

Ministry of Energy & Mines  
Energy & Minerals Division  
Geological Survey Branch

**ASSESSMENT REPORT  
TITLE PAGE AND SUMMARY**

TITLE OF REPORT [type of survey(s)] LINEAMENT AND GEOCHEMICAL ORIENTATION STUDIES AT FLAN TOTAL COST 6500

AUTHOR(S) Mikkel Schau SIGNATURE(S) Mikkel Schau

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S) NA YEAR OF WORK 2009

STATEMENT OF WORK - CASH PAYMENT EVENT NUMBER(S)/DATE(S) 4291556 2009/JUN/30

PROPERTY NAME FLAN-consolidated

CLAIM NAME(S) (on which work was done) 507295 509012 513281 543699  
555495 590156

COMMODITIES SOUGHT PRECIOUS METALS

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN NA

MINING DIVISION Nanaimo NTS 092 L/01

LATITUDE 50° 6' 53" LONGITUDE 126° 16' 1" (at centre of work)

OWNER(S)  
1) Mikkel Schau 2) \_\_\_\_\_

MAILING ADDRESS  
1007 Barkway Tce  
Brentwood Bay V8M 1A4

OPERATOR(S) (who paid for the work)  
1) Mikkel Schau 2) Interwest Enterprises

MAILING ADDRESS  
1007 Barkwood Tce  
Brentwood Bay V8M 1A4

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):  
DIABASE, BASALT, TUFF/SILT, middle Triassic, upper Triassic, KARMUISEN  
AND "Dawnella Beds", Faulting, silicification, alteration,  
pyrrhotite, chalcopyrite, electrum, BIFe,  
2'

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS 23546, 26793, 27311,  
28382, 29360, 29551, 30009, 30471

BC Geological Survey  
Assessment Report  
31046

Orientation and Lineament studies

(Tenures 509012, 507295, 513281, 543699, 553495 and 590156)

on the

Flan-Consolidated Group of Claims

in the

Nanaimo Mining Division

in

092L/01

at 50 deg 06 min 53 sec North and 126 deg 16 min 1 sec West

for

Mikkel Schau, owner

by

Mikkel Schau, P.Geo.

For

June 30, 2009

(submitted August 5, 2009)

## SUMMARY

The Flan showing is a high grade gold showing, consisting of basal till fragments carrying up to 135 gm/mt Au in the form of small grains of electrum, trapped in chalcopyrite blebs in a pyrrhotite rich matrix within quartz-chlorite cemented diabase breccia. The Flan showing is located south of Schoen Lake Provincial Park in northern Vancouver Island. It is reached by active logging roads and is near deep water ports at Kelsey Bay and truck transport along Highway 19.

In preparation for this season's field work a number of preliminary surveys have been conducted:

1/ Lineaments were derived from a new high resolution orthophoto by a computer analysis. A circular histogram showing concentrations of orientation is presented. They show both meridional and latitudinal concentrations of lineaments that seem to be at odds with the published geological trends. They will be prospected for mineralized veins.

2/ Samples of the "sediment sill unit" have also been more completely analyzed, especially for their graphite content; The shales are albitized and silicified volcanic felsic siltstones with small amounts of graphite and sulphides. It is likely these sediments will register on electromagnetic surveys. Phyllonites carry somewhat more graphite than either diabase or siltstones.

	<b>C%</b>	<b>S%</b>	<b>Cu, ppm</b>	<b>Ag, ppm</b>	<b>Mo, ppm</b>
Siltstone	0.04-0.09	3.91-4.67	173.6-208.5	1.4-1.6	19.1-31.6
Diabase	<0.02	0.03-2.39	263.8- <b>10,000+</b>	<0.01- <b>8.4</b>	1.1 – 6.7
Phyllonite	0.11-0.23	0.74-1.83	90.9-146	0.1-0.2	49.8- <b>120.3</b>

The siltstones show elevated values of Ag; the Cu and Ag is locally concentrated on the diabase; and the Mo is found in the phyllonite. This pattern of distribution may signal secondary concentration of elements in (shear related?) veins

3/ A pyrrhotite rich float sample two hundred meters north of the gold locality collected last season has been thoroughly analyzed by petrographical and chemical methods in the **vain** hope that this till fragment was also a carrier of gold.

More till samples from the mineralized area at Flan have been found to carry anomalous gold.

<b>Sample</b>	<b>Au, ppb</b>	<b>Ag ppm</b>	<b>Cu ppm</b>	<b>Bi ppm</b>	<b>Sb, ppm</b>	<b>As, ppm</b>	<b>Hg, ppm</b>
31533, till ball 5 m north of 81, same level as fragments	<b>15,909</b>	<b>4.908</b>	<b>2425</b>	6.16	0.04	0.7	0.007
331534 basal till, near 81, 1 meter up	<b>630.9</b>	0.314	280.5	0.38	0.11	2.9	<0.005

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## Introduction

Flan-Consolidated Claim Block near Schoen Lake Provincial Park, on Northern Vancouver Island has been focused on extending the Flan showing by testing subcrops and boulders along newly built logging roads and adjacent creeks for locations with elevated gold values.

In preparation for this seasons work a new high resolution orthophoto has been analyzed for lineaments . More complete analysis of the black sediment sill unit show that rock is locally composed of albitized and silicified felsic tuffs and sediments. Special attention to the possible content of graphite to estimate the possible interference with electromagnetic methods. Selected till samples have been analyzed.

## Property location, access and title

The Flan Showing is found in tenure 50912 within the Flan-Consolidated Claims located on Northern Vancouver Island and is within the Nanaimo Mining District jurisdiction. The Flan-Consolidated Group claims \*including the Flan showing) are located in the Schoen Creek valley at the foot of the western flank of Mount Adam, about 30 km east-southeast of Woss, on Vancouver Island B.C. (Figures 1 and 2). They are located in the Vancouver Island Ranges within NTS 092L/01 and is centered at approximately 50 07 10 N and 126 15 10 W.

Access to the claims is via a logging main branching off the Island Highway and continues along subsidiary logging roads that pass through Schoen Lake Provincial Park, south, into the area of interest. Two and four wheel drive vehicles can closely approach the showing. The main logging road is the one leading to Gold River, and at a junction marked Schoen, (with the label, "this is not the road to Schoen Lake Provincial Park") the road passes along the south of the Davies River and through the Park into the headwaters of Schoen Creek. This road proceeds upstream along the west side of the creek until, several km along, the required road splits and the eastern one (SC10) descends to the floor of the valley and crosses the creek over a bridge. This road splits. A southern segment, continues upstream along the east side of the creek past another bridge. About a km past this the road splits. and one ascends the hill by way of a hairpin to arrive at the slump face of the Flan Showing. Near the bridge over Schoen Creek, the northern fork also quickly divides and one takes the uphill spur, which leads one, after negotiating a hairpin turn, up to the black shale showing at the end of the road..

<b>Tenure Number</b>	<b>Owner</b>	<b>New Due date</b>	<b>Area, ha.</b>
507295 #	142134	MAY 10, 2011	517.912
509012 #	142134	NOV 18, 2014	165.753
513281#	142134	MAY 10, 2011	497.218
543699 #	142134	MAY 10, 2011	227.868
553495 #	142134	MAY 10, 2011	518.106
590156#	142134	MAY 10, 2011	518.087

# Claims on which work was done, the dates listed reflect work reported within.

The area of tenures total 2444.944 ha. .

All claims, which are focused on finding precious metals, currently are held 100% by Mikkel Schau (Free Miner 14234). A recent contract has been signed with Interwest Enterprises which allows that company to proportionally buy into the claim group (to a maximum of 80%) over the next 4 years. once

expenditures have surpassed \$20,000.

The land situation is typical of BC; I have claimed the mineral rights in a lawful manner. According to the MTOOnline website: "...Any subsequent activities, permits, approvals or decisions related to exploration or development work on mineral or placer claims will require the Province British Columbia to meet applicable legal obligations to consult with, and if appropriate, accommodate, affected First Nations". There is no record, available to me, that such consultation has been carried out for these claims.

To the best of my knowledge the Land Claim Treaty Process has not directly discussed these lands although they are under general claim by several groups. The SOI of 'Namgis Nation covers the majority of the claim group and I have been in meetings regarding my summer plans with the members of treaty office of the 'Namgis Nation. The lands east of height of land marked in part by Mt Adam (Adam River drainage) are subject to a competing SOI of the \*\* Nation and I have spoken briefly with the chief .

I have also met with staff of Western Forest Products and relevant Provincial officials, and informed them of my summer plans.

There has been no impediment to my claiming or working on the land to time of writing. Local people have told me they would like there to be more exploration, and possibly mining in region, to shore up their local economy.

## Previous work

The general area has had a sparse history of mineral exploration. Previous mapping by government sponsored regional mapping programs conducted by J.E. Muller et al. (1974) (Fig. 3) and made available in digital form by N.W. Massey (1995, 2004). A government sponsored regional geochemical survey (RGS23) indicate that creeks in the Schoen Lake watershed are anomalous, showing values up to 160 ppb Au. (MapPlace, 2000/2003/2006/2008). An adjacent creek valley and a hill crest to the west of the Schoen Creek valley were staked in 1993 and shown to carry anomalous concentrations of several economic elements(AR 23546). Those claims have since lapsed. Claims to the east of Mount Adam have been explored over the years, but have currently lapsed and are not held at this time.

In 2000, a sample with about 60 gm/mt gold was found at the Flan showing by the current owner, prospecting for precious metals under the Prospector's Assistance Program, and it was staked in late 2000. A granite was recognized in the course of mapping and an area was staked to cover the apparent edges of the granite. The current owner, Mikkel Schau, is conducting grass-roots exploration and looking at the possibility of enlarging the showing to become a viable prospect. Previous assessment work done by owner on the claims is listed below:

AR Number	Date off confidential	Operator
30471	Not posted yet	Self
30009	2009-03-02	Self
29551	2008-10-18	Self
29360	2008-07-28	Self
28382	2007-02-14	Self
27311	2004-08-26	Self
26793	2002-11-15	Self

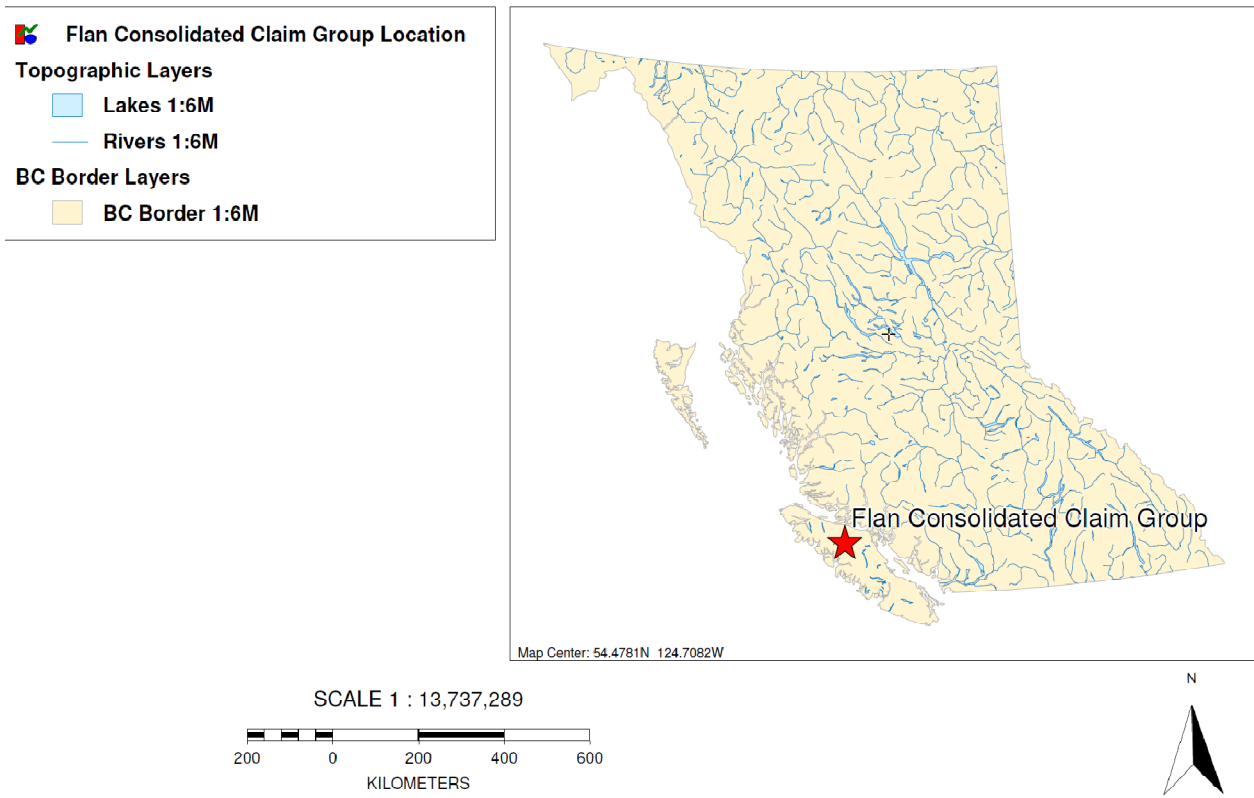


Figure 1: Location of Claim Map

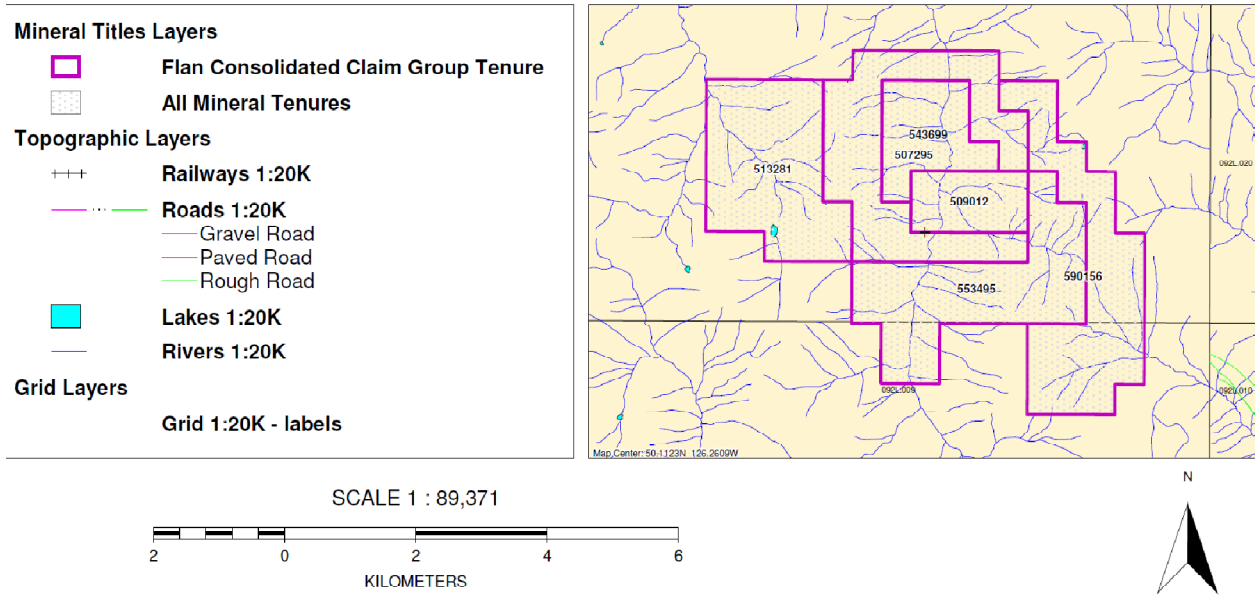


Figure 2 Map of Flan consolidated claim group



AR 26793 produced data on the surrounds of the original gold discovery location

AR 27311 discussed veins in a nearby, hitherto unknown, 2 mica granite thought to be a possible source of mineralization

AR 28382 added geological information on basalts and (epithermal) veins on on the west side of the claims.

