82E/15E-058(E) - 13356

REPORT ON

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL SURVEY

CONDUCTED ON THE

RICH I to RICH VII MINERAL CLAIMS

VERNON MINING DIVISON

BRITISH COLUMBIA

N.T.S. 82E/15E

Longitude 49° 55' N. Latitude 118° 34' W.

Owners of the Claims: R. Cundall
Operator: Mohawk Oil Co. Ltd.
Author: M.W. Waldner
Dated: August 15, 1984

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INTRODUCTION

Exploration on the Rich I to Rich VII Mineral Claims during the 1983 field season included follow-up geological, geochemical and geophysical exploration to the 1982 preliminary exploration of the claims. Specifically the geophysical follow-up included detailed VLF-EM and magnetics. Soil and some silt geochemical samples were collected in areas of anomalous results from the 1982 survey. Detailed geological mapping was done in conjunction with the geochemical follow-up in an effort to identify the causes of the geochemical anomalies.

SUMMARY

The exploration program conducted on the Rich Claims included follow-up geochemical soil, silt and rock sampling, geological mapping, prospecting and geophysics, in areas of anomalous soil and silt samples identified from the 1982 reconnaissance exploration program. In addition, fill-in magnetic and VLF-EM surveys were conducted in areas on the property which had little or no previous coverage in 1982.

The follow-up program detailed several areas in the southern sector of the property which may host structurally controlled gold, silver mineralization. Specifically, a north trending zone of anomalously high values in soils for arsenic, antimony, zinc, copper and gold occurs coincident with VLF-EM and magnetic anomalies. This area may host epithermal gold-silver mineralization within north trending shears.

Exploration in the northern sector of the claim block included establishing a bulldozer trench (see Drawings 1 and 2) and fill-in VLF-EM and mag. Galena, sphalerite and silver mineralization was discovered in the trench. Rock geochemical samples collected from the trenches returned grades up to 0.1% lead and zinc with significant silver and arsenic values, but no gold. It is suspected that the arsenic which is more mobile and often occurs at a high level in a hydrothermal system may indicate the presence of gold at depth on the property near the arsenic anomalies.

The geophysics (VLF-EM and mag.) assisted in interperting geologic contacts and in identifying structural discontinuities which may be related to gold-silver and base metals mineralization.

The findings of the program indicate that additional geophysics, geological mapping and trenching are required to search for epithermal, disseminated or stockworks type gold-silver base metals mineralization in the anomalous areas currently defined by soil and silt geochemistry and geophysics. These programs could then be followed with diamond drilling if justifiable.

LOCATION AND ACCESS

The claims are located in the Monashee Mountains approximately three kilometers northwest of Lightning Peak, map sheet N.T.S. 82 E/15 E, latitude 49° 55' N and longitude 118° 34' W.

Access to the property is via a four-wheel drive road which joins Highway 6 approximately 110 kilometers southeast of Vernon. Access can also be gained to the property via a newly established logging road which is an extension of the K-50 logging access road which leaves the Kettle River logging road at 62 kilometer. The Kettle River road intersects Highway 6 at Spruce Grove about 52 kilometer southeast of Lumby. Both of these access roads to the old Dictator Mine intersect the claim block approximately 35 kilometers from Highway 6.

MOHAWK OIL Co. LTD.

RICH CLAIMS

LOCATION MAP

FIGURE 1

PHYSIOGRAPHY

The topography slopes gently towards the south from a elevation of about 1790 metres a.s.l. in the northeastern sector of the claims to approximately 1620 metres a.s.l. in the south. The claims are intersected by south flowing Rendell Creek and its tributaries which locally create moderately steep sided creek valleys.

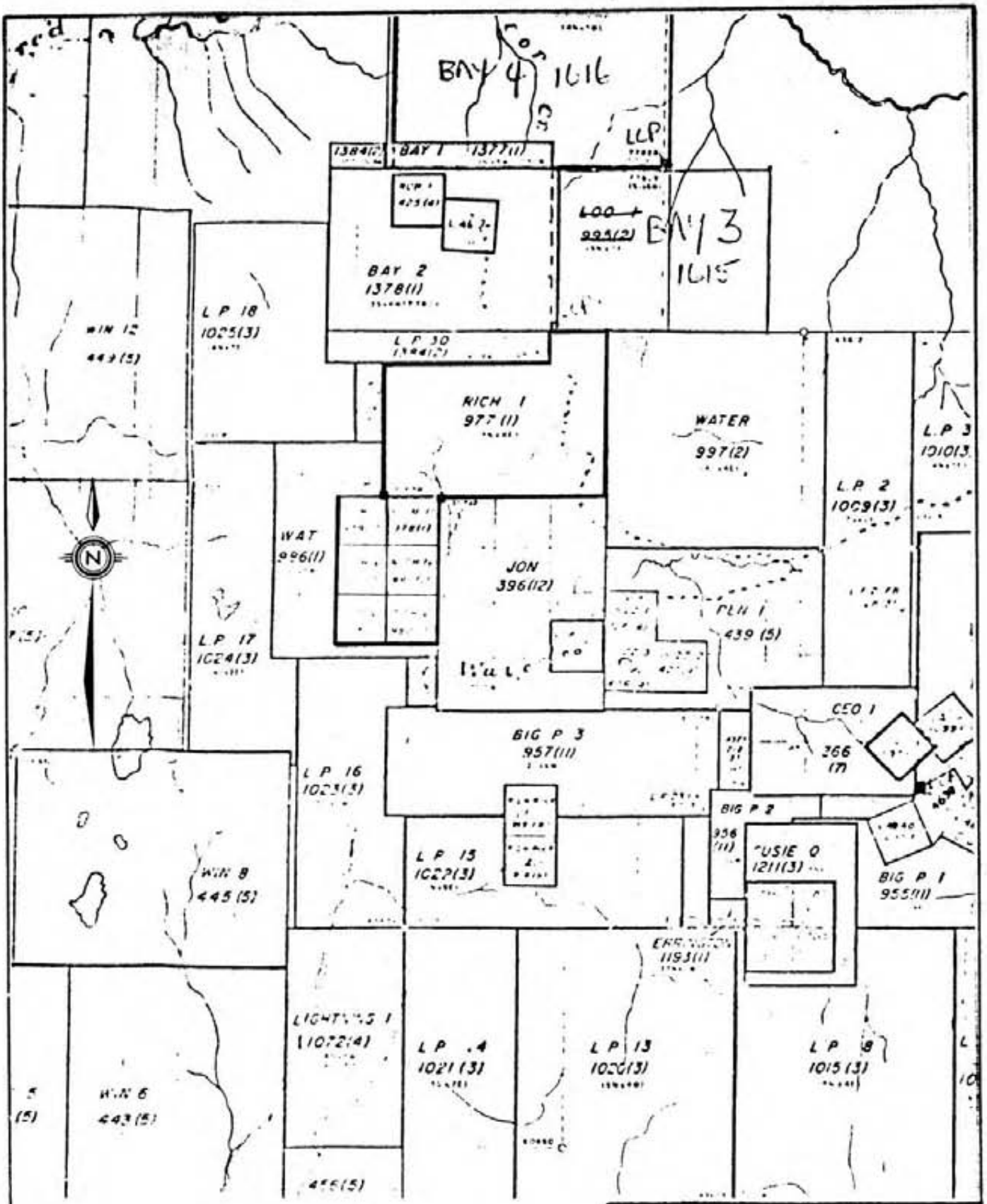
The claims are forested primarily by stands of fir, spruce and poplar. There are also marshes on the Rich I (northern) claim block and locally alder is abundant.

Rock outcrops are relatively abundant on the western flank of the claims and in the creek valleys. However, overall only about 20% of the claims area is exposed as outcrop.

