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**ASSESSMENT REPORT**

on the

**SOUP PROPERTY**

**Soup #1 - Soup 19, Soup Fr, Soup 11 Fr**

**KLIYUL CREEK AREA**

**OMINECA MINING DIVISION**

for

**VITAL PACIFIC RESOURCES LTD. and**

**ATHLONE RESOURCES LTD.**

by

**DISCOVERY CONSULTANTS  
BOX 933  
VERNON, BC V1T 6M8**

FILMED

NTS: 94D/08E  
Latitude: 56°04'W  
Longitude: 126°04'W  
Owner: Vital Pacific Resources Ltd.  
Operator: Vital Pacific Resources Ltd.  
Author: Jane M. Howe, P. Geo  
Date: 22 November, 1996

24,661  
Part 1 of 2

GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT

Volume 1 of 2

## SUMMARY

The Soup Property is located in the Omineca Mountains of north-central British Columbia within the Quesnel Trough, a geological belt with high copper-gold porphyry potential. Triassic-Jurassic Takla Group volcanic rocks are intruded by diorite, gabbro and pyroxenite rocks of the Hogem Intrusive Complex.

Historical exploration since 1964 included prospecting, geological mapping, talus fines and rock sampling, ground magnetometer, airborne magnetometer and  $K_{40}$  radiometric surveys, and diamond drilling.

During 1996, exploration conducted on the Soup Property consisted of geological mapping and prospecting, the collection of 311 talus fine and 73 rock samples, a small geophysical survey, 10 diamond drill holes (891 metres) and 186 core samples. The purpose of the 1996 exploration program was to decisively evaluate 1) the Saddle Gully Zone, 2) the stratiform magnetite unit, 3) known geochemical and geophysical anomalies, and 4) the potential for gold and copper stockwork and porphyry style mineralization.

Results of the 1996 drilling program indicate that the only significant gold mineralization located to date on the property is associated with the structurally-controlled Saddle Gully Zone, previously identified by drilling in 1989 and 1995. The SGZ has been tested by six drill holes over 250 metres of strike length. Significant results include 13.61 grams/tonne over 5.18 metres from hole 96DS-1; 4.1 g/t gold over 2.9 metres in hole 89-1; 6.57 g/t gold over 1.59 metres from hole 96DS-2. The fourth hole was drilled

subparallel to the strike of the SGZ and intersected 5.4 grams/tonne gold over 10.46 metres and 14.3 grams/tonne gold over 3.2 metres. Two additional drill holes (89-7, and 96DS-7B) tested the SGZ beyond the limits of mineralization, and did not contain significant gold or copper mineralization.

Seven drill holes (71-1,2,3 and 89-3,4,5,6) and extensive sampling to date, have failed to identify any continuous economic mineralization within the stratiform magnetite horizon. Six drill holes to date (96DS-3,4,5,6,7B, and 95HS-3) have failed to locate economic mineralization along the more than 600 metre long coincident gold geochemical anomaly and weak magnetic anomaly just below the Soup Ridge. Two drill holes (96DS-4,5) which tested the most prospective zone of porphyry-style veins in the gabbro-diorite body failed to intersect any significant gold mineralization. Drilling, sampling and mapping indicate that the potential for economic grades of gold ± copper porphyry-style mineralization is extremely limited due to the lack of porphyry-style alteration, and the weak intensity and narrow widths of the veins.

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## INTRODUCTION

Following a review of the historical exploration on the Soup Property in May 1996, Discovery Consultants was contracted to conduct a \$475,000 detailed exploration program on behalf of the operator Vital Pacific Resources Ltd. and its joint venture partner Athlone Resources Ltd. The operator was directly involved in all aspects of the program, and frequently provided recommendations regarding exploration activities, methodology, and logistics. This assessment report describes the work completed on the Soup Property between July 16, and September 16, 1996.

The primary goals of this exploration program included ground truthing and re-evaluation of all known geochemical and geophysical anomalies; determination of the extent and continuity of the structurally-controlled mineralization in the Saddle Gully Zone; evaluation of the potential for porphyry-style stockwork mineralization; and determination of the relationship(s) between the various styles of mineralization and intrusive rocks.

Day-to-day management was provided by Discovery Consultants, with some additional management from Vital Pacific and Athlone personnel, especially on the drill program.

## LOCATION, ACCESS and TOPOGRAPHY

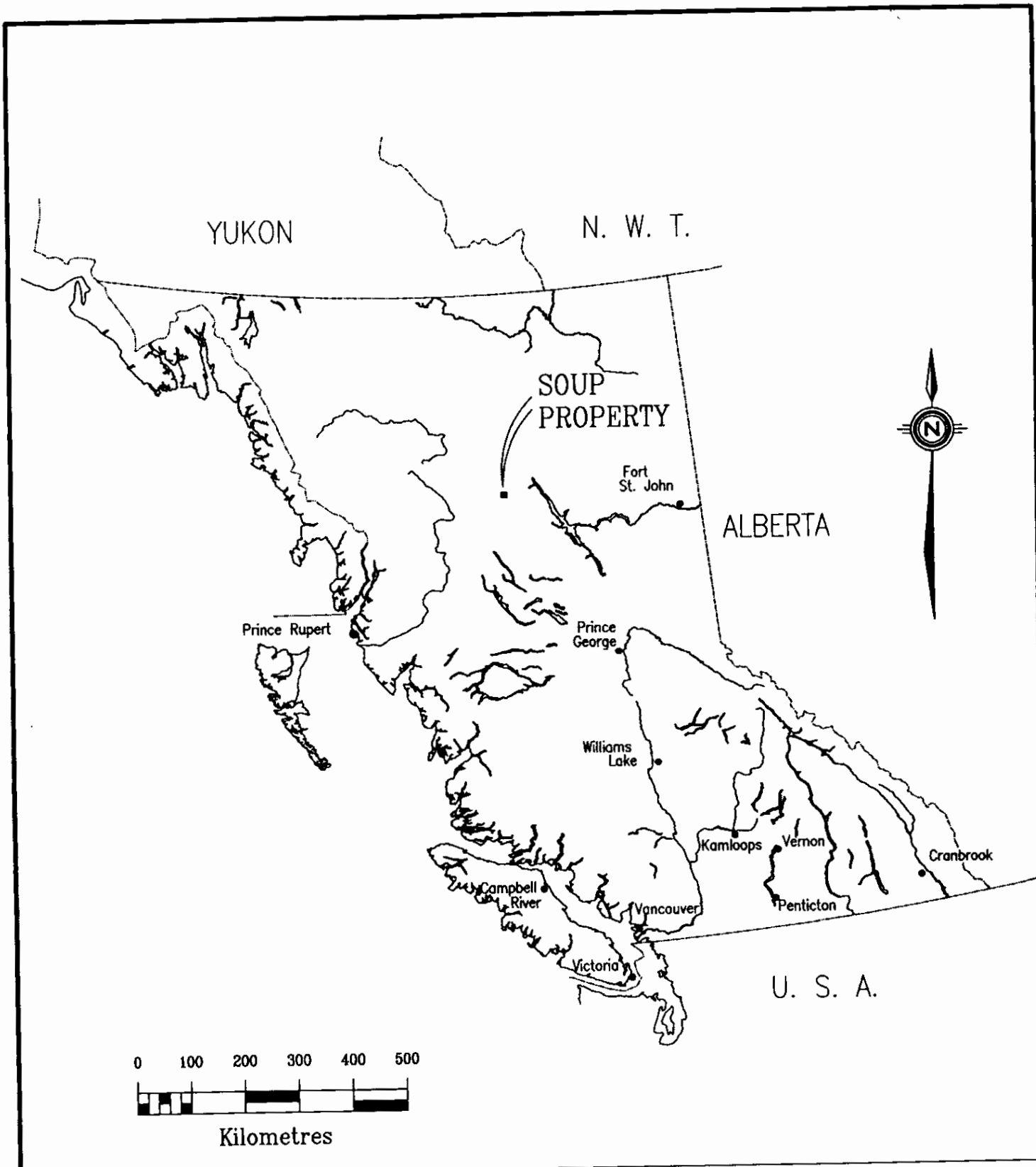
The Soup Property lies in the Swannell Range of the Omineca Mountains of north-central British Columbia (Figure 1) within NTS map sheet 94D/8E. The property is situated 200 km north-northeast of Smithers, 250 km northwest of Fort St. James and 350 km northwest of Prince George (Figure 2).

Access to the property can only be obtained via helicopter. Float planes can easily land at Johanson Lake or Aitken Lake, which lie to the north and southeast of the property, respectively. Wheel-equipped planes can also land at an unmaintained airstrip along the forestry road just north of Johanson Lake. Aitken and Johanson Lakes are both road accessible via the Thutade Forest Service Road (FSR) from Fort St. James (380 km) or the Finlay-Osilinka FSR from Highway 97 (350 km) near MacKenzie (Figure 2).

The Soup claims straddle the ridge between Kliyul and Croydon Creeks, tributaries of the Mesilinka River. Topography in the area of the property is steep, rugged, mountainous terrain with precipitous and inaccessible cliffs, cirques, and rock slides. Elevations range from 1250 metres above sea level in the south along Kliyul Creek, to 2300 metres along the Soup Ridge; trees and scrub-brush occur below 1500 to 1600 metres elevation.

The claim block ranges from 56°27' to 56°29' North Latitude and 126°02'30" to 126°06' West Longitude. The corresponding UTM coordinates are 6,259,000N to 6,263,500N and 679,000E to 683,000E.

A 1:5,000 scale digital base map with 10 metre topographic



**DISCOVERY** Consultants

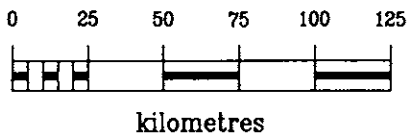
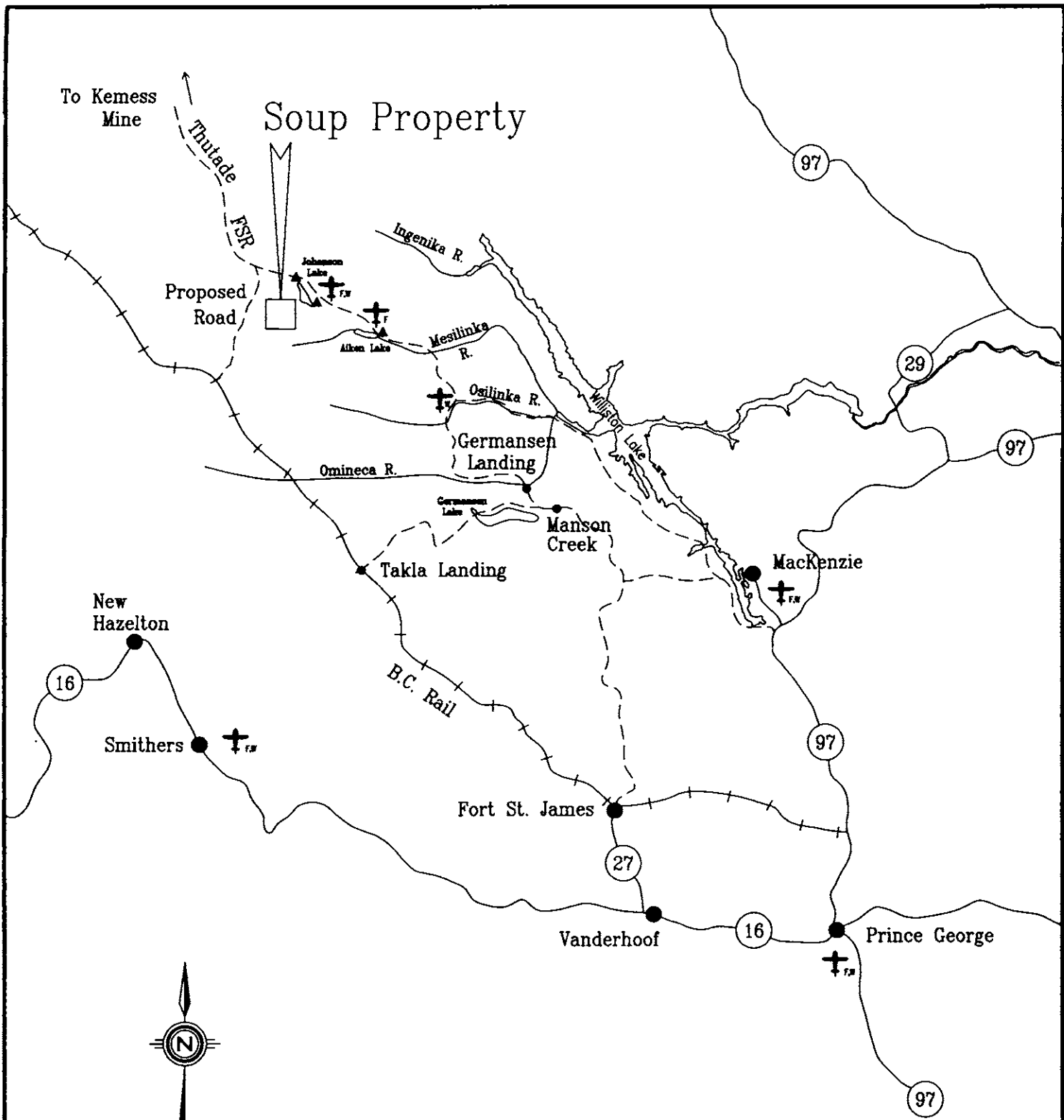
VITAL PACIFIC RESOURCES LTD.

SOUP PROPERTY

LOCATION MAP



contours, and a 1:10,000 orthophotograph with 50 metre contour intervals, were prepared from B.C. TRIM aerial photographs by The Orthoshop of Calgary. These maps form the base from which all work was completed during 1996.



- ▲ - Camp sites
- ✚<sub>r/w</sub> - Plane access
- r - float
- w - Wheel

<b>DISCOVERY</b> Consultants			
Vital Pacific Resources Ltd.			
<b>SOUP PROPERTY</b> ACCESS ROUTES			
Location:	Kiyul Cr.	Mining Jurisdiction:	Omineca
Datum:	NAD83	Map Ref.:	0940/08E
Project:	572	Date:	Nov. 25, 1996
		Scale:	1:2,500,000
		Drawn By:	RK
		UTM:	09
		Figure:	2

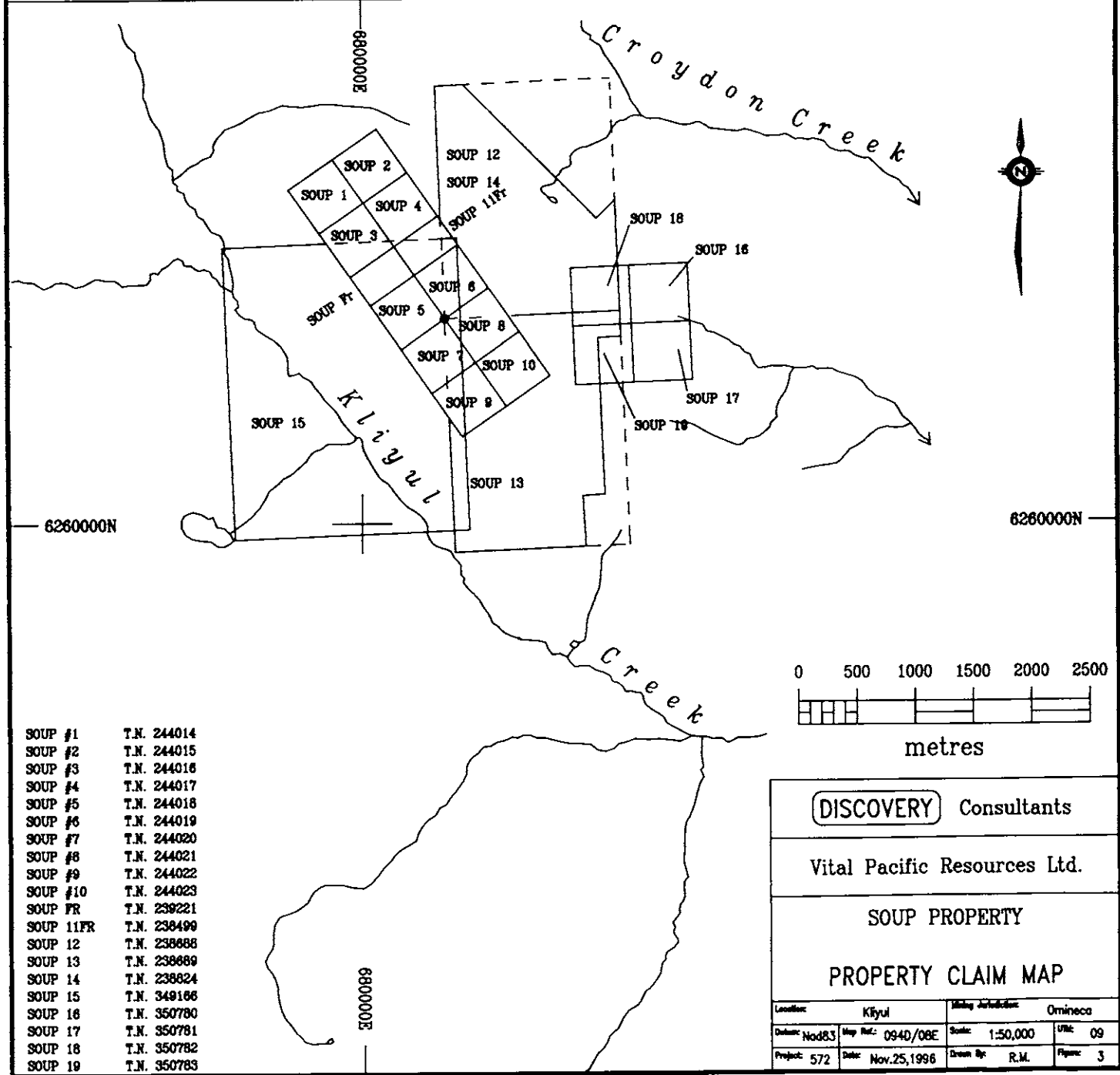
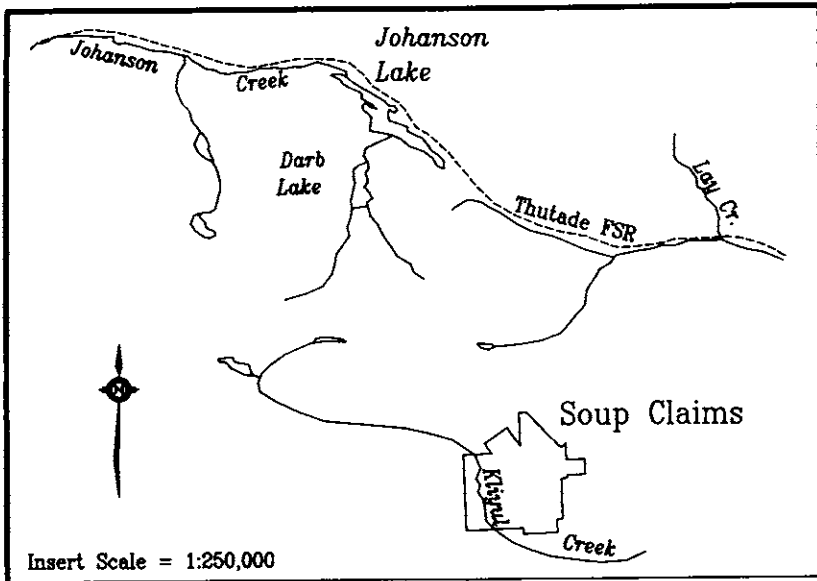
## CLAIM STATUS

The Soup Property comprises the following mineral claims (Table 1). All claims occur in the Omineca Mining Division, British Columbia and are shown in Figure 3. The registered owner of the Soup claims is Vital Pacific Resources Ltd. and all claims are subject to an option agreement between Vital Pacific Resources Ltd. and Athlone Resources Ltd.

**Table 1: Claim Status**

<b>Claim</b>	<b>Tenure No.</b>	<b>Units</b>	<b>Date of Record</b>	<b>Anniversary Date</b>
SOUP #1	244014	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #2	244015	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #3	244016	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #4	244017	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #5	244018	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #6	244019	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #7	244020	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #8	244021	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #9	244022	1	Aug. 7, 1964	Aug. 7, 2005
SOUP #10	244023	1	Aug. 7, 1964	Aug. 7, 2005
SOUP 11 FR	238499	1	Aug. 15, 1981	Aug. 15, 2005
SOUP 12	238688	12	Oct. 5, 1983	Oct. 5, 2005
SOUP 13	238689	12	Oct. 5, 1983	Oct. 5, 2005
SOUP 14	238824	12	Aug. 13, 1984	Aug. 13, 2005
SOUP FR	239221	1	Aug. 1, 1986	Aug. 1, 2005 *
SOUP 15	349166	20	July 29, 1996	July 29, 2005 *
SOUP 16	350780	1	Sept. 8, 1996	Sept. 8, 2005 *
SOUP 17	350781	1	Sept. 8, 1996	Sept. 8, 2005 *
SOUP 18	350782	1	Sept. 8, 1996	Sept. 8, 2005 *
SOUP 19	350783	1	Sept. 8, 1996	Sept. 8, 2005 *
<b>Total</b>		<b>72 units</b>		

\* The anniversary date of 2005 for these claims assumes acceptance of this assessment report which outlines expenditures to cover the Statement of Work (#3091273) filed on July 20, 1996 for \$200 to maintain the Soup FR claim until 1997, as well as an additional



SOUP #1	T.N. 244014
SOUP #2	T.N. 244015
SOUP #3	T.N. 244016
SOUP #4	T.N. 244017
SOUP #5	T.N. 244018
SOUP #6	T.N. 244019
SOUP #7	T.N. 244020
SOUP #8	T.N. 244021
SOUP #9	T.N. 244022
SOUP #10	T.N. 244023
SOUP FR	T.N. 239221
SOUP 11FR	T.N. 239499
SOUP 12	T.N. 238688
SOUP 13	T.N. 238689
SOUP 14	T.N. 238624
SOUP 15	T.N. 349166
SOUP 16	T.N. 350780
SOUP 17	T.N. 350781
SOUP 18	T.N. 350782
SOUP 19	T.N. 350783

Statement of Work filed with this report to distribute portions of the 1996 expenditures to the Soup FR and the five newly staked claims (Soup 15 through 19), so that they are valid until 2005. All of the above claims were recently grouped together in November 1996.

Note that the two recorded Statements of Work cover the period July 30 to September 16, 1996; they total the amount shown in the Statement of Costs.

## SUMMARY OF HISTORICAL EXPLORATION

To date over 950 talus fines and almost 1100 rock samples have been collected. Approximately 32 line-km of ground magnetometer surveying and 1670 m of drilling have also been completed.

- 1964 Soup 1 - 10 claims staked by R. Thompson and W. White
- 1965 Assessment Report 675, by K.C. McTaggart  
- Geological mapping and prospecting
- 1966 Claims examined by Kennco (reference: Assessment Report 10743)
- 1971? Proprietary Report; by T. Gyr, Falconbridge Nickel  
- Three x-ray drill holes, totalling 70 feet (21 m)
- 1975 Assessment Report 5562, by A. Sinclair  
- Mineralogical study of surface samples and 1972 drill core
- 1976 Assessment Report 5985, by A. Sinclair  
- Two orientation ground magnetometer profiles across strata
- 1977 Assessment Report 6410, by C. Bates, BP Minerals Ltd.  
- 201 rock chip samples on 11 sections at 10 foot (3 m) intervals for 100 feet (30 m) on each side of skarn
- 1978 Assessment Report 7033, by A. Sinclair  
- Additional analysis and interpretation of rocks collected in 1977
- 1981 Assessment Report 9485, by T. Rodgers, Vital Resources Ltd.  
- Orientation talus fines sampling (about 200 feet below skarn zone); 82 samples at 25 m intervals,
- 1982 Assessment Report 10743, by W. Leahey, Noranda Exploration Company Ltd.  
- 440 talus fines samples on 330 m x 25 m grid and on 100 m x 25 m detailed grid,  
- 161 rock samples,  
- Magnetometer survey (4.5 line km)
- 1984 Assessment Report 13315, by H. Smit and R. Meyers, BP Resources Canada Ltd.  
- Geological mapping and prospecting  
- 345 rock samples, 199 talus fines samples

- 1986 Assessment Report 15201, by C.M. Rebagliati, Lemming Resources Ltd.  
- Magnetometer survey, 2.9 line km  
- 45 rock samples
- 1987 Assessment Report 16655, by C.M. Rebagliati, Lemming Resources Ltd.  
- Magnetometer survey, 18.5 line km  
- 29 rock samples
- 1989 Assessment Report by C.M. Rebagliati, Athlone Resources Ltd.  
- Seven drill holes (330 m)
- 1990 Assessment Report 21521, by J. Toohey, Teck Exploration Ltd.  
- As part of a larger project Teck conducted geological mapping and prospecting at 1:4000 scale and systematic chip sampling of the southern magnetite horizon
- 1993 Hemlo Gold Mines Inc. Proprietary Report  
- Airborne magnetometer and K<sub>40</sub> radiometric survey
- 1994 Assessment Report 23586, by D. Gill, Hemlo Gold Mines Inc.  
- Geological mapping at 1:5000  
- 114 talus fines samples  
- 119 rock samples
- 1994 Assessment Report 23683, by D. Gill, Hemlo Gold Mines Inc.  
- Magnetometer survey, 6.5 km  
- 25 rock samples
- 1995 Assessment Report by L. Erdman, Hemlo Gold Mines Inc.  
- Four drill holes (318 m)
- 1996 This Assessment Report by J. Howe, Discovery Consultants  
- Geological mapping and prospecting,  
- Infill magnetometer survey (4.3 line km)  
- 311 talus fine samples  
- 73 rock samples  
- Ten drill holes (891 m), 186 core samples

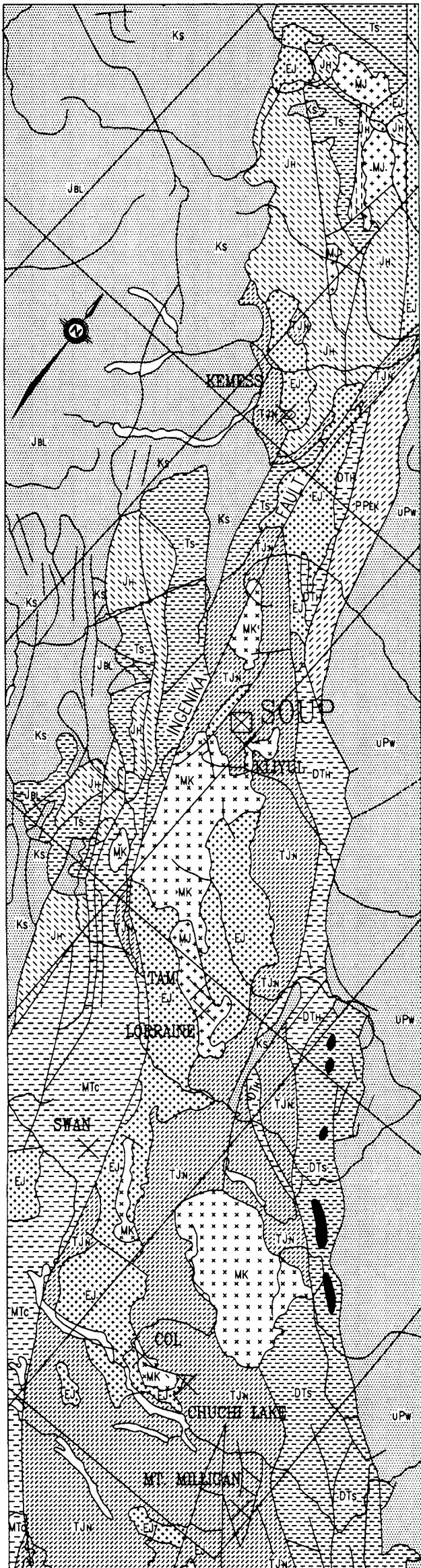
## REGIONAL GEOLOGY

The Soup Property is underlain by the Quesnel Tectono-stratigraphic Terrane, a composite volcanic arc assemblage which amalgamated with other allochthonous terranes of the Intermontane Belt prior to accretion on the North American craton during the Mesozoic. Quesnellia (previously referred to as the Quesnel Trough) is comprised of a 25 km to 75 km wide, fault-bounded, structurally complex belt of Triassic-Jurassic Takla Group volcanic and sedimentary rocks along the eastern boundary of the Intermontane Belt. The Takla Group is in structural contact on the east with equivalents of the Paleozoic Slide Mountain and Harper Ranch Groups and on the west by the Paleozoic to Mesozoic Cache Creek and Jurassic Hazelton Groups (Figure 4).

Regionally, the Takla volcanic rocks comprise island-arc type calc-alkaline and alkaline flows and related volcanic and epiclastic rocks. Pelites, conglomerates and limestones are interlayered with the flows and tuffs. Ferri et al. (1993) subdivided the Takla Group into two distinct units in the Aitken Lake area: the Plughat Mountain Formation and the maroon tuff unit. The Soup Property is underlain by the Plughat Formation, an undifferentiated package of predominantly greenschist-grade, subaqueous mafic tuffs, agglomerates with minor sedimentary material. The dominant regional structures are represented by north and northwest-trending, high-angle brittle faults and shear zones.

The Takla Group was intruded along its western margin by the Late Triassic to Cretaceous Hogem Intrusive Complex and related mafic to





Geology after GSC Map 1712A

### LEGEND

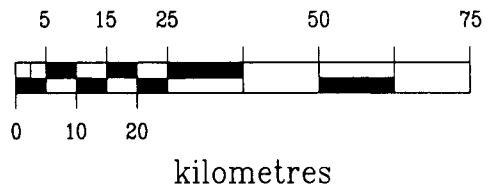
#### Volcanic and Sedimentary Rocks

	Cretaceous	Ks	Skeena Group
	Middle and Upper Jurassic	JBL	Bowser Lake Group
	Lower and Middle Jurassic	JH	Hazleton Group
	Upper Triassic-Lower Jurassic	TJN	Nicola Group
	Upper Triassic	Ts	Stuhini Group
	Mississippian-Upper Triassic	MTC	Cache Creek Group
	Devonian-Triassic	DTH	Harper Ranch Group
	Devonian-Triassic	DTs	Slide Mountain Group
	Upper Proterozoic-Paleozoic	PPeX	Eagle Bay Group
	Upper Proterozoic	UPW	Windermere Group

#### Plutonic Rocks

	Mid-Cretaceous	MK	monzonite, granodiorite
	Middle Jurassic	MJ	diorite, quartz monzonite
	Early Jurassic	EJ	granodiorite, quartz diorite
	Devonian-Triassic	DT	diorite, amphibolite

- Geological contact
- Fault/geological contact
- TAM Mineral deposit



**DISCOVERY** Consultants

VITAL PACIFIC RESOURCES LTD.

SOUP PROPERTY

REGIONAL GEOLOGY

Location: B.C.		Mining Jurisdiction: Omineca	
Datum: NAD27	Map Ref.:	Scale: 1:1,250,000	UTM: 09
Project: 572	Date: Nov.25,1996	Drawn By: rk	Figure: 4

intermediate intrusions. Furthermore, at least three Late Triassic to Early Jurassic Ultramafic Complexes intrude Takla volcanic rocks in the vicinity of the Soup Property. These Alaskan-type complexes are considered to be co-magmatic and coeval with arc-related augite-phyric lavas, pyroclastic rocks of the Takla Group (Nixon et al. 1990).

## PROPERTY GEOLOGY

Following is a brief synopsis of the rock units present on the Soup Property based on 1:5000 scale geological mapping (Map 2) and drill core logging during 1996. The reader is also referred to the following reports which provide descriptions and interpretations, of an alternative nature, based on geological mapping by the respective authors: McTaggart and White (1964), Smit and Meyers (1982), Toohy (1990), and Gill (1994a,b).

### Takla Group

The Upper Triassic to Lower Jurassic Takla Group consists of three easily distinguishable units on the Soup Property: a lower tuffaceous unit, a coarse-grained augite porphyritic flow(?), and lapilli tuffs and agglomerates. These basaltic lithologies appear to have gradational and interfingering contacts laterally and upwards through the stratigraphy.

The lower tuffaceous sequence consists of fine to medium-grained plagioclase-dominant and augite-subordinate crystal tuff with minor amounts of very fine-grained ash tuff. Portions of this unit are moderately silicified, with variable iron carbonate alteration and trace to 1% fine-grained disseminated pyrite. The term "iron carbonate" is used throughout this report, and refers to the presence of any or all of the following yellowish-brown to orange-colored amorphous minerals: ankerite, siderite, magnesite, or aragonite. These altered Takla rocks form the large orange gossanous gullies and

ridges located just above tree line, which trend off the property to the northwest. Historical sampling plus minor sampling during 1996 confirmed the lack of any mineralization within these altered basalts.

The overlying basaltic augite phyric sequence consists of medium to coarse-grained euhedral, equant augite crystals in a fine grained chlorite and sausseritized plagioclase-rich groundmass. Plagioclase phenocrysts may also be present locally. This unit may be weakly to non-magnetic, and it typically displays weak to moderate pervasive epidote alteration related to greenschist facies metamorphism.

Lapilli tuff to agglomerate are noted locally along the western slope of the Soup Ridge as small lozenges or tongues. East of the Soup Ridge these pyroclastic rocks comprise a large percentage of the exposed rocks along the ridges and in the valleys, and are typically well bedded with tops to the east. The lapilli to agglomerate unit is typically monolithic, being composed of variably-textured plagioclase + augite ± hornblende phyric sub-angular clasts. These coarse fragmental units do not display any flattening fabric or welded textures. This unit commonly hosts discontinuous patches of weak to moderate epidote alteration.

No evidence was found during 1996 geological mapping or core logging which would indicate the presence of interbedded limestones, calcareous tuffs, or other limy sediments anywhere on the Soup Property.

### Stratiform Magnetite Horizon

In addition to the volcanic units, an unusual stratiform magnetite ± iron carbonate unit occurs within the Takla Group. Although poorly exposed, this unit appears to be approximately 2 to 4 metres thick, and is interpreted to parallel strata even though bedding is not well constrained throughout the area. The unit is black, extremely vuggy, fractured and oxidized with abundant goethite and limonite. Outcrop and talus of this unit, as well as drill core, consist primarily of rubble, and it is extremely difficult to obtain a fresh representative sample. There may be two or more distinct stratiform horizons, although this can only be inferred from geophysical magnetic surveys (Gill 1994b, Rebagliati 1987) and can not be confirmed due to poor bedrock exposure and talus cover.

The style of development and formation of this magnetite-rich horizon is uncertain, but it may be related to either a volcanogenic exhalite deposit, or the emplacement, mineral segregation, and subsequent alteration of an extremely magnetic mafic to ultramafic (layered?) sill. The exhalite theory, while quite plausible, may only be confirmed by thin section and lithochemical analyses, with possibly inconclusive results in this extremely oxidized and rubbled unit. The mafic intrusive explanation is also probable, but puzzling due to the lack of tremolite, talc, fuchsite, serpentinite or other mafic-ultramafic alteration by-products. However the existence of other highly magnetic, chlorite-rich mafic dykes within the Saddle Gully Zone supports this theory (refer to sections on Intrusive Rocks and Mineralization). One thing is clear however, it is unlikely that

this horizon formed as a result of metasomatic skarn alteration, due to the consistently massive texture of the magnetite, the absence of any calc-silicate hornfels minerals, and the sharp contacts with the surrounding lithologies.

Throughout this report, this unit will be referred to as the stratiform magnetite horizon, while historical reports referred to this unit as a magnetite skarn horizon. The stratiform magnetite horizon has been traced for approximately 2.5 kilometres along strike; south of the Rockslide Cirque the unit is termed the Southern stratiform magnetite horizon.

Extensive chip sampling of the magnetite horizon south of the Rockslide Cirque (Toohey 1990) suggests that it contains locally enriched, gold and copper values relative to the surrounding basalts. All other historical work failed to identify any significant gold mineralization within the stratiform magnetite unit.

### Intrusive Rocks

Several compositionally distinct intrusive bodies occur on the Soup Property; 1) a quartz-rich diorite pluton (locally called the Kliyul Creek pluton; 2) a composite body of gabbro, pyroxenite and diorite; and 3) assorted fine-grained to porphyritic mafic to intermediate dykes and sills.

The Kliyul Creek Pluton is located in the southern portion of the property. This leucocratic intrusive is typically inequigranular, medium to coarse-grained, quartz-rich with abundant plagioclase, hornblende (locally altered to chlorite) and rare sericite and/or

muscovite. Trace amounts of magnetite or illmenite are inferred from very weakly magnetic hand specimens. The matrix as well as the quartz and plagioclase phenocrysts may be weakly iron stained, and the resultant mottled pinkish tinge may be the reason it was historically referred to as a quartz monzonite. Thin section analyses are recommended to confirm this explanation.

The Kliyul Creek Pluton is massive and displays no penetrative fabrics, although joints and fractures are locally developed. The contact with the surrounding volcanoclastics is sharp. Narrow, pink aplitic apophyses commonly intrude the Takla volcanoclastics within a few tens of metres of the Kliyul Creek Pluton contact.

The composite gabbro body is best exposed in the headwall of the Rockslide Cirque in the central portion of the Soup Property. The dominant composition of this gabbro body is medium to coarse-grained, hornblende + plagioclase porphyritic, with moderate magnetism. Small, discontinuous layers, lenses and pods of strongly magnetic pyroxenite are common, but difficult to trace. The gabbro appears to grade laterally into a mixed gabbro-diorite composition near the contacts with the surrounding Takla volcanics. Drill core from holes 96DS-4 and 5 clearly shows the layered/poddy nature of the pyroxenite phases, and the highly variable compositional changes due to magma mixing between the gabbro and diorite rich portions of the body.

In both bedrock exposure and drill core, magnetite occurs as massive and interstitial grains within the pyroxenite phase. Small wispy lenses of massive magnetite and disseminated leucoxene (after illmenite, sphene) are common in the gabbro phase of the body. Trace

disseminated magnetite ± illmenite(?) may or may not be present within the more diorite-rich phase. Furthermore, magnetite and specularite commonly form crystalline aggregates or coatings along fractures (with trace amounts of malachite or azurite) within all phases of the gabbro body.

This composite body was previously mapped as a large subvolcanic diorite body with plugs of pyroxenite (Toohey 1990, Gill 1994a, etc). Ferri et al. (1993) indicates that this body, which is continuous southward to the Mesilinka River, may be related to early mafic phases of the Hogem Intrusive complex. Conversely, Nixon et al (1990) suggest that ultramafic complexes and associated gabbro intrusions in the Croyden Creek, Johanson Lake and Polaris Creek areas are discrete Alaskan-type ultramafic complexes. Regardless of the mode and timing of deposition the presence of magmatic magnetite on the Soup Property is undeniable.

Several types of intermediate to mafic dykes and sills have been identified in drill core and surface exposure near the Saddle Gully Zone. The most common dyke which occurs on the Soup Property is a coarse-grained feldspar porphyritic dyke. The groundmass appears to be plagioclase-rich, with minor chlorite, quartz and hornblende. Several hand specimens were weakly magnetic and suggest the presence of either fine-grained magnetite or illmenite. The overall composition of the dyke appears to be dioritic, although some previous authors have describe it as a monzonite. Thin section analyses would resolve this disagreement. Based on 1996 geological mapping, the feldspar porphyritic diorite typically occurs as sills within the



Takla volcanoclastic rocks and can be mapped for considerable strike length. Dyke margins in contact with the augite porphyry are typically pyritic and iron-stained. Cross-cutting dykes of comparable composition were also mapped in both Takla volcanics and the composite gabbro body. The weakly magnetic nature of the unit and the relative age, suggests that this unit and may be related to waning stages of plutonic activity related to emplacement of the Hogem Intrusive Complex as described by Ferri et al. (1993).

Numerous aphanitic to fine-grained, black, chloritic mafic dykes which are extremely magnetic and only rarely contain small, subrounded quartz phenocrysts were noted in several drill holes and one surface exposure. These dykes have never been noted in previous reports. One example of this cross-cutting dyke outcrops beside drill collar 96DS-2, and was intersected in drill holes 96DS-1, 2, 8 and 9. The dyke was weak to moderately mineralized in the first drill hole, and in the other holes it occurred adjacent to mineralized magnetite ± carbonate ± quartz ± pyrite. Similar, unmineralized varieties of this dyke were also noted intruding all lithologies of the composite gabbro body in drill holes 96DS-4 and 5. The extremely magnetic nature of this unit and its relative age, suggest that this unit may also be related to waning stages of plutonic activity related to the Hogem Intrusive Complex. It is inconclusive what relationship may exist between the magmatic magnetite and the Saddle Gully Zones and the stratiform magnetite horizon(s).

A microdiorite sill first identified by McTaggart (1964) and mapped by Smit and Meyers (1984), Toohey (1990) and Gill (1994) is

interpreted to underlie the magnetite stratiform horizon along its entire strike length. McTaggart (1964) states that the microdiorite unit is "so altered as to be difficult to classify" and he further indicates that both augite and plagioclase phenocrysts are present, which suggests that it may simply be an altered crystal tuff. Toohy (1990) states that hornblende laths show a preferred orientation parallel to the intrusive contacts in the microdiorite. Mapping during 1996 along the entire 2.5 kilometre strike length of the stratiform magnetite horizon identified crystal and ash tuffs which are locally silicified or pyritic. Furthermore, the drill logs for holes 89-3 and 4 which tested the magnetite horizon for gold mineralization indicate that the rocks above and below the massive magnetite horizon consist of plagioclase + augite crystal tuffs and augite porphyritic flows.

