GEOLOGICAL, GEOCHEMICAL

AND

DIAMOND DRILLING

ASSESSMENT REPORT ON THE

HANK CLAIM GROUP

BALL CREEK AREA

Liard Mining Division

N.T.S. 104G/1,2

Latitude: 57° 13'
Longitude: 130° 30'

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,594

OWNER AND OPERATOR: LAC MINERALS LTD.
#470-1055 West Hastings
Vancouver, B.C. V6E 2E9

REPORT BY: Rein Turna
LAC MINERALS LTD.

DATE: March 1985

5 YR CONF-85-172-13594

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

ASSESSMENT REPORT TITLE PAGE AND SUMMARY

TYPE OF REPORT/SURVEY(S)	TOTAL COST
Geological, Geochemical, Drilling	~~$113,800.00~~ 89 16 16

AUTHOR(S) Rein Turna SIGNATURE(S) .....

DATE STATEMENT OF EXPLORATION AND DEVELOPMENT FILED March 6, ~~1985~~ YEAR OF WORK 1984

PROPERTY NAME(S) Hank Claim Group (made up of HANK 1,2,3 and 4 claims)

COMMODITIES PRESENT Au, Ag NEW 104G 107

B.C. MINERAL INVENTORY NUMBER(S), IF KNOWN Require New Mineral Inventory Number.

MINING DIVISION Liard NTS 104G1,2

LATITUDE 57° 13' LONGITUDE 130° 30'

NAMES and NUMBERS of all mineral tenures in good standing (when work was done) that form the property (Examples: TAX 1-4, FIRE 2 (12 units); PHOENIX (Lot 1706); Mineral Lease M 123; Mining or Certified Mining Lease ML 12 (claims involved)):

HANK 1 (18 units) Record No. = 2691 HANK 4 (10 units) Record No. 3209
HANK 2 (20 units) Record No. = 2692
HANK 3 (20 units) Record No. = 2693 (TOTAL OF 68 UNITS)

OWNER(S)

(1) LAC MINERALS LTD. (2) .....

MAILING ADDRESS

#470 - 1055 West Hastings Street
Vancouver, B.C. V6E 2E9

OPERATOR(S) (that is, Company paying for the work)

(1) Same as Above (2) .....

MAILING ADDRESS

.....

SUMMARY GEOLOGY (lithology, age, structure, alteration, mineralization, size, and attitude):

Upper Triassic age andesitic pyroclastic rocks are intruded by Cretaceous or Tertiary age felsites. Zones of sericite-carbonate-pyrite alteration in the pyroclastics have gold associated with carbonate veins.

REFERENCES TO PREVIOUS WORK See Assessment Report by Rein Turna on the HANK CLAIM GROUP, February 24, 1984.

(over)

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	COST APPORTIONED
GEOLOGICAL (scale, area)	(1:5000 · 1:2000 8 square kilometers)		
Ground			
Photo			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic		All work was done on the HANK CLAIM GROUP comprising the HANK 1, 2, 3 and 4 claims. (TOTAL 68 UNITS)	
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for ....)			
✓ Soil	1152 Au, As		
✓ Silt (Stream)	9 " "		
✓ Rock	598		
Other - Drill Core	+ 147 Au, As (multi-element)		
DRILLING (total metres; number of holes, size)			
✓ Core DIAD.	(288 meters, 4 holes, BQ size)		
Non-core			
RELATED TECHNICAL			
Sampling/assaying	~~$25,155.99~~		
Petrographic			
Mineralogic			
Metallurgic			
PROSPECTING (scale, area)			
PREPARATORY/PHYSICAL			
Legal surveys (scale, area)			
Topographic (scale, area)			
Photogrammetric (scale, area)			
Line/grid (kilometres)	36 ~~kilometers~~ KM		
Road, local access (kilometres)			
Trench (metres)	1000/m. ~~1 km of outcrop sampling~~		
Underground (metres)			
		TOTAL COST	$189,161.16

FOR MINISTRY USE ONLY	NAME OF PAC ACCOUNT	DEBIT	CREDIT	REMARKS:
Value work done (from report) # 189,161.16				
Value of work approved —	LAC Minerals Ltd.	—	79361.16	
Value claimed (from statement) 109,800.—				
Value credited to PAC account 79361.16				
Value debited to PAC account —				
Accepted ... Date 13 Nov 85	Rept. No. 85-172-13594			Information Class 2

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PHOTOMICROGRAPHS

A total of six plates. One shows alluvial gold from Camp 2 site (Pat Bar). Five others show mode of occurrence of gold in sample HANK 2229V. These together with descriptions are in the Petrographic Report (Appendix No. 2).

INTRODUCTION

History:

The HANK 1, 2, and 3 claims totaling 58 units were staked in March 1983 to cover streams anomalous in gold and draining a hillside with gossanous rocks also anomalous in gold. The HANK 4 claim (10 units) was staked in September 1984.

In 1984 Lac Minerals Ltd. performed geological, geochemical, geophysical and diamond drilling surveys on the HANK CLAIM GROUP as a follow up on work performed in 1983. The results of 1984's geological, geochemical and dimond drilling work are presented in this report. The maps in this report include all known data - that is 1984's work relevant to this Assessment Report plus 1983's work previously provided in that year's Assessment Report. All samples are identified on the Sample Numbers map (Figure No. 3) by a grid coordinate or a "HANK" number. All "HANK" numbers below 1,000 are from 1983 sampling. "HANK" numbers above 1,000 are from 1984 sampling.

The area of the property has previously experienced exploration for porphyry copper or molybdenum. Claim posts of different owners were found on the property These owners were:

John R. Woodcock (staked in 1980)
Great Plains Development Co. of Canada (1971)
C.P. Coster (1971)
Stikine Explorations (1966)

Government files show no record of work for assessment of these properties. Apparently they were allowed to lapse after the first year or were not registered.

BRITISH COLUMBIA

HANK CLAIM GROUP

Figure No. 1

HANK CLAIM GROUP

Location Map

Scale: 1:5,335,000

Produced by Geographic Division, Surveys and Mapping Branch, Dept. of Lands, Forests, and Water Resources, Victoria, B.C.

MAP NO. 155

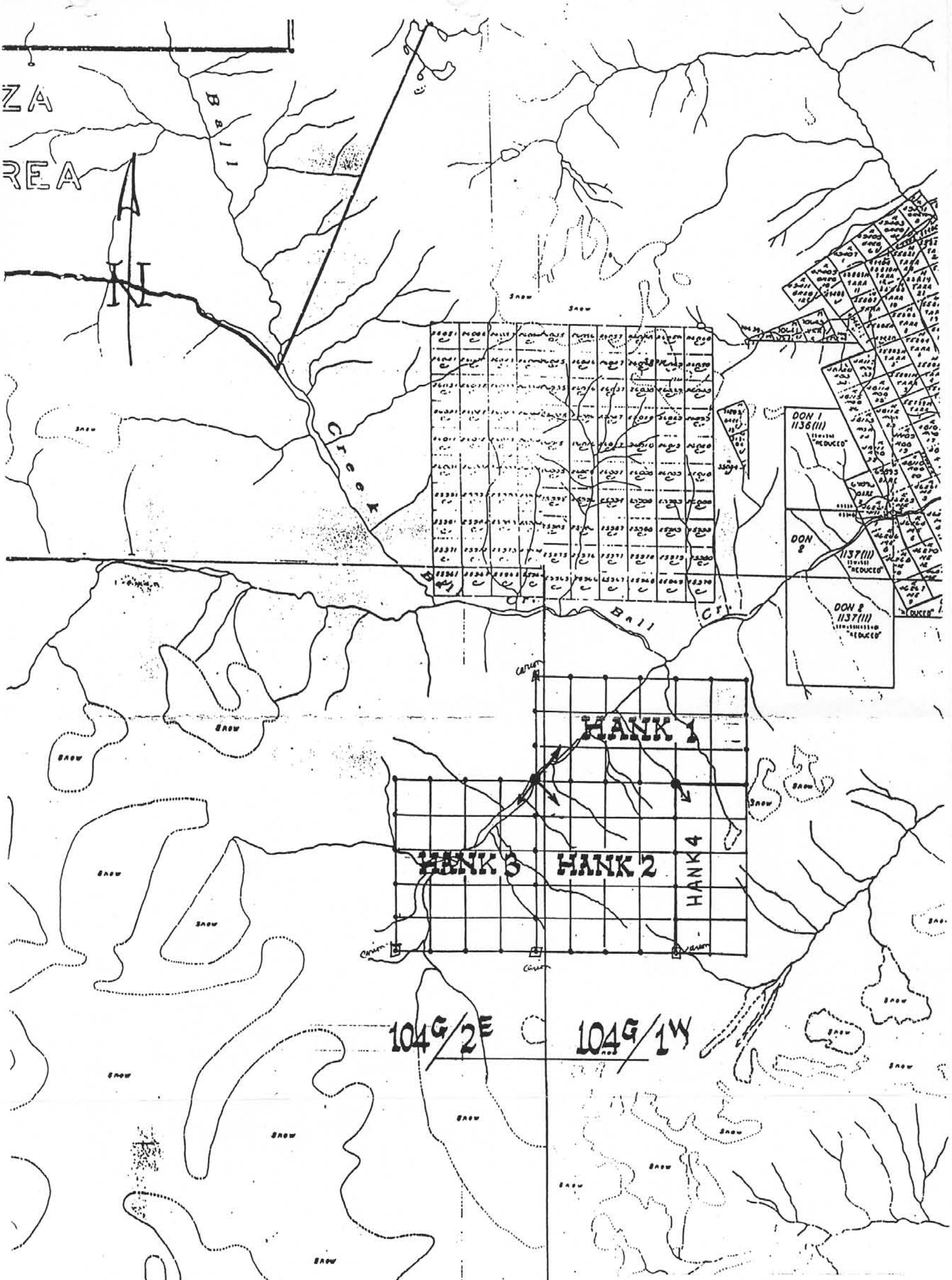

Figure No. 2

HANK CLAIM GROUP

Location Map

Scale: 1: 50,000

TABLE NO. 1

HANK CLAIM GROUP STATUS - 1985

CLAIM NAME	NUMBER OF UNITS	TAG NUMBER	RECORD NUMBER	RECORD DATE	PRESENT EXPIRY DATE
HANK 1	18	78941	2691	March 20, 1983	March 10, 1987
HANK 2	20	78942	2692	March 10, 1983	March 10, 1987
HANK 3	20	78943	2693	March 10, 1983	March 10, 1987
HANK 4	10	89285	3209	October 12, 1984	October 12, 1985

Assessment

A further 8 years is to be applied to HANK 1, 2, 3 claims, bringing the expiry date to March 10, 1985.

10 years is to be applied to HANK 4 claims, bringing the expiry date to October 12, 1985.

Location and Access:

The HANK CLAIM GROUP is located on the tributary of Ball Creek flowing northeast from Hankin Peak. The southern boundary of Mount Edziza Provincial Park is 13 kilometers to the northwest. The nearest town, Iskut is 75 km to the northeast. The Stewart-Cassiar Highway passes within 15 km east of the property.

Travel time to Iskut from Vancouver by truck is three days. One day is required to helicopter equipment to the property and set up camp. Access to the property is via helicopter from Tenajon Motel, slightly south of Iskut or from Snippaker Creek airstrip 65km to the southwest.

Topography:

The area of the HANK CLAIM GROUP is mountainous with moderately steep hillsides. Elevations range from 860 meters in the main creek at the north side of HANK 1 claim to about 1900 meters in HANK 4 claim.

Vegetation consists of sparse coniferous forest in valleys and hillsides. Alpine meadows begin at around the 1300 meter elevation.

Drainage is good. All of the property's area is traversed by creeks flowing northwest into the main creek which flows a fairly linear path northeast. Most of the northwest flowing creeks are fairly deeply incised and often form wide deep gorges.

Overburden depth appears to be generally less than three meters over most of the property. Nearer to the mountain tops outcrop is abundant with a relatively thin poorly developed soil or regolith covering. The valley of the main creek is narrow and outcrop often occurs along it.

The main creek's water is heavily silted and undrinkable before it has been allowed to settle. Most of the other creeks on the property are acid and metallic tasting. Stones in the creek beds are often stained orange or coated with a soft white (gypsum?) scum where water runs over them. Ferricrete exists widely over the property.

Creeks and other features have had names applied to them by LAC personnel for easy identification during discussion. These named features are shown on the 1:5,000 scale maps in this report. Henceforth this report will use these names in reference to the relevant area.

GEOCHEMICAL SURVEY

Type and Number of Samples:

9 stream sediments
1,152 soils
598 rocks
147 drill core samples were taken

All samples were analysed for Au and As. Some rock samples were additionally analysed for any of Cu, Pb, Zn, Ag, Sb, Hg.

The Au and As results of the geochemical survey are plotted on Figure Nos. 4 and 5 respectively. Analysis of drill core are tabulated in the drill logs and Figure Nos. 13, 14, 15 and 16 of the Diamond Drilling Report (Appendix No. 1).

Field Methodology:

Soil samples were generally collected from a depth of 20 to 30 centimeters below the ground surface. The typical colour of the soil samples is orangey brown.

Stream bank samples consisted of soils which may have sloughed or have been washed or contaminated by stream silts. These samples therefore are depicted on the geochem maps with a different symbol from soils.

Approximately ½ kilogram of material was collected at each site. Where stream sediment samples were collected they were taken from the active part of the stream.

Soil sampling lines were run with a compass and hipchain for orientation and distance measurement. Lines were oriented to run toward 135^{o} azimuth. The lines were usually 200 meters apart. Soils were collected every 50 meters

along the lines.

Soil profile pits were dug at various locations. At these sites soils were collected at various depths in a pit. Results from the profiles are discussed in Appendix No. 3.

Most of the rock samples are over 5 meter widths from trenches within the Sericite-Carbonate-Pyrite Alteration Zones. These "trenches" are actually chip samples of outcrops cleaned off with rock hammers and shovels. Most outcrops occured in creek valleys. Results and descriptions of all rock sampling are depicted on Table Nos. 2a to 2l.

Labratory Methodology:

Sample preparation:

Bondar Clegg & Company Ltd. prepared all samples. Soil and silt samples were dried and sieved to -80 mesh. Rock samples were pulverized to -100 mesh.

Geochemical analysis for Au:

Au was extracted by fire assay and hot aqua regia and analysed by closed cell flameless atomic absorption.

Geochemical analysis for As:

As was extracted with $HClO_4$-HNO_3 Arsine. The method of analysis was colourimetric.

Geochemical analysis for Cu, Pb, Zn, Ag:

Metals were extracted with hot Lefort aqua regia and analysed by atomic absorption.

The Geochem Maps:

The gold values in soils are contoured at 100 and 300 parts per billion (ppb). The arsenic values in soils are contoured at 100 parts per million (ppm). These contour values were chosen arbitrarily.

Anomalies:

The gold geochem map (Figure No. 4) shows two Main Anomalous Zones. They are both at least 3km long and strike northeast. They coincide with the upper and lower Sericite-Carbonate-Pyrite Alteration Zones depicted on the geology map (Figure No. 6).

Superimposed upon the two Main Zones is a northwestward downhill trending anomally of very high (300 ppb or higher) values. This anomaly consists of gold bearing soils washing downhill from a gold source — a Hot Spot at the upper part of Creeks 5, 6, 7 on the upper Main Anomalous Zone. Diamond drilling work was performed on part of this Hot Spot in 1984.

Higher values of arsenic show a rough correlation with higher values of gold.

The two Main Anomalous Zones seem to weaken and narrow toward their northeastern and southwestern ends, as do their associated Sericite-Carbonate-Pyrite Alteration Zones. It appears from surveys conducted that these Zones of interest entirely exist within the HANK 1, 2, 3 claims.

GEOLOGY

Map units:

The relevant Geological Survey of Canada publication for the HANK CLAIM GROUP and map sheet is Paper 71-44, Telegraph Creek Map-Area, British Columbia, (Report and Map 11-1971),1:250,000 by J.G. Souther.

PYRC Most of the property is underlain by volcanics of Southers Upper Triassic unit 8. This unit is labeled PYRC on this report's geology maps. The PYRC unit consists mainly of green andesitic pyroclastics. Agglomerates seem more abundant than tuffs. The coarse grains of the agglomerates are often difficult to make out in outcrops. The pyroclastics commonly contain white plagioclase phenocrysts in clasts and matrix. Black hornblende phenocrysts also are common. The hornblende phenocrysts are well formed with hexagonal cross sections and sharp crystal boundaries. Sometimes the crystals are up to a centimeter in length. The rock sometimes breaks around the crystals and "logs" of hornblende sometimes

stick out of freshly broken surfaces. Even in highly altered rocks the hornblende phenocrysts exist with a pale greenish white alteration that works inward from the outside surfaces of the crystal. Even highly altered silicified rocks showed hexagonal section pseudomorphs after hornblende. The hexagonal pseudomorphs consisted of quartz with pyrite enveloping and filling cracks within the crystals.

When rocks of the PYRC unit are highly altered as in the Sericite-Carbonate-Pyrite Alteration Zones they resemble the pyritic felsites of the FELS unit. Presence of the hexagonal hornblendes or pseduomorphs are diagnostic in identifying the rock as PYRC because the FELS unit appears decidedly lacking in mafics.

Within the PYRC unit is a marroon coloured horizon. This marroon horizon consists of tuffs mainly, the marron colour of which is sometimes faint and difficult to notice. Coarse marroon agglomerates are best exposed on Creek 4. Marron amygdaloidal flows show on Creeks 6 and 7.

Very minor siltstone beds exist within the PYRC unit. These exist near the lower parts of Creeks 10 to 13.

VOLC The VOLC unit is Southers lower Jurassic unit 13. The lower part of this unit is marked by lenses of light grey chert (CH) which is associated with minor sandstone containing carbon fragments. The major portion of the VOLC unit is exposed on Bald Bluff. This consists of green coarse andesitic pyroclastics (PC) difficult to distinguish from PYRC pyroclastics. The VOLC pyroclastics however showed no mafic phenocrysts but it did show relatively large (up to ½cm) plagioclase phenocrysts. The upper part of the unit consists of recessive-weathering sediments (SD) mostly conglomerate and siltstone. Here were found fossilized wood and a strongly ribbed pelecypod.

DIOR Souther's post upper Triassic pre Tertiary unit 18 is represented on the property by the DIOR unit. This is a medium equigranular black and white diorite. Mafics make up about 50% of the rock.

FELS The FELS unit is Southers Cretaceous or Tertiary unit 20. The rock is a white to light grey felsite mostly and normally contains small cubes of pyrite disseminated. Small feldspar phenocrysts usually occur in a feldspar and quartz groundmass. Darker grey rocks appear more pyritic and siliceous and less porphyritic.

Mafic minerals have not been observed in rocks of the FELS unit. This lack of mafics is usefull in distinguishing these rocks from pyritic Altered PYRC rocks which they resemble in weathered outcrops. The PYRC rocks however contain altered hornblende phenocrysts.

All outcrops of the FELS unit are oxidized bright red or yellow.

The Geological Survey of Canada mapped the FELS rocks here as dykes. The FELS unit above Camp 3 appears to be a sill as its outcrop area and inferred contacts roughly parallel the regional strike of the older rocks on the property. Large scale cleavage in the FELS outcrops also parallels regional strike — that is northeast with a southeastern dip. The other FELS outcrop on the southern part of the property has a dyke-like contact.

Structure:

The regional strike of bedding of rocks on the property is northeast. Dips are moderate and steep to the southeast. Orientations of veins are less predictable though they are often semi parallel with the regional strike.

Hemlo Creek is remarkably straight with a northeast strike for 7½ km. It could mark a major fault though evidence is under water. Rocks on the stream banks are not sheared.

High degrees of fracturing exist in the Sericite-Carbonate-Pyrite Alteration Zones. Joint sets within the Zones often show parallelism with the regional strike but the abundant fracturing within the Zones is more random.

Faulting and folding don't appear to significantly deform the stratigraphy on the property.

The Sericite-Carbonate-Pyrite Alteration Zones:

There are an upper and lower Zone. They both parallel the regional strike th ough at their northeastern end they are closer to the Hemlo Creek linear than at their southwestern end. It is not known if the Zones are stratabound but it is a possibility.

The boundaries of the Zones appear gradational over short distances — say over 5 meters or less. This is shown in outcrops and in diamond drill hole core.

Faults within or along the margins of the Zones are poorly exposed but don't appear important in localizing hydrothermal activity. The fracturing within the Zones appears to have provided the plumbing system for imigration of mineralizing hydrothermal fluids which caused the Alteration. The cause of the fracturing is unknown. They may represent the leading edge of sill or dyke-like intrusions of the FELS unit.

The Zones outcrops are strongly gossanous and from a distance they resemble the rusty outcrops of the FELS unit. Alteration is generally intense within the Zones but small greenish relatively unaltered "clots" commonly exist. Pyrite is generally 2½ to 5% and mainly disseminated with concentrations along fractures. The rocks typically have a bleached greyish white appearance. Sometimes, in areas of more moderate alteration, original rock textures such as agglomerate clasts or phenocryst pseudomorphs are discernible. More often the rock is softened and crumbly and textures are largely destroyed. Pervasive sericite and carbonate characterize the Zones.

Thin section study reveals weak pervasive silicification (about 5% quartz) to be common in the Altered rocks. Chalcedonic nodules and opalization were noticed in places but these are very local. Quartz veins are small and rare and not significant on the property.

The occurrence of carbonate veins is mainly in the Altered Zones. But even in the Zones their average abundance is not great, being perhaps 1% or less. This is more true of the lower Zone. The upper Zone has a greater abundance of carbonate veins — that is in the area of upper parts of Creeks 5, 6, 7 (the Hot Spot).

The carbonate veins are usually calcite but siderite is common and ankerite occurs. The largest single carbonate vein is 1½m thick but breccias or stockworks of carbonate of at least 10m apparent width exist on upper Creek 7.

Carbonate veining is closely associated with alteration in rocks and high gold and base metals assays. The veins themselves are generally barren with metals occurring in the wall rocks.

There are no intrusive outcrops close to the lower Altered Zone and the source of the altering and mineralizing solutions is obscure.

The upper Altered Zone, at least in the Hot Spot area at upper Creeks 5, 6, 7 is adjacent to the FELS intrusive rocks. The intrusive is probably the source of a heat pump and hydrothermal fluids there.

The Altered Zones contacts with unAltered rocks usually appear to dip vertically or steeply to the southeast. However contacts noted in diamond drill holes DDH-84-1,2 and 3 indicate the Altered Zone there dips shallowly (about 15^{o}) to the southeast. (see Figure No. 11 for cross sectional view).

Mineralization:

Within the Sericite-Carbonate-Pyrite Alteration Zones pyrite averages about 2½ to 5%. It exists disseminated and concentrated in fractures or veins. Outside of the Zones pyrite is generally less than 1% in non FELS rocks. Felsites of the FELS unit are variably pyritic. Here disseminated pyrite varies from less than 1% to aobut 5%. Average is probably 1%.

Sphalerite, galena, chalcopyrite, pyrite were observed in hand specimens from quartz, barite, but mainly carbonate gangue veins from various locations on the property. Cinnabar coated a specimen from Creek 3. High background of Hg exist in rocks on the property. Tetrahedrite and gold were additionally seen in polished sections of sample HANK2229-V.

The geochemical lab reports visible gold in sample HANK 2725 of Creek 5, sample HANK 2508 of Creek 6 and sample 66136 of DDH84-4.

Higher assays of gold are connected with polymetallic veins though not dependantly so. Gold does appear to depend on the presence of carbonate veins, with metals occuring in wall rocks between veins or also in rich polymetallic centers of carbonate gangue.

Quantification of the relationship between gold, veins %, pyrite %, alteration and fracture intensities was made in the drill hole logs. (See Appendix No. 1 on diamond drilling). Gold correlates best with veins % and more roughly with fracture and alteration intensities and pyrite %.

Several gold pans full of gravel yielded a couple of dozen gold particles (up to 1mm size) at Camp 2 site at Pat Bar.

Notes on Vein Orientations at the Hot Spot:

The area of the upper Sericite-Carbonate-Pyrite Altered zone on upper parts of Creeks 5, 6,7 is informally referred to as the Hot Spot.

The big trench here on Creek 6 shows semiparallel carbonate veins with an average strike/dip of about $70^{o}/70^{o}$ northwest. DDH84-1 did not intersect these veins as planned. Information from the drill holes' cores suggest the Altered Zone boundary under Creek 6 dips about 15^{o} southeast into the hill. Veins within the Zone do not neccessarily parallel the boundary. In the trench mentioned above the veins apparently head toward the Zone boundary and abruptly decrease there.

In the four drill holes veins cut the core axis at odd orientations and no strong parallelism is suggested.

Outcrops in upper Creek 7 show dense carbonate veining — a carbonate breccia. No preferred orientation was discerned.

One could draw a rough line joining the carbonate vein outcrops within the Hot Spot. The southwestern end of the line would be at HANK 2723. The northeastern end is at DDH84-4. The line would be 300 meters long and strike about 40^{o}, parallel with the Altered Zone boundary. Vein dips may vary but the veins are presumed to exist mainly in the Altered Zone.

The true width of the dense veining at this Hot Spot is not yet determined.

Specific creeks or sites will now be discussed in more detail.

Southwest of Creek 1

A rusty weathering felsite dyke was sampled (HANK 1008). This rock indicated a high (140ppb) gold background.

The lower parts of lines ON and 200N were run over glacial morraine and soil sampling was not possible.

Creeks 1 and 2

Gossanous Altered outcrops exist on the upper parts of these creeks. Samples HANK 1106 and 1107 from here were anomalous in gold (145 and 815 ppb respectively). This area is likely the southwestern extension of the upper Sericite-Carbonate-Pyrite Alteration Zone. Rock exposure is poor in this area of Creeks 1, 2. It is believed the upper Zone is weak and narrow here and thins out quickly to the south west.

Outcrops lower down on the creeks were green pyroclastics of the PYRC unit.

TABLE NO. 2a

ROCK GEOCHEMICAL RESULTS

HANK NO.	As (ppm)	Au (ppb)	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
SOUTHWEST OF CREEK 1							
1008	140	140	1	2			10m wide felsite dyke
1009	36	5	½	<½			Mylonitized greenstone has carbonate vein stockwork in sheared zone adjacent to dyke.
1013	11	<5	1				Pyritic zone related to carbonate veins. This in a fossiliferous siltstone.
2344	4	65					Very gossanous, altered rock. Locally silicified and brecciated.
0N29E	6	<5					Siltstone.
0N700E	3	<5					Trachyte?
200N0W	4	<5					Green sandstone.
200N60E	11	15					Andesite.
200N620E	3	30					Andesite.
CREEKS 1 and 2							
9	22	10		15			Ag=0.5 ppm, Cu=6 ppm, Mo=3 ppm. Float of mixed rhyolite and syenite
38R	2	<5	grab	0	3	3	Tuff.
1051	5	<5	⅓				Breccia. Minor quartz veinlets.
1104	80	5	1	.3	6	7	Altered tuff. Slight mineralization with ½ cm wide carbonate vein.
1105	20	<5	1	.3	7	7	Altered rusty outcrop.
1106	58	145	1	2½	8	5	Altered rock.
1107	70	815	1				Altered rock as above.
605N195E	3	5					Andesite. Visible feldspar crystals.
BETWEEN CREEKS 2 and 3							
337A	18	15	½				
800N195E	3	5					Porphyritic anedsite.

Creek 3 and (Rex) Tributary to Creek 3

Creek 3 and its tributaries expose the upper and lower Altered Zones. The northern contact of the lower Zone appears to dip steeply into the hill, that is to the southeast. At least part of the southern contact appears to be a fault.

The lower Zone is well exposed in Creek 3 as the rapidly eroding Altered rock has formed a canyon. The upper Zone is not well exposed.

Rocks of the Zones are typical highly altered pyroclastics with pervasive sericite, carbonate and pyrite. Original rock textures are rarely preserved. Some relatively unaltered "clots" exist in the lower Zone.

Average 5m chip samples within the Zones showed a high background for gold (about 10 to 100ppb). Higher values of gold and other metals were associated with 2 to 5cm carbonate veins notably at HANK 331, 1081, 2046 (.354 oz/Ton, 2580 ppb, 2.61oz/Ton respectively).

Exposures in the Zones didn't suggest a sufficient density of veins for economic mineralization.

Cinnabar stained a float boulder at HANK 333. High mercury background (>300ppb) is suggested by samples HANK 379, 380. Note mercury and silver are also much higher at HANK 331 (>5000ppb and 26.40 oz/Ton respectively).

TABLE NO. 2b

CREEK 3 and (REX) TRIBUTARY TO CREEK 3

CREEK 3

HANK NO.	As ppm	Au ppm	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
303	10	<5	grab				Ag=0.3 ppm, Cu=10 ppm, Mo=2 ppm. Green Andesite tuff.
305	82	5	.3				Ag=0.8, Cu =16 ppm, Mo=2. Grab from rusty gouge zone.
318(6')	62	125	grab				Bedrock at 6 ft. depth in soil profile pit.
331	180	.354 oz/Ton	(1m grab)				Ag=26.40 oz/Ton, Cu=3400 ppm, Mo=3ppm. Hg= >5000 ppb. Altered rock with minor quartz and carbonate veining here has malachite and azurite stains. See also 1081, A,B,2006,378.
332	34	5	grab				Ag=2.4 ppm, Cu=22ppm, Mo=1 ppm, Pyritic, highly altered rock.
333	75	745		50			Ag=1.0ppm, Cu=101 ppm, Mo=56, Hg=>5000 ppb. Float of soft mudstone. Sample of pyritic breccia portion. Cinnabar stain.
333A	52	175					Ag=0.2ppm, Cu=46ppm, Mo=261. Float of same. Non-breccia portion.
334	22	155					Ag=0.3ppm, Cu=11 ppm, Mo=6, Hg= > 5000 ppb. Float of chert. Contains small dark vein. See also 1066.
378	12	20	25				Ag=1.8ppm, Cu=27, Mo=1. Spare chip sample.
379	13	515	25				Ag=3.9, Cu=34, Mo=1, Hg=380 ppb. Sparse chip sample.
380	25	25	30				Ag=2.5, Cu=9, Mo=1, Hg=375ppb. Sparse chip sample.
381	40	25	10				Ag=3.6, Cu=29, Mo=<1. Highly altered rock.
1062	120	170	2	.3	9	7	Float. Brecciated chert.
1066	78	1090					Pb= 2 ppm, Zn=4 ppm. Float of chert breccia. See also 334.
1078	15	<5	1	2½	7	4	Altered agglomerate contains minor galena in matrix.
1081	210	2580	grab				2cm wide carbonate vein shows pyrite, chalcopyrite, sphalerite, galena. This is a highgrade grab of showing at 331.
1081A	64	180	½				Clay footwall to above vein.
10818	20	30	½				Hangingwall to above vein.

TABLE NO. 2b

Creek 3 continued..

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2000	12	45	5	.3	8	7	Spottily silicified.
2001	41	305	5	.3	9	7	Spottily silicified.
2002	22	10	5	2½	9	7	
2003	31	5	5	5	9	7	Same spots have 20% pyrite.
2004	23	45	5	2½	9	7	
2005	38	195	5	5	9	7	5% pyrite in spots.
2006	12	10	5	2½	9	7	Spottily silicified. 2cm carbonate vein. See HANK 331, 1081, A, B,
2007	11	35	5	2½	9	7	Spottily silicified.
2008	11	20	5	2½	9	7	
2009	11	20	5	2½	9	7	
2010	6	5	5	2½	9	7	
2011	6	5	5	2½	9	7	
2012	11	50	5	2½	9	7	Malachite stains. Minor carbonate veining.
2013	6	25	5	2½	9	7	
2014	11	<5	5	2½	9	7	Harder. More silicified.
2015	6	5	5	1	9	7	
2016	6	<5	5	1	9	7	
2017	21	<5	5	2½	9	7	
2018	28	<5	5	2½	9	7	
2019	24	15	5	2½	9	7	
2020	23	35	5	2½	9	7	
2021	24	10	5	2½	9	7	
2022	41	55	5	1	9	7	
2023	31	20	5	1	9	7	
2024	31	5	5	2½	9	7	
2025	26	<5	5	1	8	7	
2026	18	<5	5	2½	9	7	
2027	6	5	5	2½	9	7	

TABLE NO. 2b

Creek 3 continued..

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2028	16	10	5	1	9	7	
2029	11	10	5	1	1	7	Hexagonal phenocrysts seen.
2030	6	10	5	.3	9	7	
2031	7	<5	5	.3	9	7	
2032	48	10	5	2	7	6	
2033	21	40	5	1½	6	6	
2034	15	15	5	1	7	7	
2035	21	25	5	2	7	6	
2036	21	15	5	2	7	6	Pb=12 ppm, Zn=16 ppm
2037	6	10	5	2	7	6	Pb=10 Zn=24
2038	14	<5	5	1½	6	6	
2039	12	15	5	1½	6	6	
2040	15	15	5	2	6	7	
2041	21	30	5	2	6	6	
2042	31	25	5	1	6	6	
2043	18	25	5	1	7	7	4cm wide calcite vein included.
2044	16	30	5	2½	6	7	
2045	18	900	5	4	6	6	Malachite. Pb=77 Zn=700
2046	100	2.161 oz/Ton	.05				Ag=1.53 oz/Ton, Pb=2500 ppm, Zn=6000ppm. Grab of mineralized calcite vein. Galena visible.
2047	21	2010	5	3½	6	6	Contains small calcite vein.
2048	11	280	5	2	6	6	
2049	15	155	5	2	6	7	
2050	17	115	5	1	6	7	
2051	17	30	5	5	8	8	
2052	21	70	5	5	8	8	
2053	25	35	5	4	7	8	

TABLE NO. 2b

Creek 3 coninued...

HANK NO.	Ag ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2054	27	35	5	2	6	7	
2055	25	15	5	5	6	6	
2057	12	25	5	2	6	6	
2058	14	35	5	2	6	7	
2059	21	10	5	1	7	6	
2060	11	15	5	1	8	7	Gouge zone here included.
2061	21	10	5	3	7	6	
2062	37	15	5	5	7	7	
2063	60	10	5	5	7	7	
2064	59	1220	5	4	7	7	Pb=14ppm, Zn=92ppm. Includes gouge zone and 1cm wide basalt dyke.
2065	18	70	5	5	5	6	
2066	11	15	5	2½	5	7	
2067	36	20	5	3	5	4	Dark green phenocrysts noted.
2068	51	20	5	3	5	4	
2069	59	15	5	1½	5	4	

TABLE NO. 2b

(REX) TRIBUTARY TO CREEK 3

HANK NO.	Ag ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2070	11	15	5	2	8	7	
2071	11	30	5	2½	6	6	
2072	6	5	5	1	7	7	
2073	15	20	5	1½	6	6	
2074	21	5	5	2½	8	7	
2075	25	15	5	2	7	6	
2076	21	<5	5	2	6	6	
2077	11	<5	5	2	6	5	
2078	31	<5	5	3	5	5	
2079	11	5	5	1	7	6	
2080	11	5	5	2½	7	7	
2081	12	10	5	5	7	7	
2082	28	25	5	5	6	7	
2083	12	10	5	5	5	7	
2084	25	15	5	5	5	6	
2085	16	<5	5	1	6	7	
2086	29	20	5	3	8	8	
2087	26	<5	5	4	7	6	
2088	32	90	5	2	8	7	
2089	14	300	5	2	9	7	
2090	26	55					
2091	14	105	5	2	3	4	
2092	52	75	5	1	3	3	
2093	26	240	5	3	2	2	
2094	6	255	5		5	4	
2095	4	590	5	1	3	5	
2096	7	115	5	2	5	3	
2097	34	250	5	1	4	6	Includes calcite (and quartz?) vein.
2201	58	60	5	1	4	5	
2201A	110	525	.08	5			Malachite,azurite on red carbonate vein.
2202	30	30	5		3	5	

TABLE NO. 2b

Tributary to Creek 3 continued

HANK NO.	Ag ppm	Au ppm	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2202V	17	35	.07	3			Calcite and quartz vein.
2203	24	20	5	1	1	4	
2235	60	90	5	1	9	8	
2236	250	310	5	1	9	8	
2237	30	40	4	.3	9		
2238	13	5	3	1	9	8	
2239	58	105	5	.3	9	7	
2240	60	40	6	.3	10	9	Intense clay alteration
2241	56	205	3	0	9	8	
2242	55	15	5	0	9	9	
2243	52	110	5	3	10	8	Intense clay alteration,20% pyrite in spot
2244	35	45	5	1	10	8	
2245	58	75	5	2½	10	8	20% pyrite in spots.
2246	63	60	5	1	9	7	
2248	33	85	5	5	9	6	
2249	65	15	5	2½	9	7	Clay gouge in spots.
2250	65	5	5	2½	9	6	
2251	60	10	5	1	9	7	
2252	20	15	5	2½	8	7	
2253	20	25	5	1	9	7	
2254	20	15	5	1	9	7	
2255	50	70	5	1	9	7	
2256	50	20	5	1	9	7	
2257	30	10	5	1	9	7	
2258	20	35	7	0	10	7	Much clay gouge.
2259	20	40	7	1	10	7	Much clay gouge.

Above Creek 3

Samples of felsite show a possible background of 15ppb Au for this rock. The number of samples is too few however to make a definitive statement.

Between Creeks 3 and 4

A sample of chert at HANK1109 suggests a background of 25 ppb Au for this rock. Note samples HANK 334, 1066 from Creek 3 had high values (155, 1090 ppb Au respectively) for this rock.

TABLE NO. 2c

HANK NO.	As ppm	Au ppb	Sample width (meters)	REMARKS
ABOVE CREEK 3				
383	20	10	grab	Ag=<0.2ppm, Cu=14ppm, Mo=1ppm. Felsi
683	210	15	grab	Ag=<0.2ppm, Cu=27ppm, Mo=10ppm. Felsi
684	42	15	grab	Ag=<0.2ppm, Cu=11ppm, Mo=6ppm. Felsite.
685	63	5	grab	Ag=0.3ppm, Cu=8ppm, Mo=10ppm, Hg=165pp Pyritic (andesite?) or felsite.
BETWEEN CREEKS 3 and 4				
1109	14	25	1	Brecciated chert.
1200N550E	10	10		
1200N840E	100	370		Coarse tuff. Feldspar crystals visibl
1200N1650E	350	95	grab	Ferricrete.
1200N1840E	5	<5		

Creek 4

The lower Sericite-Carbonate-Pyrite Altered Zone is well exposed in a canyon on Creek 4. Some relatively unaltered "clots" exist in the Zone. Gold results are typical of the high background to be expected in the zone. Carbonate veining in this exposure is not sufficient for economic mineralization.

The upper Zone is realtively narrow and weak. Its eastern contact appears to have a strike/dip of $42^{o}/80^{o}$ northwest. Whether or how this connects with the upper Zone of Creeks 5 to 12 is not certain. It likely connects with the upper Zone of Creeks 1 to 3.