PROPERTY

The property is currently under option to Mohawk Oil Co. Ltd. from Lightning Peak Mining Ltd. The registered owner of the claims, Richard Cundall, holds the claims in trust for Lightning Peak Mining Ltd. The property consists of one 12 unit claim staked on the modified grid system and six two post mineral claims. The claims include:

Claim Name	Record Number	Month of Record	Number of Units
Rich I	977	January	12
Rich II	978	January	1
Rich III	979	January	1
Rich IV	980	January	1
Rich V	981	January	1
Rich VI	982	January	1
Rich VII	983	January	1


BAY 4
1616
BAY 1
1377(1)
BAY 2
1378(1)
BAY 3
1615
LOT
995(2)
LCP
L P 18
1025(3)
WIN 12
443(5)
L P 30
RICH 1
977(1)
WATER
997(2)
L.P 3
1010(3)
L.P 2
1009(3)
WAT
996(1)
JON
396(12)
PLH 1
439 (5)
L P 17
1024(3)
CEO 1
366
(7)
BIG P 3
957(11)
L P 16
1023(3)
BIG P 2
956
(11)
L P 15
1022(3)
SUSIE Q
1211(3)
BIG P 1
955(11)
WIN 8
445 (5)
ERR
1193(1)
LIGHTNING 1
1072(4)
L P 14
1021 (3)
L P 13
1020(3)
L P 8
1015 (3)
WIN 6
443 (5)
N
SCALE 1:50,000
METRES 0 1000 2000 3000
MOHAWK OIL CO. LTD.
CLAIMS MAP
DRAWN BY
M W W
DATE
APRIL, 84
DRAWING NO.
FIG. 2

GENERAL GEOLOGY

The entire property was mapped during the 1982 field season on a scale of 1:5000. This preliminary mapping was followed-up in 1983 by detailed line mapping in areas of geochemical and geophysical anomalies (Drawing No. 1). Generally rock exposures were poor in the vicinities of the 1982 geochemical anomalies. The general geology of the area is described in Cairnes (1930) and Little (1957). The property geology was described by Waldner (1983) in an assessment report detailing geological, geophysical and geochemical surveys conducted in 1982.

The Permian Anarchist Group rocks consist primarily of greenstones and tuffs with minor exposure of paragneiss and limestone. This roof pendant is surrounded and intruded by Cretaceous Nelson Intrusions. The metamorphosed Anarchist Group rocks host westerly striking silver, lead and zinc mineralization in the nearby Waterloo Mine, which produced tonnages of high grade silver ore during the 1940's. The Dictator Mine north of the property produced minor tonnages of gold, silver, lead and zinc ore hosted within the granitic rocks. This structurally controlled mineralization apparently was confirmed to south striking fault zones.

The intrusive rocks in the northern and southern portions of the property are primarily granodiorite although the composition is somewhat variable and locally is granite in composition. There are also some outcrops which are quartz diorite in composition. These rocks are generally coarse-grained and often porphyritic distinguished by K-feldspar phenocryst of 1 to 2 cm in length. The mafic mineral is usually biotite which composes about 10 per cent of the rock. The remainder of the rock is composed generally of about 30 per cent quartz, 30 per cent plagioclase and 30 per cent orthoclase although these compositions do vary depending upon the rock type.

The Anarchist Group rocks which occur in the central portion of the property are composed of limestone, metamorphosed andesitic lava, tuffs and tuffaceous sediments. The limestone flanked by metamorphosed andesite is generally medium to coarsely crystalline, grey to white in colour and massive, although veins of calcite or bands of crystalline limestone do occur within the limestone. The metamorphosed andesitic lava is generally green frequently foliated and contains fine-grained phenocrysts of biotite. The metamorphic rocks on the Rich I claim are generally the metamorphosed andesitic lavas whereas recrystallized limey tuffs predominate in the southern part

(Rich II to VII claims) of the property. As illustrated on the geology map a band of limestone is interpreted to occur in the southern area in close proximity to the intrusive contact.

Minor intrusive rocks occur within the metavolcanics and tuffs. These dykes are commonly less than a metre wide and are quartz porphyry, granite porphyry or pegmatites. These dykes are generally classified as felsic dykes or quartz-feldspar porphyry dykes, and are probably related to the Nelson Instrusions.

STRUCTURAL GEOLOGY

The property is segmented by various structural features mapped or interpreted as faults. On the Rich I Claim (northern sector of the property) two northesterly striking fault are dominant with two subsidiary faults striking north and northeastly occurring in the northwestern corner, of the claim The most easterly of the northeast striking faults intersects trenches L-8 and L-9. Where exposed in the trenches it strikes N 540 E and dip 70° to 85° towards the east. Lead, zinc, and silver mineralization was identified within the trenches closely associated with the fault. The other northeasterly striking structure does not appear to have associated gold, silver, lead or zinc mineralization.

The southern sector of the property (claims Rich II to VII) is dominated by three northerly striking faults cross-cut by two sub-parallel northwest striking faults. The three north striking structures all have anomalous soil geochemistry values in arsenic and antimony and spot anomalies of zinc, copper, and gold. These three structures are considered of economic significance and may be important in localizing and hosting epithermal gold mineralization.

All the structures described have significant VLF-EM dip angle responses and several magnetic anomalies also occur along these interpreted fault structures. The geophysical and geochemical responses near these structures should assist in future exploration and identifying possible mineralized zones.

ECONOMIC GEOLOGY

Galena-sphalerite mineralization was discovered on the property in trenches L-8 and L-9. Sampling in the trenches did return significant but low grade silver, lead, zinc results as evidenced in Appendix I. Arsenic values in rock samples are high, (samples 4361 to 4374) indicating related gold mineralization may be present. (See Drawing Nos. 1 and 2 for locations.) It should be noted that the structure which cuts through the trenches does not have any significant soil geochemical anomalies along strike. North of this trenched area there is a broad zone of high positive VLF-EM dip angle relief and several arsenic and copper soil anomalies. This could be an extension of the northerly striking structure picked up by VLF-EM to the south. This northerly striking structure is a zone of narrow, high VLF-EM dip angle relief and strong geochemical anomalies in arsenic and fewer anomalies in copper, zinc, antimony and a single gold anomoly. Sub-parallel to this structure which intersects the Rich II to VII claims are two other structures immediately west. All three of these zones indicate the possible existance of epithermal gold and/or silver mineralization. The arsenic anomalies may be the expression of the higher levels of mineralization of such an epithermal system.

The limestone which trends westerly through the southern sector of the property may host silver, galena, zinc or copper mineralization. Limestone is a suitable host rock in other areas in the region. There is also the possibility of a skarn type ore body related to the limestone.

Several rock samples collected either as float or from outcrops mapped during 1983, returned significant silver, zinc, gold and arsenic values. The original three samples from the vicinity of trenches L-8 and L-9 returned high values in silver, lead and zinc (sample 4401 to 4403 - Appendix I). Sample 4381 collected near Rendell Creek on Rich I claim was anomalously high in gold. Sample 4251 taken on line 2+00S was high in zinc. Rock sample 4260 collected on Rendell Creek near line 10+00S returned high silver and zinc values and moderately high lead. All those samples indicate that there is potential for discovery of economically viable gold, silver, zinc, and lead mineralization on the property.

GEOCHEMISTRY

Follow-up geochemical soil surveys were conducted in the central sector of the Rich I claim and fill-in line sampling was conducted on the suthern portion of the property (Rich II to VII claims). The soil samples in the central grid on Rich I were taken on east-west flagged lines on 50 metre spacings. The distances between lines were about 100 metres. The sample intervals on the fill-in grid lines was 50 metres. The lines trending west were established midway between the 87 grid lines which were on abour 200 metre spacings. Silt samples were collected on the tributaries of Rendell Creek draining the Rich I Claim. These samples were collected at approximately 100 metre intervals.

A total of 181 soil samples and 33 silt samples were collected during 1983. The soil samples were taken in the "B" horizon whenever possible. This horizon was generally reddish-brown in colour and occurred at a depth of 10 to 50 cm and was about 20 cm thick. A small mattock was used to dig the hole. Coarse rock debris and organic matter was discarded. Soil samples were not collected in swampy areas, in areas of talus or rock outcrop. If the "B" horizon was not developed a "C" soil horizon was sampled and noted. The grid location, soil type and depth, visual soil description and exposure were noted at each soil sample site.

The soil and silt samples were air dried and boxed for shipment to Kamloops Research and Assay Laboratories Ltd. for analyses. The lab. preparation included drying and screening to minus 80 mesh. A measured amount of the minus 80 mesh fraction was then digested in hot aqua regia. Atomic absorption was used to determine parts per million for antimony, silver, zinc, copper, molybdenum, lead, and arsenic. Gold determinations reported in parts per billion were done using a combination of atomic absorption and fire assaying.

The rock samples were treated in a similar fashion to the soil samples except the rock samples required crushing and pulverizing to minus 80 mesh prior to the hot aqua regia digestion. The rock sample numbers are plotted on the Geology Map (Drawing No. 1) and illustrated in Appendix I.

The soil and silt sample data were plotted on single element maps at a scale of 1:5000 combining the 1982 and 1983 data. The years the lines were sampled are marked onthe geochemical maps. The plotted data was contoured and statistical analyses performed for the different elements. Depending upon the rock type underlying the sample sites, subanomalous, anomalous and second order anomalous values for each of the elements are identified on the geochemical maps (Drawing Nos. 3 to 10) Table I illustrates the statistical data and subanomalous, anomalous and second order anomalous values for the Anarchist and Intrusive rocks. These values are identified on the single element geochemical maps. Generally, subanomalous values for each element are the mean plus one standard deviation, anomalous values are the mean plus two standard deviations and second order anomalous values are the mean plus three standard deviations.

