

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

HAT, BOB AND KEN MINERAL CLAIMS

ATLIN MINING DIVISION

NORTHWEST BRITISH COLUMBIA

LAT. 58 12"; LONG. 131 34'; NTS 104J/4E

WORK COMPLETED : September 4 to September 22, 1996
WORK BY : T.E. Lisle, P.Eng.; and E.A. Ostensoe, P.Geo.
REPORT BY : T.E.Lisle, P.Eng.
Date : January 10, 1997

**GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT**

24,935

HAT PROSPECT



LOCATION MAP

HAT PROSPECT,
ATLIN MINING DIVISION
DECEMBER, 1996 FIG 1

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INTRODUCTION

During July, 1995, the writer accompanied by E. Ostensoe, P. Geo. completed a program of prospecting, mapping and sampling on the Hat claims located near Hatchau Lake to the northwest of Telegraph Creek in Northwest British Columbia. The results of the exploration were sufficiently attractive that a further program was undertaken in the area in 1996. The later program was targeted to an area lying to the north and west of the 1995 work and was partly undertaken to obtain geochemical, geological and sample data on a large area of alteration known to occur in that area.

This report describes the work program carried out in 1996 under Energy and Mines work permit SMI 96-0101459-99. A brief discussion of the results and technical data is included along with maps showing the location of the work.

LOCATION AND ACCESS

The Hat project is located in the Atlin Mining Division at Hatchau Lake some forty kilometres northwest of Telegraph Creek and ninety-five kilometres southwest of Dease Lake in northwest British Columbia. (Figure 1).

Access to the Lake is by fixed-wing aircraft from either of the above centres. Access for the 1996 program was to an old overgrown gravel airstrip at Sheslay about ten kilometres west of the property, then by charter helicopter working in the area but based at Dease Lake.

The road connecting the Dease Lake-Telegraph Creek road to the Golden Bear Mine passes about eight kilometres south of the property, and may at a future date facilitate work at the property.

PROPERTY

The Hat project comprises 99 claim units in six (four-post), and ten (two-post) mineral claims. The claims are located in and recorded in the Atlin Mining Division. Particulars of the claims are as follows:

Claim Name	Units	Record	Owner	Anniversary.
Bob 1	20	338097	E.Ostensoe	July 12, 1999
Bob 2	20	338096	T.E.Lisle	July 12, 1999
Bob 3*	1	338098	T.E.Lisle	July 25, 1999
Bob 4*	1	338099	E.Ostensoe	July 25, 1999
Hat 3	9	326685	T.E.Lisle	June 12, 1999
Hat 4	8	326782	E. Ostensoe	June 12, 1999
Ken 1	20	350726	T.E.Lisle	Sept. 7, 1997
Ken 2	12	350727	E.Ostensoe	Sept. 8, 1997
Ken 3*	1	350728	E.Ostensoe.	Sept. 8, 1997
Ken 4*	1	350729	E.Ostensoe	Sept. 8, 1997
Ken 5*	1	350730	E. Ostensoe	Sept. 8, 1997
Ken 6*	1	350731	E. Ostensoe	Sept. 8, 1997
Ken 7*	1	350732	E. Ostensoe	Sept. 8, 1997
Ken 8*	1	350733	E. Ostensoe	Sept. 8, 1997
Ken 9*	1	350734	E.Ostensoe	Sept. 8, 1997
Ken 10*	1	350735	E. Ostensoe	Sept. 8, 1997

Total 99

* Two-post claim.

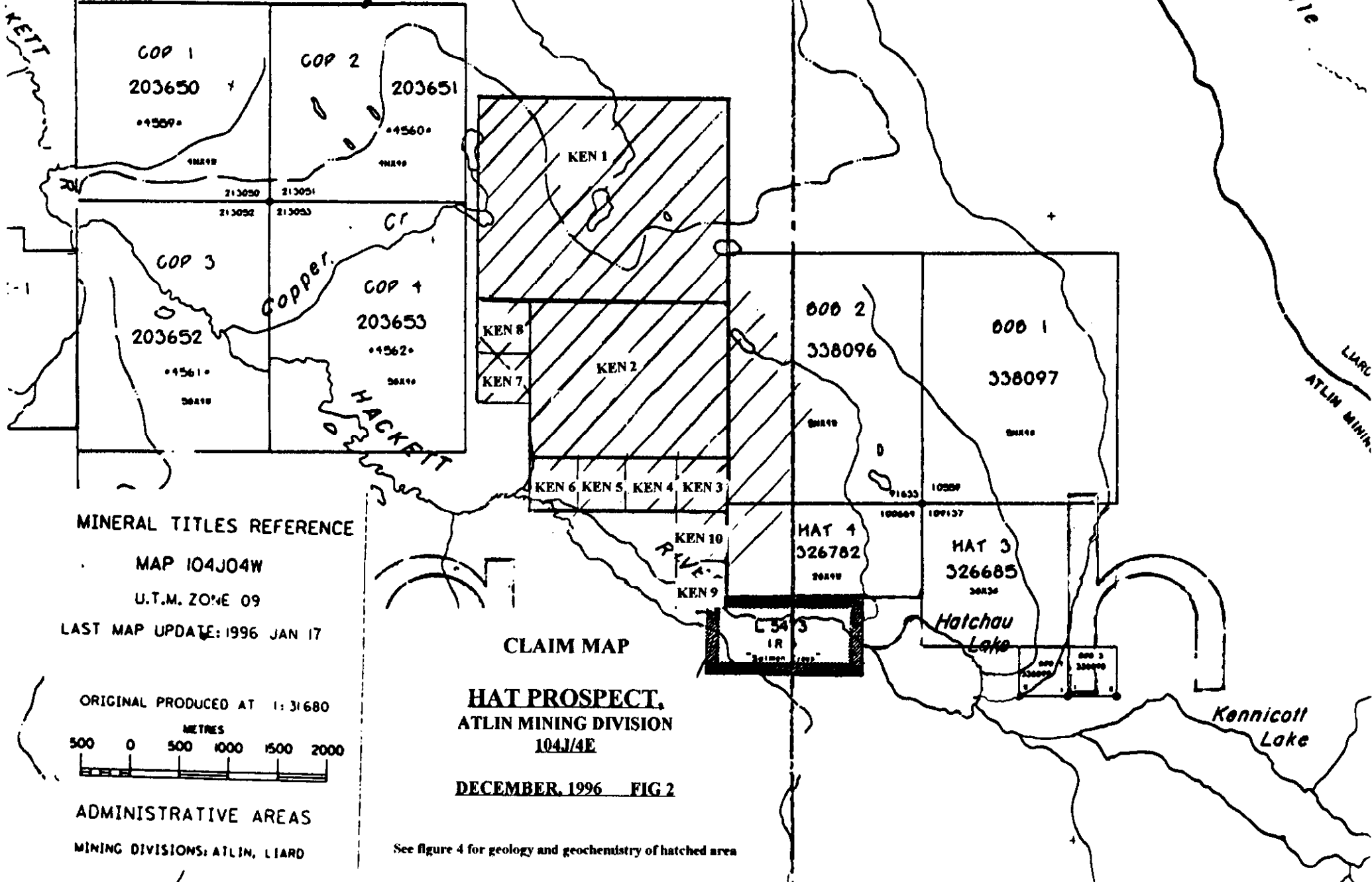
HISTORY

The Hoey prospect located on the Hat 3 claim is believed to have been first prospected and sampled by prospector Frank Hoey in 1963. Geochemical surveys and further prospecting was carried out in the late 1960's and early 1970's by Atled Exploration on behalf of Skyline Exploration Ltd., and Colorado Corporation, a unit of King Resources.

Utah Mines Ltd. (BHP) staked the SKI 1 to 6 mineral claims over the property in 1977, and to 1980 conducted geological, geochemical (2,000 soil samples), and induced polarization and magnetic surveys over 144 line kilometres of grid.

United Cambridge Mines Limited staked the Hoey prospect in 1984, and to 1991 with associated companies carried out limited geochemical, geological and geophysical surveys before allowing the claims to revert. Golden Ring Resources Ltd. carried out a regional scale airborne magnetic, electromagnetic and VLF-EM survey over the Sheslay area in 1991 that included the western part of the current property.

134°41'00" 34244 348780



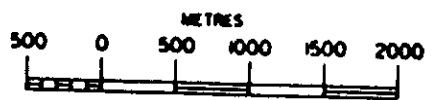
MINERAL TITLES REFERENCE

MAP 104J04W

U.T.M. ZONE 09

LAST MAP UPDATE: 1996 JAN 17

ORIGINAL PRODUCED AT 1:31680



ADMINISTRATIVE AREAS

MINING DIVISIONS: ATLIN, LIARD

CLAIM MAP

**HAT PROSPECT,
ATLIN MINING DIVISION
104J/4E**

DECEMBER, 1996 FIG 2

See figure 4 for geology and geochemistry of hatched area

Background data from all of the above programs can be accessed through Ministry of Mines Assessment Reports: 2554, 3296, 6835, 7482, 13939, 14802, 16311, 18158, and 21615.

The writer and E. Ostensoe staked the Hatchau Lake Property in 1994 and carried out a preliminary assessment of the claims in 1995. The results of this work were filed for assessment purposes in a report by E. Ostensoe, P. Geo. dated January 10, 1996.