Two thin subparallel diorite dykes cross-cut the underlying tuffs near the southern edge of the original Soup two-post claims, but these dykes appear to be related to the nearby quartz diorite Kliyul Creek Pluton.

Many of the historical reports imply a genetic relationship between the magnetite and the interpreted underlying microdiorite sill, however the 1996 geological mapping was unable to corroborate this interpretation. In drill hole 96DS-7B, a late-stage, unaltered, non-magnetic, fine-grained diorite dyke with aligned hornblende phenocrysts was observed which confirms the existence of this type of rock, but the location of the dyke does not suggest any spatial or temporal relationship to the massive magnetite horizon.

### Metamorphism:

The metamorphic grade throughout the Soup Property is greenschist facies. Mineral assemblages consistent with this metamorphic grade include extensive and pervasive chlorite and epidote alteration of the basaltic and gabbroic units. Higher metamorphic grade necessary to develop a skarn calc-silicate hornfels mineral assemblage, even if only locally developed, would partially destroy the epidote and chlorite in favor of other minerals such as diopside, garnet, clinopyroxene and biotite, all of which are absent from the property.

### Structure:

The Takla Group strata have a general northwest strike with a shallow northeast dip of about 30°. Due to the extremely fractured and broken nature of the bedrock exposures along the western slope of the Soup Property, bedding orientation can only be measured confidently in a few locales. Graded tuffs exposed below the Southern stratiform magnetic horizon are upright, strike northwesterly at 330° and dip 20° to the east. Lapilli tuffs and agglomerates exposed in the eastern portion of the property, indicate that strata vary between west-northwest-striking, tops upright and almost flat-lying along the south side of Croy Cirque, to northwest-striking, tops to the northeast with steep subvertical dips in the area east of Porphyry Cirque. These limited bedding strike, dip and topping data suggest a variably dipping monoclinial stratigraphic package, with the possibility of a synclinal fold closure in the Croydon Creek area. Rebagliatti (1987) has further suggested a possible anticlinal axes

along Kliyul Creek, however this was not verified during 1996.

A poorly-developed, penetrative cleavage fabric was locally observed along the western slope of the Soup Property, subparallel to the interpreted bedding orientation of  $330^{\circ}$ . A second, weaker cleavage fabric was locally noted at orientations between  $200^{\circ}$  and  $240^{\circ}$ . This latter fabric is probably related to the development of the SGZ, but its property-wide significance is unknown due to its intermittent development and poor bedrock exposure.

Previous workers interpreted numerous faults which offset stratigraphy along the western slope of the Soup Ridge. Mapping during 1996 indicates that most, if not all, of these faults were incorrectly interpreted from the outcrop distribution which results from shallow-dipping strata exposed on a steep and incised slope.

Only one major fault with confirmed movement was identified on the Soup Property during 1996. This fault, referred to as the North Bear Creek Fault by Toohey (1990) strikes  $140^{\circ}$ , dips between  $65^{\circ}$  and  $80^{\circ}$  to the southwest and offsets the Southern stratiform magnetite horizon almost 450 metres in an apparent left lateral sense of movement. However, the true sense of movement along this fault was likely subvertical, north side down. The North Bear Creek Fault consists of a 1-2 metres wide zone of clay and chlorite-rich rubble and gouge. Narrow discontinuous lozenges of chlorite + sericite + carbonate schist usually occur along one or both sides of the fault. Numerous subparallel splay faults offset and dismember the southern stratiform magnetite unit over tens of metres in the area. The main North Bear Creek Fault and the splays severely limit the potential to

delineate continuous gold mineralization within the Southern stratiform magnetite unit.

Other faults such as the South Bear Creek Fault, the Porphyry Creek Fault, the Karen Fault, and numerous other faults interpreted by Toohey (1990) and others, are lineaments with no evidence to suggest any significant movement.

Rebagliati (1987) identifies a northwest-trending Kliyul Fault, which is marked by a broad zone of shearing and schistose rocks exposed along the southwest side of the Soup claims. The existence of this shear zone was not substantiated during 1996 mapping.

### Mineralization

Previous reports describe the existence of four different styles of mineralization on the Soup Property: 1) magnetite + sulphide + quartz stockwork (Saddle Gully Zone); 2) magnetite + sulphide skarn; 3) quartz + sulphide veins; and 4) sulphide and oxide fracture-fillings. The latter two styles of mineralization can be combined into a porphyry-style of mineralization.

### Saddle Gully Zone

Structurally-controlled gold and copper mineralization is hosted within the magnetite ± quartz ± iron carbonate ± chlorite Saddle Gully Zone (SGZ). The zone has frequently been described as a discordant magnetite + quartz stockwork zone which occurs along a northeast-trending fault which crosscuts the Takla Group volcanic rocks.

Geological mapping completed during 1996, suggests that the SGZ

is a 3 to 8 metre wide zone of intense and variable alteration, with locally developed foliation fabrics. The nearly continuous outcrop exposure of the stratiform massive magnetite horizon on either sides of this gully implies that there is no significant movement along a fault structure coincident with the SGZ. Development of the foliation fabric is probably related to flattening and simple shear.

The SGZ as a whole, consists of variable amounts of magnetite + quartz + chlorite + iron carbonate + pyrite ± chalcopyrite along its strike length. Magnetite occurs as medium-grained recrystallized masses, which have been pitted and oxidized, resulting in a very porous rock which is similar texturally to a vesicular basalt. Magnetite is also observed as fine-grained, wispy stringers which occur within chlorite-rich material. Quartz occurs as discrete veins, subparallel stringers, veinlets, irregular shaped lenses, and as pervasive alteration. Stockwork vein textures were not observed on surface or in drill core during 1996. Chlorite alteration intensity is highly variable and occurs as moderate to intense pervasive alteration, discrete stringers, selvages around quartz veins and stringers, or as altered septas within the veins. Comparison of results from drill holes 96DS-1 and 96DS-2 suggests that the higher the chlorite intensity the lower the gold grade. Iron carbonate alteration occurs as a moderate to intense pervasive orange alteration of the magnetite, resulting in a vuggy, rubble rock with very little competency. The relative abundance of iron carbonate alteration is difficult to distinguish in zones of intense limonite alteration. Pyrite usually occurs as disseminations or semi-massive lenses or

stringers within the SGZ. It is typically strongly oxidized, tarnished and often difficult to distinguish from the strongly oxidized magnetite. Chalcopyrite was not observed during 1996, only trace amounts of malachite and azurite were noted.

The style of mineralization within the zone is also highly variable along its strike length. The zone locally consists of: a single 0.20 to 1.0 metre wide quartz vein with 2-3 metre wide foliated chlorite, magnetite and pyrite-rich selvages near 5000E/4960N and 5100E/4975N; a 6 to 8 metre wide zone of sheared chlorite + magnetite rich material cored by a relatively undeformed lozenge of extremely magnetic, fine-grained basalt (or mafic dyke?) near 5050E/4970N; a 3 to 4 metre wide chloritic shear with medium-grained remobilized magnetite near 5150E/5000N. This latter area also has numerous thin shoots of magnetite ± quartz veinlets which leak along bedding or fracture planes in the basalt sub-perpendicular to the orientation of the SGZ.

A moderately well developed penetrative fabric was observed within the chloritic-rich portions of the zone, but is not consistently developed throughout the SGZ. Utilizing solar charts and a sun compass, accurate structural measurements were obtained which show that the zone is oriented northeast, and has a minor flexure. The foliation is variable between 240°/85° near 5000E/4960N, to 220°/85° near 5050E/4970N, to 000°/90° near 5060E/4970N, to 225°/90° near 5150E/5000N. The foliation is weakly developed in the surrounding basalts within 20 to 50 metres of the SGZ.

The SGZ is exposed for almost 250 metres of strike length. The

most northeastern exposure of the zone occurs beside the collar for drill holes 96DS-7AB and 95HS#4 collar, near 5150E/5000N. There were no SGZ-style magnetite-rich rocks identified in the talus uphill from this drill site; where the talus consists predominately of augite porphyritic basalt, with lesser amounts of feldspar porphyritic dyke, gabbro and tuffaceous basalt material. To the southwest, the SGZ appears to terminate in the massive magnetite horizon, as it crosses the gully near 4975E/4950N. Minor amounts of magnetite-rich talus occur below this point in the gully, but no magnetite-rich bedrock is exposed southwest of this point and the 1987 ground magnetic survey confirms the termination of the zone.

Drill hole 96DS-7B intersected the SGZ near the northeastern-most exposure, where the zone consisted of chlorite, iron carbonate, lesser magnetite, and low gold grades. Drill hole 89-7 targeted the SGZ below the stratiform magnetite unit and appears to have intersected a zone of chlorite, quartz, epidote alteration with minor stringers of magnetite and low gold grades. Results from these drill holes suggest that a zone of alteration may persist beyond the 250 metres strike length of known SGZ gold mineralization, but the intensity of magnetite remobilization and the corresponding gold mineralization are significantly reduced.

#### Magnetite "Skarn" Mineralization

The magnetite "skarn" mineralization has been the focus of most of the historical exploration on the Soup Property. Many authors have identified the host rock to consist of limy sediments or limy tuffs



with a weak to moderate calc-silicate metamorphic assemblage. In drill core and outcrop this magnetite rich unit is strongly oxidized and altered to iron carbonate, eliminating the likelihood that primary calcareous textures can be identified. No evidence was found during 1996 geological mapping or core logging which would indicate the presence of interbedded limestones, calcareous tuffs, limy sediments or any calc-silicate hornfels mineral assemblages (with the exception of epidote), anywhere on the Soup Property. A petrographic mineralogical study by Sinclair (1977) indicates that the magnetite skarn consists of magnetite, pyrite, chalcopyrite, limonite and malachite with no mention of any calc-silicate minerals or other gangue. Furthermore, the razor sharp nature of the contacts with the surrounding rocks is not indicative of alteration. The term "skarn" appears to be misleading, and as previously discussed this magnetite rich unit will be referred to as the stratiform magnetite unit.

The stratiform magnetite unit has been extensively sampled, but only locally contains elevated gold mineralization. McTaggart (1964) refers to this unit as a "magnetite-rich, copper-gold bearing bed". Assay results from three x-ray drill holes in 1971 indicate that two samples contained 1 g/t gold, the remainder of the 13 samples contained less than 0.69 g/t gold (Gyr, 1972). Extensive chip sampling of the magnetite-rich unit and wallrock was completed by BP Minerals (Bates, 1977), but only 2 samples of the 201 collected contained over 1 g/t gold, and both of these samples were from the

footwall tuffs. Leahey (1982) shows one rock sample of massive magnetite on his map which contained 6 g/t gold, the only sample of massive magnetite collected that year by Noranda which assayed >1 g/t. Smit and Meyers (1984) state that nearly all of the chip samples of massive magnetite obtained by BP in 1984, contained less than 1000 ppb gold. Extensive chip sampling of the Southern "skarn" unit by Toohey (1990) resulted in the following composite samples: 1.7 g/t gold over 12 metres, 2 g/t gold over 14.5 metres; 2 g/t gold over 2.6 metres and 2.4 g/t gold over 2.7 metres. These samples are widely spaced and separated by unmineralized samples.

Clearly, this magnetite-rich unit has been extensively sampled, and not only does it lack continuous economic gold mineralization, it does not appear to be related to skarn formation. Further exploration is not advised for this style of mineralization on the Soup Property.

#### Porphyry Mineralization

Limited reconnaissance rock sampling in 1990 and 1994 by Teck and Hemlo suggested the presence of gold and copper porphyry-style mineralization associated with narrow quartz + carbonate veins along the Soup Ridge and within the Rockslide Cirque. Unfortunately the previous reports failed to identify the size and intensity of the veins which host this porphyry-style mineralization.

Follow-up sampling during 1996 confirmed the anomalous sample results, and mapping extended the potential host area to include the following areas of gabbro, pyroxenite and gabbro-diorite not previously identified: along the Soup Ridge north and south of the

saddle area, south and east of the tarn, and throughout the headwalls of the Rockslide, Shell and Porphyry Cirques. Throughout all of these areas intrusive rocks of variable composition host quartz stringers, veinlets and veins with minor amounts of pyrite, chalcopyrite, magnetite and their associated oxides.

In the Rockslide Cirque most of the quartz veins show a consistent orientation of 100-130° with a subvertical dip. In other areas, notably along the Soup Ridge and in the Croy Cirque, the quartz veins often show orientations which are flat-lying to shallow west-dipping. In each of these areas the quartz veins are very narrow (typically less than 10 cm, although there are rare veins up to 50 cm wide) with limited strike length and limited intensity of development (i.e., the veins do not form a stockwork texture, nor do they comprise as much as 1% of the rocks in any particular area).

Weak to moderate patchy epidote alteration occurs throughout the gabbro-diorite and Takla volcanic rocks, and is interpreted to be related to greenschist metamorphism. There are no indications of the presence of overprinting porphyry-related propylitic, potassic, sericitic or argillic alteration anywhere on the Soup Property.

It is unlikely that any further surface exploration will identify previously unobserved alteration zones, or areas with more intense vein development necessary for an economical porphyry deposit.

## 1996 EXPLORATION PROGRAM

The 1996 exploration program was conducted between July 16 and September 16, 1996 and consisted of geological mapping, prospecting, and rock sampling at 1:5000 scale (Maps 2,4); collection of 311 talus fine samples (Map 3); nine diamond drill holes (891.39m, 186 core samples); 4.3 line kilometres of detailed field magnetic surveying, and the staking of five additional claims. The results of this work are described in the following sections.

The primary objectives of the 1996 exploration program were to decisively evaluate 1) the Saddle Gully Zone, 2) the stratiform magnetite unit, 3) known geochemical and geophysical anomalies, and 4) the potential for gold and copper stockwork and porphyry style mineralization.

### 1996 Detailed Talus Fine Sampling Program

Prior to 1996, numerous workers collected talus fine samples from the western slope of the Soup claims. Hemlo, Noranda and Vital Resources sampled the talus systematically using grids in 1994, 1982 and 1981 respectively. BP also completed systematic talus sampling in several of the gullies, using a topographic base map in 1984. Unfortunately, exact locations for many of these historical samples were not well constrained on maps, and the resultant anomalies were often confusing and somewhat contradictory. Confusion regarding the location of these samples and the importance of accurately locating the anomalies prompted Discovery Consultants to undertake a talus fine

re-sampling program in 1996 to confirm some the historical results.

During 1996, talus fine samples were collected from all of the major gullies along the western slope of the Soup Ridge. Each talus line of samples started at the highest point along the ridge above the gully and samples were obtained at roughly 20 metre elevation intervals, with horizontal distances measured using a hipchain and topofil. The samples were collected utilizing a grub hoe to dig to a depth of between 10-40 centimetres. Sand-sized and finer particles of talus were manually sifted into kraft sample bags and labeled. Wherever possible the sample was obtained from the centre of the gully, although the finer-sized fraction was typically more prevalent away from the middle of the gully. In these situations, the samplers were instructed to alternate between different sides of the gully. A piece of flagging tape was labeled with the sample number and wrapped around a rock and placed at each sample site. The samples were air dried at camp, prior to shipment.

A nomenclature for naming each gully was implemented to facilitate location and identification: Gullies 1-N, 2-N, 3-N, 4-N and 5-N represent the first five gullies counting northwards from the Rockslide Cirque, while gullies 1-S, 2-S, 3-S, 5-S, and 7-S represent the gullies counting southwards from the Rockslide Cirque. Talus fine samples were also collected within the steep gullies on the northwest, northeast and southeast corners of the Rockslide Cirque. The talus fine sample locations are plotted on Map 3a, and the gold and copper geochemistry plotted on Map 3b. A complete list of the data is tabulated in Appendix 1.

Results from the 1996 detailed talus sampling program identified the following anomalies north of the Rockslide Cirque:

- a large variable intensity gold and copper anomaly, along the Soup Ridge and below the ridge on the western slope,
- copper values are typically highest just below the Soup Ridge, and slowly decrease in intensity down slope.
- a narrow, variable intensity gold anomaly immediately below each outcrop occurrence of the stratiform magnetite horizon, confirming extensive rock chip sampling which indicates that the unit contains elevated, but not economically significant gold mineralization, and
- the Saddle Gully Zone is well defined by an extremely high gold and copper anomaly which correlates exactly with the outcrop exposures of the zone.

Results from the sampling program south of the Rockslide Cirque are as follows:

- a medium-sized variable grade gold and copper anomaly along the Southern Soup Ridge and on the western slope below the ridge,
- gold and copper grades appear to decrease gradually down slope,
- there is no gold anomaly spike located down slope from outcrops of the Southern magnetite horizon, despite evidence for weak enrichment in gold within this unit, and
- there is a distinct lack of any gold in talus corresponding to Kliyul Creek Pluton exposure.

Results in the Rockslide Cirque were harder to interpret, but

indicated the following:

- there are extremely anomalous and erratic gold grades in talus fines, which may or may not be directly related to mineralized outcrop, and
- there are no extremely anomalous copper anomalies despite the presence of malachite, azurite and chalcoppyrite throughout the rocks. This seems to contrast with other areas of the property.

#### 1996 Reconnaissance Prospecting and Talus Fine Sample Program

Prior to 1996, only the western slope of the Soup Ridge had been meticulously sampled. Little or no work had been completed on the northern and eastern portions of the Soup 12/14 claims or the southern and western portions of the Soup 13 claim. This was probably due to the extremely rugged terrain along the cirque ridges, and the thick moraine-like deposits and snow cover in the bowls. Thick talus and vegetation cover in the southwestern part of the Soup 13 claim also hindered mapping and sampling.

Reconnaissance prospecting and talus fine sampling were completed over accessible portions of these areas during 1996. The intention of this work was to geologically evaluate these unexplored areas. Each area is described separately, results and descriptions for the talus fine and rock samples are plotted on Maps 3b and 4b and tabulated in Appendix 1 and 2 respectively.

### Northwest Cirque:

Twenty talus fine samples were collected at approximately 50 metre intervals from talus debris located just below the steep headwall and eastern cliffs of this cirque. Gold values ranged from 15 to 800 ppb gold; the two highest samples (488753 and 488754), located below the steep and inaccessible cliffs at the headwall, analysed 800 and 540 ppb gold, respectively. Bedrock exposed along the north face of the Soup Peak, above these anomalous talus fine samples, consists of diorite, gabbro and minor amounts of tuff and augite porphyritic basalt. Typically, the gabbro-diorite contains less than 1% pyrite with rare malachite, although small clots (<5 cm wide) of pyrite with trace malachite, and thin discontinuous stringers and fractures of pyrite ± magnetite ± malachite were also noted. Two grab samples (143056 and 143124) of the best looking mineralization from this area, contained up to 5% combined pyrite and malachite and analysed 15 ppb gold and 180 ppm copper, and 110 ppb gold and 260 ppm copper, respectively.

No further work is recommended for this area.

### Northwest Ridge:

The ridge which trends northwestward from the Soup Peak was prospected and geologically mapped during 1996. The intention of mapping and sampling was to identify the source mineralization for the gold and copper geochemical anomalies identified in talus fines immediately below the ridge (Gill 1994a, and this report).

A grab sample (143025) from the strike extent of a 10 metre wide



strike length and was spalling off an outcrop. A 1996 representative chip sample of the same vein (143037) assayed 19.24 g/t gold, and 18.90 g/t gold in duplicate analysis. Two, 2-metre wide chip samples (143138, 143139) of the unaltered hangingwall and footwall assayed 0.03 and 0.14 g/t gold respectively. A few other 10 to 20 centimetre wide vuggy quartz ± carbonate + pyrite veins were identified in the area, with orientations which vary between 120 and 160° with subvertical to steep west dips. Most veins were sampled in 1994, and did not contain any significant gold. One additional vein, previously unsampled, was chip sampled in 1996 (143136) and contained 0.24 g/t gold.

No further work is recommended in this area, due to the limited size potential and inconsistent grades of these veins.

#### Kliyul Creek Pluton Contact Zone

Three rock samples were collected from the area along the contact between the Kliyul Creek Pluton and the Takla volcanoclastic rocks in the southwestern portion of the Soup 13 claim. This area was prospected to evaluate the potential for intrusive related mineralization in the vicinity of the coincident airborne magnetic and  $K_{40}$  anomalies identified by Walcott et al (1994) using the 1993 Hemlo proprietary airborne survey data.

Most of the area, is overlain by scrub brush and mixed talus, and bedrock is only exposed in the gullies. The contact between the Kliyul Creek pluton and the Takla volcanics is relatively sharp and generally unaltered, although moderate to intense, pervasive chlorite

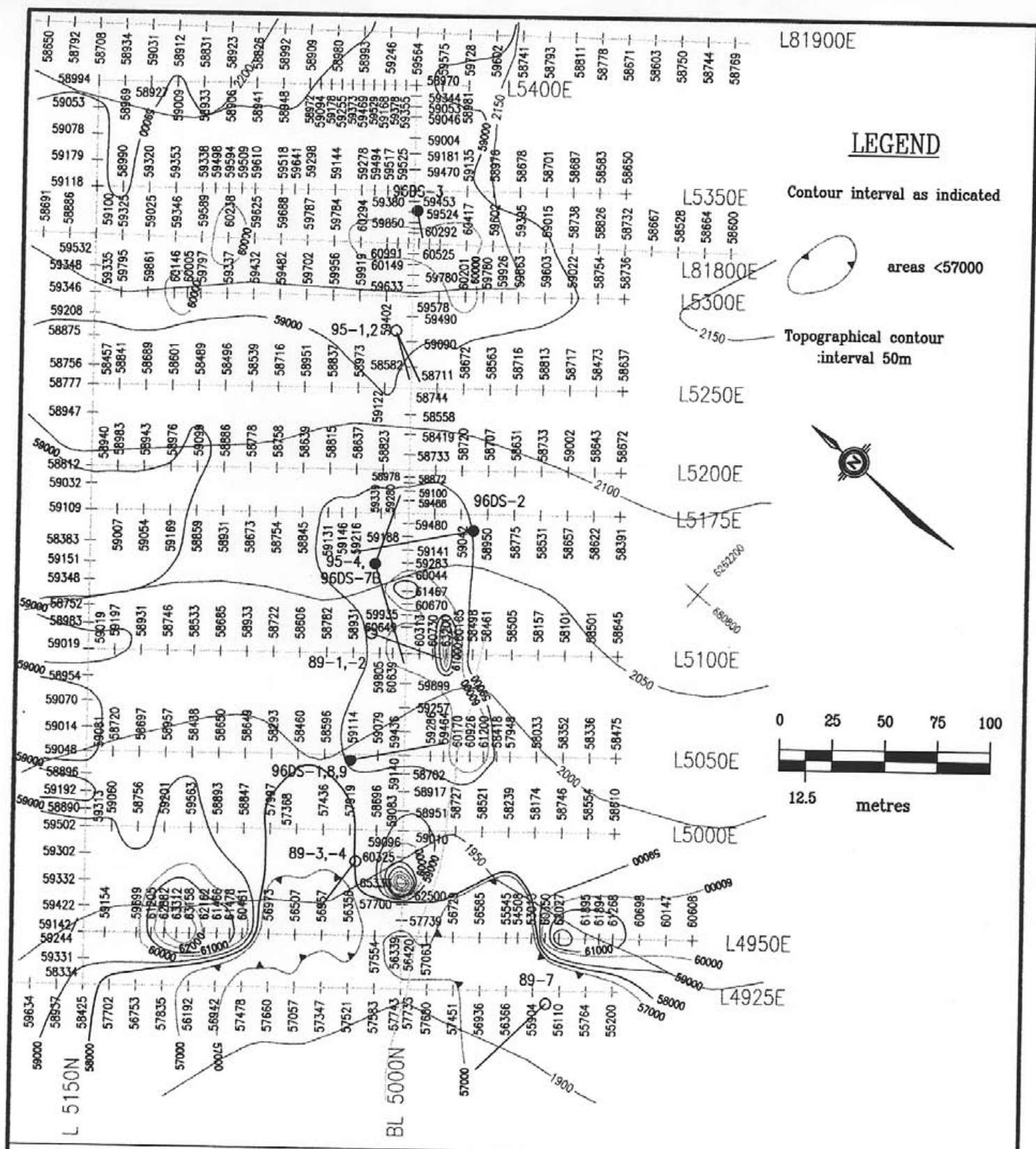
alteration was locally noted across a 1 to 2 metre interval immediately adjacent to the contact. Minor dykes and apophyses of the pluton can be traced into the basalt for a few tens of metres. These dykes frequently display iron staining along their margins, but no pyrite or other sulphides were noted. This contact relationship persists to the southeast where the Kliyul Creek pluton trends off the property.

Three rock samples (143059, 143060 and 143061) were collected which consisted of weakly gossanous or bleached basalt with minor disseminated pyrite crystals or blebs; quartz ± calcite veinlets were locally present. All three samples contained less than 25 ppb gold.

The airborne  $K_{40}$  anomaly identified by Hemlo (1994) appears to correspond exactly with the emplacement of the Kliyul Creek Pluton. There was no evidence for widespread potassic alteration along the contact or within the pluton, and no further work is recommended in this area.

#### 1996 Detailed Geophysical Survey

A small infill total field magnetic survey was completed in the area of the Saddle Gully Zone (Figure 5). Previous geophysical surveys have been completed in this area by Lemming Resources and Hemlo Gold Mines (Rebagliati, 1987 and Gill 1994b), however both of these surveys were biased along grid lines subparallel to the Saddle Gully Zone. Discovery Consultants decided to re-establish a portion of the 1987 grid and establish new cross lines to measure the magnetic



**DISCOVERY** Consultants

VITAL PACIFIC RESOURCES LTD.

SOUP PROPERTY

1996 INFILL MAGNETIC SURVEY  
"SADDLE GULLY ZONE AREA"

Date: Nov.25, 1996	Project: 572	Scale: 1:2500	N.T.S.: 094D/08E	Mining Div: Omineca	Figure: 5
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field across the strike of the SGZ. It was believed that this small survey would be helpful in locating prospective drill collar sites, as well as determining whether the zone continued beneath talus.

The 1996 total field survey was conducted using a G-846 UniMag II Proton Magnetometer. Fifteen grid lines were surveyed for a total of 4.3 line kilometres. Stations were spaced every 12.5 metres, and where strongly magnetic rocks were identified the spacing was reduced to 6.25 metres. The data were not corrected for diurnal variation, and comparison of the 1996 survey results with historical survey results shows good continuity and correlation with the magnetic intensity of other anomalies. The data were hand contoured, to eliminate orientation biases developed by computer-generated plotting software.

The 1996 survey shows the SGZ to be a well-defined zone of highly magnetic rocks which strike for approximately 250 metres between BL4925E and L5150E (in 1987 grid coordinates). The 1996 survey also confirms the high background levels of magnetism throughout the basaltic rocks which host the SGZ mineralization and the stratiform magnetite unit.

#### 1996 Diamond Drilling Program

The drill program commenced August 20, 1996 and was completed on September 13, 1996 and consisted of ten BQ sized drill holes for a total of 891 metres. The 1996 drill results are summarized in Table 2, and the drill logs are included in Appendix 3.

Drill holes 96DS-1,2,8 and 9 were drilled to test the strike and

down dip continuity and tenor of mineralization in the Saddle Gully Zone (SGZ) and the nearby stratiform magnetite horizon (Maps 6 and 7).

Drill holes 96DS-3,6,7A, and 7B were drilled to test a coincident geochemical talus anomaly and weak magnetic anomaly for potential buried porphyry-style mineralization (Maps 8 and 11). All four drill holes were abandoned due to extremely poor ground conditions.

Drill holes 96DS-4 and 5 were drilled to test the continuity of well-exposed, narrow quartz + carbonate vein-hosted gold and copper mineralization within the gabbro/pyroxenite/diorite composite body in the Rockslide Cirque headwall (Maps 9 and 10).

The results of the 1996 drilling program confirm that the only significant gold mineralization located to date on the property occurs within the Saddle Gully Zone. Six drill holes to date (96DS-3, 6, 7 and 95HS-1, 2, and 3) have failed to locate mineralization along the more than 600 metre long coincident talus geochemical anomaly and weak magnetic anomaly just below the Soup Ridge. Two drill holes which tested the most prospective zones of quartz ± carbonate + pyrite + malachite veins in the gabbro body also failed to intersect any significant gold mineralization.

Table 2: Summary of 1996 Drilling and Results

Orientation				Significant Results			
DDH	Azimuth	Dip	Length (m)	From (m)	To (m)	Gold (g/t)	Core Length (m)
96DS-1	130	-55	79.25	38.51	38.91	4.95	0.40
				39.36	45.88	2.14	6.52
				51.10	59.60	7.25	8.50
				59.60	66.45	4.26	6.85
				66.45	71.63	13.61	5.18
96DS-2	310	-45	91.44	10.06	11.43	2.50	1.37
				13.20	18.35	12.34	5.15
				74.31	75.90	6.57	1.59
96DS-3	220	-75	50.29				
96DS-4	030	-45	152.4	13.54	14.02	1.49	0.48
96DS-5	100	-45	236.83				
96DS-6	210	-75	61.57				
96DS-7A	040	-50	21.34				
96DS-7B	070	-50	53.34	46.55	48.01	1.04	0.93
96DS-8	n/a	-90	90.68				
96DS-9	130	-65	75.59	53.95	55.78	7.38	1.83

The rocks throughout the Soup Property are strongly fractured, and drilling during 1996 showed that this fracturing as well as intense oxidation persists deeper than 50 vertical metres. There was no water recirculation during the 1996 drill program; the water would flush directly out the face of the bit. Holes 96DS-3 and 6 were lost due to caving and entrapment of drill rods in the hole. Holes 96DS-7A, 7B and 8 were abandoned due to extremely poor ground conditions, which resulted in caving and redrilling each time the core tube was emptied or the rods were pulled for grease. Hole 96DS-9 was abandoned after several hours attempting to loosen rods in a severe cave. Due to the fractured and broken nature of the bedrock, it is recommended that any further drilling should be completed with larger diameter rods, with the ability to reduce rod size as necessary. This should

greatly improve the probability of completing drill holes to their target depth.

The drill core was geologically logged, measured for magnetic susceptibility, split and sampled. The samples were shipped to commercial laboratories for standard gold fire assay and multi-element ICP analyses. Geochemical results have been incorporated into the drill logs for all of the core samples (Appendix 3). The 1996 drill core is stored just east the Soup Property on the Croy 4 claim, at the old exploration camp.

The SGZ was intersected in both drill holes 96DS-1 and 2, and consisted of a zone of intense magnetite + quartz + carbonate + chlorite alteration between 3.5 to 5 metres true width. In both holes the protolith was unidentifiable within the SGZ due to the pervasive iron carbonate and limonite alteration. No penetrative cleavage fabrics were noted in drill core, although cleavage fabrics were mapped on surface within the chloritic wallrock to the SGZ. In drill hole 96DS-1 the SGZ assayed 13.61 g/t Au over 5.18 metres core length (approximately 3.5 metres true width). Immediately up hole from the SGZ, gold mineralization is continuous into a fine-grained, extremely magnetic mafic dyke and an interpreted stratiform magnetite unit. These two units assayed 4.26 g/t over 6.85 metres core length and 7.25 g/t Au over 8.50 metres core length respectively. It may be coincidental that gold mineralization occurs within the mafic dyke and adjacent wallrock along both contacts, or it may be indicative that gold mineralization and magnetite introduction are associated with the mafic dyke, or that a gold-bearing chloride or sulphide-rich

hydrothermal fluid was reduced in this oxidizing environment, and therefore deposited the gold mineralization. This relationship is not conclusive, because other magnetic mafic dykes intersected in holes 96DS-1,8 and 9 do not demonstrate the same mineralization. Conversely, the mineralization in hole 96DS-1 may be interpreted as a zone of leakage into the rocks adjacent to the SGZ, or simply a wider than normal zone of mineralization for unknown reasons.

The SGZ in hole 96DS-2 assayed 6.57 g/t Au over 1.59 metres core length (approximately 1.0 metre true width), approximately 100 metres along strike from hole 96DS-1. Another zone of mineralization near the top of hole 96DS-2 assayed 12.34 g/t Au over 5.15 metres core length, adjacent to a barren magnetic mafic dyke. The wallrock on the other side of this mafic dyke assayed 2.50 g/t Au over 1.27 metres core length. Due to the limited drill data available and the poor bedrock exposure it is impossible to determine the relationship and significance of the upper mineralized intersections relative to the SGZ.

Drill hole 96DS-8 was drilled vertically from the same drill site as hole 96DS-1 to test for possible continuity of mineralization within the interpreted stratiform magnetite unit intersected in the earlier hole. The magnetite unit was not intersected where it was projected, and several possible explanations exist: 1) the magnetite unit may have been drawn upwards into the SGZ by shearing, 2) the magnetite unit was faulted and offset along a pre-existing fault structure which has since been intruded by a dyke, or 3) that as previously described the upper magnetite-rich "unit" intersected in



hole 96DS-1 was actually a zone of magnetite introduction adjacent to the mineralized magnetic mafic dyke.

Drill hole 96DS-9 was drilled between holes 96DS-8 and 96DS-1 to resolve these questions. This hole was abandoned prior to reaching target depth due to extreme caving and rubbled core, and these questions remain unresolved.

Drill hole 96DS-3 (Map 8) at an azimuth of 220° was collared above a narrow northwest trending geophysical anomaly, and a series of extremely anomalous talus fine samples which ranged from 1030 to 1840 ppb gold. The hole intersected almost 50 metres of strongly fractured and oxidized gabbro, before the drill rods were stuck in the hole due to extreme caving. The gabbro is medium to dark mottled green with medium to coarse-grained, euhedral hornblende with rare augite, in an epidote-altered plagioclase-rich groundmass. The unit is moderately magnetic throughout, although magnetite is not visible in hand specimen. Quartz stringers are abundant throughout the gabbro, and several small discrete zones of quartz flooding associated with 1-2% clots and stringers of pyrite were intersected. Trace amounts of malachite staining were noted on some of the fractured surfaces, but no chalcopyrite was observed. No significant gold mineralization was intersected in this hole, although the source of the magnetic anomaly was confirmed to be related to the gabbro. The entire hole was split and sampled, and the highest assay was 0.50 g/t gold over 1.39 metres of core; all other samples contained less than 0.20 g/t gold and trace copper. It is believed that any gold or copper associated with the quartz stringers or flooding is not of sufficient grade to result in

anomalous mineralization over a reasonable sample interval.

Failure of this hole to intersect significant mineralization resulted in the drilling of hole 96DS-7A at 040° azimuth down slope from drill hole 96DS-3 to approach the possible source of the talus anomaly from a different direction. Hole 96DS-7A was abandoned due to extreme caving problems at 21.34 metres. Hole 96DS-7B was collared at 070° azimuth to avoid the broken ground which created the problems in hole 96DS-7A. This hole (Map 8) drilled obliquely through the SGZ between 11.28 and 13.93 metres, and between 16.40 and 18.00 metres. These two zones consist of foliated and altered chlorite + magnetite + iron carbonate, but lack gold mineralization. Between the SGZ zones are two distinct units, the first unit is interpreted as a possible mafic to intermediate dyke which is unaltered and appears to postdate alteration in the SGZ. This dyke is non-magnetic, contains fine to medium-grained acicular and aligned hornblende phenocrysts in a non-magnetic plagioclase-rich groundmass. The nature of the acicular and aligned hornblende laths is similar to the microdiorite sill described by Toohey (1990), however, this dyke appears to postdate the SGZ, rather than suggest a genetic relationship to the stratiform magnetite horizon. The second unit intersected between the SGZ zones is a fine-grained chlorite-rich, strongly magnetic dyke similar to those described adjacent to the SGZ in drill holes 96DS-1, 2 and 9. Neither of the dykes intersected between the SGZ contain anomalous gold mineralization. Immediately below the SGZ between 18.00 and 29.30 metres, the drill hole intersected a moderately magnetic, feldspar porphyritic diorite dyke, but it lacks significant gold mineralization

also. Alternating intervals of crystal and ash tuff with augite porphyritic flows were intersected below this dyke. Between 46.55 and 50.90 metres an iron carbonate + magnetite rich clay gouge zone was intersected; one sample from this interval assayed 1.14 g/t gold over 1.46 metres. The orientation and significance of this gouge zone is unknown. The hole was abandoned at 53.34 metres due to extreme caving problems which resulted when the rods were pulled to grease.

Drill hole 96DS-6 (Map 11) was the most northerly drill hole, and was collared topographically above a 1994 talus fine sample (Gill 1994a) which contained 8700 ppb gold. Due to budget constraints, this hole was unable to target both the 8700 ppb gold geochemical anomaly and the magnetic anomaly located an additional 50 metres uphill from the collar location. This magnetic anomaly is the northwesterly continuation of the magnetic anomaly targeted in drill hole 96DS-3. The hole intersected alternating intervals of ash to crystal tuff and augite porphyritic basalts. A narrow, fine-grained, strongly magnetic mafic dyke was intersected between 14.94 and 17.10 metres. The hole was abandoned at 61.57 metres when the rods sheared off due to caving and broken ground. This drill hole does not contain any significant gold mineralization, and the source of the 8700 ppb gold talus anomaly remains unexplained.

Drill hole 96DS-4 was drilled to test the continuity of well-exposed, narrow quartz + carbonate vein-hosted gold and copper mineralization within the gabbro/pyroxenite/diorite composite body in the Rockslide Cirque headwall. The drill hole intersected predominantly gabbro with layers(?) or lenses of pyroxenite in the

upper portion of the hole, gradational down the hole into dominantly gabbro, with minor pyroxenite and diorite, plus several compositionally erratic intervals with textures suggestive of magma mixing between the gabbro and diorite phases. As expected the gabbro phase is moderately magnetic throughout, although magnetism dropped significantly where overprinted by moderate to strong pervasive epidote alteration. The pyroxenite phases are strongly magnetic, while the more dioritic phases are weak to non-magnetic. Fine-grained, strongly magnetic, chlorite-rich mafic dykes, and medium to coarse-grained feldspar porphyritic dykes were observed to cross cut all phases of the composite gabbro body in this hole.

All of the rock types contained trace disseminated pyrite and oxidized fractures which locally contained trace malachite. The dominant orientation for surface quartz + carbonate veins was between  $100^{\circ}$  and  $130^{\circ}$  with a subvertical to steep westerly dip. In drill core, numerous quartz  $\pm$  carbonate  $\pm$  chlorite + pyrite veinlets and stringers, as well as pyrite  $\pm$  magnetite veinlets were noted parallel to a weakly developed foliation. However, these veinlets and stringers are typically less than 1 centimetre in width and comprise less than 1% of the rock. The best samples assayed 1.49 g/t gold over 0.48 metres and 1.81 g/t gold over 0.52 metres, and are associated with two discrete zones of intense iron carbonate, pyrite and jarosite altered mafic dyke and gabbro, respectively. Several zones of quartz-flooding with bull white, amorphous quartz veins, gradational into aplitic contacts were noted adjacent to the diorite phases in the lower portions of the drill hole. No pyrite is associated with these

quartz veins, and malachite was only rarely noted along fractures. Samples from these zones do not contain any anomalous gold.

Drill hole 96DS-5 was drilled at an azimuth of 100° from the same drill site as hole 96DS-4 in an attempt to locate the possible source of anomalous talus fine samples in the Porphyry Cirque on the other side of the Rockslide Cirque. Despite being some distance from the Porphyry Cirque, and having to drill sub-parallel to the dominant quartz + carbonate vein orientation at 100° to 130°, the operator believed that the source of mineralized talus in the Porphyry Cirque may have been continuous through the gabbro/pyroxenite/diorite composite body which forms the common headwall of both the Rockslide and Porphyry Cirques. Although the hole intersected the same lithologic units as drill hole 96DS-4, the intensity of quartz ± carbonate ± pyrite stringers was significantly reduced. All samples contained less than 0.15 g/t gold.

## CONCLUSIONS AND RECOMMENDATIONS

During 1996, exploration conducted on the Soup Property consisted of geological mapping, prospecting, the collection of 311 talus fine and 73 rock samples, a small geophysical survey, 10 diamond drill holes (891 metres) and 186 core samples.

The purpose of the 1996 exploration program was to decisively evaluate 1) the Saddle Gully Zone, 2) the stratiform magnetite unit, 3) known geochemical and geophysical anomalies, and 4) the potential for gold and copper stockwork and porphyry style mineralization.

Results of the 1996 drilling program indicate that the only significant gold mineralization located to date on the property is associated within the structurally-controlled Saddle Gully Zone. The SGZ has been tested by six drill holes over 250 metres of strike length, and the best results include 13.61 g/t over 5.18 metres from hole 96DS-1; 4.1 g/t gold over 2.9 metres in hole 89-1; 6.57 g/t gold over 1.59 metres from hole 96DS-2. The fourth hole was drilled subparallel to the strike of the SGZ and intersected 5.4 g/t gold over 10.46 metres and 14.3 g/t gold over 3.2 metres. Two additional drill holes (89-7, and 96DS-7B) have tested the SGZ beyond the limits of mineralization and do not contain significant gold or copper mineralization but suggest that the overall strike length of SGZ may extend beyond 250 metres with a different style of alteration hosting very weak gold mineralization. Insufficient data exist to generate a mineral resource for the Saddle Gully Zone at this time.

Seven drill holes (71-1,2,3 and 89-3,4,5,6) and extensive

sampling to date have failed to identify any continuous economic mineralization within the stratiform magnetite horizon, which was previously referred to as the magnetite skarn zone.