TABLE I

RICH I - VII - Geochemical Statistics

Element		Anarchist			Intrusive		
Antimony (An)	mean	X	=	0.15	X	=	0.25
	S.D.	Sx	=	0.23	Sx	=	0.60
					Samples	=	121.00
		Sub	=	0.40	Sub	=	1.0
		An	=	0.60	An	=	1.5
		2nd	=	0.80	2nd	=	2.0
Silver (Ag)		X	=	0.77	X	=	0.65
		Sx	=	23.00	Sx	=	0.20
		Samples	=	123.00	Samples	=	296.00
		Sub	=	1.0	Sub	=	1.0
		An	=	1.2	An	=	1.2
		2nd	=	1.4	2nd	=	1.4
Zinc (Zn)		X	=	67.10	X	=	59.90
		Sx	=	20.00	Sx	=	22.70
		Samples	=	126.00	Samples	=	295.00
		Sub	=	80.00	Sub	=	80
		An	=	100.00	An	=	100
		2nd	=	120.00	2nd	=	120
Copper (Cu)		X	=	21.84	X	=	14.00
		Sx	=	11.67	Sx	=	12.00
		Samples	=	125.00	Sample	=	296.00
		Sub	=	30.00	Sub	=	25.00
		An	=	40.00	An	=	40.00
		2nd	=	50.00	2nd	=	50.00

mean = X
Standard = Sx

Element	Anarchist			Intrusive		
Moly (Mo)	X	=	4.08	X	=	3.63
	Sx	=	1.00	Sx	=	0.77
	Samples	=	12.00	Sample	=	40.00
	Sub	=	5.00	Sub	=	4.00
	An	=	6.00	An	=	5.00
	2nd	=	7.00	2nd	=	6.00
Lead (Pb)	X	=	16.96	X	=	17.65
	Sx	=	3.4	Sx	=	4.43
	Samples	=	126.00	Samples	=	297.00
	Sub	=	20.00	Sub	=	20.00
	An	=	25.00	An	=	25.00
	2nd	=	30.00	2nd	=	30.00
Gold (Au)	X	=	3.63	X	=	3.47
	Sx	=	9.07	Sx	=	5.02
*	Samples	=	55.00	Samples	=	123.00
* note all values L5 calculated as 1 in statistics						
	Sub	=	10.00	Sub	=	10.00
	An	=	20.00	An	=	15.00
	2nd	=	30.00	2nd	=	20.00
Arsenic (As)	X	=	3.00	X	=	1.61
	Sx	=	5.00	Sx	=	2.21
	Samples	=	127.00	Samples	=	297.00
	Sub	=	10.00	Sub	=	4.00
	An	=	15.00	An	=	6.00

* note all values L2 calculated as 1 for statistics on high values were not used.

INTERPRETATION OF GEOCHEMISTRY

The 1983 geochemical soil and silt sampling program did not define additonal anomalies to those identified in the 1982 reconnaisance program with the possible exception of a broad relatively minor arsenic copper zone in the south-western sector of the detailed grid.

The geochemical results are illustrated in Drawing 3 to 10 on the Rich I (northern part of the property) claim. There are individual element maps for antimony, silver, zinc, copper, molybdenum, lead, gold and arsenic.

Three linear, north trending arsenic anomalies with coincident sporadic antimony, zinc, copper, and gold anomalies were detailed in the southern sector of the property. These three linear anomalies are coincident with VLF-EM structures and have been interpreted on the geology map as faults. There are also magnetic anomalies identified during the 1982 survey which correlate with these structures and geochemical anomalies, specifically magnetic highs on the central north trending strucutre on lines 10+00S about 400 metre from the western claim boundary and line 13+00S about 300 metres from the western claim boundary. The broad geochemical anomaly and coincident broad VLF-EM anomaly on the northern sector grid may be a northerly extension of the northerly striking structure that is generally coincident with Rendell Creek. This structure is strongly anomalous and anomalous values are relatively continuous over at least 1000 metres.

GEOPHYSICS

During the summer of 1983,a follow-up magnetic survey and follow-up VLF-EM survey were conducted on the Rich Claims. The purpose of the surveys were to better delineate some of the geological structures that may have economic potential, in terms of their electromagnetic and magnetic susceptibility. The magnetic survey was conducted using a Scintiex model MP-2 porton precession magnetometer. The VLF-EM survey employed a Sabre Electronics Model 27 VLF-EM receiver. The theory and instrumentation of the magnetic and VLF-EM surveys are outlined in Appendices II and III.

The magnetic survey included a total of 8 lines 500 metres long over the central part of the northern sector of the property. Readings were taken a 12.5 metre intervals. The lines were approximately 100 metres apart filling in the 1982 lines spacing which was about 500 metres.

Three areas of detailed VLF-EM surveying were conducted on the property using the Sabre model 27 instrument. The area enclosing the Rich II and VII (southern sector) claims was surveyed at 25 metre intervals. The Seattle VLF station was used because it is believed that most of the geological structures strike northerly and Seattle lies to the southwest. Although Hawaii and Seattle lie in approximately the same direction, Seattle was chosen for two reasons; 1) the signal is stronger and thus the readings are performed much quicker and are better quality because the signal to noise ratio is larger. 2) Because the frequency of Seattle is lower (18.6 kv/2) than Hawaii (23.4 kb/z), the depth of penetration is slightly better. The lower frequency is also less subject to effects of shallow subsurface features which give the data a "noisy" appearance. The second area surveyed was a smaller grid originating at the Jon Claim L.C.P. and extending to the north, east and west. This area was surveyed in detail to investigate a possible zone of economic mineralization. The line spacing was 50m and the dip angle readings were taken every 12.5 metres. The third area surveyed was in the central portion of the Rich I claim (northern sector) and was done in order to better determine structures controlling geochemical anomalies in that area. This was a follow-up survey; original surveying having been done in the previous year at a line spacing of 500 metres. The follow-up was done at 100 metre line spacings and 12.5

metre sampling intervals were used. The station chosen in this area was Annapolis Md., lying to the southeast Annapolis was chosen in order to tie-in with the 1982 Annapolis data.

Several VLF-EM structures are present in the areas done on the property. In the Rich II to VII claims area a major structure striking N 15°E runs through the area. The maximum dip angle relief is 38° and is likely to be the Rendell Creek fault (although the "cross-over" occurs at a considerable distance uphill to the west of Rendell Creek). The two weaker structures further to the west represent possible parallel shears to this interpreted main fault. The most westerly structure may be partly due to topography because on most of the lines there is a break in slope from the steeper Rendell Creek Valley to flatter terrain towards the west. An additional structure striking north near the east boundary of the area may be yet another less prominent shear. It is likely that this more subtle shear as well as the main fault have played an important role in determining the drainage direction for Rendell Creek in this area. The smaller grid originating at the Jon Claim L.C.P. outlines the main Rendell Creek fault as well as more subtle structures on either side of it.

The area in the central portion of Rich I displays mostly northwest trending structures. This may be due to the fact that the Annapolis station, lying to the southeast, was used, although it is possible that the strucutral trend in this area is a reflection of entirely different geology. Re-surveying the area using Seattle or Hawaii VLF stations would be a good idea to confirm the different geology. A major structure striking at approximately 155° runs through the entire area. The maximum dip angle relief of this structure is 14° occurring on line 7N is less continous than the main structure and may be due to a near surface feature. The two structures in the northeast corner running approximately parallel to the main fault may represent additional faulting or veining.

Some correlation exists between the magnetics (done in 1982) and the VLF-EM. Two magnetic anomalies called A_2 and A_3 in the 1982 survey, are found on the main structure believed to be the Rendell Creek fault. At A_3, anomalous silver and antimony geochemistry values were found but there appeared to be no geochemical anomalies at A_2. The two magnetic anomalies A_2 and A_3 have an amplitude of +1500 and +2300 respectively. A silver anomaly on line 6+00S is coincident with the main

fault but there is no associated magnetism. One hundred metres to the west of the main fault (the VLF-EM structure) there is coincident lead, silver, antimony and arsenic geochemical anomalies at 2+00S and at 4+00S, coincident with the same VLF structure is a zinc anomaly. At the eastern boundary a copper, arsenic and silver anomaly is found at 4+00S and a silver, arsenic anomaly is found at 8+00S. Both geochemical anomalies coincide with a weak VLF structure in the same area. No significant magnetic activity can be observed in this area. Similar coincident geochem. anomalies and VLF structures can be observed on line 8+00S at 7+00W (Zin, Cu, Sb) and also on line 10+00S at 4+50W (As).