TABLE NO. 2d

CREEK 4

HANK NO.	Ag ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
602	130	70	1				Ag=1.3ppm, Cu=5ppm, Mo=9ppm. Altered pyritic rock with minor carbonate.
605	63	100	170				Ag=2.5, Cu=8, Mo=2. Sparse chip sample of pyrite-carbonate-sericite altered rock.
606	170	125	20				Ag=6.6, Cu=101, Mo=1. Sparse chip sample of slightly altered pyritic volcanic.
664	53	135	50				Ag=0.3, Cu=7, Mo=2. Sparse chip sample pyritic altered andesite pyroclastic.
665	40	100	50				Ag=0.6, Cu=13, Mo=1. Unaltered barren pyroclastic. Sparse chip.
666	550	815	50				Ag=0.6, Cu=20, Mo=1, Hg=65ppb. Sparse chip. Barren pyroclastic. See also 2345 to 2354 and 666A,B,C.
666A	12	10	1	1	3	4	Buff weathered pyroclastic.
666B	3	5	grab	2½			Float. Very siliceous boulder.
666C	150	215	grab	2			Grab from 5cm wide pyritic pocket in otherwise uninteresting pyroclastic.
667	50	105	50				Ag=0.2, Cu=10, Mo=<1. Sparse chip sample of pyritic coasrse pyroclastic. Includes a 1m wide siliceous vein.
668	60	65	50				Ag=0.4, Cu=8, Mo=1. Sparse chip of pyritic pyroclastic.
669	290	375	50				Ag=0.6, Cu=11, Mo=1. Sparse chip. Patchily altered pyritic pyroclastic.
670	105	85	50				Ag=0.3, Cu=6, Mo=<1. Sparse chip. Patchily altered pyritic pyroclastics. Fragmental texture.
671	105	195	50				Ag=0.6, Cu=7, Mo=2, Hg=65ppb. Sparse chip. Altered pyritic pyroclastic.
672	60	255	50				Ag=2.6, Cu=8, Mo=1. Sparse chip. Altered pyritic pyroclastic.
673	83	220	50				Ag=16.0, Cu=7, Mo=3. Sparse chip. Alteration intensity increases over 20m toward 674.
674	50	105	50				Ag=1.6, Cu=12, Mo=1. Sparse chip. Pyritic bleached rock.

TABLE NO. 2d

Creek 4 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
676	58	45	25				Ag=1.0, Cu=11, Mo=1, Hg=50ppb. Sparce chip. Slightly altered pyritic pyroclastic.
677	60	25	25				Ag=0.5, Cu=9, Mo=2. Sparse chip. Patchily altered pyritic pyroclastic.
678	36	5	50				Ag=0.2, Cu=5, Mo=2, Sparse chip. Pyritic pyroclastic.
679	58	25	50				Ag=0.2, Cu=5, Mo=1. Sparse chip. Pyritic pyroclastic.
1021	120	190	2	2	9	7	Sample from fractured (or fault?) zone. Pyritic.
1098	110	135	1	1	8	7	Altered rock. At 1300m elevation.
1112	7	20	1	0			Chert. Minor quartz filled vugs.
1115	36	60	grab	5	4	6	Red weathered felsite with white phenocrysts. Talus.
1117	77	340	1	.3	6	8	Altered rock has minor carbonate vei in area.
1118	80	235	4	2½	7	6	Weakly altered rock has minor carbonate veins.
1119	35	2710	.3	1	0	2	3m wide blue grey very fine, sandy texture (felsite dyke?). Located at 1330m elevation.
2098	11	<5	grab				Green tuff fragments from 45cm level of water-filled pit.
2099	160	60	. 15				Fracture zone contains gouge.
2100	65	20	2½	1	9	5	May not be outcrop.
2101	27	805	5	1	9	7	Pb=260ppm, Zn=217ppm. Numerous calcite veins with galena and sphalerite.
2102	21	155	5	.3	9	7	Some calcite veins.

TABLE NO. 2d

Creek 4 continued...

HANK NO.	Ag ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2103	70	305	5	.3	9	7	Includes 2099 above. Minor galena, sphalerite noted.
2104	55	215	5	.3	9	7	Some quartz and calcite veins here.
2105	25	145	5	.3	9	7	
2106	23	55	5	.3	9	7	Some small calcite veins.
2107	51	45	5	.3	9	7	
2108	51	30	5	1	9	7	
2109	52	25	5	1	9	7	
2110	31	25	5	1	9	7	
2111	30	45	5	1	9	7	
2112	65	40	5	.3	9	7	
2113	37	45	5	1	9	7	Very minor malachite.
2114	39	35	5	.3	9	7	
2115	51	45	5	2½	9	7	
2116	41	60	5	1	10	7	Intense clay alteration
2117	21	25	5	1	9	7	
2118	85	175	5	1	10	7	Rotten quartz zone (1/3m) next to clay zone (1.5m).
2119	205	480	5	1	9	6	
2120	36	90	5	.3	9	7	Some quartz veinlets.
2121	38	135	4	.3	9	7	Some quartz veins.
2122	50	30	5	1	9	7	Some small shear zones
2345	75	60	5	1	7	4	Includes 6cm wide calcite vein.
2346	73	255	5	1	8	7	
2347	300	525	5	.3	8	7	

TABLE NO. 2d

Creek 4 continued..

HANK NO.	Ag ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2348	80	125	5	.3	8	3	
2349	41	40	5	.3	8	5	
2350	22	25	5	.3	8	5	(Vesicular?) rock.
2351	25	70	5	0	8	7	Limonitic (vesticles?)
2352	65	60	5	0	7	8	
2353	3	10		Tr			Hard, very siliceous (rhyolite dyke?). Grab sample
2354	250	775	grab	5			Carbonate vein float. (abundant here)
2360	23	35	2	5	9	7	
2361	60	30	3	5	10	7	
2362	34	10	7	5	9	7	
2363	52	55	5	5	9	7	Includes 1m clay altered zone with 10% pyrite and minor galena,
2364	78	45	4	5	9	7	
2365	57	45	1	5	9	8	
1390N360E	75	140	12				Galena observed in calcite and quartz veinlets.
1400N350E(4^1)	62	190	grab	1			Altered tuff with quartz and calcite veins. Sample from bottom of soil profile pit.
1400N370E	95	45					Pyritic outcrop.
1400N700E(1m)	15	15	grab				Ferricrete sample from bottom of soil profile pit.
1400N780E	3	5	grab				Talus.
1800N1843E	8	185			0	7	Highly siliceous (>90%) pyritized outcrop. Rhyolite? (or possibly chert).

Camp 3, Peak area and above Camp 3 site

Soil profile pits at Camp 3 at 2000N 1500E, 1550E were dug in highly weathered crumbly limonitic rock. Black (MnO_2?) stains may have been associated with carbonate veinlets here. It's uncertain whether the upper Sericite-Carbonate-Pyrite Altered Zone passes through here. Or should one expect green rocks here with narrow alteration zones adjacent to carbonate veins such as at HANK 3002 (upper part Creek 5).

Felsites above Camp 3, though having strong rusty stains on weathered surfaces were very weak in pyrite and gold.

TABLE NO. 2e

CAMP 3 PEAK AREA

HANK NO.	Ag ppm	Au ppb	Sample width (meters)	Pyrite %	REMARKS
1800N1150E	38	25			Weathered andesite.
1800N1300E	4	15			
1800N1414E	4	<5			
2000N1500E	16	5		0	Highly weathered green rock from soil profile pit.
2000N1550E	17	15			Crumbly limonitic rock with black (MnO_2?) stains. From soil profile pit.

ABOVE CAMP 3 SITE

382	20	<5	grab		Ag=0.2ppm, Cu=11ppm, Mo=1ppm. Felsite.
680	24	<5	grab		Ag=0.2, Cu=6, Mo=2, Fesite.
681	10	<5	grab		Ag=0.2, Cu=5, Mo=<1. Felsite.
682	23	<5	grab		Ag= <0.2, Cu=21, Mo=5. Felsite.
2395	13	35			Brecciated pyroclastic with very fine pyrite.
2396	105	5			Rusty felsite
3011	4	25			Felsite contacting (limestone?) here. Sample of latter.
3014	<2	<5			Dark andesite.

Creek 5

Exposure is very poor along Creek 5.

The lower Sericite-Carbonate-Pyrite Alteration Zone is represented by small outcrops and small exposures in dug out banks.

Carbonate veins generally of not more than several centimeters width were uncovered. Polymetallic zones in carbonate or barite gangue had high gold. Notable assays are HANK 2200(Au=2.979 oz/Ton, Ag=31.22 oz/Ton) and Hank 2725 (Au=0.400 oz/Ton over 2 meters). The assay lab reported visible Au in 2725 sample. HANK 3002D (Au=.156 oz/Ton over 1½ meters) was a carbonate vein that could be followed in outcrop for 18 meters.

Samples from the lower Zone in this creek were generally poor as the rocks were weathered to clay.

TABLE NO. 2f

CREEK 5

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2123	31	40	5	5	9	4	Hard. Siliceous.
2124	31	100	5	5	9	5	Some carbonate veins up to 1cm wide.
2125	12	80	5	5	9	5	
2126	37	45	1½	1½	6	5	Pb=30ppm, Zn=420ppm.
2127	20	3240	grab				Pb=6.00%, Zn=8.5%. Siliceous float has galena and sphalerite.
2128	33	145	7	3	8	8	Pb=1100ppm, Zn=1880ppm.
2129	36	815	grab	>5			Pb=1.78%, Zn=6.10%. Float
2130	16	35	5	3	2	3	Pb=62ppm, Zn=177ppm.
2131	28	90	5	2½	5	5	Pb=420ppm, Zn=680ppm. Some calcite veins present.
2132	46	2700	grab	>5		7	Pb=5.00%, Zn=10.20%, Sample of highgrade. Appears in place
2133	48	215	5	5	9	7	Contains calcite veins.
2133HW	22	90	½	5	9	7	Pb=15ppm, Zn=60ppm, Cu=60ppm Hangingwall of a 1½m wide zone of polymetallic carbonate (and barite?) veins.
2133FW	26	115	½	5	9	7	Pb=34, Zn=160, Cu=33 Footwall of above zone.
2134	60	1960	.4				Mineralized hangingwall adjacent to a 12cm carbonate vein. Pervasive calcite & veins here. This is within the 1½m zone described for 2133HW.
2135	36	280	5	5	9	7	Minor galena associated with calcite.
2136	26	35	2	5	9	5	
2137	60	15	2	5	9	4	
2138	60	20	grab				"Nodular" texture (result of tectonism?)
2139	90	475		soil			Regolith sample. Grey white clay.

TABLE NO. 2f

Creek 5 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2139HW	20	150	½		9		Pb=1070, Zn=2200, Cu=77 Hangingwall of a ½m wide polymetallic carbonate vein. Intense clay alteration here. This sample is mostly clay.
2139FW	45	110	½	5	7	6	Pb=302, Zn=560, Cu=60 Footwall of above vein. HANK 2127 and 2200 represent the 6cm of massive sulphides on the footwall side of the vein.
2140	370	1220	grab				Pb=2400ppm, Zn=1610ppm. Float shows galena and sphalerite in a quartz veinlet.
2200	450	2.979 oz/Ton					Ag=31.22oz/Ton, Pb=13.60%, Zn=21.80%, Cu=15200ppm, Sb=5600ppm. Grab of highgrade carbonate vein float.
2343	16	95		5			Disseminated pyrite in siliceous rock.
2723	320	700	5		9	9	Carbonate vein in grey altered agglomerate. Sample is 50% vein material. Rotten rock.
2724	380	620	4			9	Rotten agglomerate. Black (MnO2?) with carbonate veins.
2725	800	0.400 oz/Ton					Same as 2724. Assay lab reports visible gold in the +150 mesh fraction which was calculated into the total. 2m sample.
2726	290	2700	4				Weathered rock with 0.4m wide carbonate vein. Vein has 1% pyrite.
2727	210	740	2½				Weather rock with 0.4m wide carbonate breccia.
2728	38	35	5				
2729	65	60	5				
2730	70	120	5				
2731	130	360	4				
2732	140	260	6.1				Weathered limonitic rock with black (MnO2?) streaks related to carbonate veins.
2733	58	85	2.6				Non limonitic agglomerate.

TABLE NO. 2f

Creek #5 continued ...

HANK NO.	As ppm	Au ppb	Au oz/Ton	Sample width (meters)	Pyrite %	Fracture intensity	REMARKS
2734	66	440		4	2	7	Weathered rock with 0.4m wide carbonate vein. Vein has 1% pyrite.
2735	42	65		4.6			Limonitic rock. No carbonate veins.
2736	15	30		4		9	Altered rock with little to no pyrite.
2737	35	50		3½		9	Same as above.
3002A	90	75	.002	1.7			Heavily altered, weathered hematitic volcanic.
3002B	130	120	.002	0.7			Same as A above. More gossanous.
3002C	580	1250	.036	.15			Mostly gossanous weathered volcanic. Some carbonate associated with black (MnO2?)
3002D	205	6000	.156	1½			1½m wide carbonate vein. Can be followed in outcrop for 18m. Contains minor pyrite (and arsenopyrite?), chalcopyrite, malachite.
3002E	500	1950	.050	½			Gossanous altered volcanic.
3002F	180	580	.020	1.2			Same as A above.
3002G	135	380	.011				Volcanic with quartz and carbonate veining.
2000N1300E	28	10					

Creek 6

The lower Sericite-Carbonate-Pyrite Altered Zone is well exposed in Creek 6 in a narrow canyon. The upper Zone is represented in the creek bed and trenches and drillcore in the upper part of Creek 6.

The lower Zone is spottily silicified and brecciated. Veining — mostly carbonate is minor. 5 meter chip sampling in the Zone returned essentially high background figures. Rocks are typically highly altered pyroclastics with relatively "unaltered clots".

Samples from trenches at the upper Zone gave good results. Samples HANK 2501 to 2527 resulted in an average of .074 oz/Ton Au over 26 meters. Higher grades were achieved over narrower widths (see Table No. 2g). This area is characterized by a relatively high density of carbonate veins.

The upper Zone under Creek 6 appears to dip southeast about 15^{0} according to intercepts in DDH84-1, 2 and 3.

TABLE NO. 2q

CREEK 6

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	
50	17	10	grab	Tr	4	2	Float from 4 ft of soil profile pit. Trace pyite in green andesite. See also 1840N535E.
54	21	15	1	.3	5	3	Probable outcrop. Pinkish (hematitic?) Tuff.
54A	300	345	.2				Brown clayey pyritic gouge.
54B	290	1500	3	2½			Pyrite is disseminated in volcanic. Quartz and carbonate veins exist. Sample includes above gouge zone.
55(3')	75	310	grab				Talus. Green tuff.
72	20	10					Ag=0.2ppm, Cu=7ppm, Mo=2ppm. Siliceous brecciated pyritic (andesite?).
74	230	120	grab				Ag=1.8, Cu=105, Mo=4, Hg=55ppb. Altered pyritic fragmental purplish (andesite?)
92	10	5	23				Ag=0.4, Cu=162, Mo=2. Sparse chip sample.
93	13	5	26	5			Ag=0.4, Cu=202, Mo=2. Sparse ship sample. Breccia.
94	43	20	24	5			Ag=1.3, Cu=161, Mo=2. Sparse chip. Heavily altered breccia and andesite.
95	42	20	25	5			Ag=0.9, Cu=97, Mo=3. Sparse chip. Heavily altered breccia includes a silicified gouge zone.
96	38	65	25				Ag=1.9, Cu=128, Mo=2. Sparce chip. Highly altered and silicified breccia.
97	47	5	25	5			Ag=0.5, Cu=32, Mo=2. Sparse chip. Silicified (breccia?).
98	40	30	25	5			Ag=1.9, Cu=239, Mo=2. Sparse chip. Breccia.
99	35	5	25				Ag=0.7, Cu=117, Mo=2. Sparse chip. Andesite. Last half ismuch less altered.
1028	9	<5	grab	0	0	1	Andesite dyke. Talus. See also 2000N1050E

TABLE NO. 2g

Creek 6 continued ...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
1035	15	175	grab				Float. Massive pyrite sample from pyrite-carbonate vein.
1036	26	10	4	2½	9	X	Silicified (opalized?) breccia. Several ¼cm wide purple quartz veins exist. Crumbly outcrop.
1071	52	35	1	.1	2	2	(Flowrock?) Coarse, sandy, dense.
1072	13	5	1	0	1	X	Ash tuff. Soft, purplish, hackly fracture.
1074	>1000	2500	½				Green agglomerate. Includes pyritic gouge.
1074A	>1000	515	5				Agglomerate with hexagonal hornblende phoneocrysts. Outcrop has a silicified gouge zone with carbonate veins and pyrite.
1074B	700	255	.08				Grab from gouge zone.
1074C	>1000	1830	.1				Grab of 2cm carbonate vein and surrounding hard (silicified?) zone.
1075	410	335	grab	2½			Float. Pyritic carbonate vein breccia.
1075A	225	1150	grab				Float. Resampling of same boulders above.
1076	17	5	1				Coarse tuff.
1077	6	<5	1	0	1	5	Marron amygdaloidal flow.
1083	4	<5	1	0	1	5	Green pyroclastic with hexagonal hornblende phenocrysts.
1085	40	330	grab				Float. Siderite vein boulders with minor pyrite. Same location as 1085B.
1085A	390	3000	6	.3			Very weathered volcanic with several carbonate veins. Covers same area as 2505 to 2510.
1085B	75	525	.3				Carbonate (sederite) vein in trench.
1085C	300	2300	6½	.3			As 1085A. Covers same area as 2511 to 2517.
1086	>1000	1150	grab				Float. Limonitic float. (Local?).
1087	12	50	1				Ferricrete.

TABLE NO. 2g

Creek 6 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
1089	84	10	1				Ferricrete.
1091	14	<5	grab				Talus. Likely local. Altered volcanic.
1103V	>1000	275	grab				Float. Barren barite vein with pyritic host rock.
1155	>1000	1850	1				Rotten volcanic with carbonate veins.
1156	>1000	900	.8				
1157	90	540	1/3				
1158	600	1150	1				(1155 to 1165 are all similar rock from the same trench).
1159	310	220	1				
1160	500	1300	1				
1161	850	4200	1				
1162	850	4200	1				
1163	900	640	1				
1164	950	3000	1				
1165	550	360	1				
2300	90	25	5	1	7	4	Some carbonate veining with very minor (galena).
2301	48	10	5	1	6	7	Some black veinlets.
2302	50	10	5	1	9	8	
2303	90	15	5	1	9	7	Some hard (sileceous?) spots.
2304	44	15	5	2	9	7	
2305	82	30	5	3	9	8	
2306	50	25	5	1	9	8	
2307	50	35	5	1	9	7	Minor galena in fractures.
2308	65	35	5	2½	9	7	

TABLE NO. 2g

Creek 6 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2309	90	65	5	2½	9	7	
2310	38	55	5	2½	9	7	
2311	120	105	4	2½	9	8	Ferricrete mantles part of ourcrop. (not sampled).
2312	85	10	5	1	9	9	
2313	58	25	5	2½	9	4	
2314	155	35	3	1	9	4	
2315	18	30	5	1	9	4	
2316	38	60	5	1	9	7	
2317	30	210	5	1	9	7	
2318	48	170	5	1	9	7	
2319	105	200	5	2½	9	7	
2320	58	30	5	2½	9	6	Spottily silicified. Minor quartz veinlets.
2321	110	40	5	5	9	5	Opal and hematized quartz in fractures.
2322	60	35	5	1	9	7	
2323	50	25	5	2½	9	4	Breccia. Hematized quartz matrix.
2324	30	30	5	2½	9	9	Opalized concretions.
2325	62	115	5	2½	9	7	Some quartz veins here.
2326	42	115	grab				Pyritic float possibly from 2324.
2327	39	10	.07	10			(opal?) and calcite vein.
2328	110	55	5	.3	9	6	Spottily silicified.
2329	28	10	5	.3	9	8	Spottily silicified. Brecciated.
2330	26	10	5	1	8	7	Spottily silicified.
2331	110	65	5	1	9	8	Spottily silicified.
2332	85	60	5	2½	9	7	Opalized spots.

TABLE NO. 2g

Creek 6 continued

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2333	30	20	5	1	8	7	Spottily silicified. Breccia in fracture in zone (12cm wide).
2334	90	25	5	1	8	7	Spottily silicified.
2335	23	25	5	2½	8	7	
2336	295	1500	.1	1			Very minor galena and (chalcopyrite?) in graphitic quartz-calcite vein.
2337	19	30	5	1	8	7	Spottily silicified. Some breccia.
2338	18	20	5	1	8	8	
2339	13	5	grab				Brecciated amygdaloidal flow with malachite azurite.
2341	12	20	.6		3		Altered tuff. Hexagonal hornblende phenocrysts.
2342	40	<5					Green volcanic.

TABLE NO. 2g

Creek 6 continued...

HANK NO.	As ppm	Au ppb	Au oz/t	Sample width (meters)	Pyrite %	
2500	590	300	.014	1	tr.	Rotten volcanic with carbonate veins.
2501	680	1300	.038	1	tr.	20% carbonate veins, 80% rotten volcanic.
2502	210	3000	.066	1	tr.	100% banded carbonate vein.
2504	900	1550	.052	1	tr.	15% carbonate veins, 85% rotten volcanic.
2505	620	960	.024	1		60% carbonate veins, 40% rotten volcanic.
2506	650	1150	.034	1	0	40% carbonate veins, 60% rotten volcanic.
2507	400	1100	.028	1		70% carbonate veins, 30% rotten volcanics
2508	700	1250	.036	1		20% carbonate veins, 80% rotten volcanic. Assay lab reports visible gold in the +150 mesh material after screening and was calculated into the total.
2509	610	>10,000	.264	1	tr.	5% carbonate veins, 95% rotten volcanic.
2510	580	10,000	.269	1		5% carbonate veins, 95% rotten volcanic.
2511	650	1,300	.066	1	tr.	7% carbonate veins, 93% rotten volcanic.
2512	340	1700	.032	1	tr.	50% carbonate veins, 50% rotten volcanic.
2513	170	820	.016	1	tr.	10% carbonate veins, 90% rotten volcanic.
2514	620	5300	.120	1	0	10% carbonate veins, 90% rotten volcanic.
2515	750	5700	.162	1	tr.	15% carbonate veins, 85% rotten volcanic.
2516	650	5700	.171	1	tr.	15% carbonate veins, 85% rotten volcanic.
2517	700	1300	.030	1		100% rotten volcanic.
2518	780	1400	.076	1	0	10% carbonate veins, 90% rotten volcanic.
2519	780	1000	.032	1		100% rotten volcanic.
2520	570	1950	.069	1	tr.	15% carbonate veins, 85% rotten volcanic.
2521	570	3500	.098	1		5% carbonate veins, 95% rotten volcanic.
2522	220	960	.036	1	tr.	10% carbonate veins, 90% rotten volcanic.
2523	300	500	.012	1	0	15% carbonate veins, 85% rotten volcanic.
2524	290	680	.018	1	0	5% carbonate veins, 95% rotten volcanic.
2525	120	1550	.058	1	0	5% carbonate veins, 95% rotten volcanic.

TABLE NO. 2g

Creek 6 continued...

HANK NO.	As ppm	Au ppb	Au oz/t	Sample width (meters)	Pyrite %	Fracture intensity	REMARKS
2526	330	3400	.080	1			100% rotten volcanic.
2527	320	1950	.046	1	tr.		70% carbonate veins, 30% rotten volcanic.
		2655	.074	26			Average of samples 2501 to 2527 inclusive.
		3820	.108	13			Average of samples 2509 to 2521 inclusive.
		5065	.138	8			Average of samples 2509 to 2516 inclusive.
2738	90	420		2	0		Limonitic rotten volcanic and carbonate vein
2739	140	600		1½	5		Same as above.
2740	120	70		2			
2741	580	820		5	tr	9	Limonitic rotten volcanic.
2742	500	1500		3	.3	9	35% carbonate vein, 65% rotten volcanic.
2743	390	340		5		9	Highly altered volcanic.
2744	610	1000		4	5		Carbonate vein and host rock breccia.
2745	610	2000		3	5		

TABLE NO. 2g

Creek 6 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	
1800N150E(1½')	6	<5	grab		Andesite float at 1½ ft level of soil profile pit.
1820N430E	11	15	grab		Talus
1840N535E	6	145	grab		Float. Heavily weathered rock from 4 ft level of soil profile pit. See also sample no. 50.
2000N450E(1m)	80	20	grab	.3	Volcanic float. 1m level of soil profile pit.
2000N650E(.9m)	45	55	grab		Float from .9m level of soil profile pit. Pyritic altered andesitic tuff. Pyrite patches up to 25%.
2000N1000E(1m)	75	25	grab		Highly weathered andesite.
2000N1050E	29	5	grab		Andesite dyke. Talus. See also 1028.
2250N1500E	17	85	grab	0	(Felsite?) from 30cm level of soil profile pit.
2250N1563E	42	5			Light grey volcanic with finely disseminated pyrite.

See also diamond drill hole results for DDH84 (holes 1,2,3) on Creek 6.

Creek 7

The lower Sericite-Carbonate-Pyrite Altered Zone is well exposed in Creek 7. As in Creek 6 the upper Zone is represented in outcrops and drillcore.

Except in the vicinity of a couple of polymetallic carbonate and quartz veins chip sampling the lower Zone returned typical high background values. The vein HANK 2229V (Ag=22.710 oz/Ton, Au=.53 oz/Ton) is about 10cm width of massive sulphides in a 30cm width of carbonate-quartz gaugue. The HANK 2233V vein (Au=.540 to .786 oz/Ton, Ag=16.00 oz/Ton) is about 6 cm width of massive sulfphides in a 30cm width of quartz gangue. Footwalls and hanging walls had sharply lower values.

The upper Altered Zone on Creek 7 had a high density of carbonate veins. This particular area has a much higher gold background (>500ppb) in the rocks. This zone under Creek 7 appears to dip vertically according to evidence in outcrop and DDH84-4.

TABLE NO. 2h

CREEK 7

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
648	83	<5	35				Ag=0.5ppm, Cu=18ppm, Mo=2ppm. Sparse chip sample of altered rock.
649	6	<5	30				Ag=0.2, Cu=7, Mo=2, Hg=75ppb. Sparse chip of altered rock.
651	80	75	30				Ag=1.2, Cu=63, Mo=<1. Sparse chip of altered rock. Pyritic (intrusive?) andesite.
652	52	240	35				Ag=0.9, Cu=133, Mo=1, Hg=70ppb. Sparse chip of altered (intrusive?) andesite. Pyrite, chalcopyrite, pyrrhotite visible.
1048A	26	10	.25	10			Pb=15ppm, Zn=8ppm, Cu=5ppm, Sb=25ppm Porous brecciated tuff.
1092	12	230	1				Limonite covered rhyolite.
1167	>1000	1200	5				
1168	700	540	5				
1169	350	800	5				
1170	500	660	5				
1171	310	1500	5				
1172	180	170	6				Andesite. No veins.
1173	45	25	5				Andesitic tuff.
2204	3	15	5	2½	8	7	
2205	7	5	5	4	7	7	
2206	22	<5	5	3	7	6	
2207	19	<5	5	2½	8	6	
2208	26	5	5	2	7	6	
2209	60	5	5	2½	7	7	

TABLE NO. 2h

Creek 7 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2210	7	10	5	1	6	5	
2211	3	<5	5	1	5	3	
2212	18	5	5	2	5	3	
2213	16	5	5	2½	5	5	
2214	26	10	5	2½	7	8	
2215	16	10	5	3	6	7	
2216	24	10	5	2	6	5	
2217	28	5	5	2	5	5	Has 3cm wide carbonate vein.
2218	20	10	5	1	7	7	
2219	48	80	5	1	7	7	Porphyritic rock.
2220	80	125	5	.3	5	1	
2221	65	155	5	.3	7	6	Pb=1790ppm, Zn=1020ppm. Galena and sphalerite exist with calcite.
2222	50	45	5	1	7	3	
2223	30	30	5	1	4	3	Galena and (covelite?) noted. Pyritic (volcani bomb?) here.
2224	17	35	5	1	7	5	Very minor galena noted.
2225	23	15	5	1	7	7	
2226	44	30	5	1	7	7	Pyritic (volcanic bomb?) here.
2227	12	15	5	½	7	7	
2228	70	15	5	2½	3	7	
2229	155	2500	5	2½	3	4	Pb=1.39%, Zn=2.32%. Includes vein below.
2229V	210	0.53 oz/Ton					Ag=22.710oz/Ton.Grab of 10cm wide polymetallic zone in 30cm wide carbonate quartz vein. Vein is >3m long.
2229HW	150	470	1	2½	3	4	Pb=1515ppm, Zn=420ppm, Cu=400ppm. Hangingwall of above vein.

TABLE NO. 2h

Creek 7 continued..

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2229FW	70	475	1	2½	3	4	
2230	40	490	5	2½	7	4	
2231	70	240	5	2½	7	5	
2232	40	180	5				
2233	70	350	5				
2233 Vein	120	0.540 oz/Ton					Ag=16.00 oz/Ton, Pb=4.38%, Zn=19.30% 6cm wide polymetallic zone in 30cm wide quartz gangue. Vein is >1m long.
2233V	170	0.786 oz/Ton					Pb=.0.94%, Zn=24.10%, Cu=3.42%. Sample of same polymettalic zone as above.
2233HW	7	30	½		9		Pb= 85ppm, Zn=54ppm, Cu=14ppm Shattered rock and clay gouge on hangingwall of above vein.
2233FW	30	160	½		9		Pb=398, Zn-88, Cu=35 Shattered rock and clay gouge on footwall of above vein.
2234	80	505	5	1	4	4	Spottily silicified.

TABLE 2h

Creek 7 continued...

HANK NO.	As ppm	Au ppb	Au oz/Ton	Sample width (meters)	REMARKS
2528	210	720	.022	1	50% carbonate veins, 50% tuff. Breccia with carbonate matrix.
2529	250	580	.014	1	As above.
2530	120	520	.024	1	70% carbonate veins, 30% tuff. As above but more fractured. Very minor galena.
2531	240	380	.010	1	≥75% carbonate veins. Host rock fragments are pyritic.
2532	350	1100	.030	1	As at 2528.
2533	500	2000	.112	1	40% carbonate veins, 60% host rock. Host rock is pyritic.
2534	410	1500	.030	1	50% carbonate veins, 50% host rock. Host (volcanic) shows hexagonal hornblend phenocrysts.
2535	410	260	.006	1	30% carbonate veins, 70% volcanic.
2537	305	360	.006	1	50% carbonate veins, 50% volcanic.
2538	205	240	.006	1	As above.
2540	700	1200	.036	1	
2541	610	580	.018	1	
2542	390	1950	.030	1	
2543	180	320	.014	1	
2544	90	160	.004	1	
2545	70	45	.002	1	
2546	125	120	.002	1	
2547	410	>10,000	.249	1	
2548	450	780	.020	1	
2449	600	4200	.134	1	
2550	590	580	.020	1	

TABLE NO. 2h

Creek 7 continued..

HANK NO.	As ppm	Au ppb	Au oz/t	Sample width (meters)	REMARKS
2551	590	520	.016	1	
2552	600	620	.020	1	
2553	650	540	.012	1	
2554	700	520	.010	1	
3005	200	680		grab	Carbonate veins. 10m thick zone. Same location as 2528.
3006	350	500		grab	Breccia with carbonate matrix. Host rock fragments are pyritic. Same location as 2529.
3007	170	100		grab	Altered volcanic.
3008	600	1200		grab	Altered volcanic with small carbonate and quartz veins.
2250N670E	3	<5		grab	Green andesite porphyry.

See also diamond drill hole results for DDH84-4 on Creek 7.

Creek 8

The lower Zone is well exposed on Creek 8. The upper Zone is very poorly exposed with only two outcrops observed. Altered type scree and soil however is plentiful and the upper Zone is supposed to continue strong in the upper part of Creek 8.

Chip sampling in the canyon of the lower Zone yielded no high gold values. No significant veining was observed. Note sample HANK 369 had high Hg (2650ppb) with low Au (5ppb). Mercury is generally high on the property but an unreliable pathfinder for gold.

TABLE NO. 2i

CREEK 8

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
351	10	10	grab				Ag=3.0ppm, Cu=675ppm, Mo=1ppm, Altered pyritic rock.
358	11	<5	32				Ag=<0.2, Cu=12, Mo=2. Sparse chip sample.
369	12	5	34				Ag=0.3, Cu=17, Mo=1, Hg=2650ppb, Sparse chip of altered tuff.
370	11	5	8				Ag=0.4, Cu=12, Mo=1. Sparse chip of altered tuff.
1130	12	85	grab				Pyritic clay altered rock.
1131	20	<5	4	.3	8	X	Altered rock.
2459	58	15	5	.3	8	6	
2460	13	5	5	1	6	7	
2461	15	10	5	1	6	6	
2462	25	10	5	1	9	6	
2463	60	35	5	1	4	6	
2464	34	200	5	1	3	6	
2465	39	90	5	1	5	5	
2466	6	10	5	.3	8	6	
2467	8	10	5	2½	8	5	
2468	5	5	5	5	9	5	
2469	29	50	5	1	8	6	
2470	55	120	5	1	5	5	
2471	32	35	5	1	5	5	
2472	45	80	5	1	5	5	
2473	28	65	5	1	4	3	
2600N740E	3	5					Feldspar porphyry andesite with (bombs?).

Creek 9

The canyon on Creek 9 exposes the lower Zone well. Typical Altered rocks here had typically high Au background of 10 to 100 ppb. No significant veining was observed.

Between Creeks 9 and 10

Note the high Au (545 ppb) at HANK 731 was not repeated by later samples from the same outcrop. The lower Zone was not observed northeast of this outcrop though it probably continus almost as far as Creek 10. The lower Zone may run into the Hemlo Creek (fault?).

TABLE NO. 2j

CREEK 9 and BETWEEN CREEKS 9 and 10

CREEK 9

HANK NO.	As ppm	Au ppb	(meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
141	37	<5	grab	4			Ag=0.5ppm, Cu=41ppm, Mo=2ppm, Hg=190ppb. Rhyolite?
142	17	25	grab	5			Ag=0.6, Cu=11, Mo=2, Pyroclastic.
144	13	55	grab	5			Ag=0.8, Cu=23, Mo=1. Pyroclastic.
146	13	30	50	4			Ag=0.4, Cu=39, Mo=2. Sparse chip. Malachite stain.
147	20	20	25	4			Ag=<0.2, Cu=22, Mo=2. Sparse chip sample.
149	18	<5	30	4			Ag=<0.2, Cu=14, Mo=4, Hg=55ppb. Sparse chip. Malachite stain.
2400	5	5	5	2½	9	6	
2401	9	20	5	2½	5	9	
2402	18	170	5	1		5	
2403	47	10	5	2½	9	7	Spottily silicified.
2404	30	5	5	2½	8	6	
2405	25	<5	5	5	9	3	
2406	33	5	5	1	9	7	
2407	40	5	5	1	9	7	
2408	32	<5	5	2½	9	7	Spottily silicified.
2409	57	5	5	1	9	8	Spottily silicified.
2410	32	30	5	0	9	7	
2411	30	20	5	.3	9	7	
2412	21	<5	5	.3	9	5	
2413	10	25	5	2½	9	7	
2414	10	10	5	1	8	8	
2415	10	20	5	2½	9	6	Spottily silicified.

TABLE NO. 2j

Creek 9 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intenstiy	Fracture intensity	REMARKS
2416	20	30	5	2½	9	7	
2417	80	110	5	2½	9	8	
2418	50	90	5	1	9	7	
2419	31	30	5	2½	9	6	
2420	53	140	5	.3	9	7	
2421	55	200	5	.3	9	7	
2422	10	<5	5	1	7	8	
2423	10	<5	5	2	8	7	
2424	4	<5	5	½	6	4	Siliceous
2425	6	<5	5	.3	8	5	
2426	38	<5	5	1	8	6	
2427	9	<5	5	1	8	8	
2428	8	<5	5	1	8	8	
2429	47	<5	5	2	8	7	
2430	17	35	5	.3	7	5	
2431	34	30	5	.3	6	5	
2432	11	15	5	1	7	6	
2433	6	25	5	.3	9	8	
2434	11	20	5	.3	8	7	
2435	26	45	5	.3	8	8	
2436	13	80	5	.3	7	6	
2437	30	85	5	.3	7	8	
2438	12	90	5	.3	8	8	

TABLE NO. 2j

Creek 9 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
2439	19	220	5	5	9	6	
2440	15	95	5	1	8	5	
2441	14	55	5	2½	9	6	
2442	10	75	5	1	9	6	
2443	14	35	5	1	9	7	
2444	7	10	5	1	9	7	
2445	16	60	5	2½	8	7	
2446	10	35	5	2½	9	7	
2447	23	60	5	1	8	8	
2448	20	45	5	.3	9	7	
2450	5	55	5	1	9	7	
2451	5	<5	5	1	8	5	
2452	8	5	1	<.3			Large quartz boulder.
2453	43	<5	5	.3	8	7	
2454	42	10	5	.3	9	7	
2455	65	20	5	.3	9	7	
2456	47	<5	5	.3	9	8	
2457	12	5					
BETWEEN CREEKS 9 and 10							
151	40	380	grab				
731	50	545	grab				Ag=3.9ppm, Cu=27ppm, Mo=4ppm, Hg=35ppm.
1147	20	25	grab				Typical altered zone type of rock.
3000N250E	17	<5	grab				Pyritic bleached, gossanous. Three samples from same outcrop.
3000N1000E	<2	<5	grab				From talus. Green-grey volcanic.

Creek 10

The upper Sericite-Carbonate-Pyrite Altered Zone shows on Creek 10. Exposure is reasonable though not good.

Samples HANK2608 to 2722 represents an area of spotty silicification where higher gold values occur. An average of Au=1630 ppb over 14 meters exists at samples 2701-2714.

Alteration intensity is less in the Zone in Creek 10. The Zone contains many "unaltered clots".

TABLE NO. 2k

CREEK 10

HANK NO.	As ppm	Au ppb	Sample width (meters)	REMARKS
408	145	80	2	Ag=2.2ppm, Cu=28ppm, Mo=1ppm, Hg=170ppb Argilite with pyrite veins.
408	>1000	1690	grab	Ag=1.9, Cu=21, Mo=1, Hg=260ppb
426	65	100	50	8.3 91 <1
427	60	15	50	0.3 11 4
428	38	10	50	0.2 5 8
429	30	155	50	0.2 9 8
430	42	235	50	0.5 6 5 Hg=415
431	15	5	50	<0.2 11 4 Hg=190
432	22	<5	50	<0.2 10 1
433	20	<5	50	<0.2 8 <1
726	10	<5	50	<0.2 8 4
727	10	<5	50	<0.2 12 2 Hg=70
728	20	90	50	<0.2 60 2
729	47	<5	50	<0.2 56 2
730	500	700	50	1.3 49 2 Hg=160
1133	800	3350	grab	Float. Carbonate vein boulder contains sphalerite, galena, pyrite.
1134	300	150	.1	Unmineralized carbonate vein.
1135	600	800	1/3	Agglomerate with pyritic(and arsenopyrite?) quartz veins.
1136	105	70	grab	Pyritic carbonate vein.
1137	800	2250	grab	Pyritic contact zone between tuff and barite vein
1148	8	25	20	Sparse chip sample

Sample #426 to 730 represent sparse chip samples - that is occasional grabs taken over 50m intervals.

TABLE NO. 2k

Creek 10 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
1149	37	65	grab				Mn oxide rich ferricrete.
1150	19	<5	20				Sparse chip sample.
2600	23	10	grab	5			Altered rock. Position is approximate.
2608	63	15	10	2½	7	6	
2609	30	10	12	2½	7	6	Some small carbonate blebs.
2610	300	440	8	5	9	7	10% pyrite locally.
2611	450	260	5	5	9	8	10% pyrite locally.
2612	>1000	1550	5	5	9	8	10% pyrite locally. Spottily silicified.
2613	>1000	900	10	5	9	7	Spottily silicified.
2700	65	15	1	1	6	6	
2701	380	2100	1	2½	8	6	
2702	170	240	1	5	9	7	
2703	>1000	1500	1	5	9	7	(Average of samples 2701 to 2714 is Au=1630ppb
2704	>1000	4000	1	5	9	7	over 14 meters.)
2705	>1000	2100	1	2½	9	7	
2706	370	65	1	2½	9	7	
2707	>1000	2200	1	2½	9	7	
2708	310	80	1	1	9	7	
2709	280	55	1	1	9	7	
2710	>1000	1450	1	2½	9	7	A 4 to 10cm wide silicified fracture trends
2711	500	940	1	2½	9	7	through 2710 and 2711 and has minor galena.
2712	>1000	2000	1	2½	9	7	More rusty and silicified from 2712 to 2715.
2713	>1000	4300	1	2½	9	7	

TABLE NO. 2k

CREEK 10 continued...