Six drill holes to date (96DS-3,4,5,6,7B, and 95HS-3) have failed to locate buried economic, porphyry-style mineralization along the more than 600 metre long coincident gold and copper geochemical anomaly and weak magnetic anomaly below the Soup Ridge. It is believed that the tenor of the gold and copper geochemical anomalies in this area have been enriched due to placering on the steep mountain slope.

Two drill holes (96DS-4,5) which tested the most prospective zone of porphyry-style vein mineralization within the gabbro-diorite composite intrusive body failed to intersect significant gold mineralization.

Several large, airborne  $K_{40}$  anomalies were ground-truthed, and their sources identified as narrow feldspar porphyritic dykes, and the large Kliyul Creek Pluton. The potential for a large tonnage porphyry-style deposit on the Soup Property is very limited due to the lack of appropriate alteration, and the limited intensity, size and inconsistent grades of the quartz veins.

Mapping, prospecting and reconnaissance talus sampling were completed in several areas of the Soup Property where no previous exploration work had been completed. Results from talus fine sampling along the western slope of the Property suggest that a nugget-effect may explain the erratic, high gold grades obtained in talus fines samples, and that physical enrichment of heavy minerals in the fine-

sized fraction of talus samples may have resulted in the elevated gold values observed in many areas on the property. Several coincident airborne magnetic and  $K_{40}$  anomalies in the northern, eastern and southern portions of the property were prospected and mapped, and no large zones of potassic alteration or magnetite introduction were located. Narrow feldspar porphyritic dykes explain two of these anomalies, while the Kliyul Creek Pluton corresponds with the large anomaly to the south. It is interesting to note however, that there are no  $K_{40}$  anomalies along the western slope of the Soup Property where several of these feldspar porphyritic dykes intrude the Takla rocks. No further work is recommended for most of these areas.



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**APPENDIX 1: 1996 TALUS FINES SAMPLE RESULTS**

Project 572

Soup

Talus Fines Sample Analyses (ICP)  
1996

File: 572vpt\_b2.wk1

Reference: a9626818  
TSL - s3641 (m7889), s3672 (m7894), s3737 (m7926), s3791 (m7965)

Sample ID	Location	Elev. m	Au ppb	Au g/t	Cu ppm	Ag ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm
143062	Porphyry cirque	1920	120		510	<1	<1	59	<1	<2	<5	<5	<5	51	29	170	4.4	910	73
143063	Porphyry cirque	1920	>1000	1.05	390	<1	<1	63	<1	<2	5	<5	<5	47	33	180	7.1	890	69
143064	Porphyry cirque	1920	950		1700	<1	<1	84	<1	2	10	<5	<5	62	49	180	7.6	1200	140
143065	Porphyry cirque	1915	590	2.00	810	<1	4	61	<1	<2	<5	<5	<5	34	35	100	5.7	880	120
143066	Porphyry cirque	1910	560		1100	<1	<1	68	<1	6	10	<5	<5	35	48	97	7.3	990	96
143067	Porphyry cirque	1910	520		1100	<1	2	61	<1	4	<5	<5	<5	29	46	79	5.4	1400	160
143068	Porphyry cirque	1910	580	1.39	1000	<1	<1	63	<1	8	<5	<5	<5	40	46	120	5.7	1200	79
143069	Porphyry cirque	1905	490		950	<1	<1	54	<1	4	20	<5	<5	44	40	130	6.6	1000	79
143070	Porphyry cirque	1910	>1000	1.24	1200	<1	<1	62	<1	4	<5	<5	<5	46	59	120	5.6	1300	74
143071	Porphyry cirque	1920	>1000	1.69	790	<1	8	79	<1	2	<5	<5	<5	29	52	75	5.8	1600	120
143072	Porphyry cirque	1915	520	1.48	530	<1	2	65	<1	2	10	<5	<5	18	34	34	5.5	1500	810
143073	Porphyry cirque	1915	>1000	2.26	2000	2	<1	120	<1	14	<5	<5	<5	27	67	67	7.7	1600	570
143074	Porphyry cirque	1910	570		1200	1	9	140	<1	10	<5	<5	<5	44	58	120	6.7	1500	110
143075	Porphyry cirque	1910	>1000	1.03	1400	<1	<1	95	<1	6	<5	<5	<5	34	46	100	6.8	1200	74
143076	Porphyry cirque	1910	>1000	1.14	650	<1	2	68	<1	2	<5	<5	<5	26	33	65	5.4	1400	120
143077	Porphyry cirque	1910	>1000	1.31	1100	1	<1	69	<1	4	<5	<5	<5	24	39	51	5.8	1400	120
143078	Porphyry cirque	1910	600		530	<1	<1	85	<1	<2	25	<5	<5	27	33	81	6.9	1100	54
143079	Porphyry cirque	1915	510		480	<1	1	90	<1	<2	<5	<5	<5	24	31	79	6.8	1100	49
143080	Porphyry cirque	1915	>1000	2.66	870	2	<1	54	<1	8	10	<5	<5	16	37	28	5.7	1200	67
143081	Porphyry cirque	1915	>1000	1.62	630	1	<1	63	<1	6	<5	<5	<5	12	35	18	5.4	1300	75
143082	Porphyry cirque	1915	260		430	<1	<1	70	<1	<2	<5	<5	<5	17	34	24	4.9	1300	140
143083	Croy cirque	1900	45		330	<1	<1	120	<1	<2	10	<5	<5	99	40	130	3.4	940	64
143084	Croy cirque	1900	20		240	<1	<1	74	<1	<2	<5	<5	<5	100	35	190	3.1	750	48
143085	Croy cirque	1915	35		240	<1	<1	69	<1	<2	<5	<5	<5	97	34	200	4.3	1100	53
143086	Croy cirque	1915	45		340	<1	3	110	<1	<2	10	<5	<5	92	37	210	5.1	1100	85
143087	Croy cirque	1910	110		300	<1	<1	100	<1	<2	<5	<5	<5	76	42	170	4.8	1100	110
143088	Croy cirque	1910	290		340	<1	<1	68	<1	<2	<5	<5	<5	86	38	180	4.6	1100	170
143089	Croy cirque	1930	170		160	<1	<1	42	<1	<2	<5	<5	<5	82	40	230	4.3	770	110
143090	Croy cirque	1910	65		170	<1	<1	38	<1	<2	5	<5	<5	78	29	190	3.5	540	100
143091	Croy cirque	1930	25		170	<1	<1	29	<1	<2	5	<5	<5	81	31	220	3.3	520	49
143092	Croy cirque	1910	30		150	<1	1	39	<1	<2	<5	<5	<5	27	23	47	3.7	630	51
143093	Croy cirque	1910	75		75	<1	1	31	<1	<2	10	<5	<5	32	21	73	3.4	370	39
143094	Croy cirque	1910	85		240	<1	<1	41	<1	<2	<5	<5	<5	90	37	190	3.8	690	84
143095	Croy cirque	1950	>1000	1.03	630	<1	3	48	<1	<2	<5	<5	<5	100	62	220	5.6	970	60
143096	Croy cirque	1950	550		870	<1	<1	49	<1	<2	<5	<5	<5	99	70	180	5.4	920	76
143097	Croy cirque	1960	420		290	<1	<1	61	<1	<2	<5	<5	<5	88	47	240	5.0	1200	430
143098	Croy cirque	1960	280		260	<1	<1	60	<1	<2	10	<5	<5	86	43	240	5.0	1000	370
143151	Gully 3A-N	2160	1360		1920	2.0	10	60	<0.5	10	24	<2	<2	44	81	71	7.4	1015	140
143152	Gully 3A-N	2135	1840		2010	2.4	8	58	<0.5	7	18	<2	<2	42	72	99	7.8	980	70
143153	Gully 3A-N	2110	1030		1120	2.2	12	70	<0.5	9	20	<2	<2	52	180	175	9.0	1640	280
143154	Gully 3A-N	2085	1090		935	2.2	10	66	<0.5	13	18	<2	<2	66	125	173	8.4	1595	350
143155	Gully 3A-N	2050	590		981	0.8	12	48	<0.5	25	22	<2	<2	31	156	68	10.8	1275	320
143156	Gully 3A-N	2025	4650		1300	1.6	10	58	<0.5	43	26	<2	<2	41	149	114	10.2	1340	280
143157	Gully 3A-N	2000	5740		1675	1.8	8	46	<0.5	18	20	<2	<2	42	80	113	9.1	1080	330
143158	Gully 3A-N	1975	>10000	7.95	2600	1.8	2	44	<0.5	35	18	<2	<2	39	119	94	10.3	1380	320
143159	Gully 3A-N	1950	>10000	9.98	3690	2.2	4	40	<0.5	55	20	<2	<2	35	137	77	10.3	1155	410
143160	Gully 3A-N	1925	570		843	0.2	6	52	<0.5	9	24	<2	<2	44	107	72	7.5	1430	130
143161	Gully 4A-N	2195	480		1395	1.2	8	44	<0.5	19	20	<2	<2	65	134	82	8.0	1370	60
143162	Gully 4A-N	2165	580		1810	2.0	8	38	<0.5	36	22	<2	<2	79	167	83	8.6	1155	50
143163	Gully 4A-N	2140	340		1065	0.8	8	34	<0.5	19	16	<2	<2	64	175	98	7.5	915	90
143164	Gully 4A-N	2115	810		796	1.0	8	32	<0.5	14	18	<2	4	39	120	71	7.6	730	150
143165	Gully 4A-N	2090	2080		941	2.4	12	42	<0.5	11	20	<2	<2	50	159	120	8.3	1245	170
143166	Gully 4A-N	2065	1500		752	6.8	12	76	<0.5	9	26	<2	<2	66	131	145	7.8	2510	280
143167	Gully 4A-N	2040	465		599	0.8	6	48	<0.5	7	22	<2	<2	68	104	163	7.3	1730	130
143168	Gully 4A-N	2015	525		649	1.2	8	50	<0.5	12	20	<2	<2	56	101	138	7.4	1275	170
143169	Gully 4A-N	1990	745		552	0.2	6	60	<0.5	11	20	<2	<2	53	120	93	7.6	2030	230
143170	Gully 4A-N	1950	365		384	0.4	8	52	<0.5	5	24	<2	<2	73	82	173	6.6	1335	120
143171	Gully 4A-N	1925	615		520	1.4	8	36	<0.5	14	26	<2	<2	59	60	126	10.9	940	110
143172	Gully 3A-N	1900	2400		976	0.8	8	52	<0.5	12	22	<2	<2	50	122	102	8.0	1445	170
143173	Gully 3B-N	2200	180		478	0.2	10	58	<0.5	6	26	<2	<2	45	57	96	6.2	840	130
143174	Gully 3B-N	2175	145		430	0.6	8	50	<0.5	3	20	<2	<2	39	57	107	6.3	1115	130
143175	Gully 3B-N	2140	820		1095	0.8	12	66	<0.5	6	18	<2	<2	45	56	102	6.8	845	140
143176	Gully 3B-N	2110	775		890	1.0	24	66	<0.5	12	24	<2	<2	68	123	126	7.2	1390	190
143177	Gully 3B-N	2085	950		1225	1.0	18	74	<0.5	12	26	<2	<2	78	140	152	7.5	1320	150



## Project 572

## Soup

file: 572rpt\_tb2.wk1

Talus Fines Sample Analyses (ICP)  
1996Reference: a9626818  
TSL - s3641 (m7889), s3672 (m7894), s3737 (m7926), s3791 (m7965)

Sample ID	Location	Elev. m	Au ppb	Au g/t	Cu ppm	Ag ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm
143178	Gully 3B-N	2060	1410		839	1.0	10	54	<0.5	13	24	<2	<2	76	112	155	7.3	1150	130
143179	Gully 3B-N	2035	620		980	0.6	8	50	<0.5	11	22	<2	<2	65	146	118	7.4	1915	150
143180	Gully 3B-N	2010	425		789	0.4	8	40	<0.5	10	20	<2	<2	69	132	239	6.4	2190	120
143181	Gully 3B-N	1985	420		913	<0.2	8	34	<0.5	15	20	<2	<2	54	140	158	7.6	1370	170
143182	Gully 3B-N	1960	1270		1095	0.6	8	34	<0.5	12	26	<2	<2	49	156	82	8.0	1170	120
143183	Gully 3B-N	1935	660		1740	0.2	8	52	<0.5	8	24	<2	<2	62	96	117	7.4	1240	150
143184	Gully 3B-N	1910	230		657	<0.2	6	40	<0.5	8	20	<2	<2	47	103	99	6.8	1180	130
143185	Gully 3B-N	1885	315		553	0.4	8	46	<0.5	7	20	<2	<2	65	109	130	7.1	1200	120
143186	Gully 3B-N	1860	250		852	<0.2	10	58	<0.5	5	22	<2	<2	39	57	96	5.9	1480	250
143187	Gully 4A-N	1900	885		996	1.2	8	56	<0.5	19	30	<2	<2	37	64	75	>15.0	1135	360
143188	Gully 4A-N	1875	1150		836	1.0	10	48	<0.5	18	24	<2	<2	34	59	69	>15.0	1075	360
143189	Gully 4A-N	1850	470		636	1.2	8	42	<0.5	12	22	<2	<2	49	95	103	9.3	1140	170
143190	Gully 4A-N	1825	440		616	0.8	8	42	<0.5	11	24	<2	<2	48	83	108	9.2	975	170
143191	Gully 4A-N	1800	400		545	0.6	8	44	<0.5	9	22	<2	<2	41	78	93	8.7	1105	160
143192	Gully 3B-N	1810	360		368	0.2	6	42	<0.5	8	20	<2	<2	31	69	51	5.5	1860	230
143193	Gully 3B-N	1785	985		508	0.2	8	44	<0.5	6	20	<2	<2	35	70	70	6.5	1375	160
143194	Gully 2B-N	2140	120		400	<1	<1	35	<1	2	<5	<5	<5	80	94	95	5.0	810	85
143195	Gully 2B-N	2115	250		590	<1	<1	47	<1	<2	60	<5	<5	61	120	52	6.4	1300	95
143196	Gully 2B-N	2090	510		570	<1	<1	52	<1	2	30	<5	<5	75	110	120	7.1	1300	180
143197	Gully 2B-N	2065	900	1.31	540	<1	<1	49	<1	<2	35	<5	<5	71	110	110	7.1	1400	220
143198	Gully 2B-N	2040	750		560	<1	<1	46	<1	6	<5	<5	<5	69	130	110	7.5	1200	160
143199	Gully 2B-N	2015	>1000	1.72	850	<1	<1	58	<1	8	<5	<5	<5	70	140	58	8.1	1700	67
143200	Gully 2B-N	1990	410		450	<1	<1	61	<1	4	<5	<5	<5	85	81	120	6.4	820	74
143201	Gully 2B-N	1965	>1000	1.17	640	<1	<1	57	<1	6	40	<5	<5	58	120	87	7.8	1300	110
143202	Gully 2B-N	1940	540		810	<1	<1	51	<1	4	45	<5	<5	75	110	100	7.1	1200	89
143203	Gully 2B-N	1915	530		520	<1	<1	52	<1	<2	5	<5	<5	100	87	190	6.7	1300	89
143204	Gully 2B-N	1890	620	1.03	550	<1	<1	48	<1	6	<5	<5	<5	67	100	110	6.6	1000	72
143205	Gully 2B-N	1865	380		360	<1	<1	44	<1	<2	<5	<5	<5	98	110	200	6.7	940	62
143206	Gully 2B-N	1840	640	2.66	660	<1	<1	48	<1	4	<5	<5	<5	78	91	140	6.8	980	76
143207	Gully 2B-N	1815	390		790	<1	<1	42	<1	<2	15	<5	<5	63	83	120	6.6	870	71
143208	Gully 2B-N	1790	420		740	<1	<1	110	<1	<2	35	<5	<5	61	82	120	7.0	870	87
143209	NE Rockslide	2205	85		1300	<1	<1	78	<1	4	20	<5	<5	100	220	88	11.0	1800	89
143210	NE Rockslide	2175	>1000	1.03	880	<1	<1	78	<1	14	<5	<5	<5	53	200	110	15.0	1500	110
143211	NE Rockslide	2150	740		590	<1	<1	100	<1	4	70	<5	<5	48	170	110	15.0	1500	100
143212	NE Rockslide	2125	470		530	<1	<1	62	<1	8	10	<5	<5	43	170	110	15.0	1200	79
143213	NE Rockslide	2100	>1000	1.38	3300	2	2	66	<1	24	<5	<5	<5	61	370	79	13.0	1400	190
143214	NE Rockslide	2075	610		950	1	<1	99	<1	12	<5	<5	<5	56	110	130	10.0	1800	170
143215	NE Rockslide	2050	>1000	9.38	1500	2	<1	74	<1	6	<5	<5	<5	57	120	110	9.0	2000	200
143216	NE Rockslide	2000	770		1900	<1	<1	61	<1	8	<5	<5	<5	55	130	130	9.5	1300	100
143217	NE Rockslide	1975	600		1000	<1	<1	71	<1	8	<5	<5	<5	51	110	130	11.0	1300	110
143218	NE Rockslide	1950	700	1.59	930	<1	<1	65	<1	10	<5	<5	<5	40	76	120	7.7	1300	130
143219	NE Rockslide	1925	610		1200	<1	<1	83	<1	12	<5	<5	<5	60	120	150	11.0	1600	140
143220	NE Rockslide	1900	>1000	3.02	1200	<1	<1	70	<1	10	<5	<5	<5	53	110	130	9.2	1400	120
143221	Gully 7-S	2025	95		140	<1	<1	87	<1	<2	20	<5	<5	35	27	62	4.7	900	120
143222	Gully 7-S	2000	160		210	2	84	140	<1	<2	<5	<5	<5	18	31	28	5.4	2400	150
143223	Gully 7-S	1975	75		150	<1	17	130	<1	2	<5	<5	<5	20	30	31	4.6	1800	300
143224	Gully 7-S	1950	40		85	<1	25	110	<1	4	5	<5	<5	13	20	23	3.7	1500	460
143225	Gully 7-S	1925	<5		22	<1	32	73	<1	<2	10	<5	<5	5	8	8	2.3	810	420
143226	Gully 7-S	1900	120		67	2	26	84	<1	<2	<5	<5	<5	10	14	16	3.2	1100	370
143227	Gully 7-S	1875	25		74	<1	23	74	<1	<2	<5	<5	<5	11	12	19	2.9	880	510
143228	Gully 7-S	1850	<5		18	<1	18	55	<1	4	<5	<5	<5	4	5	7	2.0	470	240
143229	Gully 7-S	1825	20		34	1	38	98	<1	6	<5	<5	<5	6	8	12	2.9	880	450
143230	Gully 7-S	1800	5		31	<1	32	65	<1	4	15	<5	<5	9	8	16	2.4	650	250
143231	Gully 7-S	1765	<5		27	<1	18	66	<1	2	10	<5	<5	9	7	15	2.5	730	240
143232	Gully 7-S	1740	20		33	<1	16	67	<1	<2	30	<5	<5	7	9	14	2.6	790	300
143233	Gully 7-S	1715	5		38	<1	16	70	<1	<2	<5	<5	<5	9	10	16	2.7	830	450
143234	Gully 7-S	1690	<5		35	<1	53	71	<1	2	<5	<5	<5	10	9	19	2.6	850	280
143235	Gully 7-S	1665	10		35	<1	24	67	<1	4	10	<5	<5	8	10	14	2.6	820	330
143236	Gully 7-S	1640	5		42	<1	30	64	<1	<2	25	<5	<5	8	10	15	2.4	1100	500
143237	Gully 7-S	1615	55		42	<1	20	60	<1	<2	15	<5	<5	9	9	16	2.5	880	310
143238	Gully 7-S	1580	<5		26	<1	41	63	<1	4	10	<5	<5	7	7	13	2.5	650	310
143239	Gully 7-S	1550	<5		27	<1	19	68	<1	4	<5	<5	<5	6	8	13	2.5	720	350
143240	Gully 7-S	1530	<5		25	<1	39	61	<1	4	<5	<5	<5	9	8	17	2.4	640	310
143241	Gully 7-S	1505	<5		51	<1	3	61	<1	<2	10	<5	<5	20	14	41	3.2	650	170



Project 572

## Soup

file: 572rpt\_tb2.wk1

Talus Fines Sample Analyses (ICP)  
1996Reference : a9626818  
TSL - s3641 (m7889), s3672 (m7894), s3737 (m7926), s3791 (m7965)

Sample ID	Location	Elev. m	Au ppb	Au g/t	Cu ppm	Ag ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm
143242	Gully 4-S	2200	450		270	<1	<1	81	<1	<2	<5	<5	<5	39	27	140	5.0	530	89
143243	Gully 4-S	2175	900		330	2	<1	70	<1	<2	<5	<5	<5	61	41	230	6.2	690	120
143244	Gully 4-S	2150	190		400	<1	6	69	<1	<2	20	<5	<5	70	50	230	6.0	840	260
143245	Gully 4-S	2125	110		340	<1	<1	71	<1	<2	50	<5	<5	66	45	180	5.9	1000	350
143246	Gully 4-S	2090	55		840	<1	<1	110	<1	<2	<5	10	<5	63	89	170	5.4	2000	120
143247	Gully 4-S	2075	120		230	<1	<1	96	<1	<2	<5	10	<5	68	50	180	7.2	2100	290
143248	Gully 4-S	2045	110		270	<1	<1	64	<1	<2	<5	10	<5	64	46	160	4.9	1000	230
143249	Gully 4-S	2015	160		770	<1	3	66	<1	10	55	<5	<5	95	210	120	8.8	1800	170
143250	Gully 4-S	1990	610		3400	2	<1	85	<1	8	30	<5	<5	75	140	110	10.0	1300	120
143251	Gully 2A-N	2165	>1000	3.10	900	<1	8	52	<1	<2	140	<5	<5	110	220	110	9.4	1200	110
143252	Gully 2A-N	2140	160		750	<1	<1	39	<1	4	<5	<5	<5	85	130	95	7.0	790	33
143253	Gully 2A-N	2115	260		390	<1	<1	78	<1	<2	5	<5	<5	86	77	160	6.3	1300	140
143254	Gully 2A-N	2070	210		580	<1	<1	56	<1	<2	5	<5	<5	140	110	200	7.1	1000	85
143255	Gully 2A-N	2045	140		580	<1	<1	64	<1	<2	45	<5	<5	130	100	200	7.3	990	74
143256	Gully 2A-N	2015	230		470	<1	4	76	<1	<2	20	<5	<5	120	85	210	7.1	1000	78
143257	Gully 2A-N	1980	280		430	<1	<1	71	<1	<2	20	<5	<5	88	66	170	6.4	1300	80
143258	Gully 2A-N	1955	140		370	<1	<1	68	<1	<2	45	<5	<5	110	66	190	6.6	850	57
143259	Gully 2A-N	1925	550		520	<1	<1	67	<1	<2	<5	<5	<5	28	64	62	6.4	1100	89
143260	Gully 2A-N	1900	260		490	<1	<1	61	<1	<2	<5	<5	<5	30	66	60	6.4	1100	110
143261	Gully 2A-N	1855	250		450	<1	<1	57	<1	<2	<5	<5	<5	40	63	87	6.4	960	82
143262	NW Rockslide	2175	45		520	<1	<1	53	<1	<2	<5	<5	<5	220	100	350	8.2	1500	95
143263	NW Rockslide	2150	100		1000	<1	<1	35	<1	<2	30	<5	<5	92	140	100	7.9	960	56
143264	NW Rockslide	2125	210		940	<1	<1	31	<1	<2	<5	<5	<5	99	140	92	9.3	940	57
143265	NW Rockslide	2100	>1000	1.22	1000	<1	<1	100	<1	<2	<5	<5	<5	60	180	67	7.3	1500	120
143266	NW Rockslide	2075	300		540	<1	<1	65	<1	<2	<5	<5	<5	75	91	110	6.0	1200	100
143267	NW Rockslide	2050	220		550	<1	<1	56	<1	<2	20	<5	<5	77	82	120	6.9	950	78
143268	NW Rockslide	2015	240		390	<1	<1	71	<1	<2	5	<5	<5	38	44	95	5.6	1100	220
143269	NW Rockslide	1975	160		340	<1	<1	75	<1	<2	30	<5	<5	46	55	83	5.8	1200	300
143270	NW Rockslide	1890	150		410	<1	<1	67	<1	2	<5	<5	<5	80	82	140	6.9	950	120
143271	Gully 2-S	1850	65		250	<1	<1	89	<1	<2	20	10	<5	52	46	130	5.4	1300	160
143272	Gully 2-S	1875	60		180	<1	<1	78	<1	<2	40	<5	<5	47	66	100	4.8	1200	170
143273	Gully 2-S	1900	330		270	<1	<1	83	<1	<2	<5	<5	<5	58	45	130	5.3	1200	140
143274	Gully 2-S	1925	110		300	<1	<1	71	<1	<2	<5	<5	<5	40	49	86	5.4	1000	150
143275	Gully 2-S	1950	420		540	<1	<1	78	<1	2	<5	<5	<5	61	65	160	6.4	1200	170
143276	Gully 2-S	1975	500		550	<1	<1	57	<1	<2	10	<5	<5	68	60	180	5.7	990	160
143277	Gully 2-S	2000	>1000	1.86	1400	<1	<1	78	<1	16	<5	<5	<5	88	82	270	7.7	1500	180
143278	Gully 2-S	2025	690		590	<1	<1	52	<1	<2	<5	<5	<5	43	54	98	4.5	1100	93
143279	Gully 2-S	2050	310		550	<1	<1	55	<1	<2	20	<5	<5	62	59	160	5.7	1000	190
143280	Gully 2-S	2090	440		680	<1	3	64	<1	<2	<5	<5	<5	73	77	160	6.0	1600	240
143281	Gully 2-S	2115	420		610	<1	3	69	<1	<2	<5	<5	<5	54	65	120	6.7	1900	290
143282	Gully 1-S	2080	60		420	<1	<1	73	<1	<2	<5	<5	<5	74	69	130	5.1	1500	63
143283	Gully 1-S	2055	450		470	<1	<1	77	<1	<2	<5	<5	<5	60	60	91	5.6	1700	110
143284	Gully 1-S	2030	65		630	<1	<1	81	<1	2	<5	<5	<5	110	55	180	5.4	1900	63
143285	Gully 1-S	2005	>1000	11.21	400	20	2	79	<1	6	5	<5	<5	60	46	100	7.0	1700	180
143286	Gully 1-S	1975	200		390	<1	<1	55	<1	<2	5	<5	<5	48	55	99	4.7	1000	88
143287	Gully 1-S	1950	>1000	2.83	370	1	<1	62	<1	<2	<5	<5	<5	61	82	120	6.7	1200	99
143288	Gully 1-S	1925	730		410	<1	<1	67	<1	<2	15	<5	<5	57	71	120	6.8	1200	110
143289	Gully 1-S	1900	140		430	<1	<1	59	<1	<2	<5	<5	<5	41	75	74	5.2	1000	150
143290	Gully 1-S	1875	95		360	<1	<1	68	<1	<2	30	<5	<5	55	67	120	5.5	1500	200
143291	Gully 1-S	1850	270		400	<1	<1	76	<1	<2	25	<5	<5	60	66	130	6.4	1400	170
143292	Gully 1-S	1825	80		210	<1	<1	74	<1	<2	<5	<5	<5	46	71	110	5.8	1300	180
143293	Gully 1-S	1800	110		200	<1	<1	63	<1	<2	35	<5	<5	36	53	85	5.2	1100	130
143294	Gully 1-S	1775	260		830	<1	<1	66	<1	<2	15	<5	<5	48	79	99	6.9	1300	160
143295	Gully 1-S	1750	140		330	<1	8	67	<1	<2	<5	<5	<5	25	45	53	4.7	1200	110
143296	Gully 5-S	2200	85		240	<1	<1	110	<1	<2	5	<5	<5	39	30	80	4.2	520	75
143297	Gully 5-S	2170	450		610	<1	<1	64	<1	<2	<5	<5	<5	55	60	140	5.4	930	47
143298	Gully 5-S	2140	55		420	<1	<1	86	<1	<2	<5	10	<5	67	65	130	6.5	2400	180
143299	Gully 5-S	2110	240		350	<1	<1	68	<1	<2	20	<5	<5	63	53	110	4.9	1100	71
143300	Gully 5-S	2085	150		530	<1	<1	110	<1	2	<5	15	<5	85	64	190	5.8	1100	77
468566	Croy/ShellRidge		230		670	<1	<1	30	<1	<2	20	<5	<5	32	51	79	6.7	540	49
468567	Croy/ShellRidge		310		750	<1	<1	35	<1	<2	<5	<5	<5	30	51	45	9.5	490	65
468569	Croy/ShellRidge		130		730	<1	<1	32	<1	<2	<5	<5	<5	84	73	180	8.9	640	830
468570	South Ridge		30		330	<1	<1	77	<1	<2	<5	<5	<5	51	40	130	5.9	2300	130
468573	NE Rockslide	2222	>1000	10.76	770	13	<1	48	<1	52	<5	<5	<5	48	500	130	22.0	1800	130



Soup

Talus Fines Sample Analyses (part 2)

Sample ID	V ppm	Hg ppm	Sr ppm	La ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %	Ti ppm/%	Sc ppm	U ppm	Be ppm	B ppm	P ppm	Zr ppm	Ga ppm	Tl ppm
143242	110	n/a	36	n/a	6	<10	<10	1.8	1.6	0.50	<0.01	n/a	900	7	n/a	<1	<10	680	<1	n/a	n/a
143243	130	n/a	29	n/a	5	<10	<10	2.0	1.8	0.49	<0.01	n/a	990	8	n/a	<1	<10	690	<1	n/a	n/a
143244	130	n/a	30	n/a	6	<10	<10	2.2	1.9	0.52	<0.01	n/a	1100	10	n/a	<1	<10	800	1	n/a	n/a
143245	140	n/a	41	n/a	6	<10	<10	2.6	2.0	0.64	<0.01	n/a	1200	14	n/a	<1	<10	900	6	n/a	n/a
143246	120	n/a	68	n/a	9	<10	<10	2.7	1.9	1.50	<0.01	n/a	1200	15	n/a	<1	<10	730	5	n/a	n/a
143247	160	n/a	33	n/a	14	<10	<10	4.1	2.2	0.79	<0.01	n/a	470	25	n/a	<1	<10	880	16	n/a	n/a
143248	120	n/a	50	n/a	7	<10	<10	2.2	1.9	0.91	<0.01	n/a	1100	11	n/a	<1	<10	820	3	n/a	n/a
143249	120	n/a	110	n/a	13	<10	<10	3.0	1.8	0.63	0.03	n/a	1400	13	n/a	<1	<10	1400	1	n/a	n/a
143250	130	n/a	94	n/a	9	<10	<10	3.0	1.9	0.69	0.01	n/a	1100	13	n/a	<1	<10	1000	1	n/a	n/a
143251	140	n/a	45	n/a	14	<10	<10	2.4	1.7	0.39	0.02	n/a	1200	11	n/a	<1	<10	1100	<1	n/a	n/a
143252	110	n/a	43	n/a	8	<10	<10	1.8	1.6	0.50	0.01	n/a	1500	10	n/a	<1	<10	1100	6	n/a	n/a
143253	120	n/a	130	n/a	6	<10	<10	3.0	2.0	0.82	<0.01	n/a	1100	12	n/a	<1	<10	910	5	n/a	n/a
143254	130	n/a	61	n/a	8	<10	<10	2.6	2.0	0.64	<0.01	n/a	1300	13	n/a	<1	<10	1200	2	n/a	n/a
143255	140	n/a	64	n/a	9	<10	<10	2.7	2.0	0.67	0.01	n/a	1500	13	n/a	<1	<10	1200	6	n/a	n/a
143256	140	n/a	75	n/a	8	<10	<10	2.9	2.1	0.69	<0.01	n/a	1400	13	n/a	<1	<10	1300	7	n/a	n/a
143257	140	n/a	82	n/a	7	<10	<10	3.0	2.1	0.76	<0.01	n/a	1200	13	n/a	<1	<10	1300	7	n/a	n/a
143258	130	n/a	54	n/a	6	<10	<10	2.6	2.1	0.63	<0.01	n/a	1200	12	n/a	<1	<10	1100	5	n/a	n/a
143259	120	n/a	73	n/a	5	<10	<10	2.6	1.9	0.90	<0.01	n/a	920	7	n/a	<1	<10	1600	<1	n/a	n/a
143260	130	n/a	79	n/a	6	<10	<10	2.7	2.0	0.87	<0.01	n/a	1000	7	n/a	<1	<10	1500	2	n/a	n/a
143261	130	n/a	88	n/a	6	<10	<10	2.7	2.0	0.93	<0.01	n/a	1200	8	n/a	<1	<10	1500	<1	n/a	n/a
143262	180	n/a	20	n/a	8	<10	<10	3.5	2.4	0.44	<0.01	n/a	970	27	n/a	<1	<10	1300	14	n/a	n/a
143263	130	n/a	45	n/a	9	<10	<10	1.9	1.6	0.39	0.02	n/a	1000	9	n/a	<1	<10	900	6	n/a	n/a
143264	120	n/a	52	n/a	7	<10	<10	1.8	1.5	0.51	0.02	n/a	900	9	n/a	<1	<10	1100	9	n/a	n/a
143265	120	n/a	67	n/a	6	<10	<10	2.5	1.8	0.73	0.01	n/a	800	7	n/a	<1	<10	1100	6	n/a	n/a
143266	120	n/a	59	n/a	6	<10	<10	2.5	1.9	0.67	0.01	n/a	950	8	n/a	<1	<10	1100	6	n/a	n/a
143267	130	n/a	57	n/a	6	<10	<10	2.2	1.8	0.59	0.01	n/a	990	7	n/a	<1	<10	1000	8	n/a	n/a
143268	120	n/a	120	n/a	7	<10	<10	3.3	1.9	1.00	0.02	n/a	1200	9	n/a	<1	<10	1200	2	n/a	n/a
143269	110	n/a	120	n/a	8	<10	<10	3.7	1.9	1.30	0.04	n/a	1200	10	n/a	<1	<10	1200	5	n/a	n/a
143270	140	n/a	99	n/a	7	<10	<10	2.8	2.0	0.83	0.01	n/a	1400	10	n/a	<1	<10	1200	3	n/a	n/a
143271	110	n/a	98	n/a	6	<10	<10	3.8	2.1	1.00	<0.01	n/a	1800	8	n/a	<1	<10	880	2	n/a	n/a
143272	96	n/a	87	n/a	5	<10	<10	3.4	1.9	0.81	<0.01	n/a	1500	6	n/a	<1	<10	980	<1	n/a	n/a
143273	110	n/a	86	n/a	5	<10	<10	3.6	2.0	1.20	<0.01	n/a	1800	9	n/a	<1	<10	820	3	n/a	n/a
143274	110	n/a	110	n/a	5	<10	<10	3.7	2.0	1.30	0.01	n/a	1700	8	n/a	<1	<10	740	4	n/a	n/a
143275	140	n/a	85	n/a	6	<10	<10	3.2	2.0	1.00	<0.01	n/a	1500	12	n/a	<1	<10	870	4	n/a	n/a
143276	130	n/a	44	n/a	5	<10	<10	2.3	2.0	0.70	<0.01	n/a	880	8	n/a	<1	<10	900	6	n/a	n/a
143277	170	n/a	69	n/a	7	<10	<10	3.7	2.2	0.97	<0.01	n/a	1500	16	n/a	<1	<10	960	6	n/a	n/a
143278	110	n/a	73	n/a	4	<10	<10	2.9	1.8	1.30	0.02	n/a	970	7	n/a	<1	<10	660	6	n/a	n/a
143279	140	n/a	40	n/a	4	<10	<10	2.0	1.9	0.65	<0.01	n/a	770	8	n/a	<1	<10	810	8	n/a	n/a
143280	140	n/a	38	n/a	7	<10	<10	2.6	2.1	0.63	<0.01	n/a	860	11	n/a	<1	<10	820	9	n/a	n/a
143281	140	n/a	31	n/a	8	<10	<10	2.4	2.0	0.57	<0.01	n/a	810	11	n/a	<1	<10	960	8	n/a	n/a
143282	110	n/a	55	n/a	7	<10	<10	2.6	2.0	0.78	<0.01	n/a	940	9	n/a	<1	<10	730	7	n/a	n/a
143283	130	n/a	48	n/a	7	<10	<10	2.8	2.1	0.73	<0.01	n/a	820	9	n/a	<1	<10	730	5	n/a	n/a
143284	140	n/a	47	n/a	7	<10	<10	3.3	2.3	1.10	<0.01	n/a	770	14	n/a	<1	<10	680	9	n/a	n/a
143285	120	n/a	33	n/a	9	<10	<10	3.0	2.1	0.75	<0.01	n/a	430	11	n/a	<1	<10	970	9	n/a	n/a
143286	110	n/a	53	n/a	5	<10	<10	2.6	1.8	0.79	0.01	n/a	660	7	n/a	<1	<10	760	6	n/a	n/a
143287	130	n/a	92	n/a	7	<10	<10	3.2	2.0	0.98	0.01	n/a	1300	11	n/a	<1	<10	840	4	n/a	n/a
143288	140	n/a	89	n/a	7	<10	<10	3.1	2.0	0.94	0.01	n/a	1200	11	n/a	<1	<10	970	2	n/a	n/a
143289	100	n/a	400	n/a	5	<10	<10	4.5	1.8	1.80	0.04	n/a	1400	7	n/a	<1	<10	1000	3	n/a	n/a
143290	120	n/a	170	n/a	6	<10	<10	4.1	2.0	1.30	0.02	n/a	1700	10	n/a	<1	<10	860	4	n/a	n/a
143291	130	n/a	98	n/a	8	<10	<10	3.5	2.0	1.00	0.01	n/a	1500	12	n/a	<1	<10	1000	5	n/a	n/a
143292	110	n/a	75	n/a	6	<10	<10	3.5	2.0	0.96	<0.01	n/a	1800	9	n/a	<1	<10	880	2	n/a	n/a
143293	91	n/a	77	n/a	6	<10	<10	3.1	1.8	0.91	<0.01	n/a	1500	7	n/a	<1	<10	830	<1	n/a	n/a
143294	100	n/a	58	n/a	5	<10	<10	3.2	1.9	0.54	<0.01	n/a	1300	8	n/a	<1	<10	800	2	n/a	n/a
143295	81	n/a	52	n/a	3	<10	<10	2.4	1.6	0.45	<0.01	n/a	990	4	n/a	<1	<10	730	3	n/a	n/a
143296	85	n/a	50	n/a	6	<10	<10	2.2	1.5	0.54	0.01	n/a	1100	6	n/a	<1	<10	620	1	n/a	n/a
143297	120	n/a	35	n/a	5	<10	<10	3.0	1.9	0.78	<0.01	n/a	990	10	n/a	<1	<10	700	3	n/a	n/a
143298	150	n/a	38	n/a	9	<10	<10	4.0	2.1	1.10	<0.01	n/a	1300	15	n/a	<1	<10	840	3	n/a	n/a
143299	110	n/a	120	n/a	6	<10	<10	3.7	1.9	1.40	0.03	n/a	1300	8	n/a	<1	<10	670	2	n/a	n/a
143300	130	n/a	83	n/a	5	<10	<10	3.6	2.1	0.95	<0.01	n/a	1200	14	n/a	<1	<10	750	5	n/a	n/a
468566	94	n/a	32	n/a	2	<10	<10	1.7	1.6	0.28	0.01	n/a	1200	6	n/a	<1	<10	1200	4	n/a	n/a
468567	90	n/a	31	n/a	2	<10	<10	2.0	1.5	0.18	<0.01	n/a	1400	4	n/a	<1	<10	2100	2	n/a	n/a
468569	170	n/a	450	n/a	6	<10	<10	3.1	1.7	0.46	0.02	n/a	1400	11	n/a	<1	<10	1900	13	n/a	n/a
468570	120	n/a	68	n/a	12	<10	<10	3.8	2.3	0.61	0.02	n/a	1100	18	n/a	<1	<10	910	9	n/a	n/a
468573	330	n/a	81	n/a	5	<10	<10	2.6	2.3	0.51	0.04	n/a	1100	33	n/a	<1	<10	770	21	n/a	n/a

## Project 572

## Soup

file: 572vpt\_tb2.wk1

Talus Fines Sample Analyses (ICP)  
1996

Reference: a9626818

TSL - s3641 (m7889), s3672 (m7894), s3737 (m7926), s3791 (m7965)