CONCLUSIONS AND RECOMMENDATIONS

Three northerly trending VLF-EM structures occur in the southern (Rich II to VII claims) sector of the property. These structures have been interpreted as fault zones which may host base metal gold or silver mineralization. Well developed, fairly continuous arsenic soil geochemistry anomalies plus periodic zinc, copper, antimony anomalies and one gold anomaly occur along the three interpreted northerly striking faults. There are also two extremely high magnetic anomalies and a magnetic low coincident with two of these structures and an area of generally higher magnetic susceptibility over all three structures. These structures may host epithermal type gold or silver mineralization and should be further explored.

There is a broad area of high positive VLF-EM dip angle relief in the southwestern part of the detailed grid on the Rich I (northern) claim. There are also anomalous arsenic, copper and antimony in the vicinity. This may be an indication of structurally controlled gold/copper mineralization, possibly epithermal veins or a disseminated or stockworks type deposit.

It is recommended that:

1. Self potential or induced polarization and VLF-EM surveys be conducted on the 1983 grid established on the northern sector of the property. The VLF-EM survey should use the Seattle VLF staton.

2. Self potential or induced polarization surveys be conducted across the geochemically and geophysically anomalous north trending structures in the southern part of the property.

3. Detailed geological mapping and prospecting of the geochemical and geophysical anomalies be completed.

4. The above surveys should be followed up with trenching and eventually drilling if justifiable from the surveys results and the trenching.

AUTHOR'S OF QUALIFICATIONS

I, Matthew W. Waldner, do hereby certify that:

1. I am a geologist, resident at 1601 - 39th Avenue, in the City of Vernon, in the Province of British Columbia.

2. I am a graduate of the University of British Columbia with a Bacholor of Science (Geology) degree.

3. I have practices my profession continuously since 1969.

4. My contribution to this report is based on field work on the property, supervisoin of exploration projects on the property and in the area and evaluation of available reports.

5. I am an employee and shareholder of Mohawk Oil Co. Ltd.

Dated this 15 day of August, 1984 at Vernon, British Columbia.

M.W. Waldner

M.W. Waldner
August 15, 1984

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APPENDIX I

ROCK SAMPLES RICH CLAIMS

Appendix I

Rock Samples - Rich Claims
Results

Sample No.	Sample Width	ppm Au	Ag	Pb	Zn	Cu	As	Sb
4361	36	0	0.7	47.0	32.0	13.0	1.0	0.3
4362	8"	20.0	1.1	132.0	48.0	17.0	50.0	0.6
4363	26	1.0	0.6	48.0	47.0	15.0	1.0	0.4
4364	9	5.0	0.7	44.0	26.0	21.0	9.0	0.3
43365	36	10.0	0.6	25.0	84.0	10.0	33.0	0.2
4366	17	5.0	1.4	28.0	100.0	12.0	12.0	0.3
4367	57	5.0	2.3	61.0	165.0	63.0	19.0	0.3
4368	10	1.0	3.2	95.0	202.0	26.0	52.0	0.6
4369	Garb	5.0	0.4	26.0	17.0	11.0	1.0	0.4
4370	48	10.0	1.7	54.0	75.0	33.0	57.0	0.2
4371	32	1.0	0.7	20.0	29.0	9.0	1.0	0.1
4372	14	5.0	3.2	49.0	117.0	55.0	14.0	0.2
4373	36	15.0	1.9	43.0	145.0	24.0	56.0	0.1
4374	36	1.0	1.6	27.0	112.0	43.0	1.0	0.1
4381	Float	70.0	1.9	82.0	18.0	9.0	64.0	0.2
4251	Grab	1.0	0.8	61.0	590.0	16.0	1.0	0.1
4252	Grab	1.0	0.6	10.0	87.-	17.0	1.0	0.1
4253	Grab	5.0	0.9	32.0	197.0	7.0	1.0	0.1
4260	Float	1.5	5.0	180.0	610.0	12.0	8.0	1.4
4261	Float	5.0	0.7	16.0	104.0	14.0	1.0	0.1
4262	Grab	5.0	0.5	12.0	86.0	16.0	1.0	0.1
4263	Float	5.0	0.6	14.0	95.0	28.0	1.0	0.1
4264	Grab	5.0	0.2	10.0	48.0	14.0	1.0	0.1
4274	Grab	5.0	1.6	36.0	14.0	4.0	1.0	0.1
4275	Grab	10.0	0.8	17.0	75.0	63.0	1.0	0.1
4276	Grab	10.0	0.6	15.0	37.0	19.0	1.0	0.1
4401	chip	L5	1.5	32.0	700.0	71.0	6.0	
4402	chip	5	3.3	84.0	235.0	70.0	8.0	
4403	chip	L5	G20	960.0	1090.0	199.0	G15	

4361 (36")	Moderately altered granodiorite - Alteration chlorite and clay. Py less than 1%.
4362 (8")	Smokey grey to white massive qtz. with limonite along fracture surfaces. Py ± 1% is very fine grained, disseminated and in small clusters.
4363 (36")	Fault gouge includes fragments of qtz. sevicite altered intrusive fragments in kaolinzed zone. No visible sulphides.
4364 (9")	Gray qtz. py occurs as tiny veinlets. Limonite occurs along fractures, fine granid py ± 1%.
4365 (36")	Gossany, highly altered intrusive qtz. chl, manganmese no visible sulphides.
4366 (17")	Intrusive, highly altered, Py occurs along fracture 1 - 2%.
4367 (57")	Qtz., sericite alternate and graphite Py ± 1%.
4368 (10")	Blue green graphite clays with fragments of qtz. containing diss. Py. Galena diss. - 1% sph?
4369 (Grab)	Qtz. in intrusive vuggy box work with weathered cubic pyrite ± 1%.
4370 (48")	Qtz. sericite alteration. Limonite along fractures Py ± 1% Galena (trav).
4371 (32")	F/W - chlorite, qtz. alteration of a slightly pophyritc intrusive? no visible sulphides.
4372 (14")	Fault guage - blue green graphite clay containing Py 1%, Galena.
4373 (36")	Qtz. sericite Py 1%, Galena (trace) also present green blue. mariposite?
4374 (36")	H/W alter andesite? invaded with dyke inclusions Py 1%.
4381 (float)	qtz smokey grey Py 1% located 29 metres north along Rendell Creek as measured from Jon LCP.
4382	Metavolcanic andesite - present calcite limonite chl. located on west side of Rendell Creek above LCP.
4251	Taken at sample #82 1573 (520 metres west of base line) line 2+00S - granodiorite - no visible sulphides.
4252	Line 0+00S, 3+5000 at #1597. Fine grained granodiorite pyrolusite on fracture surfaces, trace limonite on some. No visible sulphide non-magnetic.
4253	Strongly altered intrusive plag. to clays, no visible mafics dissem py - qtz. sericite alteration.
4260	Float on Rendell Creek line 10+00S. Massive qtz. somewhat vuggy. Coarsely dissem Py altering to limonite 2%.

4261	line 15+00N, 4+00E, float altered volc. - secondary limonite, minor Py, magnetite foliated med. grained.
4262	Line 15+00N, 4+00E alt. volc. fresher secondary biot massive, fine-med. grained, magnetic, limonite near surface.
4263	Line 6+50N, 6+50E float - coarse grained G.D./Q.D. mafics to chlorite with greenish non-magnetic.
4264	10+00N, 6+50E small subangular subrounded fragments from the sample site, intrusive?
4274	For Rendell Creek (west fork) 43 metres south of RS 83 - 32 material from 1 of 2 carbonate veins - 4 cms wide, trace Py near contact with volcs. stn. 117° dip 63.
4275	In Rendell Creek (w. fork) between Calcite veins Calcite flooding and veinlets 1% Py near veinlets disseminated.
4276	Ninety-one metres south of RS - 83 - 32 in East bank of Rendell Creek. Cemented fault frags. up to 2 cms. Frags silic. volc. Cement silica. Some qtz. locally abundant limonite.
4401	Hanging wallside volcanic andesite? maybe invaded with sediments. L-8, L-9, trenches area.
4402	Gouge - blue clays some graphite galena? sph? L-8, L-9 trenches area.
4403	Altered intrusives on foot wall side. Gossany chip limonite stained. L-8, L-9 trenches area.