AR 29360 focused on new high grade sulphide grab samples from basal till near at the original location. Gold assays (metallics fire assay) on 500 gm samples yielded up to 4 oz/mt from pyrrhotite rich copper bearing basal till fragments.

AR 29551 discussed alteration on the claims and conclude that low grade regional metamorphism affected Triassic basalts and shales. Local phyllic alteration has affected the 2 mica pluton, showing a local chlorite rich zone and a sericite rich zone. The granite was thought to have been emplaced in a high strain zone. The possibility that the west of the creek was displaced with regard to the east side was suggested.

AR30009 presents evidence that the gold at Flan Showing is found in small grains of electrum (range 5 to 72 micron grains; median and mode is 15 microns) along with small grains of BiTe within chalcopyrite, and less so, in pyrrhotite and sphalerite. .

AR30471 presents data on anomalous till samples near the mineralized till fragments, as well a data on a new copper and silver showing in the "sed and sill" unit. Orientation surveys on various analytical methods were carried out. It was concluded that two layers of till are present in various locations: one a basal till, shows mineralized till fragments and a later, overlying, barren till with rounded boulders of granodiorite

## Summary of work done

*Acquiring a new orthophoto and determining lineaments*

*Computer analysis of orientations*

*Reanalyzing samples (from AR30471) to test their suitability for electromagnetic surveys.*

*Assays (Acme Analytical Labs van 0900 1592.1*

*(14 specs, method 4A and B Whole rock majors and trace elements + 2A C species))*

*Analise new till, till fragments and rock specimens*

*Assays (Acme Analytical Labs van 09000516.1*

*(19 specs, method 1F15 (ultra sensitive ICP-MS)*

*2 Polished Thin sections and 2 polished sections (prepared by Vancouver Petrographics and summarily described by author.*

# Detailed data and interpretation

## *Purpose*

The work recorded herein is to present information regarding lineaments derived from a newly purchased orthophoto, as well as some preparatory analytical work to evaluate the feasibility of electromagnetic surveys. The next three sections are extracted and modified from AR3009 and 30471.

## *General surficial geology*

The claims are situated on the junction of a tributary from the south east (informally called "Jackpot Creek") with the main U-shaped Schoen Creek valley. The eastern ridge of the main creek is largely mountainous outcrop as is the western ridge. The valleys are filled with downward thickening glacial deposits and post glacial stream and talus deposits. Road outcrops are technically subcrops; only a few knobs of bedrock crop out on the lower slopes; only at the upper steeper slopes are cliff forming outcrops present. Very large blocks of material from the upper slopes has cascaded down the hill. In virgin forest such blocks are difficult to distinguish from actual outcrop. The depth of till increases downhill, as does colluvium. The bottoms of the valleys are occupied by creeks cutting through their own, earlier fluvial sediments.

According to Howes (1981, 1983) there are two glacial periods and interglacial s recorded on northern Vancouver Island. The earliest glacial episode occurred some 50,000 years ago, and has left only sporadic evidence of its presence, but it was probably as extensive as the Fraser Glaciation. Only limited dated interglacials have been preserved (ibid). The later Fraser Glaciation was widespread and consisted of three stages. An early stage (prior to 25,000 years before present) includes glaciers forming in valleys draining the Vancouver Island Ranges. At maximum (some 16,000 years ago, the ice from the coast mountains, on the mainland, spread over the the early valley glaciers of Vancouver Island and spread southwest ward.. At deglaciation, starting at 12,000 years ago, the valley glaciers re-established themselves to fade away by 9000 years before the present. Later streams reworked the tills and outwash materials in the valley bottoms.

In the general area, glacial striae on subcrops indicate that the valley glacier in the Schoen Creek drainage scraped debris from south to north, toward Schoen Lake. Howes (1981) reports that on the nearby Mount Victoria, at an of 1550 m elevation, glacial striae linked with the Fraser maximum, flowed from NE to SW.

It is concluded that the basal till observed at Flan is associated with the valley glaciers. The basal tills are probably associated with the early valley glaciers and not with the later, short lived Fraser Glaciation Maximum ice cover. The later, upper portions of the till cover may reflect some interaction with debris from the Fraser maximum glaciation.

The Flan showing is on the western side of the Schoen Creek, on the northern edge of a small subsidiary creek ("Jackpot Creek, according to local logging lore"). Glacial debris was likely carried by this smaller creek and would join with the debris of the main down valley ice flow somewhat to the west of the current surface. Striae were noted on the southern most subcrops near the Flan showing, where the surficial debris had been washed away, after the road had been pushed through striae indicated ice movement was parallel with the valley wall and to the north, down valley to the lake. Presumably these striae mark early, pre-maximum glaciation and indicate that up-ice for glacial basal till boulders would be at the headwaters of Schoen creek and its tributaries (cf Hicock, 1986). Hence the basal till at the showing is likely associated with the tributary glacier descending "Jackpot Creek". This is relevant, because the

direction of ice flow is important tracing the mineralized boulders back to source.(Proudfoot et al, 1995)

The high grade samples are located in the interface between bedrock and basal till. The samples are loose and are part of the basal till package. "...most studies on gold dispersal trains show that distances of transport of detectable materials are rather short. ..." (p. 45, Plouffe, 1995) and Proudfoot et al, (1995) indicates that till fragments rise in the glacier as the distance from the source increases. Fragments which are at the base of the till are very close to the source.(ibid, p.25).

The road cuts are unstable, and between the summer of 2007 and 2008, several ten or so metres wide slides brought down trees, soil and till over previously exposed till and bedrock sections. Erosion thus continuously exposes new sulphide rich fragments the surface. These fragments quickly disappear since they are quickly oxidized to porous and loosely consolidated rusty masses and fine talus.

## ***Regional Geology***

The regional geology has been mapped by Muller et al 1974, (Fig 3) prior to the construction of current logging roads, and as such, suffers from not having access to the subcrops now exposed. Observations gained while prospecting in the region after the roads were available, indicate that a small 2 mica granite stock occurs west of Schoen Creek. The contact of this stock are seen in two places, one intrusive and one faulted, but its general elongate shape can be deduced from distribution of talus and subcrops in the region. This type of granite is typically a result of crustal melting in a thickened continental crust which has been affected by crustal shearing (Barbarin, 1996). The detailed placement of faults in the claim area is still uncertain, but the general presence of profound steep northerly fault zone/complex is without doubt (Massey (2005), Mueller (1974).

Regional geology of the immediate area is simple. Late Paleozoic limestone is exposed in low lying areas east of the claims. They are overlain by the informally named Daonella beds, a middle Triassic unit of black shale and siliceous tuffaceous cherts which in turn is overlain by the Karmutsen basalts, a thick pile of pillowed and massive sub-aqueous to sub aerial lavas. Intrusive rocks include early late Triassic gabbro sills (emplaced mainly in the Daonella beds), and later, large Jurassic granodiorite plutons.

Regional faulting, affected area. The apparent sense of movement on the mostly steeply east dipping north south faults is west side up, but associated slickensides indicate largely horizontal displacement. It would appear that regionally, Jurassic plutons post date some of the NS faulting; on the other hand the two mica granite is faulted both in NS and EW directions. Other steep, later?, east west faults associated with abundant alteration and a possible dextral sense of displacement are locally important. Local, later, tertiary dykes that cross the east west faults, and stocks are noted within this same general region (near Mt Cain).

The geology in Schoen creek is incompletely known, and the deep till cover at the base of the U shaped creek valley precludes a detailed map of even this small claim group. Nevertheless, a cross-section from east to west, across the Schoen Creek valley, in the vicinity of Mt Adam, would include these features from east to west:

### *East*

*Mt Adam underlain by Karmutsen basalts (with shallow west dip)  
western flanks of Mt Adam cut by a fault (steep and northerly trending)-shown on Muller's  
map.(west side up)  
Middle Triassic black shales and cherts/gabbro sills faulted against Karmutsen Basalts  
Thicker Gabbro sills in tuffaceous cherts (c.f. FLAN Showing)  
Schoen Creek valley, possibly underlain M.Tr black shales and local cherts/gabbro sills*

Across the Schoen Creek, and up the hill,  
 Unnamed 2 mica granitic Stock emplaced in black shale/gabbro, in north and east,  
 Karmutsen basalt in west  
 Karmutsen feldspar phyric basalt flows with shallow west? dip, near top of hill  
 Nimpkish Pluton intruding the western edge of the claims west of the ridge

West

Age	#	Unit	Lithology	Relationship with unit below	Comments
Holocene (post glacial)		Alluvium	Country rock of high hills and ridges	unconformity	Thickness increases to valley bottom
Holocene several? Glacial episodes		Moraine, basal till	Comminuted country rock, up ice, larger boulders	unconformity	Thickness increases to valley bottom,
Late Tertiary				UNCONFORMITY	
later Mesozoic or Tertiary	7a,b		local alteration of 2 mica granite	Faulting, mainly strike slip? Also minor cross faults ,	(copper-gold mineralization event?)
late Mesozoic or Tertiary	6	Unnamed granite in Schoen Creek	2 mica Granite,	intrudes shales, gabbro, and Karmutsen	Carries minor molybdenite in quartz veins
Early Mid Mesozoic	5	Island Intrusions (Mgd)	Magnetite bearing granodiorites	Intrudes all previous Units	Local metamorphic halos (copper-gold mineralization event?)
Mesozoic	4			Normal faulting, west side down? affects all older units	(copper-gold mineralization event?)
Triassic (Karnian?)	3b	Karmutsen sub-Group TrKb	Basalts with feldspar phenocrysts	Upper contact not seen in this area; lower contact, disconformable?	Thick section
Triassic (Karnian?)	3a	Unnamed gabbro TrGb	gabbro	Sills, intrusive into shales	Widespread and thin
Mid Triassic	2	"Daonella" Beds TrDb	Black shale and siliceous tuff and chert	Upper contact with Karmutsen, disconformable;	Recessive unit, possible source of sulphides in area
Latest Paleozoic				UNCONFORMITY	
Late Paleozoic	1	Buttle Lake Formation	Bioclastic Limestone and local limy siltstone	Contact not seen, unconformable?.	