1996 WORK PROGRAM

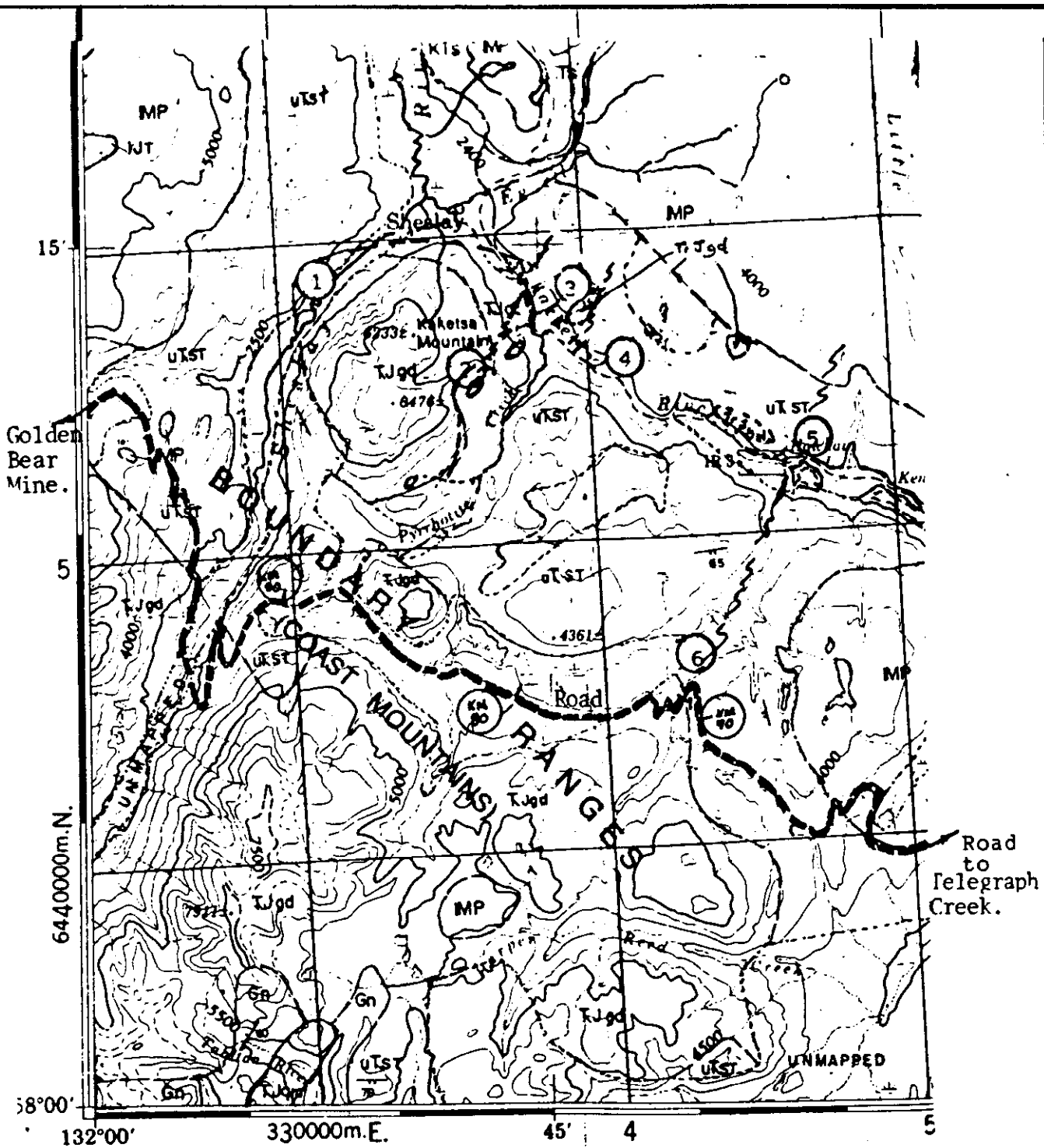
Between September 4 and 22, 1996, the writer accompanied by E. Ostensoe, P. Geo. travelled to the property and carried out the preliminary prospecting program described herein. A helicopter supported fly camp was established on a small lake near the south part of the Ken 1 claim. Prospecting traverses were made to various parts of the property and reconnaissance geological data was recorded in notebooks or on air photographs

A total of 24 rock samples and 78 soil samples were collected from areas thought to be of economic interest. The location of all samples are shown of figure 4 to this report. In addition, 18 soil samples collected in 1995 from the western section of line 8S at Gossan Creek were also analyzed. An early season snowfall slowed progress and limited the coverage to the areas shown.

REGIONAL SETTING.

The Hatchau Lake area is in the intermontaine belt where the Stikine Plateau merges with the Coast mountains. This area is coincident with the northern margin of tectonic terrane Stikinia where structural trends are dominantly west northwest and northerly, in part parallel to the King Salmon Fault and the terrane bounding Nahlin Fault.

The geology of the area is dominated by three major units that lie on older Paleozoic basement north and west of Sheslay; and in part are overlain by Cretaceous to Tertiary felsic volcanic rocks in the same area. The oldest of the three units is the upper Triassic Stuhini Group, an island arc assemblage dominated by andesitic to basaltic flows, pillow lavas, agglomerate and breccia in the lower part, and volcanic sandstone, lapilli tuff, greywacke, siltstone and minor argillite and limestone in the upper part. Fine exhalative sulphides are locally present in thin cherty members near the transition from volcanic to sedimentary units.



LEGEND

- MP Miocene-Recent. Level Mtn. and Hearts Peak volcanics.
- UTrST Upper Triassic Stuhini Gp.
- TrJgd Upper Triassic-Jurassic Granodiorite to gabbroic intrusive rocks.



SHESLAY AREA, REGIONAL GEOLOGY.

- 1 Kid-Grizzly.
- 2 Kaketsa Mtn.
- 3 Dick Creek.
- 4 Copper Creek.
- 5 Hatchau Lake.
- 6 Wolverine Creek.

The Stuhini Group is intruded by the the large Moosehorn batholith of late Triassic to early Jurassic age. The composition of the batholith ranges from biotite-hornblende diorite, quartz diorite and granodiorite, and locally quartz monzonite. A number of smaller intrusive masses include diorite, gabbro, monzonite and syenite. A large outlier of the batholith underlies Kaketsa Mountain to the west of the project area, and a number of smaller stocks and tabular masses of variable composition are scattered between Kaketsa Mountain and the project area. Some of these units are coeval with Stuhini volcanics, and scattered concentrations of sulphides are locally present.

The volcanic and intrusive rocks are partly overlain by volcanic rocks of the Level Mountain complex. Level Mountain is a large Shield volcano of Miocene to Recent age, and is included in a northerly trending belt of smaller volcanoes. The composition of the volcano is dominated by alkali olivine basalt flows and breccias with subordinate concentrations of trachyte and rhyolite in the upper later phases.

The southwest contact of Level Mountain parallels a short distance to the north the Hackett River valley. The valley contains both Hatchau and Kennicott lakes and is interpreted to host a major west-northwest fault. North-northeast faults and lineaments, parallel the Moosehorn Fault to the west and offset the valley Fault in the claim area. Both sets may relate to an extensional tectonic regime developed in the post-Eocene period.

GEOLOGY OF THE HAT CLAIMS.

The geology of the claim area was mapped in the 1977 to 1980 period, however this data is not in the public record. The following summary is from the reconnaissance program carried out in September, 1996.

The three lithologies described above are present in varying proportions on the western part of the Bob-Hat-Ken claims. The Stuhini Group includes an interbedded assemblage of siltstone and augite and plagioclase rich basaltic flows with minor tuff. In places the rocks are well altered, and the siltstones are locally mineralized with up to 10% pyrite. Stuhini Group rocks are mainly present on the western part of the property, but are also known to occur to the east of the large gabbroic stock.

Three types of intrusive rocks are present . Near the northwest corner of Ken 1 claim, outcrops of hornblende diorite grading to quartz diorite and granodiorite ? are evident, and appear to be part of a small stock that abuts or is overlain by Level Mountain volcanic rocks on the north. This unit is grey, medium-grained, mainly eqigranular, in places weakly porphyritic. Locally it contains up to 3% pyrite and is similar to exposures on Kaketsa Mountain to the west.

A large stock grading from diorite to gabbro in composition underlies much of the area prospected during 1996. The stock is massive, dark-grey and commonly medium to coarse-grained, although finer-grained phases may be present near the borders. The unit is magnetite-rich and the coarse phases contain crystals of hornblende +/- augite greater than 1 cm. in diameter. Minor concentrations of pyrite and chalcopyrite are locally present. Where the stock intrudes Stuhini Group rocks on the west, the contact area is marked by a large zone of alteration. To the north, the stock abuts or is overlain by the Level Mountain volcanics. The south contact of the stock may be along the Hackett River Fault, and the east boundary is undefined. Because of its characteristics, we have provisionally labelled it the Hatchau Lake Stock for ease of reference.

The older rocks are cut by numerous orange-weathering monzonite to syenite dykes. The dykes are up to a few metres wide and commonly trend north northwest. At one location, a dyke was noted to dip easterly at 50 degrees. Some of the dykes are dark green and porphyritic and are similar to porphyritic andesites of the Stuhini Group. Locally, the dykes are mineralized with minor pyrite and/or chalcopyrite.

The Level Mountain volcanics comprising basaltic flows and breccias are present to the north of the Hatchau Lake Stock. The nature of the contact is uncertain however it follows a strong lineament trending northwest.

