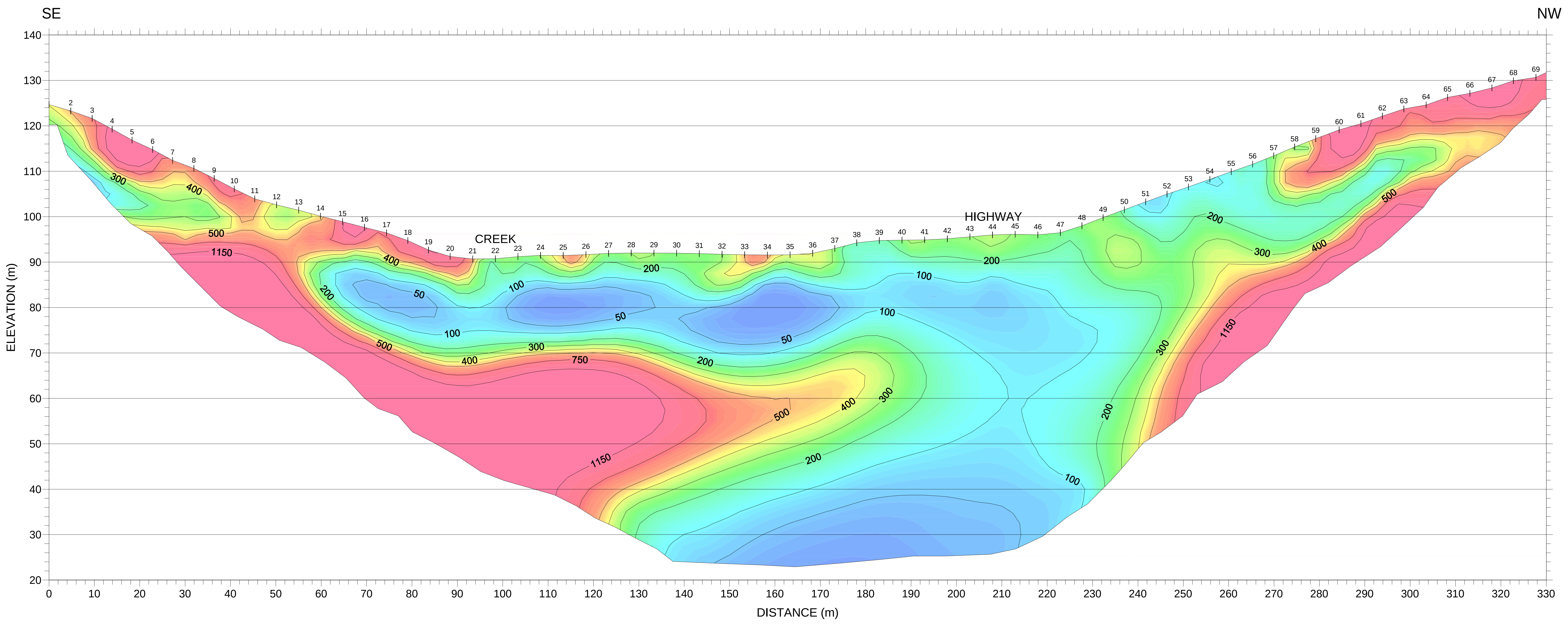
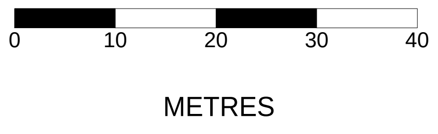
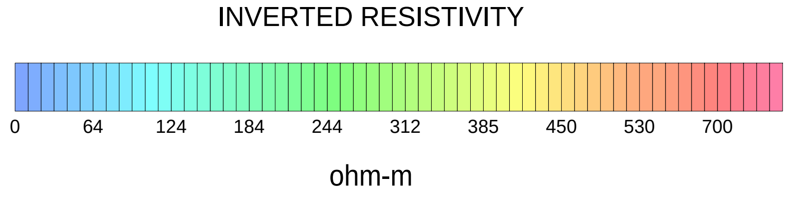
ms

CVJ MINING WINGDAM PLACER PROJECT		
GEOPHYSICAL SURVEY		
IP INVERTED SECTION SL-3		
FRONTIER GEOSCIENCES INC.		
DATE: DEC. 2009	SCALE 1:750	FIG. 1







CVJ MINING WINGDAM PLACER PROJECT
GEOPHYSICAL SURVEY
RESISTIVITY INVERTED SECTION SL-3
FRONTIER GEOSCIENCES INC.

DATE: DEC. 2009	SCALE 1:750	FIG. 1