Sample ID	Location	Elev. m	Au ppb	Au g/t	Cu ppm	Ag ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm
468577	Shell Cirque	2150	>1000	1.54	1900	<1	<1	56	<1	8	<5	<5	<5	25	58	120	21.0	890	53
468601	Gully 4C-N	2180	85		47	<1	1	54	<1	<2	<5	<5	<5	10	10	12	1.9	390	64
468602	Gully 4C-N	2150	380		1400	<1	<1	45	<1	<2	<5	<5	<5	26	85	30	4.8	810	150
468603	Gully 4C-N	2125	900		770	1	<1	38	<1	10	<5	<5	<5	35	78	54	5.9	860	110
468604	Gully 4C-N	2100	>1000	1.10	770	1	<1	39	<1	12	10	<5	<5	38	89	52	6.9	870	100
468605	Gully 4C-N	2075	540		840	1	<1	39	<1	6	<5	<5	<5	50	120	62	6.8	880	130
468606	Gully 4C-N	2050	450		690	<1	<1	37	<1	6	<5	<5	<5	49	110	61	5.6	820	110
468607	Gully 4C-N	2025	280		510	<1	2	51	<1	10	<5	<5	<5	34	68	45	5.7	870	150
468608	Gully 4C-N	2000	460		540	<1	<1	42	<1	12	<5	<5	<5	46	90	70	5.5	990	120
468609	Gully 4C-N	1975	260		460	<1	3	48	<1	8	<5	<5	<5	42	63	82	5.6	990	110
468610	Gully 4C-N	1950	390		600	1	2	42	<1	8	<5	<5	<5	46	84	73	5.6	890	110
468611	Gully 4C-N	1925	580		850	<1	<1	40	<1	6	<5	<5	<5	55	100	90	6.9	850	89
468612	Gully 4C-N	1900	430		570	<1	<1	36	<1	4	10	<5	<5	53	77	98	5.5	800	85
468613	Gully 4C-N	1875	520		640	<1	<1	38	<1	6	<5	<5	<5	48	77	81	8.0	780	87
468614	Gully 4C-N	1850	580		690	<1	<1	34	<1	6	<5	<5	<5	56	89	87	6.6	780	84
468615	Gully 4C-N	1825	270		530	<1	3	44	<1	<2	<5	<5	<5	49	62	87	5.8	920	120
468616	Gully 4C-N	1800	340		480	<1	4	47	<1	<2	10	<5	<5	49	55	82	5.5	950	170
468617	Gully 4C-N	1775	380		480	<1	2	42	<1	<2	<5	<5	<5	50	66	86	5.9	940	140
468618	Gully 4C-N	1750	250		270	<1	3	49	<1	<2	20	<5	<5	35	56	59	5.1	1200	160
468619	Gully 4C-N	1725	220		170	<1	4	64	<1	<2	<5	<5	<5	37	60	57	5.0	2000	210
468621	Croy Cirque		>1000	1.05	830	<1	<1	45	<1	6	10	<5	<5	99	140	220	7.5	1300	110
468622	Croy Cirque		210		1100	<1	<1	40	<1	<2	20	<5	<5	130	140	280	7.8	1100	150
468623	Croy Cirque		300		910	<1	<1	91	<1	<2	20	<5	<5	96	110	290	7.3	1300	170
468624	Croy Cirque		480		510	<1	<1	53	<1	<2	10	<5	<5	100	51	310	7.0	1400	270
468625	Croy Cirque		120		590	<1	<1	31	<1	<2	20	<5	<5	86	59	290	5.5	900	190
468626	Croy Cirque		300		520	<1	<1	33	<1	<2	<5	<5	<5	110	55	270	5.1	790	85
468627	Croy Cirque		240		630	<1	<1	31	<1	<2	10	<5	<5	140	77	350	5.0	870	320
468628	Shell Cirque	1900	65		510	<1	<1	33	<1	<2	<5	<5	<5	84	59	260	4.7	520	90
468629	Shell Cirque	1870	130		460	<1	<1	33	<1	<2	30	<5	<5	130	65	330	5.1	720	140
468630	Shell Cirque	1870	180		340	<1	<1	29	<1	<2	<5	<5	<5	130	51	320	4.3	720	130
468631	Shell Cirque	1880	70		300	<1	<1	33	<1	<2	10	<5	<5	74	35	250	4.1	680	88
468632	Shell Cirque	1885	25		150	<1	<1	38	<1	<2	<5	<5	<5	61	32	250	4.0	660	120
468633	Shell Cirque	1890	85		380	<1	<1	62	<1	<2	20	<5	<5	92	48	310	6.7	1700	220
468634	Shell Cirque	1930	120		360	<1	<1	48	<1	<2	10	<5	<5	91	41	290	5.5	1100	200
468635	Shell Cirque	1945	140		390	<1	<1	57	<1	<2	<5	<5	<5	130	54	420	7.3	1300	91
468636	Shell Cirque	1965	100		250	<1	<1	86	<1	<2	10	<5	<5	80	40	300	7.0	1100	110
468637	Shell Cirque	2170	>1000	7.03	7000	5	1	87	<1	20	5	<5	<5	41	93	96	12.0	1600	170
468638	Shell Cirque	2150	>1000	2.14	3500	2	<1	63	<1	10	<5	<5	<5	36	78	120	14.0	1400	140
468639	Shell Cirque	2030	580		1000	<1	<1	68	<1	<2	20	<5	<5	68	76	230	9.2	1500	160
468640	Shell Cirque	2025	>1000	1.52	2400	2	<1	76	<1	18	<5	<5	<5	54	76	170	9.5	1300	160
468641	Shell Cirque	1915	110		1200	<1	<1	62	<1	<2	10	<5	<5	65	110	130	7.2	1400	64
468642	Shell Cirque	1920	140		670	<1	<1	68	<1	<2	10	<5	<5	95	57	260	7.4	930	78
468643	Shell Cirque	1935	280		610	<1	<1	52	<1	<2	<5	<5	<5	60	48	190	7.6	840	59
468644	Shell Cirque	1925	240		450	<1	<1	57	1	<2	<5	<5	<5	58	33	230	5.5	1200	170
468645	Shell Cirque	1935	55		360	<1	<1	64	<1	<2	<5	<5	<5	53	38	210	6.8	1100	76
468646	Shell Cirque	1930	55		200	<1	<1	80	2	<2	<5	<5	<5	98	51	430	9.2	1600	170
488701	Gully 5-S	2060	120		550	<1	<1	87	<1	<2	<5	15	<5	61	69	180	6.0	1100	100
488702	Gully 5-S	2030	95		160	<1	<1	160	<1	<2	30	<5	<5	41	36	78	5.5	1400	200
488703	Gully 5-S	2000	65		160	<1	<1	94	<1	<2	40	<5	<5	19	35	29	5.1	1800	230
488704	Gully 5-S	1975	85		180	<1	<1	100	<1	<2	60	<5	<5	36	38	71	5.5	1500	200
488705	Gully 5-S	1950	240		280	<1	<1	530	2	6	<5	<5	<5	16	58	23	6.1	2700	430
488706	Gully 5-S	1925	160		260	<1	<1	100	<1	<2	35	<5	<5	51	49	120	5.7	1400	130
488707	Gully 5-S	1900	100		240	<1	<1	110	<1	4	<5	10	<5	45	45	95	5.6	1600	160
488708	Gully 5-S	1875	110		240	<1	<1	110	<1	4	35	<5	<5	45	47	98	5.8	1400	140
488709	Gully 5-S	1835	100		190	<1	2	110	<1	8	<5	<5	<5	35	36	72	5.2	1300	190
488710	Gully 5-S	1800	65		85	<1	61	100	<1	4	5	<5	<5	17	17	32	3.2	930	230
488711	Gully 5-S	1775	65		110	<1	120	140	1	6	<5	<5	<5	24	19	41	3.4	1300	300
488712	Gully 5-S	1750	45		80	<1	57	100	<1	4	10	<5	<5	14	15	28	3.5	1200	320
488713	Gully 5-S	1710	30		72	<1	27	85	<1	2	5	<5	<5	13	16	26	3.3	1100	270
488714	Gully 7-S	2050	100		130	<1	2	87	<1	<2	35	<5	<5	36	26	69	4.8	810	120
488715	Gully 7-S	2075	55		130	<1	<1	91	<1	<2	<5	<5	<5	39	29	81	5.1	810	130
488716	Gully 7-S	2100	120		140	<1	<1	76	<1	<2	10	<5	<5	40	26	65	4.4	770	120
488717	Gully 7-S	2125	100		180	<1	<1	68	<1	<2	15	<5	<5	44	29	81	4.5	800	120
488718	Gully 7-S	2150	180		280	<1	<1	67	<1	<2	10	<5	<5	41	30	76	4.4	680	100

## Soup

## Talus Fines Sample Analyses (part 2)

Sample ID	V ppm	Hg ppm	Sr ppm	La ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %	Ti ppm/%	Sc ppm	U ppm	Be ppm	B ppm	P ppm	Zr ppm	Ga ppm	Tl ppm
468577	270	n/a	4	n/a	2	<10	<10	3.1	2.3	0.17	<0.01	n/a	790	13	n/a	<1	<10	570	9	n/a	n/a
468601	17	n/a	190	n/a	3	<10	<10	2.5	1.3	1.20	0.06	n/a	250	1	n/a	<1	<10	1000	2	n/a	n/a
468602	110	n/a	230	n/a	4	<10	<10	2.7	1.6	1.00	0.03	n/a	810	5	n/a	<1	<10	880	5	n/a	n/a
468603	120	n/a	140	n/a	5	<10	<10	2.3	1.7	0.75	0.02	n/a	990	5	n/a	<1	<10	1100	4	n/a	n/a
468604	120	n/a	130	n/a	5	<10	<10	2.3	1.7	0.69	0.02	n/a	1000	5	n/a	<1	<10	1100	3	n/a	n/a
468605	110	n/a	150	n/a	6	<10	<10	2.3	1.7	0.60	0.03	n/a	1200	4	n/a	<1	<10	1300	7	n/a	n/a
468606	110	n/a	140	n/a	5	<10	<10	2.3	1.7	0.77	0.02	n/a	1100	5	n/a	<1	<10	1000	5	n/a	n/a
468607	110	n/a	130	n/a	4	<10	<10	2.5	1.7	0.72	0.03	n/a	1200	5	n/a	<1	<10	1000	6	n/a	n/a
468608	120	n/a	120	n/a	5	<10	<10	2.5	1.8	0.69	0.02	n/a	1200	6	n/a	<1	<10	1000	6	n/a	n/a
468609	140	n/a	100	n/a	4	<10	<10	2.5	1.8	0.73	0.01	n/a	1000	7	n/a	<1	<10	860	8	n/a	n/a
468610	120	n/a	110	n/a	5	<10	<10	2.5	1.8	0.70	0.02	n/a	1200	6	n/a	<1	<10	990	6	n/a	n/a
468611	130	n/a	110	n/a	5	<10	<10	2.5	1.9	0.93	0.02	n/a	1200	7	n/a	<1	<10	1000	5	n/a	n/a
468612	130	n/a	100	n/a	4	<10	<10	2.4	1.9	0.74	0.02	n/a	1000	7	n/a	<1	<10	960	5	n/a	n/a
468613	130	n/a	82	n/a	3	<10	<10	2.2	1.7	0.57	0.02	n/a	1100	6	n/a	<1	<10	1000	5	n/a	n/a
468614	120	n/a	93	n/a	4	<10	<10	2.3	1.8	0.73	0.02	n/a	1000	6	n/a	<1	<10	950	7	n/a	n/a
468615	110	n/a	81	n/a	3	<10	<10	2.5	1.7	0.54	0.02	n/a	1000	5	n/a	<1	<10	870	5	n/a	n/a
468616	120	n/a	100	n/a	4	<10	<10	2.8	1.9	0.77	0.01	n/a	880	5	n/a	<1	<10	800	4	n/a	n/a
468617	110	n/a	92	n/a	4	<10	<10	2.4	1.8	0.77	0.01	n/a	970	5	n/a	<1	<10	930	4	n/a	n/a
468618	91	n/a	93	n/a	4	<10	<10	2.4	1.6	0.57	0.02	n/a	900	4	n/a	<1	<10	800	4	n/a	n/a
468619	72	n/a	92	n/a	8	<10	<10	2.4	1.6	0.58	0.02	n/a	750	4	n/a	<1	<10	880	3	n/a	n/a
468621	150	n/a	190	n/a	5	<10	<10	3.6	2.4	1.00	<0.01	n/a	1200	14	n/a	<1	<10	760	7	n/a	n/a
468622	140	n/a	150	n/a	4	<10	<10	3.4	2.4	0.91	<0.01	n/a	1200	12	n/a	<1	<10	920	8	n/a	n/a
468623	180	n/a	150	n/a	6	<10	<10	4.2	2.6	0.88	<0.01	n/a	1300	15	n/a	<1	<10	970	9	n/a	n/a
468624	180	n/a	210	n/a	6	<10	<10	4.1	2.6	0.92	<0.01	n/a	1300	21	n/a	<1	<10	1200	12	n/a	n/a
468625	160	n/a	220	n/a	4	<10	<10	3.4	2.4	0.97	<0.01	n/a	1100	14	n/a	<1	<10	1000	8	n/a	n/a
468626	150	n/a	130	n/a	4	<10	<10	3.4	2.4	1.10	<0.01	n/a	1400	11	n/a	<1	<10	1000	5	n/a	n/a
468627	120	n/a	110	n/a	4	<10	<10	3.2	2.4	0.95	<0.01	n/a	1400	11	n/a	<1	<10	950	6	n/a	n/a
468628	120	n/a	85	n/a	4	<10	<10	2.7	2.3	0.82	0.01	n/a	1300	8	n/a	<1	<10	1000	5	n/a	n/a
468629	130	n/a	86	n/a	4	<10	<10	3.2	2.4	0.93	<0.01	n/a	1400	11	n/a	<1	<10	1100	4	n/a	n/a
468630	110	n/a	74	n/a	3	<10	<10	2.8	2.3	0.81	0.01	n/a	1400	9	n/a	<1	<10	940	5	n/a	n/a
468631	100	n/a	78	n/a	4	<10	<10	2.6	2.2	0.71	0.01	n/a	1400	7	n/a	<1	<10	930	3	n/a	n/a
468632	95	n/a	61	n/a	3	<10	<10	2.7	2.0	0.62	0.02	n/a	1800	4	n/a	<1	<10	960	2	n/a	n/a
468633	170	n/a	130	n/a	8	<10	<10	4.1	2.5	0.59	0.01	n/a	1500	19	n/a	<1	<10	1200	12	n/a	n/a
468634	150	n/a	160	n/a	6	<10	<10	3.5	2.4	0.54	0.01	n/a	1400	14	n/a	<1	<10	1000	10	n/a	n/a
468635	200	n/a	50	n/a	7	<10	<10	4.2	2.7	0.41	<0.01	n/a	1300	24	n/a	<1	<10	1000	14	n/a	n/a
468636	220	n/a	62	n/a	7	<10	<10	3.9	2.6	0.60	<0.01	n/a	1800	23	n/a	<1	<10	1100	14	n/a	n/a
468637	200	n/a	82	n/a	8	<10	<10	4.0	2.4	0.69	<0.01	n/a	1300	20	n/a	<1	<10	1500	8	n/a	n/a
468638	240	n/a	78	n/a	6	<10	<10	3.9	2.5	0.61	<0.01	n/a	1200	18	n/a	<1	<10	1300	6	n/a	n/a
468639	190	n/a	100	n/a	6	<10	<10	3.6	2.4	0.81	0.01	n/a	980	18	n/a	<1	<10	1000	11	n/a	n/a
468640	210	n/a	110	n/a	6	<10	<10	3.7	2.4	0.92	0.01	n/a	1100	17	n/a	<1	<10	1200	11	n/a	n/a
468641	150	n/a	200	n/a	4	<10	<10	2.7	2.1	0.79	<0.01	n/a	920	6	n/a	<1	<10	1100	2	n/a	n/a
468642	200	n/a	87	n/a	4	<10	<10	3.0	2.4	0.92	<0.01	n/a	1700	6	n/a	<1	<10	1000	3	n/a	n/a
468643	220	n/a	130	n/a	5	<10	<10	3.1	2.3	1.30	<0.01	n/a	1400	9	n/a	<1	<10	1800	4	n/a	n/a
468644	170	n/a	110	n/a	5	<10	<10	3.6	2.4	1.30	<0.01	n/a	1100	9	n/a	<1	<10	1200	5	n/a	n/a
468645	200	n/a	99	n/a	6	<10	<10	3.4	2.4	1.20	<0.01	n/a	1700	12	n/a	<1	<10	1400	9	n/a	n/a
468646	260	n/a	31	n/a	7	<10	<10	4.1	2.8	0.90	<0.01	n/a	1400	36	n/a	<1	<10	830	28	n/a	n/a
488701	130	n/a	70	n/a	5	<10	<10	3.7	2.1	1.10	<0.01	n/a	1100	12	n/a	<1	<10	890	3	n/a	n/a
488702	73	n/a	95	n/a	8	<10	<10	3.2	2.0	0.89	0.02	n/a	730	8	n/a	<1	<10	670	<1	n/a	n/a
488703	46	n/a	180	n/a	10	<10	<10	3.6	1.9	1.30	0.02	n/a	620	4	n/a	<1	<10	690	<1	n/a	n/a
488704	76	n/a	110	n/a	9	<10	<10	3.2	1.9	0.91	0.01	n/a	880	7	n/a	<1	<10	690	<1	n/a	n/a
488705	43	n/a	240	n/a	17	<10	<10	3.0	1.7	0.81	0.01	n/a	690	5	n/a	<1	<10	850	<1	n/a	n/a
488706	93	n/a	91	n/a	7	<10	<10	3.3	2.0	0.86	0.02	n/a	1000	8	n/a	<1	<10	760	2	n/a	n/a
488707	84	n/a	110	n/a	9	<10	<10	3.2	2.0	0.79	0.01	n/a	890	7	n/a	<1	<10	830	2	n/a	n/a
488708	80	n/a	100	n/a	8	<10	<10	3.1	1.9	0.76	0.01	n/a	960	8	n/a	<1	<10	780	1	n/a	n/a
488709	68	n/a	140	n/a	9	<10	<10	2.9	1.8	0.79	0.01	n/a	800	7	n/a	<1	<10	780	2	n/a	n/a
488710	34	n/a	110	n/a	11	<10	<10	1.6	1.1	0.49	<0.01	n/a	280	4	n/a	<1	<10	620	1	n/a	n/a
488711	39	n/a	110	n/a	13	<10	<10	1.9	1.3	0.46	<0.01	n/a	180	4	n/a	<1	<10	660	<1	n/a	n/a
488712	37	n/a	170	n/a	9	<10	<10	2.1	1.0	0.52	<0.01	n/a	190	3	n/a	<1	<10	800	<1	n/a	n/a
488713	36	n/a	160	n/a	7	<10	<10	2.2	0.9	0.53	<0.01	n/a	230	2	n/a	<1	<10	820	<1	n/a	n/a
488714	88	n/a	57	n/a	9	<10	<10	2.7	1.6	0.45	0.01	n/a	1300	6	n/a	<1	<10	970	<1	n/a	n/a
488715	94	n/a	55	n/a	10	<10	<10	3.0	1.7	0.52	0.01	n/a	1400	7	n/a	<1	<10	970	7	n/a	n/a
488716	84	n/a	51	n/a	9	<10	<10	2.6	1.6	0.50	0.01	n/a	1100	6	n/a	<1	<10	1100	1	n/a	n/a
488717	88	n/a	71	n/a	8	<10	<10	2.8	1.7	0.64	0.01	n/a	1100	7	n/a	<1	<10	1000	4	n/a	n/a
488718	87	n/a	89	n/a	9	<10	<10	2.9	1.6	0.82	0.04	n/a	1000	7	n/a	<1	<10	860	2	n/a	n/a

## Project 572

## Soup

file: 572rpt\_tlb2.wk1

Talus Fines Sample Analyses (ICP)  
1996Reference : a9626818  
TSL - s3641 (m7889), s3672 (m7894), s3737 (m7926), s3791 (m7965)

Sample ID	Location	Elev. m	Au ppb	Au g/t	Cu ppm	Ag ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm
488719	SE Rockslide	2260	240		340	<1	5	160	<1	<2	10	<5	<5	42	40	120	7.7	1600	100
488720	SE Rockslide	2235	790		430	<1	3	67	<1	<2	5	<5	<5	37	31	120	5.8	700	84
488721	SE Rockslide	2210	210		260	<1	6	60	<1	<2	<5	<5	<5	31	28	110	5.6	700	160
488722	SE Rockslide	2185	180		230	<1	3	56	<1	<2	<5	<5	<5	100	31	250	4.1	690	51
488723	SE Rockslide	2160	230		580	<1	<1	50	<1	<2	<5	<5	<5	65	57	120	4.5	930	110
488724	SE Rockslide	2130	290		1800	1	<1	110	<1	<2	<5	<5	<5	83	91	190	7.8	2100	65
488725	SE Rockslide	2100	240		570	<1	19	97	<1	<2	<5	<5	<5	90	61	190	5.8	1400	60
488726	SE Rockslide	2075	550		620	<1	130	240	<1	<2	20	<5	<5	74	58	160	5.7	1500	96
488727	SE Rockslide	2050	340		670	<1	91	260	<1	<2	10	<5	<5	74	59	160	5.5	1100	64
488728	SE Rockslide	2025	>1000	1.41	480	<1	26	98	<1	16	<5	<5	<5	51	55	74	5.0	1300	220
488729	SE Rockslide	2000	760		630	<1	39	160	<1	<2	<5	<5	<5	69	59	150	5.2	990	83
488730	SE Rockslide	1970	740	1.38	530	<1	23	130	<1	<2	<5	<5	<5	75	56	170	5.7	1100	110
488731	SE Rockslide	1950	640		500	<1	46	130	<1	<2	<5	<5	<5	64	55	160	5.3	960	98
488732	SE Rockslide	1925	530		520	<1	26	130	<1	<2	<5	<5	<5	72	48	170	5.1	1000	110
488733	SE Rockslide	1900	540		540	<1	42	140	<1	<2	20	<5	<5	68	53	160	5.5	1100	130
488734	Northwest cirque	2015	410		440	<1	5	92	<1	<2	30	<5	<5	90	56	190	5.0	1500	170
488735	Northwest cirque	2040	130		250	<1	<1	91	<1	<2	<5	<5	<5	87	57	170	4.9	1400	170
488736	Northwest cirque	2040	35		270	<1	<1	82	<1	<2	<5	<5	<5	90	51	210	4.9	1200	130
488737	Northwest cirque	2060	130		480	<1	<1	74	<1	<2	5	<5	<5	68	47	150	5.2	1200	84
488738	Northwest cirque	2055	75		480	<1	<1	67	<1	<2	<5	<5	<5	71	55	160	4.8	1300	75
488739	Northwest cirque	2075	120		320	<1	1	65	<1	<2	20	<5	<5	93	58	160	4.4	750	67
488740	Northwest cirque	2075	30		300	<1	<1	60	<1	<2	<5	<5	<5	150	47	260	4.6	940	73
488741	Northwest cirque	2080	25		330	<1	<1	57	<1	<2	30	<5	<5	85	46	190	4.6	950	77
488742	Northwest cirque	2080	35		170	<1	2	45	<1	<2	<5	<5	<5	74	31	190	4.4	660	74
488743	Northwest cirque	2085	15		140	<1	<1	31	<1	<2	<5	<5	<5	110	34	250	4.0	640	47
488744	Northwest cirque	2085	20		210	<1	<1	39	<1	<2	<5	<5	<5	48	39	130	5.0	820	44
488745	Northwest cirque	2090	85		730	<1	<1	36	<1	<2	10	<5	<5	68	52	160	4.4	690	60
488746	Northwest cirque	2100	110		570	<1	<1	35	<1	<2	<5	<5	<5	68	66	150	4.1	770	52
488747	Northwest cirque	2095	100		540	<1	<1	39	<1	<2	10	<5	<5	73	69	160	4.1	650	50
488748	Northwest cirque	2100	50		360	<1	<1	35	<1	<2	<5	<5	<5	62	54	140	4.7	710	45
488749	Northwest cirque	2110	45		210	<1	<1	60	<1	<2	10	<5	<5	52	29	160	3.8	650	72
488750	Northwest cirque	2130	100		400	<1	2	44	<1	<2	20	<5	<5	34	34	90	4.1	1100	48
488751	Gully 4-S	1980	860		4100	3	<1	93	<1	<2	<5	<5	<5	56	81	92	7.6	1200	120
488752	Northwest cirque	2115	35		290	<1	<1	40	<1	<2	<5	<5	<5	32	26	84	3.8	680	49
488753	Northwest cirque	2120	800		3400	2	<1	41	<1	10	<5	<5	<5	110	100	220	7.3	1100	45
488754	Northwest cirque	2120	540		2600	2	<1	41	<1	8	<5	<5	<5	78	84	140	6.0	760	52
488755	Gully 5A-N	2100	480		1000	1	3	47	<1	4	10	<5	<5	39	110	44	5.8	840	88
488756	Gully 5A-N	2075	160		550	<1	<1	38	<1	<2	<5	<5	<5	35	70	65	4.6	730	55
488757	Gully 5A-N	2050	170		490	<1	<1	36	<1	<2	<5	20	<5	38	75	71	4.2	770	71
488758	Gully 5A-N	2025	490		490	<1	<1	37	<1	2	<5	<5	<5	40	71	66	4.4	760	68
488759	Gully 5A-N	2000	530		470	<1	<1	39	<1	<2	<5	<5	<5	42	70	70	4.6	770	78
488760	Gully 5A-N	1975	250		660	<1	8	62	<1	<2	20	<5	<5	49	72	86	6.9	1200	160
488761	Gully 5A-N	1950	120		500	<1	5	60	<1	<2	<5	<5	<5	42	49	69	5.2	1500	150
488762	Gully 5A-N	1925	340		390	<1	2	50	<1	<2	<5	<5	<5	38	55	63	4.9	1200	150
488763	Gully 5A-N	1900	530		350	<1	2	57	<1	<2	<5	<5	<5	57	60	91	5.6	1300	170
488764	Gully 5A-N	1875	190		350	<1	<1	51	<1	<2	<5	<5	<5	48	57	74	5.0	1100	130
488765	Gully 5A-N	1850	320		290	<1	4	53	<1	<2	<5	<5	<5	52	57	75	4.8	1400	140
488766	Gully 5A-N	1825	310		330	<1	<1	55	<1	2	<5	<5	<5	49	56	61	5.0	1200	150
488767	Gully 5A-N	1800	230		410	<1	<1	54	<1	<2	10	<5	<5	45	65	64	5.8	1300	170
488768	Gully 5A-N	1775	150		230	<1	1	55	<1	<2	<5	<5	<5	36	47	65	4.7	1300	150
488769	Gully 5A-N	1750	200		260	<1	2	55	<1	<2	<5	<5	<5	44	62	67	5.0	1300	130
488770	Gully 5A-N	1725	190		210	<1	4	71	<1	<2	<5	<5	<5	24	92	34	5.1	2100	180
488771	Gully 5A-N	1700	75		91	<1	6	64	<1	2	<5	<5	<5	8	50	9	4.4	940	140
488772	Gully 5A-N	1700	170		130	<1	14	74	<1	2	10	<5	<5	12	45	10	7.6	960	210

## Soup

## Talus Fines Sample Analyses (part 2)

Sample ID	V ppm	Hg ppm	Sr ppm	La ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %	Ti ppm/%	Sc ppm	U ppm	Be ppm	B ppm	P ppm	Zr ppm	Ga ppm	Tl ppm
488719	250	n/a	25	n/a	5	<10	<10	3.4	2.4	0.58	<0.01	n/a	150	19	n/a	<1	<10	760	15	n/a	n/a
488720	170	n/a	39	n/a	4	<10	<10	1.9	1.7	0.51	<0.01	n/a	780	8	n/a	<1	<10	760	6	n/a	n/a
488721	140	n/a	40	n/a	6	<10	<10	1.6	1.5	0.54	<0.01	n/a	770	6	n/a	<1	<10	780	5	n/a	n/a
488722	120	n/a	38	n/a	3	<10	<10	1.7	1.9	0.54	<0.01	n/a	920	5	n/a	<1	<10	380	3	n/a	n/a
488723	110	n/a	90	n/a	4	<10	<10	1.9	1.8	0.70	0.01	n/a	740	6	n/a	<1	<10	740	4	n/a	n/a
488724	170	n/a	29	n/a	4	<10	<10	2.8	2.2	0.71	<0.01	n/a	610	16	n/a	<1	<10	620	11	n/a	n/a
488725	110	n/a	40	n/a	4	<10	<10	2.2	2.0	2.00	<0.01	n/a	500	11	n/a	<1	<10	760	9	n/a	n/a
488726	110	n/a	33	n/a	5	<10	<10	2.2	2.0	1.50	<0.01	n/a	380	10	n/a	<1	<10	830	9	n/a	n/a
488727	120	n/a	37	n/a	4	<10	<10	2.1	2.0	1.80	<0.01	n/a	840	10	n/a	<1	<10	690	10	n/a	n/a
488728	50	n/a	35	n/a	5	<10	<10	1.5	1.5	2.20	<0.01	n/a	82	7	n/a	<1	<10	770	9	n/a	n/a
488729	120	n/a	42	n/a	4	<10	<10	1.9	1.9	2.00	<0.01	n/a	600	10	n/a	<1	<10	720	7	n/a	n/a
488730	130	n/a	37	n/a	5	<10	<10	2.4	2.1	1.70	<0.01	n/a	680	11	n/a	<1	<10	770	10	n/a	n/a
488731	120	n/a	40	n/a	5	<10	<10	2.1	2.0	2.10	<0.01	n/a	630	10	n/a	<1	<10	760	5	n/a	n/a
488732	120	n/a	32	n/a	4	<10	<10	2.3	2.1	1.50	<0.01	n/a	420	9	n/a	<1	<10	750	9	n/a	n/a
488733	130	n/a	36	n/a	5	<10	<10	2.3	2.0	1.90	<0.01	n/a	510	10	n/a	<1	<10	830	8	n/a	n/a
488734	110	n/a	95	n/a	5	<10	<10	3.1	2.2	0.92	0.01	n/a	820	9	n/a	<1	<10	900	10	n/a	n/a
488735	100	n/a	73	n/a	4	<10	<10	2.5	2.0	0.66	0.02	n/a	1000	7	n/a	<1	<10	760	7	n/a	n/a
488736	120	n/a	60	n/a	5	<10	<10	2.6	2.1	0.77	0.01	n/a	1100	8	n/a	<1	<10	850	7	n/a	n/a
488737	160	n/a	75	n/a	5	<10	<10	2.5	1.9	1.00	0.01	n/a	1300	13	n/a	<1	<10	680	8	n/a	n/a
488738	130	n/a	74	n/a	5	<10	<10	2.6	2.0	0.84	0.01	n/a	1300	12	n/a	<1	<10	670	9	n/a	n/a
488739	110	n/a	86	n/a	4	<10	<10	2.3	1.9	0.73	0.01	n/a	1100	9	n/a	<1	<10	640	6	n/a	n/a
488740	120	n/a	57	n/a	4	<10	<10	2.5	2.1	0.97	0.01	n/a	1400	6	n/a	<1	<10	750	4	n/a	n/a
488741	110	n/a	82	n/a	3	<10	<10	2.5	2.0	0.92	<0.01	n/a	1200	5	n/a	<1	<10	720	5	n/a	n/a
488742	110	n/a	72	n/a	3	<10	<10	2.2	2.0	0.74	0.02	n/a	1100	6	n/a	<1	<10	800	5	n/a	n/a
488743	95	n/a	51	n/a	3	<10	<10	2.5	2.2	0.73	<0.01	n/a	980	4	n/a	<1	<10	960	3	n/a	n/a
488744	120	n/a	60	n/a	3	<10	<10	2.5	1.9	0.91	0.01	n/a	890	5	n/a	<1	<10	840	2	n/a	n/a
488745	110	n/a	69	n/a	3	<10	<10	2.3	2.0	0.91	0.01	n/a	1100	5	n/a	<1	<10	920	6	n/a	n/a
488746	88	n/a	70	n/a	3	<10	<10	2.2	1.9	1.40	0.01	n/a	1300	5	n/a	<1	<10	890	5	n/a	n/a
488747	86	n/a	64	n/a	4	<10	<10	1.9	1.8	1.20	0.01	n/a	1400	5	n/a	<1	<10	830	5	n/a	n/a
488748	100	n/a	68	n/a	3	<10	<10	1.8	1.6	1.00	0.01	n/a	1300	5	n/a	<1	<10	870	4	n/a	n/a
488749	100	n/a	120	n/a	4	<10	<10	2.8	1.9	1.40	0.03	n/a	1400	7	n/a	<1	<10	570	5	n/a	n/a
488750	130	n/a	150	n/a	5	<10	<10	3.9	2.0	1.80	0.04	n/a	1300	9	n/a	<1	<10	570	8	n/a	n/a
488751	91	n/a	71	n/a	6	<10	<10	3.3	1.8	1.10	<0.01	n/a	1000	7	n/a	<1	<10	860	1	n/a	n/a
488752	100	n/a	110	n/a	4	<10	<10	3.1	1.9	1.30	0.02	n/a	1300	6	n/a	<1	<10	660	4	n/a	n/a
488753	130	n/a	100	n/a	4	<10	<10	3.1	2.2	0.71	0.01	n/a	950	11	n/a	<1	<10	780	11	n/a	n/a
488754	110	n/a	170	n/a	5	<10	<10	3.1	2.0	1.10	0.02	n/a	840	9	n/a	<1	<10	980	9	n/a	n/a
488755	100	n/a	110	n/a	8	<10	<10	2.3	1.5	0.55	0.03	n/a	890	5	n/a	<1	<10	1200	5	n/a	n/a
488756	96	n/a	120	n/a	4	<10	<10	2.6	1.7	0.87	0.03	n/a	930	5	n/a	<1	<10	840	3	n/a	n/a
488757	95	n/a	160	n/a	4	<10	<10	2.7	1.7	1.00	0.03	n/a	940	5	n/a	<1	<10	940	3	n/a	n/a
488758	100	n/a	130	n/a	4	<10	<10	2.4	1.7	0.88	0.03	n/a	1000	5	n/a	<1	<10	840	4	n/a	n/a
488759	100	n/a	130	n/a	4	<10	<10	2.5	1.7	0.87	0.03	n/a	1100	5	n/a	<1	<10	850	4	n/a	n/a
488760	140	n/a	180	n/a	5	<10	<10	3.4	2.0	1.00	0.03	n/a	1200	8	n/a	<1	<10	1100	4	n/a	n/a
488761	150	n/a	120	n/a	5	<10	<10	3.0	1.9	0.82	0.02	n/a	1200	10	n/a	<1	<10	760	8	n/a	n/a
488762	140	n/a	110	n/a	4	<10	<10	2.8	1.8	0.78	0.02	n/a	1200	7	n/a	<1	<10	790	5	n/a	n/a
488763	120	n/a	110	n/a	4	<10	<10	2.8	1.7	0.76	0.02	n/a	1100	5	n/a	<1	<10	910	5	n/a	n/a
488764	130	n/a	110	n/a	4	<10	<10	2.6	1.8	0.76	0.02	n/a	900	6	n/a	<1	<10	810	3	n/a	n/a
488765	100	n/a	90	n/a	4	<10	<10	2.6	1.7	0.63	0.02	n/a	830	4	n/a	<1	<10	920	3	n/a	n/a
488766	93	n/a	89	n/a	4	<10	<10	2.4	1.6	0.63	0.02	n/a	810	4	n/a	<1	<10	850	2	n/a	n/a
488767	90	n/a	89	n/a	4	<10	<10	2.5	1.6	0.62	0.02	n/a	770	4	n/a	<1	<10	870	3	n/a	n/a
488768	93	n/a	100	n/a	4	<10	<10	2.7	1.6	0.64	0.01	n/a	800	4	n/a	<1	<10	880	3	n/a	n/a
488769	79	n/a	120	n/a	4	<10	<10	2.3	1.5	0.61	0.02	n/a	800	3	n/a	<1	<10	870	2	n/a	n/a
488770	73	n/a	110	n/a	9	<10	<10	2.7	1.5	0.54	0.02	n/a	690	3	n/a	<1	<10	1000	4	n/a	n/a
488771	59	n/a	160	n/a	11	<10	<10	3.7	1.0	1.50	0.05	n/a	1200	3	n/a	<1	<10	900	3	n/a	n/a
488772	62	n/a	170	n/a	10	<10	<10	3.0	1.0	0.54	0.05	n/a	1400	3	n/a	<1	<10	1500	4	n/a	n/a

**APPENDIX 2: ROCK SAMPLE DESCRIPTIONS AND RESULTS**

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Sample	Type	Description	Station	Au (ppb)	Cu (ppm)
143051	Grab	Weakly gossanous, fine-grained silicified and pyritic tuff. 1% pyrite, trace chalcopyrite?	JMH001	<5	33
143052	Grab, talus	Light grey, very fine-grained rock with 3-4% flecks of pyrite, probably fine-grained basaltic tuff, weakly gossanous.	JMH005	20	81
143053	Grab	Quartz blob in coarse-grained augite porphyritic basalt contains 1x3cm blebs of pyrite and surface malachite, adjacent to felsic dyke.	JO-003	140	1.25%
143054	Grab	Limonitic, siliceous vein, strongly magnetic and banded. Resample of 1994 Hemlo sample GG0163 which assayed 6100ppm Cu	JO-005	740	4800
143055	Grab	Green weathered, coarse-grained basalt with less than 10% pyrite, hematite stain and low magnetite content	JO-006	20	510
143056	Grab	Fine-grained basalt with light-green streaks (flow-banding?), blebs and disseminated pyrite, epidote alteration along N-S vertical fractures. Sample is non-magnetic, although chunks of limonitic magnetite noted in float.	JO-009	15	180
143057	Grab	Bull white quartz and calcite veins with fine-grained, soft, dark green chlorite, scattered pyrite and chalcopyrite crystals.	JO-010	<5	110
143058	Grab	Sample of fine-grained pale olive green felsitic material with rusty weathered surface, sulphides weathered to brown mica. Gangue is a medium-grained augite porphyritic basalt, with slivers of augite altered to epidote.	JO-011	860	1200
143059	Grab	Numerous discontinuous pods of altered and leached basalt in area of augite porphyritic basalt, non-magnetic, disseminated pyrite, gossanous,	JO-013	5	62
143060	Grab	Dark green aphanitic to fine-grained basalt with scattered blebs of pyrite, and 1-3mm calcite veinlets.	JO-014	25	120
143061	Grab	Pyrite porphyritic basalt, moderately magnetic, rusty brown surface staining,	JO-017	<5	42
143101	Grab	Augite porphyritic basalt, weak to moderate patchy magnetism, epidote and chlorite adjacent to quartz stringers (up to 2cm wide). Some quartz stringers also occur with rims of magnetite. Trace disseminated (and rare) pyrite.	JMH020	10	81
143102	Grab	Extensional quartz veinlets oriented sub-parallel to inferred bedding, trace to 1% clots of py and chalcopyrite. Veinlet selvages consists of jarosite and magnetite within 5cm of veins, wallrock consists of fine-grained silicified basaltic tuff.	JMH022	720	3560

143103	Chip	15cm wide quartz + carbonate vein with 1-2% blebs of silvery py with trace chalcopyrite. Vein has vuggy iron carbonate rich margins and is hosted in a fine to medium-grained homogenous diorite. Diorite is weakly magnetic, plagioclase is weakly sausseritized and iron-stained.	JMH023	280	330
143104	Grab	Vuggy and oxidized, 30cm wide extensional quartz vein with clots of iron carbonate and stringers/septas of chlorite and 1% py. Wallrock consists of fine to medium-grained augite porphyritic basalt with patches of magnetite disseminated throughout and rimming quartz vein.	JMH024	2640	18
143105	Grab, talus	Orange, vuggy and pervasively iron-carbonate altered massive magnetite rubble. Rubble is sourced in-situ and unit is approximately 10m wide. Magnetite appears to occur between a gabbroic textured (weakly magnetic) unit on the east contact and a silicified and pyritic fine to medium-grained plagioclase and hornblende crystal tuff (non-magnetic) on the western contact.	JMH025	120	1375
143106	Grab, talus	Silicified and pyritic wallrock to sample 143105. Disseminated pyrite locally up to 5%. Grab sample is high-grade of most intense patches of sulphides	JMH026	25	318
143107	Grab, talus	High grade grab sample of several bull white quartz veins with chlorite ribbons and selvages. Typically <1% pyrite and trace chalcopyrite, suggested by smears of malachite and azurite along vein selvages. Veins are less than 10cm wide and form less than 5% of a band of talus, approximately 4m wide. Veins are hosted in chloritic altered fine-grained basalt.	JMH028	10	955
143108	Chip	Four chips across a 10 to 30cm wide bull-white quartz vein. Vein contains clots and selvages of chlorite, with 1-2% combined fine-grained disseminated chalcopyrite and py. Vein is hosted within an unaltered medium grained diorite dyke, Vein strikes at 260° /24° for approximately 15m and is the only vein in this area.	JMH030	175	4540
143109	Grab, talus	Sample is a collection of the most intensely chalcopyrite, azurite and malachite mineralized talus from just below the ridge top. Mineralized talus typically contains 1-2% disseminated chalcopyrite, with malachite or azurite occurring along carbonate fractures. Less than 2% of talus contains any copper mineralization and most 98% of talus is unmineralized diorite or fine-grained basalt.	JMH031	25	3620