A large area to the west of the Hatchau Lake Stock has been flooded with carbonate and lesser silica alteration. Locally, the altered zone is mineralized with 1% to 2% pyrite +/- chalcopyrite. Near 98+00N and 6+00E, a coarse grey-green breccia with up to 50% subangular clasts of altered augite basalt to 6.0 cm. in diameter is developed. Further to the south in a creek at the western margin of the Ken 2 claim, calcareous tufa, is thought related to vents along a fault bounding the Hatchau Lake Stock on the west.

GEOCHEMISTRY.

During the program, a total of 78 soil samples and 24 rock samples were collected. The samples were taken from areas previously shown to have anomalous levels of copper in the soil, or from the large alteration zone. The soil samples were collected with a shovel. Details of sample horizon, depth, colour and material were recorded on sample data sheets that accompany this report.

21 of the 24 rock samples collected were grab or character samples taken to determine general or background levels of base and precious metals. Three of the samples were taken in an old trench near the common boundary of the Ken 1 and 2 claims. These samples were chipped over specific widths as shown on assay data sheets.

The analyses of soil samples confirmed the high copper background noted in previous surveys. Assays below 100 ppm copper are few. Several of the samples have elevated levels (+300PPM) of zinc and few of the samples have anomalous levels of arsenic (+20 PPM) and gold (+20ppb).

An area along the east boundary of the Ken 2 claim is underlain by Stuhini volcanics intruded by diorite and monzonite. Exposures appear to suggest a pendant. The rocks are skarn-like with magnetite and locally chalcopyrite and pyrite. Soil samples collected over this zone on line 10+50 south ranged to 377 ppm copper, 760 ppm zinc, and 107 ppb gold. Three small rock chips from this area, HR 3, 4 and 5 assayed up to 832 ppm copper, 211 ppm zinc with low (- 10 ppb) gold. This zone appears to be marked by a magnetic high, however it has not been explored thoroughly.

Several soil samples were collected on line 600 S about 400 metres to the north. Bedrock is poorly exposed along much of the line but one exposure near the west end is skarn-like as above. The copper content of the soils ranged from 107 to 348 ppm, and Zinc ranged up to 218 ppm. Gold content ranged to 43 ppb gold.

The bulk of soil samples were collected over a large area of altered Stuhini volcanic and sedimentary rocks sandwiched between the coarse grained gabbroic stock on the east and the Kaketsa style dioritic intrusion on the west. The soil analyses revealed a copper content up to 476 ppm, and zinc up to 666 ppm. The arsenic content is commonly less than 10 ppm but five samples from 2+00 to 4+00 E on line 100+00N ranged from 13 to 67 ppm., and two other samples in the same area yielded 144 and 171 ppm respectively. The gold content is commonly less than 10 ppb however several samples yielded from 10 to 74 ppb and one sample assayed 811 ppb gold.

Nineteen rock samples were taken from exposures in the same area. The copper, gold and zinc assays are commonly low. The highest copper assay of 515 ppm is from an exposure of pyritized siltstone on a ridge that trends northwesterly. Some of the anomalous soil samples are coincident with this area suggesting the possibility that these horizons may be more prospective of mineralization than the large area of alteration.

The highest assay recorded in the program was from a sample selected from a gossan zone after a long traverse to the upper part of Gossan Creek. It assayed 2500 ppm copper, 3 ppm silver and 1170 ppb gold. This result may be significant in view of the preliminary results obtained from the Gossan Creek area in 1995, and that 18 soil samples collected in 1995 from the western part of line 8S at Gossan Creek and analyzed in 1996 showed a continuation of anomalous copper, arsenic and gold in that area.

SUMMARY AND CONCLUSIONS

A preliminary interpretation of the geology and geochemistry of the Hat claim area suggests the following:

The Hatchau Lake Stock and related monzonite intrusions were emplaced into and are likely coeval with volcanic rocks of the Stuhini Group. The size and shape of the stock is not fully defined.

Geophysical evidence indicates that a major fault underlies the Hackett River Valley and this structure is offset by a number of northerly and northeasterly trending faults. Movement along these structures with brittle deformation around the margins of the stock could produce the permeability necessary to host the large areas of carbonate-silica alteration found at the northwest and southeast parts of the stock.

The character of the alteration, calcareous tufa and the breccia zones, particularly at the southeast end of the stock, indicates a late geological event that may relate to the emplacement of the Level Mountain and other nearby volcanoes.

The Hat property covers part of a belt of mineralized occurrences that stretches several kilometres northwest and roughly parallels the Hackett River Fault on the north. Porphyry and skarn-type prospects within the belt have previously been investigated and large areas in the vicinity of the prospects have anomalous copper +/- zinc, lead, gold and silver. Mineralized cherty horizons within the trend indicates that some of the mineralization is exhalative. Mineralized occurrences at the Hat property in places also have elevated levels of arsenic, cobalt and locally antimony; and epithermal deposits are important targets.

The 1996 work revealed that soils overlying the Hatchau Lake Stock are locally anomalous in copper, zinc and gold. Minor amounts of chalcopyrite were noted in bedrock. Pyritized siltstones and a small magnetite-rich skarn zone also contain anomalous copper. Some of the soil samples overlying the large alteration zone and pyritized siltstone at the northwest end of the stock are anomalous in copper, zinc and locally arsenic and gold, however rock samples from the alteration zone yielded low to slightly above background levels of those elements.

Exploration carried out in 1995 and 1996 appears to indicate that the area to the east of the Hatchau Lake Stock has potential for the discovery of significant mineralization. As determined in 1995, this mineralization will likely occur in large epithermal systems as at Gossan Creek, or in imbricated vein and/or porphyry deposits as at the Hoey. As much of the mineralization encountered occurs within or near the intrusions, further work to the north of Gossan Creek and the Hoey Prospect along the easterly trace of the Hatchau Lake Stock should be undertaken.

RECOMMENDATIONS.

- 1) Carry out detailed geological, geochemical and geophysical surveys over the large alteration zone at Gossan Creek.
- 2) Compile all technical data and carry out a limited field program as above at the Hoey Prospect to better define drill targets.
- 3) Undertake a field program of prospecting, mapping and geochemistry to systematically re-evaluate those areas shown to be of geochemical and geophysical interest on the plateau area to the north of Gossan and Hoey Creeks.



T.E. Lisle, P. Eng

January 10, 1996

REFERENCES.

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18,158, 22,100, 21,615.
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Investment. Geological Fieldwork, 1974, 1977.
G.E.M. 1972, 1974.
- Ostensoe, E. P. Geo. Report of work on the Hat Prospect, Jan. 10, 1996.
- Souther, J.G. GSC Memoir 362. Geology and Mineral Deposits of
the Tulsequah Map Area. 1971.
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movements in the Canadian Cordillera. Canadian
Journal of Earth Science, Vol 7, 1970

APPENDIX 1

STATEMENT OF EXPENDITURES.

Transportation.	Helicopter	1,770.93	
	Fixed-Wing Aircraft.	361.66	
	Truck 19 days at 50.00	950.00	
	3592 km. at 0.18	<u>646.56</u>	3,729.15
Analytical Costs.	Acme Analytical Lab.		1,679.73
Gasoline.			433.08
Consumables and Travel.			729.09
Field Supplies.			153.14
Wages.	2 X19days at 250.00		9,500.00
Report.	4 days at 250.00		1,000.00
Miscellaneous.	Thin sections, copy, maps etc.		60.00
Total			<u>\$17,284.19</u>



APPENDIX 3
GEOCHEMICAL DATA SHEETS.

GEOCHEMICAL DATA

LOCATION		NTS UTM GRID		Survey-type	Depth	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
NORTH	SOUTH	EAST	WEST												
		8+50.5	8+00W	Soil Rock	.25	C	Yellow+ br	Residual Soil Colluvium	15		15	20	40	10 100	Bedrock - mostly soft, with 9abbric andesite, sh'd zones Some Quartz
				Rock											see notebook
		8+00.3	8+00W	S	.4	B	Dk br	Co	10	5	25	30	30		on slope to Cr. (50m E)
			8+50W	S	.4	B	Dk br	Co		5	20	40	35		almost flat as per
			9+00W	S	0.55	B	med br	Co			25	50	25		" " flat
			9+50W	S	0.35	B	med br			5	20	40	35		"rocky" soil
			10+00W	S	0.35	B	dk br			5	20	60	15		Fine soil
			10+50W	S	0.25	B	br		15	5	20	30	20		Gravelly soil + rocks
			11+00W	S	0.45	B	med br	soil	10	5	20	50	15		Good Edge of soil, slope w to Cr.
			11+50W	S	0.4	B	br	soil	15	5	15	50	15		Good soil. Gentle slope to SW.

DEPTH; Measured in meters.

HORIZON; Marked A, B, or C

COLOUR; Br. Brown. Bl. Black. R. Red. G. Grey. O. Orange. Dk. Dark. Lt. Light.

MATERIAL; T Till; Co. Colluvium. A. Alluvium. F. Fluvial. GF. Glaciofluvial. O. Organic.

ORGANICS; Visual estimate of organic content.

GRAVEL; Estimate of Gravel sized fragments.

CLAY-SILT-SAND. Low to moderate to high estimates.

PROJECT: HAT

DATE: July 13, 1995

SAMPLER: E.A.O.