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS	
2714	>1000	1800	1	2½	9	7		
2715	650	110	1	2½	9	7		
2716	410	80	1	2½	9	7		
2717	310	25	1	2½	9	7		
2718	800	720	1	2½	9	7		
2719	610	340	1	2½	9	7		
2720	180	70	1	2½	9	7		
2721	160	80	1	2½	9	7		
2722	90	70	1	2½	9	7	Intruded by andesite dyke having pyrite.	≥2½%

Creeks 11 and 12

Relatively weakly Altered rocks of the upper Zone crop out in canyons on these creeks. Original volcanic textures and "unaltered clots" occur.

Samples HANK 1141, 1144, 1145 show that higher Au values exist with carbonate veins.

These creeks were only cursorily examined and sampled.

Creeks 13 and 14

These creeks were cursorily examined.

A narrow Altered Zone crops out in Creek 13 and it appears that the upper Altered Zone starts to fade out between Creeks 12 and 13.

A narrow and weak Altered Zone exists on Creek 14.

Sample HANK 1154 from the Creek 14 Zone had 8200 ppb Au in a polymetallic quartz-carbonate gaugue. This appears to be from a highgrade pod of insignificant extent.

TABLE NO. 21

HANK NO.	As ppm	Au ppb	Sample width (meters)	Pyrite %	REMARKS
CREEK 11					
710	11	<5	50		Ag=0.6ppm, Cu=8ppm, Mo=3ppm.
711	13	<5	50		Ag=0.3, Cu=5, Mo=2, Hg=55ppb
713	10	<5	50		Ag=0.2, Cu=11, Mo=2
1141	70	110	grab		Float. Carbonate veins in green volcanic have pyrite and chalcopyrite.
CREEK 12					
687	20	5			Ag=0.4ppm, Cu=111ppm, Mo=4ppm. Brecciated pyritic flow.
689	13	5	70		Ag=0.9, Cu=16, Mo=3. Sparse chip. Mostly altered.
691	12	20	50		0.3 10 3 — Samples 691 t
692	2	<5	50		0.2 3 2 Hg=40ppb. 695 are spars
693	3	<5	50		0.3 5 2 chip samples
694	7	<5	50		<0.2 6 2 over 50m
695	4	<5	50		<0.2 8 3 Hg=55ppb intervals.
1144	390	1050	1	.1	Siderite vein can be followed for 10m. 1m wide.
1145	160	85	1		Siderite vein with minor pyrite. 1m wide.
3800N675E	4	<5		2½	Rusty, greenish altered volcanic.

TABLE NO. 21

HANK NO.	As ppm	Au ppb	Sample Width (meter)	Pyrite %	Alteration intensity	Fracture intensity	REMARKS
CREEK 13							
119	13	<5		2½			Ag= 0.2ppm, Cu=31ppm, Mo=2ppm. Tuff.
386	4	<5	5	0			Ag= 0.2, Cu=102, Mo=1. Marroon amygdaloidal flow breccia. Minor quartz and brown (ankerite?) venlets. Minor malachite.
388	4	5	grab				Ag=0.2, Cu=4, Mo=1. Altered agglomerate.
1146	37	65	grab				Float. Pyritic carbonate vein.
CREEK 14							
106	22	70		5			Ag=1.1ppm, Cu=13ppm, Mo=2ppm. Agglomerate. See also 1151.
110	15	50					Ag=1.9, Cu=79, Mo=2. Tuff. Minor malachite.
1151	2	<5	3	1	7	6	Altered agglomerate. See also 106.
1152	<2	<5	3				Same as above. More intensely altered.
1153	225	190	grab				Float from talus. Carbonate vein with very minor sphalerite and galena.
1154	190	8200	grab				Float from talus. Quartz-carbonate vein with sphalerite, galena, chalcopyrite, malachite, azurite. Minerals are more associated to quartz than carbonate. Likely local source.
4600N550E	<2	<5	grab				Float from talus. Andesite.

CONCLUSIONS

1. The HANK CLAIM GROUP is underlain by an upper Triassic volcanic suite comprising andesitic pyroclastics and flows and sediments. These rocks are intruded by Cretaceous or Tertiary felsite dykes or sills.

2. High gold values are associated with carbonate veining in areas of sericite-carbonate-pyrite alteration in the pyroclastics.

3. Trenching at upper Creek 6 has Au = .074 oz/Ton average over 26 meters. Higher grades are achieved over narrower widths.

4. Narrow high grade polymetallic veins exist widely over the property. At present these exploration targets are of secondary importance. They are worthy of follow up.

RECOMMENDATIONS:

1. Diamond drilling should be continued in the area of the Hot Spot at upper parts of Creeks 5, 6, 7.

2. Further rock sampling in the above area.

3. Further rock sampling at the Creek 10 anomaly.

4. Exploratory chip sampling on the upper Zone on Creeks 11, 12.

5. Continued mapping and sampling of the FELS unit to determine its relationship to mineralized areas.

APPENDIX NO. 1

DIAMOND DRILLING REPORT

LAC MINERALS LTD.
#470-1055 West Hastings St.
Vancouver, B.C. V6E 2E9

DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-1
PAGE No. 1 OF 10
LOGGED BY Rein Turna
DATE September 1984

PROJECT HANK TYPE OF HOLE D.D.H. ☒ R.D.H. ☐ P.D.H. ☐

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry	FT	fault	CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

NOTE:
Au in ppb is by Fire Assay and Atomic Absorption. Au in oz/ton is by Fire Assay.

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 74.68 m RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 20/84 END September 22/84

0 meters	% pyrite	% veins	alteration intensity	fracture intensity	TO
2.54					OVB
7.77	5	1	7	4	Lost
8.18	5	<1	7	4	Fault?
10.79	2½	10	7	6	Sericite-carbonate-pyrite Altered Zone
12.19	5	1	7	3	
13.41	1	<1	7	3	
13.92	5	1	7	3	
14.88	2½	<1	7	4	
16.64	.3	<1	4	3	epidote
18.29	.3	<1	4	3	
19.81	.3	<1	4	3	Moderate propylitic alteration
21.34					
22.86	.3	<1	4	3	
24.94					
27.43	.3	<1	4	3	Moderate propylitic alteration
28.96					
32.31					Weak propylitic alteration
41.15	3	1	3	3	
44.20					

FROM	TO	DESCRIPTION
		Alteration and fracture intensities are assigned values from 0 (lowest) to 10 (highest). Similarly a 10 point value scale is assigned sometimes to describe sorting, sphericity, roundness of clasts.
		Overall impression of the hole:
		There is just one lithology. An andesitic pyroclastic. A zone of intense sercite-carbonate-pyrite alteration exists from bedrock surface to the 16.64m depth. This zone is characterized by an average 5% disseminated pyritization and pervasive carbonate and sercite. Rock of this zone is grey coloured and soft. Slightly more carbonate veining exists.
		The fresher rock below 16.64m is mainly green coloured. Sometimes agglomerate clasts are apparent. Plagioclase phenocrysts are abundant. Hornblende phenocrysts appear hexagonal in cross section. They are black in unaltered rock and have lighter "crusts" around them when moderately altered.
0	2.54	Overburden. Gravel and stones
2.54	7.77	Pyrite = 5% Veins = <1% intensity of Alteration = 8, Fractures = 4. Grey, very soft crumbly core. Rock is very clayey. Like compacted coarse sand. It has the

VISUAL ESTIMATE (CP % BO % MO % PY)

SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au (1st pulp)	Au	Au
66601	2.54	4.44	1.90	110	60		
66602	4.44	7.77	3.33	170	95		
66003	8.18	10.79	2.61	380	280		
66004	10.79	12.19	1.40	140	50		
66005	12.19	13.41	1.22	120	15		
66006	13.41	13.92	.51	8	<5		
66007	13.92	14.88	.96	15	<5		
66008	14.88	16.64	1.76	7	<5		
66009	16.64	18.29	1.65	4	<5		
66011	18.29	19.81	1.5	4	<5		
66012	21.34	22.86	1.5	12	5		
66013	27.43	28.96	1.5	4	<5		
66014	41.15	44.20	3	8	<5		
66015	56.39	59.44	3	7	<5 (excludes vein below)		
66016	58.75		.03	85	<5 (vein)		
HANK	1174 from 32.31m for thin section						
HANK	1175 from 24.94m for thin section						

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,594

LAC MINERALS LTD.
#470-1055 West Hastings St.
Vancouver, B.C. V6E 2E9

DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-1
PAGE No. 2 OF 10
LOGGED BY Rein Turna
DATE September 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	MI	molybdenite		
BRXY	breccia	MYLN	mylonite	SI	biotite	EP	epidote	MG	magnetite		
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone		
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite		
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz		
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite		
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	k-spar	SE	serpentine		
PPHO	hornblende porphyry	FT	fault	CI	cuprite	LI	limonite	SH	shear		
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous		
				CL	chlorite	MO	molybdenum	X	shattered rock		

NOTE:
Au in ppb is by Fire Assay and Atomic Absorption. Au in oz/ton is by Fire Assay.

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 74.68 m RECOVERY % CORE SIZE BQ
PURPOSE
DATE: STARTED September 20/84 END September 22/84

meters FROM	TO	% pyrite	% veins	alteration intensity	fracture intensity	TO	DESCRIPTION	VISUAL ESTIMATE CPY	BORN	MPY	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
							consistency of wet concrete.											
							At 7.72m is a 1cm carbonate vein (barren) cutting core axis at 50°. No increase in pyrite here.											
56.39		.3	1	3	3	weak propylitic alteration	At 5.90m is a 2cm harder (silicified) zone. No extra pyrite here.											
59.44						weak propylitic alteration	At 2.54 to 4.27m the core is of bedrock but is very soft like mud. It can be mashed in the hand (like wet concrete).											
							At 4.27 to 7.77m the core is harder but still extremely crumbly.											
							Throughout the dominant texture is porphyritic. White (plagioclase) phenocrysts are up to 1mm long but most are smaller. Dark grey odd shaped clasts are up to 2mm diameters but usually smaller. This rock would be classed as an andesitic pyroclastic.											
74.68		END HOLE																
							Pyrite is very finely and very evenly disseminated throughout (5%).											
							Fracture intensity is fairly low (4). (See Geolog. System).											
							Occasional ½ to 1cm long crystals of hexagonal cross section exist. These exhibit an unusual "crust" on their outer sides. The inner parts are darker coloured.											

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-1
PAGE No. 3 OF 10
LOGGED BY Rein Turna
DATE September 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 74.68 m RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 20/84 END September 22/84

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%PY	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
							Grain size = 5 (grit)												
							Sorting = moderate (5). Open framwork.												
							Sphericity/Roundness = 7/7												
							(See Geolog System)												
					7.77	8.18	Drill mud. Lost core.												
					8.18	10.79	Pyrite = 5% Veins = <1% intensity of alteration = 8,												
							fractures = 4.												
							Rock is same as before. Though overall appears finer												
							grained. Sorting = moderate (5) 9.8 to 10.13m is a 1cm												
							wide 20% pyrite seam (gouge?). It cuts core axis at 15°.												
							9.98 to 10.13m has several ¼ cm carbonate veinlets making												
							up 10% of the rock here. Pyrite is slightly more												
							concentrated in the vein centers. Veins are dendritic and												
							chaotically ordered.												
							9.45 to 10.79m is more crumbly and softer. Fracture												
							intensity is 6 (fairly high). Fracture surfaces show												
							slickensiding. Rock appears somewhat broken (brecciated).												
							Rock is slightly harder and more coherent starting at 10.79m												
					10.79	12.19	Pyrite = 2½% Veins = 10% intensity of alteration = 8,												
							Fractures = 6 Harder, fine grained. Massive homogenuous												
							rock.												

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#470-1055 West Hastings St.
Vancouver, B.C. V6E 2E9

DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-1
PAGE No. 4 OF 10
LOGGED BY Rein Turna
DATE September 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussarite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 74.68 m RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 20/84 END September 22/84

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %PY	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
							Grain size = 3 (fine sand)									
							Fracture intensity = 3 (low).									
							At 11.6m a few small dark (pyritic) fractures make up less than 1% of the rock.									
					12.19	13.41	Pyrite = 5% Vein = 1% intensity of Alteration = 8,									
							Fractures = 3									
							Slightly coarser again. Hexagonal crystals with "crusts" are visible again.									
					13.41	13.92	Pyrite = 1% Veins = <1% intensity of Alteration = 8									
							Fractures = 3									
							Black hornblende phenocrysts of up to ½ cm make up 5% of rock. Rock. Rock is still the same porphyritic andesitic pyroclastic.									
					13.92	14.88	Pyrite 5% Veins = 1% intensity of Alteration = 8,									
							Fracture = 3									
							Slightly more fracturing. (5 molderate).									
							Carbonate veinlets make up 1% of rock and cut at 45° to core axis. Pyrite concentrates at veinlets.									
					14.88	16.64	Pyrite = 2½% Veins = <1% intensity of Alteration = 8									
							Fractures = 4									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-1
PAGE No. 5 OF 10
LOGGED BY Rein Turna
DATE September 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 74.68 m RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 20/84 END September 22/84

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE CP% BO% M: PY	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
							Pyrite occurs more patchily now. Carbonate veinlets are rarer.									
							Clasts up to 1 cm exist.									
							Grain size = 4 (medium sand).									
							16.64m appears to mark the end of the carbonate Pyrite Alteration Zone. (This occurs at a fracture which may mark a contact or gouge zone)									
					16.64	18.29	Pyrite = .3% Veins = <1% intensity of Alteration = 4, Fractures = 3									
							Rock is decidedly darker. Purplish green.									
							Grain size = 6 for clasts (small pebbles). 3 for matrix (very fine sand).									
							Sorting = 3 (poor). Open frame work.									
							Sphericity/Roundness = 5/5 Alteration = 4 from 16.64 (See Geolog System).									
							Many of the clasts are epidotized.									
							Carbonate veinlets are chaotically ordered.									
							Hexagonal crystals with "crusts" occasionally exist.									
							This zone is separated from the previous by a fracture and carbonate veinlet at 16.64m. They are essentially the same rock type - a porphyritic andesitic pyroclastic.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER HANKA-1
PAGE No. 6 OF 10
LOGGED BY Rein Turna
DATE September 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SH	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 74.68 m RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 20/84 END September 22/84

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M: %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
					18.29	19.81	Pyrite = .3% Veins = <1% intensity of Alteration = 4, Fractures = 3									
					18.29		Around the 18.29m marker, the rock loses its purplish tinge and is a medium dark green. All other characteristics remain the same.									
							Since 16.64m fracture intensity remained low at (3).									
							At 20.01 and 21.84m exist 2cm and 4cm respectively, carbonate veins. Some epidote alteration exists on their outer margins, but not an appreciable increase in pyrite.									
							22.6 to 23.8m the matrix has more hornblend phenocrysts. 2mm carbonate veins exist. (2 to 3 veins per meter). 28.0 to 29.9m rock is purplish again.									
							Pyrite is uniformly and sparsely disseminated at less than 1% (around .3%?)									
							Carbonate veinlet density continues to be one to two 2mm veinlets per meter.									
							Fracture intensity is low (3).									
							Wall rocks are epidotized about up to 2cm away from carbonate veining. Veins cut core axis at range from 40° to 90°.									

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DRILL HOLE GEOLOGIC LOG

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LOGGED BY Rein Turna

DATE September 1984

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°

COLLAR: LATITUDE _____ DEPARTURE _____

ELEVATION: COLLAR _____ BOTTOM _____

LENGTH: 74.68 m RECOVERY _____ % CORE SIZE BQ

PURPOSE: _____

DATE: STARTED September 20/84 END September 22/84

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
FPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
FPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kaspar	SE	serpentine
FPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
FPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	molybdenum	TA	talc
								X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE CP% BO% MO% PY	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
					21.34	22.86	Pyrite = .3% Veins = <1% intensity of Alteration = 4, Fractures = 3.									
					24.94		Hexagonal crystals present. Apparently an alteration contact here. Intenser propylitic above, less intense below.									
					27.43	28.96	Pyrite = .3% Veins = <1% intensity of Alteration = 4, Fractures = 3									
					32.31		A contact appears at 32.31m between purplish crystaline dense rock lower and greener rock above. The upper rock has slightly greater propylitic alteration.									
							This contact is gradational over several centimeters though the colour change is more abrupt (over 1cm). This contact is fairly clear. Textures and structures continue unchanged across the contact. Black (hornblende) phenocrysts are constant.									
							The greener rock above 32.31m appears less dense and softer. It appears more fractured. Alteration intensity = 3 from 32.31m									
					41.15	44.20	Pyrite = .3% Veins = 1% intensity of Alteration = 3 Fractures = 3									
					50.29	53.34	Rock is unchanged from 18.29m and continues on. Description of this interval fits all since 18.29m Sorting = 3(poor) Sphericity/Roundness = 5/5 (average)									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-1
PAGE No. 8 OF 10
LOGGED BY Rein Turna
DATE September 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 74.68 m RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 20/84 END September 22/84

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M: %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
							Colour = Dark purplish green									
							Open frame work.									
							Pyrite = /1% to .3% disseminated									
							Structure = massive									
							Carbonate veins = 1 to 2mm size and 1 to 3 per meter									
							Fracture intensity = 3 (low)									
							Grain size = 6 (small pebble) maximum size									
							Bedding = none									
							Alteration = pervasive chlorite. Clasts are sometimes									
							epidotized. Epidotization exists adjacent									
							to carbonate veinlets.									
							1mm plagioclase phenocrysts are ubiquitous ½cm hornblende									
							½cm hornblende phenocrysts are less abundant but also									
							ubiquitous.									
					56.39	59.44	Pyrite = .3% Veins = 1% intensity of Alteration = 3,									
							Fracturing = 3									
					at 58.75		There exists a ½ cm wide carbonate vein (unusally large)									
							with 2mm pyrite selvages.									
							This vein cuts core axis at 45°									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-1
PAGE No. 9 OF 10
LOGGED BY Rein Turna
DATE September 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
FPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
FPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
FPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
FPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 74.68 m RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 20/84 END September 22/84

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE CP	SB	SM	SPY	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
					0	10.95	Box 1												
					10.95	18.11	Box 2												
					18.11	25.25	Box 3												
					25.25	32.33	Box 4												
					32.33	39.62	Box 5												
					39.62	46.84	Box 6												
					46.84	53.95	Box 7												
					53.95	60.93	Box 8												
					60.93	67.73	Box 9												
					67.73	74.68	Box 10												
					MARKERS		(MEASURED)												
																		RECOVERY %	
					2.54	3.05	.51 meters of 90% rock											90% recovery	
					3.05	4.57	.94 " " 90% rock											56% recovery	
					4.57	6.10	.76 " " 90% rock											45% recovery	
					6.10	7.62	1.24 " " 90% rock											73% recovery	
					7.62	10.06	2.44 " " 70% rock											70% recovery	
					10.06	12.19	1.98 " " 90% rock											84% recovery	
					12.19	13.72	1.55 " " 95% rock											96% recovery	
					13.72	15.24	1.60 " " 95% rock											100% recovery	
					15.24	16.76	1.60 " " 95% rock											100% recovery	
					16.76	18.29	1.70 " " 90% rock											100% recovery	
					18.29	19.81	1.70 " " 90% rock											100% recovery	
					19.81	21.34	1.57 " " 95% rock											97% recovery	
					21.34	22.86	1.60 " " 95% rock											100% recovery	
					22.86	24.38	1.60 " " 95% rock											100% recovery	
					24.38	25.91	1.52 " " 98% rock											97% recovery	
					25.91	27.43	1.61 " " 95% rock											100% recovey	

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DRILL HOLE GEOLOGIC LOG

PAGE No. 10 OF 10

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LOGGED BY Rein Turna

DATE September 1984

LOCATION: Lisel (6) Creek AZIM. 135° DIP -45°

COLLAR: LATITUDE _____ DEPARTURE _____

ELEVATION: COLLAR _____ BOTTOM _____

LENGTH: 74.68 m RECOVERY _____ % CORE SIZE BQ

PURPOSE: _____

DATE: STARTED September 20/84 END September 22/84

HOLE LOCATION WITH RESPECT TO CLAIMS

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	(MEASURED) DESCRIPTION	RECOVERY %	VISUAL ESTIMATE CCP% BO% M: PY	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
					27.43	28.96	1.52 meters of 98% rock	97% recovery									
					28.96	30.48	1.52 " " 98% rock	98% recovery									
					30.48	32.00	1.61 " " 95% rock	100% recovery									
					32.00	33.53	1.55 " " 98% rock	99% recovery									
					33.53	35.05	1.52 " " 98% rock	98% recovery									
					35.05	36.58	1.52 " " 98% rock	97% recovery									
					36.58	38.10	1.61 " " 95% rock	100% recovery									
					38.10	39.62	1.52 " " 98% rock	98% recovery									
					39.62	41.15	1.52 " " 98% rock	97% recovery									
					41.15	42.67	1.55 " " 98% rock	100% recovery									
					42.67	44.20	1.68 " " 90% rock	99% recovery									
					44.20	45.72	1.57 " " 95% rock	98% recovery									
					45.72	47.24	1.52 " " 98% rock	98% recovery									
					47.24	48.77	1.55 " " 98% rock	99% recovery									
					48.77	50.29	1.61 " " 95% rock	100% recovery									
					50.29	51.82	1.55 " " 98% rock	99% recovery									
					51.82	53.34	1.55 " " 98% rock	100% recovery									
					53.34	54.86	1.60 " " 95% rock	100% recovery									
					54.86	56.39	1.71 " " 90% rock	100% recovery									
					56.39	57.91	1.52 " " 95% rock	99% recovery									
					57.91	59.44	1.71 " " 90% rock	100% recovery									
					59.44	60.96	1.68 " " 90% rock	99% recovery									
					60.96	62.48	1.57 " " 95% rock	98% recovery									
					62.48	64.01	1.63 " " 95% rock	100% recovery									
					64.01	65.53	1.52 " " 98% rock	98% recovery									
					65.53	67.06	1.57 " " 98% rock	100% recovery									
					67.06	68.58	1.61 " " 95% rock	100% recovery									
					68.58	70.10	1.52 " " 98% rock	98% recovery									
					70.10	71.63	1.57 " " 95% rock	97% recovery									
					71.63	73.15	1.57 " " 95% rock	98% recovery									
					73.15	74.68	1.68 " " 90% rock	99% recovery									

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DRILL HOLE GEOLOGIC LOG

DDH84-2

PAGE No. 1 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry	FT	fault	CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

NOTE:
Au in ppb is by Fire Assay and Atomic Absorption. Au in oz/ton is by Fire Assay.

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM BQ
LENGTH: 59.44 meters RECOVERY % CORE SIZE
PURPOSE:
DATE: STARTED September 23,1984 END September 24, 1984

meters	% pyrite	% veins	alteration intensity	fracture intensity	TO
0					
					OVB
4.27	5	<1	8	6	
6.10	5	2½	8	7	
7.62	5	1	8	6	pervasive FT?
9.14	2½	1	8	7	epidote FT?
10.67	5	5	8	8	some bxy FT?
12.19	5	<1	8	8	bxy FT?
13.72	2½	<1	7	5	
15.24	<1	<1	5	4	epidote N weakening alteration
16.76	1	<1	6	4	more bxy, alteration pyrite
18.29	5	2½	7	7	major CB veining
18.54	1	90	8	4	
19.81	2½	50	8	5	
20.73	10	<1	8	7	biotitic xpite FT?
22.00	5	<1	8	7	
22.86	5	5	7	7	major CB veining
24.79	2½	20	8	7	FT?
25.60	5	1	8	6	
27.43	5	5	8	7	biotitic FT?
28.96	5	2½	8	7	
30.48	5	20	8	7	some bigger CB veins
32.99	5	10	8	7	
35.05	5	5	8	6	
36.58	2½	2½	7	8	FT?
37.80	2½	1	7	8	
39.32	2½	1	7	10	FT?
41.00	2½	<1	7	10	less altered
42.52	2½	<1	7	7	
44.20					

FROM	TO	DESCRIPTION
		Alteration and fracture intensities are assigned values from 0 (lowest) to 10(highest). Similarly a 10 point value scale is assigned sometimes to describe sorting, sphericity roundness of clasts.
		Overall impression of the hole:
		There is just one lithology. An andesitic pyroclastic.
		A zone of intense sericite-carbonate-pyrite alteration exists from bedrock surface to the 51.82m depth. This zone is characterized by an average 5% disseminated pyritization and pervasive carbonate and sericite. Rock of this zone is grey coloured and soft. Zones of major carbonate veining exist. The veins are mostly randomly oriented. Several highly fractured zones exist.
		The fresher rock below 51.82m is mainly green coloured. Plagioclase phenocrysts are abundant. Hornblende phenocrysts appear hexagonal in cross section. They are black in unaltered rock and have lighter "crusts" around them when moderately altered.
0	4.27	Overburden
4.27	6.10	Pyrite = 5% Veins = <1% intensity of Alteration = 8, Fractures = 6
		Rock is quite broken, crumbly, soft, porous. Medium grey green colour. Hexagonal cross-section (hornblende) crystals seen. Clastic texture of rock is obvious as some 1cm clasts

VISUAL ESTIMATE

%CP	%BO	%M	%PY

SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	oz/t Au (dupl.)	oz/t Au (2nd pulp)
66017	4.27	6.10	1.83	140	300		
66018	6.10	7.62	1.5	130	220		
66019	7.62	9:14	1.5	210	240		
66020	9.14	10.67	1.5	450	800	.018	
66021	10.67	12.19	1.5	320	280		
66022	12.19	13.72	1.5	300	100		
66024	13.72	15.24	1.5	210	30		
66025	15.24	16.76	1.5	85	65		
66026	16.76	18.29	1.5	220	240		
66027	18.29	18.54	.25	550	280		
66028	18.54	19.81	1.27	450	500		
66029	19.81	20.73	.92	550	600	.015	
66030	20.73	22.00	1.27	305	170		
66031	22.00	22.86	.86	310	190		
66032	22.86	24.79	1.93	700	580	.013	
66033	24.79	25.60	.81	350	680	.018	
66034	25.60	27.43	1.83	>1000	800	.030	
66035	27.43	28.96	1.5	650	1800	.014	
66036	28.96	30.48	1.5	500	540	.005	
66037	30.48	32.99	2.51	500	8200	.225	
66039	32.99	35.05	2.06	310	2100	.051	
66040	35.05	36.58	1.5	450	1700	.040	
66041	36.58	37.80	1.22	450	200		
66042	37.80	39.32	1.5	500	280		
66043	39.32	41.00	1.68	500	420		
66044	41.00	42.52	1.5	160	160		
66045	42.52	44.20	1.68	75	30		
66046	44.20	45.42	1.22	82	45		

GEOLOGICAL BRANCH ASSESSMENT REPORT

12,601

LAC MINERALS LTD
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VANCOUVER, B.C.
V6E 2E9

DRILL HOLE GEOLOGIC LOG

HOLE NUMBER UDH84-2
PAGE No. 2 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry	FT	fault	CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

Note: Au in ppb is by Fire Assay and Atomic Absorption. Au in oz/ton is by fire Assay.

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM BQ
LENGTH: 59.44 meters RECOVERY % CORE SIZE
PURPOSE:
DATE: STARTED September 23,1984 END September 24, 1984

meters	% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %PY	SAMPLE NUMBER	FROM	TO	METRES	ppm Au	ppb Au	Au	Au
44.20	2½	<1	7	7	FT?					66047	45.42	47.09	1.67	70	30	(dupl.)	(2nd pulp)
45.42	2½	<1	7	6				and many smaller rounded clasts are visible.		66048	47.09	48.62	1.5	65	30		
47.09	2½	<1	7	6						66049	48.62	50.47	1.85	70	35		
48.62	2½	<1	7	7				An average of one 2mm carbonate vein per meter. Poor core		66050	50.47	51.82	1.35	7	5		
50.47	2½	<1	7	6	FT?			recovery (<30%).		66051	51.82	53.57	1.75	47	5		
51.82	<1	<1	4	4	Epidote zone					66052	53.57	54.86	1.29	4	5		
53.57	<1	<1	3	2	Unaltered rock			Pyrite is fine and uniformly disseminated.									
54.86	<1	<1	3	2													
59.44	END HOLE					6.10	7.62	Pyrite = 5% Veins = 2½% intensity of Alteration = 8,									
								fractures = 7		HANK	1176	For thin section. Contact at 51.84m					
										HANK	1177	For thin section. Rock at 49.38m					
								Same thing. Broken rock. Clastic texture.		AHNK	1178	For thin section. Rock at 54.92m					
								7.30 to 7.62 is brecciated rock with some more carbonate		HANK	1179	For thin section. Rock at 54.47m					
								veins and 10% pyrite. Very porous, soft, crumbly. Some									
								biotite on fracture surfaces.									
						6.1	11	Pyroclastic texture is apparent									
						7.62	9.14	Pyrite = 5% Veins = 1% intensity of Alteration = 8,									
								fractures = 6									
								Same broken, soft, crumlby, porous. Clastic texture.									
								Hexagonal phenocrysts.									
								At 8.90 are 2mm quartz-carbonate veinlets with 20% pyrite									
								on 1cm selvages.									
								At 8.2 and 8.8m are 2cm carbonate veins. The vein at 8.2m									
								has about 2cm of 10% pyrite on both sides. The veins cut									
								the core axis at 30° and 40° respectively.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 3 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite		
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite		
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone		
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite		
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz		
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite		
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine		
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SH	shear		
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous		
				CL	chlorite	MO	mud seam	TA	talc		
						MO	molybdenum	X	shattered rock		

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM BQ
LENGTH 59.44 meters RECOVERY % CORE SIZE
PURPOSE
DATE STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CPy %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	Au
					8.8	9.0	Minor brecciation									
					9.0	9.24	The rock is very shattered (fracture intensity = 9) and crumbly (fault zone?)									
					8.65	10.45	Rock is epidote coloured. Hexagonal phenocrysts seen.									
					9.14	10.67	Pyrite = 2½% Veins = 1% intensity of Alteration = 8, Fractures = 7									
					10.45	10.67	Rock is shattered(fractured intensity=10). FAult zone?. Two ½cm carbonate veins occur but pyrite is less here.									
					10.67	12.19	Pyrite = 5% Veins = 5% intensity of Alteration = 8, Fractures = 8									
							10.67 to 10.91 is epidote coloured.									
							10.91 to 11.64 rock is very shattered and crumbled.									
							10.69 to 10.73 has a wavy zoned carbonate vein (barren) with higher pyrite concentrated on vein edges. The zoning is similar to veins in trenches. Dark carbonate makes narrow parallel wavy bands in the white carbonate. Biotite on some fracture surfaces.									
					11.40	12.01	Some small carbonate veinlets at random orientations. At 11.68 a 4cm carbonate vein has a narrow 10% pyrite zone around it.									
							A 1cm carbonate vein at 11.40 cuts core axis at 45o									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 4 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kaper	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM BQ
LENGTH: 59.44 meters RECOVERY _____ % CORE SIZE _____
PURPOSE: _____
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Au	ppb Au	Au	Au
					12.01	18.29	The rock is a higher green colour. This is an epidote zone. The rock is harder and less crumbly. Pyrite continues to be disseminated mainly and also concentrated on vein selvages as always.									
							Veining is two or three 2mm carbonate veins per meter. They often contain pyrite. The veins usually cut core axis at 45° ± 20°.									
							This interval resembles DDH84-3 from about 45.7 to 55.3m									
							12.04m shows hexagonal phenocrysts.									
					12.19	13.72	Pyrite = 5% Veins = <1% intensity of Alteration = 8, fractures = 8									
							Crumbly, soft, porous, broken rock continuous to 13.46m									
							12.60 to 13.46m is very shattered rock (fault zone?) with half the core missing.									
							13.46 to 13.72m rock is more coherent. Shearing is evident 45° to core axis.									
							Slightly more pyritic than to 12.19m (but around 5%)									
							Rock appears somewhat brecciated.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 5 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kaper	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE ____ DEPARTURE ____
ELEVATION: COLLAR ____ BOTTOM BQ
LENGTH: 59.44 meters RECOVERY ____ % CORE SIZE ____
PURPOSE: ____
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %PY	SAMPLE NUMBER	FROM	TO	METRES	ppm Au	ppb Au	Au	Au
					13.72	15.24	Pyrite = 2½% Veins = <1% intensity of Alteration = 7,									
							Fractures = 5									
							Hexagonal phenocrysts are abundant. Pyrite peters out									
							gradually to about 14.80m where epidote colour appears									
							pervasive again. At 14.80m is contact with start of a									
							stronger epidote zone.									
							¼cm hexagonal phenocrysts and dark clasts are clear and									
							make up about 50% of the rock.									
							Matrix = 50% Sphericity/Roundness = 5/5									
							Sorting = fairly poor (4)									
							Open framework . Pyrite = <1% since 14.80m.									
							Biotite is apparent on fracture surfaces.									
					15.24	16.76	Pyrite = <1% Veins = <1% intensity of Alteration = 5,									
							Fractures = 4									
							Hexagonal phenocrysts are abundant and dominant texture.									
							Rock is less altered, mineralized, veined, fractured.									
							Epidote alteration is patchy, rock is often greenish									
							purple and then yellow green again.									
							At 16.55m a 3mm quartz vein cuts core axis at 25°. 1cm									
							silicification on both sides of vein but no more pyrite.									
					16.76	18.29	Pyrite = 1% Veins = <1% intensity of Alteration = 6,									
							Fractures = 4									
							Rock is yellow, green epidote coloured.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 6 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CJ	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM BQ
LENGTH: 59.44 meters RECOVERY % CORE SIZE
PURPOSE:
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
							Hexagonal phenocrysts and small dark clasts are abundant and clear.												
							Pyrite is as usual disseminated and concentrated on fracture surfaces.												
					18.29	18.54	Pyrite = 5% Veins = 2½% intensity of Alteration = 7, Fractures = 7												
							Broken rock, Softer. More altered again. More pyrite, especially in fractures. Slight brecciation. Purplish (biotite?)noted.												
							At 18.54m starts a major carbonate vein. The rock at the contact area is 60% vein and 40% wall rock. The wall rock is soft again.												
							Note that the softer rock is more veined and pyritic than the harder rock above in the "epidote zone".												
					18.54	19.81	Pyrite = 1% Veins = 90% intensity of Alteration = 8, Fractures = 4												
							Start of major carbonate veining at 18.54m. Low pyrite % reflects apparent barrenness of vein material. The contact at 18.54m appears to cut core axis at about 45°												
							Wall rocks on vein boundaries and embedded in veins are very pyritic, altered, fratured. The vein material itself is non mineralized, competent, fresh.												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 7 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM BQ
LENGTH: 59.44 meters RECOVERY % CORE SIZE
PURPOSE:
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M:	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	Au
							Light and dark carbonate banding on zoning is faintly evident in vein. At 19.81m the vein is very coarse grained with crystals >3cm width.												
							Presence of occasional wall rocks make a pseudo breccia texture.												
							At 19.44m a 1cm quartz vein cuts a carbonate vein at 80° to core axis. No greater pyrite is associated with the quartz vein. Other spots also have minor quartz veinlets cutting carbonate.												
							No attitude can be measured but small veinlets appear randomly oriented.												
					19.81	20.73	Pyrite = 2½% Veins = 50% Intensity of Alteration = 8, Fractures = 5												
							Again, wall rocks are very pyritic (5%) and altered(8).												
							Veins are relatively barren, fresh, competent.												
							Pseudo breccia is evident.												
							Wall rocks show hexagonal phenocrysts.												
							Some parts of wall rocks are altered to a much darker purplish colour (biotite?)												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 8 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
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GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SI	siliceous
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	Sh	shear
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION COLLAR BOTTOM BQ
LENGTH 59.44 meters RECOVERY % CORE SIZE
PURPOSE
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE CPY BO SM PY	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE METRES	ppm As	ppb Au	Au	Au
							Vein ends at 20.73m . Contact here appears to cut core axis at about 45°.									
					20.73	22.00	Pyrite = 10% Veins =<1% intensity of Alteration = 8, Fractures = 7 Broken, porous, very soft and crumbly rock. Abundant dark purplish (biotite?). Call this a "biotite zone". Breccia is occasionally evident. This may be a fault zone.									
							Hexagonal phenocrysts seen. Small carbonate veinlets cut core axis at around 45°.									
					20.7	23.2	Biotite noted in fractures.									
					22.00	22.86	Pyrite = 5% Veins =<1% intensity of Alteration = 8 Fractures = 7 Still biotite but less.									
							Hexagonal phenocrysts are fairly abundant and clear. Generally the same very broken, soft, crumbly porous rock.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 9 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR LATITUDE ____ DEPARTURE ____
ELEVATION COLLAR ____ BOTTOM BQ
LENGTH 59.44 meters RECOVERY ____ CORE SIZE ____
PURPOSE ____
DATE STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE (Cp, Bo, Mo, Py)	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE METRES	ppm As	ppb Au	Au	Au
					22.86	24.79	Pyrite = 5% Veins = 5% intensity of Alteration = 7									
							Fractures = 7									
							Same biotite still exists patchily.									
							Several carbonate veins throughout are ½ to 1cm wide.									
							Veins cut core angle at odd orientations.									
							Hexagonal phenocrysts seen.									
							Rocks is still quite broken, soft, porous.									
							23.77 to 24.18m is 30% carbonate vein cutting core axis at 25°.									
					24.79	25.60	Pyrite = 2½% Veins = 20% intensity of Alteration = 8,									
							Fractures = 7									
							Several carbonate veins. The biggest is about 15cm and cuts core at 45° at 25.28m. At 24.79m a 2cm wide carbonate vein is parallel to core axis.									
					25.60	27.43	Pyrite = 5% Veins = 1% intensity of Alteration = 8,									
							Fractures = 6									
							25.60 to 25.75m rock is very crumbly, soft, porous, mushy (fault zone?)									
							A ½cm carbonate veinlet at 25.77 cuts core axis at 30°.									
							The rest is typical grey, altered, pyrite soft rock.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER [illegible]
PAGE No. 10 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM BQ
LENGTH: 59.44 meters RECOVERY _____ % CORE SIZE _____
PURPOSE: _____
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M:	%PY	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	Au
					27.43	28.96	Pyrite = 5% Veins = 5% intensity of Alteration = 8, Fractures = 7												
							Broken rock. Occasionally pseudo brecciated by veins.												
							Some biotite on fractures.												
							At 28m a 4cm carbonate vein cuts core axis at 40°. For												
							15cm past there, the rock is very broken (fracture												
							intensity = 9). Fault zone?												
							At 28.34m a 2cm carbonate vein cuts core axis at 70°. A												
							greater than usual amount of biotite exists between these												
							two veins in the broken (fault?) zone.												
							At 28.40m a ¼cm carbonate vein has biotite and pyrite												
							filling fractures on vein edges. Offshooting veinlets												
							from the vein cut this mineralization												
					28.96	30.48	Pyrite = 5% Veins = 2½% intensity of Alteration = 8,												
							Fractures = 7												
							Veins cut core at odd orientations but more are closer to												
							core axis than core normal.												
							Some agglomerate clasts and plagioclase and hexagonal												
							phenocrysts seen.												
							Rock here is fairly typical of hole so far except for												
							slightly more than average veining.												
							Rock is grey, broken, soft.												