APPENDIX II

MAGNETIC SURVEYS - INSTRUMENTAITON AND THEORY

Appendix II

Magnetic Surveys - Instrumentation and Theory

The instrument used to perform the magnetic surveys was a proton precession magnetometer, model MP-2 manufactured by Scintrex. This instrument measures the magnitude of the total magnetic field at any given point on the surface. The total field is the sum of the external field and the internal field within and surrounding the material being measured. The magnetometer sensor consists of a chamber filled with a proton rich fluid enclosed within two wire wound coils. When a current passes through these coils for a short period of time a magnetic field is set up which aligns the spinning protons. When this polarizing current is abruptly switched off, the protons begin to precess around the earth's magnetic field and eventually re-align with it. This precession induces a small, exponentially decaying, AC signal in the sensor coils whose frequency is proportional to the flux of the ambient magnetic field. This frequency is measured, converted to gammas and presented on the digital display of the instrument.

The surveys consist of measuring accurately the resultant magnetic field of the earth's magnetism acting on rock formations having different magnetic properties and configurations. The resultant field is the vector sum of induced and remanent magnetism.

Thus there are three factors, excluding geometrical factors, which determine the magnetic field at any particular locality. These are the strength of the earth's magnetic field, the magnetic susceptibility of the rocks present and their remanent magnetism.

Magnetic surveys are useful in conjunction with geological mapping and for exploration for magnetically susceptible minerals. Interpretation of magnetic profiles and maps can assist in interpretation of rock type distribution and the locations of structural features. Often magnetic minerals such as magnetite, pyrrhotite or ilmenite are associated with the mineral deposits which are sought or there may be a depletion of such minerals. Either case can assist in mineral exploration.

APPENDIX III

VERY LOW FREQUENCY ELECTROMAGNETIC SURVEY - INSTRUMENTATION AND THEORY

Appendix III

Very Low Frequency Electromagnetic Survey - Instrumentation and Theory

A VLF-EM receiver, Model 27, manufactured by Sabre Electronics was used for the VLF-EM surveys. A transmitter located in Hawaii, U.S.A. and Annapolis, U.S.A. was used. The instrument measures the magnetic component of a very low frequency (VLF) electromagnetic (EM) field. The dip angles were measured on grid lines with the instrument oriented towards Hawaii and Annapolis. The VLF radio transmission from Hawaii and Annapolis produce an alternating magnetic field (primary). If a conductive mass such as a sulphide body or clay filled fault zone is within the magnetic field, a secondary alternating current is induced within it which in turn induces a secondary magnetic field that distorts the primary magnetic field. It is this distortion that the EM receiver measures. The VLF-EM uses a frequency range from 16 - 24 KHz. whereas most EM instruments use frequencies ranging from a few hundred to a few thousand KHz. Because of its relatively high frequency, the VLF-EM can pick up bodies of a much lower conductivity and therefore is more susceptible to clay beds, electrolyte-filling fault or shear zones and porous horizons, graphite, carbonaceous sediments, lithological contacts as well as sulphide bodies of too low a conductivity for other EM methods to pick up.

Consequently, the VLF-EM has additional uses in mapping structure and in detecting sulphide bodies of too low a conductivity for conventional EM methods and too small for induced polarization (in places it can be used instead of IP). However, its susceptibility to lower conductive bodies results in a number of anomalies, many of them difficult to explain and, thus, VLF-EM preferably should not be interpreted without a good geological knowledge of the property and/or other geophysical and geochemical surveys.

Subsequent to the collection of dip angle measurements at each station on the grid lines the data is "Fraser Filtered". The dip angle measurements for Hawaii and Annapolis are treated separately. North to Northeast striking structures should respond better to the Hawaiian signal and West or Northwest striking structures should respond best to the Annapolis signal.

The Fraser Filter is essentially a 4-point difference operator which transforms zero crossings into peaks, and a low pass smoothing operator which reduces the

inherent high frequency noise in the data. Therefore, the noisy non-contourable data are transformed into contourable data. Another advantage of this filter is that a conductor that does not show up as a cross-over on the unfiltered data quite often will show up on the filtered data.

Profiles of the filter, data were prepared for Hawaii and Annapolis separately. These plots were then analyzed and structures interpreted and possible zones of sulphide mineralization or clay alteration identified.

APPENDIX IV

UNFILTERED VLF-EM DATA

Appendix IV

Date: September 17, 1983 **VLF on Rich I Data from August 17th & 18th**

Stn	13N	FF	12N	FF	11N	FF	9N	FF	8N	FF	7N	FF	6N	FF	4N	FF
	0		0		+10		0		-5		+7		+9		-7	
	+1		0		+9		0		-6		+6		+9		-4	
		-1		+1		4		-6		+1		-2		3		0
	+1		-1		+9		3		-6		+8		+8		-3	
		2		0		5		-3		-5		0		4		-2
	+1		0		+6		3		-6		+7		+7		-3	
		3		2		0		0		+5		2		4		-1
550E	-1		-1		+7		3		-1		+7		+6		-2	
		3		4		-2		-1		-18		3		4		1
	0		-2		+8		3		+4		+6		+5		-3	
		7		1		1		-2		-14		3		4		0
	-3		-3		+7		4		+7		+5		+4		-3	
		7		-3		1		-1		-8		1		4		-3
	-5		-1		+7		4		+10		+5		+3		-2	
		1		0		-1		0		-2		-1		2		-2
6E	-5		-1		+7		4		+9		+5		+2		-1	
		-2		6		-1		-1		0		-2		0		-1
	-4		-3		+8		4		+10		+6		+3		-2	
		-2		5		6		-3		2		-1		1		-7
	-4		-5		+7		5		+9		+6		+2		0	
		-2		1		14		-3		3		-1		2		-6
	-3		-4		+2		6		+8		+6		+2		+4	
		-2		1		14		-4		-1		-3		3		3
650E	-3		-5		-1		6		+8		+7		+1		0	
		-2		0		9		-7		-4		-3		3		-3
	-2		-5		-4		9		+10		+8		0		+3	
		-1		-1		4		-5		1		-2		1		-7
	-2		-4		-4		10		+10		+8		0		+4	
		-1		1		2		-2		5		-3		0		-8
	-2		-5		-5		10		+7		+9		0		+6	
		-2		1		3		-4		0		-4		0		-10
7E	-1		-5		-5		11		+8		+10		0		+9	
		-1		-1		6		-2		-3		-6		0		-8
	-1		-5		-7		13		+9		+11		0		+11	
		-1		-2		6		1		-3		-7		1		-6
	-1		-4		2		1		+14		0		0		+12	
		-3		-2		2		1		-5		6		2		-5
	0		-4		-9		13		+11		+14		-1		+14	
		-3		-5		0		7		-5		19		0		-2
750E	+1		-3		-9		9		+12		+5		-1		+14	
		-1		-9		0		11		-3		11		-2		1
	+1		0		-9		7		+13		+4		0		+14	
		-1		7		-4		11		0		1		-7		3
	+1		+2		-9		4		+13		+4		0		+13	
		-1		-1		-10		9		7		-1		-2		3
	+2		+2		-5		1		+12		+4		+1		+12	
		1		-1		-9		4		-1		-2		3		2
8E	+1		+1		-3		1		+7		+5		+1		+12	
		1		-3		-5		2		10		-4		-4		2
	+1		+4		-2		0		+5		+7		+3		+11	
		0		3		-5		2		4		0		-4		1
	+1		+2		-1		0		+4		+6		+3		+11	
		-3		7		-5		3		2		5		-6		0

Stn	13N		12N		11N		9N		8N		7N		6N		4N	
SF		FF		FF		FF		FF		FF		FF		FF		FF
	+1		0		+1		-1		+4		+6		+5		+11	
		-3		4		-1		3		3		9		-8		1
	+4		-1		+1		-2		+3		+2		+7		+11	
		3		0		0		3		3		5		-8		3
	+1		-1		0		-2		+2		+2		+9		+10	
		4		-4		-5		5		1		3		-7		4
	+1		0		+2		-4		+2		+1		+11		+9	
		3		-5		-7		5		0		1		-6		4
	0		+2		+4		-5		+2		0		+12		+8	
		-1		2		-2		2		3		-4		-5		3
9E	-1		+2		+5		-6		+2		+2		+14		+7	
		-8		9		3		-1		8		-5		-2		0
	+3		-2		+3		-5		-1		+3		+14		+7	
		-7		5		0		-2		7		-4		1		-1
	+4		-3		+3		-5		-3		+4		+14		+8	
		-5		-2		-5		-6		4		-2		2		1
	+5		-2		+5		-4		-3		+5		+13		+7	
		-5		-3		-2		-11		3		2		3		1
950E	+7		-1		+6		0		-5		+4		+13		+7	
		-1		-2		4		-8		-6		4		5		-1
	+7		-1		+4		+2		-4		+3		+11		+7	
		2		-2		6		-3		-19		3		6		-2
	+6		0		+3		+2		+2		+2		+10		+8	
		-1		-1		6		-2		-21		4		5		-1
			+6		0		+1		+3		+8		+2		+8	
E	+6		0		0			+3		+11		-1		+8		+8