GEOCHEMICAL DATA

LOCATION		NTS UTM GRID		Survey-type	Depth	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
NORTH	SOUTH	EAST	WEST												
1		L 8+00S	12+00W	Soil	0.1	?	Brown	Gravel sand	25%	10	25	25	35		stream worked material with soil developed
2			12+50W	S	0.25	?	Brown	fine gravel	20	10	5	40	25		E slope of stream valley. Sorted mat'l + soil
3			13+00W	S	0.35	B?	Brown	fluvial	15	5	10	50	20		Sidehill slope 25°S Traction mat'l. Fair to good
4			13+50W	S	0.35	B	med br	Soil	0	5+	10	45	40		Sidehill. Good soil med to dk brown
5			14+00W	S	0.4	B	med br	Soil	0	5	15	45	35		
6			14+50W	R	0.25	Rock	Yellow brown	Colluvium broken bedrock						v.f. gv v.sil.	No soils - just organic layer and rx frags.
7			15+00W	S	0.1	B	Dk br	Soil	0	5	15	50	30		Good soil. 20° slope to south. Aspxs.
8			15+50W	S	0.35	B	Dk br	soil	(2)	5	15	45	35		Aspxs.
9			16+00W	S	0.1	B	Yellow br	Soil	20	5	20	30	25	limestone st. tuff	Rocky
10			16+50W	S	0.1	B	Yellow to med br.	Gravelly soil	20	5	15	35	25		Rocky

DEPTH; Measured in meters.

HORIZON; Marked A, B, or C

COLOUR; Br. Brown. Bl. Black. R. Red. G. Grey. O. Orange. Dk. Dark. Lt. Light.

MATERIAL; T Till; Co. Colluvium. A. Alluvium. F. Fluvial. GF. Glaciofluvial. O. Organic.

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GRAVEL; Estimate of Gravel sized fragments.

CLAY-SILT-SAND. Low to moderate to high estimates.

GEOCHEMICAL DATA

LOCATION		NTS UTM GRID		Survey-type	Depth	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks	
NORTH	SOUTH	EAST	WEST													
1			LB+00S	17+00W	Soil	0.4	B	Reddish brown	Soil	2	5	15	60	20		Flat. Aspens.
2				17+50W	S	0.4	B	Yellow brown	Soil Colluvium	20		20	30	30	Dark Porphyry	Slope 25° S.
3				18+00W	S	0.4	Lwr A	Choc br.	Soil minor Co	10	15	15	30	30		Slope 20° S
4				18+50W	S	0.3	B	Med br	Soil + talus	20	5	10	25	40	LK porphyry	Telegraph Trail at Δ
5				19+00W	S	0.2	?	Yellow br	Soil + detritus	25	5	5	35	30	Calc'd Silic porphyry	1/2 c pinnacle of yellow/orange limonite stained bxd frn with pyrite, mal, cpy.
6					Hackett Rv	is about	80m S		and 30m lower	in elev'n.						
7																
8																
9																
10																

DEPTH; Measured in meters.

HORIZON; Marked A, B, or C

COLOUR; Br. Brown. Bl. Black. R. Red. G. Grey. O. Orange. Dk. Dark. Lt. Light.

MATERIAL; T Till; Co. Colluvium. A. Alluvium. F. Fluvial. GF. Glaciofluvial. O. Organic.

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GRAVEL; Estimate of Gravel sized fragments.

CLAY-SILT-SAND. Low to moderate to high estimates.

GEOCHEMICAL DATA

HAT PROJECT, SEPT. 1996

96	HR1	GRAB	large alteration zone.
	HR2	"	Altered augite basalt + siltstone. Qz uns
	HR3	"	Skarn alteration - volcanic pendant in Diorite
	HR4	"	" " with minor malachite + Cpy.
	HR5	"	Skarn alteration + Magnetite.
	HR6	Grab	Near altered Breccia - Flow? Intrusive.
	HR7	float	Highly altered - Pink (K-Spar)?
	HR8	Grab	Pyritized Siltstone - 3% - 10% Py, on Ridge
	HR9	Grab	Pyritized siltstone and basalt.
	HR10	Grab	Alteration zone - Qz veins - K-Spar?
	HR11	Select	Silicified alteration zone + Py + Lim.
	HR12	1.2m chip	Monzonite Porphyry + Py - Old trench.
	HR13	4.0M. chip	Diorite. Tr Py. lim, Ep. - " " "
	HR14	3.0M Grab	Diorite + Monzonite. Minor py. + Ep.
	HR15	Grab	Highly altered volcanics.
	HR16	GRAB.	Highly altered zone.
	HR17	Random Chips	Highly altered (carb-sil) basaltic flow - Tr G
	HR18	" "	" " Augite-rich. " " "
	HR19	Grab	Highly altered tuff, and flows.
96	HR20	SELECT	Strong gossan in Diorite, Py + Cpy - Gossan Creek
96	HRE1	GRAB	
	HRE2	GRAB	
	HRE3	GRAB.	
	HRE4	20M chip	Strong Alteration zone - Discontinuous chip.

GEOCHEMICAL DATA

PROJECT HAT
 GENERAL LOCATION Sheslay, B.C.

SAMPLER E. Ostensoe
 DATE Sept. 11, 1996
 NTS MAP SHEET _____

LOCATION NTS
 UTM
 GRID
 (NORTH/SOUTH) (EAST/WEST)

				Survey-type	Depth	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
1				Soil	10	B	Red-brown	Fine-textured soil							✓ Pyritic nodules 25° slope
2					20	B	Dark brown								Rocky colluvium
3					25		Light brown	Rocky colluvium							20° slope.
4					25		Dark brown								20° slope. Good soil.
5					25		Grey brown	Colluvium(?)							12° slope
6					20		Lt brown - Yellow brown.								Flat. Granodiorite intr.
7					20		Black/brown			✓✓					Buck brush swamp. Poor. Matted vegetation.
8					20		Light brown	Till?			✓				G'diol(?). Flat
9					15/20		Pale brown	Rocky colluvium							Flat
10															

SURVEY TYPE: S=Soil, SS=Silt, R=Rock Chip

DEPTH: Measured in meters.

HORIZON: Marked A, B, or C

COLOUR: Br. Brown, Bl. Black, R. Red, G. Grey, O. Orange, Dk. Dark, Lt. Light.

MATERIAL: T Till; Co. Colluvium, A. Alluvium, F. Fluvial, GF. Glaciofluvial, O. Organic.

ORGANICS: Visual estimate of organic content.

GRAVEL: Estimate of Gravel sized fragments.

CLAY-SILT-SAND: Low to moderate to high estimates.

GEOCHEMICAL DATA

PROJECT HAT
 GENERAL LOCATION Sheslay, B.C.

SAMPLER E. Ostensen
 DATE Sept. 11, 1996
 NTS MAP SHEET _____

LOCATION

NTS

UTM

GRID

NORTH/SOUTHEAST

WEST

Survey-type

Depth

Horizon

Colour

Material

% Gravel

% Organic

Clay

Silt

Sand

Bedrock

Remarks

	<u>NORTH/SOUTH</u>	<u>EAST</u>	WEST	Survey-type	Depth	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
1	100+50N	0+00		Soil	15	B	Yellow brown							✓	shallow rocky soil
2	99+50	0+00			25	B	Light brown	Rocky colluvium							Alt. 3680'. Dry
3	100+00	4+50E			20		Dark to medium brown	Coarse rocky soil							15° slope easterly
4		5+00			10		Light brown	Colluvium?							Almost flat.
5		5+50					Light brown/grey	clayey Basal till?			✓				
6		6+00			15-20		Light brown	Very rocky			✓				Probable till
7		6+50					Light brown	Till?	✓		✓				Similar to 6+00E
8		7+00			20		med. brown	Till?	✓		✓				As above
9		7+50			20		Light brown	Alluvium							Rocky. Good sample.
10		8+00			20		med. brown	Light soil	✓						Angular pebbles.

8+50E
to 10+50E - lake.

SURVEY TYPE: S=Soil, SS=Silt, R=Rock Chip

DEPTH: Measured in meters.

HORIZON: Marked A, B, or C

COLOUR: Br. Brown, Bl. Black, R. Red, G. Grey, O. Orange, Dk. Dark, Lt. Light.

MATERIAL: T Till, Co. Colluvium, A. Alluvium, F. Fluvial, GF. Glaciofluvial, O. Organic.

ORGANICS: Visual estimate of organic content.

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CLAY-SILT-SAND: Low to moderate to high estimates.

GEOCHEMICAL DATA

PROJECT HAT
 GENERAL LOCATION Sheslay, B.C.

SAMPLER E. Ostensoe
 DATE Sept 11, 1996
 NTS MAP SHEET _____

LOCATION
 NTS
 UTM
 GRID
 (NORTH) SOUTH (EAST) WEST

				Survey-type	Depth	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
1		100+00	11+00 E	Soil	20		Dark brown	U. fine textured soil							15° slope to West
2			11+50		20		Brown								Gentle slope. Fair.
3			12+00		20		light brown	Rocky soil							
4															
5															
6															
7															
8															
9															
10															

SURVEY TYPE: S=Soil; SS=Silt; R=Rock Chip
 DEPTH: Measured in meters.
 HORIZON: Marked A, B, or C
 COLOUR: Br. Brown. Bl. Black. R. Red. G. Grey. O. Orange. Dk. Dark. Lt. Light.
 MATERIAL: T Till; Co. Colluvium. A. Alluvium. F. Fluvial. GF. Glacioluvial. O. Organic.
 ORGANICS: Visual estimate of organic content.
 GRAVEL: Estimate of Gravel sized fragments.
 CLAY-SILT-SAND: Low to moderate to high estimates.

GEOCHEMICAL DATA

PROJECT HAT
 GENERAL LOCATION Sheslay, B.C.