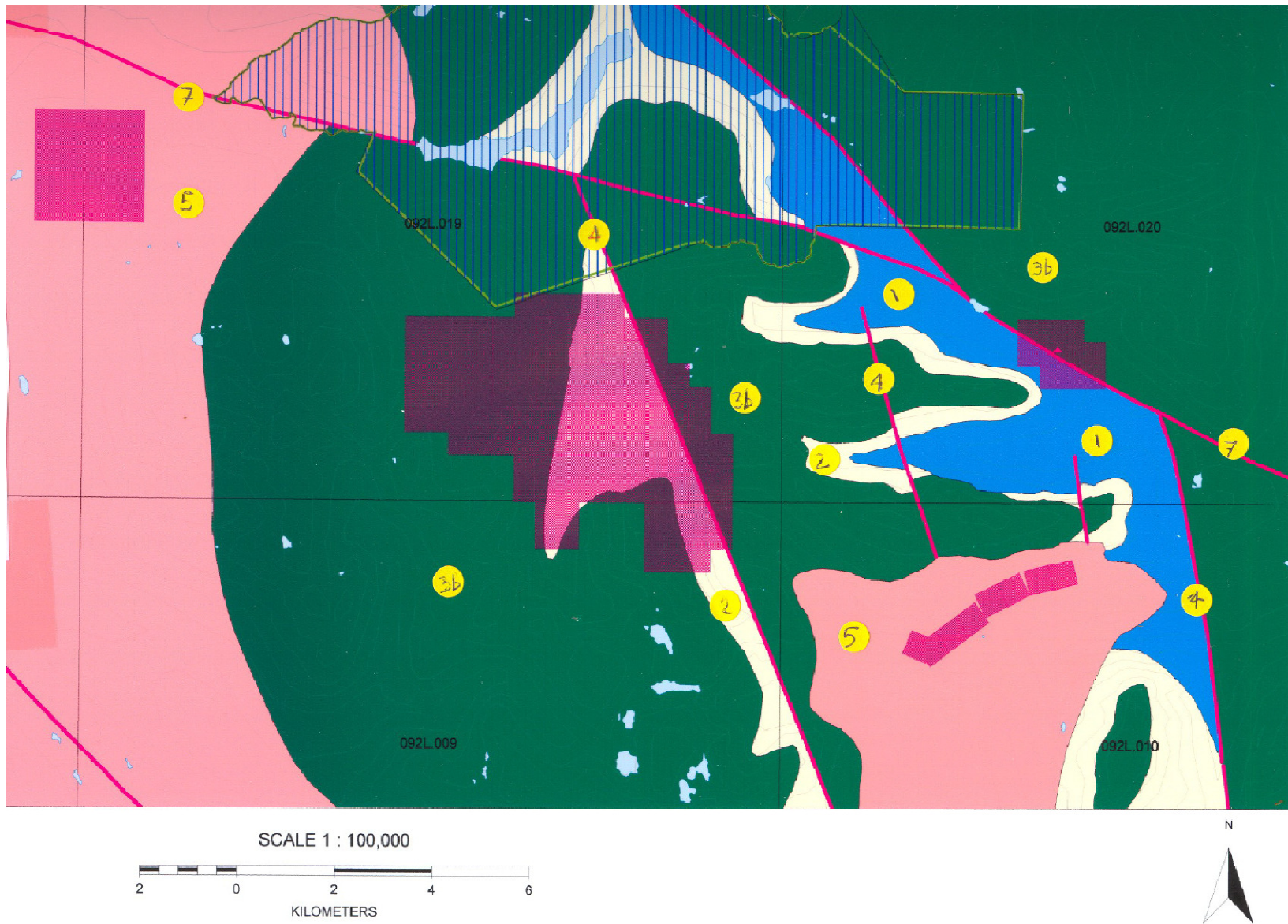


Figure 3: Regional Geology



Projection/Datum: UTM 9(N) NAD83  
Scale 1:10000

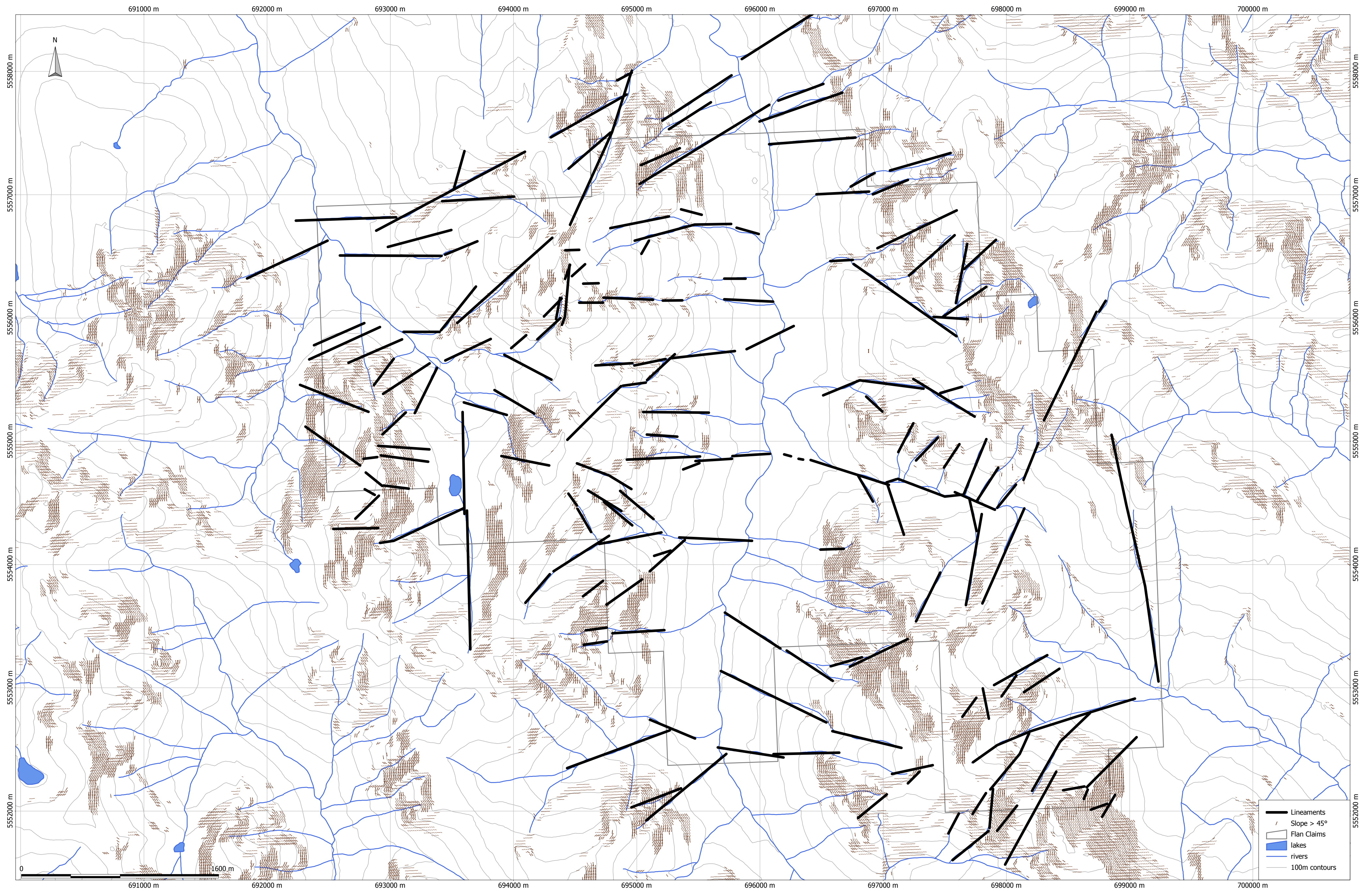
0 800 m

## THE FLAN PROJECT

Figure 4  
ORTHO PHOTO & TOPOGRAPHY

August 2009

GIS by TBTango.ca



Projection/Datum: UTM 9(N) NAD83  
Scale 1:20000



## THE FLAN PROJECT

## Lineaments & Strike of Slopes (slopes > 45)

August 2009

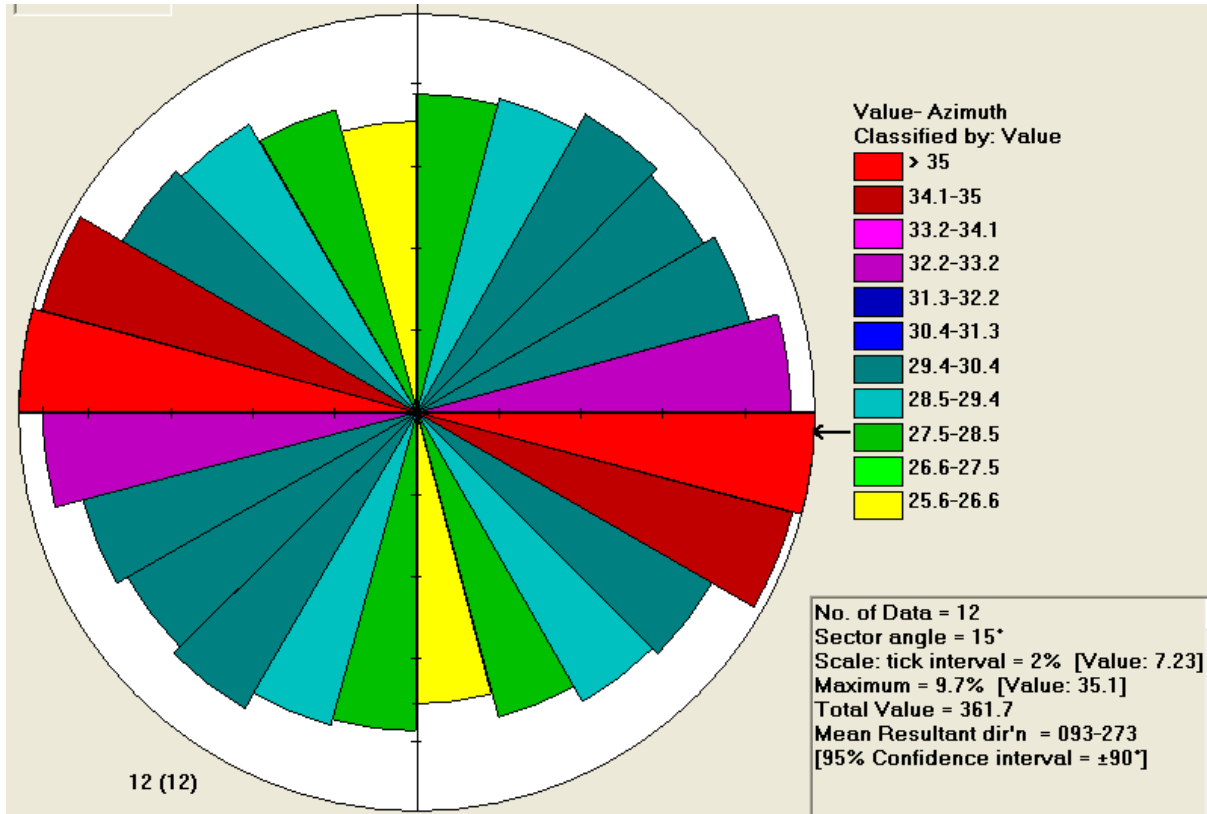


Figure 6: Circular histogram showing the orientations of computer recovered minor lineaments.



## **Property geology**

Figure 4 shows a high resolution orthophoto acquired as a suitable base map for upcoming work. Figure 5 shows some lineaments derived by manual extraction, using the orthophoto as a guide. Also noted are computer generated orientations of minor steep cliffs in an effort to locate the more dominant fracture directions as expressed in topography. The smaller features are recovered by a GIS computer system from a digital elevation model of the area. The surface (cliff) whose slope orientation is measured, (if the slope is greater than 45 degrees) is a Delauney triangle with an area of only a few square meters. The interpretation of the feature is that it contains information about the orientation of preferential directions in which the rock will break and waste away, thus indicating, in a crude way, the fabric of the rock. The orientations have been gathered into orientation categories some 15 degrees wide. Since 45 degrees is an angle which is steeper than the angle of repose, the areas so indicated are also an indication of major outcrop distribution.

Figure 6 shows a circular histogram of the distribution of orientations of planar surfaces dipping steeper than 45 degrees.

Cursory assessment of these two figures indicate a lot of east-west fractures: the large NNE fractures indicated on the current regional geological map are not in evidence.

Previously, the property geology has been summarized (AR 30471). The description below is taken from that report:

*“...New logging roads high up on the eastern side of Schoen Creek expose faulted black shale/siltstone in subcrop, these are the so called “sed and sill” or Daonella beds Complex. The beds dip to the east, and are locally foliated and cut by fault surfaces with slickensides. It appears that a small anticline has developed against the fault, perhaps in response to west side up movement on a major east dipping fault. Along strike of this fault, Jurassic intrusion seals the fault trace, but locally rocks show structures indicative of long lived faulting.*

*Cliffs and outcrops on the east side of main creek are mainly formed in fine-grained gabbro of the sills.*

*Lower in the valley, the subcrops exposed on the logging roads to the east of the creek are of gabbro, cut by major steeply dipping NS and minor EW faults and veins. Large truck sized talus pieces of Karmutsen pillow basalt are locally abundant. Presumably these fragments are derived from high above, and from basalt on the East side of the major NS fault mapped along west flank of Mt Adam. The subcrops exposed by logging, show that local NS faulting cut by later cross faults and veins are widely distributed.*

*The area from the road to the creek covered by till overlain by soil and talus. A few chips of black slate in the till, and chip fragments in the creek, raise the possibility that these slates may, as shown by Muller (op cit), underlie part of the valley.*

*Fragments of pyrite bearing sericite altered feldspar porphyry have been recovered from Jackpot Creek, suggesting the possibility of thin dykes upstream and near the major fault (which has been intruded several km to the south by a large Island Intrusion).*

*Crossing the Schoen Creek and coming up the western slope, subcrops and abundant talus are of 2 mica granite, widely chloritic, locally phyllic/argillic, veined and faulted. In the northern part of the claims patches of metasediment and metagabbro crop out. Widespread talus of chert noted is noted here*

as well. The contact between Hb-Hornfels/metagabbro and granite is also marked by an east west fault in which metasediments are caught up as fragments. The fresh 2 mica granite is a medium grained muscovite biotite granite with about equal amounts of quartz and microcline and minor normally zoned oligoclase to albite. The biotite and mica appear in small clots together, surrounding small accessory monazite and/or zircon and less abundantly, pyrite. The biotite is partially converted to chlorite, the plagioclase core is altered to very fine clay/white mica. Local, very thin chlorite veins traverse the rock. In some instances thin carbonate veins cut the chlorite veins. Modal proportions of minerals indicate that it is peraluminous as would be expected from the micaceous nature. Portions of the stock are deformed by small faults sub-parallel to northerly trending steeply dipping regional ones, and these zones, and small subsidiary sets at right angles have been silicified, chloritized and locally epidotized. Ductile faulting, with the foliation merging into the high strain zone are noted in several locations. A later period of cataclastic faulting has also taken place, generating crush zones. The earlier ductile zones carry pyrite, whereas the later crush zones generate fault surfaces on which the sulphides are smeared. The surrounding granite has been argillically altered to various degrees. Pyrite, and minor amounts of other sulphides are locally present. Veining is parallel and also normal to foliation; it is marked by chlorite, locally epidote, or quartz with or without small amounts of ankeritic carbonate. The veins are locally mineralized with pyrite and very minor amounts of other sulphides. Adjacent to the veins are argillically altered zones, in which feldspars, mainly plagioclase is reduced to clay or white mica. These zones are barren. Some veins are a bluish colour and are composed of very finegrained quartz with very fine grained pyrite disseminated throughout. These veins are seen to have elevated lead concentrations. Chlorite veins cut the ductilely deformed quartz veins, and are cut by carbonate carrying veins, and both are cut by the crush zones. The paragenesis and geographical distribution of alteration has not been fully explained yet. A few veins, rich in iron and manganese, contain many pathfinder elements. Their current state, ie a very dark plastic chlorite rich muck, is presumably due to near surface weathering of carbonate/ankerite/rhodochrosite/chlorite. In the southern part, along an east west fault surfaces developed in the granite show several mm thick veins of rhodonite.

This type of granite is generally thought to have formed in crustally sheared thickened continental crust. The meridional (northerly) faults seen at surface are part of a long-lived and deeply penetrating fault system. The possibility that this elongate 2 mica granite stock predates the early faulting has not been ruled out, but is currently considered to be of much later age since it is in part emplaced in the fault zone.

High on the western slope, outcrops of Karmutsen basalts provide talus fragments to lower slopes. There is thus a contact near western edge of claims between metasediments and Karmutsen, as shown by Muller (op cit). Over the hill top, rocks are Karmutsen basalt where seen outcrop. There epithermal veins are locally seen to cut the basalt. A fragment of garnet skarn was located in till near the headwaters of the creeks in this area.

## **Mineralization**

The mineralization on the claims comprise several types and has been reviewed in AR30471, it is repeated here to provide context to the work.:

“... At Flan showing, east of the Schoen creek:

I/ Early, green, poly-metallic, epidote-chlorite-sulphide veins with irregular pods of quartz, and tens of cm wide, replace a fault zone cutting a gabbro sill. Sphalerite, chalcopyrite and pyrite are common sulphides, but analyses suggest molybdenite and galena are present in small measure as well. Gold is variably anomalous.