143110	Grab, talus	Sample is a collection of the most sulphidic talus from just below the ridge. Mineralized talus typically contains up to 4% disseminated py. Less than 1% of talus is mineralized and 99% of talus consists of siliceous augite porphyritic basalt.	JMH032	25	225
143111	Grab	60cm wide bull white quartz vein which contains <1% pyrite as medium-grained disseminated crystals and clots. Minor septas of chlorite and patches of vuggy carbonate in vein. Vein is exposed for approximately 10m strike length and pinches out adjacent to a zone of strongly foliated basalt. The vein selvage contains chlorite ± magnetite.	JMH035	1050	45
143112	Grab, talus	Pyritic and silicified diorite with minor patches and clots of magnetite. 1-3% pyrite, trace malachite and azurite along fractures. Sulphidized diorite comprises approximately 75% of talus here, just below ridge.	JMH040	10	137
143113	Chip	Representative chip across 1m wide zone of 2% pyritic, siliceous and intensely epidote altered basalt. Altered zone occurs along the contact between the basalt and a coarse-grained plagioclase porphyritic diorite dyke. Some of talus boulders slumped off of outcrop appear to contain up to 8% pyrite	JMH041	5	162
143114	Grab, talus	Very siliceous and epidote altered basalt with 10% silvery pyrite, extensive iron carbonate veins also. Talus located just down slope from sample 143113.	JMH042	3050	8
143114	Grab, talus	Talus appears to be in-situ rubble of an extremely iron-stained quartz + carbonate vein. Casts of eroded euhedral pyrite also noted within quartz vein rubble. Small outcrops of fine-grained chloritic basalt wallrock nearby contain <1% quartz veins or veinlets with trace py, chalcopyrite and magnetite, but do not contain the intense iron-carbonate alteration	JMH047	110	1110
143115	Chip	30cm representative chip sample of massive magnetite rubble exposed along a ridge. Unit is highly oxidized and iron-stained, and it is impossible to distinguish between oxidized magnetite and pyrite.	JMH050	12.38 gpt	1450
143116	Chip	2m representative chip sample of pyritic zone within gabbro / diorite composition wallrock adjacent to the previously sampled magnetite zone (143115)	JMH050	70	88
143117	Grab, talus	Sample consists of most intensely sulphidized gabbro / diorite talus located near previous samples. Possibly a zone of intensely silicified and epidote altered talus with 5-10% pyrite as clots and disseminations.	JMH051	<5	34

143118	Grab, talus	1-2% of the talus consists of augite porphyritic basalt with bull white quartz veins up to 5cm wide with magnetite selvages.	JMH052	25	44
143119	Grab	Orange coloured talus, intensely iron-carbonate flooded, deeply weathered unit (protolith unidentifiable). Trace jarosite, possibly up to 5% pyrite, with a minor amount of massive magnetite preserved.	JMH053	510	1780
143120	Grab	Deeply weathered, oxidized and epidote altered coarse-grained diorite with 5% clots and disseminated tarnished pyrite	JMH054	<5	101
143121	Grab	Deeply weathered, oxidized and epidote altered coarse-grained gabbro with up to 8% clots, stringers and disseminated tarnished pyrite	JMH055	<5	72
143122	Grab, talus	Bull white quartz vein talus with septas of chlorite, carbonate clots and trace clots and euhedral crystals of pyrite. Hosted within a fine-grained equigranular, siliceous diorite.	JMH056	65	12
143123	Grab	Gossanous contact zone between gabbro and basalt, up to 10% pyrite as clots, stringers and disseminations, and later remobilized pyrite along fractures. Rare quartz veinlets.	JMH057	<5	206
143124	Grab, talus	Gossanous gabbro talus with 5% pyrite as nodules, clots and disseminations.	JMH080	110	260
143125	Grab	Gossanous gabbro talus with 10% pyrite as nodules and stringers, abundant fractures which contain remobilized magnetite as well as small clots and stringers of massive magnetite.	JMH081	55	710
143126	Grab, talus	Epidote altered gabbro with occasional coarse-grained plagioclase phenocrysts, with occasional 1mm wide stringers of magnetite. Contains trace to 2% disseminated and clotty pyrite, some appears to pseudomorph hornblende crystals.	JMH083	5	130
143127	Grab	Medium-grained gabbro with moderately pervasive magnetism (locally also contains stringers of magnetite), contains trace to 1% pyrite.	JMH085	5	120
143128	Grab	Medium to coarse-grained gabbro with weak to moderate pervasive magnetism, locally matrix has been completely altered to iron-carbonate resulting in vuggy rubble. Contains trace to 1% pyrite and weak malachite stains along fractures.	JMH086	15	150
143129	Grab	Fine-grained basalt or chilled portion of gabbro, weakly magnetic, weak malachite and azurite stains on weathered surfaces, no chalcopyrite noted in fresh rock.	JMH087	600	9800
143130	Chip	2m wide zone of broken, highly fractured and weakly gossanous fine-grained basalt, strongly silicified with trace to 1% pyrite.	JMH088	5	9

143131	Grab	High grade sample of numerous small 10-20cm patches of intense iron carbonate and pyrite altered basalt adjacent to quartz diorite contact. Patches are discontinuous and of very limited strike extent. Sample contains 2-3% pyrite as coarse crystals or clots.	JMH091	75	9
143132	Chip	2m chip across shattered and highly fractured quartz vein. Vein is bull white, with very minor iron carbonate and no pyrite	JMH093	10	24
143133	Chip	2m chip across silicified and pyritic wallrock adjacent to quartz vein. Sample contains 1-2% disseminated fine-grained pyrite.	JMH094	5	11
143134	Grab	High grade grab sample from two 1-2m wide chlorite, clay, carbonate and pyrite-rich shears localized within a 15m wide zone of sheared, fissile and rubbly basalt.	JMH095	70	43
143135	Grab	Silicified and pyritic basalt, sample contains 1-2% disseminated fine-grained pyrite.	JMH096	10	35
143136	Chip	Two chips across a 20cm wide quartz + carbonate veinlet, no wall rock included in sample. Vein contains 3-5% pyrite locally altered to jarosite along fractures or weathered surfaces. Hosted in completely unaltered and un sulphidized augite porphyritic basalt.	JMH100	0.24 gpt	36
143137	Chip	20cm chip across a iron-stained massive quartz vein with less than 10% pyrite as clots and disseminations. Resample of LE0291 sample which assayed 30gpt Au.	JMH101	19.24 18.90 gpt	220
143138	Chip	2m chip sample across hangingwall to quartz vein in previous sample, Wallrock is a weak patchy epidote altered and un sulphidized coarse-grained augite porphyritic basalt. Rare jarosite along fractures.	JMH102	0.03 gpt	76
143139	Chip	2m chip sample across footwall to quartz vein in sample 143137, Wallrock is a weak patchy epidote altered and un sulphidized medium-grained augite porphyritic basalt with occasional irregular diorite dykelets (less than 20cm across). Diorite dykes are fine-medium grained plagioclase phytic with iron stained contacts with augite porphyry	JMH103	0.14 gpt	98
143140	Grab, talus	Grab sample of sub-angular, iron-stained talus rubble and fines from same site as 1994 Hemlo talus/soil sample located at L627N and 81600E which assayed 8700 ppb Au.	JMH104	6.21 0.86 1.00 gpt	460
468551	Grab	30cm wide quartz vein with pyrite, hosted in gabbro.	JMS	3.93 gpt	6400
468552	Chip	1.5m chip sample across foliated, moderate to strongly magnetic, chlorite zone with irregular barren quartz + chlorite veins and pods. Associated with coarse-grained, magnetic and epidote altered gabbro or augite porphyry.	DMS	25	430

468553	Grab, talus	High grade grab sample from talus, chalcopyrite-rich (7-10%) chloritic, magnetic vein rock, hosted in gabbro or augite porphyry. Chalcopyrite occurs as 1cm veinlet and disseminated blebs.	LMS	670	5.99%
468554	Grab, talus	20cm wide piece of quartz in talus with 1.5cm wide pyrite vein.	LMS	4.49 gpt	390
468555	Grab, talus	Orange- brown talus float sample, vuggy malachite-stained, dark green chlorite, quartz, calcite and magnetite	LMS	50	1700
468556	Grab, talus	Weakly malachite-stained, light grey siliceous rock with 5-10% disseminated magnetite, 1-2% chalcopyrite and 1-2% pyrite.	LMS	630	4400
468557	Grab	Small grab of massive magnetite	LMS	40	410
468558	Grab, talus	Small chunk of quartz vein with 25% blebs chalcopyrite,	LMS	27.03 gpt	4.37%
468559	Grab, talus	Sampled chunk of dark green, epidote altered lapilli tuff with minor amounts of pyrite, chalcopyrite and pyrrhotite	LMS	120	1100
468560	Grab, talus	Piece of 20cm wide coarse to medium grained quartz + carbonate vein with coarse pyritic sections.	LMS	110	160
468561	Grab, talus	Silicified dark green mafic volcanic with coarse blebs of chalcopyrite and pyrite.	LMS	130	3300
468562	Chip	1m chip sample across N-S trending carbonatized, punky, chloritic, strongly magnetic rock, minor quartz veining and traces of pyrite.	LMS	<5	250
468563	Grab	High grade grab of magnetite pods in layered augite porphyritic basalt. Pyrite and chalcopyrite occur as narrow stringers, malachite on fractures,	LMS	480	920
468564	Grab, talus	Similar to previous sample, except more chalcopyrite	LMS	200	3600
468565	Grab	Oval shaped silicified and pyritic zone, with limonite where pyrite is most intense, Grab sample of most intense pyritic zone, locally up to 35% pyrite. Some quartz + chlorite vein material around, rocks are non-magnetic. Note: Talus fine samples 468566 and 468567 taken just below this grab sample assayed 230 and 310ppb Au respectively.	LMS	95	480
468568	Chip	1m chip sample across chloritic, weakly magnetic, weakly mineralized (malachite) fracture zone with quartz and calcite stringers.	LMS	55	1600
468571	Grab	Grab 4cm wide vein with 3<5% coarse blebs of chalcopyrite. Hosted in blocky augite porphyritic basalt or gabbro?	LMS	250	3.14%
468572	Chip	1m chip sample parallel to 1-2cm wide quartz veinlets along carbonatized contact between gabbro and diorite. Minor disseminated pyrite.	LMS	50	75
468574	Chip	2m chip across carbonate altered shear zone in very magnetic augite porphyritic basalt (gabbro?), numerous fractures parallel shear at 100°/20°, local pyrite and small quartz stringers. Note: Talus fine sample 468573 taken 20m below chip sample assayed 10.76 and 11.66gpt Au.	LMS	35	140

468575	Chip	5m wide chip sample across layered gabbro, cream-coloured layers 1cm wide alternating with coarse grained augite. Abundant epidote. Augite layers are strongly magnetic, and magnetite occurs as primary blobs layers and fractures. No sulphides noted.	DMS	20	290
468576	Grab	High grade grab of goethite, magnetite, malachite talus from 20cm wide chlorite + calcite + quartz + epidote + magnetite vein. Host rock is gabbro with feldspar porphyritic diorite dyke. Note: talus fine sample 468577 below grab sample assayed 1.54gpt Au	DMS	7.79 5.38 6.07 gpt	8.30%
468578	Grab, talus	Grab sample of one chunk of light coloured rock with interconnected masses of magnetite and chalcopyrite (8-10%). Other talus here include a feldspar porphyritic dyke with 5-20cm wide quartz veins.	DMS	4.48 gpt	5.07%

## Project 572

## Soup

file: 572vpt\_tbt1.wk1

Rock Sample Analyses (ICP)  
1996

Reference: a9626767

TSL - s3642 (s,3717, m7890), s3736 (s3790, m7928), s3746 (m7929), s3789 (s3826, m7964), s3889 (m8039)

Sample ID	Au ppb	Au g/t	Cu ppm	Cu %	Ag ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm
143051	<5		33		<0.2	12	116	<0.5	<1	16	<2	<2	5	14	43	3.7	1135	100
143052	20		81		0.4	10	44	<0.5	2	16	<2	6	6	15	37	4.1	430	110
143053	140		>9999	1.25	2	1	77	<1	<2	<5	<5	<5	35	26	95	4.1	300	26
143054	740		4800		4	17	92	<1	250	<5	<5	<5	11	70	110	22.0	110	59
143055	20		510		<1	20	74	<1	16	20	<5	<5	81	88	110	6.8	320	9
143056	15		180		<1	<1	46	<1	2	15	<5	<5	34	37	71	6.8	430	39
143057	<5		110		<1	<1	37	<1	<2	<5	<5	<5	28	24	120	4.9	560	9
143058	860		1200		<1	2	24	<1	14	55	<5	<5	7	34	15	16.0	200	75
143059	5		62		<1	2	75	<1	<2	20	<5	<5	4	7	18	4.2	460	66
143060	25		120		<1	<1	82	<1	<2	<5	<5	<5	15	16	19	2.5	310	67
143061	<5		42		<1	<1	130	<1	<2	<5	<5	<5	24	29	23	5.2	280	14
143101	10		81		<0.2	6	22	<0.5	<1	2	<2	<2	14	13	86	1.9	355	40
143102	720		3560		3.6	8	64	<0.5	8	20	<2	<2	32	26	178	10.9	945	170
143103	260		330		0.8	<2	4	<0.5	1	2	<2	<2	5	14	297	2.0	130	<10
143104	2640		18		2.0	6	6	<0.5	36	4	<2	<2	5	21	129	4.7	115	110
143105	120		1375		3.8	14	36	<0.5	3	28	<2	<2	11	32	41	>15.0	785	<10
143106	25		318		0.4	6	30	<0.5	1	8	<2	2	16	17	85	3.4	180	110
143107	10		955		0.8	2	12	<0.5	1	2	<2	<2	7	6	236	1.4	245	10
143108	175		4540		5.6	<2	14	<0.5	8	2	<2	<2	5	33	224	3.1	150	<10
143109	25		3620		<0.2	2	36	<0.5	1	8	<2	<2	18	23	65	3.6	390	50
143110	25		225		0.2	4	12	<0.5	<1	10	<2	<2	15	86	74	3.5	150	<10
143111	1050		45		0.8	2	2	<0.5	12	2	<2	<2	9	22	247	2.8	55	50
143112	10		137		<0.2	4	28	<0.5	<1	14	<2	<2	16	28	59	2.8	230	60
143113	5		162		<0.2	10	38	<0.5	1	20	<2	<2	18	25	69	2.2	210	60
143114A	3050		8		3.4	10	36	<0.5	243	18	<2	4	14	46	173	12.4	315	10
143114B	110		1110		0.2	12	26	<0.5	1	28	<2	<2	26	114	72	4.4	190	40
143115	>10000	12.38	1450		6.6	16	12	<0.5	34	54	<2	<2	22	247	93	>15.0	160	270
143116	70		88		<0.2	4	10	<0.5	<1	2	<2	<2	14	13	52	2.7	160	80
143117	<5		34		<0.2	2	22	<0.5	2	8	<2	<2	7	18	55	5.4	155	60
143118	25		44		0.2	6	44	<0.5	<1	14	<2	2	31	25	214	5.1	660	30
143119	510		1780		0.8	8	12	<0.5	1	14	<2	<2	54	20	90	12.2	110	30
143120	<5		101		<0.2	2	10	<0.5	<1	10	<2	<2	15	12	73	2.5	150	10
143121	<5		72		<0.2	4	6	<0.5	<1	8	<2	<2	16	9	55	2.1	105	10
143122	65		12		0.2	2	10	<0.5	1	<2	<2	2	7	11	256	1.4	155	<10
143123	<5		206		0.2	2	8	<0.5	<1	8	<2	<2	26	23	75	2.0	155	30
143124	110		260		4	320	160	<1	<2	10	<5	<5	22	47	50	6.9	400	38
143125	55		710		<1	15	60	<1	<2	<5	<5	<5	33	71	79	8.0	560	21
143126	5		130		<1	9	11	<1	<2	5	<5	<5	8	11	46	2.7	120	18
143127	5		120		<1	11	55	<1	4	10	<5	<5	79	19	110	3.8	350	55
143128	15		150		<1	4	9	<1	<2	<5	<5	<5	22	15	75	2.5	110	14
143129	600		9800		5	<1	49	<1	<2	<5	<5	<5	160	220	250	5.4	530	31
143130	5		9		<1	<1	100	<1	<2	20	<5	<5	6	5	65	2.1	910	75
143131	75		9		<1	18	9	<1	8	35	<5	<5	2	2	40	3.0	66	54
143132	10		24		<1	5	5	<1	24	15	<5	<5	7	2	220	0.6	78	850
143133	5		11		<1	<1	58	<1	2	25	<5	<5	6	7	66	3.1	560	87
143134	70		43		<1	12	210	<1	<2	55	<5	<5	6	3	45	4.5	500	100
143135	10		35		<1	<1	56	<1	<2	<5	<5	<5	6	6	67	2.6	510	59
143136		0.24	36		<1	4	23	<1	<2	10	<5	<5	5	14	79	3.9	240	26
143137		19.24	220		4	6	4	<1	32	10	<5	<5	4	13	120	8.8	41	54
143138		0.03	76		<1	5	49	<1	<2	5	<5	<5	37	26	170	4.1	730	30
143139		0.14	98		<1	9	62	<1	<2	5	<5	<5	36	27	150	4.6	850	35
143140		6.21	460		<1	16	47	<1	8	10	<5	<5	43	77	78	5.6	1100	100
468551	>1000	3.93	6400		12	<1	95	<1	<2	20	<5	<5	150	290	83	22.0	420	<1
468552	25		430		<1	3	31	<1	<2	10	<5	<5	49	40	360	5.2	760	<1
468553	670		>9999	5.99	25	<1	110	<1	20	<5	<5	<5	28	31	29	16.0	990	43
468554	>1000	4.49	390		8	<1	4	<1	90	<5	<5	<5	18	92	120	2.9	33	19
468555	50		1700		<1	<1	83	<1	4	<5	<5	<5	38	95	180	7.6	950	2
468556	630		4400		3	<1	33	<1	8	<5	<5	<5	29	170	480	9.7	330	28
468557	40		410		<1	<1	44	<1	10	50	<5	<5	60	23	470	33.0	1100	9
468558	>1000	27.03	>9999	4.37	40	<1	40	<1	<2	60	<5	<5	23	87	82	16.0	140	<1
468559	120		1100		<1	<1	35	<1	<2	<5	<5	<5	27	32	72	5.2	820	98
468560	110		160		<1	<1	7	<1	<2	20	<5	<5	15	21	97	4.9	390	5
468561	130		3300		8	1	58	<1	<2	5	<5	<5	48	21	130	1.9	530	20
468562	<5		250		<1	<1	59	<1	<2	<5	<5	<5	54	41	110	11.0	910	55

## Soup

## Rock Sample Analyses (part 2)

Sample ID	V ppm	Hg ppm	Sr ppm	La ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %	Ti ppm/%	U ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm	Ga ppm	Tl ppm
143051	81	<1	63	<10	n/a	n/a	<10	2.8	2.5	0.59	0.05	0.22	0.18	<10	2	<0.5	n/a	450	n/a	10	<10
143052	62	<1	42	<10	n/a	n/a	<10	1.9	1.2	0.63	0.06	0.29	0.21	<10	1	<0.5	n/a	510	n/a	10	<10
143053	55	n/a	27	n/a	<1	<10	<10	0.8	1.2	1.90	<0.01	n/a	690	n/a	7	<1	<10	280	<1	n/a	n/a
143054	130	n/a	25	n/a	1	<10	<10	0.9	0.6	0.15	<0.01	n/a	490	n/a	9	<1	<10	530	<1	n/a	n/a
143055	49	n/a	20	n/a	2	<10	<10	1.3	1.6	0.41	0.01	n/a	1500	n/a	3	<1	<10	560	<1	n/a	n/a
143056	150	n/a	14	n/a	3	<10	<10	2.8	2.1	0.93	0.01	n/a	1300	n/a	4	<1	<10	460	<1	n/a	n/a
143057	120	n/a	37	n/a	3	<10	<10	2.9	2.0	4.00	<0.01	n/a	950	n/a	6	<1	<10	220	2	n/a	n/a
143058	150	n/a	19	n/a	4	<10	<10	1.8	1.7	0.29	0.04	n/a	2100	n/a	6	<1	<10	620	<1	n/a	n/a
143059	34	n/a	25	n/a	3	<10	<10	1.3	1.3	0.17	0.07	n/a	1600	n/a	2	<1	<10	390	3	n/a	n/a
143060	45	n/a	290	n/a	3	<10	<10	2.2	1.0	1.20	0.14	n/a	550	n/a	4	<1	<10	340	<1	n/a	n/a
143061	50	n/a	31	n/a	3	<10	<10	1.1	0.8	0.42	0.05	n/a	1600	n/a	4	<1	<10	510	<1	n/a	n/a
143101	71	<1	69	<10	n/a	n/a	<10	1.4	0.8	1.98	0.06	0.09	0.17	<10	5	<0.5	n/a	720	n/a	10	<10
143102	168	<1	13	<10	n/a	n/a	<10	3.8	3.5	0.44	<0.01	0.44	0.17	<10	11	<0.5	n/a	650	n/a	10	<10
143103	13	<1	4	<10	n/a	n/a	<10	0.2	0.1	0.05	0.02	0.01	0.01	<10	1	<0.5	n/a	80	n/a	<10	<10
143104	28	<1	64	<10	n/a	n/a	<10	0.4	0.2	0.05	0.08	0.19	0.03	<10	3	<0.5	n/a	470	n/a	<10	<10
143105	57	<1	14	<10	n/a	n/a	<10	0.7	0.1	0.58	<0.01	0.01	0.08	10	3	<0.5	n/a	580	n/a	<10	<10
143106	52	<1	35	<10	n/a	n/a	<10	1.2	1.0	0.42	0.08	0.24	0.16	<10	1	<0.5	n/a	820	n/a	<10	<10
143107	33	<1	13	<10	n/a	n/a	<10	0.6	0.6	1.17	0.03	0.03	0.03	<10	3	<0.5	n/a	190	n/a	<10	<10
143108	15	<1	4	<10	n/a	n/a	<10	0.4	0.3	0.20	0.01	0.02	<0.01	<10	1	<0.5	n/a	120	n/a	<10	<10
143109	120	<1	68	<10	n/a	n/a	<10	2.1	1.6	1.00	0.05	0.12	0.22	<10	3	<0.5	n/a	800	n/a	10	<10
143110	82	1	51	<10	n/a	n/a	<10	1.0	0.4	1.18	0.03	0.01	0.29	<10	3	<0.5	n/a	670	n/a	<10	<10
143111	18	<1	16	<10	n/a	n/a	<10	0.4	0.0	0.03	0.03	0.08	0.01	<10	3	<0.5	n/a	200	n/a	<10	<10
143112	69	<1	45	<10	n/a	n/a	<10	1.3	0.9	0.96	0.04	0.31	0.19	<10	2	<0.5	n/a	980	n/a	10	<10
143113	65	<1	43	<10	n/a	n/a	<10	1.3	0.9	0.93	0.03	0.13	0.22	<10	2	<0.5	n/a	840	n/a	10	<10
143114A	136	1	15	<10	n/a	n/a	<10	1.5	0.9	0.19	0.01	0.01	0.08	<10	10	<0.5	n/a	550	n/a	10	<10
143114B	58	<1	34	<10	n/a	n/a	<10	0.9	0.4	0.93	0.04	0.14	0.18	<10	3	<0.5	n/a	730	n/a	<10	<10
143115	189	<1	12	<10	n/a	n/a	10	0.5	0.0	0.07	0.03	0.09	0.03	30	5	0.5	n/a	930	n/a	<10	<10
143116	51	<1	28	<10	n/a	n/a	<10	0.8	0.5	0.65	0.04	0.07	0.18	<10	3	<0.5	n/a	610	n/a	<10	<10
143117	73	1	30	<10	n/a	n/a	<10	1.4	1.6	0.21	0.06	0.13	0.25	<10	4	<0.5	n/a	1020	n/a	10	<10
143118	182	<1	59	<10	n/a	n/a	<10	2.9	3.1	3.82	0.01	0.07	0.13	<10	21	<0.5	n/a	300	n/a	10	<10
143119	205	<1	75	<10	n/a	n/a	<10	2.1	1.3	0.48	0.04	0.10	0.20	<10	9	<0.5	n/a	420	n/a	10	<10
143120	68	<1	46	<10	n/a	n/a	<10	1.2	0.4	1.44	0.03	0.06	0.22	<10	4	<0.5	n/a	600	n/a	<10	<10
143121	56	<1	36	<10	n/a	n/a	<10	0.8	0.2	1.22	0.04	0.04	0.19	<10	3	<0.5	n/a	550	n/a	<10	<10
143122	19	<1	5	<10	n/a	n/a	<10	0.3	0.3	0.13	<0.01	0.01	0.01	<10	1	<0.5	n/a	80	n/a	<10	<10
143123	49	<1	50	<10	n/a	n/a	<10	0.9	0.3	1.72	0.03	0.04	0.19	<10	3	<0.5	n/a	780	n/a	<10	<10
143124	130	n/a	46	n/a	5	<10	<10	1.9	1.8	0.71	0.03	n/a	2200	n/a	3	<1	<10	990	11	n/a	n/a
143125	150	n/a	26	n/a	4	<10	<10	2.5	2.1	2.50	0.01	n/a	1100	n/a	5	<1	<10	710	5	n/a	n/a
143126	59	n/a	29	n/a	4	<10	<10	0.6	0.3	0.79	0.02	n/a	1600	n/a	2	<1	<10	570	9	n/a	n/a
143127	130	n/a	60	n/a	3	<10	<10	1.4	1.4	0.92	0.03	n/a	1700	n/a	3	<1	<10	930	4	n/a	n/a
143128	65	n/a	40	n/a	5	<10	<10	0.7	0.2	0.95	0.03	n/a	1600	n/a	2	<1	<10	530	7	n/a	n/a
143129	140	n/a	29	n/a	6	<10	<10	2.8	2.1	0.43	0.02	n/a	910	n/a	9	<1	<10	780	8	n/a	n/a
143130	18	n/a	36	n/a	4	<10	<10	1.6	1.6	0.51	0.04	n/a	1000	n/a	<1	<1	<10	720	3	n/a	n/a
143131	2	n/a	6	n/a	44	<10	<10	0.3	0.1	0.07	0.02	n/a	100	n/a	1	<1	<10	46	7	n/a	n/a
143132	2	n/a	15	n/a	3	<10	<10	0.1	0.0	0.02	<0.01	n/a	16	n/a	<1	<1	<10	24	<1	n/a	n/a
143133	52	n/a	39	n/a	4	<10	<10	1.8	1.8	0.56	0.04	n/a	1900	n/a	2	<1	<10	630	2	n/a	n/a
143134	54	n/a	13	n/a	3	<10	<10	1.4	1.6	0.13	0.03	n/a	1100	n/a	4	<1	<10	760	6	n/a	n/a
143135	24	n/a	60	n/a	3	<10	<10	1.3	1.5	0.40	0.04	n/a	1100	n/a	1	<1	<10	640	7	n/a	n/a
143136	77	n/a	24	n/a	2	<10	<10	0.9	0.8	0.23	0.06	n/a	890	n/a	5	<1	<10	540	5	n/a	n/a
143137	50	n/a	17	n/a	<1	<10	<10	0.3	0.1	0.03	0.11	n/a	570	n/a	2	<1	<10	330	6	n/a	n/a
143138	140	n/a	61	n/a	5	<10	<10	2.3	1.9	3.20	0.02	n/a	1700	n/a	13	<1	<10	520	8	n/a	n/a
143139	150	n/a	49	n/a	6	<10	<10	3.0	2.1	2.70	0.02	n/a	1900	n/a	11	<1	<10	610	9	n/a	n/a
143140	120	n/a	99	n/a	5	<10	<10	2.6	1.8	0.82	0.02	n/a	1300	n/a	6	<1	<10	840	5	n/a	n/a
468551	42	n/a	7	n/a	<1	<10	<10	1.3	1.3	0.09	<0.01	n/a	170	n/a	1	<1	<10	140	1	n/a	n/a
468552	130	n/a	87	n/a	2	<10	<10	1.5	1.9	5.30	<0.01	n/a	330	n/a	11	<1	<10	58	8	n/a	n/a
468553	130	n/a	6	n/a	<1	<10	<10	2.3	2.4	0.55	0.02	n/a	660	n/a	6	<1	<10	540	<1	n/a	n/a
468554	6	n/a	1	n/a	<1	<10	<10	0.1	0.1	0.05	<0.01	n/a	21	n/a	<1	<1	<10	18	1	n/a	n/a
468555	250	n/a	30	n/a	4	<10	<10	2.6	2.1	2.20	<0.01	n/a	410	n/a	19	<1	<10	860	11	n/a	n/a
468556	220	n/a	12	n/a	2	<10	<10	1.2	1.3	1.00	0.03	n/a	540	n/a	4	<1	<10	300	2	n/a	n/a
468557	1400	n/a	120	n/a	2	<10	<10	1.3	1.7	6.60	<0.01	n/a	150	n/a	6	<1	<10	<2	<1	n/a	n/a
468558	37	n/a	<1	n/a	<1	<10	<10	0.4	0.5	0.06	0.02	n/a	160	n/a	4	<1	<10	50	<1	n/a	n/a
468559	70	n/a	37	n/a	<1	<10	<10	1.5	1.0	3.90	0.05	n/a	1100	n/a	5	<1	<10	430	4	n/a	n/a
468560	11	n/a	61	n/a	<1	<10	<10	0.3	0.3	2.30	<0.01	n/a	100	n/a	1	<1	<10	28	3	n/a	n/a
468561	55	n/a	36	n/a	2	<10	<10	0.9	0.9	5.70	<0.01	n/a	350	n/a	3	<1	<10	440	2	n/a	n/a
468562	360	n/a	130	n/a	4	<10	<10	1.2	2.3	7.50	<0.01	n/a	68	n/a	30	<1	<10	70	17	n/a	n/a

Project 572

## Soup

file: 572vpt\_tb1.wk1

Rock Sample Analyses (ICP)  
1996

Reference : a9626767

TSL - s3642 (s,3717, m7890), s3736 (s3790, m7928), s3746 (m7929), s3789 (s3826, m7964), s3889 (m8039)

Sample ID	Au ppb	Au g/t	Cu ppm	Cu %	Ag ppm	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm
468563	480		920		<1	<1	96	<1	4	<5	<5	<5	23	120	120	19.0	950	7
468564	200		3600		<1	<1	64	<1	16	<5	<5	<5	22	170	68	21.0	760	4
468565	95		480		<1	<1	30	<1	4	<5	<5	<5	57	55	46	7.0	290	10
468568	55		1600		2	<1	150	<1	2	<5	<5	<5	70	84	210	5.6	730	6
468571	250		>9999	3.14	65	<1	140	<1	<2	<5	<5	<5	18	28	130	4.2	880	<1
468572	50		75		<1	<1	66	<1	<2	<5	<5	<5	43	39	180	8.9	1300	160
468574	35		140		<1	<1	49	<1	<2	<5	<5	<5	35	39	150	11.0	1500	290
468575	20		290		<1	<1	24	<1	<2	10	<5	<5	17	21	92	4.3	380	23
468576	>1000	7.79	>9999	8.30	16	<1	63	<1	78	<5	<5	<5	59	540	56	27.0	4200	39
468578	>1000	4.48	>9999	5.07	12	<1	32	<1	28	<5	<5	<5	81	330	6	19.0	4200	<1



## Soup

## Rock Sample Analyses (part 2)

Sample ID	V ppm	Hg ppm	Sr ppm	La ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %	K %	Ti ppm/%	U ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm	Ga ppm	Tl ppm
468563	340	n/a	12	n/a	2	<10	<10	3.9	2.5	0.62	<0.01	n/a	690	n/a	12	<1	<10	96	6	n/a	n/a
468564	280	n/a	9	n/a	1	<10	<10	2.4	2.1	1.10	<0.01	n/a	690	n/a	11	<1	<10	280	<1	n/a	n/a
468565	59	n/a	13	n/a	2	<10	<10	1.3	1.6	0.38	0.02	n/a	1000	n/a	2	<1	<10	460	6	n/a	n/a
468568	160	n/a	34	n/a	3	<10	<10	2.8	2.3	2.20	<0.01	n/a	1000	n/a	9	<1	<10	710	6	n/a	n/a
468571	46	n/a	88	n/a	<1	<10	<10	0.3	0.6	4.20	0.02	n/a	57	n/a	4	<1	<10	74	<1	n/a	n/a
468572	330	n/a	230	n/a	3	<10	<10	2.0	2.5	8.30	<0.01	n/a	560	n/a	45	<1	<10	200	28	n/a	n/a
468574	380	n/a	240	n/a	4	<10	<10	1.4	2.4	8.90	<0.01	n/a	290	n/a	32	<1	<10	84	16	n/a	n/a
468575	130	n/a	44	n/a	2	<10	<10	1.3	1.6	1.60	0.02	n/a	1300	n/a	5	<1	<10	110	3	n/a	n/a
468576	95	n/a	18	n/a	15	<10	<10	2.0	1.9	1.50	<0.01	n/a	220	n/a	10	<1	<10	1500	<1	n/a	n/a
468578	70	n/a	270	n/a	18	<10	<10	0.3	0.7	23.00	<0.01	n/a	59	n/a	8	<1	<10	570	<1	n/a	n/a

**APPENDIX 3: 1996 DIAMOND DRILL LOGS AND RESULTS**

## DISCOVERY CONSULTANTS

## Drill Log

Co-ords: 1987 grid 5050E/5010N  
 1994 grid 81550E/62200N (UTM 682632E 6262269N)  
 Azimuth: 130°  
 Dip: -55°  
 Elevation: 2000 m

Drill type &amp; size: Falcon F1000 BQ-TW

Hole No: 96-DS-1  
 Property: Soup

Dip Test: Acid test @258' (78.54m)

Location: Ridge between gully 3A-N & 3B-N  
 Soup 4 claim

Length: 79.25m (proposed 80m)

file: 572\DDH01\_96.wk1

Date St.: 96.08.23

Date Fin: 96.08.25

Section:

Logged by: J.Howe

Purpose: test NNE trend Qtz & Mt Mnlzn in saddle gully zone; appr. 50m  
 along strike to west from 1989-1 & 2 pierce points

Reference: TSL - s3789(m7964), s3832(m8007)

Date Logged: 96.08.24 to 96.08.26

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery		Sample Interval (m)			Au ppb	Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from					to
0.00	3.05	CASING					0.00	3.05	0							
3.05	4.69	ASH TUFF Medium grey green ash tuff, moderate to strong pervasive silicification - very hard; 5% white carbonate veinlets; iron stained fractured surfaces; rare <1mm plagioclase crystals, gradational lower contact; moderate pervasive magnetism throughout interval	--	--	--	53.3	3.05	5.49	70							
4.69	8.30	CRYSTAL TUFF Plagioclase crystals >>> augite crystals in chlorite ± epidote matrix, medium dark green subhedral crystals up to 2mm, generally <1mm; subtle bedding noted by changes in grain size, no clear bedding. Rare lapilli-sized fragments (<5 cm) noted; iron stained fractures. Minor epidote veinlets through intervals, weak pervasive magnetism throughout 7.0-7.5 m Weak to moderate pervasive epidote alteration	--	--	wk	27.4	5.49	8.53	85							
8.30	10.83	INTERBEDDED ASH TUFF AND CRYSTAL TUFF As in 3.05-4.69m, weak pervasive silicification. Generally more plagioclase and augite crystals visible; crystals typically <1mm approaching fine grained crystal tuff. Wispy bedding noted throughout at 25° c.a. Abundant rusty carbonate veinlets, and iron-stained fractures.	--	--	--	48.0	8.53	11.58	99							
10.83	12.08	CRYSTAL TUFF Plagioclase >> augite crystals; plagioclase <= 2mm; augite <= 1 mm in medium green chloritic matrix, iron-stained fractures and occasional carbonate veinlets, weak moderate magnetism throughout. Sharp upper and lower contacts.	--	--	--	32.6	11.58	14.63	96							

Project 572

96-DS-1 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

96-DS-1 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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Project 572

96-DS-1 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

## 96-DS-1 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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Hole No: 96-DS-1

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery		%	Sample Interval (m)			Au ppb	Au g/t	Cu ppm	Ag ppm
							from	to		ID	from	to				
24.90	31.27	CRYSTAL TUFF WITH DIORITE DYKELETS Medium green fine grained plagioclase and augite crystal tuff (as above) with 10-20% diorite (fine-medium grained) as 1-5cm wide dykelets and stringers. Dykelets consist of aphanitic plagioclase matrix with <3mm hornblende crystals. Trace pyrite crystals within and adjacent to dykes. Weak patchy magnetite disseminated throughout interval - likely introduced with dykes 25.40-26.40 m DIORITE DYKE with 60% angular xenoliths of chlorite ash tuff some show bedding. Minor quartz and epidote stringers.	tr	tr	wk	18.3										
							23.93	25.30	98							
							25.30	23.67	97							
							26.67	26.82	50							
							26.82	29.87	100							
31.27	33.15	CRYSTAL TUFF Medium green, plagioclase>augite fine-medium grained crystal tuff with patchy - thin wispy bands of magnetite. Quartz veinlets at 40-60° c.a. with iron carbonate and pyrite and chalcopyrite. Pyrite is also disseminated in trace amounts through interval. Malachite along fractures. Quartz veinlets have 1-5mm chlorite selvages, may also have 1-2mm magnetite selvages. A 5 cm veinlet at 33.05 m contains 2 cm carbonate of chlorite. Generally increased chlorite content towards base of interval.	1%	tr	wk	49.5	29.87	32.92	100							
										468701	31.27	32.33	1.06	500	1800	<1
										468702	32.33	33.15	0.82	200	380	<1
							32.92	35.97	99							
33.15	35.28	AUGITE PORPHYRY Coarse grained euhedral augite crystals to 1cm in fine grained plagioclase and augite matrix - plagioclase rich portions are moderately pervasive epidote altered. Trace disseminated pyrite, Minor quartz veinlets with disseminated and massive magnetite selvages. Magnetite also patchy and disseminated through augite porphyry. Rare diorite dykelets, also with magnetite adjacent to contacts.	tr	-	mod	25.5				468703	33.15	35.28	2.13	160	380	<1
										468704	35.18	38.51	3.33	230	730	<1
35.28	37.57	ASH TUFF Medium green, fine grained, chloritic ash tuff, minor bedding noted. Minor quartz stringers at 45-60° c.a., moderately pervasive magnetic through interval. Trace disseminated and fracture controlled pyrite,	tr	-	-	38.6	35.97	39.01	66							

## Project 572

## 96-DS-1 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468701	<1	43	<1	8	<5	<5	<5	26	39	84	5.5	940	440	190	31	3	<10	<10	3.00	2.20	2.10	0.02
468702	<1	46	<1	4	20	<5	<5	23	31	86	5.9	1200	160	190	53	6	<10	<10	2.90	2.30	4.60	0.02
468703	<1	29	<1	10	<5	<5	<5	20	27	77	4.8	680	600	170	38	3	<10	<10	2.80	2.20	1.90	0.02
468704	<1	34	<1	<2	35	<5	<5	22	33	92	6.6	820	470	160	49	5	<10	<10	2.80	2.20	2.90	0.02

## Project 572

## 96-DS-1 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
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468701	1700	8	<1	<10	740	5
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468702	1400	16	<1	<10	620	10
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468703	2100	7	<1	<10	710	5
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468704	1800	13	<1	<10	740	8
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Hole No: 96-DS-1

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au ppb	Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to					Length
		rare clots of pyrite up to 1 cm between 37.15-37.20 m.															
37.57	38.51	LOST CORE Very poor recovery, <5%. Redrilled rubble of very chloritic material.															
38.51	38.91	MASSIVE MAGNETITE Intense iron carbonate alteration and vugs. Quartz veinlets with irregular contacts.		--	--	off scale				468705	38.51	38.91	0.40	>1000	5.00 4.90	640	<1
38.91	39.36	ASH TUFF Medium green, chloritic tuff, white quartz and calcite stringers with trace disseminated pyrite throughout tuff. Both upper and lower contacts are rubbly and oxidized with weak magnetite	tr	--	--	10.4				468706	38.91	39.36	0.45	110		390	<1
							39.01	40.82	77								
39.36	45.88	MAFIC DYKE (?) Dark green, fine to medium grained mafic dyke, which locally contains medium grained flattened augite crystals <4mm. Abundant quartz and ankerite veins and veinlets - most contain pyrite (2%) (which is generally very oxidized). Minor stringers of pyrite <1%. Locally very rubbly and broken core which is quite oxidized. Magnetite occurs as fine grained disseminations throughout and 0.5 cm vein selvages and along fractures. Unit is quite distinctive from a tuff, primarily due to the intense magnetite throughout. Lower contact consists of about 30 cm of pervasive iron carbonate. Thin section at 39.95 m veinlets/bands of magnetite, with pyrite and quartz veins. Malachite occurs along rare chlorite slips or fractures.	3%	tr	--	163.0				468707	39.36	41.16	1.80	>1000	1.21	450	<1
							40.82	42.06		468708	41.16	42.80	1.64	>1000	2.28 2.48	2300	<1
							42.06	45.11	96	468709	42.80	44.10	1.30	>1000	3.00	1300	2
										468710	44.10	45.88	1.78	>1000	2.83 2.34	1500	3
45.88	51.10	FINE GRAINED TUFF Rubble core, medium green, fine grained, RQD=0. Weak pervasive epidote and chlorite alteration of some tuff beds; remnant bedding in some pieces of rubble. Generally weakly pervasive magnetism, but also contains patches of stronger magnetism, appearing as bands - difficult to determine due to size of rubble. Trace pyrite and chalcopyrite (as malachite) noted on rubble surfaces and as tarnished fractures. Increased magnetite	tr	tr	wk	core too small	45.11	48.16	90 (rubble)	468711	45.88	48.26	2.38	300		1100	<1
							48.16	51.21	80 (rubble)	468712	48.26	51.10	2.84	460		660	<1