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DRILL HOLE GEOLOGIC LOG

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LOGGED BY Rein Turna

DATE October 1984

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M-	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°

COLLAR: LATITUDE DEPARTURE

ELEVATION: COLLAR BOTTOM BQ

LENGTH: 59.44 meters RECOVERY % CORE SIZE

PURPOSE:

DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
					30.48	32.99	Pyrite = 5% Veins = 20% intensity of Alteration = 8, Fractures = 7									
							Nothing very unusual. Some more carbonate veining.									
							Rock appears more shattered and crumbly at 31m and 32m. At 31.70m a 1cm carbonate vein cuts core axis at 45°.									
							31.85 to 32.50m has 60% carbonate vein in a crumbly broken zone. At 32.80m a ½ cm carbonate vein cuts core axis at 30°.									
							Some biotite seen in fractures and occasional pseudo breccia.									
					32.99	35.05	Pyrite = 5% Veins = 10% intensity of Alteration = 8, Fractures = 7									
							Typical grey, altered, pyritic, broken up rock.									
							33.25 to 33.33m has carbonate veins cutting core axis between 0 - 30°. Veins elsewhere are randomly oriented. Some veins cut core axis at 45°. 34.80 - 35.05m has a carbonate vein cutting core axis at 40°. Biotite exists on some fractures.									
					35.05	36.58	Pyrite = 5% Veins = 5% intensity of Alteration = 8, Fractures = 6									
							A couple of 2cm carbonate veining cut core axis at 20° and 15°. Other veinlets cut core axis at 10° to 40°.									
							At 35.23m a ½ cm pinkish carbonate vein cuts core axis at 20°.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 12 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kapar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	molybdenum	TA	talc
								X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM BQ
LENGTH: 59.44 meters RECOVERY % CORE SIZE
PURPOSE:
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	Au
							At 35.53 to 35.71m a carbonate vein's lower contact cuts core axis at 45°.												
							At 36.37 to 36.47 a carbonate vein's lower contact cuts core axis at 45°.												
							Rock is fairly crumbly and soft and as usual medium grey. Hexagonal phenocrysts seen.												
							Pyrite appears to gradually diminish downward.												
							35.20 to 35.69m has a ½cm carbonate vein parallel to core axis.												
							Around 35.85 colour changes from a lighter grey to a darker (less altered) grey.												
					36.58	37.80	Pyrite = 2½% Veins = 2½% intensity of Alteration = 7, Fractures = 8												
							Rock is darker grey. Alteration appears to be decreasing. No major alteration contact has been observed. Things may be petering out gradually.												
							36.78 to 37.27m is very poor core recovery. Very high (10) fracturing intensity. Crumble and powder zone here. Fragments of minor quartz and carbonate veinlets here. Possible fault zone.												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 13 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SI	siliceous
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	Sh	shear
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM BQ
LENGTH: 59.44 meters RECOVERY _____ % CORE SIZE _____
PURPOSE: _____
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M: %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	Au
							37.27 to 37.80m darker grey, altered, more competent rock resumes.									
		1			37.80	39.32	Pyrite = 2½% Veins = 1% intensity of Alteration = 7, Fractures = 8					1				
							Same darker grey, soft rock.									
							38.26 to 38.46m crumble and power zone here.									
							38.53 to 38.76m has carbonate veining cutting core axis at 50°.									
					39.32	41.00	Pyrite = 2½% Veins = 1% intensity of Alteration = 7, Fractures = 10									
							Plagioclase and hexagonal phenocrysts seen. Carbonate veinlets cut core axis at odd orientations.									
					40.20	42.15	A very highly fractured zone. Mostly crumble and powder. Core recovery not good. (Fault zone?)									
					41.00	42.52	Pyrite = 2½% Veins = <1% intensity of Alteration = 7, Fractures = 10									
							Same rock. Mostly crumble and powder.									
					42.52	44.20	Pyrite = 2½% Veins = <1% intensity of Alteration = 7, Fractures = 7									
							The same darker medium grey rock.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 14 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kapar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM BQ
LENGTH: 59.44 meters RECOVERY % CORE SIZE
PURPOSE:
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	Au
							Hexagonal phenocrysts apparent. Clastic texture.									
							Soft, somewhat crumbly rock.									
					42		Rock became somewhat harder and more coherent. Fewer fractures and less crumbly.									
					44.20	45.42	Pyrite = 2½% Veins = <1% intensity of Alteration = 7, Fractures = 7									
							44.95-45.42m another crumble and powder highly fractured (fault?) zone. The rock here is soft, wet, mushy like wet concrete.									
							Soft rock overall. Hexagonal phenocrysts seen.									
					45.42	47.09	Pyrite = 2½% Veins = <1% Intensity of Alteration = 7, Fractures = 6									
							Same typical rock. Nothing unusual.									
							46.02 to 46.33m Somewhat greater fracturing intensity (7) here.									
					47.09	48.62	Pyrite = 2½% Veins = <1% intensity of Alteration = 7, Fractures = 6									
							Same rock.									
							47.40 to 47.85m has higher fracturing.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 15 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM BQ
LENGTH: 59.44 meters RECOVERY _____ % CORE SIZE _____
PURPOSE: _____
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M:	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	Au
							Several other narrow spots of broken rock.												
							48.5 to 48.6m the rock is soft, wet, mushy like wet concrete.												
					48.62	50.47	Pyrite = 2½% Veins = <1% intensity of Alteration = 7, Fractures = 7												
							Same typical rock.												
							49.50 to 50.53m is somewhat more broken up where shearing shows cutting core axis at 80°. (Fault?)												
					50.47	51.82	Pyrite = 2½% Veins = <1% intensity of Alteration = 7, Fractures = 6												
							Same typical rock. Some greenish epidote patches. Hexagonal phenocrysts show. Black (hornblende!) Phenocrysts show.												
							Rock is harder.												
					51.82	53.57	Pyrite = <1% Veins = <1% intensity of Alteration = 4, Fractures = 4												
							Major alteration contact exists at 51.82m. A fault here, shattered rock on lower side. Rock from this point is decidedly epidote coloured. Say the Epidote Zone is this interval.												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 16 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SI	siliceous
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	Sh	shear
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM BQ
LENGTH: 59.44 meters RECOVERY % CORE SIZE
PURPOSE:
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE METRES	ppm Au	ppb Au	Au	Au
							Black 1cm long phenocrysts of hexagonal cross section are hornblende. (Thus previous hexagonal phenocrysts were likely altered hornblende).									
							The contact at 51.82m cuts the core axis at 45° and is marked by a 2mm carbonate vein.									
					53.57	54.86	Pyrite = <1% Veins = <1% intensity of Alteration = 3, Fractures = 2									
							Rock is purplish green now. Fresh, unaltered looking. Black hornblended phenocrysts are abundant and obvious now and have hexagonal cross sections.									
							At 54.40m take sample for thin section. (HANK 1179). Piece shows a 2cm long hexagonal hornblende crystal.									
							At 54.86 minor (opal?) veinlets exist.									
					54.86	59.44	Pyrite = <1% Veins = <1% intensity of Alteration = 3, Fractures = 2									
							Same unaltered rock as above.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER UUH84-2
PAGE No. 17 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE ____ DEPARTURE ____
ELEVATION: COLLAR ____ BOTTOM BQ
LENGTH: 59.44 meters RECOVERY ____ % CORE SIZE ____
PURPOSE: ____
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%PY	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	Au
					0	10.90	Box 1												
					10.90	19.08	Box 2												
					19.08	26.16	Box 3												
					26.16	34.39	Box 4												
					34.39	41.55	Box 5												
					41.55	48.95	Box 6												
					48.95	56.18	Box 7												
					56.18	59.44	Box 8												

MARKERS		(measured)	Recovery %
0	6.10	2.39 meters of 75% rock	29
6.10	7.62	1.68 " " 90% rock	99
7.62	9.14	1.52 " " 80% rock	80
9.14	10.67	1.57 " " 90% rock	92
10.67	12.19	1.30 " " 90% rock	77
12.19	13.72	.99 " " 90% rock	58
13.72	15.24	1.57 " " 95% rock	98
15.24	16.76	1.60 " " 95% rock	100
16.76	18.29	1.52 " " 95% rock	94
18.29	19.81	1.61 " " 95% rock	100
19.81	21.34	1.47 " " 90% rock	96
21.34	22.86	1.63 " " 90% rock	97
22.86	24.38	1.65 " " 90% rock	98
24.38	25.91	1.55 " " 90% rock	91
25.91	27.43	0.56 " " 90% rock	33
27.43	28.96	1.65 " " 90% rock	97
28.96	30.48	1.68 " " 90% rock	99
30.48	32.00	.99 " " 80% rock	52

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-2
PAGE No. 18 OF 18
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SI	siliceous
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	Sh	sheer
				CL	chlorite	MO	molybdenum	TA	talc
								X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM BQ
LENGTH: 59.44 meters RECOVERY _____ % CORE SIZE _____
PURPOSE: _____
DATE: STARTED September 23,1984 END September 24, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M:	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	Au
					MARKERS		(measured) Recovery %												
					32.00	33.53	1.75 meters of 80% rock 92												
					33.53	35.05	1.63 meters of 80% rock 86										1		
					35.05	36.58	1.60 " " 90% rock 94												
					36.58	37.80	1.70 " " 80% rock 100												
					37.80	39.32	1.70 " " 90% rock 100												
					39.32	41.00	1.68 " " 80% rock 80												
					41.00	42.52	1.63 " " 80% rock 86												
					42.52	44.20	1.68 " " 90% rock 90												
					44.20	45.42	.94 " " 90% rock 69												
					45.42	47.09	1.55 " " 95% rock 88												
					47.09	48.62	1.60 " " 95% rock 95												
					48.62	50.29	1.63 " " 90% rock 88												
					50.29	51.82	1.65 " " 90% rock 97												
					51.82	53.34	1.50 " " 95% rock 94												
					53.34	54.86	1.68 " " 90% rock 99												
					54.86	56.39	1.52 " " 95% rock 94												
					56.39	57.91	1.52 " " 95% rock 95												
					57.91	59.44	1.52 " " 95% rock 94												

#470-1055 West Hastings Street
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DRILL HOLE GEOLOGIC LOG DDH84-3

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

PAGE No. 1 OF --
LOGGED BY Rein Turna
DATE October 1984

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 94.49 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 25, 1984 END September 30, 1984

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

Note:
Au in ppb is by Fire Assay and Atomic Absorption.

Au in oz/ton is by Fire Assay.

0 meters	% pyrite	% veins	Alteration intensity	Fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M: %Py
12.19					OVB				
13.72	2½	1	8	7				Alteration and fracture intensities are assigned values	
15.24	5	<1	8	6				from 0 (lowest) to 10 (highest). The same value scale is	
17.07	5	1	8	6				used occasionally to describe other parameters such as	
18.29	2½	30	8	6	FP			sorting.	
19.81	5	<1	8	6					
21.34	5	<1	8	6				Overall impression of the hole:	
22.86	5	<1	8	6				There is just one lithology. An andesitic pyroclastic. A	
24.38	5	1	8	6				zone of intense sericite-carbonate-pyrite alteration exists	
25.91	5	2½	8	6				from bedrock surface to about 80.4m depth. This zone is	
27.43	5	2½	8	7				characterized by an average 5% disseminated pyritization	
28.96	5	2½	8	6				and pervasive carbonate and sericite. Rock of this zone	
30.48	5	2½	8	6	some brxy			is grey coloured and soft. Higher gold values appear	
32.00	5	2½	8	6				associated with greater carbonate veining in the alteration	
33.53	5	1	8	6	some			zone.	
35.05	5	<1	8	7	epidote				
36.58	5	2½	8	7				Plagioclase crystals are abundant. Hornblende phenocrysts	
38.10	5	2½	8	7				appear hexaconal in cross section. They are black in	
39.62	5	1	8	9				unaltered rock and have lighter "crusts" around them when	
41.15	5	1	8	7				moderately altered.	
42.67	5	1	8	6					
44.20	5	2½	8	5		0	12.19	Overburden	
45.72	5	2½	7	5					
47.47	2½	<1	7	4		12.19	13.72	Pyrite = 2½% Veins = 1% intensity of Alteration = 8,	
49.15	2½	10	8	7	epidote			Fractures = 7	
50.60	2½	1	7	6				12.19 to 12.50 is a highly fractured (9) crumble and powder	
52.12	<1	<1	2	4	weakly altered			zone which may represent intense weathering or possibly a	
53.64	1	<1	4	5	epidote			fault zone. NOTE: No gossan.	
55.17	2½	5	8	7	CB+QZ veins				
57.00	2½	1	7	6	some brxy			Light coloured hexagonal phenocrysts show.	

Ser-CB-Py Alteration Zone from 12.19 to 80.4 m

SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au (1st pulp)	oz/ton Au (Duln.)	oz/ton Au (2nd pulp)	oz/ton Ag
66053	12.19	13.72	1.5	160	45			
66054	13.72	15.24	1.5	22	5			
66055	15.24	17.07	1.83	90	180			
66056	17.07	18.29	1.22	210	280			
66057	18.29	19.81	1.5	58	45			
66058	19.81	21.34	1.5	35	20			
66059	21.34	22.86	1.5	35	15			
66060	22.86	24.38	1.5	22	35			
66061	24.38	25.91	1.5	65	80			
66062	25.91	27.43	1.5	90	260			
66063	27.43	28.96	1.5	95	500			
66064	28.96	30.48	1.5	170	400			
66065	30.48	32.00	1.5	220	240			
66066	32.00	33.53	1.5	90	70			
66067	33.53	35.05	1.5	53	25			
66068	35.05	36.58	1.5	90	200			
66069	36.58	38.10	1.5	250	380			
66070	38.10	39.62	1.5	120	100			
66071	39.62	41.15	1.5	210	190			
66072	41.15	42.67	1.5	140	95			
66073	42.67	44.20	1.5	250	160			
66074	44.20	45.72	1.5	180	220			
66075	45.72	47.47	1.75	57	50			
66076	47.47	49.15	1.68	350	380			
66077	49.15	50.60	1.45	160	45			
66078	50.60	52.12	1.5	65	5			
66079	52.12	53.64	1.5	140	240			
66080	53.64	55.17	1.5	380	780	.023		

GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,594

#470-1055 West Hastings Street
Vancouver, B.C. V6E 2E9

DRILL HOLE GEOLOGIC LOG

DDH 84-3

PAGE No. 6 OF 6

LOGGED BY Rein Turna

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ] DATE October 1984

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°

COLLAR: LATITUDE DEPARTURE

ELEVATION: COLLAR BOTTOM

LENGTH: 94.49 meters RECOVERY % CORE SIZE BQ

PURPOSE:

DATE: STARTED September 25, 1984 END September 30, 1984

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	grawacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kaper	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

Note:
Au in ppb is by Fire Assay and Atomic absorption.
Au in oz/ton is by Fire Assay.

meters TO	% pyrite	% veins	alteration intensity	fracture intensity		FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py
51.80	2½	1	7	5					
53.41	2½	<1	7	6	weaker alteration here	12.19	17	Clastic nature of the rock is often evident. 1 cm or	
59.44	2½	<1	5	5				bigger clasts often show. This is an agglomerate.	
60.96	2½	<1	5	5					
62.18	2½	2½	6	4	epidote	12.19	40	Grey, soft crumbly rock	
64.01	2½	2½	6	4	epidote			Sphericity/roundness = 5/5	
65.53	2½	2½	6	5	CB veins			Sorting = 5 (poor)	
67.51	2½	2½	6	5	CB veins			Fine fraction grain size = 3 (fine sand)	
67.92	2½	2½	6	5	CB veins			Coarse fraction grain size = 6 (up to small pebble)	
68.58	5	2½	7	5	CB veins			% coarse fraction = 30%	
70.10	5	2½	7	5	CB veins			(see Geolog System)	
70.84	1	90	8	4	CB veins				
71.93	2½	1	7	5					
73.15	1	2½	6	4		13.72	15.24	Pyrite = 5% Veins = <1% intensity of Alteration = 8,	
74.52	2½	20	7	5	CB veins			Fractures = 6	
76.20	5	2½	7	5				Typical light grey altered rock. Some dark agglomerate	
77.72	5	2½	7	5				clasts visible. Soft, slightly crumbly.	
78.79	2½	80	7	5	CB veins				
79.99	5	<1	7	6		15.24	17.07	Pyrite = 5% Veins = 1% intensity of Alteration = 8,	
80.37	1	1	5	5	epidote			Fractures = 6	
81.78	<1	<1	3	3	weakly altered			Same typical rock.	
83.82	1	1	3	3				At 15.85m a 4cm carbonate vein cuts core axis at 55°	
85.77	1	5	4	3	epidote			At 16.64m a ½cm carbonate vein cuts core axis at 45°	
86.87	1	2½	5	4					
89.31	<1	<1	3	3	weak alt.				
89.92	5	2½	7	4	Ser-CB-Py altered	17	24	Agglomerate clasts of ½cm to 2cm continue to be evident.	
91.82	<1	<1	3	3	weakly			The rock continues soft and crumbly.	
92.64	1	<1	3	3	altered				
94.49	END HOLE				altered	17.07	18.29	Pyrite = 2½% Veins = 30% intensity of Alteration = 8,	
								Fractures = 6	
								Pyrite average is down because of increase in apparently barren carbonate veining. Wall rock is biotite altered adjacent to veins.	

Ser-CB-Py Alteration Zone, FT's — greater alteration — decreasing alteration — end of Ser-CB-Py Alteration

SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au (1st pulp)	oz/ton Au (dup.)	oz/ton Au (2nd pulp)	oz/ton Ag
66080	53.64	55.17	1.5	380	780	.023		
66081	55.17	57.0	1.83	205	320			
66082	57.0	57.91	.91	95	220			
66083	57.91	59.44	1.5	140	100			
66084	59.44	60.96	1.5	130	110			
66085	60.96	62.18	1.22	170	75			
66086	62.18	64.01	1.83	170	260			
66087	64.01	65.53	1.5	140	100			
66088	65.53	67.51	1.98	320	1250	.010		
66089	67.51	67.92	.41	380	320			
66090	67.92	68.58	.66	850	440			
66091	68.58	70.10	1.5	500	280			
66092	70.10	70.84	.74	500	220			
66093	70.84	71.93	1.09	280	150			
66094	71.93	73.15	1.22	500	130			
66095	73.15	74.52	1.37	450	130			
66096	74.52	76.20	1.68	850	680	.024	.019	.12
66097	76.20	77.72	1.5	850	380			
66098	77.72	78.79	1.07	750	420			
66099	78.79	79.99	1.20	330	320			
66100	79.99	80.37	.38	800	280			
66101	80.37	81.78	1.41	600	140			
66102	81.78	83.82	2.04	41	5			
66103	83.82	85.77	1.95	36	10			
66104	85.77	86.87	1.10	650	520	.021	.014	.07
66105	86.87	89.31	2.44	650	280			
66106	89.31	89.92	.61	210	50			
66107	89.92	91.82	1.90	>1000	800	.026	.019	.09
66108	91.82	92.64	.82	600	240			
66109	92.64	94.49	1.85	220	60			

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 3 OF 19
LOGGED BY Rein Turna
DATE October 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH 94.49 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	oz/t Au	oz/t Au	oz/t Ag
							18.19 to 18.29m has very crumbly mush or gouge (fault?)													
					18.29	19.81	Pyrite = 5% Veins = <1% intensity of Alteration = 8 Fractures = 6													
							Typcial wall rocks. Light grey. Hexagonal phenocrysts sometimes seen. Clastic texture.													
					19.81	21.34	Pyrite = 5% Veins = <1% intensity of Alteration = 8, Fractures = 6													
							Same as above.													
					21.34	22.86	Pyrite = 5% Veins = <1% intensity of Alteration = 8, Fractures = 6													
							Same stuff. Some dark 1cm agglomerate clasts.													
					22.86	24.38	Pyrite = 5% Veins = 1% intensity of Alteration = 8 Fractures = 6													
							Some small hexagonal phenocrysts													
							At 23.63m is a ¼cm quartz vein cutting core axis at 65°.													
							Other carbonate veinlets in the same vicinity cut core axis at 50°.													
					24.38	25.91	Pyrite = 5% Veins = 2½% intensity of Alteration = 8, Fracutures = 6													
							At 24.80m a 5cm carbonate vein cuts core axis at 80°.													
							Adjacent to the vein is a dark (biotite) alteration.													
							At 25.0 and 25.9m are 3cm carbonate veins cutting core at approximately core normal. These veins exhibit a wavy zoning pattern noted in veins in the trenches.													

#470-1055 West Hastings Street
Vancouver, B.C. V6E 2E9

DRILL HOLE GEOLOGIC LOG

PAGE No. 4 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH 94.49 meters RECOVERY % CORE SIZE BQ
PURPOSE
DATE STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE F-CP-BO-MM-Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	oz/t Au	oz/t Au	oz/t Ag
					25.91	27.43	Pyrite = 5% Veins = 2½% intensity of Alteration = 8										
							Fractures = 7										
							The rock is quite broken, soft, crumbly and mushy in here.										
							Core recovery is poor.										
					27.43	28.96	Pyrite = 5% Veins = 2½% intensity of Alteration = 8										
							Fractures = 6										
							Typical light grey, pyritic, soft, broken rock.										
							Agglomerate clasts seen.										
					28.96	30.48	Pyrite = 5% Veins = 2½% intensity of Alteration = 8,										
							Fractures = 6										
							Same as above. Nothing unusual. Some (biotite?) on										
							fractue surfaces. Some brecciation.										
					30.48	32.00	Pyrite = 5% Veins = 2½% intensity of Alteration = 8,										
							Fractures = 6										
							Same as above. Nothing unusual. Some Brecciation.										
					24.38	32.00	Note somewhat greater veins % (2½%) and somewhat more										
							prevasive carbonate alteration. The light colour of the										
							rock may be due to more carbonate present.										
					32.00	33.53	Pyrite =5% Veins = 1% intensity of Alteration = 8,										
							Fractures = 6										
							Same stuff. Light grey colour. Agglomerate clasts noted.										
							Some fractures show dark (biotite?) on surfaces around 33.1m.										
					32	35	Rock is harder. Big agglomerate clasts(up to 10cm) are epidotized.										

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER [illegible]
PAGE No. 5 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kaper	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE ____ DEPARTURE ____
ELEVATION: COLLAR ____ BOTTOM ____
LENGTH: 94.49 meters RECOVERY ____ % CORE SIZE BQ
PURPOSE: ____
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	oz/t Au	oz/t Au	oz/t Ag
					33.53	35.05	Pyrite = 5% Veins = <1% intensity of Alteration = 8, Fractues = 7 Some patches of epidote noted.										
					35.05	36.58	Pyrite = 5%, Veins = 2½% intensity of Alteration = 8, Fractures = 7 Rock is softer and more crumbly in places. Of note are two 4cm carbonate veins from 36.05 to 36.17 with dark biotitized rock adjacent. These veins cut core at core normal. Another narrow biotite zone exists at 35.20m										
					36.58	38.10	Pyrite = 5% Veins = 2½% intensity of Alteration = 8, Fractures = 8 Very crumbly and mushy rock.										
					38.10	39.62	Pyrite = 5% Veins = 1% Intensity of Alteration = 8, Fractures = 9 Very crumbly and mushy rock.										
					39.62	41.15	Pyrite = 5% Veins = 1% intensity of Alteration = 8, Fractures = 7 Rock continues to be very broken, soft, grey, porous. Very crumbly and powdered zone ends around 40.2m										
					41.15	42.67	Pyrite = 5% Veins = 1% intensity of Alteration = 8, Fractues = 6 Typical altered, pyritic grey rock. Nothing unusual. Hexagonal phenocrysts seen.										

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH87-6
PAGE No. 6 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM _____
LENGTH: 94.49 meters RECOVERY _____ % CORE SIZE BQ
PURPOSE: _____
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	Alteration intensity	Fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M:	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	oz/t Au	oz/t Ag
					42.67	44.20	Pyrite = 5% Veins = 2½% intensity of Alteration = 8,													
							Fractures = 5													
							Hexagonal phenocrysts seen. Most of this section is													
							occupied by a ½cm carbonate vein running parallel to core													
							axis.													
					44.20	45.72	Pyrite = 5% Veins = 2½% intensity of Alteration = 7,													
							Fractures = 5													
							An alteration contact occurs at around 44.75m.													
							The contact cuts the core axis at around 45°, beyond which													
							the rock is a darker grey colour. The rock beyond 44.75m													
							is more competent and less fractured.													
							44.40 to 44.70m has random oriented carbonate veinlets with													
							attendant biotitization of wall rocks. Some open spaces													
							around 44.50 are filled by calcite crystals.													
							Hexagonal phenocrysts are abundant and clear.													
					45.72	47.47	Pyrite = 2½% Veins = <1% intensity of Alteration = 7,													
							Fractures = 4													
							Slightly harder rock. Clastic texture and hexagonal													
							phenocrysts are clear.													
					46.80	47.90	Broken and crumbly.													
					47.47	49.15	Pyrite = 2½% Veins = 10% intensity of Alteration = 8,													
							Fractures = 7													
							Rock is generally more broken with veins cutting at odd													
							angles.													

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 1 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	molybdenum	TA	talc
						MD	mud seam	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 94.49 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	Intensity alteration	Intensity fracture	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	oz/t Au	oz/t Au	oz/t Ag
							The rock is harder and light greyish green in colour													
							Hexagonal phenocrysts are prominent and abundant.													
							Between the veins the rock is soft and wet as like wet													
							concrete. These may represent small (fault?) gouge zones.													
							Wall rocks are still 5% pyritic.													
					49.15	50.60	Pyrite = 2½% Veins = 1% intensity of Alteration = 7													
							Fractures = 6													
							48.90 to 50.39m is epidote green zone.													
					50.60	52.12	Pyrite = <1% Veins = <1% intensity of Alteration = 2,													
							Fractures = 4													
							Fine grained dark grey rock. Looks somewhat like a dyke													
							rock but it is the same volcanic as always. This is not													
							a dyke.													
							Black Hexgonal hornblende phenocrysts have a white "Crust"													
							on outsides. Other hornblendes are more altered.													
					52.12	53.64	Pyrite = 1% Veins = <1% intensity of Alteration = 4,													
							Fractures = 5													
							Same weakly altered rock. More epidotized patches exist													
							here, which are accompanied by slightly more pyrite.													

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 8 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	Si	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Lisel (6) Creek AZIM 315° DIP -45°
COLLAR LATITUDE ____ DEPARTURE ____
ELEVATION COLLAR ____ BOTTOM ____
LENGTH 94.49 meters RECOVERY ____ % CORE SIZE BQ
PURPOSE ____
DATE STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%PY	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	oz/t Au	oz/t Ag
					50.60	53.64	Greenish, hard, fresher, more competent. Colour is generally due to chlorite except for epidote patches.					1							
							Many black hornblende phenocrysts are obvious. Some hexagonal cross sections and an alteration "crust" on outer surfaces. Many plagioclase crystals show.												
							Texture is porphyritic. Framework is open.												
							Sorting = 5 Sphericity Roundness = 5/5 Grain size = 5 (See Geolog System)												
					53.64	55.17	Pyrite = 2½% Veins = 5% intensity of Alteration = 8, Fractures = 7 Crumbly broken rock accompanies carbonate veining at 54.74 to 55.17m. Some quartz veining, here also. Pseudo breccia associated with veining in this interval.												
							Rock is darker due to biotitization near veins.												
							The veins cut core at odd angles, from core normal to 30° to core axis. At 53.64m a 1cm carbonate vein cuts core at core normal.												
					55.17	57.00	Pyrite = 2½% Veins = 1% intensity of Alteration = 7, Fractures = 6												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 9 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM _____
LENGTH: 94.49 meters RECOVERY _____ % CORE SIZE BQ
PURPOSE: _____
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M:	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	oz/t Au	oz/t Ag
							Hexagonal phenocrysts seen. A couple of carbonate veinlets parallel the core axis. Others cut core at odd orientations.												
					57.00	57.91	Pyrite = 2½% Veins = 1% intensity of Alteration = 7, Fractures = 6 Generally same as above.												
					57.91	59.44	Pyrite = 2½% Veins = <1% intensity of Alteration = 6, Fractures = 5 Same as above. Hexagonal phenocrysts show. Agglomerate clasts are apparent.												
					50.39		Mineralization, veins and alteration appear to be slowly petering out since around 50.60m except for relatively minor ups at 53.64 to 55.17m												
					59.44	60.96	Pyrite = 2½% Veins = <1% intensity of Alteration = 5, Fractures = 5 Hexagonal phenocrysts and agglomerate clasts noted. Mineralization and alteration continue to peter out gradually.												
					60.96	62.18	Pyrite = 2½% Veins = <1% intensity of Alteration = 5, Fractures = 5 Same rock as above. Rock is quite broken up at 61.60 to 61.70m												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 10 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SI	siliceous
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SH	shear
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR LATITUDE ____ DEPARTURE ____
ELEVATION COLLAR ____ BOTTOM ____
LENGTH 94.49 meters RECOVERY ____ % CORE SIZE BQ
PURPOSE ____
DATE STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE P-CP %BO %M P:Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	oz/t Au	oz/t Ag
					62.18	64.01	Pyrite = 2½% Veins = 2½% intensity of Alteration = 6, Fractures = 4									
							Some ¼cm wide carbonate veins cut core axis at 45° to 90° range.									
							Grey coloured rock ends around 62.2m									
							From 62.2m the rock is lighter and more green (from epidote)									
					64.01	65.53	Pyrite = 2½% Veins = 2½% intensity of Alteration = 6, Fractures = 4									
							Same as above. Carbonate veinlets cut core axis in the 45° to 90° range. Biggest vein is ½cm width.									
							Colour of the rock is patchily grey or epidote green.									
					65.53	67.51	Pyrite = 2½% Veins = 2½% intensity of Alteration = 6, Fracture = 5									
							Epidote alteration continues pathcy but is more abundant here than in previous section.									
							At 66.30m is a 2cm wide carbonate vein of indeterminable orientation.									
							At 67.06m is a narrow gouge (fault?) zone.									
							Otherwise nothing unusual or special here.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 11 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SI	siliceous
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	Sh	shear
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM _____
LENGTH 94.49 meters RECOVERY _____ % CORE SIZE BQ
PURPOSE _____
DATE STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE (CP, BO, M, PY)	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE METRES	ppm As	ppb Au	oz/t Au	oz/t Au	oz/t Ag
					67.51	67.92	Pyrite = 2½% Veins = 60% intensity of Alteration = 8, Fractures = 6 Carbonate veining cuts core axis at 70° and at other odd orientations.										
					67.92	68.58	Pyrite = 2½% Veins = 5% intensity of Alteration = 7, Fractures = 6 68.22m to 68.58m rock is broken and crumbly.										
							Otherwise typical. 67.92 to 68.25m ½ to 1cm carbonate veins are oriented 45° to 65° to core axis.										
					65.5		Note: Alteration has been generally up again, increasing gradually.										
					68.58	70.10	Pyrite = 5% Veins = 2½% intensity of Alteration = 7, Fractues = 5 Carbonate veinlets cut core at odd orientations. Angles of 15°, 45°, 60° noted.										
					70.10	70.84	Pyrite = 5% Veins = 2½% intensity of Alteration = 7, Fractures = 5 Same as above.										
					70.84	71.93	Pyrite = 1% Veins = 90% intensity of Alteration = 8, Fractures = 4 Major carbonate vein here. Boundaries with wall rock cut core axis at 10° to 40°.										

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 12 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM 315° DIP -45°
COLLAR: LATITUDE ____ DEPARTURE ____
ELEVATION: COLLAR ____ BOTTOM ____
LENGTH: 94.49 meters RECOVERY ____ % CORE SIZE BQ
PURPOSE ____
DATE STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE C CP BO SM PY	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE METRES	ppm As	ppb Au	oz/t Au	oz/t Ag
					71.93	73.15	Pyrite = 2½% Veins = 1% intensity of Alteration = 7, Fractures = 5 Carbonate veinlets as usual are at odd orientations.									
					72.8	74.4	The hornblende phenocrysts are small and faintly apparent.									
					73.15	74.52	Pyrite =1% Veins = 2½% intensity of Alteration = 6, Fractures = 4 Pyrite and alteration decreasing slowly. Carbonate veinlets cut core axis at 30° to 45° mostly.									
					74.52	76.20	Pyrite = 2½% Veins = 20% intensity of Alteration = 7, Fractures = 5 Most carbonate vein contacts are 25° 35°. The veins here are generally larger (2cm width) than usual. Plagioclase and hexagonal (hornblende) phenocrysts exist.									
					76.20	77.72	Pyrite = 5% Veins = 2½% intensity of Alteration = 7, Fractures = 5 Several carbonate veinlets cut core axis at 25° to 45° to core axis. 77.42 to 77.72m a 1cm carbonate vein parallels core axis.									
					77.72	78.79	Pyrite = 5% Veins = 2½% intensity of Alteration = 7, Fractures = 5 Same as above. Some veins show pyrite concentrated on bands within the vein and parallel to wall rock boundary.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 13 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 94.49 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	Au	oz/t Au	oz/t Ag
					78.79	79.99	Pyrite = 2½% Veins = 80% intensity of Alteration = 7,										
							Fractures = 5										
							Carbonate veinlets tend to cut core axis at 45° in this										
							section.										
							79.17 to 79.45m a carbonate veinlet cuts core axis at 10°.										
							78.79 to 79.25m a carbonate veinlet cuts core axis at 25°										
							to 35°.										
							At 80.0m a carbonate veinlet cuts core axis at 60°.										
					79.99	80.37	Pyrite = 5% Veins = <1% intensity of Alteration = 7,										
							Fractures = 6										
							Back again to average typical altered wall rock.										
					80.37	81.78	Pyrite = 1% Veins = 1% intensity of Alteration = 5,										
							Fractures = 5										
							Pyrite and alteration diminishing fast. Epidote zone.										
							Light yellow green. Blends sharply into darker green										
							chlorite zone below.										
							This epidote zone is characterized by decreased pyrite,										
							veins, alteration, fracturing.										
							Dendritic MnO_2 lines fractures at 80.5m										

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 14 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 94.49 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	oz/t Au	oz/t Au	oz/t Ag
					81.78	83.82	Pyrite = <1% Veins = <1% intensity of Alteration = 3,										
							Fractures = 3										i
							Fresh rock. Dark green clorite zone. Small black hexa-										
							gonal (hornblende) phenocrysts and small white plagioclase										
							are apparent.										
							Much less pyrite. Fine grained. Pyrite tends to be										
							concentrated on veinlet boundaries and fracture surfaces.										
							This section is similar to 50.39 to 53m										
					83.82	85.77	Pyrite = 1% Veins = 1% intensity of Alteration = 3,										
							Fractures = 3										
							Same fresh weakly altered rock as above.										
							Carbonate veinlets usually cut core axis at around 45°.										
							Almost all pyrite is adjacent to veins.										
					85.77	86.87	Pyrite = 1% Veins = 5% intensity of Alteration = 4,										
							Fractures = 3										
							Slightly more pyritic and alteration due to several ½cm										
							carbonate veins cutting core axis at 20° to 50°.										
							At 86.41m a 1cm quartz vein cuts core axis at 45°. Pyrite										
							is concentrated in selvages to this vein and at fractures										
							here. A 1cm carbonate vein cuts the quartz vein. The										
							carbonate vein is 20° to core axis. This vein has less										
							pyrite on selvages than the quartz vein.										
							The rock is lighter coloured again. Epidotized.										

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DRILL HOLE GEOLOGIC LOG

LOGGED BY Rein Turna

DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°

COLLAR: LATITUDE _____ DEPARTURE _____

ELEVATION: COLLAR _____ BOTTOM _____

LENGTH: 94.49 meters RECOVERY _____ % CORE SIZE BQ

PURPOSE: _____

DATE: STARTED September 25, 1984 END September 30, 1984

HOLE LOCATION WITH RESPECT TO CLAIMS

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite		
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite		
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone		
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite		
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz		
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite		
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine		
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear		
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous		
				CL	chlorite	MD	mud seam	TA	talc		
						MO	molybdenum	X	shattered rock		

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	oz/t Au	oz/t Ag
					86.87	89.31	Pyrite = 1% Veins = 2½% intensity of Alteration = 5 Fractures = 4 Same as above. Epidote coloured. Carbonate veins cut core axis at 45° ± 20°.									
					89.31	89.92	Pyrite =<1% Veins = <1% intensity of Alteration = 3, Fractures = 3 Relatively unaltered fresh rock. Small black (hornblende) and white (pagioclase) phenocrysts exist.									
							Darker chloritic zone again.									
					89.92	91.82	Pyrite = 5% Veins = 2½% intensity of Alteration = 7, Fractures = 4 Light grey rock. Carbonate veinlets tend to be about ½cm width and most cut the core axis at 25° to 40°. Some epidote.									
					91.82	92.30	Pyrite = 5 Veins 2½% intensity of Alteration = 7, Fractures = 4 Same as above.									
					92.30	92.64	Pyrite = <1% Veins = <1% intensity of Alteration = 3, Fractures = 3 Alteration boundary at 92.30m Fresh rock again.									
					92.64	94.49	Pyrite = 1% Veins = <1% intensity of Alteration = 3 Fractures = 3									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 16 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE ____ DEPARTURE ____
ELEVATION: COLLAR ____ BOTTOM ____
LENGTH: 94.49 meters RECOVERY ____ % CORE SIZE BQ
PURPOSE: ____
DATE: STARTED September 25, 1984 END September 30, 1984

HOLE LOCATION WITH RESPECT TO CLAIMS

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

% pyrite	% veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	oz/t Au	oz/t Au	oz/t Ag
							Purplish grey rock continues to 94.26m										
							94.26 to 94.49 is grey, altered (6), pyritic (2½%)										
							rock again.										