II/ A later, thin, white weathering, apparently cross cutting, quartz-sulphide (pyrite and chalcopyrite) vein assemblage with local Au concentration developed in gabbro. Seems to carry best gold values near the earlier veins. Adjacent basal till fragments of pyrrhotite, chalcopyrite, pyrite, quartz and

*chlorite veins apparently cutting gabbro carry interesting amounts of electrum.*

*Elsewhere, east of Schoen creek, scarce outcrops of black shales /siltstones and sills are pyritic and pyrrhotitic and locally carry copper minerals, including chalcopyrite and sparse malachite, especially near tectonically modified versions are found.*

*A cobble of thoroughly sericitized quartz porphyry with blebs of pyrite has been found in (unofficially named) Jackpot Creek, a subsidiary of Schoen Creek*

*West of the Schoen creek*

*A polymetallic vein with pyrite, chalcopyrite, sphalerite, and galena and anomalous gold cuts Karmutsen country rock near the northern and western contact of 2 mica granite and Karmutsen Basalts (AR23546).*

*In the 2-mica granite the mineralization is of four types:*

*i/ molybdenite bearing quartz veins.*

*ii/ pyrite in altered granite with no elevated gold values.*

*iii/ pyrite, minor galena in quartz veining with minor elevated gold values (blue veins).*

*iv/ rusty manganese alteration zones/ex-veins? rich in pathfinder elements.*

*In the western unnamed creek drainage, unmineralized epithermal veins cut basalt. Mineralized till fragments have been located here previously. ...”*

## **Exploration Target**

The exploration is at early stages and fixing on a single mineral deposit model is premature.

There are a number of possibilities; but one mineral deposit model seems to fit the limited amount of information currently available. This model is selected from the BC Mineral Deposit Suite: category I02; INTRUSION RELATED Au PYRRHOTITE VEINS (Aldrick, 1996).

A capsule Description is given below:

...Parallel tabular to cymoid veins of massive sulphide and/or bull quartz carbonate with native gold, electrum, chalcopyrite are emplaced in a set of en echelon fractures around the periphery of a subvolcanic pluton... Flan may fulfill the requirements of this model type, but more data is needed .

Two BC examples of this model are the Snip Mine (a recent major gold producer), and Rosland Veins, (historically, one of BC's large gold camps). Typical grades are 10-20 g/t Au.

## **Detailed sampling results**

### **Previous results, setting the stage**

*Previous results from the FLAN group are relevant here, inasmuch as they show the varied nature of the mineralization on the property,.*

**The Flan Showing;** *Polymetallic veins in country rock and diabase.(east of Schoen Creek)*

*As has been mentioned before, the Flan showing is in polymetallic veins in sheared gabbro. The highest gold assays encountered came from basal till fragments presumably derived from nearby pyrrhotite-chalcopyrite bearing quartz chlorite vein cutting diabase.*

**In place** green polymetallic veins in N-S fault zone in diabase sill (these values are, in part, updated from AR30471

gold	up to 407 ppb
palladium:	up to 9 ppb
silver:	up to 9.6 ppm
nickel	up to 34 ppm
cobalt:	up to 187 ppm
copper	up to 4115 ppm
molybdenum	up to 324 ppm
zinc:	up to 5566 ppm
bismuth	up to 1.6 ppm

**In place** Sulphide veins (now largely limonite) in gabbro:(on knob)\*

gold:	up to 110 ppb
palladium:	up to 35 ppb
silver	up to 2.4 ppm
nickel	up to 104 ppm
cobalt	up to 73 ppm
copper	up to 1047 ppm
molybdenum	up to 3 ppm
zinc	up to 581 ppm
bismuth	up to 6 ppm

**In place** 10 cm wide quartz vein with chlotite and sulphides found at intersection of faults

gold:	up to 134 ppb
palladium:	up to 16 ppb
silver	up to 7.7 ppm
nickel	up to 25 ppm
cobalt	up to 115 ppm
copper	up to 3507 ppm
molybdenum	up to 113 ppm
zinc	up to 5489 ppm
bismuth	up to 4 ppm

:(loose, but probably in place) White quartz veins in pyritic gabbro just above, above samples

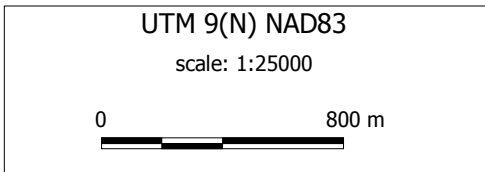
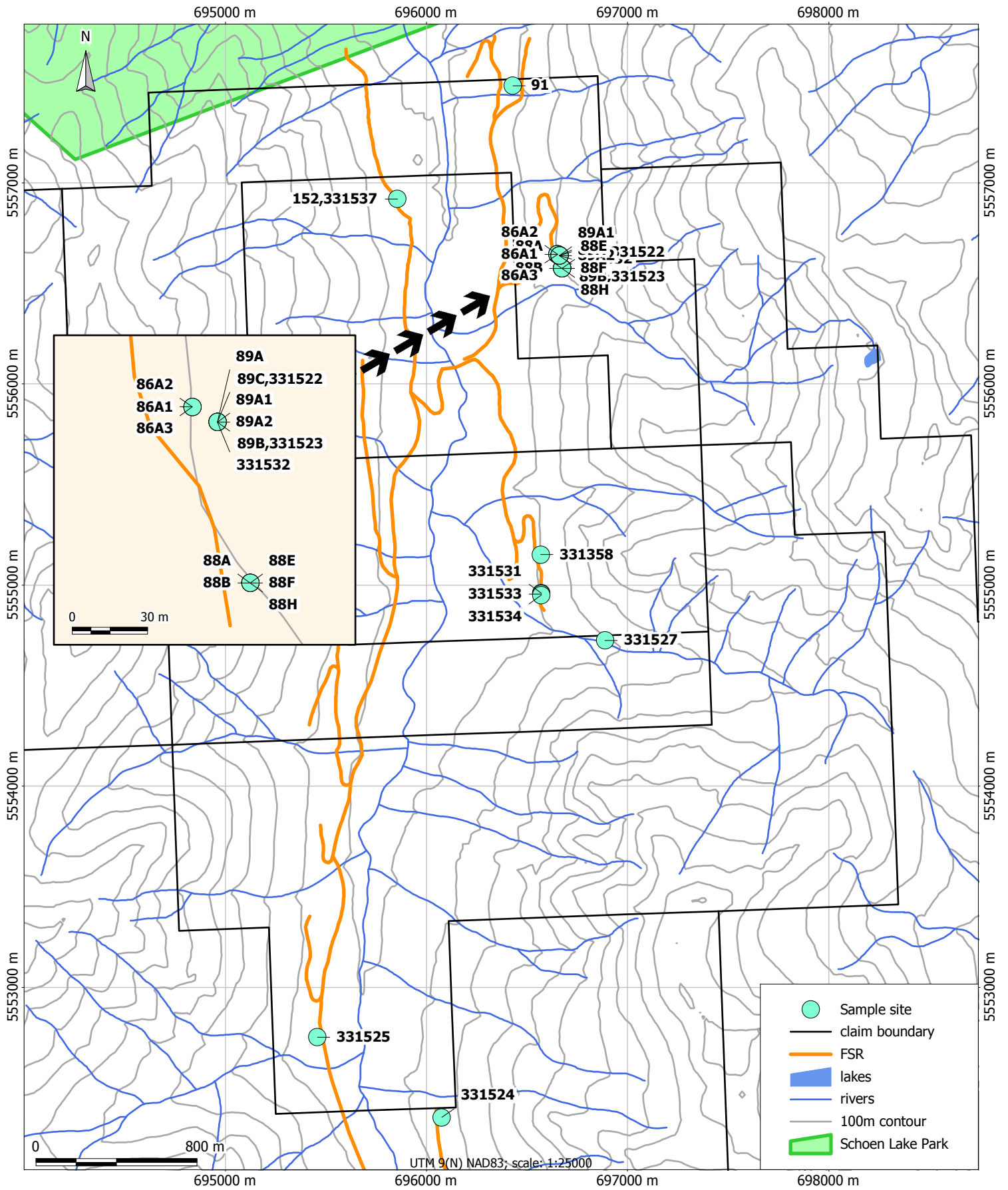
gold:	up to <b>61.04</b> gm/mt (ICP-ES 152 ppm !)
palladium:	up to 16 ppb
silver:	up to 25.7 gm/mt
nickel:	up to 25 ppm
cobalt	up to 58 ppm
copper:	up to 5536 ppm
molybdenum:	up to 7.7 ppm
zinc:	up to 356 ppm
bismuth	up to 37.6 ppm

Basal till sulphide (po-cpy) samples (from AR 29360)

gold:	up to <b>135.09</b> gm/mt
palladium:	up to 22 ppb
silver:	up to <b>71.4</b> gm/mt
nickel:	up to 86 ppm'
cobalt	up to 360 ppm
copper:	up to <b>4.534%</b>
molybdenum:	up to 29.3 ppm
zinc:	up to 1750 ppm
bismuth	up to 60 ppm

## **New Results,**

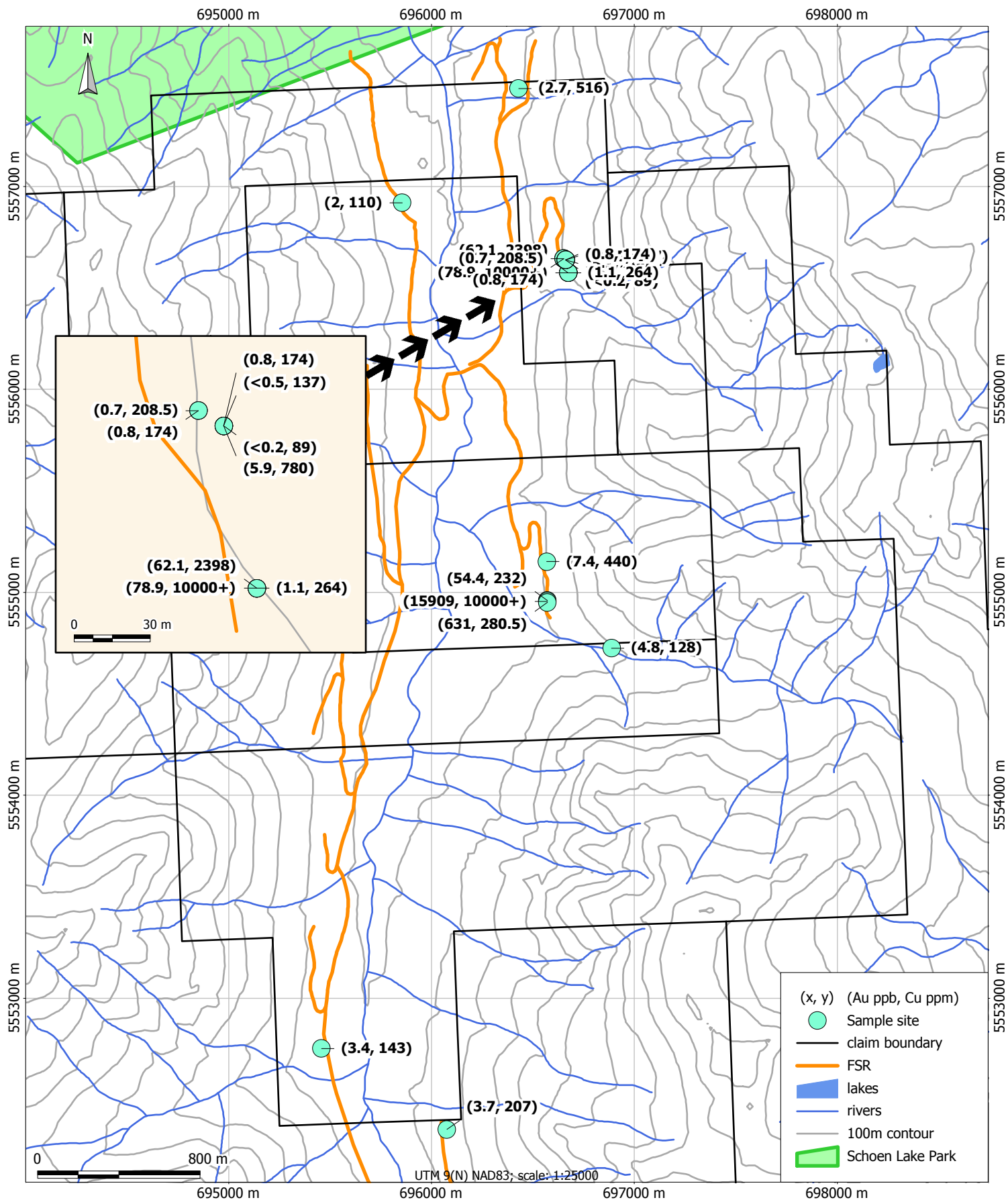
See appendix A-1-1, 1-2, 1-3a, 1-3b and A-2 for descriptions and partial elemental listing and figures 7 for position of samples, and Figures 6 for values of Cu and Au assays respectively Appendix B presents 2 polished and 2 regular thin section descriptions and Appendix C presents the actual assay certificates and QA/QC material provided by ACME..



## FLAN PROJECT

Figure 7  
SAMPLE LOCATIONS

GIS by TBTango.ca



UTM 9(N) NAD83

scale: 1:25000

0 800 m

### FLAN PROJECT

Figure 8  
Gold & Copper assays

## ***Interpretations and conclusions***

### ***Results from outcrops***

Several important new findings derived from *in situ* rocks are reported below

#### ***Flan Outcrop***

Outcrops near the showing have been re-investigated again. The knob immediately above the sub cropping showing is seen to be gabbro cut by a variety of veins as previously indicated. The gabbro also contains metre sized inclusions of siliceous tuff, some of whose laminations show magnetic sulphides. Sulphide veinlets and wall paper veinlets are common.

Outcrops uphill from showing are seen to be mainly diabase but samples of laminated silicified black shale were also located. The exact distribution of sediment and sills is not easily discerned.

### **Results from petrography**

Petrographical studies show that till fragment (located north of the Flan boulders) consisting of altered diabase which is rich in pyrrhotite and pyrite has been extensively altered and veined. Plagioclase has been replaced by pyrite and pyrrhotite and mafics by a fibroid amphibole. Local minor epidote and titanite also occur.

Several specimens were prepared with the (failed) expectation of mapping the distribution of chalcopyrite and related minerals.

#### ***Black Shale /siltstone, diabase and phyllonite outcrop***

Black shales are deformed on a microscale as well as on a mesoscale showing an east dip, towards the fault, and fault dip. The apparent sense of movement is east side down (or west side up). The gross structural pattern is that of shallow west dipping slabs of Karmutsen, cut by east dipping normal faults; hence the east dip observed probably indicates that a small segment bounded by subsidiary faults has rotated to show east dips, specially developed near and subparallel to the fault.