## Project 572

## 96-DS-1 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468705	1	24	1	32	<5	<5	<5	12	22	92	28.0	360	82	170	10	3	<10	<10	0.85	1.00	0.28	0.03
468706	<1	42	<1	<2	<5	<5	<5	32	30	120	8.9	850	420	240	31	5	<10	<10	3.50	2.40	1.70	0.02
468707	<1	76	<1	8	<5	<5	<5	26	32	130	16.0	1100	69	150	8	2	<10	<10	3.20	2.30	0.16	0.01
468708	<1	97	<1	<2	20	<5	<5	48	120	180	14.0	1800	140	220	14	4	<10	<10	3.80	2.50	0.28	0.02
468709	<1	74	<1	6	10	<5	<5	61	51	290	18.0	1000	130	300	15	2	<10	<10	4.00	2.50	0.19	0.02
468710	<1	64	<1	28	<5	<5	<5	48	30	210	16.0	820	200	230	18	3	<10	<10	3.20	2.30	0.22	0.02
468711	<1	71	<1	<2	<5	<5	<5	47	58	160	9.5	1100	110	220	7	7	<10	<10	4.10	2.60	0.32	0.01
468712	<1	58	<1	<2	<5	<5	<5	26	32	77	9.3	1100	140	180	10	6	<10	<10	3.60	2.40	0.50	0.01

## Project 572

## 96-DS-1 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468705	270	9	<1	<10	460	9
468706	2000	25	<1	<10	700	19
468707	560	11	<1	<10	680	13
468708	680	28	<1	<10	920	12
468709	790	27	<1	<10	740	19
468710	1200	26	<1	<10	790	19
468711	1700	22	<1	<10	650	9
468712	2000	13	<1	<10	690	7

Hole No: 96-DS-1

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au ppb	Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to					Length
		towards lower contact where oxidization is more prevalent.															
51.10	59.50	MASSIVE MAGNETITE Black to dark rust colored massive magnetite with locally pervasive iron carbonate and irregular blobs and veins of recrystallized quartz vein. Pervasive iron carbonate occurs at top, middle and bottom of interval. Iron carbonate destroys all textures and leaves rock as moderate-strongly magnetic, very soft, vuggy orange rubble. Pyrite is only locally visible due to extreme oxidization/carbonate alteration. It is impossible to guess an accurate % pyrite. Chalcopyrite is noted as malachite, visible rarely with pyrite. Sucrosic (recrystallized) quartz generally forms small irregular shapes and aggregates rather than distinct veins, and tends to occur only where iron carbonate is not pervasive - resulting in a mottled black and white magnetite and quartz rich rock. Quartz blobs probably contain some calcite or iron-carbonate as it is locally pitted or vuggy textured. 51.10 - 52.42 m Orange, intense pervasive iron carbonate, minor quartz blobs 52.42 - 54.10 m Black massive magnetite with 10% quartz blobs, minor patchy iron carbonate 54.10 - 56.85 m Orange, intense pervasive iron carbonate rubble 56.85 - 59.50 m Black massive magnetite with 20% quartz blobs, and 15% vuggy iron carbonate	1%	--	--	off scale				468713 (duplicate)	51.10	52.42	1.32	>1000	2.44 2.70	1300	2
						51.21	52.73	70 (rubble)									
									468714 (duplicate)	52.42	54.10	1.68	>1000	8.14 8.48	550	1	
						52.73	53.80	80									
						53.80	54.10	90 (rubble)									
						54.10	55.47	60 (rubble)	468715 (duplicate)	54.10	56.85	2.75	>1000	5.76 6.34	930	<1	
						55.47	56.85	40 (rubble)									
						56.85	58.52	60 (1/2 rubble)	468716	56.85	59.50	2.65	>1000	9.21	520	2	
59.50	66.45	MAFIC DYKE (?) Medium grey-green (where not pervasive iron-carbonate), soft chloritic altered magnetic unit. Looks similar to mafic dyke described between 39.36 and 45.88 for most of interval, although there are locally portions which look like they may be plagioclase and augite crystal tuff. Unit is generally fine grained and homogeneous textured. Iron carbonate occurs as pervasive moderate to intense patchy alteration over 50% of the interval. Where not pervasively iron carbonate altered,	1%	--	--	107.3	58.52	61.26	95								
									468717	59.60	61.26	1.66	>1000	3.93	540	<1	
							61.26	62.79	80	468718	61.26	63.19	1.93	>1000	2.31	850	<1
							62.79	63.40	75								
									468719 (duplicate)	63.19	63.80	0.61	>1000	7.93 7.66	730	<1	
							63.40	64.92	50								
									468720	63.80	64.60	0.80	>1000	3.55	450	<1	

## Project 572

## 96-DS-1 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468713	12	24	<1	24	<5	<5	<5	6	18	75	29.0	320	82	130	10	2	<10	<10	1.00	1.00	0.14	<0.01
468714	35	20	<1	52	<5	<5	<5	<1	11	30	24.0	200	25	2	2	4	<10	<10	0.15	0.05	0.02	<0.01
468715	3	19	<1	20	20	<5	<5	8	19	92	29.0	210	130	81	18	2	<10	<10	1.00	0.77	0.09	0.01
468716	31	17	<1	38	<5	<5	<5	<1	12	53	26.0	140	30	39	2	4	<10	<10	0.16	0.05	0.02	<0.01
468717	<1	25	<1	16	10	<5	<5	10	20	92	19.0	330	61	180	22	2	<10	<10	1.90	1.40	0.01	0.02
468718	<1	37	<1	16	20	<5	<5	14	24	82	14.0	560	130	190	41	4	<10	<10	2.90	1.90	0.09	0.03
468719	<1	30	<1	10	<5	<5	<5	7	16	87	19.0	360	130	120	32	5	<10	<10	2.10	1.60	0.25	0.02
468720	<1	69	<1	<2	30	<5	<5	21	22	69	12.0	1100	210	180	38	5	<10	<10	3.60	2.30	0.23	0.02



## Project 572

## 96-DS-1 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468713	1000	5	<1	<10	640	13
468714	170	1	<1	<10	320	<1
468715	750	4	<1	<10	460	<1
468716	110	<1	<1	<10	260	<1
468717	1700	13	<1	<10	420	13
468718	2400	18	<1	<10	650	16
468719	1700	11	<1	<10	660	2
468720	2600	12	<1	<10	650	4



## Project 572

## 96-DS-1 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468721	<1	29	<1	14	10	<5	<5	9	10	83	19.0	400	160	130	20	1	<10	<10	2.10	1.60	0.25	0.01
468722	<1	11	<1	10	<5	<5	<5	5	10	88	20.0	120	90	110	17	1	<10	<10	0.93	0.45	0.13	0.03
468723	6	9	<1	8	<5	<5	<5	4	15	100	26.0	120	59	97	15	3	<10	<10	0.52	0.17	0.07	0.04
468724	12	21	<1	20	<5	<5	<5	15	41	72	25.0	270	130	110	15	2	<10	<10	1.20	0.67	0.17	0.01
468725	<1	34	<1	2	<5	<5	<5	20	27	44	6.7	670	120	160	35	3	<10	<10	2.90	2.00	0.55	0.02

## Project 572

## 96-DS-1 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468721	1600	9	<1	<10	320	13
468722	1300	5	<1	<10	470	10
468723	680	3	<1	<10	590	6
468724	930	7	<1	<10	350	10
468725	1900	3	<1	<10	790	4



Project 572

96-DS-1 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

96-DS-1 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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## DISCOVERY CONSULTANTS

### Drill Log

Co-ords: 1987 grid 5160E/4960N  
 1994 grid 31645E/62150N (UTM 680751E 6262299N)  
 Azimuth: 310°  
 Dip: -45°  
 Elevation: 2064 m

Drill type &amp; size: Falcon F1000 BQ-TW

Hole No: 96-DS-2  
 Property: Soup

Dip tests: acid test @298' (90.8 m)

Location: Ridge Between 3A'-N & 3A-N gullies  
 Soup 11 Fr claim

Length: 91.44m (proposed 90m)

file: 572DDH02\_96.wk1

Date St.: 96.08.25  
 Date Fin: 96.08.27

Section:

Logged by: J.Howe

Purpose: test NNE trending Qtz & Mt Mnln in saddle gully zone;  
 appr. 100m along strike to E from 96-DS-1

Reference: TSL-s3832 (m8007)

Date Logged: 96.08.26 to 96.08.28

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	Pb ppm	
							from	to	%	ID	from	to					Length
0.00	4.57	CASING					0.00	4.57	0								
4.57	6.43	CRYSTAL TUFF Medium green, medium grained plagioclase crystal tuff. Plagioclase >>> Augite, plagioclase crystals to 5 mm euhedral, with rare euhedral augite crystals to 5 mm. Moderate pervasive epidote alteration in patches, also 1-3mm wide epidote veinlets. Rare 1-2 mm wide quartz and epidote veinlets with pyrite and chalcopyrite (within veinlets). Very hard, perhaps siliceous matrix? Broken and fractured core with minor Fe-oxides on fractures. Weakly magnetic throughout.	tr	tr	mod	23.9	4.57	4.88	80 (redrill)								
							4.88	6.10	90 (some rubble)								
							6.10	6.40	60								
6.43	6.65	FELDSPAR PORPHYRITIC DYKE/SILL Dark green, almost black fine grained - aphanitic matrix with coarse grained euhedral feldspar phenocrysts up to 10 mm. Epidote along chill margins contains trace fine grained disseminated pyrite, mostly oxidized. Sharp upper and lower contacts.	tr	--	mod	9.2	6.40	6.71	78								
6.65	10.06	CRYSTAL TUFF As in interval 4.47 - 6.43 m. Pyrite (oxidized) occurs in hairline quartz ± epidote veinlets at 45°, 35° and 10° c.a. Weak moderate pervasive epidote alteration patches. Increased chlorite towards base of interval. Fractured with iron-oxides. Assay samples are of unmineralized wallrock.	tr	--	wk-mod	10.0	6.71	6.86	95								
							6.86	7.16	50								
							7.16	7.32	98								
							7.32	7.92	98								
							7.92	8.53	95								
							8.53	8.84	90	468727	8.53	10.06	1.53	0.10	220	<1	<1
							8.84	10.36	98								
10.06	11.43	QUARTZ + CARBONATE + MAGNETITE ZONE Intensely altered interval, protolith unidentifiable. Quartz 50%, Carbonate 30%, magnetite 20%. Quartz as pervasive silicification and as quartz veinlets and blobs with irregular shapes. Iron carbonate	2-3%	tr		89.0	10.36	11.43	95	468728 (duplicate)	10.06	11.43	1.37	2.07 2.93	590	<1	4



## Project 572

## 96-DS-2 Drill Sample Results (part 2)

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Sample ID	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468727	37	<1	4	10	<5	<5	28	55	52	4.6	530	140	130	37	4	<10	<10	2.70	1.90	0.79	0.02
468728	9	<1	380	<5	<5	<5	26	29	99	19.0	130	30	130	25	2	<10	<10	1.10	0.82	0.15	0.08

Project 572

96-DS-2 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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468727	2200	3	<1	<10	770	4
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468728	1400	5	<1	<10	590	9
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Hole No: 96-DS-2

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	Pb ppm	
							from	to	%	ID	from	to					Length
		is moderate to strong pervasive patches or veinlets. Magnetite occurs as a vuggy massive blob between 10.06 - 10.20 m which has been intensely oxidized and iron-carbonate altered. Magnetite also occurs throughout interval as wispy irregular lenses, stringer-like shapes and selvages to quartz veins. Oxidized pyrite appears to be intimate with oxidized magnetite and are different to distinguish.															
11.43	13.20	MAFIC DYKE (?) Fine grained, dark green strongly magnetic rock similar to unit seen in drill hole 96-DS#1 adjacent to magnetite zones. Distinctive from tuffaceous units by dark green black, chloritic and magnetic nature. Unit is extremely broken and rubbly. Several little bits of rubble have malachite ± azurite, trace amount over entire interval. Rare oxidized clots and veinlets of pyrite. Unit locally looks like it may be a fine grained crystal tuff - but very inconclusive.	tr	tr	--	core too small	11.43	11.73	95	468729	11.43	12.50	1.07	0.07	1200	<1	<1
							11.73	12.04	80								
							12.04	12.19	50								
							12.19	12.50	50								
							12.50	12.80	80	468730	12.50	13.20	0.70	0.03	3200	2	<1
							12.80	13.26	70								
									(rubble)								
13.20	17.90	QUARTZ+CARBONATE+MAGNETITE ZONE Similar to previous quartz and carbonate and magnetic zone, except % are slightly different. Quartz: 30%, Carbonate 50%, Magnetite 20%. Fe-carbonate is much more intense and pervasive in this interval and locally completely replaces protolith. Chlorite is also locally abundant and some bits of core show a well developed penetrative cleavage fabric. Magnetite, as before, occurs at clots, selvages and massive bands/blobs as well as disseminated throughout interval. Rare augite phenocrysts are locally identifiable but are generally completely to partially replaced by iron-carbonate. Veins and stringers of iron carbonate are also very common. Oxidized pyrite different to distinguish from oxidized magnetite. Trace chalcopyrite - suggested by malachite along occasional fractures.	2%?	tr	--	140.1				468731	13.20	14.50	1.30	7.83	1800	2	4
							13.26	14.02	98	(duplicate)				7.55			
							14.02	15.24	60								
									(rubble)	468732	14.50	16.46	1.96	17.55	730	3	4
									(duplicate)					19.52			
							15.24	16.46	70								
									(rubble)								
							16.46	17.07	60	468733	16.46	17.90	1.44	11.24	1000	3	5
									(rubble)	(duplicate)				11.62			
							17.07	17.53	50								
									(rubble)								
							17.53	18.29	85								
									(rubble)								
17.90	32.95	ASH-CRYSTAL TUFF Medium green, fine grained chlorite and	tr	tr	mod	23.2 (17.9-21.5m)	18.29	18.75	99	468734	17.90	18.35	0.45	1.72	660	<1	<1
									(duplicate)					1.69			

## Project 572

## 96-DS-2 Drill Sample Results (part 2)

Sample ID	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468729	29	<1	38	20	<5	<5	120	140	190	7.8	630	540	200	17	5	<10	<10	3.60	2.10	0.40	0.03
468730	38	<1	22	<5	<5	<5	53	160	75	9.3	730	570	210	42	6	<10	<10	3.70	2.00	0.31	0.03
468731	20	<1	78	5	<5	<5	13	57	61	20.0	280	64	140	26	3	<10	<10	1.40	0.86	0.18	0.03
468732	7	<1	240	<5	<5	<5	3	21	97	22.0	90	22	110	17	1	<10	<10	0.55	0.24	0.13	0.05
468733	27	<1	150	<5	<5	<5	10	36	32	17.0	360	93	140	48	2	<10	<10	2.00	1.50	0.24	0.03
468734	29	<1	38	10	<5	<5	14	42	23	11.0	520	150	130	24	3	<10	<10	2.50	1.80	0.35	0.02

## Project 572

## 96-DS-2 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468729	2000	8	<1	<10	790	11
468730	2400	7	<1	<10	1000	11
468731	1900	5	<1	<10	790	5
468732	1500	3	<1	<10	660	11
468733	2200	6	<1	<10	660	13
468734	1400	3	<1	<10	850	5



## Project 572

## 96-DS-2 Drill Sample Results (part 2)

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Sample ID	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468735	36	<1	4	10	<5	<5	18	57	27	5.1	650	150	130	34	5	<10	<10	2.70	1.90	0.48	0.02

## Project 572

## 96-DS-2 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468735	1400	3	<1	<10	810	5





## Project 572

## 96-DS-2 Drill Sample Results (part 2)

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Sample ID	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

96-DS-2 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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Hole No: 96-DS-2

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	Pb ppm	
							from	to	%	ID	from	to					Length
		chili margins. Dyke probably trends roughly sub parallel to c.a. Dyke has very similar composition to crystal tuff, plagioclase and augite phenocrysts - generally <= 3 mm. Adjacent to the 1-2 mm black chloritic chill margins there is no alteration of host tuff. All fractures in this interval are oxidized.					64.31	65.84	98								
		66.76 m Quartz vein 0.5 cm wide, trace pyrite and chalcopyrite at 10° c.a.															
67.40	70.23	CRYSTAL TUFF Interval begins like previous crystal tuff units but decreases in crystal content downhole. Near base of interval, mostly plagioclase 1-2 mm crystals with rare augite crystals. Quartz stringers and veinlets at 30°, 120° c.a. within final 1.5 metres of interval.					68.21	71.63	99								
70.23	72.73	QUARTZ PORPHYRITIC MAFIC DYKE (?) Dark green, fine grained matrix with medium to coarse grained plagioclase phenocrysts and rare sub-round quartz eyes. 5-10cm, intense iron carbonate and pyrite and magnetite along interpreted contacts, plus 1 small internal zone of quartz and iron carbonate and pyrite and magnetite up to 10 cm wide. This is an unusual looking unit: locally it looks almost like the feldspar porphyritic dykes, elsewhere it looks slightly like a quartz - rich plagioclase crystal tuff. Moderately magnetic throughout.	tr	tr	--	77.6				468736	70.23	71.63	1.40	0.14	2700	<1	<1
							71.36	73.61	90	(duplicate)				0.10			
										468737	71.63	72.73	1.10	0.21	680	<1	<1
72.73	74.31	INTERBEDDED ASH AND CRYSTAL TUFF Dark green to black, fine grained matrix with interbedded fine grained ash and plagioclase = augite fine grained crystal tuff. Matrix is very chloritic. Numerous quartz stringers and tensional veinlets with chlorite selvages. 73.90-74.20 m Intense quartz stringers with pyrite ± chalcopyrite(?) abundant chlorite and magnetite.	tr	tr	--	48.7				468738	72.73	74.31	1.58	0.17	950	<1	<1
							73.61	75.59	98								
74.31	75.90	IRON CARBONATE+MAGNETITE+QUARTZ+CHLORITE ZONE Massive magnetite with intense iron-	?	--	--	44.5				468739	74.31	75.20	0.89	7.38	5800	10	7
										(duplicate)				7.97			
										468740	75.20	75.90	0.70	5.17	3700	6	1

## Project 572

## 96-DS-2 Drill Sample Results (part 2)

Sample ID	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468736	53	<1	4	10	<5	<5	66	160	130	7.5	1700	200	200	25	12	<10	<10	4.30	2.10	1.80	0.03
468737	27	<1	<2	20	<5	<5	49	60	77	7.4	830	310	230	41	8	<10	<10	3.30	2.00	2.10	0.03
468738	50	<1	20	10	<5	<5	62	83	320	7.7	1300	190	220	42	5	<10	<10	4.20	2.20	4.20	0.02
468739	39	<1	510	<5	<5	<5	45	160	230	21.0	1000	63	240	84	5	<10	<10	3.50	1.70	0.68	0.03
468740	52	<1	110	30	<5	<5	52	120	270	17.0	1100	63	250	44	5	<10	<10	3.90	1.90	0.66	0.02

## Project 572

## 96-DS-2 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
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468736	2200	21	<1	<10	730	14
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468737	2500	21	<1	<10	820	15
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468738	1700	34	<1	<10	750	23
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468739	1400	27	<1	<10	920	27
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468740	1600	28	<1	<10	740	22
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## Project 572

## 96-DS-2 Drill Sample Results (part 2)

Sample ID	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468741	49	<1	10	<5	<5	<5	64	81	450	7.4	1700	150	210	38	7	<10	<10	3.90	2.20	5.90	<0.01
468742	32	<1	4	10	<5	<5	52	85	470	5.5	1400	130	180	60	6	<10	<10	2.90	2.10	7.60	<0.01
468743	35	<1	<2	<5	<5	<5	53	67	530	7.0	1400	110	200	100	5	<10	<10	3.40	2.10	8.20	<0.01
468744	77	<1	40	<5	<5	<5	73	290	450	8.9	3300	79	230	49	15	<10	<10	4.30	2.10	5.00	<0.01
468745	55	<1	2	<5	<5	<5	35	43	88	6.3	1000	78	220	45	8	<10	<10	2.90	2.00	3.40	0.04



## Project 572

## 96-DS-2 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468741	1600	34	<1	<10	670	20
468742	1200	31	<1	<10	510	19
468743	1400	33	<1	<10	550	17
468744	970	30	<1	<10	620	21
468745	1500	22	<1	<10	750	16



Project 572

96-DS-2 Drill Sample Results (part 2)

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Sample ID	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

96-DS-2 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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## DISCOVERY CONSULTANTS

## Drill Log

Co-ords: 1987 grid 5340E/5020N  
 1994 grid 81820E/62235N (UTM 680846E 6262421N)  
 Azimuth: 210°  
 Dip: -75°  
 Elevation: 2170 m

Length: 50.29m (proposed 200m)

Section:  
 Purpose: Target geochem & geophysical (MAG) anomaly - beneath talus

Drill type & size: Falcon F1000 BQ-TW

Dip tests: Hole abandoned  
 rod stuck @50.29 m due to caving &  
 extremely broken ground  
 file: 572DDH03\_96.wk1

Reference : TSL-s3832 (m8007)

Hole No: 96-DS-3  
 Property: Soup

Location: N. of saddle  
 Soup 11 Fr claim

Date St.: 96.08.27  
 Date Fin: 96.08.29

Logged by: J.Howe  
 Date Logged: 96.08.28/29

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
0.00	1.52	CASING					0.00	1.52	0							
1.52	3.10	MAFIC DYKE(?) Dark green, almost black fine grained unit which is strongly magnetic. Weakly chlorite altered, mostly adjacent to quartz veinlets. Trace disseminations and stringers of pyrite adjacent to quartz veinlets. Interval is very hard, almost siliceous - but doesn't look it. Wispy quartz veinlets with irregular start and end, generally at 20° c.a. with chlorite selvages.	tr	--	--	116.2	1.52	4.27	50 (lots rubble)	468746 (duplicate)	1.52	3.10	1.58	0.10 0.07	120	<1
3.10	50.29	GABBRO/GABBROIC TEXTURED FLOW Medium to dark mottled green, medium grained plagioclase (matrix) with hornblende crystal masses. Some crystals appear to be augite shaped. Interval has been silicified and has considerable quartz veinlets and epidote veinlets. Epidote also forms moderate-intensity irregular pervasive patches and as sausseritization of plagioclase. Interval contains inconsistent amount of disseminations and stringers of pyrite - sometimes amount of pyrite is related to intensity of quartz stringers. There are however, lots of quartz stringers which lack any pyrite. Trace malachite is evident on many fracture or rubble surfaces, but chalcopyrite is rarely noted in core. Generally, when there are small zones of quartz flooding, there are 1-2% clots and stringers of pyrite adjacent as follows: 7.10 - 7.70 m and 8.50 - 8.75 m 12.00-12.05(approx)m and 13.65-13.70m 12.50 - 13.70 m	tr 1%	tr	mod (3.1-12.5m)	53.4	4.27	5.18	35 (rubble/redrill)	468747	3.10	5.50	2.40	0.17	390	<1
							5.18	5.79	50 (rubble)	468748	5.50	7.31	1.81	0.17	210	<1
							5.79	7.01	85 (broken)							
							7.01	7.62	90 (broken)	468749	7.31	8.70	1.39	0.48 0.52	250	<1
							7.62	8.23	55 (v.broken)							
							8.23	9.14	50 (v.broken)	468750	8.70	10.60	1.90	0.07	200	<1
							9.14	10.36	95 (broken)							
							10.36	11.28	99 (broken)	468751	10.61	13.70	3.09	0.03	210	<1
							11.28	12.50	40 (rubble)							
							12.50	14.33	45 (rubble/redrill)	468752	13.70	14.94	1.24	0.03	140	<1
							48.1	14.33	50 (redrill)							
							(12.5-24.0m)	14.63	45 (broken)							
								14.63	14.94							

## Project 572

## 96-DS-3 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468746	2	45	<1	<2	<5	<5	<5	24	32	110	9.7	750	52	170	34	4	<10	<10	2.20	1.80	2.20	0.02
468747	<1	45	<1	<2	10	<5	<5	24	37	71	5.5	660	26	180	46	2	<10	<10	2.40	1.90	2.50	0.02
468748	<1	59	<1	<2	<5	<5	<5	23	30	87	6.9	1000	21	260	47	3	<10	<10	3.20	2.00	5.20	0.02
468749	<1	69	<1	<2	<5	<5	<5	26	34	100	7.1	1300	9	250	44	3	<10	<10	3.20	2.00	5.80	0.01
468750	3	73	<1	<2	20	<5	<5	24	26	100	5.9	980	11	230	43	4	<10	<10	3.10	2.00	4.90	0.01
468751	<1	49	<1	<2	<5	<5	<5	20	36	92	5.7	700	26	180	41	3	<10	<10	2.40	1.90	3.20	0.02
468752	<1	41	<1	<2	10	<5	<5	19	28	100	6.0	630	56	190	43	3	<10	<10	2.50	1.90	2.80	0.02

## Project 572

## 96-DS-3 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468746	1200	11	<1	<10	780	11
468747	1200	5	<1	<10	570	6
468748	1000	16	<1	<10	650	12
468749	860	21	<1	<10	770	16
468750	890	15	<1	<10	870	12
468751	990	6	<1	<10	1100	6
468752	1100	9	<1	<10	1100	10

Hole No: 96-DS-3

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
		LOST CORE/VOID														
		at 17.30 m 2 cm wide quartz vein with chlorite and magnetite wallrock/selvages with trace pyrite and chalcopyrite within quartz vein.					14.94	15.85	40	468753	14.94	17.07	2.13	0.03	210	<1
									(broken/redrill)							
							15.85	16.46	20							
									(redrill)							
		Increasing intensity of epidote alteration below 14.0 m. Decrease in quartz veinlet intensity below 14.0 m. Unit is variably fractured and broken, some runs are 100% recovery, while others consist of 40% recovery. Most fractures are oxidized, many contain trace malachite with manganese oxides.					16.46	17.07	15							
									(redrill)							
							17.07	17.68	99	468754	17.07	18.70	1.63	<0.03	190	<1
							17.68	18.29	90							
									(broken)							
							18.29	19.20	95	468755	18.70	20.30	1.60	<0.03	160	<1
									(broken)							
							19.20	19.81	95							
		Generally, the more intense the epidote alteration, the less magnetic the "gabbroic textured" unit.							(fractured)							
							19.81	20.73	95							
		Even at 50 m depth, fractures are weakly oxidized and malachite is evident.							(broken)	468756	20.30	22.45	2.15	0.07	340	<1
							46.6			(duplicate)			0.03			
		28.90-29.72 m QUARTZ+CARBONATE+PYRITE ZONE					(24.0-33.0m)	20.73	22.10	98						
									(broken)							
		Protolith unidentifiable, rusty orange siliceous unit. Less than 50% recovery over interval. RQD=0					22.10	23.01	95	468757	22.45	24.40	1.95	<0.03	210	<1
									(broken)							
		33.67 m two veins; 0.5 cm quartz carbonate vein (older) at 45° c.a. and younger. 1 cm quartz and chloritic vein and pyrite at 40° c.a.					50.5	23.01	23.77	99						
							(33.0-42.5m)		(broken)							
							23.77	25.76	97	468758	24.40	27.13	2.73	0.14	390	<1
									(broken)							
							25.76	26.21	30							
		42.10-42.37 m Moderately pervasive oxidization of possible xenoliths of crystal tuff (plagioclase crystals)							(rubble)							
							26.21	26.52	60							
									(rubble)							
							52.4	26.52	26.67	100						
		42.67-42.97 m Moderately pervasive oxidization of plagioclase crystal tuff xenoliths					(42.5-50.3m)		(broken)							
							26.67	26.97	95							
									(broken)							
		47.30-47.80 m Rubble and broken core of unaltered plagioclase crystal tuff?					26.97	27.13	98							
									(broken)	468759	27.13	28.90	1.77	0.03	340	<1
							27.13	27.58	85							
		Dark green, very magnetic aphanitic matrix with <2-3 mm subhedral plagioclase crystals - possible dyke?							(rubble)							
							27.58	27.74	85							
									(rubble)							
							27.74	27.89	98							
									(broken)							
50.29		END OF HOLE					27.89	28.19	50							
									(rubble)							
							28.19	28.50	90							
									(rubble)							



## Project 572

## 96-DS-3 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468753	<1	41	<1	<2	<5	<5	<5	19	28	88	5.5	620	23	190	43	2	<10	<10	2.20	1.80	2.70	0.02
468754	<1	36	<1	<2	<5	<5	<5	17	23	76	4.0	500	8	130	44	2	<10	<10	1.50	1.50	2.80	0.02
468755	<1	38	<1	<2	5	<5	<5	21	19	110	3.7	410	11	98	39	2	<10	<10	1.30	1.40	2.00	0.02
468756	<1	35	<1	<2	<5	<5	<5	19	24	83	3.4	380	9	90	41	2	<10	<10	1.30	1.30	1.60	0.02
468757	<1	37	<1	<2	10	<5	<5	17	22	80	3.7	390	16	110	40	2	<10	<10	1.40	1.30	1.50	0.02
468758	<1	45	<1	<2	<5	<5	<5	20	27	87	4.5	470	14	150	43	2	<10	<10	1.80	1.60	1.70	0.02
468759	1	35	<1	<2	<5	<5	<5	18	22	90	4.0	350	16	140	46	3	<10	<10	1.60	1.50	1.20	0.02

## Project 572

## 96-DS-3 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468753	1200	7	<1	<10	810	6
468754	1200	4	<1	<10	500	5
468755	1100	2	<1	<10	910	3
468756	1200	2	<1	<10	830	3
468757	1400	2	<1	<10	630	3
468758	1400	4	<1	<10	580	6
468759	1500	3	<1	<10	530	4

Hole No: 96-DS-3

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
							28.50	28.65	98							
									(rubble)							
							28.65	28.80	60							
									(rubble)							
							28.80	29.11	99							
									(broken)	468760	28.90	29.72	0.82	0.10	2000	<1
							29.11	29.72	30							
									(rubble)							
							29.72	30.33	30	468761	29.72	32.00	2.28	0.03	440	<1
									(rubble)	(duplicate)				0.03		
							30.33	30.63	85							
									(broken)							
							30.63	30.78	100							
									(rubble)							
							30.78	30.94	98							
									(rubble)							
							30.94	31.09	95							
									(redrill)							
							31.09	31.24	65							
									(redrill)							
							31.24	31.55	60							
									(redrill)							
							31.55	32.00	70							
									(rubble/redrill)							
							32.00	32.33	50	468762	32.00	34.14	2.14	<0.03	310	<1
									(broken)							
							32.33	32.61	50							
									(broken)							
							32.61	32.92	60							
									(rubble)							
							32.92	33.38	80							
									(redrill)							
							33.38	34.14	95							
									(broken)							
							34.14	34.58	70	468763	34.14	35.97	1.83	0.07	330	<1
									(redrill/rubble)							
							34.58	35.05	60							
									(redrill)							
							35.05	35.66	60							
									(cave/rubble)							
							35.66	35.97	85							
									(cave/rubble)							
							35.97	36.42	85	468764	35.97	38.00	2.03	0.03	360	<1
									(broken)							
							36.42	36.88	95							
									(broken)							
							36.88	37.34	98							

## Project 572

## 96-DS-3 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468760	<1	37	<1	<2	<5	<5	<5	18	39	27	3.9	420	23	68	36	5	<10	<10	1.70	1.60	1.40	0.04
468761	<1	40	<1	<2	<5	<5	<5	23	23	110	4.6	480	21	120	41	3	<10	<10	1.80	1.70	1.80	0.02
468762	1	43	<1	<2	10	<5	<5	20	22	100	5.3	550	45	130	39	4	<10	<10	1.90	1.70	2.00	0.02
468763	2	39	<1	<2	15	<5	<5	22	22	120	4.8	560	49	140	50	4	<10	<10	2.00	1.70	2.70	0.02
468764	1	31	<1	<2	20	<5	<5	25	23	120	3.8	340	22	120	38	2	<10	<10	1.20	1.30	1.40	0.02

## Project 572

## 96-DS-3 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468760	1700	2	<1	<10	1300	7
468761	1100	4	<1	<10	1100	5
468762	1000	4	<1	<10	1800	6
468763	1100	7	<1	<10	1100	5
468764	1100	2	<1	<10	720	4



## Project 572

## 96-DS-3 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468765	<1	36	<1	<2	<5	<5	<5	17	23	73	4.4	380	21	150	45	1	<10	<10	1.30	1.20	2.10	0.02
468766	<1	39	<1	<2	<5	<5	<5	18	21	110	4.9	400	37	150	35	3	<10	<10	1.40	1.40	1.80	0.02
468767	<1	40	<1	<2	<5	<5	<5	19	21	72	5.0	420	28	140	41	3	<10	<10	1.90	1.60	1.50	0.03
468768	<1	43	<1	<2	<5	<5	<5	20	21	78	4.3	430	40	110	45	3	<10	<10	1.80	1.60	1.40	0.03
468769	<1	39	<1	<2	10	<5	<5	19	22	100	4.9	420	38	130	42	3	<10	<10	1.90	1.70	1.50	0.02
468770	<1	34	<1	<2	20	<5	<5	17	24	68	4.7	370	49	110	57	3	<10	<10	1.60	1.50	1.20	0.02

## Project 572

## 96-DS-3 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468765	1300	3	<1	<10	510	4
468766	1200	3	<1	<10	890	5
468767	1700	3	<1	<10	830	6
468768	1100	3	<1	<10	970	4
468769	1200	3	<1	<10	1100	7
468770	1100	3	<1	<10	1400	5





## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468771	1	44	0.1	14	80	1	1	27	18	34	4.07	919	54	1	82	47	1	2.21	2.02	0.03	3.68	0.11
468772	1	44	0.1	14	96	1	1	26	19	33	3.92	915	53	1	82	65	1	2.56	2.02	0.03	3.61	0.11
468773	1	42	0.1	12	100	1	1	25	18	32	3.34	745	43	1	69	62	1	2.35	1.92	0.03	2.65	0.09
468774	1	42	0.1	12	104	1	1	25	19	42	3.58	904	40	1	74	50	1	2.39	2.06	0.04	3.57	0.08
468775	1	41	0.1	18	56	1	1	31	99	24	5.04	1069	55	1	81	35	1	2.60	2.14	0.02	3.73	0.09
468776	1	42	0.1	14	93	1	1	48	60	95	4.85	1026	36	1	162	50	1	2.59	2.73	0.03	5.73	0.09
468777	1	32	0.1	82	1	1	1	54	84	132	15.00	661	29	1	237	40	1	3.12	2.94	0.01	0.85	0.04
468778	1	54	0.1	15	122	1	1	47	29	82	4.96	1084	18	1	164	50	1	2.84	2.93	0.03	5.67	0.05
468779	1	38	0.1	12	30	1	1	36	22	76	4.00	553	19	1	118	36	1	1.46	1.51	0.03	2.44	0.04
468780	1	29	0.1	9	48	1	1	24	18	55	2.74	428	12	1	86	51	1	1.20	1.19	0.02	2.29	0.03

## Project 572

## 96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468771	0.07	1	2	1100	0.1	1	8
468772	0.09	1	2	1060	0.1	1	8
468773	0.07	1	2	1080	0.1	1	8
468774	0.10	1	2	860	0.1	1	9
468775	0.06	1	3	1080	0.1	1	10
468776	0.09	1	3	630	0.1	1	11
468777	0.06	1	7	1010	0.1	1	18
468778	0.06	1	3	790	0.1	1	13
468779	0.06	1	2	890	0.1	1	7
468780	0.06	1	1	1160	0.1	1	5



## Project 572

## 96-DS-4 Drill Sample Results (part 2)

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Sample ID	Pb	Zn	Cd	Mo	As	Sb	Bi	Ni	Co	Cr	Fe	Mn	Ba	U	V	Sr	W	Al	Mg	Na	Ca	K
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%	%

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Project 572

96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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Hole No: 96-DS-4

Interval		Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Au oz/t	Cu ppm	Ag ppm	
From	To						from	to	%	from	to	Length					
		<p>weak moderate oxidization occurs with minor manganese oxides. Rare stringers of pyrite. Very weakly epidote altered with rare epidote veinlets.</p> <p>23.30-23.38m Band (or bed?) of melanocratic gabbro, lacks plagioclase (&lt;5%). Sharp contacts with surrounding gabbro at 50° c.a. - possibly a cumulate layer? Does not appear to be a dyke since the contacts do not show chilling, quenching or alteration within the wallrock</p> <p>24.51-24.53m Similar band of melanocratic gabbro/pyroxenite.</p> <p>24.80-24.90m Fragments (subround-angular) of dark melanocratic gabbro (pyroxenite?)</p> <p>28.00-28.30m Same fragments as above</p>															
28.30	30.60	<p>MELANOCRATIC GABBRO/PYROXENITE?</p> <p>Dark green-black unit with crowded, inequigranular hornblende and augite which comprise ~80% of unit, plagioclase matrix is weakly-moderately sausseritized and comprises remainder 20%. Occasional epidote veinlets and quartz stringers. Buff to pale brown leucoxene - after sphene? Also noted within gabbro, but more prevalent here.</p>	--	--	v.wk	84.9	28.96	29.57	100								
							29.57	32.61	99								
30.60	31.51	<p>GABBRO</p> <p>Intense pervasive epidote alteration, very limey-apple green and hard. Most augite phenocrysts are preserved in limey-apple green matrix. 1% clots and stringers of pyrite, not noticeably magnetic.</p>	1%	--	int	4.2				468781	30.60	31.51	0.91	0.01	0.001	66	0.9
31.51	34.60	<p>GABBRO</p> <p>Medium grained, hornblende + augite phenocrysts in moderate to strongly epidote and sausseritized plagioclase-rich matrix. Trace to 1% disseminated clots and stringers of pyrite. Unit same as 12.84-28.30 m but here there is epidote. Also occasional fragments of pyroxenite, rare quartz veinlets</p>	tr 1%	--	mod-str	49.2				468782	31.51	32.61	1.10	0.01	0.001	109	0.6
							32.61	35.36	98	468783	32.61	34.60	1.99	0.01	0.001	148	0.9

## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468781	1	14	0.1	6	55	3	1	16	10	62	1.11	281	10	1	33	86	4	0.92	0.50	0.02	2.72	0.01
468782	1	16	0.1	8	1	1	1	23	12	101	2.69	278	24	1	84	47	6	0.87	0.57	0.03	2.45	0.04
468783	1	24	0.1	9	37	1	1	33	16	99	2.79	389	22	1	80	45	4	1.14	0.99	0.03	2.75	0.04



## Project 572

## 96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468781	0.06	1	1	850	0.1	1	2
468782	0.06	1	1	1020	0.1	1	3
468783	0.09	1	1	590	0.1	1	4



## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468784	1	41	0.1	14	59	1	1	49	27	180	4.48	643	17	1	112	48	6	1.73	1.77	0.03	3.45	0.03
468785	1	47	0.1	16	22	1	1	39	37	69	5.49	722	17	1	156	35	1	2.05	2.22	0.02	2.61	0.03
468786	1	42	0.1	15	39	1	1	32	28	43	4.65	576	22	1	132	44	1	1.72	1.76	0.03	1.95	0.04
468787	1	32	0.1	10	39	1	1	24	20	40	3.37	451	19	1	97	45	1	1.28	1.26	0.03	1.92	0.03

Project 572

96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468784	0.10	1	2	1000	0.1	1	9
468785	0.11	1	3	380	0.1	1	11
468786	0.11	1	2	970	0.1	1	9
468787	0.08	1	2	1120	0.1	1	6



## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468788	1	31	0.1	11	28	1	1	28	22	47	3.97	551	29	1	127	49	1	1.41	1.39	0.04	3.07	0.05
468789	1	25	0.1	9	50	1	1	20	16	42	2.31	425	9	1	73	71	1	1.21	1.07	0.02	2.47	0.01
468790	1	31	0.1	10	103	1	1	24	19	30	2.61	433	18	1	78	43	1	1.58	1.59	0.04	1.56	0.03
468791	1	42	0.1	13	98	1	1	29	40	24	3.60	534	12	1	99	48	1	2.03	2.16	0.03	1.08	0.02
468792	1	41	0.1	40	26	1	56	36	81	37	4.77	491	22	1	126	36	1	1.72	1.77	0.03	1.25	0.05
468793	1	24	0.1	11	7	1	1	26	22	45	4.18	399	20	1	156	35	1	1.22	1.17	0.03	2.19	0.05
468794	1	40	0.1	14	33	1	1	38	27	56	4.77	538	16	1	143	49	1	1.88	1.92	0.02	2.09	0.04

## Project 572

## 96-DS-4 Drill Sample Results (part 3)

Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468788	0.08	1	2	1000	0.1	1	7
468789	0.07	1	1	750	0.1	1	4
468790	0.06	1	2	1150	0.1	1	8
468791	0.09	1	2	1120	0.1	1	11
468792	0.08	1	3	870	0.1	1	9
468793	0.14	1	2	160	0.1	1	5
468794	0.09	1	3	480	0.1	1	9





## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468795A	1	53	0.1	15	78	1	1	48	36	85	6.19	1025	17	1	224	24	1	2.60	3.04	0.02	4.97	0.06
468795B	1	39	0.1	223	1	1	1	49	101	53	12.45	566	62	1	172	53	1	2.56	1.99	0.03	0.42	0.08
468796	1	36	0.1	15	1	1	1	38	36	69	6.40	488	11	1	196	41	1	1.60	1.49	0.02	1.83	0.03

Project 572

96-DS-4 Drill Sample Results (part 3)

Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468795A	0.10	1	3	520	0.1	1	14
468795B	0.10	1	5	220	0.1	1	11
468796	0.16	1	3	470	0.1	1	6



## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468797	1	33	0.1	12	37	1	1	30	24	48	4.16	447	17	1	145	68	1	1.65	1.42	0.03	1.96	0.06
468798	1	56	0.1	14	101	1	5	40	35	80	4.81	906	7	1	139	44	1	2.37	2.80	0.01	4.49	0.02
468799	1	20	0.1	7	10	1	1	27	16	76	2.52	234	12	1	77	65	3	1.00	0.70	0.03	1.87	0.03

## Project 572

## 96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468797	0.11	1	2	420	0.1	1	6
468798	0.13	1	3	530	0.1	1	12
468799	0.07	1	1	790	0.1	1	3



## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468800	1	28	0.1	10	30	1	1	28	20	73	3.93	431	12	1	107	51	1	1.39	1.31	0.03	2.10	0.03
468801	1	14	0.1	6	37	1	2	20	14	57	1.92	304	14	1	70	89	2	1.01	0.66	0.04	2.85	0.02
468802	1	40	0.1	11	112	1	1	54	21	131	3.79	856	13	1	127	96	2	2.04	2.31	0.02	5.84	0.03

## Project 572

## 96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468800	0.10	1	2	840	0.1	1	6
468801	0.11	1	1	560	0.1	1	2
468802	0.08	1	2	520	0.1	1	10



Hole No: 96-DS-4

Interval		Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Au oz/t	Cu ppm	Ag ppm		
From	To						from	to	%	from	to	Length						
		All veins are less than 0.5 cm except as follows: 98.76 m 4 cm quartz chlorite vein at 60° to c.a., no sulphides 100.67 m 2 cm quartz chlorite vein at 65° to c.a., no sulphides 102.32 m 3 cm quartz chlorite vein at 55° c.a.																
106.67	108.40	MAFIC DYKE(?) Fine grained, medium-dark green with wispy irregular quartz flooding and stringers (20%) of interval. Strongly magnetic with considerable chlorite (scratchable). White quartz vein wisps are parallel to foliation which is moderately well developed in this interval at 50° c.a. Trace disseminated pyrite throughout.	tr	--	--	99.3												
108.40	111.83	QUARTZ-CARBONATE ALTERED MAFIC DYKE? Rubbly and broken core, possibly same protolith although not convincing. Magnetism is patchy and variable (non magnetic where intensely altered, to strongly magnetic where weakly altered). Quartz veins and flooding comprise ~20%; Iron carbonate/ankerite forms pervasive alteration of mafic dyke and marginal to quartz veins (~30%). Rare patches of semi-massive magnetite (intensely carbonate altered and rusted). Pyrite occurs locally as stringers or disseminations ~1-2% overall. Core of interval looks like it has abundant Fe- stained plagioclase crystals resulting in a porphyritic texture (and suggest possible dyke interpretation). Quartz veins contain abundant chlorite as clots and selvages. Fractured surfaces are strongly oxidized.	1-2%	--	--	2.1	97.4	108.82	111.86	95	468803	108.40	109.43	1.03	0.17	0.005	52	0.7
											468804	109.43	110.68	1.25	0.03	0.001	33	0.6
											468805	110.68	111.83	1.15	0.03	0.001	55	0.4
111.83	112.74	DIORITE DYKE Leucocratic medium grained, with 70% plagioclase matrix and phenocrysts as well as 15% each of hornblende and augite. Weak to moderate epidote alteration. Tremolite crystals along upper contact with mafic dyke. Trace disseminated pyrite (patchy). Most mafic minerals altered to epidote, some augite/hornblende crystals are fresh.	tr	--	wk-mod	2.0	111.86	114.91	100		468806	111.83	112.74	0.91	0.01	0.001	42	0.8

## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468803	1	60	0.1	18	126	1	1	57	27	78	5.40	2438	188	1	124	210	1	2.39	3.28	0.02	10.33	0.07
468804	1	35	0.1	9	187	1	1	36	15	96	2.32	1222	53	1	61	154	1	1.81	2.82	0.02	8.86	0.10
468805	1	50	0.1	12	113	1	1	81	21	158	5.14	2368	86	1	78	169	1	1.28	3.90	0.01	9.99	0.11
468806	1	13	0.1	5	97	1	2	17	9	44	0.86	362	18	1	35	52	1	0.91	1.01	0.04	3.02	0.04

## Project 572

## 96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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468803	0.01	1	3	560	0.1	1	15
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468804	0.01	1	2	80	0.1	1	12
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468805	0.01	1	3	290	0.1	1	8
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468806	0.09	1	1	80	0.1	1	3
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## Project 572

## 96-DS-4 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468807	1	12	0.1	5	24	1	6	17	18	47	1.47	225	11	1	44	47	2	0.77	0.42	0.03	2.61	0.01
468808	1	39	0.1	9	112	1	1	45	22	186	3.03	570	20	1	92	64	6	1.55	1.85	0.04	3.84	0.07

## Project 572

## 96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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468807	0.11	1	1	650	0.1	1	1
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468808	0.12	1	2	770	0.1	1	10
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Hole No: 96-DS-4

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery		Sample Interval (m) from to Length	Au g/t	Au oz/t	Cu ppm	Ag ppm				
							from	to						%			
133.20	138.55	PYROXENITE Dark green to black melanocratic, medium grained augite - rich unit, as previous intervals. Trace pyrite. Weak matrix alteration by epidote. Strongly magnetic throughout. Thin section sample at 136.15 m 133.60-134.00 m Diorite dykelet intrudes at 0° c.a. 134.48-134.52 m Diorite dykelet intrudes at 90° c.a.	tr	--	wk	63.7	133.20	136.25	100								
							136.25	139.29	100								
138.55	139.90	DIORITE/QUARTZ FLOODING (APLITIC CONTACT?) Upper contact with pyroxenite appears to be 95% buff white amorphous quartz - possible an aplitic contact zone with clots of chlorite, magnetite and fragments of plagioclase with Epidote, stringers and flecks of malachite. Gradational into a non-magnetic quartz rich diorite. Very unusual looking interval. Unit is unscratchable + very hard due to quartz content. Fractured surfaces are weak-moderately oxidized.	--	tr mal	str (clots)	43.1 2.4			468809	138.55	139.90	1.35	0.01	0.001	246	0.8	
							139.29	142.34	99								
139.90	144.77	GABBRO - DIORITE Unusual unit with highly variable composition and textures - possibly due to magma mixing. Strong pervasive and patchy epidote alteration. Trace disseminations and clots of pyrite, also rare stringers of pyrite. Fractured surfaces are oxidized. About 50% is gabbroic texture, and 50% of interval is dioritic. Slight increase in pyrite intensity where epidote is strongest. Strongly magnetic throughout.	tr	--	str	141.0			468810	139.90	141.52	1.62	0.01	0.001	67	0.6	
									468811	141.52	143.30	1.76	0.01	0.001	227	0.7	
							142.34	145.39	100	468812	143.30	144.77	1.47	0.01	0.001	113	0.5
144.77	145.60	DIORITE/QUARTZ FLOODING (APLITIC CONTACT) Same as previous diorite/quartz flood interval, between 138.55-139.90m except the quartz occurs at the lower contact, with fine grained very siliceous dioritic material occurs at upper contact. Augite and rare plagioclase phenocrysts (completely epidote altered) are hosted within a buff white amorphous quartz flooded zone. Very hard and not scratchable. Epidote forms pervasive alteration of fragments of wallrock(?) diorite-gabbro. No magnetite noted within	tr	--	str	8.9			468813	144.77	145.60	0.83	0.01	0.001	27	0.7	
							145.39	148.44	100								
							148.44	151.49	100								

## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468809	1	18	0.1	5	44	1	11	24	19	374	1.72	140	23	1	54	30	21	0.67	0.44	0.05	0.78	0.04
468810	1	17	0.1	6	11	1	2	19	15	57	2.27	265	8	1	61	53	2	0.93	0.54	0.03	2.36	0.01
468811	1	11	0.1	7	1	1	1	19	25	59	2.99	277	5	1	65	56	2	0.77	0.34	0.02	2.43	0.01
468812	1	11	0.1	6	1	1	1	22	21	49	3.18	304	3	1	60	50	1	0.75	0.36	0.02	2.55	0.01
468813	1	18	0.1	5	91	1	6	14	7	119	0.60	260	21	1	21	38	6	0.84	0.71	0.05	1.49	0.04



## Project 572

## 96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468809	0.16	1	1	40	0.1	1	5
468810	0.11	1	1	830	0.1	1	4
468811	0.13	1	1	850	0.1	1	1
468812	0.12	1	1	710	0.1	1	1
468813	0.10	1	1	60	0.1	1	5



## Project 572

## 96-DS-4 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468814	1	37	0.1	10	104	1	1	55	28	88	3.35	392	9	1	108	39	1	1.71	2.00	0.03	1.28	0.03
468815	1	38	0.1	10	147	1	1	114	24	296	3.44	554	6	1	66	24	8	1.93	2.74	0.02	1.65	0.02
468816	1	27	0.1	13	45	1	1	42	42	98	4.57	634	21	1	141	56	1	1.47	1.86	0.02	4.93	0.13
468817	1	12	0.1	6	12	1	2	17	11	47	1.99	205	13	1	71	39	2	0.76	0.62	0.03	1.67	0.05

## Project 572

## 96-DS-4 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468814	0.13	1	2	10	0.1	1	10
468815	0.08	1	2	120	0.1	1	13
468816	0.11	1	3	60	0.1	1	8
468817	0.10	1	1	350	0.1	1	3

## DISCOVERY CONSULTANTS

### Drill Log

Co-ords: 1994 grid: 81870E/61500N  
(UTM 681355E 6261979N)  
Azimuth: 100°  
Dip: -45°  
Elevation: 2090m

Drill type &amp; size: Falcon F1000 BQ-TW

Hole No: 96-DS-5  
Property: Soup

Dip tests: @297° &amp; 647°

Location: Rockslide Cirque  
Soup 12 claim

Date St.: 96.08.31

Date Fin: 96.09.03

Logged by: J.Howe

Date Logged: 96.09.02/03

Length: 236.83m (proposed 200m+)

file: 572\DDH05\_96.wk1

Purpose: test possible Minizn hosted in Qtz Vns & Shears in Gabbro  
& Diorite of rockslide & porphyry cirques

Reference: Min-En 6s135, 6s136

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery		Sample Interval (m)			Au g/t	Au oz/t	Cu ppm	Ag ppm		
							from	to	%	ID	from					to	Length
0.00	2.13	CASING					0.00	2.13	0								
2.13	4.75	GABBRO - SILICIFIED Very siliceous, quartz flooded medium grained gabbro. Hornblende and augite crystals (<5mm) in a very siliceous (plagioclase and silica) matrix. Epidote also moderately pervasive alteration of matrix. Abundant pinkish brown quartz carbonate veinlets/stockwork, no sulphides, no malachite noted on fractures. All fractures are oxidized	--	--	mod	16.6	2.13	3.96	60 (v.broken)								
							3.96	5.18	70 (v.broken)								
4.75	33.66	GABBRO/GABBROIC TEXTURED FLOW Medium to coarse grained inequigranular gabbro, Hornblende and augite phenocrysts vary 2-10 mm in a fine grained epidote altered plagioclase matrix. Epidote intensity strongest near upper contact, decreases downhole to moderate alteration of plagioclase (saussuritization). 5% of interval consists of sub-angular fragments of fine grained mafic material, chilled gabbro or other mafic unit - probably not tuffaceous. Most fragments are less than 5cm maximum dimension, although there are some short intervals of core which are likely stronger fragments as follows: 10.82-10.92 m Fine grained mafic fragments with quartz vein along fragment contact with gabbro 16.15-16.31 m Quartz and chlorite vein with trace pyrite and trace chalcopyrite, 45° c.a. 20.27-20.96 m Large mafic fragment, with plagioclase phenocrysts in fine grained chloritic matrix; quartz stringers common in fragments, trace pyrite 20.45-20.52 m Quartz, chlorite and	--	--	mod	67.3 (4.75-24.0m)	5.18	7.32	50 (broken)								
							7.32	8.23	5 (rubble)								
						70.5 (24.0-33.6m)	8.23	9.75	98								
							9.75	10.82	70 (v.broken)								
							10.82	12.19	95								
							12.19	14.33	100								
							14.33	17.37	100								
							17.37	20.42	100								
							20.42	23.47	97								
							23.47	26.52	100								
							26.52	29.57	99								
							29.57	32.61	100								
							32.61	35.66	100								

Project 572

96-DS-5 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
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Project 572

96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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Hole No: 96-DS-5

Interval		Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Au oz/t	Cu ppm	Ag ppm	
From	To						from	to	%	ID	from	to					Length
		carbonate vuggy vein at 45° c.a. 23.27-23.47 m Mafic fragment with medium grained plagioclase phenocrysts 25.62 m 2 cm wide quartz vein at 25 cm 26.12 m 1x2 cm clot of pyrite with flecks of malachite 30.37-30.42 m 5 cm wide quartz, chlorite vein, no sulphides at 50° c.a. Locally hornblende phenocrysts are extremely coarse-grained up to 2 cm long and can be mistaken as angular mafic fragments -although some of these crystals are euhedral to subhedral and readily identified. Epidote alteration prevails throughout interval as moderate pervasive matrix alteration. Most fractured surfaces are oxidized															
33.66	34.23	MAFIC DYKE Sharp chill margins at both contacts, fine to medium grained plagioclase and hornblende porphyritic, contains 1-2% disseminated and clotty pyrite with trace malachite specks and stringers. Moderate pervasive epidote alteration of matrix plagioclase and plagioclase phenocrysts.	1-2%	tr mal	mod	3.4				468818	33.66	34.23	0.57	0.01	0.001	113	0.1
34.23	42.30	GABBRO As previously described to 33.66 m, except this portion contains approximately 30% assorted fragments and is moderate to strongly pervasive epidote altered. Also contains 1% pyrite with flecks of malachite surrounding pyrite clots. Malachite also forms on some fracture surfaces. Pyrite and malachite are more prevalent (2-3%) within 2 m upper contact with mafic dyke decreases to trace 1% amounts in center portion of interval, then increases to 1-2% adjacent to diorite unit at base of interval. Fractures are oxidized as are some clots of pyrite.	1%	tr mal	mod-str	17.2				468819	34.23	35.50	1.27	0.01	0.001	286	0.2
							35.66	38.71	100	468820	35.50	37.05	1.55	0.01	0.001	207	0.3
							38.71	41.76	100	468821	37.05	38.71	1.66	0.01	0.001	64	0.4
							41.76	44.81	100	468822	38.71	40.51	1.80	0.03	0.001	173	0.4
										468823	40.51	42.30	1.79	0.01	0.001	119	0.3
42.30	44.45	DIORITE AND QUARTZ FLOODING (APLITIC DYKE?) Whitish (with pink and green tinges) very siliceous aphanitic unit in contact with gabbro, gradational into diorite like composition in center of interval, possible	1-2%	tr mal	mod-str	4.9				468824/5	42.30	46.11	3.81	0.01	0.001	62	0.5



## Project 572

## 96-DS-5 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468818	1	30	0.1	8	6	1	1	18	15	36	2.68	400	32	1	69	55	1	1.31	1.12	0.05	1.43	0.06
468819	1	27	0.1	8	45	1	1	21	19	43	2.20	346	13	1	69	61	1	1.45	1.28	0.05	1.25	0.03
468820	1	28	0.1	9	59	1	1	29	21	68	3.06	494	15	1	100	39	1	1.57	1.67	0.03	2.37	0.04
468821	1	40	0.1	11	87	1	1	50	20	152	3.64	795	16	1	116	34	2	2.01	2.37	0.03	4.52	0.04
468822	1	29	0.1	9	42	1	1	25	20	47	3.10	442	22	1	93	54	1	1.41	1.37	0.03	2.02	0.05
468823	1	20	0.1	7	52	1	1	17	13	59	1.67	282	16	1	50	40	2	0.88	0.90	0.03	1.46	0.03
468824/5	1	23	0.1	7	73	1	1	21	11	88	1.76	486	18	1	53	41	3	1.01	1.05	0.03	3.36	0.04

## Project 572

## 96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468818	0.08	1	1	1300	0.1	1	3
468819	0.08	1	1	1470	0.1	1	4
468820	0.08	1	2	870	0.1	1	6
468821	0.08	1	2	690	0.1	1	10
468822	0.09	1	2	990	0.1	1	5
468823	0.05	1	1	810	0.1	1	3
468824/5	0.07	1	1	380	0.1	1	3

Hole No: 96-DS-5

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery		Sample Interval (m)			Au g/t	Au oz/t	Cu ppm	Ag ppm	
							from	to	%	ID	from					to
		aplitic dyke margin. Very irregular contacts very diffuse - probably due to remelting and resorption. Identical to diorite with quartz flooding noted near the bottom of drill hole 96DS#4. Interval contains carbonate clots, pyrite clots 1-2%, trace stringers and flecks of malachite, augite phenocrysts up to 1 cm across. Generally non-magnetic, some of the pyrite maybe po, resulting in the weak magnetism. Contains numerous quartz and carbonate (vuggy) veinlets throughout, at random c.a.'s. Epidote is moderate to strong and very patchy.														
44.45	46.11	GABBRO Dark green, medium grained gabbro, trace pyrite, weak-moderate pervasive epidote with epidote veinlets.	tr	--	wk-mod	49.0	44.81	47.85								
46.11	47.55	MAFIC DYKE Medium grey-green chloritic matrix with inequigranular plagioclase and hornblende phenocrysts. Both plagioclase and hornblende crystals are sub-rounded, plagioclase <=8 mm, hornblende <=3 mm. Weak to moderate pervasive epidote alteration, and minor epidote veinlets. Sharp contacts top and bottom, but not a good chill. Rare quartz carbonate veinlets. No sulphides. Moderately magnetic throughout. Also contains rare fragments of wallrocks. Thin section/rep sample at 47.25m	--	--	wk	23.8	47.85	50.90								
47.55	55.50	GABBRO Medium to coarse grained crowded augite and hornblende crystals in fine grained epidote altered plagioclase matrix. Rare quartz and carbonate veinlets. Strongly magnetic throughout, epidote increases intensity towards base of interval. Hairline carbonate veinlets throughout, some contain trace pyrite crystals; rare quartz ± carbonate veinlets up to 0.5 cm at 20° and 60° c.a. Unit quite fractured with oxidized surfaces between: 53.0-55.5 m.				84.3	50.90	53.95								
							53.95	57.00								
55.50	56.90	DIORITE AND QUARTZ FLOODING (APLITIC DYKE) As with previously described diorite and							1.2							

Project 572

96-DS-5 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
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Project 572

## 96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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## Project 572

## 96-DS-5 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468826	1	27	0.1	9	17	1	1	12	8	29	1.78	660	244	1	19	146	1	0.78	0.69	0.02	3.41	0.18
468827	1	29	0.1	8	11	1	1	12	7	37	1.68	635	294	1	14	152	1	0.71	0.53	0.03	3.34	0.20
468828	1	32	0.1	10	6	1	1	11	8	36	1.77	680	233	1	13	164	1	0.64	0.49	0.03	3.47	0.21
468829	1	29	0.1	10	19	1	1	13	7	45	1.73	744	314	1	14	219	1	0.54	0.62	0.03	3.31	0.19

## Project 572

## 96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468826	0.01	1	1	730	0.1	1	2
468827	0.01	1	1	790	0.1	1	3
468828	0.01	1	1	810	0.1	1	2
468829	0.01	1	1	770	0.1	1	1





Project 572

96-DS-5 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
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Project 572

96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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Hole No: 96-DS-5

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Au oz/t	Cu ppm	Ag ppm		
							from	to	%	ID	from	to					Length	
		mafic dyke - as above 101.5-103.4m Rare subangular fragments (≤5cm) of fine grained mafic material																
106.18	107.68	MAFIC DYKE Medium to dark green chloritic matrix with plagioclase phenocrysts; abundant, white wispy quartz stringers typically at ~50-60° c.a. Strongly magnetic; no sulphides, very weak epidote alteration of plagioclase phenocrysts. Fairly sharp upper and lower contacts. Flecks of orangy-colored iron carbonate, fractured surfaces are oxidized.	--	--	wk	85.8												
107.68	135.07	DIORITE Light grey with pink and greenish tinge, siliceous diorite. 107.68-109.50 m Contact zone or chill margin exhibits mixing of mafic material, and produces alternating irregular and diffuse bands of aphanitic diorite, with silicified fine grained mafic. Gradational from fine grained aphanitic contact into medium grained plagioclase and hornblende phyr. Plagioclase >>> hornblende; plagioclase phenocrysts are white and typically ≤4 mm while hornblende laths are inconsistently distributed through unit and ≤10 mm. Epidote ± chlorite form abundant hairline fractures almost stockwork like, with epidote diffusing as weak-moderate pervasive alteration in envelopes around fractures. Unit is entirely non-magnetic. Rare disseminated pyrite. Unit is very siliceous and matrix can't be scratched. Most fracture surfaces are weakly oxidized. 115.41-116.91 m 20% bands of partially remelted mafic fragments, Diorite is weakly iron carbonate altered and iron stained and mafic portions contain ≤1% pyrite 121.01-125.45 m Trace to 1% clots and flecks of pyrite. Weak jarosite alteration rims pyrite, rare smears of malachite on fracture surfaces between 121.91-122.20 Below 121.01 m unit is very broken and	rare	--	wk	0.9	108.81	111.85	100									
							111.85	114.91	100									
							114.91	117.96	100	468830	115.41	116.91	1.50	0.01	0.001	45	0.6	
							117.96	121.01	99									
							121.01	121.92	50	468831	121.01	122.18	1.17	0.01	0.001	40	0.4	
							121.92	122.22	(rubble)									
							122.22	122.68	98	468832	122.18	124.05	1.87	0.01	0.001	35	0.3	
							122.68	124.05	(broken) 100									
							124.05	125.45	100	468833	124.05	125.45	1.40	0.01	0.001	20	0.4	
							125.45	126.19	88									
							126.19	127.10	(broken) 95									
							127.08	130.30	75									
							130.30	131.06	(v.broken) 30									
							131.06	131.52	(v.broken) 60									
							131.52	131.98	(rubble/redrill) 75									
			1%				131.98	132.74	(broken/rubble) 90									
							132.74	133.20	(v.broken) 95									
							133.20	134.87	(v.broken) 80									
							134.87	136.55	(v.broken) 95	468834	133.57	135.07	1.50	0.04	0.001	26	0.5	

## Project 572

## 96-DS-5 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468830	1	22	0.1	5	91	1	1	14	8	64	0.93	389	20	1	31	45	2	0.80	0.89	0.05	2.70	0.03
468831	1	14	0.1	4	57	1	1	7	6	68	0.56	211	17	1	16	33	3	0.48	0.43	0.05	1.74	0.03
468832	1	14	0.1	4	67	1	1	10	6	47	0.79	281	15	1	29	31	1	0.56	0.59	0.05	2.05	0.02
468833	1	20	0.1	6	61	1	1	12	6	64	1.15	405	29	1	39	30	2	0.73	0.75	0.05	2.75	0.04
468834	1	16	0.1	8	92	1	1	17	9	79	1.44	576	28	1	23	38	2	1.01	1.11	0.03	3.78	0.07

## Project 572

## 96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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468830	0.04	1	1	180	0.1	1	3
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468831	0.03	1	1	350	0.1	1	2
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468832	0.03	1	1	230	0.1	1	2
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468833	0.02	1	1	360	0.1	1	4
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468834	0.02	1	1	540	0.1	1	5
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## Project 572

## 96-DS-5 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468835	1	36	0.1	12	129	1	1	37	23	99	3.59	893	32	1	103	51	1	2.32	2.64	0.02	5.52	0.10
468836	1	35	0.1	12	157	1	1	32	18	86	3.27	995	31	1	110	77	1	2.44	2.87	0.03	7.32	0.06
468837	1	59	0.1	17	102	1	1	51	31	109	6.06	1315	11	1	213	62	1	3.36	4.12	0.01	7.56	0.02
468838	1	56	0.1	16	101	1	1	47	30	97	5.68	1317	9	1	186	55	1	3.07	3.72	0.01	6.92	0.02
468839	1	42	0.1	13	18	1	1	32	24	83	4.43	609	22	1	117	70	1	1.76	1.74	0.03	2.41	0.04



## Project 572

## 96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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468835	0.05	1	1	300	0.1	1	13
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468836	0.04	1	1	510	0.1	1	12
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468837	0.04	1	1	950	0.1	1	18
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468838	0.05	1	1	570	0.1	1	16
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468839	0.10	1	1	650	0.1	1	8
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## Project 572

## 96-DS-5 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
468840	1	31	0.1	11	1	1	1	29	21	56	4.78	533	32	1	169	64	1	1.25	1.31	0.03	2.73	0.05
468841	1	52	0.1	24	79	1	1	46	50	56	5.71	1240	12	1	200	41	1	2.89	3.43	0.02	6.22	0.03
468842	1	28	0.1	10	1	1	1	26	19	52	3.52	499	29	1	110	48	1	1.19	1.21	0.03	2.99	0.05

## Project 572

## 96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
468840	0.11	1	1	460	0.1	1	6
468841	0.05	1	1	680	0.1	1	17
468842	0.07	1	1	1110	0.1	1	6



Project 572

96-DS-5 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	U ppm	V ppm	Sr ppm	W ppm	Al %	Mg %	Na %	Ca %	K %
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Project 572

96-DS-5 Drill Sample Results (part 3)

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Sample ID	Ti %	Th ppm	Sn ppm	P ppm	Be ppm	Ga ppm	Li ppm
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## DISCOVERY CONSULTANTS

### Drill Log

Co-ords: 1994 grid: 81650E/62690N  
(UTM 680424E 6262806N)  
Azimuth: 210°  
Dip: -75°  
Elevation: 2120 m

Drill type &amp; size: Falcon F1000 BQ-TW

Hole No: 96-DS-6  
Property: Soup

Dip tests: no test, hole abandoned

Location: ridge between 4N & 5N gully  
Soup 2 claim

Length: 61.57m (porposed 200m) abandoned after rods broke

file: 572\DDH06\_96.wk1

Date St.: 96.09.03  
Date Fin: 96.09.06  
Logged by: J.Howe  
Date Logged: 96.09.05 to 96.09.08

Purpose: test for buried Minlzn associated with geochem anomaly  
(Hemlo talus fine sample - 8700ppb Au)

Reference: TSL-s3889 (m8039)

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
0.00	4.57	CASING					0.00	4.57	0.00							
4.57	7.77	CRYSTAL TUFF Medium green, chloritic matrix with plagioclase >> augite crystal tuff. Plagioclase <=3mm, subrounded-subhedral crystals, rare euhedral laths up to 5 mm; Augite crystals are euhedral and <6 mm. Core is extremely rubbly, considerable caving and redrilling, % recovery is unreliable due to caves. RQD 0. Epidote is weak and occurs as weak sausseritization of plagioclase with minor epidote veinlets. All fractured surfaces are oxidized. Tuff is weak- moderately magnetic throughout, pyrite occurs as rare clots rimmed by jarosite. 5.35 m Hairline pyrite-jarosite veinlet at 30° c.a.	tr	--	wk	core too small	4.57	5.49	50.00 (%rubble)							
							5.49	6.71	40.00 (rubble)							
							6.71	7.16	50.00 (rubble)							
							7.16	7.32	50.00 (rubble)							
							7.32	7.62	75.00 (rubble)							
							7.62	7.77	90.00 (rubble)							
7.77	7.85	ASH TUFF Medium green, chloritic matrix, lacks any crystals, faintly laminated at 80° c.a., weakly magnetic.	--	--	wk	core too small	7.77	7.92	98.00 (broken)							
7.85	14.94	CRYSTAL TUFF Same as interval between 4.57-7.77m 9.40-9.70 m Augite crystals are coarse grained, up to 10 mm, subhedral, no bedding evident. 10.80-12.10 m Epidote alteration increases intensity, and forms bands/veins of strong pervasive alteration oriented at 0° c.a. 13.11-14.94 m Epidote veinlets abundant, very fractured and strongly oxidized coarse grained crystal tuff. Both plagioclase and augite crystals to	tr 1%	--	wk	7.3	7.92	8.08	98.00							
							8.08	9.14	98.00							
							9.14	9.45	65.00							
							9.45	10.67	95.00 (broken)							
							10.67	12.34	80.00 (v.broken)							
							12.34	12.80	40.00 (v.broken)	468843	12.34	13.11	0.77	<0.03	210	<1
							12.80	12.95	50.00 (rubble)							
							12.95	13.11	95.00							



## Project 572

## 96-DS-6 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468843	6	42	<1	<2	30	<5	<5	7	16	24	4.1	500	48	130	37	3	<10	<10	2.10	1.80	1.20	0.04

## Project 572

## 96-DS-6 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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468843	1500	3	<1	<10	900	3
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Hole No: 96-DS-6

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m) ID from to Length	Au g/t	Cu ppm	Ag ppm			
							from	to	%							
		8 mm, sub-euhedral. 1% pyrite occurs as clots partially altered to jarosite, or as strings/veinlets within or associated with epidote veinlets. Occasional bits of vuggy quartz, carbonate vein material noted in rubble. Unit is still magnetic 13.83-13.93 m orange iron carbonate mud/sand					13.11	14.33	95.00 (broken)	468844	13.11	14.94	1.83	0.03	190	<1
							14.33	14.94	50.00 (broken)							
14.94	17.10	MAFIC DYKE(?) Dark green to black, very siliceous and hard matrix with coarse grained augite (<10 mm) phenocrysts. Minor epidote, occurs as hairline veinlets. Pyrite occurs as clots and veinlets with irregular margins at 10-30° c.a. and 60-80° c.a. Generally most pyrite has been altered to jarosite and fractures are intensely oxidized. Minor vuggy iron carbonate associated with some pyrite veinlets.	2%	--	v.wk	68.8	14.94	15.39	90.00 (broken)	468845	14.94	17.10	2.16	0.03	150	<1
							15.39	15.85	98.00 (broken)							
							15.85	17.22	98.00 (broken)							
17.10	18.13	CRYSTAL TUFF Medium green, chloritic matrix with abundant euhedral plagioclase crystals <4 mm, with rare augite crystals. Plagioclase crystals are moderate-strongly sausseritized, abundant epidote veinlets and minor patchy moderate to strong pervasive alteration, trace pyrite. Weak to moderately magnetic.	tr	--	mod	10.2	17.22	19.20	97.00 (broken)	468846	17.10	18.13	1.03	0.03	87	<1
18.13	21.05	CRYSTAL TUFF (COARSE GRAINED) Medium green chloritic matrix, with plagioclase>augite crystals, but augite is coarse grained up to 10 mm, while plagioclase crystals are smaller <4 mm. Inconclusive evidence for bedding: minor bands which lack significant crystals. Pyrite occurs as clots within matrix, as cores (replacing) augite crystals and within orange iron carbonate vuggy veinlets. Unit is moderately magnetic throughout. Plagioclase crystals are sausseritized, epidote veinlets common but unit lacks pervasive epidote alteration. Lower contact appears to be a chill margin but may be just an interbedded ash tuff horizon.	1%	--	wk	27.1	19.20	19.35	100.00 (broken)	468847	18.13	19.55	1.42	0.03	97	<1
							19.35	20.73	98.00 (broken)	468848	19.55	21.05	1.50	<0.03	87	<1
							20.73	22.40	99.00 (broken)							

## Project 572

## 96-DS-6 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468844	7	43	<1	<2	40	<5	<5	13	32	39	3.9	530	38	110	59	4	<10	<10	2.10	1.70	1.20	0.04
468845	3	29	<1	<2	5	<5	<5	12	20	40	4.6	320	30	120	42	5	<10	<10	1.40	1.10	0.87	0.05
468846	6	38	<1	<2	20	<5	<5	9	22	29	4.1	430	62	130	58	4	<10	<10	1.90	1.70	1.20	0.04
468847	5	28	<1	<2	20	<5	<5	16	17	44	3.7	340	33	120	76	6	<10	<10	1.60	1.60	1.30	0.04
468848	4	18	<1	<2	<5	<5	<5	13	18	41	3.0	240	21	98	81	6	<10	<10	1.30	0.85	1.20	0.05

## Project 572

## 96-DS-6 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468844	2300	4	<1	<10	840	4
468845	2100	4	<1	<10	1100	5
468846	2000	4	<1	<10	980	4
468847	2500	4	<1	<10	780	6
468848	2800	3	<1	<10	830	5



## Project 572

## 96-DS-6 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468849	4	26	<1	<2	5	<5	<5	13	19	39	2.5	320	18	74	120	7	<10	<10	1.70	1.60	0.90	0.04
468850	4	24	<1	<2	<5	<5	<5	13	15	40	2.5	310	17	96	47	7	<10	<10	1.40	1.10	0.88	0.04
468851	6	39	<1	<2	5	<5	<5	26	33	46	3.2	480	9	86	74	5	<10	<10	2.00	1.80	0.94	0.03
468852	6	30	<1	<2	<5	<5	<5	18	17	32	2.7	380	31	88	62	4	<10	<10	1.70	1.70	0.82	0.04

## Project 572

## 96-DS-6 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468849	2600	2	<1	<10	730	3
468850	2300	3	<1	<10	700	4
468851	2300	3	<1	<10	710	3
468852	2300	3	<1	<10	640	2



Hole No: 96-DS-6

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
		wispy magnetite occurs.														
38.60	39.65	ASH TUFF Medium green, fine grained, softer ash tuff, very chloritic, weak epidote alteration as veinlets with fracture fills. Core is very broken. Minor iron carbonate as veinlets and later overprinting? Moderately magnetic. 39.5 m <1 cm quartz veinlets with chlorite selvages and trace pyrite - completely jarosite coated.	tr	--	wk	10.5										
39.65	41.90	CRYSTAL TUFF (FINE to MEDIUM GRAINED) Medium green chloritic matrix with plagioclase >>> augite crystals. Plagioclase are <3 mm ragged, sub-rounded and sometimes look to be cored by chlorite; Augite are rare and generally <=5 m and sub-euhedral. Fractures are oxidized, non magnetic.	tr	--	wk	2.1	39.01	42.06	100.00							
41.90	44.90	ASH TUFF Chloritic, fine grained lacks significant crystal component, although minor interbeds occur with poorly defined contacts which contain fine grained plagioclase ± augite crystals. Trace quartz as white wispy veinlets. Very trace amounts of pyrite as clots. No epidote noted, non-magnetic. Interval is extremely rubbly.	tr	--	--	core too small	42.06	42.67	50.00 (rubble)							
							42.67	42.98	70.00 (rubble)							
							42.98	43.89	15.00 (rubble)							
							43.89	44.30	0.00							
							44.30	44.81	20.00 (rubble)							
44.90	52.40	CRYSTAL TUFF Medium to dark green, chloritic matrix with augite >> plagioclase crystals. Plagioclase are generally <2 mm, euhedral. Augite variable up to 10 mm. Plagioclase are weak to moderately sausseritized. Epidote forms rare vuggy clots/voids and veinlets. Pyrite occurs throughout as very rare/trace clots or strings 48.40-49.68 m Trace to 1% strings and clots of pyrite, rare malachite on fractures 50.84-50.94 m Thin bed of ash tuff, sharp contacts at 50° c.a.	tr	--	wk-mod	3.4	44.81	45.11	120.00 (cave)							
							45.11	46.49	98.00 (broken)							
							46.49	48.15	85.00 (broken)							
							48.15	49.38	80.00 (rubble/cave)	468853	48.15	49.35	1.20	<0.03	130	<1
			1%	tr mal	mod	core too small	49.38	49.68	120.00 (rubble/cave)	468854	49.35	49.68	0.33	<0.03	96	<1
							49.68	49.99	80.00 (rubble)	468855	49.68	50.71	1.03	0.03	87	<1
							49.99	50.14	130.00 (rubble/core)							
52.40	56.80	AUGITE PORPHYRY? GABBROIC TEXTURED FLOW?	tr	--	wk-mod	2.5	50.14	51.51	98.00							

## Project 572

## 96-DS-6 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468853	7	37	<1	<2	5	<5	<5	40	17	83	3.0	440	38	92	32	3	<10	<10	1.60	1.70	0.89	0.04
468854	5	36	<1	<2	5	<5	<5	31	15	76	3.2	480	35	110	37	4	<10	<10	1.70	1.70	1.30	0.04
468855	5	37	<1	<2	10	<5	<5	22	18	57	3.4	570	37	120	46	4	<10	<10	1.90	1.80	1.80	0.04

## Project 572

## 96-DS-6 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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468853	1700	4	<1	<10	730	3
468854	2000	5	<1	<10	710	5
468855	2100	6	<1	<10	740	6

Hole No: 96-DS-6

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
		Very dark green to black rock with crowded coarse grained augite crystals with very minor interstitial plagioclase and rare plagioclase laths overgrowing augite crystals. Looks like it could be a coarse grained gabbroic textured augite porphyry flow. Contacts are gradational into the crystal tuff at top and bottom. Plagioclase is weakly sausseritized, minor epidote veinlets. Unit is mixed rubble and broken rock, three 5mm quartz and chlorite veinlets with trace pyrite along selvages noted in rubble core between 53.12m and 54.25m, possible trace malachite?					51.51	52.12	(v.broken) 70.00							
			52.12	52.73	(v.broken) 60.00											
			52.73	52.88	(rubble) 120.00											
			52.88	53.04	(redrill/cave) 90.00											
			53.04	53.44	(rubble) 120.00											
			53.44	53.80	(rubble/cave) 468856 90.00			53.12	54.25	1.13	0.03	83	<1			
			53.80	54.10	(rubble) 140.00											
			54.10	54.25	(cave) 90.00											
			54.25	54.86	(rubble) 110.00											
			54.86	55.02	(cave) 70.00											
56.80	61.57	CRYSTAL TUFF	tr	tr	mal	wk-mod	55.02	55.47	(rubble) 50.00							
		Same as unit between 44.90-52.40m, fine to medium grained augite >> plagioclase crystal tuff. Epidote is moderate to weakly pervasive and commonly occurs as veinlets and irregular veins up to 1 cm wide. Quartz stringers and wisps at 30-45° c.a. and irregular clots of quartz contain chlorite ± pyrite selvages, with oxides on fractured quartz vein surfaces. Rare malachite noted occasionally on fractures, either associated with quartz veinlets or rare iron carbonate veinlets. Interval is extremely broken and rubbly with abundant redrill and cave material. RQD = 0, recoveries are extremely unreliable and erratic. All fractures are strongly oxidized. 57.61-61.57 m Pyrite ~1% disseminated and stringers, with jarosite alteration					55.47	56.01	(rubble) 5.00							
			56.01	56.31	(rubble) 80.00											
			56.31	56.69	(rubble) 50.00											
			56.69	57.61	(rubble) 85.00											
			57.61	57.76	(v.broken) 85.00			57.61	58.90	1.29	0.03	200	<1			
			57.76	58.83	(v.broken) 98.00											
			58.83	60.35	(broken) 95.00											
			60.35	61.11	(v.broken) 468858 60.00			58.90	60.35	1.45	0.07	210	<1			
			61.11	61.26	(rubble) 468859 200.00			60.35	61.26	0.91	0.03	450	<1			
			61.26	61.42	(rubble/cave) 200.00											
61.57		END OF HOLE					61.26	61.57	0.31	0.03	200	<1				
							61.42	61.57	200.00							
									(rubble/cave)							

## Project 572

## 96-DS-6 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468856	4	34	<1	<2	<5	<5	<5	26	18	60	3.1	570	57	100	50	5	<10	<10	1.80	1.80	1.90	0.05
468857	8	67	<1	<2	<5	<5	<5	26	28	61	5.0	850	55	220	56	6	<10	<10	2.90	2.10	2.60	0.03
468858	7	56	<1	<2	<5	<5	<5	19	21	41	4.3	520	84	140	70	5	<10	<10	2.30	1.90	1.10	0.03
468859	5	37	<1	<2	<5	<5	<5	24	22	51	4.6	450	61	130	73	5	<10	<10	1.90	1.80	1.00	0.04
468860	7	39	<1	<2	<5	<5	<5	24	17	71	3.8	450	63	120	68	5	<10	<10	1.80	1.70	1.20	0.04

## Project 572

## 96-DS-6 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468856	2100	6	<1	<10	730	5
468857	2500	13	<1	<10	660	7
468858	2300	5	<1	<10	990	4
468859	2100	5	<1	<10	1100	4
468860	2100	5	<1	<10	1000	4

## DISCOVERY CONSULTANTS

## Drill Log

Co-ords: 1987 grid 5010N/5160E  
 1994 grid 62195N/81649E (UTM 680709E 6262323N)  
 Azimuth: 070°  
 Dip: -50°  
 Elevation: 2062 m

Length: 53.34m (proposed 200m)

Purpose: Test coincident geochemistry and magnetic anomalies above the SGZ

Drill type &amp; size: Falcon F1000 BQ-TW

Hole No: 96-DS-7b

Dip tests: None

Property: Soup  
 Location: Ridge between 3A & 3B-N gully  
 Soup 4 claim

file: 572\DDH07\_96.wk1

Date St.: 96.09.09  
 Date Fin: 96.09.10  
 Logged by: J.Howe  
 Date Logged: 96.09.10

Reference: TSL-s3926 (m8056)