Seattle

Date: August 24th

VLF from Rich II - VII - August 6th - 9th

Stn.	Line 0+00S Dip	FF	Line 1+00S Dip	FF	Line 2+00S Dip	FF	Line 3+00S Dip	FF	Line 4+00S Dip	FF	Line 5+00S Dip	FF
750W	-1		-8		-14		-6				-9	
	-7		-6		-12		-6		-6		-12	
		12		-4		-7		0				3
700W	-10		-6		-10		-6		-5		-12	
		1		-3		-6		1		3		-1
	-10		-4		-9		-6		-6		-12	
		-4		-1		-6		2		4		-1
	-8		-5		-7		-7		-8		-11	
		-3		-2		-3		3		0		1
	-8		-4		-6		-7		-7		-12	
		-1		-4		0		3		0		-1
600W	-7		-3		-7		-9		-7		-12	
		-2		-2		0		-1		-2		-7
	-8		-2		-6		-8		-8		-10	
		-1		-1		2		-4		-6		-6
	-5		-3		-7		-7		-4		-7	
		3		3		1		-3		3		1
	-9		-1		-8		-6		-5		-9	
		-2		9		-3		-1		7		1
500W	-7		-7		-6		-6		-10		-9	
		-7		3		-2		-3		-3		-2
	-5		-6		-6		-6		-6		-8	
		0		-3		0		-7		-4		0
	-4		-5		-6		-3		-6		-8	
		5		-1		-1		-7		-3		-1
	-8		-5		-6		-2		-6		-9	
		0		1		-4		-3		-6		-3
400W	-6		-5		-5		0		-3		-6	
		-3		-1		-7		2		5		-2
	-6		-6		-3		-2		-3		-8	
		-5		-7		-9		6		14		-11
	-5		-3		-1		-2		-11		-5	
		-8		-8		-4		5		5		-21
	-2		-1		+2		-6		-9		+2	
		-4		-3		10		-6		-5		-8
300W	-1		0		-2		-3		-10		+6	
		0		2		11		-9		-8		17
	-2		-1		-7		+1		-5		-1	
		-3		5		-3		6		-4		23
	-1		-2		-4		-1		-6		-8	
		-6		0		-8		15		8		9
	+1		-4		-2		-7		-5		-10	
		-5		-15		-6		11		19		-3
200W	+2		+1		-1		-8		-14		-8	
		7		-2		-4		10		5		-8
	+3		+8		+1		-11		-16		-7	
		27		38		14		5		-18		-10
	-7		-9		0		-14		-8		-3	
		12		35		28		-10		-18		-6
	-15		-20		-14		-10		-4		-2	
		-6		-1		3		-18		-10		0

Stn.	Line 0+00S		Line 1+00S		Line 2+00S		Line 3+00S		Line 4+00S		Line 5+00S	
	Dip	FF	Dip	FF	Dip	FF	Dip	FF	Dip	FF	Dip	FF
100W	-11		-16		-13		-5		-2		-2	
		9		-16		-21		-18		-6		3
	-15		-12		-4		-1		0		-2	
		0		-17		-12		-8		0		4
	-10		-8		-2		+4		0		-4	
		-9		-20				8		4		6
	-6		-3		-3		-2		-2		-5	
0W	0		+3				-3		-2		-8	

Stn.	Line 6S		Line 7S		Line 8S		Line 10S		Line 12S		Line 1350S	
	Dip	FF	Dip	FF	Dip	FF	Dip	FF	Dip	FF	Dip	FF
750W	-6						-12		-15			
	-10						-12		-13		-11	
		11						4		-5		
700W	-12						-14		-12		-8	
		7						4		-1		11
	-15				-15		-14		-11		-12	
		-1						2		0		12
	-14				-17		-16		-3		-18	
		-6				7		-3		-4		-4
	-12				-19		-14		-10		-14	
		-5				4		-7		-1		-10
600W	-11				-20		-13		-10		-12	
		-4				-2		-9		1		-5
	-10				-20		-10		-12		-10	
		-1				-6		-6		-6		-1
	-9				-17		-8		-9		-11	
		6				-6		2		-7		-1
	-11				-17		-9		-7		-10	
		7				-10		4		0		-2
500W	-14				-14		-11		-7		-10	
		0				-13		-2		10		-1
	-13				-10		-10		-9		-9	
		-4				-9		-2		13		6
	-12		-6		-8		-8		-15		-10	
		-6				0		0		0		10
	-11		-3		-7		-11		-14		-15	
		-4		-3		7		0		-12		1
400W	-8		-2		-11		-7		-10		-14	
		-10		6		4		12		-8		-7
	-6		-4		-11		-12		-7		-12	
		-12		13		-3		15		+2		-8
	-3		-7		-11		-18		-9		-10	
		-15		20		0		-2		5		-7
	+1		-12		-8		-16		-10		-8	
		-7		22		13		-17		0		-6
300W	+5		-19		-14		-12		-11		-7	
		15		8		12		-20		-6		-8
	0		-22		-18		-5		-8		-5	
		27		-13		-1		-10		-6		-7
	-9		-17		-16		-3		-7		-2	
		18		-22		-11		+4		-6		-2
	-13		-11		-15		-4		-6		-3	
		0		-17		-2		+7		-5		-3
200W	-14		-6		-8		-8		-3		-2	
		-13		-8		-21		-2		2		-3
	-8		-5		-2		-6		-5		0	
		-12		-4		-11		-5		-9		4
	-6		-4		0		-4		-2		-2	
		-5		-1		-4		0				3
	-4		-3		+1		-5		+??			-4
		0		3		-1		2				-3

Stn.	Line 6S Dip	Line 6S FF	Line 7S Dip	Line 7S FF	Line 8S Dip	Line 8S FF	Line 10S Dip	Line 10S FF	Line 12S Dip	Line 12S FF	Line 1350S Dip	Line 1350S FF
100W	-5		-5		+1		-5			-1		
		1		1		3		4			-2	
	-5		-5		+1		-6			-2		
		0		-5		7					-4	
	-5		-4		-2		-8			-1		
		0		-14		3					-13	
	-5		-1		-3					+2		
0+00W	-5		+6		-1					+8		

Date: September 17/83

Seattle

VLF on Rich I Collected August 20th
Lines originate at Jon L.C.P.

Stn.	Line 0N	0+50N	1+00N	1+50N	2+00N	2+50N
200W	-3	-11	-2	-5	-5	-8
	-5	-10	-3	-8	-5	-7
	5	-5	6	2	-4	-6
	-7	-8	-4	-8	-4	-6
	-2	-2	7	-3	-5	-10
	-6	-8	-7	-7	-2	-3
	-6	-2	5	-2	-3	-11
150W	-4	-8	-7	-6	-2	0
	-5	-5	4	2	-1	-8
	-3	-6	-9	-7	-1	+2
	-4	-4	2	3	1	-3
	-2	-5	-9	-8	-2	+3
	-1	-1	-1	-1	1	0
	-1	-5	-9	-8	-2	+2
	9	0	0	-3	0	-2
100W	-3	-5	-8	-6	-2	+3
	18	-1	5	2	1	-3
	-9	-5	-10	-7	-2	+4
	13	11	6	9	3	-1
	-13	-6	-12	-9	-3	+4
	1	10	2	13	3	1
	-12	-8	-12	-12	-4	+4
	-5	10	-2	11	12	-1
50W	-11	-13	-12	-16	-4	+3
	-6	-4	-10	1	18	-2
	-9	-11	-10	-17	-15	+6
	-5	-17	-15	-14	-2	4
	-8	-6	-4	-13	-11	+3
	-4	-15	-11	-20	-15	1
	-7	-1	-3	-6	-7	+2
		-4	-6	-11	-10	-9
0E/W	-6	-1	0	-4	-4	+6
		1	-2	-3	-5	-9
		-2	-1	-4	-4	+8
		0	-1	-2	-4	0
		-1	0	-3	-2	+9
		1	1	-1	-2	8
		-2	0	-3	-2	+5
		2	2	1	0	8
50E		-2	-2	-3	-2	+4
		3	5	3	1	6
		-3	-3	-4	-2	+2
		6	7	3	2	5
		-5	-6	-5	-3	+1
		5	0	1	2	4
		-6	-4	-5	-3	0
		3	0	0	2	3
100E		-7	-5	-5	-4	-1
		1	2	1	1	3