## Results from assays

A “black shale outcrop” located last season with local copper and silver mineralization has been chemically analyzed, in part to estimate its influence in electromagnetic surveys.

Graphite analyses were conducted (Appendix A -1a) and are summarized below:

	<b>C%</b>	<b>S%</b>	<b>Cu, ppm</b>	<b>Ag, ppm</b>	<b>Mo, ppm</b>
Siltstone ()	0.04-0.09	3.91-4.67	173.6-208.5	1.4-1.6	19.1-31.6
Diabase ()	<0.02	0.03-2.39	263.8- <b>10,000+</b>	<0.01- <b>8.4</b>	1.1 – 6.7
Phyllonite ()	0.11-0.23	0.74-1.83	90.9-146	0.1-0.2	49.8- <b>120.3</b>

Samples were also subjected to whole rock, major and minor element analyses (see Appendix A-2): they show that the (volcanic) siltstones have been albitized and silicified, that mineralization is sporadic and their localization probably related to the deformation rather than to a primary enrichment of the siltstones.

The rocks are best described as carbonaceous and sulphidic altered siltstones rather than black shales.

## Results from tills

### From region of Flan Showing

An understanding of the glacial history of Schoen Creek valley is central to tracing the source of the pyrrhotite veins. An earlier glaciation, although possibly more widespread than the latest episode of glaciation, has been essentially removed by interglacial erosion. Hence it is the latest glaciation that will have dictated the distribution of till borne mineralized clasts.

A capsule history of the latest (Fraser) glaciation in Schoen Creek includes early north moving valley glacier ice, followed by an over run towards the south west by the Fraser maximum ice, and then resumes, on melting, to have north flowing valley glaciers again.

Mineralization in new basal till fragment (331538) from 200 m to the north of Flan shows the carbonaceous sulphidic diabase signature, Cu and Ag was elevated but carried no gold (see Appendix A-3).

<b>Sample</b>	<b>Au, ppb</b>	<b>Ag, ppm</b>	<b>Cu, ppm</b>	<b>Bi, ppm</b>	<b>Sb, ppm</b>	<b>As,ppm</b>	<b>Hg,ppm</b>
331525 rusty siltstone from south edge of claim, west side of Schoen Creek	3.4	0.966	142.8	0..16	0.4.12	32.2	0.011
331538 sulphidic diabase sample from till 200 m north of Flan	7.4	0.298	439.5	0.33	0.15	1.5	0.007

Several till samples taken from various locations are shown below: Individual values and locations are given in appendices

Till Sample	Au, ppb	Ag, ppm	Cu, ppm	Bi, ppm	Sb, ppm	As, ppm	Hg, ppm
331524 At southern claim boundary, east side	3.7	0.068	207.0	0.27	0.18	5.9	0.008
331527 131A, uphill from Flan, in undifferentiated till	4.8	0.062	128.3	0.02	0.15	2.1	0.015
331532, basal till just above diabase sill, near silicified siltstone 89	5.9	0.432	780.1	0.04	0.15	2.5	0.040
331531 till ball in basal till near rusty frags at Flan	54.4	0.249	231.7	0.55	0.15	5.2	0.008
331533, till ball 5 m north of 81, same level as fragments	<b>15,909</b>	<b>4.908</b>	<b>2425</b>	6.16	0.04	0.7	0.007
331534 till near 81, 1 meter up	<b>630.9</b>	0.314	280.5	0.38	0.11	2.9	<0.005

Notice the elevated Au, Ag, and Cu in tills associated with the Flan. 331533 is from a till ball about the size of a tennis ball. It is probably the leached remainder of a previous till fragment. 331534 is from unoxidized till near the above sample.

## Summary

The merit of this property derives from several till fragments of high grade vein materials with

values of up to Au up to 135 gm/mt.

Till fragments of diabase mineralized with pyrrhotite found 200 m north of Flan returned only minor copper and silver.

Basal till in the vicinity of Flan continues to generate anomalous assay values.

Lineament studies derived from new high definition orthophotos indicate that both meridional lineaments, thought to bound major geological features are cut by (later?) minor latitudinal linears. Major geological boundaries are not marked by prominent lineaments. More work is needed to confirm the suggestion that both directions are hosts to mineralization.

Rock called “...stratiform, black shale, with (as yet local) copper-silver mineralization...” has been analyzed more completely in this report and are best characterized as locally carbonaceous and pyrrhotitic, highly silicified and albitized siltstone and cherty tuffs. More outcrops need to be sampled.

As noted previously the most relevant samples to collect are bedrock and basal till samples. If penetration of tills is too difficult, given the impermeable and tough nature of the till, perhaps a partial leach geochemical method which is said to penetrate till cover might be preferable.

Tracing of fragments and basal till, mainly up-ice, may lead to the originating vein(s). More traverses in the more rugged parts of claim are needed. Beepmat surveys may help locate boulders in till.

Geophysical methods will yield positive results and report all locations of magnetic and conductive pyrrhotite, both the potentially vein? economic locations and also the stratigraphically? barren areas where carbonaceous and pyrrhotitic units might be located.

## **Recommendations for future work**

### ***Mineral deposit Models***

Exploration guides for the current choice of Intrusion Related Au Pyrrhotite Vein Mineral Deposit Model include:

Locate a geochemical footprint of elevated Au, Ag, Cu, (minor As and Zn),

A geophysical electromagnetic signature revealed by (ABEM or VLF-EM) and a magnetic signature shown by linear magnetic anomalies, as well as

Geological observations which which include the finding of small 'hairline' fractures which are good indicators that a major vein is nearby (Aldrick, 1996).

## ***Exploration Methods***

At Flan, the presence of gold is known to be in very small particles within the chalcopyrite; this focuses further exploration to the easier task of finding copper. The presence of altering pyrrhotite insures an acid weathering environment and release of copper into the weathering environment. Hence standard geochemical procedures can be used to outline resultant copper anomalies in tills, soils and/or streams. Each sample type gives different yields and directional clues as to source of mineralization. A basal till survey would yield the best and most immediate results to locate copper (and gold) bearing pyrrhotite veins..An alternate method to outline bedrock sulphides would be to use partial leach methods that are said to penetrate ground cover. Not all copper rich rocks in this area carry gold.

The presence of pyrrhotite in veins indicates that geophysical methods will be useful. Pyrrhotite at Flan showing is mildly magnetic, and would show up in a magnetic survey. Pyrrhotites are known to be conductive and any, of a large variety, of electromagnetic methods should work. Pyrrhotite and carbonaceous units associated with the black shales/silicified siltstones would likewise yield to both geophysical methodologies. Not all pyrrhotite bearing rocks are mineralized with Cu and Ag. Hence the geophysical survey would not be definitive.

A prospector based exploration program could include a Beepmat survey to outline near surface conductors, a small soil/basal till survey within such an area, and hand trenching on the most prominent anomalies.

A junior company could perform larger airborne more systematic geochemical and geophysical surveys on well established grids to find anomalous regions.

## ***A Proposed Budget for summer 2009***

	Unit Price	days	GST	total
M. Schau (inc GST)	1000	21	1050.00	22,050
Contractor 1 (3 people, 4 wd, has web)	350+300+300	21	1111.00	23,796, estimate
Prospector, contractor 2 (has web)	350	15	262.50	5,518.50
Room and Board, est??	80 x 4	21	335	7055
Truck (Enterprise), est??		23	100	2,000
BeepMat	80	21	84	1,764
Sampling supplies, shipping etc, gas	1000	na	50	1,050
<b>Subtotal</b>			<b>2992.50</b>	<b>63233.50*</b>
Analytical work Actlabs prepaid (enzyme leach)	\$40/sample	70	140	2,940
Analytic work ACME prepaid (rock)	\$30/sample	100	150	3,150
Analytic work ACME prepaid (silt and soil)	\$25/sample	100	125	2,650
<b>Subtotal</b>			<b>415</b>	<b>8,740</b>
<b><i>Phase 2 follow up</i></b>				
M. Schau	1000	7	350	7,350
Contractor 1 (3people, 4 wd, has web) est?/	350+300+300	7	355	7,455
Prospector, contractor 2 (has web)	350	5	87.50	1,837.50
Room and Board, estimate, hopefully less	80 x 5	7	132.00	2,772
Truck (Enterprise), estimate	100	7	35	700
Sampling supplies, shipping etc, gas			15	300
<b>Subtotal</b>			<b>974.50</b>	<b>20,414.5</b>
<b><i>Later in fall</i></b>				
Analytic work ACME prepaid				To be discussed
Write Assessment Report				To be discussed
<b>TOTAL</b>			<b>About 5000</b>	<b>Not to exceed \$100,000</b>

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## Author's qualifications

I, Mikkel Schau

have been a rock hound, prospector and geologist for over 50 years. My mineral exploration experience has been with Shell, Texas Gulf Sulfur, Kennco, Geophoto, Cogema and several public and private junior mining companies. I have worked 10 years in southern BC and spent 23 years with the GSC as a field officer focused on regional mapping in northeastern Arctic Canada before retiring. For the last 14 years I have prospected and mapped in Nunavut, Nunavik, Yukon, Ontario and BC.

I reside at 1007 Barkway Terrace, Brentwood Bay, BC, V8M 1A4

My formal education is that of a geologist, I graduated with an honours B.Sc. in 1964 and Ph.D. in Geology in 1969, both, from UBC.

My experience in geochemical exploration spans half a century. I was on a follow up crew for a province wide Kennco geochemical survey in the early sixties, . Later I was a teaching assistant to Dr Delavault's Exploration Geochemistry course at UBC. Subsequently, I was the geochemist for a major geochemical survey in NE BC. Hence, I lectured on the subject of Aqueous Geochemistry, a fourth year course at University of Manitoba. I currently use geochemical methods in my exploration work.

I am currently registered as a P.Geo. (25977) in BC. And I hold a BC Free Miner License, # 142134.

Interwest Enterprises Ltd, a private company, is earning up to 80% in this project by investing in its development over the next 4 years (until 2012). I currently have 100% interest in the claims in question, but will relinquish ownership in accordance with a contractual schedule. .

I am an author of the report entitled and dated "*Orientation and Lineation Studies (Tenures 507295, 509012, 513281, 543699, 553495 and 590156) on the Flan-Consolidated Group of Claims in the Nanaimo Mining Division in 092L/01 at 50 deg 06 min 53 sec North and 126 deg 16 min 1 sec West*"

Signed  
Mikkel Schau, P. Geo.  
(APEGBC 25977)  
, dated August 5 2009



## Itemized cost statement

### Field Work

MS November 6, 2009 ½ day @\$600.00	300.00
Room and board*	
1@60/day/person	60.00
Travel (900km @\$0.40/km) not to exceed 10% of total	360.00

### Orthophoto

Acquisition of Orthophotos	787.50
Computer Georegistration,(invoice 09031401)	819.00
Lineament analysis(invoice 09051802)	378.00

### Analytical work

#### Geochemical

ACME labs	
Van09000516.1	512.30
Van09001592.1	671.61

#### Petrographical

VanPet 2 thin sections, 1 polished slab, 2 polished thin sections	159.60
4 descriptions @ 150	600.00

Report writing	1000.00
Graphics printing (invoice 0112528 and 0113790)	384.14
Supplies, copies	117.85

**TOTAL** **6150.00**

## **Appendix A-sample descriptions, locations and selected assays**

**TABLE A1-1, Outcrop samples – Carbon, Sulphur, and Silica**

Sample	UTME	UTMN	Descriptor	C as graphite, %	Total C (LECO)	Total S% (LECO)	SiO2 %
86A1 TS	696651	5556645	Sample with sulphides, left side of wall, dark grey aphanitic slate with sulphide blebs	0.05	0.84	4.67	53.47
86A2	696651	5556645	As above, no sulphides	0.09	na	na	na
86A3 TS	696651	5556645	Black slate, sulphides as blotches and disseminated	0.04	0.22	3.91	61.57
88A	696674	5556575	Samples from right side of 15 m wide rock face at end of road, some malachite	<0.02	<0.02	0.26	46.77
88B	696674	5556575	Dolerite samples from right side of 15 m wide rock face at end of road, some malachite	<0.02	0.03	1.69	46.11
88E	696674	5556575	Dolerite? Samples from right side of 15 m wide rock face at end of road, some malachite	<0.02	na	na	na
88F	696674	5556575	Samples of grey foliated dolerite with sulphide layers and slickensides in pyrite	<0.02	0.02	0.03	48.18
88H	696674	5556575	Dolerite? Samples from right side of 15 m wide rock face at end of road, some malachite	<0.02	na	na	na
89A	696661	5556639	Foliated aphanite/phyllonite, , shear zone in and adjacent to fault zone	0.11	0.69	1.83	61.57
89A1	696661	5556639	Foliated aphanite /phyllonite, shear zone in and adjacent to fault zone	0.13	na	na	na
89A2	696661	5556639	Foliated aphanite/phyllonite , shear zone in and adjacent to fault zone	0.18	na	na	na
89B 331523	696661	5556639	Foliated aphanite/phyllonite, shear zone in and adjacent to fault zone	0.23	1.43	0.74	70.68
89C 331522	696661	5556639	Black Foliated aphanite/ phyllonite, spossibly dolerite, hear zone in and adjacent to fault zone	0.16	1.07	1.59	64.88
91	696429	5557483	Rusty outcrop ,tectonized gabbro/basalt sample with sulphides wall paper and pyrite cubes (bridge)	<0.02	<0.02	2.39	45.4

**TABLE A1-2 Outcrop samples, Au, Ag, Cu and Mo**

Sample	UTME	UTMN	Descriptor	Au, ppb	Ag, ppm	Cu, ppm	Mo, ppm
86A1 TS	696651	5556645	Sample with sulphides, left side of wall, dark grey aphanitic slate with sulphide blebs	0.7	<b>1.4</b>	208.5	19.1
86A3 TS	696651	5556645	Black slate, sulphides as blotches and disseminated	0.8	<b>1.6</b>	173.6	31.6
88A	696674	5556575	Samples from right side of 15 m wide rock face at end of road, some malachite	<b>62.1</b>	<b>1.7</b>	<b>2398</b>	6.7
88B	696674	5556575	Dolerite samples from right side of 15 m wide rock face at end of road, some malachite	<b>78.9</b>	<b>8.4</b>	<b>1%+</b>	7.4
88F	696674	5556575	Samples from right side of 15 m wide rock face at end of road, grey foliated dolerite with sulphide layers and slickensides in pyrite	1.1	<0.01	263.8	1.1
89A	696661	5556639	Foliated aphanite/ phyllonite, , shear zone in and adjacent to fault zone	<0.5	0.1	219.4	49.8
89B 331523	696661	5556639	Foliated aphanite/ phyllonite, shear zone in and adjacent to fault zone	<0.5 <0.2	0.1 0.134	90.9 86.08	61.5 47.15
89C 331522	696661	5556639	Foliated aphanite/ phyllonite, possibly dolerite, hear zone in and adjacent to fault zone	<0.5 1.0	0.2 0.197	128.4 146.4	115.8 120.3
91	696429	5557483	Rusty outcrop ,tectonized gabbro/basalt sample with sulphides wall paper and pyrite cubes (bridge)	2.7	0.1	516.4	1.2
331537 152	695856	5556920	Argillic 2 mica granite	2.0	0.031	110.1	0.65

**TABLE A1-3a, Till fragment samples,**

Till Fragment	UTME	UTMN	Au, ppb	Ag, ppm	Cu, ppm	Bi, ppm	Sb, ppm	As, ppm	Hg, ppm
331358 alt diabase	696568	5555151	7.4	0.298	439.5	0.33	0.15	1.5	0.007
331525 Rusty siltstone	695458	5552753	3.4	0.966	142.8	0.16	<b>4.16</b>	32.2	0.011

Note elevated Sb.