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 17 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 94.49 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	Alteration intensity	Fracture intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M: %Py	SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	Au	oz/t Au	oz/t Ag
					0	17.19	Box 1										
					17.19	24.48	Box 2										
					24.48	32.18	Box 3										
					32.18	39.62	Box 4										
					39.62	46.86	Box 5										
					46.86	54.51	Box 6										
					54.51	61.54	Box 7										
					61.54	68.71	Box 8										
					68.71	75.79	Box 9										
					75.79	83.01	Box 10										
					83.01	90.12	Box 11										
					90.12	94.49	Box 12										
					Markers		(measured)										Recovery %
					0	8.23	.76 meters of 50% rock										5%
					8.23	9.14	.63 meters of 60% rock										42%
					9.14	10.67	.30 meters of 60% rock										12%
					10.67	12.19	.51 " " 50% rock										17%
					12.19	13.72	1.47 " " 75% rock										72%
					13.72	15.24	1.55 " " 95% rock										97%
					15.24	16.76	1.60 " " 95% rock										100%
					16.76	18.29	1.32 " " 95% rock										82%
					18.29	19.81	1.70 " " 90% rock										100%
					19.81	21.34	1.70 " " 90% rock										100%
					21.34	22.86	1.55 " " 95% rock										97%
					22.86	24.38	1.52 " " 95% rock										95%
					24.38	25.91	1.52 " " 95% rock										94%
					25.91	27.43	1.07 " " 90% rock										63%

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 18 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kaper	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM _____
LENGTH: 94.49 meters RECOVERY _____ % CORE SIZE BQ
PURPOSE: _____
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	alteration intensity	fracture intensity	TO	FROM	TO	DESCRIPTION	Recovery %
					Markers		(Measured)	
					27.43	28.96	1.61 meters of 95% rock	100%
					28.96	30.48	1.60 meters of 95% rock	100%
					30.48	32.00	1.45 meters of 95% rock	91%
					32.00	33.53	1.55 meters of 98% rock	99%
					33.53	35.05	1.52 meters of 98% rock	98%
					35.05	36.58	1.60 " " 95% rock	99%
					36.58	38.10	1.27 " " 95% rock	79%
					38.10	39.62	1.63 " " 95% rock	97%
					39.62	41.15	1.52 " " 90% rock	89%
					41.15	42.67	1.60 " " 95% rock	95%
					42.67	44.20	1.52 " " 95% rock	94%
					44.20	45.72	1.52 " " 95% rock	95%
					45.72	47.24	1.60 " " 95% rock	100%
					47.24	48.77	1.55 " " 90% rock	91%
					48.77	50.29	.97 " " 80% rock	51%
					50.29	51.82	1.52 " " 90% rock	89%
					51.82	53.34	1.60 " " 95% rock	100%
					53.34	54.86	1.57 " " 95% rock	98%
					54.86	56.39	1.63 " " 95% rock	100%
					56.39	57.91	1.68 " " 90% rock	99%
					57.91	59.44	1.60 " " 95% rock	99%
					59.44	60.96	1.57 " " 95% rock	98%
					60.96	62.48	1.52 " " 98% rock	98%
					62.48	64.01	1.52 " " 98% rock	98%
					64.01	65.53	1.52 " " 98% rock	98%
					65.53	67.06	1.57 " " 95% rock	97%
					67.06	68.58	1.60 " " 95% rock	99%

VISUAL ESTIMATE: %CP %BO %M: %Py

SAMPLE NUMBER	FROM	TO	METRES	ppm Ag	ppb Au	oz/t Au	oz/t Au	oz/t Ag

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-3
PAGE No. 19 OF 19
LOGGED BY Rein Turna
DATE October - 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Lisel (6) Creek AZIM. 315° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 94.49 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 25, 1984 END September 30, 1984

% pyrite	% veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	ppm As	ppb Au	oz/t Au	oz/t Ag
					Markers		(Measured) Recovery %												
					68.58	70.10	1.61 meters of 95% rock 100%												
					70.10	71.63	1.55 meters of 95% rock 96%												
					71.63	73.15	1.70 meters of 90% rock 100%												
					73.15	74.68	1.57 meters of 95% rock 97%												
					74.68	76.20	1.52 meters of 98% rock 98%												
					76.20	77.72	1.57 meters of 98% rock 100%												
					77.72	79.25	1.53 meters of 98% rock 98%												
					79.25	80.77	1.53 meters of 98% rock 99%												
					80.77	82.30	1.52 meters of 98% rock 97%												
					82.30	83.82	1.55 " " 98% rock 100%												
					83.82	85.34	1.55 " " 98% rock 100%												
					85.34	86.87	1.57 " " 98% rock 100%												
					86.87	88.39	1.62 " " 95% rock 100%												
					88.39	89.92	1.52 " " 98% rock 97%												
					89.92	91.44	1.55 " " 98% rock 100%												
					91.44	92.96	1.60 " " 95% rock 100%												
					92.96	94.49	1.55 " " 98% rock 99%												

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DRILL HOLE GEOLOGIC LOG DDH 84-4

PROJECT HANK TYPE OF HOLE D.D.H. [X] B.D.H. [ ] P.D.H. [ ]

PAGE No. ___ OF ___
LOGGED BY Rein Turna
DATE OCTOBER 1984

LOCATION Edison (7) Creek AZIM 335° DIP -45°
COLLAR: LATITUDE ___ DEPARTURE ___
ELEVATION: COLLAR ___ BOTTOM ___
LENGTH 59.44 meters RECOVERY ___ % CORE SIZE BQ
PURPOSE ___
DATE STARTED September30 1984 END October 1, 1984

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	ksoar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

Note: Au in ppb is by Fire Assay and Atomic Absorption Au in oz/ton is by Fire Assay.

meters	%PY	%Veins	Alteration Intensity	Fracture Intensity	TO
0					
2.13	2½	<1	8	5	OVB
3.05	2½	50	8	6	CB veins and brxy
4.57	5	20	8	8	
6.10	5	2½	8	6	
7.62	5	30	8	6	CB veins and brxy FT?
9.14	5	5	8	6	
10.67	5	40	8	6	
11.48	2½	50	8	8	
12.19	2½	50	8	8	major CB veining and brxy
13.72	5	30	8	8	
15.24	5	30	8	7	brxy
16.76	5	30	8	7	
17.20	5	1	8	5	
18.29					
19.81	5	<1	8	4	silicified
21.34	5	<1	8	5	
22.86	5	<1	8	5	
24.38	2½	<1	8	6	FT?
25.91	5	2½	8	6	
27.43	5	1	8	5	FT?
28.96	5	1	8	5	
30.48	5	1	8	6	
32.16	5	2½	8	6	
33.58	5	20	8	8	CB veins and brxy silicified
35.05	5	1	8	6	
36.27	5	2½	8	6	
38.10	5	5	8	6	
39.62	5	2½	8	6	CB veins FT?
41.15	5	5	8	7	
42.09	5	80	8	7	CB veins and brxy
42.67	5		8	6	
44.22	2½	10	8	7	CB veins FT?
45.62	2½	1	5	4	

FROM	TO	DESCRIPTION
		Alteration and fracture intensities are assigned values from 0 (lowest) to 10 (highest). Similarly a 10 point scale is assigned sometimes to sorting, sphericity, roundness of clasts.
2.13	59.44	The lithology appears all the same. This is an andesitic pyroclastic whose original texture is characterized by numerous white (plagioclase) and black (hornblende) phenocrysts. The white phenocrysts are square or rectangular. Rounded ones with diffuse boundaries may represent plagioclase or carbonate blebs. The hornblende pheoncrysts have hexagonal cross sections. In fresh rock they are black. In altered rock they have lighter coloured "crusts" on their outer surfaces. They range in length from <1mm to >½cm.
		On average the phenocrysts make up about 30% of the rock, forming an open framework.
		Intense sericite-carbonate-pyrite alteration prevades the core down to around 44.22 meters. Carbonate veins and breccia exist in this altered zone. Veins tend to be of 1 to 2mm width generally and randomly oriented. Orientation usually fall into a 45°± 25° range. Rock of this zone are grey and soft. Higher gold values appear associated with greater carbonate veining in the alteration zone.

VISUAL ESTIMATE: %CP %BO %M %PY

NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Au (oz/t)	Ag (oz/t)
						(1st Pulp)	(dupl. 2nd pulp)	(3rd Pulp)
66111	2.13	3.05	.92	450	300			
66112	3.05	4.57	1.5	320	540	.009	.014	.18
66113	4.57	6.10	1.5	550	760	.027	.011	.20
66114	6.10	7.62	1.5	550	880	.024	.020	.25
66115	7.62	9.14	1.5	650	540	.037	.028	.18
66116	9.14	10.67	1.5	550	960	.025	.028	.11
66117	10.67	11.48	.81	100	180			
66118	11.48	12.19	.71	800	2800	.025	.062	.20
66119	12.19	13.72	1.5	700	1850	.045	.048	.25
66120	13.72	15.24	1.5	750	3400	.106	.094	.41
66121	15.24	16.76	1.5	700	1700	.048	.042	.16
66122	16.76	17.20	.44	600	880	.034	.030	.12
66123	17.20	18.29	1.09	110	160			
66124	18.29	19.81	1.5	51	45			
66125	19.81	21.34	1.5	75	65			
66126	21.34	22.86	1.5	75	140			
66127	22.86	24.34	1.5	55	85			
66128	24.34	25.91	1.5	45	75			
66129	25.91	27.43	1.5	70	130			
66130	27.43	28.96	1.5	85	65			
66131	28.96	30.48	1.5	180	190			
66132	30.48	32.16	1.68	450	340			
66133	32.16	33.58	1.42	550	500			
66134	33.58	35.05	1.47	500	300			
66135	35.05	36.27	1.22	310	280			
66136	36.27	38.10	1.83	600	>10,000	.361	.793	1.24
66137	38.10	39.62	1.5	700	1100	.049	.035	.09
66138	39.62	41.15	1.5	650	1500	.050	.047	.10
66139	41.15	42.09	.94	850	960	.028	.023	.29
66140	42.09	42.67	.58	300	540	.018	.013	.04

GEOLOGICAL BRANCH ASSESSMENT REPORT 17,501

#470 1055 West Hastings Street
Vancouver, B.C. V6E 2E9

DRILL HOLE GEOLOGIC LOG DDH84-4

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

PAGE No. 1 OF 11
LOGGED BY Rein Turna
DATE OCTOBER 1984

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

Note;
Au in ppb is by Fire Assay and Atomic Absorption.
Au in oz/ton is by Fire Aassy.

LOCATION Edison (7) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH 59.44 meters RECOVERY % CORE SIZE BQ
PURPOSE
DATE STARTED September30 1984 END October 1, 1984

meters	%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION
45.62	2½	1	5	6	moderate			
47.40	1	<1	4	4	propylitic			The fresher rock below 42.7m are green with epidote and
48.77	1	<1	4	4	alteration		1	chlorite.
50.29	2½	<1	5	5	epidote			
52.22	2½	<1	5	5	minor brxy	0	2.13	Overburden, rock chips
53.11	2½	2½	6	4	moderate			
59.86	2½	1	6	4	propylitic alteration	2.13	3.05	Pyrite = 2½%, Veins = <1% intensity of Alteration = 8,
56.97	5	2½	7	5	Ser-CB-Py			Fractures = 5
57.91	5	1	7	7	altered brxy			Hexagonal phenocrysts are abundant. Brownish grey
59.44	END	HOLE						fairly soft rock. Some small dark tuff clasts seen.
						3.05	4.57	Pyrite = 2½% Veins = 50% intensity of Alteration = 8
								Fractures = 6
								3.13 to 4.13m is occupied by a dark purplish brown barren
								looking carbonate vein.
								3.0 to 3.6m is pseudo brecciation due to veining.
						4.57	6.10	Pyrite = 5% Veins = 20% intensity of Alteration = 8,
								Fractures = 8
								Rock is brecciated. Dark purplish carbonate veins are
								cut at odd orientations by 1mm white carbonate veinlets.
								The dark veins have pyrite concentrated on vein boundaries.
						6.10	7.62	Pyrite = 5% Veins=2½% Intensity of Alteration = 8,
								Fractures = 6
								Hexagonal phenocrysts seen. Small dark clasts seen.
								Pyrite is disseminated and concentrated on vein selvages.
						7.62	9.14	Pyrite = 5% Veins = 30% intensity of Alteration = 8,
								Fractures = 6
								Breccia zone. Chaotically oriented apparently barren
								carbonate veins.
								7.6 to 7.87m is blacker and very pyritic. Much core is

VISUAL ESTIMATE %CP %BO %M %Py

NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t) (1st Rules & Dups)	Au (oz/t) (2nd Rules)	Ag (2nd Pulp) (oz/t)
66141	42.67	44.22	1.55	900	1450	.049	.030	.16
66142	44.22	45.62	1.40	320	240			
66143	45.62	47.40	1.78	140	160			
66144	47.40	48.77	1.37	160	110			
66145	48.77	50.29	1.5	35	35			
66146	50.29	52.22	1.93	18	<5			
66147	52.22	53.11	.89	130	130			
66148	53.11	54.86	1.75	280	300			
66149	54.86	56.97	2.11	110	190			
66150	56.97	57.91	.94	90	100			
66151	57.91	59.44	1.5	22	10			

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 3 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Edison (7) Creek AZIM 335° DIP -45°
COLLAR. LATITUDE _____ DEPARTURE _____
ELEVATION. COLLAR _____ BOTTOM _____
LENGTH 59.44 meters RECOVERY _____ % CORE SIZE BQ
PURPOSE _____
DATE STARTED September 30 1984 END October 1, 1984

%Py	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
							missing between 7.62 and 9.14 markers. A fault zone may exist around the 7.62 marker.												
					9.14	10.67	Pyrite = 5% Veins = 5% intensity of Alteration = 8, Fractures = 6 Crumbly soft broken rock. Lots of pore spaces.												
					10.67	11.48	Pyrite = 5% Veins = <1% intensity of Alteration = 8, Fractures = 6 Crumbly soft rock. Broken in spots. Pore spaces. Fewer veins. Some small hexagonal phenocrysts seen.												
					11.48	12.19	Pyrite = 2½% Veins = 50% intensity of Alteration = 8, Fractures = 8 Breccia zone. Carbonate veins have minor pyrite. Wall rocks have much more. Major carbonate zone starts at 11.48m. Pervassive carbonate is also greater.												
					11.48	17.20	Grain size = 8 Sorting = 2 Sphericity/Roundness = 3/1 (see Geolog System)												
					12.19	13.72	Pyrite = 2½% Veins = 50% intensity of Alteration = 8 Fractures = 8 Breccia zone continues. Same as above.												
					13.72	15.24	Pyrite = 5% Veins = 30% intensity of Alteration = 8, Fractures = 8												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 4 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SH	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Edison (7) Creek AZIM. 335° DIP -45°
COLLAR. LATITUDE _____ DEPARTURE _____
ELEVATION COLLAR _____ BOTTOM _____
LENGTH 59.44 meters RECOVERY _____ % CORE SIZE BQ
PURPOSE _____
DATE STARTED September30l1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE (CP+BO%M+Py)	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
							Breccia, carbonate veins and much pervasive carbonate.									
					15.24	16.76	Pyrite = 5% Veins = 30% intensity of Alteration = 8, Fractures = 7									
							Breccia zone continues. Breccia clasts are purplish and highly pyritic.									
							Just before the 16.76m marker is 10cm of carbonate vein.									
					16.76	17.20	Pyrite = 5% Veins = 30% intensity of Alteration = 8, Fractures = 5									
							Breccia and carbonate vein zone ends at 17.20m.									
							At the 16.76m marker is very crumbly and pyritic rock which could represent a fault. Some fracture surfaces here show slickensides.									
					17.20	18.29	Pyrite = 5% Veins = 1% intensity of Alteration = 8, Fractures = 5									
							White (plagioclase) and hexagonal (horneblende) phenocrysts seen.									
							Typical rock of altered zone. Veins cut core axis at around 45°.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 5 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CV	clay	M.	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Edison (7) Creek AZIM. 335° DIP -45°
COLLAR LATITUDE ____ DEPARTURE ____
ELEVATION COLLAR ____ BOTTOM ____
LENGTH 59.44 meters RECOVERY ____ % CORE SIZE BQ
PURPOSE ____
DATE STARTED September 30 1984 END October 1, 1984

%Py	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %Py	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
					18.29	19.81	Pyrite = 5% Veins = <1% intensity of Alteration = 8, Fractures = 4									
							Some typical highly altered and pyritic rocks with typical pervasive carbonate. Few veins or fractures.									
							White phenocrysts and clasts and hexagonal phenocrysts seen.									
					19.81	21.34	Pyrite = 5% Veins = <1% intensity of Alteration = 8, Fractures = 5									
							Same as above. Broken, crumbly, porous rock from 18.71 to 20.88m (fault zone?) where slickensides show on some surfaces.									
					21.34	22.86	Pyrite = 5% Veins = <1% intensity of Alteration = 8 Fractures = 5									
							White pheoncorysts and clasts and hexagonal phenocrysts seen. Rock is more broken and crumbly again.									
							22.78 to 22.86m is 10% disseminated pyrite.									
					22.86	24.34	Pyrite = 2½% Veins = <1% intensity of Alteration = 8, Fractures = 6									
							Crumbly, broken soft and porous. Fracture surfaces are chloritic and slickensided.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 6 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite		
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite		
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone		
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite		
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz		
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	saussurite		
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	ksoar	SE	serpentine		
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SH	shear		
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous		
				CL	chlorite	MD	mud seam	TA	talc		
						MO	molybdenum	X	shattered rock		

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Edison (7) Creek AZIM. 335° DIP -45°
COLLAR LATITUDE ____ DEPARTURE ____
ELEVATION COLLAR ____ BOTTOM ____
LENGTH 59.44 meters RECOVERY ____ CORE SIZE BQ
PURPOSE ____
DATE STARTED September 30 1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	SCALE ESTIMATE A.Cp BO CM P PY	SAMPLE NUMBER	SAMPLE FROM	SAMPLE TO	SAMPLE METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
					24.34	25.91	Pyrite = 5% Veins = 2½% intensity of Alteration = 8, Fractures = 6									
							Some more chaotic carbonate veining.									
							1st half of this zone is broken up rock. 2nd half is more competent.									
							A 1cm diameter round nodule exists at 25.51m. Nodules like this were observed in altered rocks in trenches elsewhere on the property. These may be a byproduct of tectonism.									
							White and small hexagonal phenocrysts continue to be seen.									
					25.91	27.43	Pyrite = 5% Veins = 1% intensity of Alteration = 8, Fractures = 5									
							26.44 to 27.43m is broken rock zone. (fault zone ?).									
							Poor core recovery here. The lost core would be in this interval.									
							White and hexagonal phenocrysts exist.									
							25.91 to 26.02m a carbonate veinlet parallels the core axis.									
					27.43	28.96	Pyrite = 5% Veins = 1% intensity of Alteration = 8, Fractures = 5									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 7 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB>	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Edison (7) Creek AZIM 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION COLLAR BOTTOM
LENGTH 59.44 meters RECOVERY % CORE SIZE BQ
PURPOSE
DATE STARTED September 30 1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%PY	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
							More competent rock. An unusual darker purplish carbonate vein exists at 28.36m. It cuts core axis at 45°. Two veinlets between 28.10 and 28.36m cut core axis at 25°												
					28.96	30.48	Pyrite = 5% Veins = 1% intensity of Alteration = 8, Fractures = 6 White and hexagonal phenocrysts exist.												
					27	35	Carbonate veins are generally smaller than ½cm and cut core axis at 50° ± 20°. Vein selvages are often pyritic.												
					30.48	32.16	Pyrite = 5% Veins = 2½% intensity of Alteration = 8, Fractures = 6 30.48 to 30.91m the rock is broken up. Pervasive carbonate alteration appears somewhat more. Broken crumbly zone also exists at 31.40 to 31.54m.												
					32.16	33.58	Pyrite = 5% Veins = 20% intensity of Alteration = 8, Fractures = 8 Crumbly broken rock. Breccia zone here. Porous. Fracture surfaces have slickensides.												
					33.58	35.05	Pyrite = 5% Veins = 1% intensity of Alteration = 8, Fractures = 6 Back to typical rock again. Dark grey clasts. White and small hexagonal phenocrysts seen.												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 8 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	molybdenum	TA	talc
						MD	mud seam	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Edison (7) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 59.44 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 30 1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M: %Py	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
					35.05	36.27	Pyrite = 5% Veins = 2½% intensity of Alteration = 8,									
							Fractures = 6									
							35.39 to 35.49m zone of broken crushed rock.									
					36.37	38.10	Pyrite = 5% Veins = 5% intensity of Alteration = 8									
							Fractures = 6									
							More carbonate veins. Also abundant are white and small									
							hexagonal phenocrysts and small dark grey clasts. The									
							rock has a greywacke like texture though this is still									
							the andesitic pyroclastic.									
							At 37.80m note a small quartz veinlet with narrow									
							silicification pervading the wall rock. Other carbonate									
							veinlets have slightly more pyrite concentrated on vein									
							edges. Veins cut core at random orientations.									
							37.95 to 38.10m is a carbonate vein. Contact at 37.95m									
							cuts core axis at 35°									
						*	NOTE: Assay lab states that visible Au was found in the									
							+150 mesh fraction after screening and calculated into the									
							total.									
					36.3	36.6	Carbonate veins cut core axis mostly around 75°.									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 9 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Edison (7) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM _____
LENGTH: 59.44 meters RECOVERY _____ % CORE SIZE BQ
PURPOSE: _____
DATE: STARTED September30 1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M:	%Py	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
					38.10	39.62	Pyrite = 5% Veins = 2½% intensity of Alteration = 8												
							Fractures = 6												
							Pyrite is as usual disseminated with concentrations on fractures and vein edges.												
							A couple of very small veinlets are hard and may be quartz.												
					39.62	41.15	Pyrite = 5% Veins = 5% intensity of Alteration = 8,												
							Fractures = 7												
							Some bigger carbonate vein here. Up to 2cm wide. Rock is more broken up.												
					41.15	42.09	Pyritic = 5% Veins = 5% intensity of Alteration = 8,												
							Fractures = 7												
							Same as above. A couple of bigger veins again.												
					42.09	42.67	Pyrite = 5% Veins = 80% intensity of Alteration = 8,												
							Fractures = 6												
							A short section here of greater carbonate veining %. Vein contact at 42.09 cuts core axis at 35°.												
					42.67	44.22	Pyrite = 2½% Veins = 10% intensity of Alteration = 8												
							Fractures = 7												
							Some small pyrite seams where pyrite is concentrated on fractures. Veins and fractures have random orientations.												
							Some bigger veins again, in the 1cm or slightly bigger range.												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 10 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Edison (7) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE _____ DEPARTURE _____
ELEVATION: COLLAR _____ BOTTOM _____
LENGTH: 59.44 meters RECOVERY _____ % CORE SIZE BQ
PURPOSE: _____
DATE: STARTED September 30 1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
							Zones of crushed broken rock exist at 42.55 to 42.85m and												
							43.63 to 44.00m. (fault zones?)												
							42.85 to 44.22 has less pyrite (2½%) and is greenish												
							(epidote) coloured.												
							44.22m marks the end of the sericite-carbonate-pyrite												
							alteration zone.												
					44.22	45.62	Pyrite = 2½% Veins = 1% intensity of Alteration = 5,												
							Fractures = 4												
							The alteration contact is gradational at 44.22m but happens												
							quickly. No fault or lithologic difference is represented.												
							The rock is competent and chloritic green here. Pyrite is												
							as before disseminated but concentrated on fractures and												
							vein edges. Plagioclase and hornblende hexagonal phenocrysts												
							are not obvious or abundant, illustrating that the green												
							andesite doesn't necessarily have these obvious and												
							distinguishment from the felsite unit (on the property) is												
							difficult in altered rock.												
					45.62	47.40	Pyrite = 2½% Veins = 1% intensity of Alteration = 5,												
							Fractures = 6												
							Same grey green competent rock as above.												
							46.40m to 46.70m has broken crushed rock with some												
							carbonate veining.												
							At 47.24m pyrite concentrates at vein selvages in a 20cm												
							zone around the 47.24m marker.												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 11 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M:	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Edison (7) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH 59.44 meters RECOVERY % CORE SIZE BQ
PURPOSE
DATE: STARTED September 30 1984 END October 1, 1984

%Py	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
					47.40	48.77	Pyrite = 1% Veins = <1% intensity of Alteration = 4,												
							Fractures = 4												
							Typical green, chloritic, competent, weakly altered rock.												
							Carbonate veinlet at 48.57m is pinkish. Alteration												
							appears to be weakening. Rock is greener, darker.												
					48.77	50.29	Pyrite = 1% Veins = <1% intensity of Alteration = 4,												
							Fractures = 4												
							Same as above. But at 49.55m rock gets greyer and												
							more pyritic similar to 45.62 to 47.40m interval.												
					50.29	52.22	Pyrite = 2½% Veins = <1% intensity of Alteration = 5,												
							Fractures = 5												
							Slightly epidote green coloured.												
					52.22	53.11	Pyrite = 2½% Veins = <1% intensity of Alteration = 5,												
							Fractures = 5												
							Some minor brecciation in places caused by carbonate and												
							quartz veinlets. Some clasts here look like agglomerate												
							clasts. Some open fractures are lined by well-formed												
							calcite crystals.												
					53.11	54.86	Pyrite = 2½% Veins = 2½% intensity of Alteration = 6,												
							Fractures = 4												
							Rock is getting greyer and pyrite increasing.												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 12 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	SH	sheer
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Edison (7) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH 59.44 meters RECOVERY % CORE SIZE BQ
PURPOSE
DATE STARTED September 30 1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%Py	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
					54.86	56.97	Pyrite = 2½% Veins = 1% intensity of Alteration = 6, Fractures = 4												
	-						Same as above.												
					56.91	57.91	Pyrite = 5% Veins = 2½% intensity of Alteraton = 7 Fractures = 5												
							Grey and altered again.												
							Sercite-carbonate-pyrite Alteration Zone again 57.20 to 57.35m has several small carbonate veinlets and pseude breccia parallel to core normal.												
					57.01	59.44	Pyrite = 5% Veins = 1% intensity of Alteration = 7, Fractures = 7 Alteration and fractures continue to increase. Breccia noted at end of hole.												

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 13 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	siliceous
				CL	chlorite	MO	molybdenum	TA	talc
								X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION Edison (7) Creek AZIM 335° DIP -45°
COLLAR LATITUDE DEPARTURE
ELEVATION COLLAR BOTTOM
LENGTH 59.44 meters RECOVERY CORE SIZE BQ
PURPOSE
DATE STARTED September30 1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP %BO %M %PY	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
					0	11.48	Box 1									
					11.48	18.87	Box 2									
					18.87	27.58	Box 3									
					27.58	35.61	Box 4									
					35.61	43.08	Box 5									
					43.08	50.29	Box 6									
					50.29	57.3	Box 7									
					57.3	59.44	Box 8									
					MARKERS		(Measured) Recovery %									
					2.13	3.05	.69 meters of 60% rock 45									
					3.05	4.57	.82 meters of 60% rock 32%									
					4.57	6.10	1.47 meters of 60% rock 58%									
					6.10	7.62	.74 meters of 70% rock 34%									
					7.62	9.14	.94 meters of 70% rock 43%									
					9.14	10.67	1.17 meters of 80% rock 61%									
					10.67	12.19	1.68 meters of 90% rock 99%									
					12.19	13.72	1.60 meters of 95% rock 99%									
					13.72	15.24	1.60 meters of 95% rock 100%									
					15.24	16.76	1.37 meters of 90% rock 81%									
					16.76	18.29	1.55 meters of 95% rock 96%									
					18.29	19.81	1.55 meters of 98% rock 100%									
					19.81	21.34	1.62 meters of 95% rock 100%									
					21.34	22.86	1.40 meters of 90% rock 83%									
					22.86	24.34	1.14 meters of 90% rock 69%									
					24.34	25.91	1.40 meters of 90% rock 80%									
					25.91	27.43	.63 meters of 80% rock 33%									
					27.43	28.96	1.45 meters of 95% rock 90%									
					28.96	30.48	1.35 meters of 98% rock 87%									

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DRILL HOLE GEOLOGIC LOG

HOLE NUMBER DDH84-4
PAGE No. 14 OF 14
LOGGED BY Rein Turna
DATE OCTOBER 1984

PROJECT HANK TYPE OF HOLE D.D.H. [X] R.D.H. [ ] P.D.H. [ ]

LEGEND

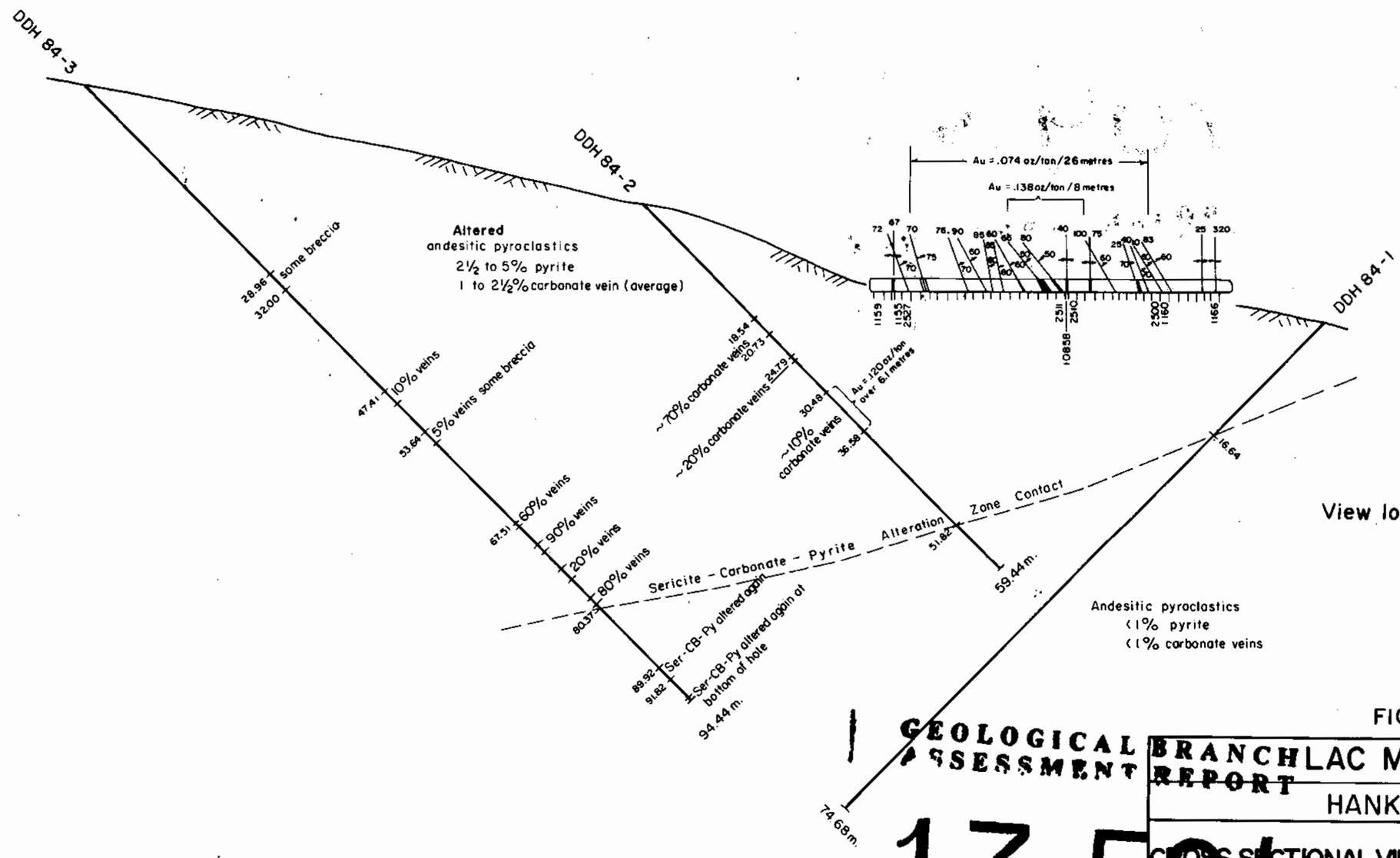
ARGL	argillite	MUDS	mudstone	AZ	azurite	CY	clay	M	molybdenite
BRXY	breccia	MYLN	mylonite	BI	biotite	EP	epidote	MG	magnetite
GREY	greywacke	RHYL	rhyolite	BL	bleached	GR	graphite	OX	oxide zone
GOUG	gouge	SILT	siltstone	BO	bornite	GY	gypsum	PY	pyrite
HORN	hornfels			CA	calcite	HE	hematite	QZ	quartz
PPBI	biotite porphyry	OVB	overburden	CB	carbonate	KA	kaolin	SA	sausserite
PPB >	biotite hornblende porphyry	DYK	dyke	CC	chalcocite	KF	kspar	SE	serpentine
PPHO	hornblende porphyry			CI	cuprite	LI	limonite	Sh	shear
PPQB	quartz-biotite porphyry			CP	chalcopyrite	MC	malachite	SI	silicious
				CL	chlorite	MD	mud seam	TA	talc
						MO	molybdenum	X	shattered rock

HOLE LOCATION WITH RESPECT TO CLAIMS

LOCATION: Edison (7) Creek AZIM. 335° DIP -45°
COLLAR: LATITUDE DEPARTURE
ELEVATION: COLLAR BOTTOM
LENGTH: 59.44 meters RECOVERY % CORE SIZE BQ
PURPOSE:
DATE: STARTED September 30 1984 END October 1, 1984

%PY	%Veins	Alteration Intensity	Fracture Intensity	TO	FROM	TO	DESCRIPTION	VISUAL ESTIMATE %CP	%BO	%M	%PY	SAMPLE NUMBER	FROM	TO	METRES	As (ppm)	Au (ppb)	Au (oz/t)	Ag (oz/t)
					MARKERS		(measured) Recovery %												
					30.48	32.00	1.40 meters of 95% rock 88%												
					32.00	33.53	1.04 meters of 90% rock 61%												
					33.53	35.05	1.52 meters of 95% rock 95%												
					35.05	36.58	1.19 meters of 95% rock 74%												
					36.58	38.10	1.60 meters of 90% rock 95%												
					38.10	39.62	1.52 meters of 95% rock 95%												
					39.62	41.15	1.52 meters of 90% rock 89%												
					41.15	42.67	1.60 meters of 95% rock 100%												
					42.67	44.20	1.50 meters of 95% rock 93%												
					44.20	45.72	1.50 meters of 95% rock 94%												
					45.72	47.24	1.47 meters of 90% rock 87%												
					47.24	48.77	1.55 meters of 95% rock 96%												
					48.77	50.29	1.60 meters of 95% rock 100%												
					50.29	51.82	1.63 meters of 90% rock 96%												
					51.82	53.34	1.55 meters of 90% rock 92%												
					53.34	54.86	1.52 meters of 95% rock 96%												
					54.86	56.39	1.55 meters of 98% rock 99%												
					56.39	57.91	1.60 meters of 95% rock 100%												
					57.91	59.44	1.60 meters of 95% rock 99%												

N 45° W



GEOLOGICAL BRANCH ASSESSMENT REPORT
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FIGURE Nº. 11

LAC MINERALS LTD.

HANK CLAIM GROUP

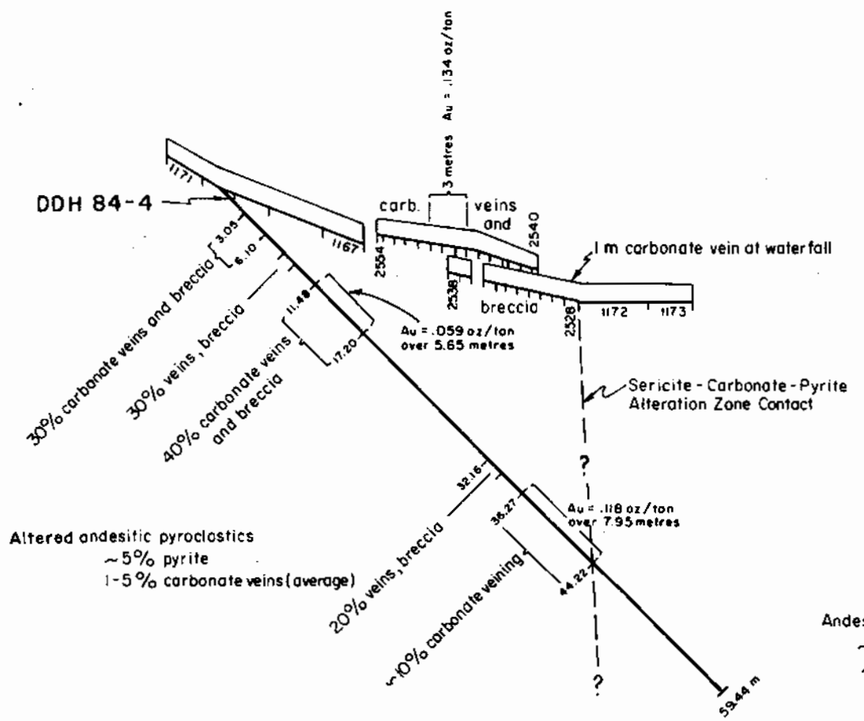
CROSS SECTIONAL VIEW OF DIAMOND DRILL HOLES
DDH 84 - 1,2 and 3

PROJECTED ONTO A PLANE ORIENTED N 45° W

SCALE 1:500 (0, 10, 20 metres)	N.T.S. 104 G/1,2
DRAWN BY : R. TURNA	DATE : FEB. 1985

CHONG

N 25° W



View looking southwest

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FIGURE Nº. 12

LAC MINERALS LTD.

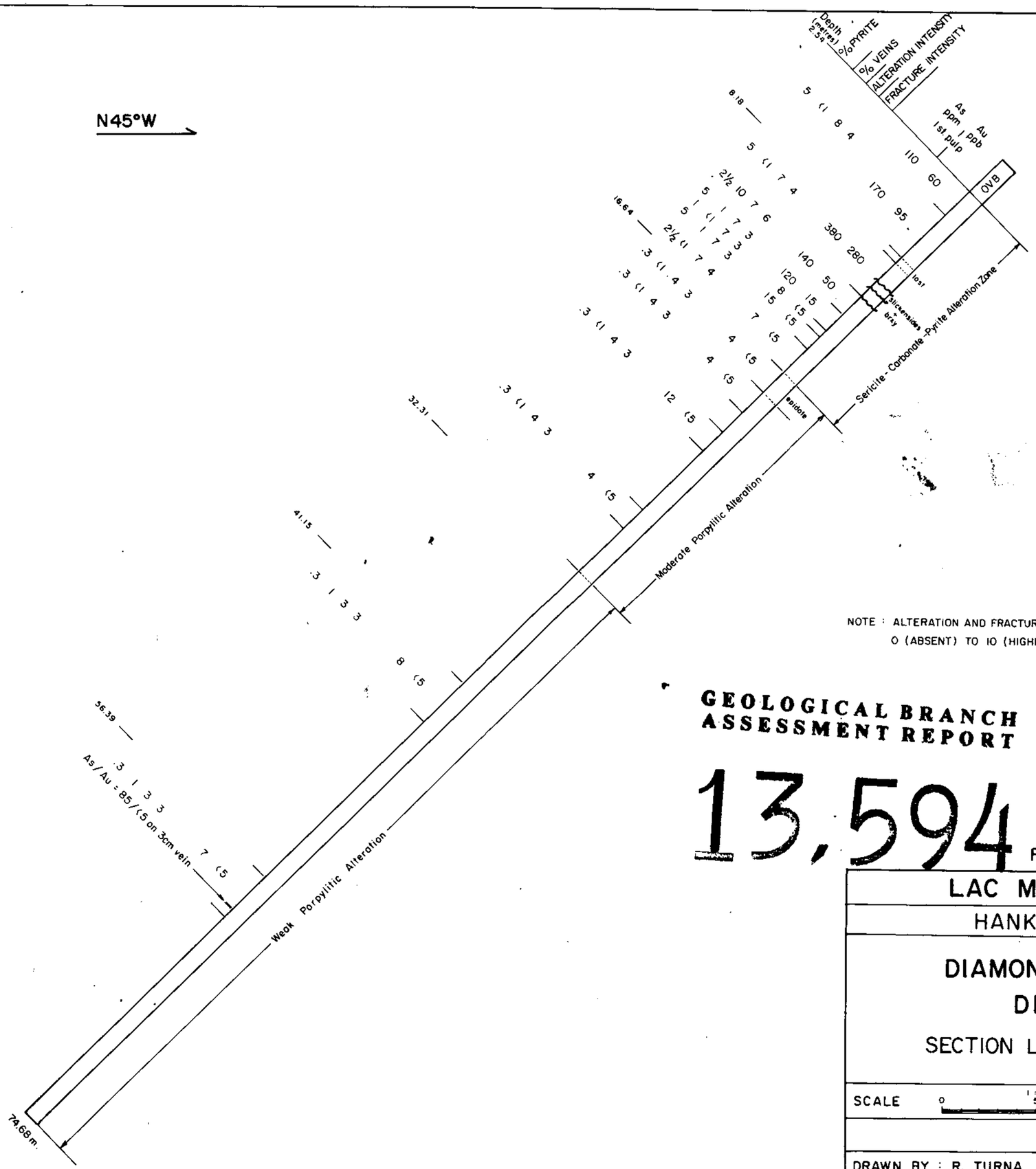
HANK CLAIM GROUP

CROSS SECTIONAL VIEW OF DIAMOND DRILL HOLE
DDH 84-4

PROJECTED ONTO A PLANE ORIENTED N25°W

SCALE 1:500 (0, 10, 20 metres)	N.T.S. 104 G/1,2
DRAWN BY : R. TURNA	DATE : FEB. 1985

CHONG



NOTE : ALTERATION AND FRACTURES INTENSITIES ARE GRADED ON A 0 (ABSENT) TO 10 (HIGHEST) POINT SCALE.