		-7		-5		-5		-4		-1	
			0		2		2		0		2
		-7		-6		-6		-4		-2	
			0		1		1		0		2
		-7		-6		-6		-4		-2	
			1		-1		0		1		4
150E		-7		-6		-6		-4		-3	
			-2		-1		0		3		6
		-8		-5		-6		-5		-5	
			1		1		0		3		6
		-8		-6		-6		-6		-6	
			-1		0		0		2		
		-8		-6		-6		-6		-8	
200E	-7		-5		-6		-7				

APPENDIX V

ITEMIZED COST STATEMENT - RICH CLAIMS

APPENDIX V

Itemized Cost Statement - Rich Claims

Personnel	Position	Days Worked	Pay Scale/day	Cost Total
C. Nagati	Geologist	12.0	$ 95.00	$1,140.00
A. Gamp	Geophysicist	10.0	95.00	950.00
D. Newton	Geological Assistant	4.0	84.50	338.00
S. Maltby	Geological Assistant	8.0	84.50	676.00
B. Callaghan	Project Geologist	9.5	110.00	1,045.00
M. Waldner	Chief Geologist	8.0	250.00	2,000.00
			Total	$6,149.00

Item	Rate	Task	Total Time	Total Cost
FL-9 Loader-Backhoe	$ 55/hr.	Trenching	9.0/hrs.	$ 495.00
D6-C Bulldozer	69/hr.	Road Building & Trenching	54.5/hrs.	3,760.50
Room & Board	55/man/day		60/days	3,300.00
4 X 4 Crew Cab Pick-ups	46/day	Crew Transport	17/days	782.00
4 X 4 Pick-up	43/day	Crew Transport	3/days	129.00
Radios	15/day	Communications	36/days	540.00
VLF-EM Receiver	15/day	EM Survey	8/days	120.00
Misc. equipment materials & supplies				$ 353.15
Geochemical Analyses	$20.35/sample	Soil & Silt Sampling	211/sample	$ 4,293.00
Assays	$55.25/sample 29.25/sample	Rock samples	2/sample 1/sample	$ 110.50 29.25
Freight	Rock/Silt/Soil/Samples Vernon to Kamloops			15.00
Draughting	12/hr.	Map Preparation	33.5/hrs.	450.00
Typing & Copying				450.00
			Total	$14,780.25
			Grand Total	$20,929.25

387, 600 E

5, 531, 200 N

15+00N (82)

13+00N (83)

12+00N (83)

11+00N (83)

10+00N (82)

9+00N (83)

8+00N (83)

7+00N (83)

6+00N (83)

5+00N (82)

4+00N (83)

10+00N (82)

0+00S (82)

1+00S (83)

2+00S (82)

3+00S (83)

4+00S (82)

5+00S

6+00S

7+00S (82)

8+00S (82)

9+00S 83)

10+00S (82)

11+00S (83)

12+00S (82)

13+00S (83)

13+50S (82)

7+00S (83)

9+00S (83)

11+00S (83)

RENDELL CREEK

LEGEND

SCALE 1:5000

200m 100 0 100 200 300 400 500m

TERTIARY

CENOZOIC — KAMLOOPS GROUP: Basalt, olivine basalt, minor rhyolitic lava, and breccia.

CRETACEOUS

MESOZOIC — COAST INTRUSIONS: Valhalla intrusions: granite, porphyritic granite. Nelson intrusions: granodiorite, porphyritic granite, diorite, monzonite, quartz monzonite.

PERMIAN

PALEOZOIC — ANACHIST GROUP: Greenstone, greywacke, paragneiss, andesitic lava, breccia, recrystallized limy tuffs.

Limestone.

ROAD		FAULT (approximate) (inferred)	
NO VEGETATION		CONTACT (approximate) (inferred)	
SLIDE AREA		BEDDING (inclined, vertical, unknown)	
GEOCHEM SOIL TRAVERSE	10+00N	FOLIATION (inclined, vertical, unknown)	
GEOCHEM SILT TRAVERSE		FRACTURES (inclined, vertical, unknown)	
MARSH		TRENCH	
ROCK GEOCHEM. SAMPLE	9999	PIT	
DIRECTION OF GLACIATION		OUTCROP	

Qz	QUARTZ
Peg	PEGMATITE
Grt	GARNET
Apl	APLITE
Calc	CALCITE
Hem	HEMATITE
Mag	MAGNETITE
Pyrr	PYRRHOTITE
Sph	SPHALERITE
Ga	GALENA
Br	BORNITE
Cpy	CHALCOPYRITE

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PART 4 OF 5

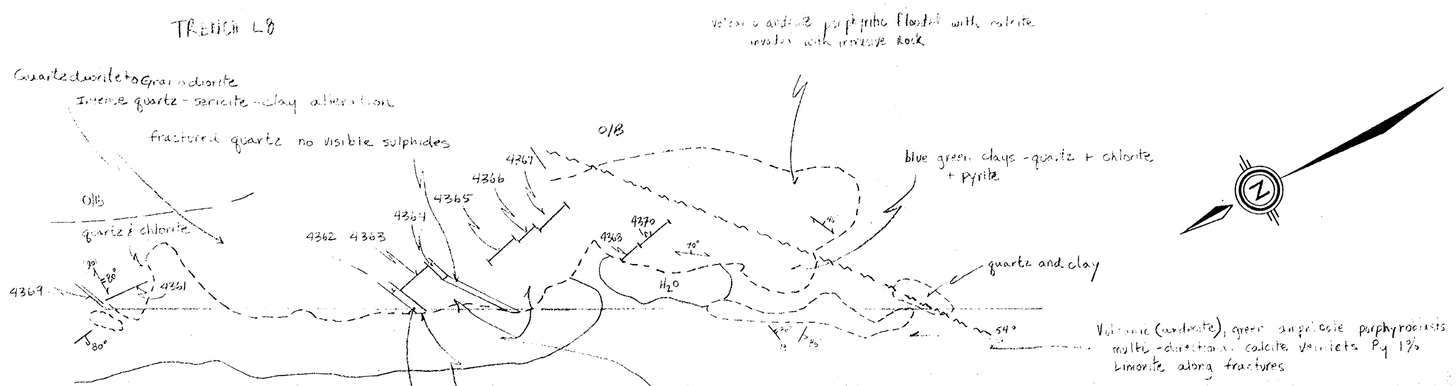
MOHAWK OIL COMPANY LTD.

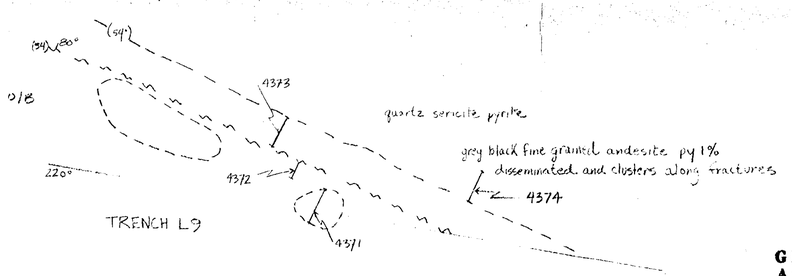
LIGHTNING PEAK AREA

RICH I - VII

GEOLOGY

DRAWN BY	SCALE	DATE	DRAWING NO
M. LETILLY	1:5000	APRIL, 1984	1





4361 36" Intrusive granodiorite? alteration moderate - chlorite clays

4362 8" Smokey grey to white massive qtz with limonite stained clays along fracture surfaces Py <1% Very fine grained disseminated and in small clusters, parts weathered

4363 36" quartz sericite clay alteration Fragments of intrusive rock occur in clays no visible sulfides

4364 9" Greyer quartz pyrite occurs as tiny veinlets Limonite along fractures <1% py fine grained

4365 36" Gossany highly altered intrusive, quartz chlorite manganese clays no visible sulphides

4366 17" Gossany highly altered intrusive py 1-2% along fractures

4367 57" Quartz and sericite and calcite graphite? py <1%

4368 10" Blue green graphite clays with fragments of quartz containing pyrite disseminated galena disseminated 1%

4369 grab Quartz in intrusive rock vugs contain weathered pyrite - boxwork visible sulphides <1% disseminated arsenic in py cubic vugs

4370 4' Quartz sericite limonite stained clays along fractures Py 1% galena (trace)