**TABLE A1-3b Till matrix samples**

Till Sample	UTME	UTMN	Au, ppb	Ag, ppm	Cu, ppm	Bi, ppm	Sb, ppm	As, ppm	Hg, ppm
331524, till At southern claim boundary, east side	696076	5552353	3.7	0.068	207.0	0.27	0.18	5.9	0.008
331527 131A, uphill from Flan, in unclassified till	696887	5554725	4.8	0.062	128.3	0.02	0.15	2.1	0.015
331532, basal till just above diabase sill, near silicified siltstone 89	696661	5556639	5.9	0.432	780.1	0.04	0.15	2.5	0.040
331531 till in basal till near rusty frags at Flan	696571	5554960	54.4	0.249	231.7	0.55	0.15	5.2	0.008
31533, gossany till ball 5 m north of 81, about 30 cm above base	696571	5554956	<b>15909.0</b>	<b>4.908</b>	<b>2425</b>	<b>6.16</b>	0.04	0.7	0.007
331534 till near 81, 1 meter up	696571	5554951	<b>630.9</b>	0.314	280.5	0.38	0.11	2.9	<0.005

**TABLE 2 Major Rock compositions**

Locations are given in above tables

	<b>086A1</b>	<b>086A3</b>	<b>088A</b>	<b>088B</b>	<b>088F</b>	<b>089A</b>	<b>089B</b>	<b>089C</b>	<b>091</b>
SiO <sub>2</sub>	53.47	61.57	46.77	46.11	48.18	61.57	70.68	64.88	45.45
TiO <sub>2</sub>	0.97	0.96	2.48	2.48	2.55	0.90	0.62	0.83	2.27
Al <sub>2</sub> O <sub>3</sub>	13.19	12.14	14.12	14.13	14.72	12.39	8.75	9.97	13.02
Fe <sub>2</sub> O <sub>3t</sub>	11.13	8.54	15.02	13.87	12.48	6.40	4.45	6.25	17.31
MnO	0.10	0.03	0.18	0.15	0.17	0.07	0.08	0.10	0.17
MgO	4.34	3.49	6.86	6.33	6.55	6.07	3.82	5.12	4.72
CaO	5.59	1.60	9.88	9.01	11.55	2.43	4.28	3.91	8.69
Na <sub>2</sub> O	<b>5.96</b>	<b>6.41</b>	2.45	2.85	2.58	<b>4.95</b>	<b>3.09</b>	<b>3.27</b>	3.03
K <sub>2</sub> O	0.04	0.04	0.25	0.23	0.15	0.04	0.08	0.07	0.36
P <sub>2</sub> O <sub>5</sub>	0.22	0.28	0.20	0.21	0.21	0.25	0.19	0.26	0.16
LOI	4.6	4.7	1.1	2.8	0.5	4.6	3.6	4.8	4.4
<b>Sum</b>	<b>99.73</b>	<b>99.78</b>	<b>99.36</b>	<b>99.18</b>	<b>99.65</b>	<b>99.67</b>	<b>99.63</b>	<b>99.54</b>	<b>99.66</b>
totC	0.84	0.22	<0.02	0.03	0.02	0.69	1.43	1.07	<0.02
totS	4.67	3.91	0.26	1.69	0.03	1.83	0.74	1.59	2.39

Samples 086 are layered siltstones, samples 088 are mainly diabase and samples 089 are phyllonites, a mixture of siltstone and diabasic fault gouge. 091 is also diabase.

Note the enrichment in Na in the siltstone; it has probably been albitized..

## Appendix B-Petrographic descriptions of selected samples from a till fragment north of Flan

	PTS-1	PTS-2	PS-1	PS-2
Hand specimen description	Sulphidic and Black aphanitic diabase	Sulphidic and Black aphanitic diabase	Sulphidic and Black aphanitic diabase	Sulphidic and Black aphanitic diabase
Magnetic?				
Thin section description				
Primary minerals				
Feldspar	40%, small prisms replaced by albite	40%, small prisms replaced by albite	N/A	N/A
Opagues	10% small grains replaced by pyrrhotite	10% small grains replaced by pyrrhotite	10% small grains replaced by pyrrhotite	10% small grains replaced by pyrrhotite
Mafic minerals	50%, Shapes, reminiscent of pyroxene prisms replaced by amphibole/chlorite	50%, Shapes, reminiscent of pyroxene prisms replaced by amphibole/chlorite	N/A	N/A
Secondary minerals				
Chlorite	Replaces pyroxene and ground mass	Replaces pyroxene and ground mass	N/A	N/A
Amphibole	Replaces pyroxene and ground mass	Replaces pyroxene and ground mass	N/A	N/A
Feldspar	Clear albite	Clear albite	N/A	N/A
Titanite	In ground mass	In ground mass	N/A	N/A
Sulphides	Pyrrhotite replaces opagues, also replaces ground mass, rims altered to concentric pyrite and marcasite	Pyrrhotite replaces opagues, also replaces ground mass, rims altered to concentric pyrite and marcasite	Pyrrhotite replaces opagues, also replaces ground mass, rims altered to concentric pyrite and marcasite	Pyrrhotite replaces opagues, also replaces ground mass, rims altered to concentric pyrite and marcasite
Fabric	Diabasic	Diabasic	Diabasic	Diabasic
Structure	massive	massive	massive	massive

Veins	Many micro veinlets, some are chlorite with pyrrhotite, others are mainly pyrrhotite	Many micro veinlets, some are chlorite with pyrrhotite, others are mainly pyrrhotite	Many micro veinlets, some are chlorite with pyrrhotite, others are mainly pyrrhotite	Many micro veinlets, some are chlorite with pyrrhotite, others are mainly pyrrhotite
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## **Appendix C -Assay and QA/QC certificates**

Acme VAN09000516.1.

19 samples

Acme VAN09001592.1.

14 samples

Acme has provided estimates of precision and accuracy for all the elements.

It would seem that gold at lower tenors is systematically underestimated (46.5 – 54.4 ppb actual vs 70 ppb expected)

The difference is not critical for this exploration effort.



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Submitted By: Mikkel Schau  
Receiving Lab: Canada-Vancouver  
Received: February 20, 2009  
Report Date: March 04, 2009  
Page: 1 of 2

## CERTIFICATE OF ANALYSIS

VAN09000516.1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 18

### SAMPLE DISPOSAL

RTRN-PLP Return  
RTRN-RJT Return

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

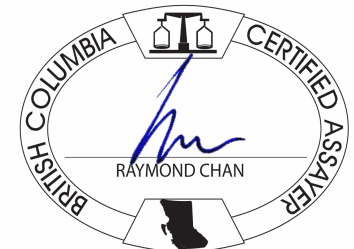
Invoice To: Schau, Mikkel  
1007 Barkway Terrace  
Brentwood Bay BC V8M 1A4  
Canada

CC:

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status
R200	17	Crush, split and pulverize rock to 200 mesh		
1F15	17	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	15	Completed

### ADDITIONAL COMMENTS



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only.  
All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only.  
\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Page: 2 of 2 Part 1

CERTIFICATE OF ANALYSIS

VAN09000516.1

Method	WGHT	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	
331522	Rock	0.32	120.3	146.4	29.25	1057	197	144.2	22.7	244	3.47	<0.1	20.3	<0.2	2.2	7.6	24.14	0.38	0.74	305	0.50
331523	Rock	0.20	47.15	86.08	30.56	1334	134	54.0	6.5	377	2.88	<0.1	15.3	1.0	1.9	12.2	29.30	0.62	0.38	164	0.97
331524	Rock	0.12	1.06	207.0	2.97	46.6	68	107.0	23.5	431	3.08	5.9	0.3	3.7	0.5	45.6	0.24	0.18	0.27	88	1.31
331525	Rock	0.59	12.09	142.8	41.75	85.0	966	34.5	10.9	147	9.76	32.2	1.2	3.4	0.6	3.5	0.77	4.12	0.16	26	0.12
331526	Rock	0.52	0.16	14.82	13.85	12.7	1281	0.5	0.4	50	8.40	192.5	0.4	1158	2.3	37.1	0.05	1.98	<0.02	75	<0.01
331527	Rock	0.52	0.37	128.3	2.04	27.2	62	19.5	8.6	198	2.00	2.1	0.3	4.8	0.4	36.8	0.11	0.15	0.02	81	1.20
331528	Rock	0.04	1.17	7.36	1.02	4.6	20	4.5	1.3	120	0.62	3.5	0.1	16.5	0.1	19.3	0.06	0.09	<0.02	5	2.70
331529	Rock	0.21	0.76	50.49	9.72	44.6	91	16.1	17.0	316	2.78	10.2	0.4	3.1	<0.1	374.3	0.13	0.15	0.03	65	13.49
331530	Rock	0.99	2.77	>10000	4.67	100.5	52634	150.5	102.9	235	18.22	0.3	0.1	63.9	0.1	26.5	3.05	0.27	0.13	139	0.32
331531	Rock	0.27	4.43	231.7	3.24	134.0	249	20.3	14.2	524	10.03	5.2	0.3	54.4	0.9	26.5	1.12	0.15	0.55	114	0.61
331532	Rock	0.30	0.69	780.1	1.72	45.0	432	23.0	11.5	269	3.16	2.5	0.2	5.9	0.3	30.6	0.21	0.15	0.04	113	0.98
331533	Rock	0.52	1.26	2425	28.00	1062	4908	38.0	84.4	3085	16.35	0.7	0.1	15909	0.7	2.1	11.90	0.04	6.16	416	0.31
331534	Rock	0.34	1.77	280.5	3.29	83.5	314	20.3	12.6	362	6.25	2.9	0.3	630.9	0.8	37.0	0.57	0.11	0.38	107	0.86
331535	Rock	0.30	0.26	92.50	1.12	50.4	78	26.7	17.6	259	3.92	0.2	<0.1	57.0	0.2	29.1	0.15	0.04	0.10	158	0.67
331536	Rock	0.43	0.43	81.66	1.60	50.4	45	38.7	17.6	337	4.10	0.3	<0.1	2.2	0.2	74.4	0.08	0.23	<0.02	118	1.48
331537	Rock	0.19	0.65	110.1	2.31	60.2	31	10.0	16.3	589	4.59	0.5	0.6	2.0	2.5	51.4	0.07	0.06	<0.02	175	3.07
331538	Rock	0.35	0.75	439.5	6.42	49.2	298	108.8	68.3	249	8.72	1.5	<0.1	7.4	0.2	13.4	0.13	0.15	0.33	158	0.94
331539	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.



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Page: 2 of 2 Part 2

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Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	
Analyte	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge	
Unit	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm	
MDL	0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1	
331522	Rock	0.136	10.8	159.9	1.71	10.4	0.161	<1	1.32	0.027	<0.01	0.1	2.4	<0.02	1.61	17	22.0	0.25	6.5	0.07	<0.1
331523	Rock	0.074	11.0	54.2	0.37	6.2	0.169	2	1.13	0.026	0.02	0.1	2.7	<0.02	0.49	18	12.0	0.17	4.1	0.16	<0.1
331524	Rock	0.048	2.5	146.4	1.52	21.7	0.278	1	2.97	0.147	0.04	0.3	5.9	<0.02	<0.02	8	<0.1	0.13	6.6	0.18	<0.1
331525	Rock	0.034	2.3	14.1	0.25	17.9	0.082	<1	0.43	0.016	0.05	<0.1	2.9	0.08	4.63	11	12.6	0.39	1.4	0.07	<0.1
331526	Rock	0.174	11.5	3.0	<0.01	31.8	<0.001	3	0.25	0.015	0.69	<0.1	2.7	6.13	1.23	35	<0.1	<0.02	4.7	6.79	0.1
331527	Rock	0.065	4.0	26.6	0.54	28.9	0.166	<1	2.42	0.188	0.04	<0.1	3.9	<0.02	0.02	15	0.3	<0.02	6.1	0.11	<0.1
331528	Rock	0.004	<0.5	6.0	0.11	34.5	<0.001	6	0.49	0.094	0.20	<0.1	0.2	0.11	0.05	11	<0.1	<0.02	2.0	0.28	<0.1
331529	Rock	0.035	1.2	18.6	1.10	68.7	0.075	1	5.06	0.595	0.10	<0.1	4.4	0.25	0.93	13	0.4	0.20	8.6	0.41	<0.1
331530	Rock	0.030	0.6	102.5	0.38	1.9	0.193	<1	0.88	0.001	<0.01	<0.1	5.7	<0.02	2.76	292	33.0	<0.02	6.3	0.02	0.4
331531	Rock	0.061	4.6	20.9	0.78	34.2	0.165	1	2.44	0.063	0.04	<0.1	6.6	<0.02	0.20	8	0.9	0.04	7.0	0.12	0.1
331532	Rock	0.057	2.9	29.6	0.79	101.3	0.245	<1	2.15	0.097	0.03	<0.1	4.3	<0.02	0.05	40	0.7	0.02	9.2	0.16	<0.1
331533	Rock	0.113	6.0	5.1	2.63	8.7	0.097	<1	5.11	0.001	0.02	0.2	22.7	<0.02	5.11	7	9.2	1.11	22.4	0.08	0.3
331534	Rock	0.066	4.4	27.0	0.70	40.3	0.201	<1	2.18	0.095	0.04	<0.1	5.5	<0.02	0.17	<5	1.0	0.13	6.8	0.09	<0.1
331535	Rock	0.063	4.0	9.0	1.13	62.1	0.149	2	1.34	0.064	0.20	<0.1	2.6	<0.02	0.08	<5	<0.1	<0.02	6.8	0.16	<0.1
331536	Rock	0.069	2.5	37.0	1.09	5.9	0.436	1	1.63	0.072	0.02	<0.1	4.9	<0.02	<0.02	<5	<0.1	<0.02	6.0	0.02	0.1
331537	Rock	0.108	9.0	13.7	1.30	16.0	0.157	2	4.71	0.016	0.06	0.1	8.9	<0.02	<0.02	<5	<0.1	0.02	10.0	0.39	0.1
331538	Rock	0.071	2.6	43.8	1.45	23.0	0.315	<1	1.83	0.132	0.13	0.1	6.4	0.08	4.36	7	1.5	0.04	8.7	0.32	0.1
331539	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.