SAMPLER E. Ostensoe
 DATE Sept. 13, 1996.
 NTS MAP SHEET _____

KE 2

LOCATION NTS
 UTM
 GRID
 NORTH SOUTH EAST WEST

				Survey-type	Depth Cm.	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
1				Soil	20	C?	Yellow/brown	clayey.	20		35	30	15		Possible till.
2					30	B	Tan-brown	Deep soil	5	5	45	30	15		Flat ground.
3					30	B	Tan-brown	Deep soil.	5			85			Gentle slope
4					30	B									As above.
5						C	Yellow tan	Till	20		40				Gentle slope
6					25	B	med. brown		5			80			Fine soil.
7					25	B	Red brown		40		20	30			Gravelly soil
8					30		Yellow brown	Till	35		30	20			
9					25	B	Dark brown		30		10	40			Rocky
10					20		Dark red-brown	Fine textured soil	10		10	80			20° south slope - aspens.

SURVEY TYPE: S=Soil, SS=Silt, R=Rock Chip

DEPTH: Measured in meters.

HORIZON: Marked A, B, or C

COLOUR: Br. Brown, Bl. Black, R. Red, G. Grey, O. Orange, Dk. Dark, Lt. Light.

MATERIAL: T Till, Co. Colluvium, A. Alluvium, F. Fluvial, GF. Glaciofluvial, O. Organic.

ORGANICS: Visual estimate of organic content.

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CLAY-SILT-SAND: Low to moderate to high estimates.

GEOCHEMICAL DATA

PROJECT HAT
 GENERAL LOCATION Sheslay, B.C.

SAMPLER E. Ostensoe
 DATE Sept 13, 1996
 NTS MAP SHEET _____

LOCATION
 NTS UTM GRID
 NORTH SOUTH EAST WEST

				Survey-type	Depth cm	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
1				soil	20	C(B)	Dark brown	Alluvial	70			10	20		open hillside
2					20	B	Dark brown				20	60		10	Open slope
3															
4					25			Till	25						coarse gravel
5					20	C	Yellow brown	Till	25		35				
6					25	C	Yellow brown	Till	25		35				
7						C	Yellow brown	Till	25		35				shallow soil
8					20	B	Dark red brown								shallow soil coarse amphibole magn.-diomite some basal fill?
9					10	B	Dark brown				✓			✓	shallow soil on Kiblenge diorite
10					35	C(B)	Yellow brown	clayey rocky soil	30	✓	35	30			

SURVEY TYPE: S=Soil; SS=Silt; R=Rock Chip

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HORIZON: Marked A, B, or C

COLOUR: Br. Brown, Bl. Black, R. Red, G. Grey, O. Orange, Dk. Dark, Lt. Light

MATERIAL: T Till; Co. Colluvium; A. Alluvium; F. Fluvial; GF. Glaciofluvial; O. Organic

ORGANICS: Visual estimate of organic content.

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CLAY-SILT-SAND: Low to moderate to high estimates.

GEOCHEMICAL DATA

PROJECT HAT
 GENERAL LOCATION Sheslay, B.C.

SAMPLER E. Ostensoe
 DATE Sept 13, 1996
 NTS MAP SHEET _____

LOCATION NTS
 UTM
 GRID
 NORTH (SOUTH) EAST (WEST)

				Survey-type	Depth	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
1					30	C	Yellow brown		25		50	20			less rocky similar to 5+00W
2					20	C	Tan brown	Till	30		35	30			As above
3					20	B	Dark brown		20		35	35			
4										Deep peat					No sample.
5					30	B(C)	Dark brown		25		35	35			Some upper till
6					12-20		Yellow brown	clayey colluvium	25		35	35		coarse, bi-blende diorite/amphibolite	
7					50		Y								Very deep organic layer. Poor? Reducing environment.
8					15	B	Dark grey brown			10	10	70		10	Good sample.
9					30	B	Grey brown				30	60		10	25° slope South. Poplars.
10					25	B?C	med. brown	clayey till						Norm blende diorite	Varved?

SURVEY TYPE: S=Soil; SS=Silt; R=Rock Chip
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 MATERIAL: T Till; Co. Colluvium. A. Alluvium. F. Fluvial. GF. Glaciofluvial. O. Organic.
 ORGANICS: Visual estimate of organic content.
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 CLAY-SILT-SAND: Low to moderate to high estimates.

GEOCHEMICAL DATA

PROJECT HAT
 GENERAL LOCATION Sheslay, B.C.

SAMPLER E. Ostensoe
 DATE Sept. 14, 1996.
 NTS MAP SHEET _____

LOCATION NTS
 UTM
 GRID
 NORTH (SOUTH) EAST (WEST)

				Survey-type	Depth	Horizon	Colour	Material	% Gravel	% Organic	Clay	Silt	Sand	Bedrock	Remarks
1				Soil	25	C	Yellow brown	Clayey till	20		55	25			May not be useful? Poplars. 20° slope.
2								Clayey till and soil	20		55	25		Amph. debris	25° slope Similar to above.
3															
4															
5															
6															
7															
8															
9															
10															

SURVEY TYPE: S=Soil; SS=Silt; R=Rock Chip
 DEPTH: Measured in meters.
 HORIZON: Marked A, B, or C
 COLOUR: Br. Brown. Bl. Black. R. Red. G. Grey. O. Orange. Dk. Dark. Lt. Light.
 MATERIAL: T Till; Co. Colluvium. A. Alluvium. F. Fluvial. GF. Glaciofluvial. O. Organic.
 ORGANICS: Visual estimate of organic content.
 GRAVEL: Estimate of Gravel sized fragments.
 CLAY-SILT-SAND: Low to moderate to high estimates.

- 96 HR-E1 - old blast pit. Elev. 3700 feet.
 very fine grained to fine grained monzonite
 with magnetite as layers and disseminations.
- 96 HR-E2 - bleached augite(?) porphyry. No sulphides.
 sample across 20 m. \pm . Alt. 3720' \pm
- 96 HR-E3 - rusty pyritic layer - siltstone. 2-4% pyrite
 alt. 3840 ft.
 50m. N. of 4+00E on line 100+00N.
 - grab sample of rock chips.
- 96 HR-E4 - discontinuous chip sample - 20 m.
 south of west end of Camp Lake
 strong feldspathic alteration in diorite
 (- TEL tied to old 1P grid)
 check for gold.
- 96 HR-20 - rusty, v. broken rock on E side of small
 (Sept 19/96) creek that flows S'y to Hackett River.
 alt. 3120 ft.
 - from old bulldozer cut. Near headwtr. Gossau Cr.

APPENDIX 4
ASSAY CERTIFICATES.