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
0.00	4.57	CASING					0.00	4.57	0							
4.57	11.28	ASH TUFF Dark green, chloritic matrix with minor plagioclase >> augite crystals. Very minor crystals overall - so referred to as ash tuff. Plagioclase crystals are <2 mm, subhedral and saussuritized; augites are ghosty sub-euhedral <5 mm crystals altered to chlorite and iron carbonate. Unit is extremely fractured and oxidized. Most of fractured surfaces contain iron carbonate veinlets and jarosite after pyrite. Interval is moderately magnetic throughout. 6.18-6.38 m Malachite with iron carbonate and pyrite on fractures. Abundant epidote and carbonate (?) veinlets throughout interval, carbonate (?) weathered out leaving vuggy epidote veinlets. Carbonate and pyrite veinlets randomly through core, several at 0° c.a. Epidote and carbonate veinlets generally at 40-60° c.a.	1%	tr	mod	18.9	4.57	4.88	50 (rubble)	468861	4.57	6.18	1.61	0.14	1000	<1
							4.88	5.49	90 (rubble)							
							5.49	6.18	65 (v.broken)							
							6.18	7.92	98 (v.broken)	468862	6.18	8.38	2.20	0.10	1400	<1
							7.92	8.38	97 (broken)	468863	8.38	11.28	2.90	<0.03	750	<1
							8.38	8.99	50 (v.broken)							
							8.99	9.75	50 (v.broken)							
							9.75	10.57	20 (rubble)							
							10.57	11.28	5 (rubble)							
11.28	13.93	CHLORITE + CARBONATE + MAGNETITE ZONE intensely altered, protolith unknown; chlorite: 50%, carbonate: 40%, magnetite: 10% (Possible same chloritic tuff as above). Approximately 70 cm of solid core, remainder of interval is orange carbonate and chlorite, rubble. Iron carbonate occurs as pervasive flooding and veins overprinting chlorite appearance of foliation from the carbonate veins at 40° c.a. Some iron carbonate veins contain completely oxidized magnetite and pyrite which are vuggy and generally produce rubble core. Rarely see possible remnant plagioclase crystals - completely altered to	2%?	--	--	70.4	11.28	12.44	20 (rubble)	468864	11.28	13.11	1.83	0.38	850	<1
							12.44	13.11	80 (rubble/core)							

## Project 572

## 96-DS-7b Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468861	4	45	<1	16	<5	<5	<5	34	110	38	6.7	830	170	140	31	9	<10	<10	3.20	2.00	1.20	0.02
468862	6	41	<1	8	10	<5	<5	35	140	42	5.7	740	230	130	41	10	<10	<10	3.10	2.00	0.75	0.02
468863	6	48	<1	4	<5	<5	<5	26	99	41	5.1	740	130	130	62	11	<10	<10	3.20	2.00	1.20	0.02
468864	11	25	<1	6	20	<5	<5	13	55	54	12.0	270	84	110	44	3	<10	<10	1.90	1.00	0.26	0.05



## Project 572

## 96-DS-7b Drill Sample Results (part 3)

Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468861	3100	12	<1	<10	670	7
468862	2700	9	<1	<10	900	4
468863	2800	9	<1	<10	860	5
468864	2100	9	<1	<10	590	2

Hole No: 96-DS-7b

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
		iron carbonate - suggests a crystal tuff protolith. Magnetite occurs as disseminated medium grained crystals which appear to overgrow the iron carbonate locally. Difficult to distinguish between oxidized pyrite and oxidized magnetite.														
13.93	14.75	MAFIC-INTERMEDIATE DYKE(?) Medium grey-green siliceous matrix, with medium grained augite phenocrysts and hornblende laths. Unit is very competent, unaltered, non-magnetic, and lacks any oxidized fractures or iron carbonate veinlets. Appears to post date the chlorite and iron carbonate and magnetite zone alteration. Hornblende laths are almost acicular and aligned along foliation at ~50° c.a. 14.16 m Thin Section Sample				2.5	13.11	14.33	90	468865	13.11	13.93	0.82	0.14	790	<1
								(rubble/core)		468866	13.93	14.75	0.82	0.03	310	<1
										(duplicate)				0.03		
14.75	16.40	ASH TUFF(?) MAFIC DYKE (?) Dark green almost black, fine grained chloritic unit, strongly magnetic throughout. Core is very rubbly and broken with considerable redrill. Many fracture surfaces contain graphite, and iron carbonate and oxides are conspicuously absent. Moderately well-developed foliation at 40-50° c.a.				core too small	14.33	16.92	50	468867	14.75	16.40	1.65	0.21	690	<1
										468868	16.40	18.00	1.60	0.28	1300	<1
							16.92	17.37	98							
										(v.broken)						
16.40	18.00	CHLORITE + MAGNETITE + IRON CARBONATE ZONE Similar to interval between 11.28-13.93 m, except there appears to be more magnetite. Unit is very broken and rubbly, and footages for top and bottom contacts are estimated 0.5 m ±. Interval contains less pervasive iron carbonate, typically as veinlets and vuggy veins with oxidized magnetite and pyrite. Magnetite occurs throughout interval with chlorite and as distinct vuggy bands and blobs. Difficult to distinguish between oxidized pyrite and oxidized magnetite.	5%?	--	--	core too small	17.37	18.75	80	468869	18.00	19.10	1.10	<0.03	240	<1
										(v.broken)						
18.00	29.30	FELDSPAR PORPHYRITIC DYKE/SILL Medium-greyish green plagioclase and chlorite matrix with abundant coarse grained (1-2cm) subhedral laths of plagioclase. Unit is moderately well foliated at 20° c.a. throughout. Within upper 4 m of unit, it	tr	--	--	24.3	18.75	20.42	50	468870	19.10	21.05	1.95	<0.03	290	<1
								(broken/rubble)		(duplicate)				<0.03		
							20.42	22.35	90							

## Project 572

## 96-#7b Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468865	9	42	<1	20	<5	<5	<5	20	72	52	7.3	430	210	110	68	4	<10	<10	2.80	1.80	0.34	0.03
468866	5	74	<1	6	5	<5	<5	26	92	78	4.2	870	90	96	120	10	<10	<10	2.50	1.90	1.80	0.03
468867	4	62	<1	10	10	<5	<5	27	110	43	6.0	730	160	120	25	14	<10	<10	2.60	2.00	0.57	0.02
468868	5	48	<1	34	20	<5	<5	33	120	100	11.0	330	240	150	40	6	<10	<10	2.70	1.90	0.29	0.02
468869	3	72	<1	8	<5	<5	<5	17	80	35	3.8	570	120	47	40	7	<10	<10	1.50	1.40	1.10	0.03
468870	4	80	<1	4	5	<5	<5	14	69	31	3.1	820	140	34	58	10	<10	<10	1.40	1.10	1.60	0.02

## Project 572

## 96-#7b Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468865	2700	12	<1	<10	500	7
468866	1900	9	<1	<10	1300	7
468867	2500	9	<1	<10	930	5
468868	1700	12	<1	<10	630	9
468869	720	4	<1	<10	1100	3
468870	1100	3	<1	<10	1200	1



## Project 572

## 96-#7b Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

96-#7b Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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Hole No: 96-DS-7b

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
		As previously described between 18.00-29.30 m					31.09	31.55	20							
29.57	36.00	CRYSTAL-LAPILLI TUFF As previously described between 29.30-35.66 m Rubbly and gradational lower contact					31.55	32.31	80							
							32.31	32.77	60							
36.00	36.80	ASH TUFF(?) Dark green chloritic tuff with rare plagioclase crystals <1-2 mm in size. Core is extremely broken into very small chips (like RC chips). Middle of unit contains a 5 cm interval of orange carbonate rich bits of core - probably due to a iron carbonate vein, with trace pyrite. Malachite occurs with vuggy carbonate veinlets just below this orange rubble to end of interval (~40 cm). Non magnetic.	--	tr.mal	--	core too small	32.77	33.99	85							
							33.99	35.20	60							
							35.22	35.66	50							
							35.66	36.25	70	468871	36.00	36.80	0.80	0.10	2400	<1
							36.25	37.03	80							
36.80	45.50	AUGITE PORPHYRY/CRYSTAL TUFF(?) Medium green chloritic matrix with abundant augite phenocrysts, subhedral to euhedral upto 5 mm. Unknown if volcanic or tuffaceous origin. Occasional plagioclase crystals noted, not evenly distributed, subhedral and typically <2 mm. Epidote forms irregular patches of moderate to strongly pervasive alteration and abundant veinlets - some veinlets upto 2 cm wide with unaltered augite porphyritic fragments within vein. Whitish yellow carbonate veinlets are common and rarely contain oxidized pyrite. All fractured surfaces are oxidized. Unit becomes very broken near lower contact. Unit is moderately magnetic, less where epidote is strong	tr	--	mod-str	14.9	37.03	38.71	90							
							38.71	40.54	95							
							40.54	41.76	98							
							41.76	42.67	80							
							42.67	42.98	60							
							42.98	44.05	70							
							44.05	44.98	25							
							44.98	45.57	60							
45.50	46.10	FELDSPAR PORPHYRITIC DYKE/SILL Medium green very chloritic, moderately magnetic with plagioclase laths <5 mm. Extremely broken core, contacts are extremely difficult to identify, and footages are approximate.				core too small	45.57	46.63	60	468872	45.50	46.55	1.05	0.03	680	<1
46.10	46.55	ASH TUFF(?) Same as interval between 36.00-36.80, Dark green to black chloritic small rock chips. Non magnetic, lacks an iron stain, carbonate veins or oxidized fracture surfaces. Possible that this could be a very fine				core too small	46.63	48.01	80	468873	46.55	48.01	1.46	0.93	2900	<1



## Project 572

## 96-#7b Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468871	4	63	<1	14	<5	<5	<5	46	200	65	5.0	870	87	160	86	15	<10	<10	3.30	2.00	1.50	0.02
468872	1	59	<1	8	<5	<5	<5	43	140	100	3.7	760	110	89	39	9	<10	<10	2.30	1.90	1.20	0.04
468873	19	38	<1	120	<5	<5	<5	57	160	130	21.0	490	110	170	82	4	<10	<10	2.80	1.50	0.34	0.07

## Project 572

## 96-#7b Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468871	2900	11	<1	<10	740	6
468872	1500	9	<1	<10	1000	4
468873	1300	12	<1	<10	790	2



## Project 572

## 96-#7b Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468874	19	72	<1	120	<5	<5	<5	190	520	330	7.6	1200	52	170	45	11	<10	<10	4.80	2.20	0.37	0.02
468875	3	39	<1	16	<5	<5	<5	33	140	49	5.4	490	44	180	12	8	<10	<10	2.30	2.00	0.37	0.04
468876	16	54	<1	36	10	<5	<5	94	240	160	7.6	680	75	180	64	13	<10	<10	3.90	2.10	0.48	0.04
468877	1	46	<1	10	<5	<5	<5	69	85	160	5.5	670	170	170	42	10	<10	<10	3.00	2.10	2.10	0.02

Project 572

96-#7b Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468874	1200	22	<1	<10	680	11
468875	1100	13	<1	<10	1300	7
468876	1500	20	<1	<10	980	11
468877	2200	18	<1	<10	1000	8

# DISCOVERY CONSULTANTS

## Drill Log

Co-ords: 1987 grid 5050E/5010N  
1994 grid 81550E/62200N (UTM 682632E 6262269N)  
Azimuth: n/a  
Dip: -90°  
Elevation: 2000 m

Drill type &amp; size: Falcon F1000 BQ-TW

Hole No: 96-DS-8  
Property: Soup

Dip tests: @167'

Location: ridge between 3A & 3B gullies  
Soup 4 claim

Length: 90.68m (proposed 110m)

file: 572IDDH08\_96.wk1

Date St.: 96.09.10  
Date Fin: 96.09.11

Logged by: J.Howe

Date Logged: 96.09.11/12

Purpose: To test stratiform magnetite horizon for minizn (away from  
saddle gully zone)

Reference : TSL-s3926 (m8056)

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample interval (m)			Au g/t	Cu ppm	Ag ppm																																									
							from	to	%	ID	from	to				Length																																								
0.00	1.52	CASING					0.00	1.52	0																																															
1.52	25.72	CRYSTAL to LAPILLI TUFF Medium grey-green chloritic matrix with abundant augite and plagioclase crystals - poorly sorted with varying crystal sizes between 2-10 mm. Lapilli sized fragments are not uncommon and range upto 3-4 cm, subangular with variable volcanoclastic textures. Interval is generally unaltered, although epidote veinlets occur randomly and minor patches of weak to moderate pervasive epidote occurs, generally within preferred tuff beds. Unit contains oxidized iron carbonate ± trace pyrite veinlets commonly at 30° c.a., but other random orientations also. All fractures are oxidized. Unit is moderately magnetic throughout. Crude bedding is noted consistently at 50° c.a. 4.25-4.55 m Oxidized lapilli tuff. Matrix is bleached white with abundant vuggy iron carbonate veinlets. Augite crystals and lapilli fragments are rimmed by iron stain. Interval has sharp banding contacts with surrounding crystal tuff at 40° c.a. 6.03 m 1 cm wide glassy quartz vein with chlorite selvage 6.60 m Epidote and oxidized pyrite veinlet; 2-4 mm wide at 60° c.a. 6.80 m Epidote and oxidized pyrite veinlet; 2-4 mm wide at 60° c.a. 7.60-8.10 m Oxidized lapilli tuff as at interval 4.25-4.55 m Also contains trace clots of pyrite, moderate pervasive iron carbonate alteration of matrix 8.73-9.03 m Interbedded ash tuff, finely laminated at 50° c.a. - grading	tr	--	nil-mod	21.6	1.52	4.11	95	4.11	5.18	99	5.18	7.16	99	7.16	8.53	99	8.53	10.67	99	10.67	13.26	99	13.26	14.78	96	14.78	16.92	99	16.92	19.05	100	19.05	20.42	100	20.42	22.25	100	22.25	23.16	99	23.16	24.35	98	24.35	25.30	95	25.30	25.45	95	(broken)	25.45	26.52	99	(broken)

## Project 572

## 96-DS-8 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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**Project 572**

**96-DS-8 Drill Sample Results (part 3)**

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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Hole No: 96-DS-8

Date St.: 96.09.10  
 Date Fin: 96.09.11  
 Logged by: J.Howe  
 Date Logged: 96.09.11/12

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
		not evident, sharp contacts														
		14.80-15.15 m Interbedded ash tuff, fine laminations, sharp contacts, banding at 50° c.a., not graded														
		13.60-13.80 m Several small <1 cm clots of oxidized pyrite rimmed by chlorite.														
		14.05-14.10 m Net textured open space crystals of calcite with intense epidote pervasive alteration and clots of pyrite														
		19.15-19.20 m Several hairline carbonate and pyrite (oxidized) veinlets random orientations.														
		20.51-20.64 m Interbedded ash tuff, bedding at 50° c.a.														
		21.05-21.15 m Interbedded ash tuff, bedding at 50° c.a.														
		24.10-27.52 m Increased amount of iron carbonate (oxidized) ± pyrite veinlets and fractures. Core is broken and strongly oxidized. Veinlets and fractures at 0°, 30°, 80° c.a. Fewer lapilli fragments noted in the last few meters of core.														
25.72	30.27	ASH-CRYSTAL TUFF	tr	--	wk	33.1										
		Moderate green chloritic fine grained matrix with minor augite crystals: euhedral and up to 6 mm. Very rare plagioclase crystals noted, typically very small and fine grained laths <2 mm. Abundant (4%) quartz carbonate white stringers and veinlets (40-60° c.a.), most veinlets have chlorite clots and selvages. Trace disseminated and clotty (weak-moderately oxidized) pyrite occurs throughout interval. Gradational lower contact into the crystal (augite and plagioclase) tuff.	1%	--	mod		26.52	29.57	100	468878	26.92	27.85	0.93	0.38	360	<1
		26.92-27.85 m Vuggy, more carbonate veinlets, 1% pyrite and two, 10cm wide irregular and ragged quartz, carbonate, chlorite and pyrite veins.					29.57	31.55	100							
30.27	36.50	CRYSTAL TUFF (COARSE GRAINED)	tr	--	v.wk		31.55	34.14	100							
		Medium green, fine grained matrix; with abundant plagioclase augite crystals throughout. Gradational upper contact with ash-crystal tuff. Plagioclase are sub-					34.14	35.66	100							
							35.66	36.73	97							

## Project 572

## 96-DS-8 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468878	2	57	<1	4	<5	<5	<5	27	59	70	6.8	830	34	190	27	7	<10	<10	2.90	2.10	2.40	0.03

## Project 572

## 96-DS-8 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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468878	2600	13	<1	<10	700	7
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## Project 572

## 96-DS-8 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

96-DS-8 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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Hole No: 96-DS-8

Date St.: 96.09.10  
 Date Fin: 96.09.11  
 Logged by: J.Howe  
 Date Logged: 96.09.11/12

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery		Sample Interval... (m)			Au g/t	Cu ppm	Ag ppm		
							from	to	%	ID	from				to	Length
		quartz carbonate veins noted in rubble. 1-2% quartz and carbonate white wispy veinlets/stringers at erratic orientations, lack sulphides. Some of the rubbly bits of core are oxidized. Middle portion of interval has much stronger magnetism and is blacker in color than margins of unit. Gradational contacts at top and bottom.					46.18	47.40	95							
46.80	51.68	CRYSTAL TUFF (COARSE GRAINED) As in interval 30.27-36.50 m. Epidote is weak-moderate and patchy with veinlets. Crowded plagioclase and augite crystal tuff with occasional fragments. Pyrite occurs as trace stringers and clots usually associated with carbonate ± epidote veinlets. Also very minor disseminated pyrite crystals. Generally all pyrite is oxidized - as are all fractures. Crude bedding at 45-50° c.a.	tr	--	wk-mod		47.40	48.38	100							
							48.38	50.14	99							
							50.14	51.82	98							
51.68	53.36	DIORITE DYKE Medium grained, sub-equigranular, leucocratic dyke, plagioclase rich unit - with moderate pervasive epidote alteration and veinlets. Iron carbonate and oxidized pyrite veinlets crosscut randomly. Rubbly core locally, contacts occur in rubbled portions. 10cm portion of rubble is massive black manganese oxide(?) almost looks like massive graphite, but it is definitely not graphite, nor magnetite, nor chlorite, no phenocrysts, non magnetic	tr	--	mod	0.8	51.82	53.95	90							
53.36	61.86	CRYSTAL TUFF (COARSE GRAINED) Crowded plagioclase and augite crystal tuff, with rare lapilli fragments. Several quartz carbonate veins up to 3 cm wide which have well developed epidote and chlorite selvages and strings of (oxidized) pyrite within or adjacent to veins. Patchy weak to moderately magnetism, dependant on epidote intensity. 54.80 m Ragged 4 cm wide quartz, epidote, chlorite and pyrite vein 53.95 m 0.5 m quartz veinlet with adjacent pyrite stringer at 50° c.a. 54.40 m. Quartz, epidote, chlorite and pyrite veinlet 0.5 cm wide at 60° c.a.	tr	--	mod	9.2	53.95	55.93	100	468879	54.40	56.13	1.73	0.10	190	<1
							55.93	57.00	100							
							57.00	60.05	100							

## Project 572

## 96-DS-8 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468879	3	34	<1	<2	20	<5	<5	21	32	47	4.4	570	380	150	43	3	<10	<10	2.70	2.00	1.40	0.03



## Project 572

## 96-DS-8 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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468879	3000	5	<1	<10	630	3
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Hole No: 96-DS-8

Date St.: 96.09.10  
 Date Fin: 96.09.11  
 Logged by: J.Howe  
 Date Logged: 96.09.11/12

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery		Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from				to
		55.63 m Ragged 4 cm wide quartz vein with clots of pyrite, thick 4 cm selvage of chlorite and epidote													
		56.13-56.85 m Interbedded ash tuff with minor plagioclase crystals, non-magnetic, sharp banding contacts at 50° c.a., 2-5% white wispy quartz and carbonate veinlets, no pyrite.													
		57.90-58.60 m Interbedded ash tuff, same as above. These latter two interbedded ash tuff units almost look to be fine grained mafic dykes locally, but not conclusive.													
		58.90 m 4 cm wide quartz vein with chlorite selvage ~ 2 cm wide with trace pyrite					60.05	63.09	100						
		60.05 m 2 cm wide quartz vein with 1 cm wide chlorite selvage, clots of oxidized pyrite adjacent to vein.													
61.86	63.21	ASH-CRYSTAL TUFF As in previous interval between 36.50-39.86m, fine grained chloritic matrix with 1-2 mm plagioclase ± augite crystals. 1-2% white wispy quartz and carbonate veinlets. Rubbled lower contact, non magnetic.	--	--	wk-mod	3.2									
							63.09	66.14	95 (v.broken)						
63.21	65.80	AUGITE PORPHYRY Dark green matrix (chloritic) with coarse grained crowded augite crystals upto 10 mm. Minor interstitial sausseritized plagioclase. Moderate pervasive iron carbonate alteration resulting in broken and rubbly core. Many fractured surfaces are oxidized. Weak epidote alteration typically veinlets. Magnetism is weak-moderate and patchy.	--	--	wk	5.1 to 40.9									
65.80	69.00	MAFIC DYKE (60%) CRYSTAL TUFF (40%) Very rubbly core with small rounded quartz eyes in a siliceous matrix mixed with about 40% rubbly tuffaceous plagioclase ± augite crystal tuff. Contacts are impossible to identify due to rubbled are redrilled core. Most fractured surfaces are oxidized. Epidote veinlets may also contain vuggy carbonate.	--	--	wk	core too small									
							66.14	69.19	80 (v.broken/rubble)						
69.00	81.30	CRYSTAL TUFF	--	--	wk-mod	3.75	69.19	71.63	95						

## Project 572

## 96-DS-8 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

96-DS-8 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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Project 572

96-DS-8 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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Project 572

96-DS-8 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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## DISCOVERY CONSULTANTS Drill Log

Co-ords: 1987 grid 5050E/5010E  
 1994 grid 81550E/62200N (utm 682632E 6262269N)  
 Azimuth: 130°  
 Dip: -65°  
 Elevation: 2000 m

Drill type & size: Falcon F1000 BQ-TW

Hole No: 96-DS-9  
 Property: Soup

Dip test: hole abandoned before target depth  
 due to caving

Location: ridge between gullies 3A & 3B-N  
 Soup 4 claim

Length: 75.59m (proposed 100m)

file: 572\DDH09\_96.wk1

Date St.: 96.09.12  
 Date Fin: 96.09.13

Purpose: To test saddle gully zone mineralization at depth below  
 hole 96-DS-1

Reference: TSL-s3926 (m8056)

Logged by: J.Howe  
 Date Logged: 96.09.12/13

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
0.00	3.05	CASING					0.00	3.05	0							
3.05	12.71	INTERBEDDED ASH AND CRYSTAL TUFFS Medium to dark green chloritic tuffs, with good bedding contacts at typically 35-45° c.a. Within crystal tuff units plagioclase is the dominant crystal, generally <=3mm. Tuffs contain few augite crystals in comparison which are generally <=8mm; both plagioclase and augite are sub-euhedral. Usually ash units form rubble/broken core. Minor orange-green carbonate and epidote veinlets throughout interbedded tuffs. All fractures are oxidized. Pyrite occurs as very trace amounts within vuggy iron carbonate veinlets - usually oxidized. Consistently moderately magnetic throughout.	v.tr	--	v.wk	42.3				468880	5.15	5.95	0.80	0.34	47	<1
		3.05-3.85 m Crystal tuff					7.62	8.23	98							
		3.85-7.25 m Ash tuff					8.23	8.84	99 (broken)							
		5.75-5.95 m Intense iron stained quartz carbonate vuggy and rubbly vein with 1- 2% pyrite, minor chlorite					8.84	10.21	99							
		7.25-8.05 m Crystal tuff					10.21	11.28	100							
		8.05-8.35 m Ash tuff					11.28	13.11	100							
		8.35-9.05 m Crystal tuff														
		9.05-9.50 m Ash tuff														
		9.50-12.71 m Crystal tuff - Augite becomes more significant in this tuff horizon but is still less than plagioclase														
12.71	16.80	CRYSTAL-LAPILLI TUFF Oxidized. Matrix is bleached buff colored with abundant vuggy iron carbonate veinlets. Interval is a crowded plagioclase = augite coarse-grained crystal tuff with abundant lapilli fragments. Fragments are variably textured volcanoclastics, subround to sub-angular and generally <4cm in size.	tr	--	wk-mod	0.7	13.11	14.33	100							
							14.33	17.22	100							



## Project 572

## 96-DS-9 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468880	4	57	<1	6	<5	<5	<5	17	39	40	5.7	680	50	180	16	6	<10	<10	2.50	2.00	0.74	0.05

Project 572

96-DS-9 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468880	2300	10	<1	<10	1100	8



## Project 572

## 96-DS-9 Drill Sample Results (part 2)

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Sample ID	Pb	Zn	Cd	Mo	As	Sb	Bi	Ni	Co	Cr	Fe	Mn	Ba	V	Sr	Y	Sn	W	Al	Mg	Ca	Na
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	%	%

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Project 572

96-DS-9 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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Hole No: 96-DS-9

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery			Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from	to				Length
		eyes are cored or rimmed by epidote and iron carbonate. Abundant orangy iron carbonate veinlets at random orientations, increased intensity of veinlets adjacent to dyke contacts.														
31.65	32.95	CRYSTAL TUFF (COARSE GRAINED) Exactly as interval between 22.92-29.90m	tr	--	mod	9.7	32.61	35.66	100							
32.95	33.50	QUARTZ PORPHYRITIC MAFIC DYKE Exactly as interval between 29.90-31.65m	--	--	wk-mod	43.2										
33.50	38.36	CRYSTAL TUFF (COARSE GRAINED) Exactly as interval between 22.92-29.90m	tr	--	mod	12.3										
							35.66	38.71	100							
38.36	38.60	QUARTZ PORPHYRITIC MAFIC DYKE Exactly as in interval between 29.90-31.65m except that quartz eyes are fewer and no larger than 2-3mm.	--	--	wk		38.71	39.32	20							
							39.32	39.62	95							
38.60	40.39	CRYSTAL TUFF (COARSE GRAINED) Exactly as between 22.92-29.90m. Core quite broken and rubbly, with oxidized fractures.	--	--	mod	9.8	39.62	40.35	65							
							40.35	41.76	95							
40.39	62.00	CRYSTAL TUFF Medium chloritic green, distinctly different shade than previous medium to dark greens. Fine grained augite crystals upto 4 mm, typically euhedral. Minor plagioclase crystals <=2mm. Abundant white, wispy quartz ± carbonate veinlets. Unit is very chloritic and soft-scratchable. All fractures are oxidized. Pyrite occurs as fine grained disseminated crystals and within carbonate veinlets. Weakly magnetic interval overall.	tr	--	wk	8.9	41.76	44.85	98							
		50.90-52.40 m Increase in carbonate veinlets to 4%; 1% pyrite, trace malachite on fractures? moderate to strongly magnetic.	1%	tr	wk		55.32	55.78	50							
		52.40-55.78 m Oxidized with intense iron carbonate alteration. Core is quite vuggy and rubbly to broken, trace malachite on fractures. Several small bits of quartz and carbonate vein material in rubbled core. Small irregular blobs of black oxidized magnetite, strongly to moderately	1-2%	--	--		55.78	56.24	60	468884	55.78	57.00	1.22	0.03	660	<1
							56.24	57.00	80							
			tr	--	wk		57.00	60.05	100	468885	57.00	58.50	1.50	0.14	230	<1
							60.05	60.96	50							
							60.96	61.92	30							
							61.92	63.09	95							

Project 572

96-DS-9 Drill Sample Results (part 2)

Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468881	2	44	<1	<2	<5	<5	<5	25	47	50	5.6	880	100	240	26	10	<10	<10	2.80	2.10	2.00	0.03
468882	8	48	<1	6	<5	<5	<5	26	53	47	7.6	580	140	230	13	9	<10	<10	2.80	2.10	0.40	0.04
468883	5	47	<1	16	10	<5	<5	63	77	120	6.9	840	410	240	10	6	<10	<10	2.80	2.20	0.26	0.04
468884	4	42	<1	6	30	<5	<5	48	53	86	7.2	760	99	240	13	3	<10	<10	2.80	2.20	0.75	0.03
468885	3	34	<1	4	5	<5	<5	21	46	45	5.5	930	240	190	40	3	<10	<10	2.50	2.00	3.50	0.03

## Project 572

## 96-DS-9 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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468881	2600	22	<1	<10	720	13
468882	1300	19	<1	<10	890	11
468883	530	23	<1	<10	680	12
468884	330	21	<1	<10	720	12
468885	580	19	<1	<10	620	10



Hole No: 96-DS-9

Interval From	To	Description	PY	CP	EP	Mag Suscept	Recovery		Sample Interval (m)			Au g/t	Cu ppm	Ag ppm	
							from	to	%	ID	from				to
		magnetic, 1-2% oxidized pyrite? 55.78-58.50 m as in 50.90-52.40 m 5% white carbonate veinlets are very irregular and discontinuous, and locally appear to be almost a flooding texture. Other iron carbonate vuggy veinlets of lesser intensity with trace pyrite (oxidized)													
62.00	64.96	CRYSTAL TUFF (COARSE GRAINED) Medium green chlorite and epidote rich matrix with coarse grained plagioclase >augite crystals. Augite are sub-hedral <8mm while plagioclase are typically euhedral laths <=3mm. Three epidote, carbonate ± quartz veins up to 20cm wide as follows: 62.95- 63.09; 64.14-64.26; 64.73-64.96 These veins are vuggy with a black manganese oxide filling the vugs. Quartz where present occurs as fine grained crystal growths within the vugs. Unit is moderately epidote altered, either pervasively forming bands or coin-sized patches of strong to intense pervasive epidote. Abundant iron carbonate veins at random orientations some contain pyrite strings (oxidized).	tr	-	mod-str	18.4			468886	62.95	64.96	2.01	0.03	380	<1
			1-2%	tr	str		63.09	66.14	95						
64.96	75.59	CRYSTAL TUFF Medium to dark chloritic green with fine grained plagioclase = augite crystals. Crystals are both <2mm. Matrix is weakly epidote altered with rare epidote ± carbonate veinlets. Unit is rubbly to broken with lots of oxidized fractures. 74.10-75.20 CRYSTAL TUFF (COARSE GRAINED) as at 62.00-64.96m, very broken and oxidized core	-	-	wk		66.14	67.34	30 (lg.marbles)						
							67.34	68.12	30 (marbles)						
							68.12	71.02	30 (rubble)						
							71.02	71.78	90 (broken)						
							71.78	72.09	60 (sm.marble/sand)						
							72.09	73.15	85 (v.broken)						
75.59		END OF HOLE					73.15	74.83	80 (v.broken)						
							74.83	75.44	80 (rubble)						
							75.44	69.19	(cave/marbles)						
							69.19	75.44	(cave/marbles)						

## Project 572

## 96-DS-9 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
468886	7	34	<1	<2	10	<5	<5	22	51	55	5.0	670	64	150	74	6	<10	<10	2.80	2.00	1.20	0.03

Project 572

96-DS-9 Drill Sample Results (part 3)

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Sample ID	Ti ppm	Sc ppm	Be ppm	B ppm	P ppm	Zr ppm
468886	2700	9	<1	<10	690	8



Project 572

96-DS-9 Drill Sample Results (part 2)

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Sample ID	Pb ppm	Zn ppm	Cd ppm	Mo ppm	As ppm	Sb ppm	Bi ppm	Ni ppm	Co ppm	Cr ppm	Fe %	Mn ppm	Ba ppm	V ppm	Sr ppm	Y ppm	Sn ppm	W ppm	Al %	Mg %	Ca %	Na %
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## Project 572

## 96-DS-9 Drill Sample Results (part 3)

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Sample ID	Ti	Sc	Be	B	P	Zr
	ppm	ppm	ppm	ppm	ppm	ppm

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**APPENDIX 4: STATEMENT OF COSTS**

## STATEMENT OF COSTS

for period July 30 - September 16

### Professional Services

J. Howe (P.Geo.)

Aug. 6 - Sept. 16 (field work)

42 days @\$450/day \$18,900.00

Data Compilation, Reporting, etc

20 days @\$450/day 9,000.00 \$ 27,900.00

### Field Personnel

N.Andrie (Sampling, Core Splitting etc)

Jul. 30 - Aug. 18

20 days @ \$231.12/day 4,622.40

S.Jones (Sampling, Core Splitting etc)

Jul. 30 - Sept. 16

49 days @214.00/day 10,486.00

J.Osterhagen (Sampling)

Jul. 30 - Aug. 2

4 days @\$316.72/day 1,266.88

T.Sulkko (Sampling, 1st Aid)

Jul. 30 - Aug. 8

10 days @\$248.24/day 2,482.40

M.Stewart (Sampling, 1st Aid)

Aug. 24 - Aug. 30

7 days @\$231.12/day 1,617.84

D.Strain (Sampling & Geophysics)

Aug. 9 - Aug. 26

18 days @\$273.92/day 4,930.56 25,406.08

### Sub-contracting

Action 1st Aid Services

4,948.56

Min-Consult (Drill Pad construction)

22,682.34

Falcon Drilling Ltd.

118,878.68

146,509.58

Drafting

2,000.00

Data compilation, secretarial

6,000.00

### Expenses

Geochemical Analysis

10,732.57

Communications

4,308.87

Equipment Rental

575.74

Field Supplies

3,031.92

Lodging and Meals

25,321.30

Base map

1,515.00

Management Fee

4,548.54

50,033.94

**Sub-Total**

**\$257,849.60**

### Transportation

Helicopter

138,460.59

Air Charter

2,053.82

Trucks & Land Transport

5,745.27

Maximum transportation cost - 50% of \$257,849.60

128,924.80

**Total**

**\$386,774.40**



**APPENDIX 5: STATEMENT OF QUALIFICATIONS**

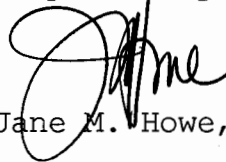
APPENDIX 5: STATEMENT OF QUALIFICATIONS

I, Jane M. Howe, with a residence address of 10356 Skagit Drive, Delta, B.C., do hereby certify that:

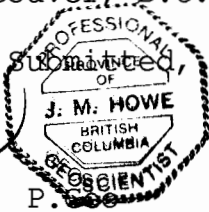
1. I am a Consulting Geologist in mineral exploration.
2. I am a graduate of the University of Waterloo at Waterloo, Ontario with a Bachelor of Science Degree in Geology (1985).
3. I am a registered member, in good standing, of the Association of Professional Engineers and Geoscientists of British Columbia.
4. I have practised my profession as a Geologist throughout Canada, the United States and South America for twelve years.
5. The work described in this report is based on exploration work completed during July, August and September 1996, which I supervised.
6. I am the author of this report.
7. I have no direct or indirect financial interest in any company known by me to have an interest in the mineral properties described in this report, nor do I expect to acquire such interest.
8. Permission is hereby granted to Vital Pacific to use this report to satisfy the requirements of stock exchanges or regulatory authorities.

Dated at Vancouver, B.C. this 25<sup>th</sup> day of November, 1996.

Respectfully Submitted,



Jane M. Howe, P.



## **APPENDIX 6: ANALYTICAL METHODS**

The talus fine samples and rock samples were shipped to either:

- Chemex Labs Ltd. in North Vancouver for sample preparation and analysis.
- Mineral Environments Laboratories preparation lab in Smithers and then to TSL Laboratories in Saskatoon for analysis.

These samples were analysed for gold (30 g, fire assay/AA) and for 30 to 32 elements by standard I.C.P. methods.

The drill core samples were shipped to Mineral Environments (Min En) Laboratories preparation lab in Smithers and then to either TSL Laboratories in Saskatoon or Min En Laboratories in Vancouver for analysis.

These samples were analysed for gold by standard fire assay methods and for 30 elements by standard I.C.P. methods.

# ANALYTICAL PROCEDURES

## Geochemical Analysis

by Mineral Environments Laboratories

ELEMENT		LOWER DETECTION LIMIT	EXTRACTION TECHNIQUE	METHOD
Ag	Silver	1 ppm	aqua-regia digestion	ind. coupled plasma
Al*	Aluminum	0.01 %	aqua-regia digestion	ind. coupled plasma
As	Arsenic	5 ppm	aqua-regia digestion	ind. coupled plasma
Ba*	Barium	10 ppm	aqua-regia digestion	ind. coupled plasma
Be*	Beryllium	0.5 ppm	aqua-regia digestion	ind. coupled plasma
Bi	Bismuth	5 ppm	aqua-regia digestion	ind. coupled plasma
Ca*	Calcium	0.01 %	aqua-regia digestion	ind. coupled plasma
Cd	Cadmium	1 ppm	aqua-regia digestion	ind. coupled plasma
Co	Cobalt	1 ppm	aqua-regia digestion	ind. coupled plasma
Cr*	Chromium	1 ppm	aqua-regia digestion	ind. coupled plasma
Cu	Copper	1 ppm	aqua-regia digestion	ind. coupled plasma
Fe	Iron	0.01 %	aqua-regia digestion	ind. coupled plasma
Ga*	Gallium	10 ppm	aqua-regia digestion	ind. coupled plasma
K	Potassium	0.01 %	aqua-regia digestion	ind. coupled plasma
Li	Lithium	1 ppm	aqua-regia digestion	ind. coupled plasma
Mg*	Magnesium	0.01 %	aqua-regia digestion	ind. coupled plasma
Mn	Manganese	5 ppm%	aqua-regia digestion	ind. coupled plasma
Mo	Molybdenum	2 ppm	aqua-regia digestion	ind. coupled plasma
Na*	Sodium	0.01 %	aqua-regia digestion	ind. coupled plasma
Ni	Nickel	1 ppm	aqua-regia digestion	ind. coupled plasma
P	Phosphorus	10 ppm	aqua-regia digestion	ind. coupled plasma
Pb	Lead	2 ppm	aqua-regia digestion	ind. coupled plasma
Sb	Antimony	5 ppm	aqua-regia digestion	ind. coupled plasma
Sn	Tin	10 ppm	aqua-regia digestion	ind. coupled plasma
Sr*	Strontium	1 ppm	aqua-regia digestion	ind. coupled plasma
Th	Thorium	1 ppm	aqua-regia digestion	ind. coupled plasma
Ti*	Titanium	0.01 %	aqua-regia digestion	ind. coupled plasma
U	Uranium	5 ppm	aqua-regia digestion	ind. coupled plasma
V	Vanadium	1 ppm	aqua-regia digestion	ind. coupled plasma
W*	Tungsten	10 ppm	aqua-regia digestion	ind. coupled plasma
Zn	Zinc	1 ppm	aqua-regia digestion	ind. coupled plasma

\* incomplete digestion

# ANALYTICAL PROCEDURES

## Geochemical Analysis

by Chemex Labs Ltd.

ELEMENT		LOWER DETECTION LIMIT	EXTRACTION	METHOD
Au	Gold	5 ppb	fire assay	A.A.
Al*	Aluminum	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Sb	Antimony	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
As	Arsenic	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ba*	Barium	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Be*	Beryllium	0.5 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Bi	Bismuth	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Cd	Cadmium	0.5 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ca*	Calcium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Cr*	Chromium	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Co	Cobalt	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Cu	Copper	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ga*	Gallium	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Fe	Iron	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
La*	Lanthanum	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Pb	Lead	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Mg*	Magnesium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Mn	Manganese	5 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Hg	Mercury	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Mo	Molybdenum	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ni	Nickel	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
P	Phosphorus	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
K*	Potassium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Sc*	Scandium	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ag	Silver	0.2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Na*	Sodium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
Sr*	Strontium	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Tl*	Thallium	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Ti*	Titanium	0.01%	Aqua-Regia digestion	Ind. Coupled Plasma
W*	Tungsten	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
U	Uranium	10 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
V	Vanadium	1 ppm	Aqua-Regia digestion	Ind. Coupled Plasma
Zn	Zinc	2 ppm	Aqua-Regia digestion	Ind. Coupled Plasma

\* Incomplete digestion.

# ANALYTICAL PROCEDURES

## Geochemical Analysis

by TSL Laboratories:

ELEMENT		LOWER DETECTION LIMIT	EXTRACTION TECHNIQUE	METHOD
Au	Gold	5 ppb	fire assay	A.A.
Ag	Silver	1 ppm	HNO <sub>3</sub> -HCl (1:3)	ind. coupled plasma
Al*	Aluminum	0.01 %	HNO <sub>3</sub> -HCl	ind. coupled plasma
As	Arsenic	5 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
B	Boron	10 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Ba*	Barium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Be*	Beryllium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Bi	Bismuth	5 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Ca*	Calcium	0.02 %	HNO <sub>3</sub> -HCl	ind. coupled plasma
Cd	Cadmium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Co	Cobalt	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Cr*	Chromium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Cu	Copper	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Fe	Iron	0.01 %	HNO <sub>3</sub> -HCl	ind. coupled plasma
Mg*	Magnesium	0.01 %	HNO <sub>3</sub> -HCl	ind. coupled plasma
Mn	Manganese	0.01 %	HNO <sub>3</sub> -HCl	ind. coupled plasma
Mo	Molybdenum	2 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Na*	Sodium	0.01 %	HNO <sub>3</sub> -HCl	ind. coupled plasma
Ni	Nickel	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
P	Phosphorus	2 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Pb	Lead	2 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Sb	Antimony	5 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Sc*	Scandium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Sn	Tin	10 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Sr*	Strontium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Ti*	Titanium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
V	Vanadium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
W*	Tungsten	10 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Y	Yttrium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Zn	Zinc	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma
Zr	Zirconium	1 ppm	HNO <sub>3</sub> -HCl	ind. coupled plasma

\* incomplete digestion