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 Report Date: March 04, 2009

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CERTIFICATE OF ANALYSIS

VAN09000516.1

Method	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
Analyte	Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd	Pt	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppb	
MDL	0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10	2	
331522	Rock	0.50	0.24	0.4	1.2	<0.05	18.1	10.26	19.1	0.13	188	0.2	8.5	16	4
331523	Rock	0.56	0.35	0.6	1.1	<0.05	17.5	10.94	18.2	0.15	96	0.2	1.5	<10	4
331524	Rock	0.24	0.52	2.0	0.4	<0.05	5.4	7.43	6.8	<0.02	3	0.2	6.2	11	6
331525	Rock	0.27	0.51	2.0	0.2	<0.05	10.5	8.22	5.2	0.03	47	0.2	1.5	18	6
331526	Rock	<0.02	<0.02	21.9	0.2	<0.05	0.3	2.08	33.5	0.04	<1	0.3	1.6	<10	3
331527	Rock	0.05	0.94	1.4	0.3	<0.05	2.2	10.41	10.4	<0.02	<1	0.2	3.2	15	6
331528	Rock	<0.02	<0.02	4.4	0.1	<0.05	0.2	0.23	1.1	<0.02	<1	<0.1	0.7	<10	<2
331529	Rock	0.08	0.03	2.0	<0.1	<0.05	2.8	2.54	2.2	<0.02	3	<0.1	11.6	<10	3
331530	Rock	0.12	0.13	0.2	0.4	<0.05	2.0	2.85	1.8	0.85	<1	<0.1	3.2	27	9
331531	Rock	0.11	0.19	1.9	0.2	<0.05	2.8	7.40	10.2	0.05	<1	0.2	3.9	<10	3
331532	Rock	0.11	1.23	1.0	0.4	<0.05	3.2	8.93	7.7	0.04	<1	0.2	6.0	<10	4
331533	Rock	0.03	0.08	1.4	0.2	<0.05	0.5	9.34	15.6	0.45	3	<0.1	10.1	15	<2
331534	Rock	0.17	0.17	1.4	0.3	<0.05	3.6	6.50	9.9	0.04	<1	0.3	3.6	<10	3
331535	Rock	0.10	0.08	3.7	0.3	<0.05	3.0	8.94	10.8	<0.02	<1	<0.1	6.9	14	4
331536	Rock	0.47	0.33	0.3	0.4	<0.05	10.3	10.01	6.8	<0.02	<1	0.3	4.9	23	4
331537	Rock	0.21	<0.02	2.7	0.6	<0.05	6.4	11.44	19.5	0.03	1	0.4	9.1	<10	2
331538	Rock	0.27	0.20	3.3	0.5	<0.05	5.2	7.51	6.7	0.03	1	0.1	6.8	15	4
331539	Rock	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.



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 1007 Barkway Terrace  
 Brentwood Bay BC V8M 1A4 Canada

Project: None Given

Report Date: March 04, 2009

Page: 1 of 1 Part 1

QUALITY CONTROL REPORT

VAN09000516.1

Method	WGHT	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	
Analyte	Wgt	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	
Unit	kg	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	%	
MDL	0.01	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02	2	0.01	
Pulp Duplicates																					
331528	Rock	0.04	1.17	7.36	1.02	4.6	20	4.5	1.3	120	0.62	3.5	0.1	16.5	0.1	19.3	0.06	0.09	<0.02	5	2.70
REP 331528	QC		1.05	6.77	1.08	5.0	20	4.1	1.2	115	0.64	3.6	0.1	15.3	<0.1	20.4	0.05	0.08	<0.02	6	2.67
331538	Rock	0.35	0.75	439.5	6.42	49.2	298	108.8	68.3	249	8.72	1.5	<0.1	7.4	0.2	13.4	0.13	0.15	0.33	158	0.94
REP 331538	QC		0.86	449.8	6.73	57.3	313	113.9	67.8	259	9.20	1.7	0.1	6.1	0.3	14.3	0.16	0.17	0.35	162	0.97
Reference Materials																					
STD DS7	Standard		19.51	116.3	68.97	404.2	847	54.8	9.2	715	2.56	52.2	4.9	61.8	4.6	79.8	6.42	6.01	4.81	86	0.98
STD DS7 Expected			20.92	109	70.6	411	890	56	9.7	627	2.39	48.2	4.9	70	4.4	68.7	6.38	5.86	4.51	86	0.93
BLK	Blank		<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02	<2	<0.01
Prep Wash																					
G1	Prep Blank	<0.01	0.18	1.47	2.19	44.1	7	3.9	4.3	564	1.98	<0.1	1.4	11.6	3.6	48.7	0.01	<0.02	0.07	37	0.48
G1	Prep Blank	<0.01	0.15	1.80	2.11	45.7	2	3.8	4.4	570	1.96	<0.1	1.7	0.8	3.6	53.0	0.01	<0.02	0.06	38	0.48



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Project: None Given

Report Date: March 04, 2009

Page: 1 of 1 Part 2

QUALITY CONTROL REPORT

VAN09000516.1

Method		1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	
Analyte		P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga	Cs	Ge
Unit		%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm	ppm	ppm
MDL		0.001	0.5	0.5	0.01	0.5	0.001	1	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1	0.02	0.1
Pulp Duplicates																					
331528	Rock	0.004	<0.5	6.0	0.11	34.5	<0.001	6	0.49	0.094	0.20	<0.1	0.2	0.11	0.05	11	<0.1	<0.02	2.0	0.28	<0.1
REP 331528	QC	0.004	<0.5	5.8	0.10	34.2	<0.001	8	0.49	0.090	0.19	<0.1	0.2	0.11	0.04	19	<0.1	<0.02	1.9	0.30	<0.1
331538	Rock	0.071	2.6	43.8	1.45	23.0	0.315	<1	1.83	0.132	0.13	0.1	6.4	0.08	4.36	7	1.5	0.04	8.7	0.32	0.1
REP 331538	QC	0.072	2.6	44.8	1.51	19.1	0.335	<1	1.88	0.139	0.13	0.2	7.0	0.09	4.72	10	1.6	<0.02	9.3	0.33	0.1
Reference Materials																					
STD DS7	Standard	0.076	14.4	196.4	1.14	465.7	0.135	41	1.16	0.102	0.55	3.8	3.0	4.64	0.19	199	3.5	1.24	5.5	6.83	0.1
STD DS7 Expected		0.08	12.7	163	1.05	370.3	0.124	38.6	0.959	0.073	0.44	3.8	2.5	4.19	0.21	200	3.5	1.08	4.6	6.36	0.1
BLK	Blank	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<1	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1	<0.02	<0.1
Prep Wash																					
G1	Prep Blank	0.084	6.9	9.7	0.60	254.7	0.129	1	0.91	0.050	0.53	<0.1	2.1	0.39	<0.02	12	<0.1	<0.02	5.0	3.58	0.1
G1	Prep Blank	0.086	5.7	6.9	0.60	275.4	0.127	1	0.90	0.046	0.56	<0.1	2.1	0.41	<0.02	11	<0.1	<0.02	4.8	3.73	<0.1



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Project: None Given

Report Date: March 04, 2009

Page: 1 of 1 Part 3

QUALITY CONTROL REPORT

VAN09000516.1

Method		1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15	1F15
Analyte		Hf	Nb	Rb	Sn	Ta	Zr	Y	Ce	In	Re	Be	Li	Pd
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb
MDL		0.02	0.02	0.1	0.1	0.05	0.1	0.01	0.1	0.02	1	0.1	0.1	10
Pulp Duplicates														
331528	Rock	<0.02	<0.02	4.4	0.1	<0.05	0.2	0.23	1.1	<0.02	<1	<0.1	0.7	<10
REP 331528	QC	<0.02	<0.02	5.0	0.1	<0.05	0.2	0.25	1.0	<0.02	2	<0.1	0.6	<10
331538	Rock	0.27	0.20	3.3	0.5	<0.05	5.2	7.51	6.7	0.03	1	0.1	6.8	15
REP 331538	QC	0.27	0.26	3.5	0.5	<0.05	5.3	8.13	7.0	0.03	4	0.2	7.8	20
Reference Materials														
STD DS7	Standard	0.14	0.62	43.6	5.5	<0.05	6.3	6.14	39.8	1.69	5	2.0	35.1	64
STD DS7 Expected		0.11	0.71	35.8	5.4		5.4	5.18	38	1.57	4	1.6	29.3	58
BLK	Blank	<0.02	<0.02	<0.1	<0.1	<0.05	<0.1	<0.01	<0.1	<0.02	<1	<0.1	<0.1	<10
Prep Wash														
G1	Prep Blank	0.07	0.28	47.7	0.4	<0.05	0.9	3.67	13.8	<0.02	<1	0.3	34.9	<10
G1	Prep Blank	0.05	0.25	47.3	0.4	<0.05	0.9	3.40	11.7	<0.02	<1	0.2	37.7	<10





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**Client:** **Schau, Mikkel**  
1007 Barkway Terrace  
Brentwood Bay BC V8M 1A4 Canada

Submitted By: Mikkel Schau  
Receiving Lab: Canada-Vancouver  
Received: May 08, 2009  
Report Date: May 22, 2009  
Page: 1 of 2

## CERTIFICATE OF ANALYSIS

VAN09001592.1

### CLIENT JOB INFORMATION

Project: None Given  
Shipment ID:  
P.O. Number  
Number of Samples: 15

### SAMPLE DISPOSAL

RTRN-PLP Return

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

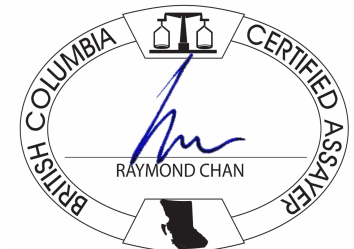
Method Code	Number of Samples	Code Description	Test Wgt (g)	Report Status
No Prep	14	Sorting of samples on arrival and labeling		
4A&4B	9	Whole Rock Analysis Majors and Trace Elements	0.2	Completed
2A C Species	14	2A(Graphite C) _____LECO	0.1	Completed

### ADDITIONAL COMMENTS

Acme does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Schau, Mikkel  
1007 Barkway Terrace  
Brentwood Bay BC V8M 1A4  
Canada

CC:



This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of analysis only. \*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



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Project: None Given  
Report Date: May 22, 2009

Page: 2 of 2 Part 1

CERTIFICATE OF ANALYSIS

VAN09001592.1

Method		4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B
Analyte		SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ni	Sc	LOI	Sum	Ba	Be	Co	Cs	Ga
Unit		%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	20	1	-5.1	0.01	1	1	0.2	0.1	0.5
086A1	Rock Pulp	53.47	13.19	11.13	4.34	5.59	5.96	0.04	0.97	0.22	0.10	0.067	182	25	4.6	99.73	65	<1	37.6	<0.1	15.5
086A2	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
086A3	Rock Pulp	61.57	12.14	8.54	3.49	1.60	6.41	0.04	0.96	0.28	0.03	0.027	115	25	4.7	99.76	50	2	24.7	<0.1	12.3
088A	Rock Pulp	46.77	14.12	15.02	6.86	9.88	2.45	0.25	2.48	0.20	0.18	0.013	52	44	1.1	99.36	322	<1	41.3	0.2	19.5
088B	Rock Pulp	46.11	14.13	13.87	6.33	9.01	2.85	0.23	2.49	0.21	0.15	0.012	60	45	2.8	98.18	276	<1	41.4	0.2	18.9
088D	Rock Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
088E	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
088F	Rock Pulp	48.18	14.72	12.48	6.55	11.55	2.58	0.15	2.55	0.21	0.17	0.018	77	47	0.5	99.65	139	<1	43.5	0.2	20.2
088H	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089A	Rock Pulp	61.57	12.39	6.40	6.07	2.43	4.95	0.04	0.90	0.25	0.07	0.053	156	23	4.6	99.67	56	1	18.7	<0.1	15.6
089A1	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089A2	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089B	Rock Pulp	70.68	8.75	4.45	3.82	4.28	3.09	0.08	0.62	0.19	0.08	0.033	62	14	3.6	99.63	81	<1	7.3	<0.1	9.5
089C	Rock Pulp	64.88	9.97	6.25	5.12	3.91	3.27	0.07	0.83	0.28	0.10	0.045	166	17	4.8	99.54	86	<1	25.0	<0.1	12.6
091	Rock Pulp	45.45	13.02	17.31	4.72	8.69	3.03	0.36	2.27	0.16	0.17	0.011	62	40	4.4	99.65	199	1	75.8	0.3	18.2



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Project: None Given  
 Report Date: May 22, 2009