GEOCHEMICAL ANALYSIS CERTIFICATE



T.E. Lisle & Associates PROJECT 960101459-99 File # 96-6589 Page 1

145 W. Rockland Road, North Vancouver BC V7N 2V8

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
96 HR 1	<1	52	<3	24	<.3	4	<1	150	.58	<2	<5	<2	<2	135	<.2	<2	3	68	1.59	.130	2	12	.26	54	.11	9	1.06	.10	.07	<2	2
96 HR 2	1	15	<3	24	<.3	4	<1	275	.41	2	<5	<2	<2	35	<.2	<2	<2	80	2.82	.085	2	9	.54	17	.21	28	1.94	.09	.05	<2	2
96 HR 3	<1	260	<3	106	<.3	8	13	886	4.46	<2	<5	<2	<2	33	<.2	<2	<2	197	3.11	.161	2	12	.97	45	.10	27	2.83	.07	.04	<2	7
96 HR 4	<1	832	5	211	.5	4	14	1257	4.37	2	<5	<2	<2	25	<.2	<2	<2	182	2.43	.159	3	6	.78	32	.12	25	2.57	.07	.07	<2	9
96 HR 5	<1	220	3	58	<.3	6	8	493	6.74	2	5	<2	<2	35	.3	<2	<2	326	1.93	.117	2	39	.30	36	.11	24	1.93	.17	.06	<2	7
96 HR 6	1	81	4	26	<.3	24	13	282	.84	5	<5	<2	<2	27	<.2	<2	<2	59	1.80	.126	3	10	.32	30	.17	14	1.27	.07	.05	<2	1
96 HR 7	5	5	<3	14	<.3	6	1	247	.54	<2	<5	<2	<2	56	<.2	<2	<2	128	1.46	.052	2	30	.11	8	.17	<3	.66	.05	.02	2	<1
96 HR 8	53	515	<3	16	<.3	110	36	193	6.02	29	<5	<2	<2	22	<.2	<2	6	204	.93	.108	7	16	.31	8	.16	6	1.00	.11	.04	<2	4
96 HR 9	3	163	3	15	<.3	21	22	317	3.59	19	<5	<2	<2	53	<.2	<2	4	146	3.03	.108	3	25	.30	17	.14	13	2.18	.18	.04	3	2
96 HR 10	1	10	<3	18	<.3	3	<1	346	.31	2	<5	<2	<2	32	<.2	<2	<2	76	2.08	.120	1	10	.56	28	.17	14	1.55	.08	.09	<2	<1
96 HR 11	1	46	11	23	<.3	190	27	208	1.04	10	<5	<2	<2	79	<.2	<2	<2	80	3.86	.090	5	50	.49	19	.15	27	2.76	.13	.05	<2	1
96 HR 12	<1	82	83	75	<.3	3	12	1347	4.15	15	<5	<2	<2	22	<.2	<2	5	107	.80	.165	6	2	1.74	<1	.15	8	2.17	.09	.01	<2	6
96 HR 13	<1	44	8	61	<.3	11	12	779	4.47	<2	<5	<2	<2	75	<.2	<2	<2	248	2.52	.074	2	14	1.65	22	.15	13	3.06	.11	.08	2	3
96 HR 14	<1	58	12	59	<.3	5	9	717	2.04	<2	<5	<2	<2	43	<.2	3	<2	118	2.41	.147	3	8	1.70	11	.14	16	2.68	.06	.03	2	2
96 HR 15	<1	12	<3	26	<.3	2	1	262	.45	3	<5	<2	<2	34	<.2	<2	<2	45	1.23	.062	1	4	.36	38	.11	11	.94	.07	.05	<2	1
RE 96 HR 15	<1	12	3	26	<.3	<1	<1	247	.43	2	<5	<2	<2	33	<.2	<2	<2	44	1.21	.060	2	5	.34	28	.11	10	.91	.08	.05	<2	1
96 HR 16	1	6	<3	32	<.3	3	<1	480	.35	13	<5	<2	<2	16	.2	<2	2	57	3.29	.199	1	3	.58	38	.18	25	2.10	.05	.08	<2	1
96 HR 17	1	19	<3	66	<.3	5	<1	383	.29	<2	<5	<2	<2	27	<.2	<2	2	53	1.93	.122	1	5	.49	28	.13	12	1.27	.08	.05	<2	1
96 HR 18	1	9	<3	25	<.3	5	<1	221	.34	<2	<5	<2	<2	37	<.2	<2	5	48	1.46	.138	2	5	.24	18	.13	8	1.05	.10	.04	<2	1
96 HR 19	1	13	<3	14	<.3	3	<1	146	.29	<2	<5	<2	<2	175	<.2	<2	3	34	2.96	.078	<1	11	.43	13	.13	9	3.77	.47	.06	<2	1
96 HR 20	12	2511	4	10	3.0	3	13	233	17.02	8	<5	<2	2	25	<.2	<2	<2	279	1.08	.307	5	32	.90	22	.19	11	1.51	.07	.09	<2	1170
96 HR E1	1	87	<3	30	<.3	5	19	462	6.59	<2	<5	<2	<2	92	<.2	<2	2	328	1.71	.144	4	4	.92	25	.12	17	2.30	.12	.07	<2	15
96 HR E2	1	12	3	10	<.3	4	<1	147	.33	<2	<5	<2	<2	48	<.2	<2	2	61	2.05	.125	2	4	.30	16	.14	19	1.48	.12	.06	<2	3
96 HR E3	62	159	6	9	.5	20	8	197	2.77	33	<5	<2	<2	23	<.2	<2	<2	341	.54	.099	5	27	.23	<1	.09	6	.59	.06	.04	<2	2
96 HR E4	1	147	5	26	<.3	6	<1	187	.29	2	<5	<2	2	36	<.2	4	<2	33	1.52	.116	2	5	.31	35	.10	12	.97	.07	.07	<2	1
STANDARD C2/AU-R	19	57	39	138	6.5	68	33	1110	3.73	39	26	7	32	48	17.8	16	20	69	.55	.108	36	60	.92	188	.07	29	1.86	.06	.13	13	454

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.

THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL.

ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB

- SAMPLE TYPE: P1 ROCK P2 TO P4 SOIL AU* - IGNITED, AQUA-REGIA/MIBK EXTRACT, GF/AA FINISHED.(10 GM)

Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

DATE RECEIVED: DEC 13 1996

DATE REPORT MAILED:

Dec 24/96

SIGNED BY:D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
L100+50N 0+00E	2	197	<3	102	.3	47	33	794	7.01	6	<5	<2	3	44	<.2	<2	<2	179	.61	.061	5	73	1.49	96	.18	8	4.74	.02	.05	<2	12
L100+00N 0+00	1	257	<3	92	<.3	71	38	762	6.81	3	<5	<2	2	67	<.2	<2	4	200	1.05	.038	6	108	1.89	124	.21	<3	4.51	.02	.08	<2	25
L100+00N 0+50E	1	145	5	122	<.3	43	26	844	6.05	<2	6	<2	<2	50	<.2	<2	5	205	.83	.026	9	80	1.45	124	.17	3	4.00	.04	.04	<2	5
L100+00N 1+00E	3	341	4	117	<.3	2	2	230	.36	<2	<5	<2	<2	143	.2	<2	3	9	6.06	.126	2	4	.26	8	<.01	28	.20	.01	.02	<2	3
L100+00N 1+50E	1	153	<3	108	<.3	46	36	782	7.40	5	<5	<2	3	51	<.2	<2	<2	239	.61	.021	4	72	1.83	135	.17	3	5.05	.02	.07	<2	5
L100+00N 2+00E	2	162	6	199	.3	51	37	1571	6.64	15	<5	<2	<2	81	.9	<2	<2	230	1.44	.088	8	68	1.59	223	.16	6	3.72	.03	.18	<2	9
RE L100+00N 2+00E	2	165	7	203	.3	52	38	1609	6.83	13	<5	<2	2	82	.7	<2	<2	235	1.47	.087	8	70	1.62	218	.17	6	3.72	.03	.18	<2	5
L100+00N 2+50E	5	164	12	344	.3	68	56	1628	7.29	67	7	<2	<2	58	1.0	3	2	220	.77	.115	7	60	1.15	185	.13	<3	4.19	.03	.14	<2	4
L100+00N 3+00E	2	221	11	185	<.3	57	41	1582	6.58	18	9	<2	<2	77	<.2	2	9	237	1.24	.166	8	61	1.37	120	.12	7	4.03	.03	.11	<2	15
L100+00N 3+50E	4	341	67	374	.4	54	53	1258	7.32	52	<5	<2	<2	76	1.8	<2	2	180	1.25	.165	8	53	1.05	107	.15	9	3.78	.02	.10	<2	811
L100+00N 4+00E	5	170	41	381	.3	69	43	1122	7.79	31	9	<2	<2	51	.7	<2	<2	182	.61	.140	9	57	.99	117	.18	<3	4.71	.02	.08	<2	7
L100+00N 4+50E	1	114	<3	189	.4	54	35	1422	6.69	<2	7	<2	<2	72	.3	<2	<2	224	1.00	.084	9	78	1.63	209	.21	<3	4.00	.03	.11	<2	8
L100+00N 5+00E	1	98	<3	173	.4	61	32	1225	6.74	3	<5	<2	2	74	.7	2	<2	211	1.04	.105	7	82	1.81	226	.23	3	4.22	.03	.08	<2	6
L100+00N 5+50E	1	132	<3	102	.3	96	36	1157	7.29	<2	6	<2	2	75	<.2	<2	<2	240	1.29	.054	7	128	2.61	150	.21	<3	4.48	.04	.11	<2	74
L100+00N 6+00E	<1	224	3	108	.4	75	42	1327	8.18	5	<5	<2	<2	91	<.2	<2	<2	289	1.12	.041	9	97	2.43	243	.20	6	5.44	.03	.08	2	11
L100+00N 6+50E	<1	246	<3	132	<.3	73	40	1214	8.32	7	<5	<2	2	84	<.2	2	3	296	1.06	.053	9	101	2.35	216	.21	4	5.52	.02	.10	<2	12
L100+00N 7+00E	<1	147	<3	110	.4	59	36	1302	7.76	<2	5	<2	2	86	<.2	2	<2	283	1.40	.109	9	77	2.34	174	.19	<3	4.78	.03	.09	<2	9
L100+00N 7+50E	1	120	<3	174	.4	64	30	1219	6.80	2	<5	<2	<2	64	<.2	<2	<2	201	1.08	.151	12	74	1.51	160	.29	4	3.60	.04	.09	<2	16
L100+00N 8+00E	1	165	3	120	.4	43	23	972	6.10	3	7	<2	<2	89	<.2	<2	<2	188	2.08	.086	14	62	1.71	167	.22	4	3.35	.06	.07	<2	6
L100+00N 11+00E	1	120	<3	119	<.3	60	34	1251	6.81	<2	<5	<2	<2	74	<.2	<2	6	216	1.39	.116	7	74	1.93	115	.20	<3	3.81	.02	.10	<2	11
L100+00N 11+50E	1	148	<3	114	<.3	67	37	1118	7.23	4	<5	<2	<2	81	<.2	3	2	220	1.13	.060	9	85	1.95	213	.25	<3	4.59	.03	.08	<2	20
L100+00N 12+00E	<1	190	<3	90	.3	105	43	1126	8.24	<2	<5	<2	2	104	<.2	<2	2	275	1.35	.108	13	129	2.50	444	.16	<3	5.41	.03	.08	<2	16
L99+50N 0+00E	<1	144	3	114	.3	55	36	1336	6.87	2	<5	<2	<2	65	<.2	<2	2	228	1.21	.051	7	96	1.86	144	.19	5	4.28	.03	.09	<2	13
L99+50N 4+00E	7	167	13	663	.6	131	40	1581	7.78	171	<5	<2	<2	55	1.4	<2	2	229	1.05	.137	6	100	1.62	113	.11	5	5.42	.02	.07	<2	4
L99+00N 4+00E	18	373	15	287	.8	132	117	2064	9.07	144	<5	<2	<2	121	<.2	<2	<2	244	1.40	.192	9	71	.83	151	.13	3	4.07	.04	.16	<2	8
L99+00N 4+50E	9	254	8	131	.3	98	46	881	7.47	69	<5	<2	<2	56	<.2	<2	<2	264	.67	.062	5	77	1.67	165	.16	5	5.38	.03	.07	<2	6
L98+50N 4+00E	4	101	6	372	.8	70	41	2135	7.20	<2	<5	<2	<2	49	.8	<2	<2	188	.82	.164	13	66	1.11	202	.33	<3	3.86	.04	.14	<2	7
L98+00N 4+00E	1	141	4	131	.3	76	35	935	7.21	<2	<5	<2	<2	72	<.2	<2	<2	250	1.25	.096	7	81	1.92	189	.17	<3	4.54	.02	.11	<2	7
L97+50N 0+00	4	333	3	144	.5	25	59	1806	9.50	<2	<5	<2	<2	86	<.2	2	3	196	1.19	.089	8	47	1.49	55	.18	<3	4.35	.02	.18	<2	20
L97+50N 4+00E	2	89	3	192	.3	80	33	1423	7.30	2	<5	<2	<2	66	<.2	2	2	168	.94	.132	18	64	1.74	139	.49	6	3.70	.06	.09	<2	3
L97+00N 0+00	1	174	<3	94	<.3	57	28	841	6.12	3	<5	<2	<2	64	<.2	<2	<2	203	1.39	.058	6	69	1.54	116	.15	<3	4.26	.04	.07	<2	18
L97+00N 4+00E	1	115	4	223	.5	45	37	2143	6.52	<2	<5	<2	<2	69	<.2	<2	<2	218	1.23	.082	8	68	1.40	168	.18	<3	3.92	.03	.15	<2	11
L96+50N 0+00	1	399	<3	91	.5	4	3	759	.46	<2	<5	<2	<2	125	.5	2	<2	10	8.10	.129	2	5	.32	26	.01	27	.31	.01	.02	<2	1
L96+50N 4+00E	1	123	<3	147	<.3	50	29	1299	6.10	5	<5	<2	<2	71	<.2	2	<2	206	1.48	.090	6	60	1.52	194	.17	3	3.84	.03	.18	<2	13
L96+00N 0+00	1	172	<3	110	<.3	36	21	1010	6.14	2	<5	<2	<2	57	<.2	2	2	218	1.56	.122	11	60	1.29	107	.17	4	2.74	.05	.06	<2	18
STANDARD C2/AU-S	19	60	33	144	6.6	69	34	1212	3.91	42	21	8	33	51	18.1	17	22	74	.56	.107	39	64	.97	189	.08	28	1.95	.07	.15	13	45