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FIGURE Nº. 13

LAC MINERALS LTD.

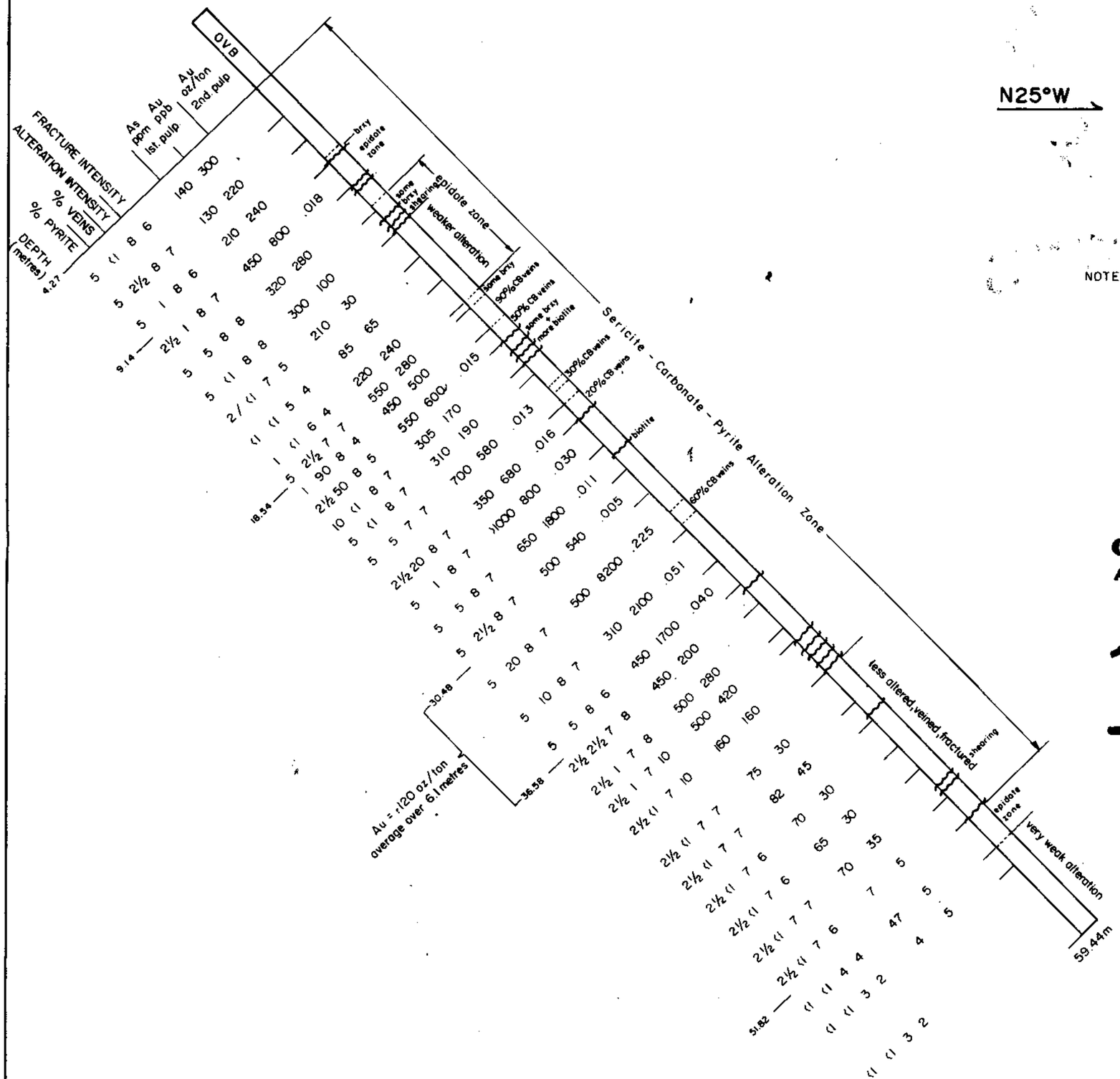
HANK CLAIM GROUP

DIAMOND DRILL HOLE
DDH 84 - 1

SECTION LOOKING SOUTHWEST

SCALE 0 1:200 5 10M.	N.T.S. 104 G / 1,2
DRAWN BY : R. TURNA	DATE : FEB. 1985

CHONG



N25°W

NOTE : ALTERATION AND FRACTURES INTENSITIES ARE GRADED ON A 0 (ABSENT) TO 10 (HIGHEST) POINT SCALE

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FIGURE No. 14

LAC MINERALS LTD.

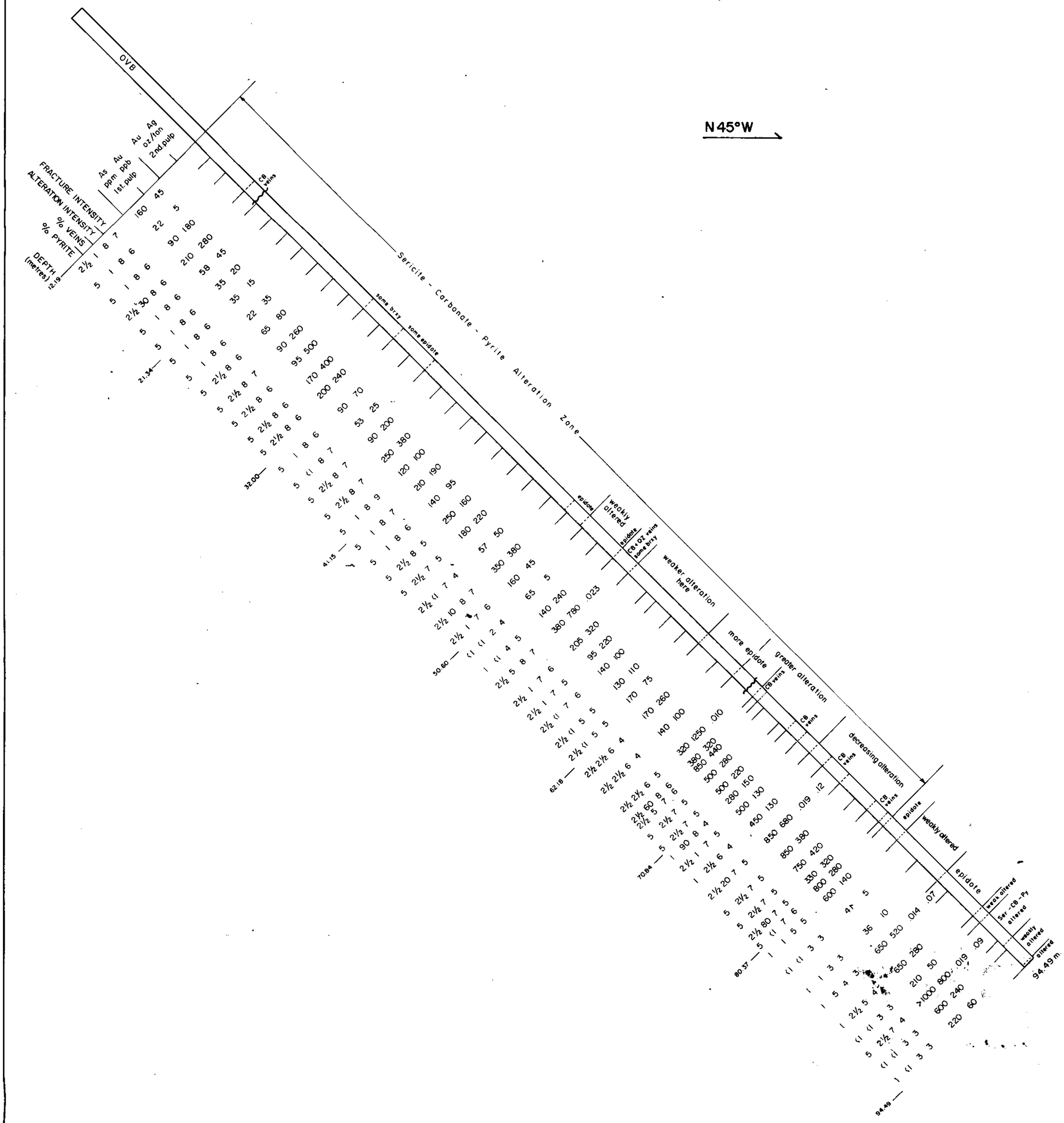
HANK CLAIM GROUP

DIAMOND DRILL HOLE DDH 84-2

SECTION LOOKING SOUTHWEST

SCALE 0 1:200 5 10M.	N.T.S. 104G/1,2
DRAWN BY : R. TURNA	DATE : FEB. 1985

CHONG



NOTE : ALTERATION AND FRACTURES INTENSITIES ARE GRADED ON A 0 (ABSENT) TO 10 (HIGHEST) POINT SCALE.

FIGURE Nº. 15

LAC MINERALS LTD.	
HANK CLAIM GROUP	
DIAMOND DRILL HOLE DDH 84-3 SECTION LOOKING SOUTHWEST	
SCALE 0 1:200 5 10 M.	N.T.S. 104G/1,2
DRAWN BY : R. TURNA	DATE : FEB. 1985

CHONG

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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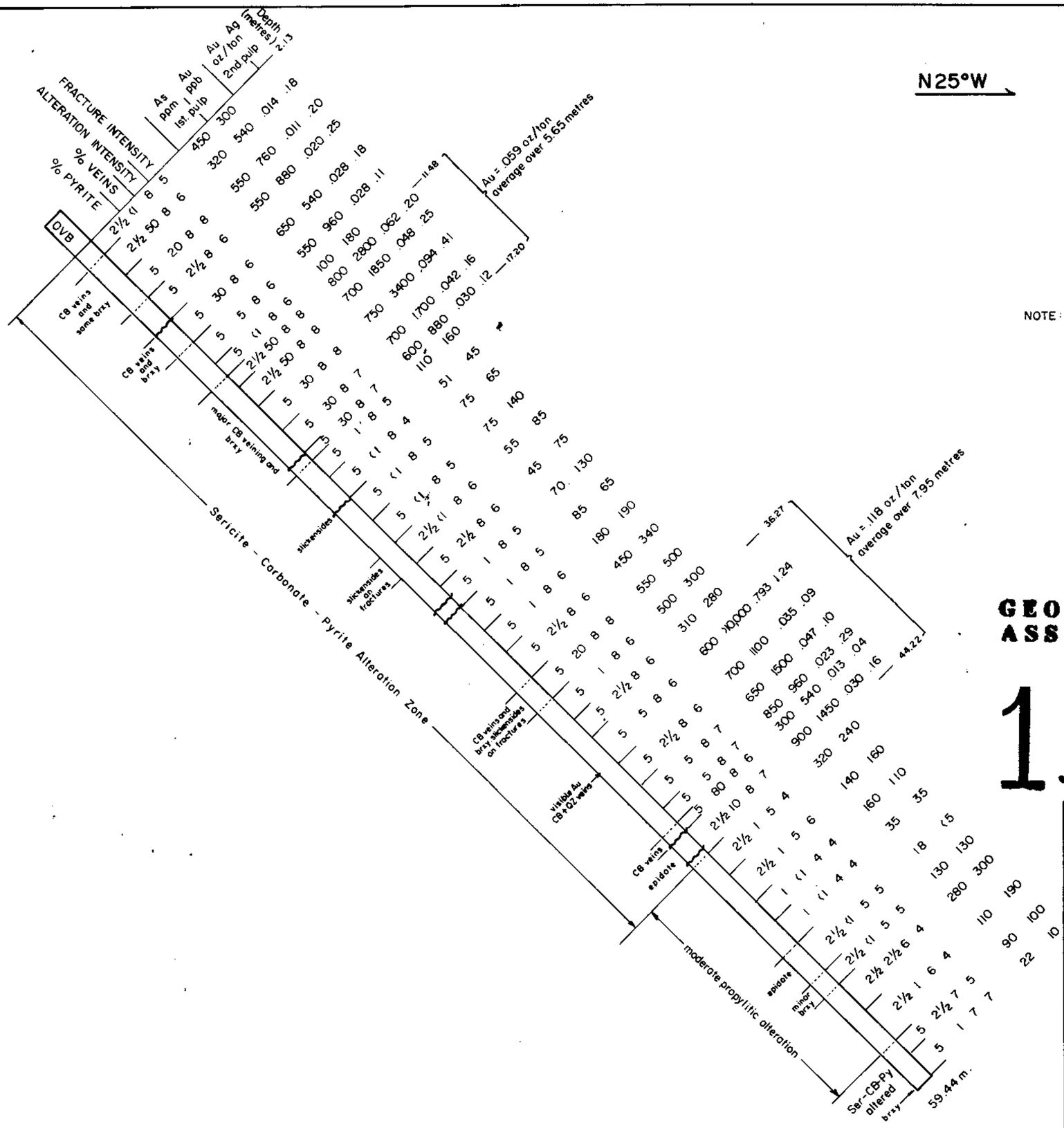

NOTE: ALTERATION AND FRACTURES INTENSITIES ARE GRADED ON A 0 (ABSENT) TO 10 (HIGHEST) POINT SCALE.

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ASSESSMENT REPORT

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FIGURE Nº. 16

LAC MINERALS LTD.

HANK CLAIM GROUP

DIAMOND DRILL HOLE
DDH 84-4

SECTION LOOKING SOUTHWEST

SCALE 0 1:200 5 10M	N.T.S. 104 G/1,2
DRAWN BY : R. TURNA	DATE : FEB. 1985

CHONG

APPENDIX NO. 2

PETROGRAPHIC REPORT

Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY, B.C.
VOX 1JO

PHONE (604) 888-1323

Invoice 5062

February 28th, 1985

Report for: Rein Turna,
Lac Minerals Ltd.,
470 - 1055 West Hastings St.,
Vancouver, B.C.
V6E 2E9

Samples:

10 thin sections of rocks (numbered 1028, 1078, 1078 B, 1085, 1092, 1103, 1109, 1113, 1119, 2029) for petrographic description; 1 sample (2229 V: 3 polished mounts prepared) for description of opaque minerals and photomicrography; and 1 sample of panned concentrate for photomicrography of gold grains.

Summary:

The majority of the rocks of this suite are strongly altered and details of the original lithology are more or less obscured.

They are clearly of volcanic affinity. Only one (1028) retains dominantly primary textural features: it is clearly distinguishable as an andesite.

Other more altered members of the suite which may also be of original andesitic composition (based on the lack or sparsity of quartz) are 1078, 1119 and 2029. These show alteration to sericite/carbonate, carbonate and sericite respectively. They also all contain considerable disseminated pyrite and are typically very low in mafic constituents.

Sample 1078 B is also sericitic, quartz-free, leucocratic and pyritic, but is of distinctive composition in containing considerable K-feldspar. This forms a fine-grained felsitic groundmass and is presumably primary. The rock is thus classified as a latite.

Sample 1119 lacks the relict porphyritic textures noted in the others and may be a carbonated ash tuff.

Sample 1103 is another intensely altered pyritized volcanic with relict porphyritic (or possibly pyroclastic) textures. In this case the alteration is of an argillic variety and the rock contains relatively abundant quartz (of uncertain origin).

Three rocks of the suite are composed essentially of quartz, a fine-grained, chert-like form. One of these (1109) is clearly of fragmental (breccia) character; another (1092) is rather homogenous but shows ill-defined relict textures suggesting that it may be a totally silicified volcanic; and the third (1113) is a siliceous aggregate which, though lacking relict textures, could still be metasomatic or may be a true chert.

The remaining member of the suite (1085) is a sparry carbonate.

The mineralized sample (2229 V) is a polymetallic sulfide aggregate consisting of pyrite, chalcopyrite, sphalerite, galena and tetrahedrite. Initial examination failed to reveal any source for the reported very high gold assay (20 oz/ton). Continued intensive search resulted in the location of a very few scattered specks of native gold. These are typically very small (maximum 12 microns).

Much more prominent and abundant gold would be expected from material which assayed 20 oz/ton. In an attempt to resolve this anomaly, four samples of different pieces from the bag were submitted to Chemex labs for geochemical analysis.

Results are as follows:

	Au ppb
1. c. 50% sulfides	7460
2. c. 85% sulfides	> 10,000
3. c. 95% sulfides	> 10,000
4. miscellaneous small pieces	> 10,000

The analyst estimated the >10,000 values to be in the order of 13,000 ppb. This is equivalent to about 0.3 oz/ton. He also commented that the size and colour of the fusion beads suggested a high Ag content.

This is seriously at odds with the assay reported by Bondar Clegg. A check should certainly be requested. The high content of tetrahedrite in the sample would lead one to expect a high Ag content, and it seems possible that the Au and Ag values may have been transposed.

Photomicrographs were taken to show examples of the mode of occurrence of Au in 2229 V (though the extremely small grains are not very photogenic)

Photographs were also taken (as requested) of the alluvial gold. This was hand-picked from the original masking tape (which reached me as a twisted, stuck-to-itself mess in a plastic bag!) and photographed first on a new sticky tape mount, then, by careful transfer, as a loose array on black paper.

I have enclosed the negatives so that you can make your own choice as to which you have made up as multiple copies.

J.F. Harris Ph.D.

PHOTOMICROGRAPHS

Neg. #s 26, 27, 28 — Hand-picked alluvial gold grains on sticky tape.
Scale 1cm = 0.3mm

Neg. #s 29, 30 — Same gold grains transferred to black paper.
Scale 1cm = 0.44mm

Neg. #s 31 - 35 — Selected fields in polished section (photographed by plane polarized reflected light) showing mode of occurrence of gold (circled).
Scale 1cm =0.025mm (25 microns)

Subjects are as follows:

Neg. #31 — 10 micron gold grain on contact of pyrite grains in field of chalcopyrite. Dark grey (top left,bottom right) is sphalerite with small inclusions of chalcopyrite; light blue grey (lower left) is galena.

Neg. #32 — 5 micron gold grain (bright yellow speck) in gangue (black) filling interstice of pyrite aggregate (buff colour). Associated chalcopyrite (duller yellow). Note inclusions of galena and chalcopyrite in some pyrite grains.

Neg. #33 — 5 micron gold grain associated with galena (light grey) in hairline veinlet within sphalerite. Creamy white is pyrite; yellow is chalcopyrite; light bluish grey inclusions in pyrite are tetrahedrite; dark grey (bottom, top right) is gangue.

Neg. #34 — 12 micron gold grain in multi-phase gangue (various shades of brownish greys) near contact with pyrite (creamy white). Note atoll texture of chalcopyrite (yellow) in ragged grain of sphalerite (grey, top left).

Neg. #35 — 2.5 micron gold grain in gangue (black) which is apparently veining a patch of sphalerite (grey) within chalcopyrite (dull yellow). Blue grey (e.g. top right) is tetrahedrite. Note complex intergrowth of gangue and chalcopyrite (top left).

Sample 1028 ALTERED FINE-GRAINED ANDESITE

Estimated mode

Plagioclase	55
Sericite	15
Carbonate	10
Altered mafics	10
Magnetite) Limonite)	8
Sub opaques	2
Apatite	trace
Biotite	trace

This rock is composed dominantly of plagioclase, as zoned, oblong or equant euhedra, 0.2 - 1.5mm in size, set in a finer-grained felsitic groundmass. The euhedral grains commonly show zoning. This is emphasized by the fact that the central cores are often strongly altered to sericite, whereas the outer rim zones are unaltered.

The plagioclase euhedra show a weak but distinct preferred orientation.

The prominent dark phenocrysts (0.1 - 2.0mm in size) visible on the cut-off chip are altered mafic silicates, now converted totally to a brown sub-opaque cryptocrystalline material, probably composed largely of carbonate and leucoxene. They also include wisps and patches of what appears to be secondary amphibole and, less commonly, biotite. The perfectly pseudomorphed crystal outlines are characteristic of pyroxenes.

Small granules of this same material and of carbonate, sericite and fine-grained sub-opaques (rutile) are disseminated throughout the felsitic groundmass. Carbonate also forms more or less irregular coarser patches and occasional distinct veinlets.

Opaques are relatively abundant. These are dominantly magnetite, as subhedral grains 0.02 - 0.2mm. It is locally limonitized.

This is a typical altered andesite, possibly a dyke. It contains no quartz.

Sample 1078 STRONGLY ALTERED ANDESITE

Estimated mode

Plagioclase	35
Sericite	35
Carbonate	20
Quartz	3
Rutile) Sphene)	2
Pyrite	5

This is an intensely altered rock of which little can be said regarding origin except that relict textures indicate volcanic character and composition was dominantly feldspathic. The leucocratic character (lack of mafic silicates or recognizable altered equivalents) is distinctive.

It consists of carbonate as irregular to subhedral (pseudomorphic?) grains 0.1 - 1.0mm in size. These are intergrown with extensive, rather diffuse areas of fine-grained sericite. This seldom shows pseudomorphic outlines. In some places it forms compact, very fine-grained, essentially monomineralic masses; elsewhere it contains more or less abundant remnants of felsitic plagioclase (which it is clearly replacing).

Quartz occurs as scattered small grains and clumps. Tiny granules of rutile, sphene and leucoxene are rather evenly disseminated throughout.

Pyrite forms randomly disseminated anhedral grains, 0.2 - 1.0mm, often coalescing to form poikilitic clumps.

Sample 1078 B MINERALIZED ALTERED LATITE

Estimated mode

K-feldspar	25
Plagioclase	5
Sericite	60
Rutile)	
Sphene)	2
Leucoxene)	
Carbonate	trace
Pyrite)	6
Arsenopyrite)	
Limonite)	2
Scorodite)	

This rock is compositionally distinct from 1078 in its content of K-feldspar (see stained chip) and lack of carbonate. It resembles 1078 in having no recognizable mafic silicates (or altered equivalents).

It consists of scattered subhedral/prismatic patches of felted sericite, 0.05 - 1.0mm in size (presumably pseudomorphous after plagioclase phenocrysts), set in a pervasively sericitized, felsitic groundmass composed largely of K-feldspar.

Sphene and rutile form tiny disseminated granules (0.01 - 0.05mm), often concentrating as clusters.

Sulfides are relatively abundant as irregular to subhedral individuals, 0.1 - 0.5mm, locally aggregating to form poikilitic/skeletal masses. The sulfides often appear to concentrate within the sericite pseudomorphs. They consist of pyrite, probably with intergrown arsenopyrite.

The sulfides are locally limonitized. Other alteration products are scattered small irregular patches of greenish-brown cryptocrystalline material which is probably scorodite (Fe arsenate).

On the macro scale (stained chip) the distribution of sulfides appears partially associated with a poorly-defined system of sub-parallel sericitic fractures. This is not readily recognizable in the thin section (which is somewhat plucked - the lost material probably being mainly sericite and pyrite).

Sample 1085 SPARRY CARBONATE

Estimated mode

Carbonate	97
Barite (?)	3
Quartz	trace
Pyrite	trace

This sample consists of an interlocking subhedral aggregate of carbonate of grain size 0.1 - 1.0mm. This locally shows development of partial crystal faces and growth zoning and is probably a compact vein-filling.

The only other constituents are minor, interstitial, often elongate grains of what appear to be barite, together with traces of quartz. Traces of anhedral pyrite individuals, 0.05 - 0.5mm, also occur.

The patchy intergrowth of brown and white carbonate apparent on the cut-off chip cannot be differentiated in the thin section. Local areas of limonitic staining in cleavages suggest the presence of siderite, but the overall strong reactivity of the carbonate to dilute acid indicates that the dominant species is calcite.

Sample 1092 SILICIFIED ROCK

Estimated mode

Quartz	93
Sericite	4
Rutile	2
Limonite	1

This slide consists of a rather homogenous, anhedral aggregate of fine-grained quartz in the grain size range 0.01 - 0.05mm. Patches and networks of somewhat coarser grain size occur gradationally within the overall finest-grained material. A few better-defined patches of coarser mosaic could represent relict porphyritic textures.

Sericite occurs as a very fine-grained dusting throughout the cherty aggregate, locally forming patchy concentrations (again, possibly relict textures).

The only other constituents are rutile - sometimes with limonite - as clumps, wisps and atoll-forms of minute granules.

This sample is believed to represent a totally silicified rock of probable volcanic origin.

Sample 1103 ALTERED PYRITIZED VOLCANIC

Estimated mode

Clays	60
Quartz	30
Rutile)	5
Leucoxene)	
Pyrite	5

This is a rock of obscure character.

It consists of patches of pale brown, cryptocrystalline to feathery-textured, low birefringent material which has the aspect of devitrified glass but is probably composed principally of clays. These are set in a groundmass of cherty aspect, composed of tiny rounded to subhedral granules of quartz (0.01 - 0.02mm) with interstitial clays.

The clay patches are often angular, sub-prismatic in shape, but sometimes more elongate, streaky.

Leucoxene forms scattered, sub-opaque, prismatic patches which appear, from the relict flaky habit, to represent altered biotite. Finely granular rutile is associated with the leucoxene, forms prismatic and atoll-like clumps and is also randomly disseminated.

Pyrite forms abundant disseminated euhedra, 0.01 - 0.05mm, often in clusters and locally concentrated as a diffuse veniform segregation.

The coarser pyrite and/or rutile granules often seem to be concentrated within the outlines of the clay patches.

The angular habit of many of the clay patches indicates that they are probably pseudomorphs of phenocrysts or crystal clasts.

This rock is certainly of volcanic origin but details of its original character and mode of alteration are obscure.

Sample 1109 SILICEOUS BRECCIA

Estimated mode

Quartz	98
Opaques)	2
Sub-opaques)	

This rock is composed of a mixture of sharply angular to sub-rounded fragments, 0.5 - 8.0mm in size, set in a matrix of cherty to irregularly granular quartz. The fragments are also of cherty composition, generally extremely fine-grained (cryptocrystalline) and dusted with micron-sized opaque/sub-opaque granules.

The texture of the matrix is highly variable, with scattered individual grains, clumps and discontinuous veinlets of somewhat coarser quartz. Coarse quartz also occurs as fringes to some of the fragments.

The origin of the rock is uncertain. It may be an intensely silicified, coarse-grained, pyroclastic fragmental (the matrix has a tuffaceous aspect) or - as the macro texture suggests - it may be a clastic breccia of chert fragments with a silicified sandy cement.

Sample 1113 CHERT

Estimated mode

Quartz	98
Opaques)	2
Sub-opaques)	

This rock consists of a rather homogenous cherty aggregate of grain size 0.01 - 0.1mm. There is a tendency for clumps and networks of slightly coarser granularity to occur gradationally throughout the rock, but no recognizable relict textures are present.

The only constituents other than quartz are disseminated micron-sized granules - probably of rutile- which commonly occur as concentrated clusters in the finest-grained areas of chert.

Sample 1119 CARBONATED PYRITIC TUFF

Estimated mode

Felsite) Chlorite)	20
Quartz	7
Carbonate	65
Pyrite	8
Limonite	trace

This is another intensely altered rock whose original character is uncertain. It consists of/a cryptocrystalline to glassy felsitic aggregate with small granules and spheroidal clumps of quartz. The felsitic material is greenish in colour and probably contains considerable chlorite.

This matrix is strongly and evenly pervaded by carbonate, which forms coalescent clusters and networks of sub-opaque, very fine-grained material. Clearer, better crystallized carbonate commonly forms more or less well-defined patches, sometimes of equant, prismatic form, within the micritic clumps.

There is no apparent structural control or inherited texture in the distribution of the carbonate.

The carbonate is rather weakly or partially reactive to dilute acid. This may indicate the presence of more than one species or it may be essentially calcitic with the reactivity inhibited by the extremely fine grain size.

Pyrite (locally limonitized) occurs rather abundantly as disseminated subhedral individuals, 0.01 - 0.3mm in size.

The matrix of this rock has the textural aspect of a fine ashy tuff.

Sample 2029 SERICITIZED VOLCANIC

Estimated mode

Felsite	24
Quartz	5
Sericite	64
Rutile)	2
Leucoxene)	
Pyrite	5

This is another intensely altered rock whose original character is largely obscured.

In this case the dominant constituent is sericite. This is a very fine-grained variety, more or less brown in colour, and often forming compact, densely felted, sub-opaque masses.

The latter often have blocky, prismatic shapes and are clearly pseudomorphic (probably after plagioclase phenocrysts).

These are set in an extremely fine-grained felsitic groundmass which is itself extensively sericitized in pervasive fashion. Small flecks and pockets of microgranular quartz occur scattered through the groundmass.

Rutile and leucoxene form disseminated small clumps and mintue granules.

Pyrite is a rather abundant accessory as individual subhedra, 0.02 - 0.5mm, often coalescing to form skeletal or emulsion-like clumps. The pyrite shows no structural control or specific relationship to host rock mineralogy.

Sample 2229 V SEMI-MASSIVE SULFIDES

Three polished sections were made of different pieces from the bag full of material provided. One consists of about 25% sulfides as elongate streaks and fine disseminations in gangue; another contains about 55% sulfides as a semi-massive aggregate adjacent to a band of gangue (which appears to be a form of breccia); and the third consists of essentially massive sulfides with minor interstitial gangue.

No comments can be made from these preparations re the nature of the gangue or the sulfide/gangue relationships. Polished thin sections would provide this information.

The three polished sections show considerable variation as regards the relative proportions of the various sulfide minerals.

As a generalisation, the material can be said to consist of pyrite, chalcopyrite and sphalerite as major constituents, with accessory (but substantial) amounts of galena and tetrahedrite.

The only other constituents are minor quantities of oxidation products (limonite and covellite) and minute traces of gold. Possible traces of native Bi were also observed.

The various constituents show moderately complex and partially fine-grained intergrowths (though relatively coarse segregations are also present).

Pyrite typically occurs as subhedral grains 0.01 - 0.5mm in size. These form disseminated individuals and clumped aggregates in gangue and the other sulfides. The latter commonly occur interstitial to and moulded on to pyrite clusters but the individual grains are generally free of inclusions. Where these do occur, they are most commonly of galena.

Sphalerite forms extensive areas up to several mm in size. It typically contains abundant blebs and semi-oriented exsolution inclusions of chalcopyrite ranging down to sub-microscopic size. Less abundant inclusions of galena and tetrahedrite are also commonly present. Sphalerite rarely forms patches of fine-grained emulsion texture in gangue.

Chalcopyrite is generally relatively clear of inclusions. Locally it shows complex emulsion intergrowths (of exsolution origin) with tetrahedrite. Areas of intimate atoll and rim-type intergrowths with pyrite are also seen.

Galena is typically strikingly free of inclusions. It forms scattered pockets, 0.1 - 0.5mm in size, intergrown with the other sulfides.

Tetrahedrite tends to be the finest-grained constituent. It forms interstitial pockets 0.01 - 0.1mm in size. It is most closely associated with chalcopyrite.

The sulfide textural relationships are generally of the mutual boundaries type, with abundant evidence of solid solution unmixing and little or no replacement or brecciation/cementation features.

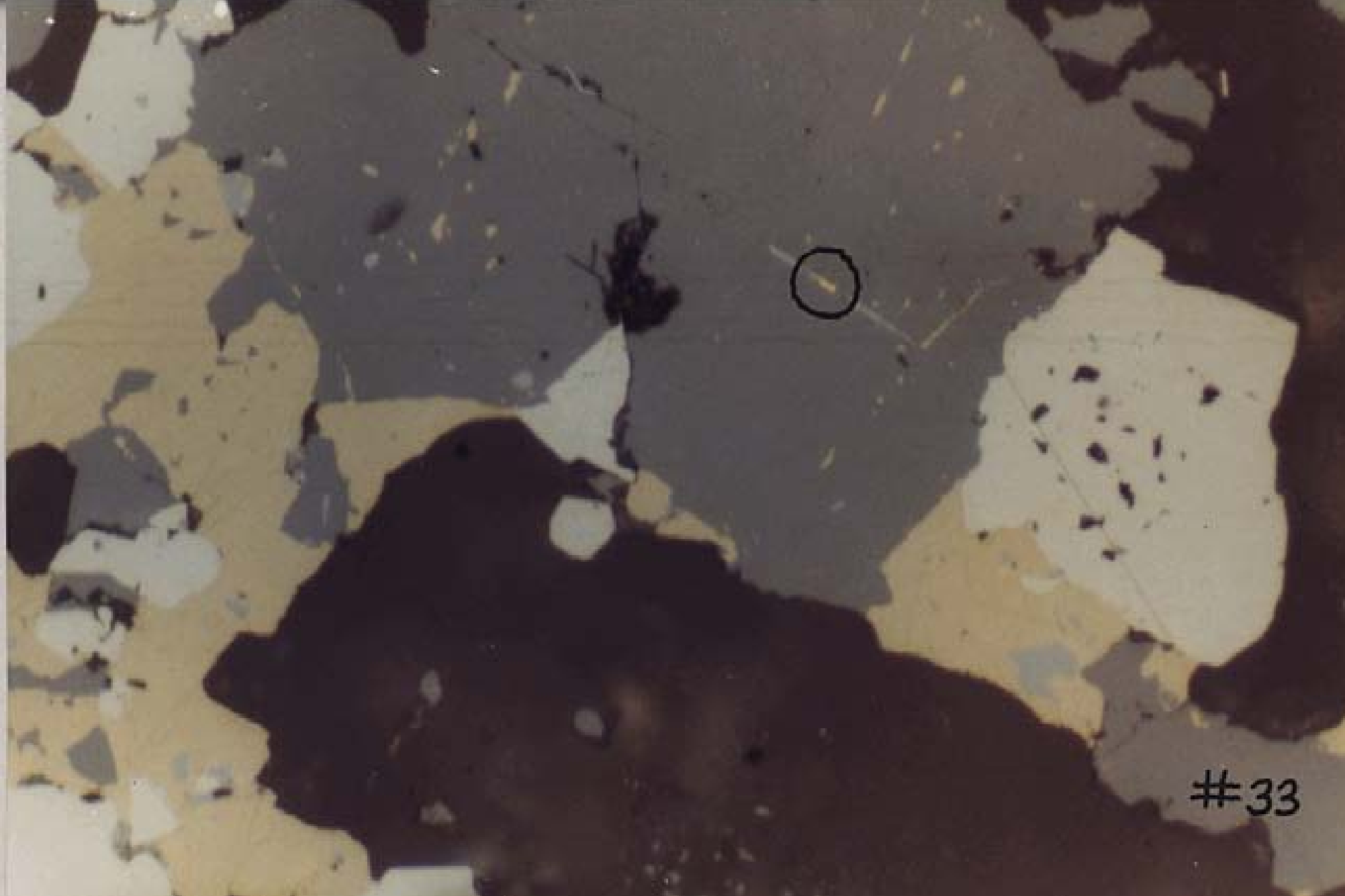
After intensive scanning under high magnification, gold was detected, but only very sparsely and as extremely small particles (maximum 12 microns). It appears to be diverse in its association. Of 7 cases, 2 were on the contacts of pyrite and chalcopyrite; 2 were within small inclusions of gangue (in pyrite/chalcopyrite and sphalerite respectively); 1 was in gangue adjacent to pyrite; 1 was associated with galena in a hairline micro-veinlet in sphalerite; and 1 was on the contact of galena and tetrahedrite.

PHOTOMICROGRAPHS

#27

#31

#32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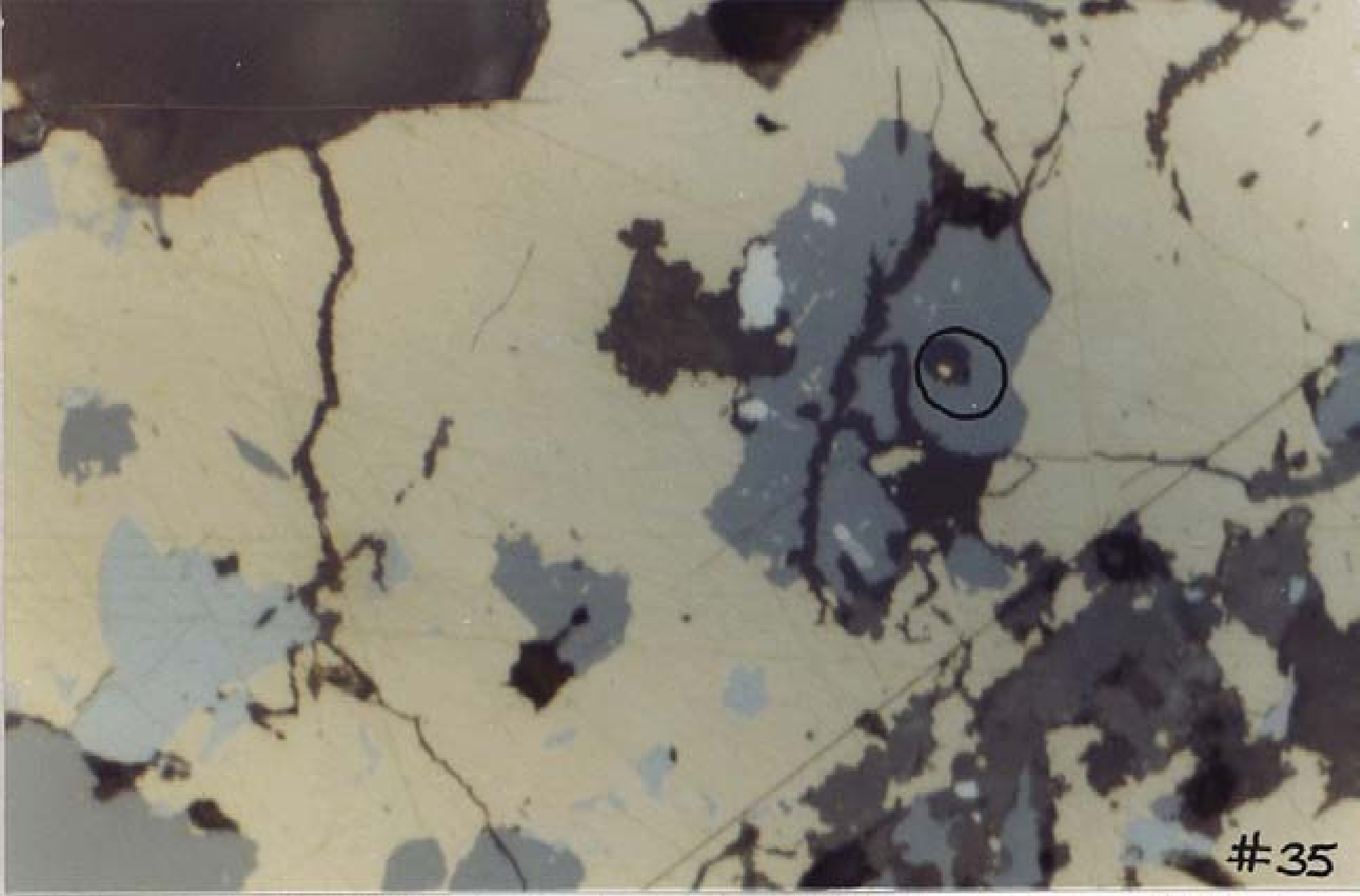
#34


#35

APPENDIX NO. 3

SOIL PROFILES PITS RESULTS

APPENDIX NO. 3

Soil profile pits were dug at various locations on the property. They were targeted at soil sample results of Au=100ppb or higher. Their purpose was to compare the geochemical results with depth and determine if the anomaly was from a local source or if it had migrated from a remote uphill source. Local sources would presumably give higher values with depth and uphill sources would result in lower values with depth.