Page: 2 of 2 Part 2

CERTIFICATE OF ANALYSIS

VAN09001592.1

Method	Analyte	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	
		Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb
		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
		MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL	MDL
086A1	Rock Pulp	3.2	8.0	0.3	1	65.4	0.3	2.8	7.6	310	<0.5	110.6	28.2	14.2	29.7	4.40	20.1	4.28	1.07	4.34	0.78
086A2	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
086A3	Rock Pulp	2.9	6.7	0.2	1	51.8	0.4	2.1	9.5	340	3.2	93.4	22.2	11.9	26.6	4.06	17.7	3.58	1.13	4.04	0.67
088A	Rock Pulp	3.9	11.4	5.1	1	248.8	0.5	1.3	0.6	524	0.5	143.4	36.2	10.3	25.7	3.89	19.6	4.92	1.98	6.65	1.16
088B	Rock Pulp	4.2	11.5	5.3	3	261.0	0.5	1.2	0.7	526	<0.5	147.5	36.3	10.2	25.1	3.83	19.8	5.31	2.16	6.44	1.16
088D	Rock Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
088E	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
088F	Rock Pulp	4.2	12.0	2.7	1	233.4	0.5	1.3	0.5	545	<0.5	148.4	37.2	11.7	29.0	4.11	21.3	5.51	1.94	6.97	1.22
088H	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089A	Rock Pulp	3.1	7.8	0.4	2	64.6	0.3	3.7	11.1	535	<0.5	104.4	22.6	18.3	33.5	4.56	17.9	3.81	1.22	3.82	0.66
089A1	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089A2	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089B	Rock Pulp	2.0	10.0	1.0	3	80.0	0.6	3.2	17.3	621	<0.5	80.9	21.7	16.2	27.7	3.98	17.2	3.32	1.07	3.31	0.56
089C	Rock Pulp	2.5	11.4	1.0	4	66.3	0.7	3.6	27.9	683	<0.5	98.8	23.9	17.3	31.8	4.44	18.4	3.91	1.31	3.98	0.67
091	Rock Pulp	3.7	10.0	8.4	1	212.7	0.5	1.0	0.4	469	<0.5	136.7	28.9	8.9	22.5	3.22	17.2	4.59	1.73	5.47	0.97



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Project: None Given  
 Report Date: May 22, 2009

Page: 2 of 2 Part 3

CERTIFICATE OF ANALYSIS

VAN09001592.1

Method	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B 2A	Leco 2A	Leco	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	1DX	
Analyte	Dy	Ho	Er	Tm	Yb	Lu	TOT/C	TOT/S	Mo	Cu	Pb	Zn	Ni	As	Cd	Sb	Bi	Ag	Au	Hg	
Unit	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	
MDL	0.05	0.02	0.03	0.01	0.05	0.01	0.02	0.02	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1	0.1	0.1	0.5	0.01	
086A1	Rock Pulp	4.76	1.00	2.96	0.45	2.74	0.43	0.84	4.67	19.1	208.5	49.5	246	169.4	21.6	4.7	5.4	0.6	1.4	0.7	0.06
086A2	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
086A3	Rock Pulp	3.82	0.76	2.06	0.34	2.19	0.30	0.22	3.91	31.6	173.6	62.1	360	112.2	14.8	7.3	8.8	0.6	1.6	0.8	0.04
088A	Rock Pulp	7.06	1.39	3.80	0.55	3.37	0.49	<0.02	0.26	6.7	2398	3.3	58	20.1	2.1	1.0	0.3	0.1	1.7	62.1	<0.01
088B	Rock Pulp	7.11	1.38	3.62	0.55	3.28	0.48	0.03	1.69	7.4	>10000	6.1	213	29.6	16.4	4.6	0.4	0.3	8.4	78.9	0.01
088D	Rock Pulp	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.	L.N.R.
088E	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
088F	Rock Pulp	6.91	1.41	3.71	0.56	3.36	0.51	0.02	0.03	1.1	263.8	2.4	24	14.6	1.0	0.1	0.2	<0.1	<0.1	1.1	<0.01
088H	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089A	Rock Pulp	3.84	0.78	2.20	0.38	2.20	0.35	0.69	1.83	49.8	219.4	8.0	249	136.0	0.8	5.2	0.1	0.6	0.1	<0.5	<0.01
089A1	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089A2	Rock Pulp	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
089B	Rock Pulp	3.22	0.68	1.86	0.30	1.71	0.27	1.43	0.74	61.5	90.9	15.4	1058	62.1	2.5	24.4	0.4	0.3	0.1	<0.5	0.02
089C	Rock Pulp	4.10	0.76	2.27	0.34	2.13	0.28	1.07	1.59	115.8	128.4	20.6	1323	144.9	1.7	30.7	0.4	0.6	0.2	<0.5	0.04
091	Rock Pulp	5.73	1.13	3.11	0.46	2.76	0.42	<0.02	2.39	1.2	516.4	4.2	32	43.8	0.6	0.2	<0.1	0.2	0.1	2.7	0.02



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Project: None Given  
Report Date: May 22, 2009

Page: 2 of 2 Part 4

# CERTIFICATE OF ANALYSIS

VAN09001592.1

Method	1DX	1DX Species	
Analyte	TI	Se	C/GRA
Unit	ppm	ppm	%
MDL	0.1	0.5	0.02
086A1	Rock Pulp	0.3	28.7 0.05
086A2	Rock Pulp	N.A.	N.A. 0.09
086A3	Rock Pulp	0.2	30.1 0.04
088A	Rock Pulp	<0.1	2.3 <0.02
088B	Rock Pulp	<0.1	5.7 <0.02
088D	Rock Pulp	L.N.R.	L.N.R. L.N.R.
088E	Rock Pulp	N.A.	N.A. <0.02
088F	Rock Pulp	<0.1	<0.5 <0.02
088H	Rock Pulp	N.A.	N.A. <0.02
089A	Rock Pulp	<0.1	19.4 0.11
089A1	Rock Pulp	N.A.	N.A. 0.13
089A2	Rock Pulp	N.A.	N.A. 0.18
089B	Rock Pulp	<0.1	13.1 0.23
089C	Rock Pulp	<0.1	18.5 0.16
091	Rock Pulp	<0.1	4.7 <0.02



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Project: None Given

Report Date: May 22, 2009

Page: 1 of 1 Part 1

# QUALITY CONTROL REPORT

VAN09001592.1

Method		4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B
Analyte		SiO2	Al2O3	Fe2O3	MgO	CaO	Na2O	K2O	TiO2	P2O5	MnO	Cr2O3	Ni	Sc	LOI	Sum	Ba	Be	Co	Cs	Ga
Unit		%	%	%	%	%	%	%	%	%	%	%	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm
MDL		0.01	0.01	0.04	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.002	20	1	-5.1	0.01	1	1	0.2	0.1	0.5
086A3	Rock Pulp	61.57	12.14	8.54	3.49	1.60	6.41	0.04	0.96	0.28	0.03	0.027	115	25	4.7	99.76	50	2	24.7	<0.1	12.3
Pulp Duplicates																					
089B	Rock Pulp	70.68	8.75	4.45	3.82	4.28	3.09	0.08	0.62	0.19	0.08	0.033	62	14	3.6	99.63	81	<1	7.3	<0.1	9.5
REP 089B	QC	70.40	8.82	4.56	3.85	4.34	3.08	0.08	0.62	0.18	0.08	0.033	64	14	3.6	99.62	76	<1	7.3	0.1	10.2
091	Rock Pulp	45.45	13.02	17.31	4.72	8.69	3.03	0.36	2.27	0.16	0.17	0.011	62	40	4.4	99.65	199	1	75.8	0.3	18.2
REP 091	QC																				
Reference Materials																					
STD CSC	Standard																				
STD CSC	Standard																				
STD CSC	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD OREAS76A	Standard																				
STD SO-18	Standard	58.02	14.15	7.63	3.34	6.38	3.69	2.16	0.69	0.82	0.39	0.548	50	25	1.9	99.71	508	2	27.0	6.9	17.4
STD SO-18	Standard	58.06	14.14	7.61	3.33	6.37	3.68	2.15	0.69	0.83	0.39	0.548	55	25	1.9	99.70	503	1	27.2	6.8	17.7
STD OREAS76A Expected																					
STD CSC Expected																					
STD DS7 Expected																					
STD SO-18 Expected		58.47	14.23	7.67	3.35	6.42	3.71	2.17	0.69	0.83	0.39	0.55	44	25			514		26.2	7.1	17.6
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.01	<0.01	<0.04	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.002	<20	<1	0.0	<0.01	<1	<1	<0.2	<0.1	<0.5



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Project: None Given  
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Page: 1 of 1 Part 2

QUALITY CONTROL REPORT

VAN09001592.1

Method	Analyte	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	4A-4B	
		Hf	Nb	Rb	Sn	Sr	Ta	Th	U	V	W	Zr	Y	La	Ce	Pr	Nd	Sm	Eu	Gd	Tb
Unit		ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
MDL		0.1	0.1	0.1	1	0.5	0.1	0.2	0.1	8	0.5	0.1	0.1	0.1	0.1	0.02	0.3	0.05	0.02	0.05	
086A3	Rock Pulp	2.9	6.7	0.2	1	51.8	0.4	2.1	9.5	340	3.2	93.4	22.2	11.9	26.6	4.06	17.7	3.58	1.13	4.04	0.67
Pulp Duplicates																					
089B	Rock Pulp	2.0	10.0	1.0	3	80.0	0.6	3.2	17.3	621	<0.5	80.9	21.7	16.2	27.7	3.98	17.2	3.32	1.07	3.31	0.56
REP 089B	QC	2.4	10.9	1.3	2	81.6	0.5	2.7	17.1	629	<0.5	82.3	21.3	16.6	29.0	4.03	15.9	3.37	1.06	3.40	0.56
091	Rock Pulp	3.7	10.0	8.4	1	212.7	0.5	1.0	0.4	469	<0.5	136.7	28.9	8.9	22.5	3.22	17.2	4.59	1.73	5.47	0.97
REP 091	QC																				
Reference Materials																					
STD CSC	Standard																				
STD CSC	Standard																				
STD CSC	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD DS7	Standard																				
STD OREAS76A	Standard																				
STD SO-18	Standard	9.8	20.9	28.6	15	408.6	6.9	10.0	16.4	204	15.1	286.7	31.6	12.2	27.2	3.41	13.8	2.91	0.86	2.88	0.51
STD SO-18	Standard	9.9	21.0	28.5	15	407.4	7.0	10.1	16.3	204	14.9	288.2	31.6	12.1	27.2	3.40	13.8	2.92	0.86	2.90	0.51
STD OREAS76A Expected																					
STD CSC Expected																					
STD DS7 Expected																					
STD SO-18 Expected		9.8	20.9	28.7	15	407.4	7.4	9.9	16.4	200	15.1	280	33	12.3	27.1	3.45	14	3	0.89	2.93	0.53
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.5	<0.1	<0.2	<0.1	<8	<0.5	<0.1	<0.1	<0.1	<0.1	<0.02	<0.3	<0.05	<0.02	<0.05	<0.01



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Project: None Given

Report Date: May 22, 2009

Page: 1 of 1 Part 3

# QUALITY CONTROL REPORT

VAN09001592.1

Method	Analyte	Unit	MDL	4A-4B Dy	4A-4B Ho	4A-4B Er	4A-4B Tm	4A-4B Yb	4A-4B Lu	2A Leco TOT/C	2A Leco TOT/S	1DX Mo	1DX Cu	1DX Pb	1DX Zn	1DX Ni	1DX As	1DX Cd	1DX Sb	1DX Bi	1DX Ag	1DX Au	1DX Hg
				ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm
				0.05	0.02	0.03	0.01	0.05	0.01	0.02	0.02	0.1	0.1	0.1	1	0.1	0.5	0.1	0.1	0.1	0.1	0.5	0.01
086A3	Rock Pulp			3.82	0.76	2.06	0.34	2.19	0.30	0.22	3.91	31.6	173.6	62.1	360	112.2	14.8	7.3	8.8	0.6	1.6	0.8	0.04
Pulp Duplicates																							
089B	Rock Pulp			3.22	0.68	1.86	0.30	1.71	0.27	1.43	0.74	61.5	90.9	15.4	1058	62.1	2.5	24.4	0.4	0.3	0.1	<0.5	0.02
REP 089B	QC			3.40	0.69	1.94	0.29	1.91	0.27														
091	Rock Pulp			5.73	1.13	3.11	0.46	2.76	0.42	<0.02	2.39	1.2	516.4	4.2	32	43.8	0.6	0.2	<0.1	0.2	0.1	2.7	0.02
REP 091	QC											1.2	529.0	4.3	31	44.8	0.9	0.2	<0.1	0.2	0.1	1.0	0.02
Reference Materials																							
STD CSC	Standard									2.94	4.34												
STD CSC	Standard																						
STD CSC	Standard																						
STD DS7	Standard											20.5	110.3	84.2	415	59.3	51.6	6.2	4.8	5.3	0.8	51.5	0.22
STD DS7	Standard											21.6	107.4	84.8	404	58.9	53.3	5.9	5.0	5.0	0.9	49.7	0.22
STD DS7	Standard											20.3	111.5	67.4	411	54.9	53.5	5.8	3.7	4.6	0.8	46.5	0.18
STD DS7	Standard											20.1	106.0	67.3	389	53.5	46.8	5.9	3.8	4.4	0.7	54.4	0.19
STD OREAS76A	Standard									0.15	17.50												
STD SO-18	Standard			2.93	0.61	1.77	0.28	1.78	0.27														
STD SO-18	Standard			2.92	0.61	1.86	0.28	1.79	0.27														
STD OREAS76A Expected										0.16	18												
STD CSC Expected										2.94	4.25												
STD DS7 Expected												20.5	109	70.6	411	56	48.2	6.4	4.6	4.5	0.9	70	0.2
STD SO-18 Expected				3	0.62	1.84	0.29	1.79	0.27														
BLK	Blank									<0.02	<0.02												
BLK	Blank																						
BLK	Blank											<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.5	<0.01
BLK	Blank											<0.1	<0.1	<0.1	<1	<0.1	<0.5	<0.1	<0.1	<0.1	<0.1	<0.5	<0.01
BLK	Blank			<0.05	<0.02	<0.03	<0.01	<0.05	<0.01														





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**Project:** None Given

**Report Date:** May 22, 2009

**Page:** 1 of 1 **Part** 4

## QUALITY CONTROL REPORT

VAN09001592.1

Method Analyte	1DX TI	1DX Species		
		Se	C/GRA	
Unit	ppm	ppm	%	
MDL	0.1	0.5	0.02	
086A3	Rock Pulp	0.2	30.1	0.04
Pulp Duplicates				
089B	Rock Pulp	<0.1	13.1	0.23
REP 089B	QC			
091	Rock Pulp	<0.1	4.7	<0.02
REP 091	QC	<0.1	5.7	<0.02
Reference Materials				
STD CSC	Standard			
STD CSC	Standard			1.99
STD CSC	Standard			1.96
STD DS7	Standard	4.1	3.5	
STD DS7	Standard	4.2	3.6	
STD DS7	Standard	3.8	4.2	
STD DS7	Standard	3.8	4.6	
STD OREAS76A	Standard			
STD SO-18	Standard			
STD SO-18	Standard			
STD OREAS76A Expected				
STD CSC Expected				2.05
STD DS7 Expected		4.2	3.5	
STD SO-18 Expected				
BLK	Blank			
BLK	Blank			<0.02
BLK	Blank	<0.1	<0.5	
BLK	Blank	<0.1	<0.5	
BLK	Blank			