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



ACME ANALYTICAL



ACME ANALYTICAL

SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	%	%	%	%	ppm	ppb
L96+00N 1+00E	1	186	9	97	<.3	45	27	1006	5.64	<2	<5	<2	<2	60	<.2	<2	2	185	1.13	.082	5	68	1.43	93	.12	7	3.62	.03	.11	<2	11
L96+00N 2+00E	1	291	10	202	.6	49	15	783	4.92	<2	<5	<2	<2	52	.2	<2	5	102	1.39	.099	23	47	.86	166	.34	4	2.64	.07	.06	<2	3
L96+00N 3+00E	30	476	8	135	.8	95	63	553	8.69	<2	<5	<2	<2	67	<.2	2	<2	323	.76	.081	5	65	1.21	122	.13	7	4.02	.02	.08	<2	7
L96+00N 4+00E	2	82	13	543	1.2	52	37	1953	5.91	<2	<5	<2	<2	51	1.5	<2	<2	167	.98	.111	8	55	1.00	163	.18	7	3.37	.02	.16	<2	3
L96+00N 4+50E	1	102	8	156	.4	45	25	1024	6.08	4	<5	<2	<2	63	<.2	<2	3	223	.99	.068	6	64	1.38	149	.16	<3	3.79	.03	.08	<2	5
L96+00N 5+00E	1	131	19	309	.3	39	24	1376	5.60	4	<5	<2	<2	57	.3	<2	<2	199	1.02	.067	6	65	1.25	130	.15	3	3.97	.02	.11	<2	7
L96+00N 5+50E	1	133	17	222	<.3	43	27	1449	5.93	<2	<5	<2	<2	61	.6	<2	7	212	1.08	.115	8	70	1.19	157	.17	5	4.26	.02	.19	<2	5
L96+00N 6+00E	1	127	19	470	.5	48	33	2178	5.11	8	<5	<2	<2	57	1.1	<2	5	203	1.14	.125	5	53	1.11	139	.14	10	4.62	.01	.14	<2	7
L96+00N 6+50E	1	78	11	666	.3	43	24	1094	5.89	<2	<5	<2	<2	40	1.4	2	<2	177	.75	.207	8	65	1.08	143	.20	6	4.31	.02	.14	<2	4
L96+00N 7+00E	1	122	13	192	.4	63	28	959	6.68	2	<5	<2	<2	84	<.2	<2	5	208	.89	.058	9	66	1.30	279	.24	9	4.38	.03	.09	<2	11
L96+00N 7+50E	<1	124	7	86	<.3	68	32	1153	6.73	<2	<5	<2	<2	72	<.2	<2	<2	234	1.07	.073	7	93	2.02	272	.16	7	4.27	.03	.07	<2	6
L96+00N 8+00E	<1	253	7	92	<.3	56	28	1060	6.67	<2	<5	<2	<2	97	<.2	<2	3	229	1.28	.080	9	90	2.08	224	.14	7	4.09	.03	.08	<2	19
L96+00N 8+50E	<1	304	9	87	<.3	57	31	1305	6.85	<2	<5	<2	<2	94	<.2	<2	<2	253	1.36	.102	9	82	1.97	196	.13	5	4.04	.04	.08	<2	16
L96+00N 9+00E	1	186	9	77	<.3	57	26	716	6.14	<2	<5	<2	<2	80	<.2	<2	4	201	1.05	.044	7	65	1.57	171	.16	5	4.29	.02	.07	<2	10
Ke2 L6+00S 11+00W	<1	262	7	120	.4	53	29	1015	6.76	2	<5	<2	<2	67	<.2	<2	2	234	1.25	.091	8	83	1.50	99	.18	9	3.64	.03	.30	<2	6
Ke2 L6+00S 10+50W	<1	242	<3	77	.4	69	28	807	5.71	8	<5	<2	<2	41	<.2	<2	10	173	1.16	.097	9	114	1.61	89	.16	6	3.21	.03	.32	<2	7
Ke2 L6+00S 10+00W	<1	278	7	68	.3	69	28	734	5.32	13	<5	<2	<2	55	<.2	<2	3	160	1.32	.094	11	100	1.65	101	.15	10	2.95	.04	.17	<2	9
Ke2 L6+00S 9+50W	<1	348	10	109	.6	52	34	1109	6.33	<2	<5	<2	<2	103	.2	<2	4	240	2.76	.095	6	61	1.99	68	.17	14	3.21	.06	.09	<2	43
Ke2 L6+00S 9+00W	<1	107	10	146	<.3	55	27	1125	5.91	<2	5	<2	<2	39	<.2	<2	7	180	1.04	.129	8	85	1.38	143	.18	7	3.15	.03	.32	<2	4
Ke2 L6+00S 8+50W	<1	265	<3	96	<.3	48	20	664	5.35	<2	<5	<2	<2	74	<.2	<2	<2	152	1.95	.123	9	78	1.62	55	.14	11	2.78	.04	.07	<2	13
Ke2 L6+00S 8+00W	<1	173	9	132	<.3	47	34	1213	5.85	<2	<5	<2	<2	53	<.2	<2	4	197	1.20	.118	5	93	1.50	73	.15	5	4.31	.03	.22	<2	10
Ke2 L6+00S 7+50W	<1	203	10	164	.4	65	32	1076	6.10	<2	<5	<2	<2	44	<.2	2	<2	172	1.21	.056	11	97	1.52	138	.23	6	3.32	.03	.14	<2	4
Ke2 L6+00S 6+50W	<1	135	4	152	.5	62	30	1096	5.93	3	<5	<2	<2	42	.4	2	6	175	1.13	.094	8	88	1.29	112	.22	7	3.21	.03	.23	<2	6
Ke2 L6+00S 6+00W	<1	205	6	129	<.3	59	31	1062	6.56	<2	<5	<2	<2	50	<.2	<2	7	208	.96	.075	8	102	1.68	90	.26	7	3.58	.03	.13	<2	8
RE Ke2 L6+00S 6+00W	<1	206	11	128	<.3	64	30	1046	6.33	<2	<5	<2	<2	51	<.2	<2	6	202	.94	.076	8	101	1.65	93	.25	4	3.64	.03	.12	<2	7
Ke2 L6+00S 5+50W	<1	233	6	175	.3	53	31	982	6.36	<2	<5	<2	<2	64	<.2	<2	8	207	1.10	.053	9	111	1.44	131	.19	5	4.12	.03	.12	<2	10
Ke2 L6+00S 5+00W	<1	323	14	153	.3	62	35	1191	6.42	3	<5	<2	<2	57	<.2	<2	5	205	1.32	.061	9	92	1.73	87	.18	6	3.64	.03	.10	<2	13
Ke2 L6+00S 4+50W	1	162	11	218	<.3	61	31	1132	5.94	<2	<5	<2	<2	39	.6	<2	5	163	1.02	.089	9	89	1.33	148	.23	4	3.70	.02	.16	<2	8
Ke2 L6+00S 4+00W	1	136	5	154	.3	83	28	931	6.37	<2	<5	<2	<2	45	<.2	2	8	166	.73	.150	9	92	1.44	180	.34	5	3.70	.03	.11	<2	5
Ke2 L6+00S 3+50W	<1	204	8	116	<.3	78	31	818	6.52	3	<5	<2	<2	59	<.2	2	4	193	1.03	.086	9	115	1.79	137	.24	5	3.95	.03	.10	<2	15
Ke2 L6+00S 3+00W	<1	176	8	136	.3	74	31	985	6.45	<2	6	<2	<2	50	<.2	3	5	175	1.05	.104	10	107	1.69	115	.24	9	3.59	.03	.15	<2	9
Ke2 L6+00S 2+50W	1	154	12	150	<.3	88	34	1131	6.63	<2	<5	<2	<2	51	<.2	<2	<2	167	1.07	.148	9	125	1.87	129	.23	5	3.71	.03	.11	<2	18
Ke2 L6+00S 2+00W	<1	208	9	83	<.3	100	34	909	6.90	7	<5	<2	<2	48	.3	2	6	176	1.23	.139	9	153	1.93	63	.18	9	3.67	.02	.20	<2	16
Ke2 L10+50S 4+00W	<1	238	6	141	.4	66	33	1025	6.40	<2	<5	<2	<2	42	.2	<2	4	197	1.15	.103	10	97	1.49	90	.18	6	3.33	.03	.39	<2	5
Ke2 L10+50S 3+50W	<1	250	6	195	.3	61	36	1341	6.56	<2	<5	<2	<2	60	.5	<2	7	197	1.14	.164	9	94	1.42	180	.16	4	3.78	.03	.30	<2	7
STANDARD C2/AU-S	20	60	37	147	6.6	69	33	1235	3.91	36	15	7	34	52	18.9	15	20	73	.53	.108	39	62	.96	188	.07	28	2.01	.06	.14	11	47