Additionally, several mesh sizes were analysed to determine which size would give the optimum results. No mesh size appeared to give superior performance to the usual -80 mesh size. Therefore this size was continued with in analysing subsequent samples. Results from analysis of the other mesh sizes are included at the end of this Appendix.

The soil profile pits results will be discussed as a whole.
Conclusions are as follows:

- High background values are the norm on this property.
- Gold values in the samples are capricious but by and large high results are confirmed over areas of the Altered Zones.

- The very high values trending northwestward from the Hot Spot are from downslope migration from the uphill source.
- Results from profile pits outside the zones tend to be erratic or decrease with depth.
- That the Altered Zones are the source of the gold is more quickly evident by comparing the geology map (Figure No. 6) and gold geochemistry map (Figure No. 4) for the property.

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
HANK 34	230	125	17cm	B	brown	
(creek 2)	210	135	50cm	B	brown	
	210	110	100cm	B	brown	
HANK 38	28	35	17cm	colluvium	brown	
(creek 2)	21	20	50cm	colluvium	grey	
	22	45	100cm	colluvium	grey	
HANK 38R	2	<5	adjacent	talus	green	unmineralized andesitic tuff.
1700N115E	400	435	20cm(8in)	B	brown	silty
(near Hank 46)	250	2150	61cm(2ft)	B		under water
1760N260E	250	5290	20cm(8in)	B	grey brown	sandy
(near Hank 47)	260	2500	61cm(2ft)	B	brown	sandy
	260	245	91cm(3ft)		grey brown	clay
	290	165	122cm(4ft)	C	grey	clay
1820N320E	38	25	30cm(1ft)	B	orange brown	sandy
(at HANK48)	32	15	61cm(2ft)	B	brown	sandy
	36	20	91cm(2ft)	till	grey brown	sandy
	40	15	122cm(4ft)	till	grey	clayey
1820N430E	240	400	30cm(1ft)	B	grey brown	sandy
(at HANK49)	330	815	61cm(2ft)	B	grey brown	sandy
	240	705	91cm(3ft)	B	grey	sandy
	300	1160	122cm(4ft)	B	grey	sandy
	11	15	adjacent	rock		from talus
1840N535E	310	460	30cm(1ft)	B	orange brown	sandy
(at HANK50)	140	858	61cm(2ft)	B	brown	silty
	210	635	91cm(3ft)	B	light brown	sandy
	290	305	122cm(4ft)	C	purple brown	clayey
	6	145	122cm(4ft)	rock		heavily weathered.
HANK 50	17	10	122cm(4ft)	rock		float, tr py.in green andesite
HANK 54	310	940	15cm(½ft)	regolith	grey	
(creek 6)	>1000	1120	46cm(1½ft)	regolith	brown	limonitic sand & clay
HANK 54	21	15	adjacent	outcrop?	pinkish	(hematitic?) tuff 1m chip
HANK 54A	300	345	adjacent	outcrop	brown	pyritic gouge 20cm wide.
HANK 54B	290	1500	adjacent	outcrop		qtz+carb veins+2½%py in tuff. 3m chip includes gouge zone.

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
HANK 55	210	375	15cm(½ft)	colluvium	brown	
(creek 6)	980	425	46cm(1½ft)	colluvium	yellow brown	
	420	1500	76cm(2½ft)	colluvium	yellow brown	
	75	310	91cm(3ft)	talus rock		green tuff. grab of talus
HANK 56	240	730	30cm(1ft)	colluvium	brown	sandy
(creek 6)	240	650	61cm(2ft)	colluvium	brown	sandy
	230	520	91cm(3ft)	colluvium	brown	sandy
	380	800	122cm(4ft)	colluvium	brown	sandy clay
	410	1600	152cm(5ft)	colluvium	brown	clay
	340	700	183cm(6ft)	glacial outwash	brown	wet, very sticky,very fine. clay.
HANK 57	500	2090	30cm(1ft)	regolith	orange brown	clayey silt
(creek 6)	600	1560	61cm(2ft)	regolith	light orange brown	clayey silt
	750	>10,000	91cm(3ft)	regolith	orange brown	clayey silt
	>1000	1930	122cm(4ft)	regolith	brown	silty, water enters pit.
HANK 62	70	410	30cm(1ft)	regolith	orange brown	silty
(creek 6)	90	830	61cm(2ft)	regolith	orange brown	silty
	160	5040	91cm(3ft)	regolith	orange brown	sandy
	170	1250	122cm(4ft)	regolith	orange brown	sandy
HANK 63	295	1670	30cm(1ft)	regolith	brown	silty
(creek 6)	310	640	61cm(2ft)	regolith	brown	silty
	310	655	91cm(3ft)	regolith	brown	clayey sand
	70	55	122cm(4ft)	regolith	orange	sandy, limonitic
	65	35	152cm(5ft)	regolith	orange	sandy, limonitic
HANK 2341	12	20	183cm(6ft)	(bed?) rock		altered,limonitic tuff
HANK 2342	40	<5	183cm(6ft)	(bed?) rock		green volcanic, float?
HANK 85	85	65	15cm(½ft)		reddish brown	sandy silt
(creek 6)	78	145	30cm(1ft)		yellowish brown	clay, sand, silt
	98	30	61cm(2ft)		brown	silty,sandy clays. red hematitic spots.
	105	20	107cm(3½ft)	C?		clay. abundant weathered volcanic rocks.
	240	70	183cm(5ft)	C?	orange	clay. fragments of soft dark weathered volcanic.
HANK 312	190	200	15cm(½ft)	regolith	brown	sandy
(creek 3)	190	465	30cm(1ft)	regolith	brown	sandy, wet
	190	120	76cm(2½ft)	glacial outwash	blue gray	wet. very fine sticky clay.

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
HANK 313	110	100	15cm(½ft)	B	brown	sandy
(creek 3)	240	265	30cm(1ft)	B	yellow	clayey sand
	54	55	76cm(2½ft)	C	grey brown	clayey
	82	60	122cm(4ft)	C	grey	clay
HANK 314	78	25	40cm	B	brown	sandy
(creek 3)	300	5	70cm	weathered bedrock		altered tuff
HANK 315	76	30	40cm	C	brown	leached talus rock
(creek 3)	48	40	70cm	C	brown	leached rock
(at 800N1005E)	55	60	100cm		orange brown	clay gouge
HANK 316	110	355	30cm(1ft)	B	orange brown	sandy
(creek 3)	110	325	61cm(2ft)	B	orange brown	silty
	130	45	91cm(3ft)	B	light orange brown	sandy,much broken rock.
	110	90	122cm(4ft)	B	light brown grey	sandy
	120	225	152cm(5ft)	B	light brown grey	clayey
HANK 318	59	300	30cm(1ft)	B	orange brown	silty
(creek 3)	70	595	61cm(2ft)	B	orange brown	sandy
	65	570	91cm(3ft)	B	orange brown	sandy
	65	770	122cm(4ft)		light grey	clay
	70	765	152cm(5ft)		orange brown	sandy, gravelly
	65	125	183cm(6ft)	bedrock		
HANK 320	120	150	30cm(1ft)	B	orange brown	sandy, silty
(creek 3)	55	155	61cm(2ft)	B	orange brown	silty, gravelly
	70	85	91cm(3ft)	B	brown	silty very gravelly
	65	45	122cm(4ft)	B	grey brown	silty, very gravelly
HANK 321	60	115	30cm(1ft)	B	orange	silty
	320	615	61cm(2ft)	B	orange brown	silty
	80	75	91cm(3ft)	B	brown	sandy/very gravelly
	360	105	122cm(4ft)	B	brown	sandy/very gravelly

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
HANK 337	140	150	15cm(½ft)	B	brown	
(creek 2-3)	110	200	30cm(1ft)	B	brown	
	78	115	61cm(2ft)	B?	light grey brown	
	75	130	91cm(3ft)	till	grey	sandy
	78	105	122cm(4ft)	till	grey	sandy
HANK 337A	18	15	adjacent	outcrop		½m grab
HANK 339	58	35	15cm(½ft)	B	brown	sandy
	160	135	46cm(1½ft)	B	brown yellow	sandy
	120	400	91cm(3ft)	B	brown	sandy
	130	110	137cm(4½ft)		grey	wet clay
HANK 623	220	1460	30cm(1ft)		brown orange	silt
(Creek 4)	240	375	61cm(2ft)		brown orange	clayey silt
	250	540	91cm(3ft)		orange	clayey silt
	110	215	122cm(4ft)		brown	sand
600N150E	120	60	30cm(1ft)			
	120	65	61cm(2ft)			
	110	110	91cm(3ft)			
	95	50	122cm(4ft)			
600N400E	120	100	30cm(1ft)	B	brown	silty
	170	145	61cm(2ft)	B	brown	silty, sandy
	160	110	91cm(3ft)	till	brown	sandy, gravelly
	160	180	122cm(4ft)	till	brown	sandy, gravelly
800N350E	120	100	30cm(1ft)		reddish brown	silty
	240	290	61cm(2ft)		orange brown	sandy
	210	135	91cm(3ft)		grey brown	sandy
	390	135	122cm(4ft)	till	brown	sandy, gravelly
800N400E	130	170	30m(1ft)		brown	silty
	210	960	66m(2ft)		grey-reddish brown	silty
	155	75	91cm(3ft)		light brown grey	silty clay
	82	65	122cm(4ft)		light brown grey	clayey
1000N400E	105	120	20cm			
	95	70	50cm			
	110	145	75cm			
	160	170	100cm			

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
1000N450E	220	665	30cm			
	105	180	60cm			
	90	150	90cm			
	70	105	120cm			
1200N450E	83	185	40cm	B	orange brown	silty
	150	250	70cm	B	orange brown	sandy silt
	92	270	100cm	B	orange brown	sandy silt
	98	225	130cm	B	orange brown	sandy silt
1200N600E	150	325	40cm	B	red brown	sandy
	180	215	70cm	B	brown	sandy/silty
	80	70	100cm	B	grey brown	clayey
	60	90	130cm	C	grey white	regolith
1200N650E	200	745	40cm	B	orange brown	sandy
	210	270	70cm	B	orange brown	sandy
	125	270	100cm	B	orange brown	silty sand
	76	65	130cm	C	orange grey	clay
1200N700E	120	490	40cm	B	orange brown	sandy silty
	140	155	70cm	B	grey brown	sandy
	130	215	100cm	B	grey brown	sandy
	170	165	130cm	B	light grey	sandy clay
1400N0E	205	350	30cm(1ft)	B	brown	sandy, many cobbles
	160	610	61cm(2ft)	B	orange brown	silty
	155	495	91cm(3ft)	B	brown	sandy
	120	105	122cm(4ft)	B	orange brown	sandy
1400N50E	195	1590	30cm(1ft)	B	brown	silty
	205	810	61cm(2ft)	B	brown	sandy
	155	1320	91cm(3ft)	B	brown	sandy/gravelly. water enter pit.
1400N100E	240	2700	30cm(1ft)	B	orange brown	silty
	210	810	61cm(2ft)	B	orange brown	silty
	210	715	91cm(3ft)	B	orange brown	silty
	240	3500	122cm(4ft)	B	orange brown	sandy
1400N150E	220	650	15cm(½ft)	B	brown	silty
	280	1250	30cm(1ft)	B	orange brown	silty
	390	2710	61cm(2ft)	B	brown	sandy
	280	1310	91cm(3ft)	B	brown	silty
	400	2460	122cm(4ft)	B	brown	sandy

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
1400N250E	120	235	30cm(1ft)	B	orange brown	silty
	155	200	61cm(2ft)	B	orange brown	silty
	70	65	91cm(3ft)	B	brown	sandy
	78	195	122cm(4ft)	B	brown	sandy
1400N350E	220	590	30cm(1ft)	B	brown	sandy
	240	560	61cm(2ft)	B	brown	sandy
	205	305	91cm(3ft)	B	brown	sandy/gravelly
	62	190	122cm(4ft)	bedrock		altered tuff with 1% pyrite with quartz and calcite veins.
1390N360E	75	140		outcrop		galena in calcite & quartz veinlets. 12m chip.
1400N700E	145	155	30cm	B	orange	sandy/silty
	190	505	70cm	B(regolith?)	orange	sandy
	150	415	100cm	B	orange	sandy
	15	15	100cm	rock		ferrierete layer
1400N800E	58	125	40cm	B	orange brown	sandy/silty
	250	130	70cm	B	grey brown	sandy clay
	210	160	100cm	B	light grey	sandy clay
	195	200	130cm	B	grey brown	clay
1600N50E	85	180	40cm	B	orange brown	sandy, silty
	100	310	70cm	B	brown	sandy
	90	120	100cm	B	brown	sandy, silty
	56	90	130cm	C	grey blue	clay
1600N100E	230	485	40cm	B	orange brown	sandy
	275	400	70cm	B	orange brown	sandy
	350	390	100cm	till	brown	silt
	290	265	130cm	till	brown	silt
1600N150E	250	505	40cm	B	orange brown	silt
	300	935	70cm	B	orange brown	sandy silt
	300	525	100cm	B	orange brown	sandy silt
	275	515	130cm	B	orange brown	sandy silt
1600N200E	90	105	40cm	B	dark brown	silt
	90	135	70cm	B	dark brown	silt
	200	1450	100cm	B	dark brown	silt
	210	630	130cm	B	dark brown	silty clay

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
1600N300E	300	1850	40cm		orange brown	silty sand
	400	1230	70cm	B	orange brown	silt
	525	1390	100cm	B	brown	clay
	500	590	130cm	B	grey brown	clay
1600N500E	70	185	40cm	B	dark grey brown	sandy silt
	115	105	70cm	B	dark grey brown	sandy silt
	220	250	100cm	B	brown	clay
	390	685	130cm	B	orange brown	clay
1600N550E	160	445	40cm	B	brown	clay
	70	265	70cm	B	orange brown	clay
	25	30	100cm	B	orange brown	clay
1600N600E	225	1000	40cm	B	brown	sandy, silt
	210	325	70cm	B	brown	clay
	175	215	100cm	B	brown	clay
	85	75	130cm	C?	blue gray	clay
1600N650E	200	340	40cm	B	orange brown	sandy silt
	300	490	70cm	B	brown	silt
	300	335	100cm	B	brown	silty sand
	100	120	130cm	B	brown	clay
1600N700E	70	360	40cm	B	grey brown	clay
	98	390	70cm	B	grey brown	clay
	155	360	100cm	B	grey brown	clay
	25	40	130cm	B	brown	clay
1600N750E	500	450	40cm	B	brown	sandy clay
	400	290	70cm	B	brown	clay
	475	360	100cm	B	brown	clay
	200	40	130cm	C?	blue gray	clay
1600N800E	60	60	40cm	B	grey brown	clay
	375	370	70cm	B	brown grey	clay
	125	140	100cm	B	grey	clay
	79	140	130cm	B	grey	clay
1800N0E	110	125	30cm(1ft)		grey	silty clay
	84	90	61cm(2ft)		grey	silty clay & sand
	105	750	91cm(3ft)	stream deposit		sandy. rounded cobbles
	90	840	122cm(4ft)	stream deposit		sandy. rounded cobbles

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
1800N50E	295	755	30cm(1ft)	B	brown	sandy/silty
	305	650	61cm(2ft)	B	brown	sandy/silty
	610	1050	91cm(3ft)	B	brown	coarse sand
	30	30	122cm(4ft)	B	grey blue	clay
1800N100E	340	2800	30cm(1ft)	B	brown	sandy clay
	310	1350	61cm(2ft)	B	brown	sandy clay
	240	935	91cm(3ft)	B	brown	silty clay
	300	620	122cm(4ft)	B	brown	sandy clay
1800N150E	340	750	30cm(1ft)		light brown	silty/sandy
	6	<5	46cm(1½ft)	rock		andesite float
	290	885	61cm(2ft)	B	brown	silty/sandy
	280	530	91cm(3ft)	B	dark brown	silty/sandy
	305	480	122cm(4ft)	B	dark brown	silty/sandy
1800N200E	400	775	30cm(1ft)	B	brown	silty
	410	2900	61cm(2ft)	B	brown	silty sand
	310	1000	91cm(3ft)	B	brown	silty gravel
	320	6750	122cm(4ft)	B	brown	silty gravel
1800N250E	590	550	30cm(1ft)	B	brown	clayey silt
	310	390	61cm(2ft)		brown	silty clay
	350	190	91cm(3ft)		pink, brown	clay. calcite pieces
	410	200	122cm(4ft)		light brown	clay.
1800N300E	1000	835	30cm(1ft)	B	brown orange	sandy/silty
	310	335	61cm(2ft)	B	light brown	silty
	410	620	91cm(3ft)	B	dark grey brown	sandy
	320	310	122cm(4ft)	B	dark grey brown	sandy
1800N350E	350	685	20cm		brown	sandy
	375	895	70cm	B		clay
	500	495	100cm	B		clay
	575	640	130cm	B		clay
1800N400E	900	1250	20cm	B		sandy
	800	1380	70cm	B		sandy
	575	1780	100cm	B		clay
	400	2300	150cm	B		clay
1800N450E	450	380	20cm	B		silty
	450	500	70cm	B		clay
	125	280	100cm	B		clay
	75	215	130cm	B		clay

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
1800N500E	150	475	20cm	B		clay
	175	505	60cm	B		clay, water enters pit.
1800N550E	115	705	20cm	B		silty clay
	140	680	70cm	B		silty clay
	140	935	100cm	B		clay
	300	900	130cm	B		clay
1800N600E	170	420	20cm	B		silty clay
	175	425	70cm	B		silty clay
	195	255	100cm	B		silty clay
	160	340	130cm	B		silty clay
1800N650E	290	425	20cm	B		silty
	88	95	70cm	B	grey	clay
	190	370	100cm	B	red brown	clay. water enters pit.
1800N700E	200	625	20cm	B		clay
	195	1110	60cm	B	red brown	clay. water enters pit.
1800N750E	275	1110	20cm	B	brown	clay
	350	1940	70cm	B	brown	clay
	350	1010	100cm	B	brown	clay
	550	700	130cm	B	brown	clay
1800N800E	325	350	20cm	B	brown	clay
	250	325	60cm	B	brown	clay. water enters pit
1800N900E	275	5600	40cm	till	orange brown	sandy/silty
	500	1000	70cm		orange brown	clay
	350	560	100cm		light grey	clay
	235	1050	130cm		dark brown	clay
1800N950E	170	180	20cm	C	brown	silt
	180	160	50cm	C	brown	gravelly silt.
	205	220	80cm	C	brown	silt. angular rocks
	210	220	110cm	C	brown	silt. angular rocks
1800N1000E	160	110	40cm	B	orange brown	silt
	155	80	70cm	B	brown	clayey silt
	180	90	100cm	B	grey brown	clay. angular rocks
	180	110	130cm	B	grey brown	clay. angular rocks.

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
1800N1150E	270	260	40cm	B	orange brown	sand
	38	25	adjacent	bedrock		weathered andesite.
1800N1200E	270	420	40cm	B	brown	silt. rocks (talus)
	280	500	70cm	B	brown	silt. rocks (talus)
	200	680	100cm	B	brown	gravelly silt. rocks (talus
	220	2900	130cm	B	brown	gravelly silt. rocks (talus
1800N1350E	38	25	10cm		medium brown	silty
	65	65	30cm		medium brown	sandy/silty
	58	170	60cm		medium brown	sandy/silty
	130	7300	90cm		medium brown	sandy/silty
	180	2000	130cm		medium brown	sandy/silty
2000N350E	150	70	15cm		brown	silty sand
	150	105	30cm		brown	silty sand & gravel
	200	125	60cm		brown	silty sand & gravel
	210	670	90cm		brown	silty sand & gravel
	190	165	130cm		brown	silty sand & gravel
2000N400E	59	65	15cm	B	brown	coarse sand
	400	375	30cm	till	brown	coarse sand
	325	150	60cm		brown	coarse sand
	300	190	90cm	C?	brown	coarse sand
	260	20	190cm		purple & yellow brown	coarse sand & rock
2000N450E	90	125	15cm		brown	coarse sand
	88	185	30cm		brown	coarse sand
	225	45	60cm	C	grey brown	with angular rocks
	400	205	90cm	C	grey brown	coarse sand & rocks
	80	20	100cm	bedrock	green	volcanic with 0.3% pyrite.
2000N500E	80	40	15cm	B	light brown	silt/sand
	60	65	30cm		darker brown	silt/sand
	70	420	60cm		dark brown	silty/sand
	210	190	90cm		dark red brown	silt/sand
	175	550	130cm	C	brown	coarse sand with silt. may include weathered bedrock.
2000N550E	70	435	20cm	B		sandy clay
	93	220	70cm	B		sandy clay
	97	610	100cm	B		gravelly clay
	170	220	130cm	B		sandy clay

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
2000N650E	63	75	20cm	B		silty
	150	310	70cm	C		gravelly
	45	55	90cm	bedrock		pyritic altered andesitic tuff. Py patches up to 25%
2000N700E	155	110	20cm	B		silty
	98	165	70cm	B		silty
	400	485	100cm	B		silty
	145	230	130cm	B		silty
2000N750E	100	130	20cm	B		silty clay
	160	180	70cm	B		clay
	110	175	100cm	B		clay
	100	130	130cm	B		clay
2000N1000E	325	520	30cm	till	orange brown	clayey/silty
	350	540	70cm	till	orange brown	clayey/silty
	75	25	100cm	rock		highly weathered andesite
2000N1100E	750	2200	40cm		orange brown	silt
	900	820	70cm		orange brown	clayey silt
	450	920	100cm		orange brown	silty clay
	190	4300	130cm		light brown	clay
2000N1150E	400	940	40cm		orange brown	clay
	275	380	70cm		orange brown	gravelly clay
	200	900	100cm		orange brown	clay
	400	440	130cm		brown	clayey silt
2000N1200E	165	400	40cm		orange brown	clay
	135	380	70cm		orange brown	silt
	210	340	100cm		orange brown	clay/silt
	165	260	130cm		orange brown	silt
					thick overburden over swampy area here.	
2000N1350	280	2000	30cm	B	brown	silty/sandy
	240	1300	60cm	B	brown	silty/sandy.carbonate fra
	190	2500	90cm	B	brown grey	sandy
	810	5700	120cm		light orange brown	gossanous clay

TABLE NO. 3

Soil Profile Pits Results

LOCATION	As (ppm)	Au (ppb)	Depth	Horizon	Colour	Remarks
2000N1400	810	680	30cm	B	orange brown	sandy
	950	2400	60cm	C	orange brown	sandy. rock fragments.
	.17%	5000	90cm	C	light orange brown	50% rock fragments.
	950	5300	120cm	C	light orange brown	70% rock fragments.
					weathered bedrock in pit has black vein remnants.	
2000N1500E	29	45	20cm	weathered bedrock		
	15	15	40cm	" "		
	105	150	100cm	" "		
	16	5		bedrock		
2000N1550E	105	150	10cm		medium brown	sandy silt
	280	100	30cm		medium brown	sandy silt
	115	170	60cm	weathered bedrock	light brown & grey	sandy/gritty
	160	110	90cm	" "	light brown & grey	sandy/gritty
	90	90	120cm	" "	light brown & grey	gritty
	17	15		bedrock		crumbly, limonitic, with black stain
2250N1150E	210	360	10cm		medium brown	sandy
	220	640	30cm		medium brown	sandy
	130	260	60cm		medium brown	sandy
					pit contained angular boulders of (siliceous?) green volcanic.	
2250N1200E	90	300	10cm		medium brown	silty
	120	240	30cm		light brown	silty
	520	2100	60cm		reddish medium brown	silty/sandy. rocks.
	420	1200	90cm		medium brown	silty/sandy. rocks
	405	580	120cm		grey brown	sandy. rocks
2250N1500E	41	540	10cm	scree	light brown	silty
	41	320	30cm	scree		sandy/clayey
	17	85	30cm	rock		(felsite?)

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Geochemical Lab Report

EPORT: 124-1407

OM: LAC MINERALS LTD. SUBMITTED BY: R. TURNA
)ATE: 12-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	As	2 PPM	NITRIC PERCHLOR DIG	Colourimetric	-80	SOILS	DRY, SEIVE -80
02	Au	5 PPB	AQUA REGIA	Fire Assay AA	-80		

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REMARKS: -80 FRACTION

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REPORT: 124-1407 | PROJECT: HANK | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	NOTES
-80	HANK			
S 85-0.5ft		85	65	out of Zone
S 85-1ft		78	145	
S 85-2ft		98	30	
S 85-3.5ft		105	20	
S 85-5ft		240	70	
S 623-1ft		220	1460	down hill out of Zone
S 623-2ft		240	375	
S 623-3ft		250	540	
S 623-4ft		110	215	
1740N-	PREFIX			
S 115E-8in		400	435	out down hill
S 115E-2ft		250	2150	
1760N-	PREFIX			
S 260E-8in		250	5290	down hill
S [illegible]-2ft		260	2500	out of Zone
S 260E-3ft		260	245	
S 260E-4ft		290	165	
1820N-	PREFIX			
S 320E-1ft		38	25	
S 320E-2ft		32	15	down hill out of Zone
S 320E-3ft		36	20	
S 320E-4ft		40	15	
S 430E-1ft		240	400	
S 430E-2ft		330	815	just out, down boundaryline
S 430E-3ft		240	705	
S 430E-4ft		300	1160	
1840N-	PREFIX			
S 535E-1ft		310	460	in Zone
S 535E-2ft		140	858	
S 535E-3ft		210	635	
S 535E-4ft		290	305	

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REPORT: 124-1453

FROM: LAC MINERALS LTD. SUBMITTED BY: R. TURNA
DATE: 12-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	As	2 PPM	NITRIC PERCHLOR DIG	Colourimetric	-60+80	SOILS	OTHER SAMPLE PREP 1
02	Au	5 PPB	AQUA REGIA	Fire Assay AA	-60+80		PULVERIZING

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PROJECT: HANK PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	NOTES
-60+80	HANK			
S 85-0.5ft		75	55	
S 85-1ft		65	85	
S 85-2ft		85	30	
S 85-3.5ft		75	20	
S 85-5ft		130	55	
S 623-1ft		280	750	
S 623-2ft		275	920	
S 623-3ft		230	285	
S 623-4ft		90	120	
1740N-	PREFIX			
S 115E-8in		580	505	
S 115E-2ft		260	1910	
1760N-	PREFIX			
S 260E-8in		260	5050	
S)-2ft		250	9890	
S 260E-3ft		240	210	
S 260E-4ft		300	165	
1820N-	PREFIX			
S 320E-1ft		34	25	
S 320E-2ft		31	35	
S 320E-3ft		27	25	
S 320E-4ft		30	20	
S 430E-1ft		260	500	
S 430E-2ft		310	265	
S 430E-3ft		280	195	
S 430E-4ft		360	525	
1840N-	PREFIX			
S 535E-1ft		310	305	
S 535E-2ft		260	800	
S 535E-3ft		170	365	
S 535E-4ft		240	210	

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REPORT: 124-1454

FROM: LAC MINERALS LTD. SUBMITTED BY: R. TURNA
DATE: 12-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	As	2 PPM	NITRIC PERCHLOR DIG	Colourimetric	-40+60	SOILS	OTHER SAMPLE PREP 1
02	Au	5 PPB	AQUA REGIA	Fire Assay AA	-40+60		PULVERIZING

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REMARKS: -40+60 FRACTION
ASSAY OF HIGH Au TO FOLLOW ON 624-1454.

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REPORT: 124-1454

PROJECT: HANK PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	NOTES
-40+60 HANK				
S 85-0.5ft		85	50	
S 85-1ft		55	80	
S 85-2ft		75	30	
S 85-3.5ft		65	20	
S 85-5ft		130	10	
S 623-1ft		280	1390	
S 623-2ft		270	350	
S 623-3ft		260	485	
S 623-4ft		75	110	
1740N- PREFIX				
S 115E-8in		580	230	
S 115E-2ft		260	1800	
1760N- PREFIX				
S 260E-8in		260	7180	
S 260E-2ft		250	> 10000	← See Report 624-1454 (July 18)
S 260E-3ft		240	190	
S 260E-4ft		300	120	
1820N- PREFIX				
S 320E-1ft		29	25	
S 320E-2ft		27	30	
S 320E-3ft		27	20	
S 320E-4ft		24	15	
S 430E-1ft		260	355	
S 430E-2ft		370	235	
S 430E-3ft		260	180	
S 430E-4ft		360	410	
1840N- PREFIX				
S 535E-1ft		380	400	
S 535E-2ft		260	170	
S 535E-3ft		250	260	
S 535E-4ft		240	240	

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Bondar-Clegg & Company Ltd.
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North Vancouver, B.C.
Canada V7P 2R5
Phone: (604) 985-0681
Telex: 04-52667

BONDAR-CLEGG

Certifica
of Analys

REPORT: 624-1454

FROM: LAC MINERALS LTD. SUBMITTED BY: R. TURNA
DATE: 17-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARA
01	Au	.002 OPT			-150	SOILS	AS RECEIVED, NO SI

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INVOICE TO: LAC MINERALS LTD.

REMARKS: -40+60 FRACTION

7. ERRATIC RESULTS OBTAINED WHEN SPLITTING SAMPLE AFTER SCREENING TO -150 MESH.

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This supplements Report No. 124-1454 (July 12)

REPORT: 624-1454 | PROJECT: HANK | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Au OPT	NOTES
1760N-PREFIX S 260E-2ft		0.214	7*

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Geochemic
Lab Repc

REPORT: 124-1455

FROM: LAC MINERALS LTD. SUBMITTED BY: R. TURNA
DATE: 12-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATION
01	As	2 PPM	NITRIC PERCHLOR DIG	Colourimetric	-20+40	SOILS	OTHER SAMPLE PREP 1
02	Au	5 PPB	AQUA REGIA	Fire Assay AA	-20+40		PULVERIZING

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REMARKS: -20+40 FRACTION

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...lex: 04-352667

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REPORT: 124-1455 | PROJECT: HANK | PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	NOTES
-20+40 HANK				
S 85-0.5ft		85	100	
S 85-1ft		65	70	
S 85-2ft		60	15	
S 85-3.5ft		51	15	
S 85-5ft		125	35	
S 623-1ft		300	700	
S 623-2ft		250	1200	
S 623-3ft		125	655	
S 623-4ft		59	80	
1740N- PREFIX				
S 115E-8in		600	255	
S 115E-2ft		260	3430	
1760N- PREFIX				
S 260E-8in		280	3280	
S ...E-2ft		270	9060	
S 260E-3ft		170	170	
S 260E-4ft		260	120	
1820N- PREFIX				
S 320E-1ft		21	15	
S 320E-2ft		23	40	
S 320E-3ft		29	10	
S 320E-4ft		21	10	
S 430E-1ft		280	290	
S 430E-2ft		380	205	
S 430E-3ft		240	110	
S 430E-4ft		290	280	
1840N- PREFIX				
S 535E-1ft		390	295	
S 535E-2ft		260	370	
S 535E-3ft		170	165	
S 535E-4ft		170	185	

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Geochemical Lab Report

REPORT: 124-1707

FROM: LAC MINERALS LTD. SUBMITTED BY: R TURNA
DATE: 20-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATION
01	As	2 PPM	NITRIC PERCHLOR DIG	Colourimetric	-80	SOILS	DRY, SEIVE -80
02	Au	5 PPB	AQUA REGIA	Fire Assay AA	-80		

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REMARKS: -80 FRACTION

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Geochemic
Lab Repo

REPORT: 24-1707

PROJECT: HANK PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	NOTES
PREFIX -80				
S HANK 314		150	150	plotted
S HANK 315		95	390	plotted
S HANK 316 1FT		110	355	in upper zone (value, erratic)
S HANK 316 2FT		110	325	in upper zone (value, erratic)
S HANK 316 3FT		130	45	
S HANK 316 4FT		110	90	
S HANK 316 5FT		120	225	
S HANK 1052		8	<5	
S HANK 1053		5	<5	
S HANK 1056		5	<5	
S HANK 2139		62	330	

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BONDAR-CLEGG

Geochemic
Lab Repo

REPORT: 124-1708

FROM: LAC MINERALS LTD. SUBMITTED BY: R TURNA
DATE: 20-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATIONS
01	As	2 PPM	NITRIC PERCHLOR DIG	Colourimetric	-40+80	ROCK OR BED ROCK	OTHER SAMPLE PREP 1
02	Au	5 PPB	AQUA REGIA	Fire Assay AA	-40+80		PULVERIZING

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REMARKS: -40+80 FRACTION

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Geochemic
Lab Repo

REPORT: 124-1708

PROJECT: HANK PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	NOTES
PREFIX -40+80				
S HANK 314		130	155	
S HANK 315		60	1190	
S HANK 316 1FT		95	115	
S HANK 316 2FT		90	95	
S HANK 316 3FT		110	60	(values erratic)
S HANK 316 4FT		90	60	
S HANK 316 5FT		110	205	
S HANK 1052		7	<5	
S HANK 1053		5	<5	
S HANK 1056		4	<5	
S HANK 2139		90	545	

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Geochemic
Lab Repo

REPORT: 124-1709

FROM: LAC MINERALS LTD. SUBMITTED BY: R TURNA
DATE: 20-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATION
01	As	2 PPM	NITRIC PERCHLOR DIG	Colourimetric	-20+40	SOILS	SEIVE -20
02	Au	5 PPB	AQUA REGIA	Fire Assay AA	-20+40		PULVERIZING

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REMARKS: -20+40 FRACTION

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Lab Repo

REPORT# 124-1709

PROJECT: HANK PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	As PPM	Au PPB	NOTES
PREFIX -20+40				
S HANK 314		130	75	
S HANK 315		70	60	
S HANK 316 1FT		90	95	In upper Zone
S HANK 316 2FT		65	65	
S HANK 316 3FT		125	35	(values erratic)
S HANK 316 4FT		85	55	
S HANK 316 5FT		110	105	
S HANK 1052		6	25	
S HANK 1053		4	<5	
S HANK 1056		4	<5	
S HANK 2139		90	475	

RECEIVED JUL 2 3 19

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Canada V7P 2R5
Phone: (604) 985-0681
Telex: 04-352667

BONDAR-CLEGG

Geochemi
Lab Rep

REPORT: 124-1710

FROM: LAC MINERALS LTD. SUBMITTED BY: R TURNA
DATE: 20-JUL-84 PROJECT: HANK

ORDER	ELEMENT	LOWER DETECTION LIMIT	EXTRACTION	METHOD	SIZE FRACTION	SAMPLE TYPE	SAMPLE PREPARATI
01	As	2 PPM	NITRIC PERCHLOR DIG	Colourimetric	-10+20	SOILS	SEIVE -10
02	Au	5 PPB	AQUA REGIA	Fire Assay AA	-10+20		PULVERIZING

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REMARKS: -10+20 FRACTION

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Canada V7P 2R5
Phone: (604) 985-0681
Telex: 04-352667

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Geochemi
Lab Rep

[illegible] 124-1710	PROJECT: HANK PAGE 1

SAMPLE NUMBER / ELEMENT / UNITS	As PPM	Au PPB	NOTES
LINE: -10+20			
S HANK 314	130	60	
S HANK 315	70	45	
S HANK 316 1FT	65	70	in upper Zone (low values are erratic)
S HANK 316 2FT	58	95	
S HANK 316 3FT	120	25	
S HANK 316 4FT	70	30	
S HANK 316 5FT	75	50	
S HANK 1052	6	<5	
S HANK 1053	4	5	
S HANK 1056	4	<5	
S HANK 2139	65	515	

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APPENDIX NO. 4

HANK CLAIM GROUP EXPENDITURES SUMMARY

APPENDIX #4

1984

HANK EXPENSES FOR ASSESSMENT

A/ PHYSICAL (Hand Pits & Trenches)

R. Brown	Sept 13-22 Move in & out Sept 12,23,24 Minus 2 days I.P.	9 Days @ $136/day =	$1,224.00
R. Turna	Sept. 13-15 Move in Sept 12	4 days @ $136/day =	$ 544.00
Y. M. So	Sept 13-19 Move in Sept 12,20 Minus 1 day I.P.	8 days @$136/day =	$1,088.
G. Payie	Sept 13-22 Move in Sept 12 Minus 2 days I.P.	9 days @ $85.50/day =	$ 769.50

Camp Costs:

Helicopter Camp move & move in		
Nrthn. Mtn. Hel. Invoice #26816	=	650.00
" #26825		$2,193.75
TOTAL	=	$6,469.25

.../2

C/ DRILLING

	Sept 17-Oct 3/84 Jadfry Entrp. Ltd. Invoice 4 DDH (B.Q.) size for 288.1m (945')		$35,926.31
Groceries	TPA cost $202.10		$ 202.10
	Food 881.46		$ 881.46
Helicopter	Ntn Mtn invoices 26563-26570 Sept. 19-Oct. 2/84		15,398.25
R. Turna	Sept 24-26,28,29	5 days @ $136./day	$ 680.
G. Payie	Sept 26-29	4 days @ $ 85.50/day	$ 342.
P. Coyle	Sept 22-Oct 3	12 days @ $ 77./day	$ 924.
		TOTAL	54,354.72

D/ GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL

Men:		
R. Turna	87 field days Minus - drilling (5), physical (4) Plus 60 days - office reports	
	138 days @ $136/day =	18,768.00
G. Payie	91 days Minus-drilling (4) physical (9) Plus 30 days office	
	108 days @ $85.50/day =	9,234.00
J. Conway	18 days @ $89.80/day	1,616.40
E. Ochs	70 days @ $72.90/day	5,103.00
C. Bunce	60 days @ $72.90/day	4,374.00
E. Uyeda	72 days @ $72.90/day	5,248.80
T. Donnon	58 days @ $66.70/day	3,868.60
P. Coyle	49 days @ -= 37 days @ $77/day Minus drilling (12)	2,849.00
Radio:	Helicom Avionic & Instruments July-Sept/84	$ 671.84
Fixed Wing:	C.P.A., P.W.A. Air B.C., T.P.A. June 28-Sept12/84	$9,985.81
Expeditor:	(Jean Black) 89.5 hours @ $20/hr for June-Sept/84	$1,790.00
Groceries:	(Jean Black, Overwaitea) June-Sept/84	$7,320.59
Lodging:	June - October, 1984	1,406.06
Truck Rentals:	U-Haul, Rentways, June (2 weeks), Sept.11-Oct 3/84	3,321.05
Analysis:	(Bondar-Clegg) July-November/84	25,155.99
Helicopter:	Northern Mountain June-Sept/84	24,204.05
Basemap:	McElhanney Group Ltd. November/84'	3,420.00
	TOTAL	128,337.19

APPENDIX NO. 5

STATEMENT OF EXPLORATION AND DEVELOPMENT

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources
MINERAL RESOURCES DIVISION — TITLES BRANCH

MINERAL ACT

STATEMENT OF EXPLORATION AND DEVELOPMENT

I, Rein Turna (Name) Agent for LAC MINERALS LTD. (Name)

5818 - Falcon Road (Address) #470-1055 West Hastings Street (Address)

West Vancouver, B.C. Vancouver, B.C.