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Au*
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppb
Ke2 L10+50S 3+00W	1	124	5	306	.5	69	40	1435	6.34	2	<5	<2	<2	38	.6	<2	<2	165	1.01	.133	11	103	1.33	172	.26	5	3.47	.03	.29	<2	24
Ke2 L10+50S 2+50W	<1	218	14	247	.4	64	40	1257	6.33	2	<5	<2	<2	42	.2	<2	<2	184	1.09	.152	8	103	1.29	140	.17	6	3.40	.03	.33	<2	21
Ke2 L10+50S 2+00W	<1	200	12	188	.6	71	40	1168	6.32	8	<5	<2	<2	47	.3	<2	<2	175	1.34	.174	8	115	1.43	155	.14	6	3.57	.03	.29	<2	16
Ke2 L10+50S 1+50W	1	149	14	760	.5	75	44	1876	6.17	2	<5	<2	2	42	1.4	<2	<2	133	1.03	.461	13	93	1.27	221	.21	5	3.38	.03	.17	<2	17
Ke2 L10+50S 1+00W	<1	199	8	265	<.3	45	25	1272	4.83	<2	<5	<2	<2	288	.6	<2	<2	135	1.05	.154	8	58	1.19	355	.19	3	4.88	.02	.17	<2	7
Ke2 L10+50S 0+50W	1	149	6	319	.7	82	37	1252	6.39	2	<5	<2	2	38	1.6	<2	<2	145	1.06	.170	16	119	1.48	127	.29	5	3.22	.04	.20	<2	9
Ke2 L10+50S 0+00	<1	320	7	110	<.3	79	41	1117	6.56	4	<5	<2	<2	47	.4	<2	<2	194	1.13	.069	7	173	1.88	107	.15	<3	4.13	.02	.07	<2	24
RE Ke2 L10+50S 0+00	<1	326	8	114	<.3	84	43	1141	6.71	4	<5	<2	<2	49	.2	<2	<2	198	1.18	.071	8	178	1.96	111	.15	3	4.22	.03	.07	<2	14
Ke2 L10+50S 0+50E	<1	182	7	81	.3	61	32	883	6.20	9	<5	<2	<2	61	<.2	2	<2	215	1.10	.079	9	122	1.47	153	.17	4	3.35	.03	.05	<2	14
Ke2 L10+50S 1+00E	<1	377	9	80	.3	52	30	863	5.92	10	<5	<2	<2	64	<.2	<2	<2	217	1.48	.067	7	99	1.35	93	.14	5	2.61	.03	.05	<2	107
Ke2 L10+50S 1+50E	<1	115	10	261	.3	60	32	1186	5.85	2	<5	<2	<2	39	.4	<2	<2	174	.96	.097	8	91	1.07	126	.22	6	3.41	.02	.15	<2	50
STANDARD C2/AU-S	20	59	44	141	6.5	70	35	1117	3.90	40	22	8	35	49	18.6	19	16	71	.52	.106	38	70	.96	187	.08	24	1.90	.06	.13	12	48

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.



SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
8+00S 17+50W	1	430	6	86	<.3	50	42	809	6.15	73	<5	<2	<2	54	.2	<2	<2	145	1.27	.125	13	90	.99	91	.13	6	2.44	.02	.30	<2	38
8+00S 17+00W	1	204	6	92	<.3	40	38	1006	6.03	47	<5	<2	2	36	<.2	4	<2	147	.94	.148	13	71	.71	96	.14	5	2.20	.02	.25	<2	35
8+00S 16+50W	1	228	3	108	<.3	49	49	1012	6.33	76	<5	<2	2	34	.2	<2	<2	159	1.03	.107	12	95	.71	107	.14	7	2.46	.02	.25	<2	16
8+00S 16+00W	2	392	<3	88	<.3	48	76	925	7.42	153	6	<2	2	36	.2	2	2	177	1.01	.149	17	71	.75	75	.12	5	3.06	.01	.21	<2	20
8+00S 15+50W	2	349	7	124	<.3	43	86	1231	7.43	147	<5	<2	2	43	.3	2	<2	169	1.07	.109	20	67	.78	122	.15	5	2.57	.02	.19	<2	28
8+00S 15+00W	<1	237	<3	185	<.3	32	42	1368	7.81	28	<5	<2	2	39	<.2	<2	2	183	1.25	.203	13	38	.70	137	.05	13	2.42	.01	.58	<2	6
8+00S 14+50W	1	217	<3	47	<.3	36	27	700	4.51	42	<5	<2	<2	12	<.2	<2	<2	151	1.66	.216	9	26	.50	20	<.01	3	.66	<.01	.04	<2	5
8+00S 14+00W	1	293	<3	65	.3	53	37	937	6.51	75	<5	<2	2	41	<.2	<2	<2	153	1.04	.060	12	80	.88	76	.10	6	2.17	.02	.27	<2	30
8+00S 13+50W	1	284	<3	49	<.3	12	69	1190	6.22	81	<5	<2	2	42	<.2	2	<2	138	1.41	.191	22	7	.56	46	.01	6	1.71	.01	.22	<2	15
8+00S 13+00W	<1	325	<3	94	<.3	64	48	1366	6.90	69	<5	<2	<2	103	.5	3	<2	183	3.91	.104	5	63	.87	52	.03	9	2.32	.03	.10	<2	96
8+00S 12+50W	<1	363	<3	100	<.3	109	57	1615	6.95	71	<5	<2	2	82	.4	3	<2	189	2.24	.110	8	96	.88	64	.04	11	2.25	.02	.24	2	260
RE 8+00S 12+50W	1	365	3	100	<.3	112	56	1630	6.93	67	<5	<2	<2	82	.3	<2	5	188	2.22	.108	7	97	.88	65	.03	10	2.27	.01	.24	<2	234
8+00S 12+00W	1	282	3	67	.3	147	46	1089	5.94	30	<5	<2	2	42	<.2	2	<2	148	1.62	.108	9	211	1.86	68	.13	9	2.21	.02	.19	<2	11
8+00S 11+50W	<1	181	3	87	<.3	85	30	912	5.89	18	<5	<2	2	49	<.2	<2	2	162	1.23	.108	11	132	1.37	125	.15	6	3.05	.02	.30	<2	6
8+00S 11+00W	1	99	<3	143	.3	78	29	1003	5.93	17	<5	<2	3	36	<.2	<2	<2	151	.89	.145	14	103	1.17	145	.29	6	3.13	.03	.30	<2	7
8+00S 10+50W	<1	103	9	146	<.3	79	34	1234	5.94	17	<5	<2	<2	35	<.2	<2	<2	158	1.06	.157	9	120	1.25	305	.15	5	3.02	.02	.21	<2	16
8+00S 19+00W	<1	178	<3	73	<.3	79	49	1476	5.58	53	<5	<2	<2	38	.3	<2	<2	116	3.60	.216	5	59	1.18	82	<.01	7	.96	.01	.16	<2	10
8+00S 18+50W	1	345	<3	70	<.3	47	26	875	6.09	32	<5	<2	2	43	.3	<2	3	131	.99	.087	13	61	.88	70	.13	4	2.09	.02	.30	<2	46
8+00S 18+00W	<1	319	7	137	<.3	55	41	1282	6.45	38	<5	<2	2	55	.5	<2	<2	147	1.28	.145	15	103	1.00	162	.17	6	2.84	.02	.45	<2	14
STANDARD C2/AU-S	20	59	42	139	6.5	69	34	1179	3.90	40	20	8	35	51	17.8	17	18	75	.55	.110	39	68	.94	194	.08	26	1.96	.06	.14	12	46

Sample type: SOIL. Samples beginning 'RE' are Reruns and 'RRE' are Reject Reruns.

HAT PROJECT GOSSAN CREEK.

All results are considered the confidential property of the client. Acme assumes the liabilities for actual cost of the analysis only.

Date 1/11/97 FA _____