V7W 1S3 (Postal Code) (604) 921-9984 (Telephone Number) V6E 2E9 (Postal Code) (604) 685-0531 (Telephone Number)

Valid subsisting F.M.C. No. TURNR/274320 Valid subsisting F.M.C. No. LACMIL/274316

STATE THAT

1. I have done, or caused to be done, work on the HANK 1-4 Claim(s)

Record No(s). 2961, 2962, 2963, 3209

Situate at HANKIN PEAK in the LIARD Mining Division,

to the value of at least $189,161.16 dollars. Work was done from the 18th day

of JUNE 19 84, to the 3rd day of October 19 84

2. The following work was done in the 12 months in which such work is required to be done:

[COMPLETE APPROPRIATE SECTION(S) A, B, C, D, FOLLOWING]

A. PHYSICAL (Trenches, open cuts, adits, pits, shafts, reclamation, and construction of roads and trails.)

(Give details as required by section 13 of regulations.)

	COST
HAND TRENCHING SALARIES	$3,625.50
CAMP COSTS	$2,843.75
TOTAL PHYSICAL	$6,469.25

I wish to apply $ $3,600.00 of physical work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)

One (1) year, HANK #1, March 2691

B. PROSPECTING (Details in report submitted as per section 9 of regulations.)
(The itemized cost statement must be part of the report.)

COST

I wish to apply $ ..... of this prospecting work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)

(For C and D sections, please turn over.)

C. DRILLING (Details in report submitted as per section 8 of regulations.) (The itemized cost statement must be part of the report.)	COST
2/3 incured from Sept 22/84 - October 3/84 ($36,236.48)	$54,354.72
D. GEOLOGICAL, GEOPHYSICAL, GEOCHEMICAL (Details in report submitted as per section 5, 6, or 7 of regulations.) (The itemized cost statement must be part of the report.) (State type of work in space below.)	
SALARIES	$51,061.80
ANALYSIS	$24,892.38
CAMP COSTS etc..	$52,383.01
TOTAL OF C AND D	$128,337.19

Where the above statement requires a technical report as per section C of the Mineral Act Regulations, the author of the report shall complete both copies of the ASSESSMENT REPORT TITLE PAGE AND SUMMARY form and include the completed forms in the assessment reports.

Who was the operator (provided the financing)?

Name LAC MINERALS LTD.

Address #470-1055 West Hastings Street

Vancouver, B.C. V6E 2E9

Portable Assessment Credits (PAC) Withdrawal Request	AMOUNT
Amount to be withdrawn from owner(s) or operator(s) account(s): Name of Owner/Operator	
[May be no more than 30 per cent of value of the approved work submitted as assessment work in C and (or) D.] 1.	
2.	
3.	
TOTAL WITHDRAWAL	
TOTAL OF C AND (OR) D PLUS PAC WITHDRAWAL	$182,691.91

I wish to apply $ 109,800.00 of this work to the claims listed below.

(State number of years to be applied to each claim, its month of record, and identify each claim by name and record number.)

7 years	HANK 1, March, 2961	$25,200.	
8 years	HANK 2, March, 2962	$32,000.	$89,200.00
8 years	HANK 3, March, 2963	$32,000.	
10 years	HANK 4, October, 3209 - staked Sept. 21/84		17,000.00
		TOTAL FEE	5,490.00 (5%)

Value of work to be credited to portable assessment credit (PAC) account(s).
[May only be credited from the approved value of C and (or D) not applied to claims.]

Name of owner/operator	Name	AMOUNT
1.	LAC MINERALS LTD.	$72,891.91
2.		
3.		

I, the undersigned Free Miner, hereby acknowledge and understand that it is an offence to knowingly make a false statement or provide false information under the *Mineral Act*. I further acknowledge and understand that if the statements made, or information given, in this Statement of Exploration and Development are found to be false and the exploration and development has not been performed, as alleged in this Statement of Exploration and Development, then the work reported on this statement will be cancelled and the subject mineral claim(s) may, as a result, forfeit to and vest back to the Province.

Rein Turna

Signature of Applicant

oc

APPENDIX NO. 6

NOTICE TO GROUP

Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources
MINERAL RESOURCES BRANCH–TITLES DIVISION

MINERAL ACT

FORM I

NOTICE TO GROUP

Mining Division LIARD Location BALL CREEK AREA N.T.S. 104G/1,2

Name of group HANK CLAIM GROUP Map No.

We, the undersigned owners* of the following adjoining claims, desire to group them according to the provisions of the *Mineral Act*:–

NAME OF CLAIM	No. of Units	Record No. or Lot No.	Month of Record	SIGNATURE OF OWNER*	Free Miner Certificate No.
HANK 4 (10 units) October	3209				
to be included with:					
HANK 1 (18 units) March	2691				
HANK 2 (20 units) March	2692				
HANK 3 (20 units) March	2693				
in the HANK CLAIM GROUP					
		AGENT:		Rein Turna	TURNR/274320
		OWNER:		Lac Minerals Ltd.	LACMIL/274316
				Rein Turna	

* May be signed by agent on behalf of owner.

APPENDIX NO. 7

STATEMENT OF AUTHORS' QUALIFICATIONS

APPENDIX 7

I, Rein Turna, certify that:

1. I graduated from the University of British Columbia in 1975 with a BSc in Geology.

2. Since 1975 I have been engaged in mineral exploration in British Columbia and Yukon Territory.

3. I have been personally engaged in field work on the HANK CLAIM GROUP and am responsible for the interpretation of data included in this report.

4. My business address:

Lac Minerals Limited
#470 - 1055 West Hastings Street
Vancouver, B.C. V6E 2E9

My home address:

5818 Falcon Road
West Vancouver, B.C. V7W 1W5

Rein Turna

Endorsed by:

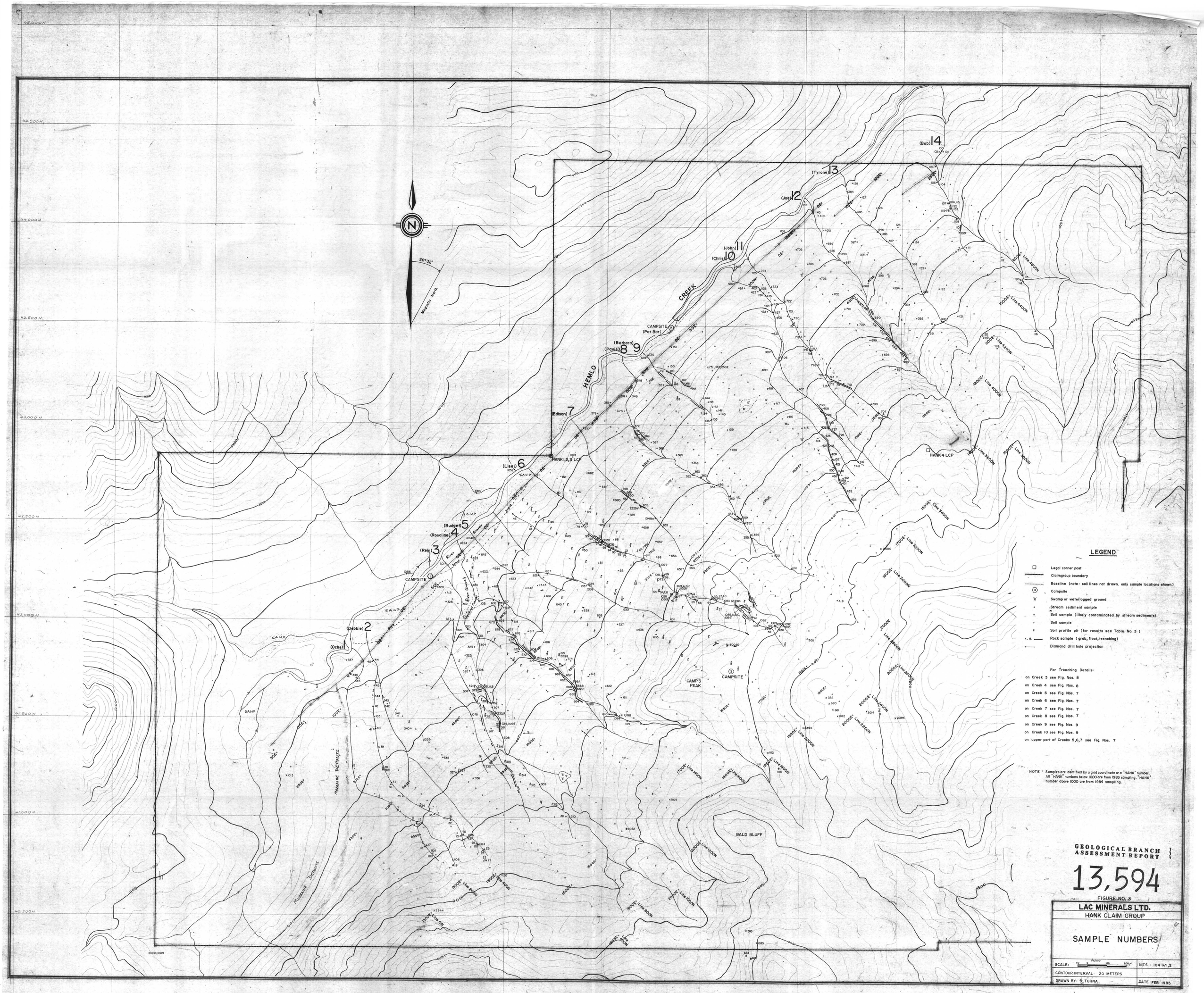
J. Hogan, P.Eng.

MAP POCKETS

for

Figure Nos.

3, 4, 5, 6, 7, 8, 9, 10



LEGEND

- Legal corner post
- Claimgroup boundary
- Baseline (note: soil lines not drawn, only sample locations shown.)
- Campsite
- Swamp or waterlogged ground
- Stream sediment sample
- Soil sample (likely contaminated by stream sediments)
- Soil sample
- Soil profile pit (for results see Table No. 3)
- Rock sample (grab, float, trenching)
- Diamond drill hole projection

For Trenching Details:

on Creek 3 see Fig. Nos. 8
on Creek 4 see Fig. Nos. 8
on Creek 5 see Fig. Nos. 7
on Creek 6 see Fig. Nos. 7
on Creek 7 see Fig. Nos. 7
on Creek 8 see Fig. Nos. 7
on Creek 9 see Fig. Nos. 9
on Creek 10 see Fig. Nos. 9
on upper part of Creeks 5,6,7 see Fig. Nos. 7

NOTE: Samples are identified by a grid coordinate or a "HANK" number. All "HANK" numbers below 1000 are from 1983 sampling. "HANK" number above 1000 are from 1984 sampling.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,594

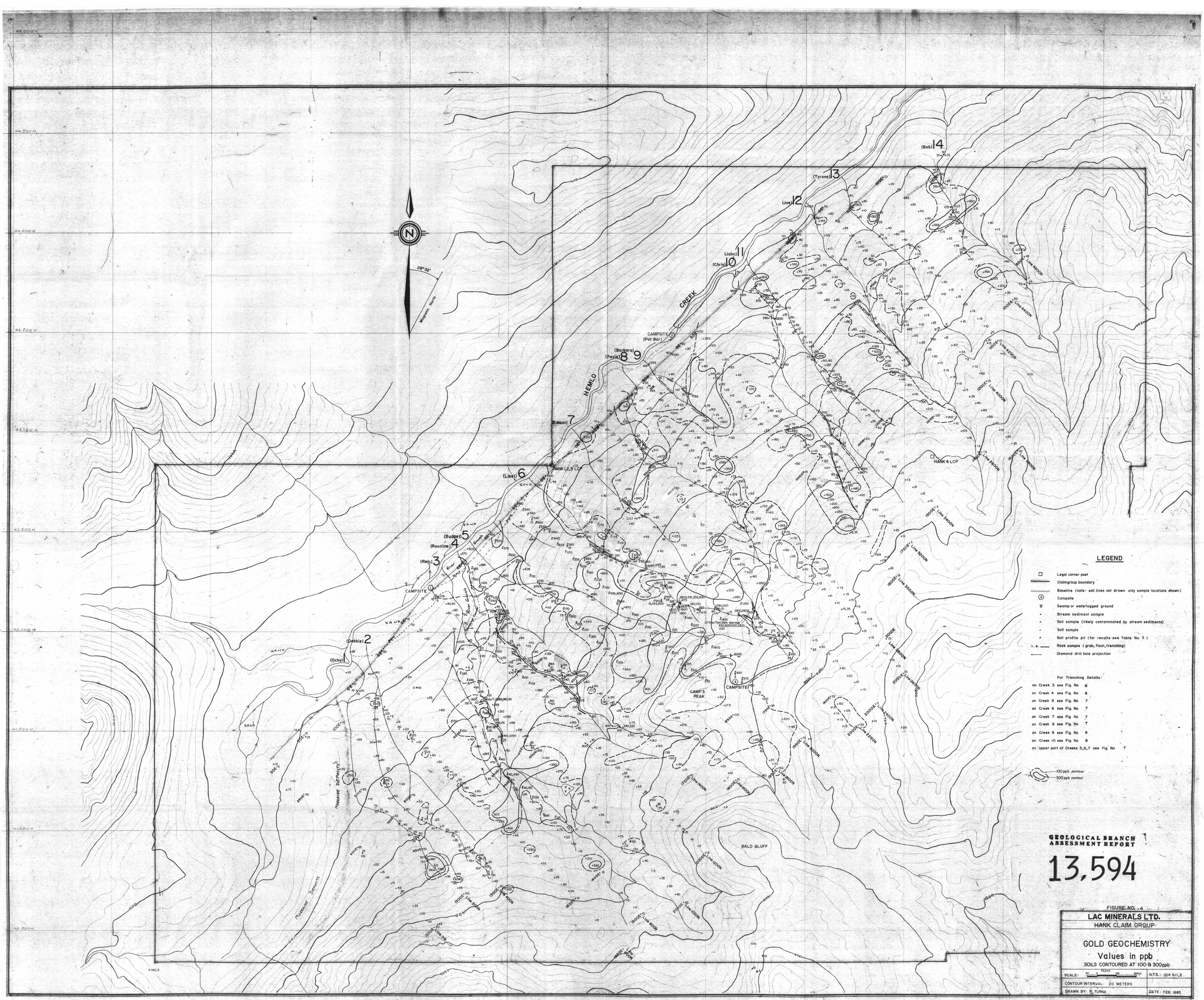
FIGURE NO. 3

LAC MINERALS LTD.

HANK CLAIM GROUP

SAMPLE NUMBERS

SCALE: 50 0 75,000 100 200 M	N.T.S.: 104 G/1,2
CONTOUR INTERVAL: 20 METERS	
DRAWN BY: R. TURNA	DATE: FEB. 1985



LEGEND

- Legal corner post
- Claimgroup boundary
- Baseline (note: soil lines not drawn, only sample locations shown.)
- (3) Campsite
- Swamp or waterlogged ground
- Stream sediment sample
- Soil sample (likely contaminated by stream sediments)
- Soil sample
- P Soil profile pit (for results see Table No. 3)
- x, ø, ▬ Rock sample (grab, float, trenching)
- Diamond drill hole projection

For Trenching Details:

on Creek 3 see Fig. No 8
on Creek 4 see Fig. No 8
on Creek 5 see Fig. No 7
on Creek 6 see Fig. No 7
on Creek 7 see Fig. No 7
on Creek 8 see Fig. No 7
on Creek 9 see Fig. No 9
on Creek 10 see Fig. No 9
on upper part of Creeks 5,6,7 see Fig. No 7

100 ppb contour
300 ppb contour

GEOLOGICAL BRANCH
ASSESSMENT REPORT

13,594

FIGURE NO. 4

LAC MINERALS LTD.

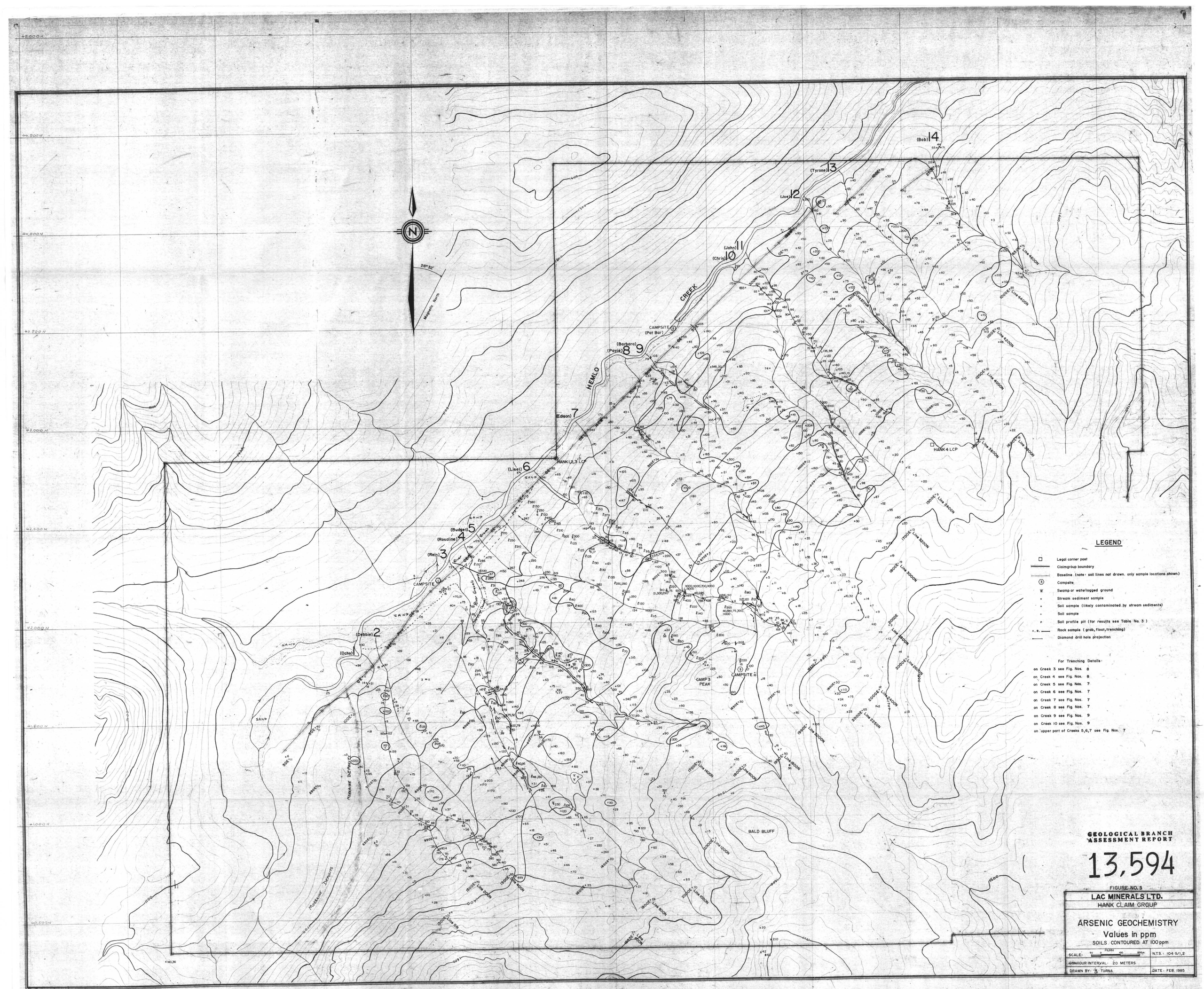
HANK CLAIM GROUP

GOLD GEOCHEMISTRY

Values in ppb

SOILS CONTOURED AT 100 & 300ppb

SCALE: 50 0 25,000 100 200ft.	N.T.S.: 104 G/1,2
CONTOUR INTERVAL: 20 METERS	
DRAWN BY: G. TURNA	DATE: FEB. 1985



LEGEND

- Legal corner post
- Claimgroup boundary
- Baseline (note: soil lines not drawn, only sample locations shown)
- Campsite
- Swamp or waterlogged ground
- Stream sediment sample
- Soil sample (likely contaminated by stream sediments)
- Soil sample
- Soil profile pit (for results see Table No. 3)
- Rock sample (grab, float, trenching)
- Diamond drill hole projection

For Trenching Details:

on Creek 3 see Fig. Nos. 8
on Creek 4 see Fig. Nos. 8
on Creek 5 see Fig. Nos. 7
on Creek 6 see Fig. Nos. 7
on Creek 7 see Fig. Nos. 7
on Creek 8 see Fig. Nos. 7
on Creek 9 see Fig. Nos. 9
on Creek 10 see Fig. Nos. 9
on upper part of Creeks 5,6,7 see Fig. Nos. 7

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FIGURE NO. 5

LAC MINERALS LTD.

HANK CLAIM GROUP

ARSENIC GEOCHEMISTRY

Values in ppm

SOILS CONTOURED AT 100 ppm

SCALE: 1:5,000 (50 0 100 200m)	N.T.S.: 104 G/1,2
CONTOUR INTERVAL: 20 METERS	
DRAWN BY: B. TURNA	DATE: FEB. 1985

GEOLOGIC LEGEND

CRETACEOUS OR TERTIARY

FELS — Felsite, lesser rhyolite

POST UPPER TRIASSIC, PRE TERTIARY

DIOR — Hornblende diorite

LOWER JURASSIC

VOLC — Andesitic pyroclastics (PC), chert (CH), siltstone, sandstone, conglomerate (SD)

UPPER TRIASSIC

PYRC — Andesitic pyroclastics (PYRC), lesser amygdaloidal flows (A^a = F), minor siltstone (SI) and greywacke

Magnetic North

(Bob)14 (Tyrone)13 (Joe)12 (John)11 (Chris)10 (Barbara)9 (Pyxie)8 (Edison)7 (Lisel)6 (Budget)5 (Rosaline)4 (Rein)3 (Debbie)2 (Ochs)

CREEK HEMLO

CAMPSITE (Pat Bar) CAMPSITE CAMPSITE CAMP 3 PEAK

HANK 1,2,3 LCP HANK 4 LCP

UPPER SERICITE-CARBONATE-PYRITE ALTERED ZONE

LOWER SERICITE-CARBONATE-PYRITE ALTERED ZONE

PYRC FELS DIOR PC BALD BLUFF

Au=.53oz/ton Ag=22.710 oz/ton in carbonate-quartz vein

Au=2.979oz/ton float

Au=.074 oz/ton/26m

Au=400oz/ton

CRGN,SPAR with carbonate & quartz Au=.354 oz/ton

MA,QN with carbonate vein Au=.216 oz/ton

abundant petrified wood and rare pelecypods

sedimentary rocks and talus

10m wide felsite dyke

greenstone

LEGEND

- Legal corner post
- Claimgroup boundary
- Baseline (note: soil lines not drawn, only sample locations shown)
- Campsite
- Swamp or waterlogged ground
- Stream sediment sample
- Soil sample (likely contaminated by stream sediments)
- Soil sample
- Soil profile pit (for results see Table No. 3)
- Rock sample (grab, float, trenching)
- Diamond drill hole projection

For Trenching Details:

on Creek 3 see Fig. No 8
on Creek 4 see Fig. No 8
on Creek 5 see Fig. No 7
on Creek 6 see Fig. No 7
on Creek 7 see Fig. No 7
on Creek 8 see Fig. No 7
on Creek 9 see Fig. No 9
on Creek 10 see Fig. No 9
on upper part of Creeks 5,6,7 see Fig. No 7

- Outcrop boundary
- Sericite-carbonate-pyrite altered zone boundary
- Geologic contact (inferred)
- Attitude of (fault, vein, joint set, bedding)

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FIGURE NO. 6

LAC MINERALS LTD.

HANK CLAIM GROUP

GEOLOGY

SCALE: 1:2,000 (50 0 100 200 FEET) — N.T.S.: 104 G/1,2

CONTOUR INTERVAL: 20 METERS

DRAWN BY: R. TURNA — DATE: FEB. 1985

(Payie) 8 Creek

(Edison) 7 Creek

(Lisel) 6 Creek

(Budget) 5 Creek

(Rosaline) 4 Creek

(Rein) 3 Creek

base line

Line 3000 N

Line 2800 N

Line 2600 N

Line 2400 N

Line 2250 N

Line 2000 N

Line 1800 N

Line 1600 N

Line 1400 N

Line 1200 N

Line 1000 N

Line 800 N

altered zone boundary

altered zone boundary (approx.)

LOWER SERICITE - CARBONATE - PYRITE ALTERED ZONE

UPPER SERICITE - CARBONATE - PYRITE ALTERED ZONE

several unaltered clasts within altered zone

topographic depression here (fault?)

inferred approx. contact

greenish maroon tuff

coarse tuff

tuff with narrow obsidian layers brecciated

pale green tuff

andesite porphyry

quartz feldspar porphyry dyke

andesite dyke talus

onkerite vein

onkerite veining in small fault zone

agglomerate

andesite

maroon pyroclastics

ash tuff with narrow obsidian layers

minor breccia

tuff

maroon amygdaloidal flow

green pyroclastic

pyritic andesite

spottily silicified pyroclastics with unaltered clasts, occasional breccia and minor carbonate and quartz veins

grading into purplish coloured

green tuff

maroon amygdaloidal flow

carbonate veinlets

green pyroclastics (probable outcrop)

fault with highly altered zone

green agglomerate

maroon porphyritic flow

green agglomerate

roughly bedded

Probable andesite dyke (aggrading to sediment) strikes N 30° E and possible dyke contact

andesite dyke (talus)

coarse green pyroclastic

dyke contact

andesite dyke

green to maroon volcanics

altered rock

altered - type scree and soil

green agglomerate

felsite

green pyroclastic with hornblende phenocrysts

breccia of carbonate and altered pyroclastics (visible Au in 2608), Au 0.074 oz/ton/26m

"HOT-SPOT" area

For trenching details in this area see figure no. 10

ferricrete and highly altered scree

(rhyolite?)

felsite and (limestone? or carbonate vein)

visible Au: 400gm/ton

1.5 m wide carbonate vein in pyroclastic

~1m wide irregularly shaped carbonate vein in pyroclastics

(felsite?)

SNOW

CAMP 3 SITE

highly altered and weathered rock in pits here

camp 3 peak

green amygdaloidal? rock

roughly bedded coarse green agglomerate

green pyroclastic

felsite

x chert or rhyolite ?

ferricrete

chert

Aug. 53 oz/Ton Ag 22.710 oz/ton GN SP CP

GN SP

Au 1.37 oz/ton

pyroclastics with occasional carbonate veins

porphyritic rock

carbonate vein float along creek

green volcanic

green andesite

ferricrete

pyroclastic

occasional carbonate vein float in creek

agglomerate

coarse tuff

approx. attitude of contact

very coarse maroon agglomerate with high clast percentage non pyritic

1 m wide carbonate vein

minor carbonate veins

approx. contact

weak altered zone pyroclastics

alteration contact

agglomerate

most intense area of this altered zone more carbonate veining here

end alteration

green agglomerate

0.5m wide siliceous (dyke?)

andesite

chert and siliceous greywacke with carbon fragments

breccia

coarse green pyroclastic

N

28° 32' Magnetic North

LEGEND

- Stream sediment sample
- Soil sample (likely contaminated by stream sediment)
- Soil sample
- Soil profile pit
- Rock sample (Grab, float, trenching)
- Diamond drill hole projection
- Outcrop boundary
- CP, GN, SP, MA — Mineral showings (chalcopyrite, galena, sphalerite, malachite)
- Attitude of (vein, joint set, bedding)
- Swamp or waterlogged ground
- Wooded area
- Geologic contact inferred

FIGURE NO. 7

LAC MINERALS LTD.

HANK CLAIM GROUP

GEOLOGY, TRENCHING and SAMPLE NUMBERS on CREEKS 5,6,7,8 and CAMP 3 AREA

For rock geochem results see Table Nos 2c to 2i

SCALE 1:2000 (25 0 50 100 metres) N.T.S. : 104G/1, 2

CONTOUR INTERVAL : 5 METRES

DRAWN BY: R. TURNA DATE: FEB. 1985

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(Rein) 3 Creek

(Rosaline) 4 Creek

Abandoned channel

1200N 250E

coarse pyroclastics

2% pyrite in 2m fracture zone

1400N 350E

altered gossanous pyroclastic 1-2% pyrite spottily silicified

619

agglomerate

andesite porphyry

grey pyroclastics

end 679

618

326

303

agglomerate

pyroclastic

325

gossanous

coarse (3mm) pyrite crystals

330

304

617

677

676

start 678

Canyon edge

2100

end 674

GN, SP

2101

2099

2106

2111

605

minor carbonate veining

start 673

604

2119

2120

2122

324

agglomerate

agglomerate

dense glassy siliceous dyke

green andestic pyroclastics

323

1000N 350E

Rex Tributary

slightly more altered

attitude of .3m wide rusty gouge zone

305

322

grey green pyroclastics

Intense carbonate, sericite alteration but minor pyrite, no gossan.

Altered zone boundary

LOWER SERICITE - CARBONATE - PYRITE ALTERED ZONE

2067

2068

2069

Canyon edge

MA

1000N 600E

321

CP,GN,SP,MA

331,1081,A,B

Au=.354 oz/ton

2001

2004

2014

2015

378

silicification

306

2070

2000

2020

2021

agglomerate

332

relatively unaltered "clot"

2075

coarse tuff

2076

320

2028

2029

altered rock

307

2084

2087

2033

2034

379

333,A

some carbonate veins parallel jointing

328°

44°

MA, GN

2045

GN

1078

pyrite & carbonate replace hornblende phenocrysts.

318

2088

Au=2.16 oz/ton

2046

105°

334

altered agglomerate

attitude of alteration contact

800N 500E

2097

86°

50°

contains mineralized carbonate vein

330°

2053

2054

380

2059

1066

381

317

50°

2201A

2202V

2203

minor carbonate & quartz veining

2066

70°

115°

coarse green tuff

dense andesite (dyke)

narrow altered zone

308

coarse sandy tuff

dense unaltered andesite (dyke?)

316

altered rock in pit at 316

800N 650E

altered stone (scree)

315

Altered zone boundary

2235

800N 950E

2237

2241

2242

314

altered rock

2246

2248

309

313

2256

2257

2259

UPPER SERICITE - CARBONATE - PYRITE ALTERED ZONE

1000N 1000E

andesite

1400N 650E

615

2098

614

1400N 850E

605

606

2260

2262

2265

start 671

less intensly altered

pyroclastic

occasional carbonate vein float in creek

Samples 671 to 679 are located approximately

start 669

agglomerate

607

agglomerate

613

start 667

666A

2345

2354

6668

2353

666C

2352

pyroclastic

approx. attitude of contact

very coorse marroon agglomerate with high clast percentage, non pyritic

30°

50°

1m wide carbonate vein

start 664

608

1200N 1200E

28°32'

Magnetic North

LEGEND

- STREAM SEDIMENT SAMPLE
- △ SOIL SAMPLE (Likely contaminated by stream sediments)
- ○ SOIL SAMPLE
- P SOIL PROFILE PIT
- x, ⊕, —— ROCK SAMPLE (Grab, float, trenching)
- OUTCROP BOUNDARY
- WATERFALL
- CP, GN, SP, MA MINERAL SHOWINGS (Chalcopyrite, Galena, Sphalerite, Malachite)
- ATTITUDE OF (Vein, Joint set, Fault)

FIGURE Nº. 8

LAC MINERALS LTD.

HANK CLAIM GROUP

SKETCH MAP OF GEOLOGY, TRENCHING & SAMPLE NUMBERS ON CREEKS 3, 4

(For rock geochem results see Table Nº: 2b,c,d)

APPROX. SCALE 1:2000 (0, 50, 100 M.)	N.T.S. 104 G / 1,2
DRAWN BY : R. TURNA	DATE : FEB. 1985

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CHONG

(Barbara) 9 Creek

(Chris) 10 Creek

(John) 11 Creek

LOWER SERICITE-CARBONATE-PYRITE ALTERED ZONE

UPPER SERICITE-CARBONATE-PYRITE ALTERED ZONE

Altered zone boundary

rhyolite

rotted carbonate vein

small veins

pyroclastics

MA

First canyon

Second canyon

Altered rock outcrops sometime mantled by tericrete

Altered rock

green tuff

green pyroclastic

altered agglomerate

topographic depression & air photo linear here may be a fault

air photo linear is probable fault

marroon

green pyroclastics

marroon andesite

ankerite veinlets

agglomerate

marroon agglomerate

marroon volcanics

green agglomerate

"unaltered clot"

Canyon edge

Altered pyroclastic

Altered agglomerate

relatively "unaltered clot"

green pyroclastics

Altered zone boundary (approx.)

orientation of silicified fracture

GN

altered pyroclastics with unaltered "clots"

altered rock

altered "unaltered clot"

altered pyroclastics often mantled by tericrete

3000N 200E

3200N 300E

2800N 100E

2800N 800E

3000N 1000E

3200N 1300E

3400N 450E

3400N 900E

LEGEND

- SWAMP OR WATERLOGGED GROUND
- STREAM SEDIMENT SAMPLE
- △ SOIL SAMPLE (Likely contaminated by stream sediments)
- ○ SOIL SAMPLE
- X, ●, — ROCK SAMPLE (Grab, float, trenching)
- OUTCROP BOUNDARY
- GN, MA MINERAL SHOWINGS (Galena, Malachite)
- ATTITUDE OF (VEIN, JOINT SET)

N

28°32'

Magnetic North

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FIGURE Nº. 9

LAC MINERALS LTD.

HANK CLAIM GROUP

SKETCH MAP OF GEOLOGY, TRENCHING & SAMPLE NUMBERS ON CREEKS 9,10,11

(For rock geochem results see Table Nºs 2j,k,l)

APPROX. SCALE 0 1:2000 50 100M.	N.T.S. 104G/1,2
DRAWN BY : R. TURNA	DATE : FEB. 1985

CHONG

LINE 2000 N

1300E 700 ppb Au

1350E 1800 ppb Au

Soil Profile

depth	ppb Au
0.3m	2000
0.6m	1300
0.9m	2500
1.2m	5700

1800 ppb Au

1400E

2723 2724 2725

irregularly shaped carbonate vein

Au > 400 oz/ton
visible gold reported by assay lab.

HANK NUMBER	WIDTH (m)	FIRE, A.A. Au ppb	FIRE ASSAY Au oz/ton	
2723	5	700		
2724	4	620		
2725	2	>10,000	0.400	(visible Au)
3002G		380	0.011	
	F 1.2	580	0.020	
	E 0.5	1950	0.050	
	D 1.5	6000	0.156	
	C 0.15	1250	0.036	
	B 0.7	120	0.002	
3002A	17	75	0.002	
2726	4	2700		
2727	2.5	740		

1½ m wide carbonate vein shows minor pyrite, chalcopyrite, malachite

3002 G

3002 A

43

90

1450E 170 ppb Au

2726 2727 Some carbonate veining here

Soil Profile

depth	ppb Au
0.2m	45
0.4m	15

1500E 400 ppb Au

Soil Profile

depth	ppb Au
0.1m	150
0.3m	100
0.6m	170
0.9m	110
1.2m	90

1550E 575 ppb Au

CAMP 3

SITE

SOIL LINES 45°

28°-32°

MAGNETIC NORTH

HANK NUMBER	WIDTH (m)	FIRE, A.A. Au ppb	FIRE ASSAY Au oz/ton	
2732	6.1	260		
2733	2.6	85		
2734	4	440		
2735	4.6	65		
2736	4	30		
2737	3.5	50		
2738	2	428		
2731	4	360		
2730	5	120		
2729	5	60		
2728	5	35		

2732 2733 2734 2735 2736 2737

Roughly placed

2731 2730 2729 2728

HANK NUMBER	WIDTH (m)	FIRE, A.A. Au ppb	FIRE ASSAY Au oz/ton	
1166	1	missing		
1165	1	360		
1164	1	3000		
1163	1	640		
1162	1	4200		
1161	1	4200		
1160	1	1300		
2500	1	300	0.014	
2501	1	1300	0.038	
2502	1	3000	0.066	
2503	1	missing		
2504	1	1550	0.052	
2505	1	960	0.024	
2506	1	1150	0.034	
2507	1	1100	0.028	
2508	1	1250	0.036	(visible Au)
2509	1	>10,000	0.264	
2510	1	10,000	0.269	
K1858	0.5	525		
2511	1	1300	0.066	
2512	1	1700	0.032	
2513	1	820	0.016	
2514	1	5300	0.120	
2515	1	5700	0.162	
2516	1	5700	0.171	
2517	1	1300	0.030	
2518	1	1400	0.076	
2519	1	1000	0.032	
2520	1	1950	0.069	
2521	1	3500	0.098	
2522	1	960	0.036	
2523	1	500	0.012	
2524	1	680	0.078	
2525	1	1550	0.058	
2526	1	3400	0.080	
2527	1	1950	0.046	
1155	1	1850		
1156	0.8	900		
1157	0.33	540		
1158	1	1150		
1159	1	220		
2745	3	2000		
2744	4	1000		
2743	5	340		
2742	3	1500		
2741	5	820		
2740	2	70		
2739	1.5	600		

2501 to 2527 average .074 oz/ton / 26m
2509 to 2521 " .108 " " 13m
2509 to 2516 " .138 " " 8m

DDH 84-1
collar

visible gold reported by assay lab

2745 2744 2743 2742 2741

DDH 84-2
collar

2740 2739

has carbonate vein

DDH 84-3
collar

(Lisel) 6 CREEK

LINE 2250 N

1150E 1250 ppb Au

Soil Profile

depth	ppb Au
0.1m	360
0.3m	640
0.6m	260

Soil Profile

depth	ppb Au
0.1m	300
0.3m	240
0.6m	2100
0.9m	1200
1.2m	580

1200E 500 ppb Au

1250E 245 ppb Au

1300E 245 ppb Au

1350E 175 ppb Au

1400E 130 ppb Au

(Edison) 7 CREEK

x 3007 (grab)

1173 1172 2528 2538

waterfall

carbonate vein breccia

3005, 3006 (grabs)

carbonate vein breccia

x 3008 (grab)

2554

DDH 84-4
collar

HANK NUMBER	WIDTH (m)	FIRE, A.A. Au ppb	FIRE ASSAY Au oz/ton	
1173	5	25		
1172	6	170		
3005		680		
3006		500		
3007		100		
3008		1200		
2528	1	720	0.022	
2529	1	580	0.014	
2530	1	520	0.024	
2531	1	380	0.010	
2532	1	1100	0.030	
2533	1	2000	0.112	
2534	1	1500	0.030	
2535	1	260	0.006	
2536	1	not sampled		
2537	1	360	0.006	
2538	1	240	0.006	
2540	1	1200	0.030	
2541	1	580	0.018	
2542	1	1950	0.030	
2543	1	320	0.014	
2544	1	160	0.004	
2545	1	45	0.002	
2546	1	120	0.002	
2547	1	>10,000	0.249	
2548	1	780	0.020	
2549	1	4200	0.134	
2550	1	580	0.020	
2551	1	520	0.016	
2552	1	620	0.020	
2553	1	540	0.012	
2554	1	520	0.010	
1167	5	1200		
1168	5	540		
1169	5	800		
1170	5	660		
1171	5	1500		

LEGEND

Carbonate vein attitude, showing dip and strike

Trench, showing vein in dark.
Rocks consist of sericite-carbonate-pyrite altered andesitic pyroclastics intruded by carbonate veins.

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FIGURE Nº. 10

LAC MINERALS LTD.

HANK CLAIM GROUP

SKETCH of TRENCHES and DRILL SITES at upper parts of CREEK 5,6 &7

For further rock geochem and sample descriptions see Table Nos 2f, g, h

SCALE 0 1:500 10 20 metres	N.T.S. 104 G/1,2
DRAWN BY : G.PAYIE, R.TURNA	DATE : FEB. 1985

CHONG