4371 32" F/W chlorite alteration of slightly porphyritic intrusive - no visible sulphides

4372 14" Gouge olive green graphitic clays Py 1% galena and sphalerite

4373 36" H/W quartz sericite pyrite <1% galena sphalerite (trace) green blebs not sure if it is a clay mineral

2m 0 2 4 6m
SCALE 1:100

MOHAWK OIL CO. LTD.		
SCALE: 1:100	APPROVED BY:	DRAWN BY SM
DATE: AUGUST 84		REVISED
TRENCH L8 & L9 (PLAN VIEW)		
RICH I — VII CLAIMS		DRAWING NUMBER 2

387, 600 E

5, 531, 200 N

5, 531, 200 N

15+00N (82)

13+00N (83)

12+00N (83)

11+00N (83)

10+00N (82)

9+00N (83)

8+00N (83)

7+00N (83)

6+00N (83)

5+00N (82)

4+00N (83)

0+00N (82)

0+00S (82)

1+00S (83)

2+00S (82)

3+00S (83)

4+00S (82)

5+00S (83)

6+00S (82)

7+00S (83)

8+00S (82)

9+00S (83)

10+00S (82)

11+00S (83)

12+00S (82)

13+00S (83)

13+50S (82)

RENDELL CREEK

3, 609, 387 E

SCALE 1:5000

200m 100 0 100 200 300 400 500m

LEGEND

SUBANOMALOUS — ANARCHIST GROUP INTRUSIVES

ANOMALOUS — ANARCHIST GROUP INTRUSIVES

2ND ORDER ANOMALY — ANARCHIST GROUP INTRUSIVES

SOIL SAMPLE GRID LINE (values in ppm) — 6 9 2

CONTOUR LINE (ppm) — 60

TOPOGRAPHIC CONTOUR — 1620

ROAD

GEOLOGICAL BRANCH
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PART 4 OF 5

MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

RICH I - VII

ARSENIC SOIL & SILT GEOCHEMISTRY

DRAWN	SCALE	DATE	DRAWING NO.
M. LETILLY	1:5000	MARCH, 1984	3

387, 600 E

5, 531, 200 N

15+00N (82)

13+00N (83)

12+00N (83)

11+00N (83)

10+00N (82)

9+00N (83)

8+00N (83)

7+00N (83)

6+00N (83)

5+00N (82)

4+00N (83)

0+00N (82)

0+00S (82)

1+00S (83)

2+00S (82)

3+00S (83)

4+00S (82)

5+00S (83)

6+00S (82)

7+00S (83)

8+00S (82)

9+00S (83)

10+00S (82)

11+00S (83)

12+00S (82)

13+00S (83)

13+50S (82)

7+00S MS (83)

9+00S MS (83)

11+00S MS (83)

RENDELL CREEK

387, 600 E

SCALE 1:5000

200m 100 0 100 200 300 400 500m

LEGEND

SUBANOMALOUS — ANARCHIST GROUP INTRUSIVES

ANOMALOUS — ANARCHIST GROUP INTRUSIVES

2ND ORDER ANOMALY — ANARCHIST GROUP INTRUSIVES

SOIL SAMPLE GRID LINE (values in ppm) — 6 9 2

CONTOUR LINE (ppm) — 60

TOPOGRAPHIC CONTOUR — 1620

ROAD

MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

RICH I – VII

LEAD SOIL & SILT GEOCHEMISTRY

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LEFILLY	1:5000	MARCH, 1984	4

387, 600 E

5, 531, 200 N

15+00N (82)

10+00N (82)

5+00N (82)

0+00N (82)

13+00N (83)

12+00N (83)

11+00N (83)

9+00N (83)

8+00N (83)

7+00N (83)

6+00N (83)

4+00N (83)

0+00S (82)

1+00S (83)

2+00S (82)

3+00S (83)

4+00S (82)

5+00S (83)

6+00S (82)

7+00S (83)

8+00S (82)

9+00S (83)

10+00S (82)

11+00S (83)

12+00S (82)

13+00S (83)

13+50S (82)

RENDELL CREEK

X 1761

1740 1720 1700 1680 1660 1640 1620 1600 1580 1560 1540 1520 1760 1780 1800

387, 600 E

5, 531, 200 N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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PART 4 OF 5

SCALE 1:5000

200m 100 0 100 200 300 400 500m

LEGEND

SUBANOMALOUS — ANARCHIST GROUP INTRUSIVES

ANOMALOUS — ANARCHIST GROUP INTRUSIVES

2ND ORDER ANOMALY — ANARCHIST GROUP INTRUSIVES

SOIL SAMPLE GRID LINE (values in ppm)

CONTOUR LINE (ppb) —60—

TOPOGRAPHIC CONTOUR —1620—

ROAD

MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

RICH I – VII

GOLD SOIL & SILT GEOCHEMISTRY

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:5000	MARCH, 1984	5

387, 600 E

5, 531, 200 N

15+00N (82)

10+00N (82)

5+00N (82)

0+00N (82)

13+00N (83)

12+00N (83)

11+00N (83)

9+00N (83)

8+00N (83)

7+00N (83)

6+00N (83)

4+00N (83)

0+00S (82)

1+00S (83)

2+00S (82)

3+00S (83)

4+00S (82)

5+00S (83)

6+00S (82)

7+00S (83)

8+00S (82)

9+00S (83)

10+00S (82)

11+00S (83)

12+00S (82)

13+00S (83)

13+50S (82)

RENDEEL CREEK

SCALE 1:5000

200m 100 0 100 200 300 400 500m

LEGEND

SUBANOMALOUS — ANARCHIST GROUP INTRUSIVES

ANOMALOUS — ANARCHIST GROUP INTRUSIVES

2ND ORDER ANOMALY — ANARCHIST GROUP INTRUSIVES

SOIL SAMPLE GRID LINE (values in ppm)

CONTOUR LINE (ppm)

TOPOGRAPHIC CONTOUR

ROAD

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MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

RICH I – VII

ZINC SOIL & SILT GEOCHEMISTRY

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:5000	MARCH, 1984	6

387, 600 E

5, 531, 200 N

15+00N (82)

13+00N (83)

12+00N (83)

11+00N (83)

10+00N (82)

9+00N (83)

8+00N (83)

7+00N (83)

6+00N (83)

5+00N (82)

4+00N (83)

0+00N (82)

0+00S (82)

1+00S (83)

2+00S (82)

3+00S (83)

4+00S (82)

5+00S (83)

6+00S (82)

7+00S (83)

8+00S (82)

9+00S (83)

10+00S (82)

11+00S (83)

12+00S (82)

13+00S (83)

13+50S (82)

TRENDELL CREEK

387, 600 E

GEOLOGICAL BRANCH
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SCALE 1:5000

200m 100 0 100 200 300 400 500m

LEGEND

SUBANOMALOUS — ANARCHIST GROUP INTRUSIVES

ANOMALOUS — ANARCHIST GROUP INTRUSIVES

2ND ORDER ANOMALY — ANARCHIST GROUP INTRUSIVES

SOIL SAMPLE GRID LINE (values in ppm) — 8 9 2

CONTOUR LINE (ppm) — 60

TOPOGRAPHIC CONTOUR — 1620

ROAD

MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

RICH I – VII

SILVER SOIL & SILT GEOCHEMISTRY

DRAWN BY	SCALE	DATE	DRAWING NO
M. LETILLY	1:5000	MARCH, 1984	7

387, 600 E

5, 531, 200 N

15+00N (82)

13+00N (83)

12+00N (83)

11+00N (83)

10+00N (82)

9+00N (83)

8+00N (83)

7+00N (83)

6+00N (83)

5+00N (82)

4+00N (83)

0+00N (82)

0+00S (82)

1+00S (83)

2+00S (82)

3+00S (83)

4+00S (82)

5+00S (83)

6+00S (82)

7+00S (82)

8+00S (82)

9+00S (83)

10+00S (82)

11+00S (83)

12+00S (82)

13+00S (83)

13+50S (82)

7+00S (83)

9+00S (83)

11+00S (83)

RENDELL CREEK

N

SCALE 1:5000

200m 100 0 100 200 300 400 500m

LEGEND

SUBANOMALOUS — ANARCHIST GROUP INTRUSIVES

ANOMALOUS — ANARCHIST GROUP INTRUSIVES

2ND ORDER ANOMALY — ANARCHIST GROUP INTRUSIVES

SOIL SAMPLE GRID LINE (values in ppm)

CONTOUR LINE (ppm) —60—

TOPOGRAPHIC CONTOUR —1620—

ROAD

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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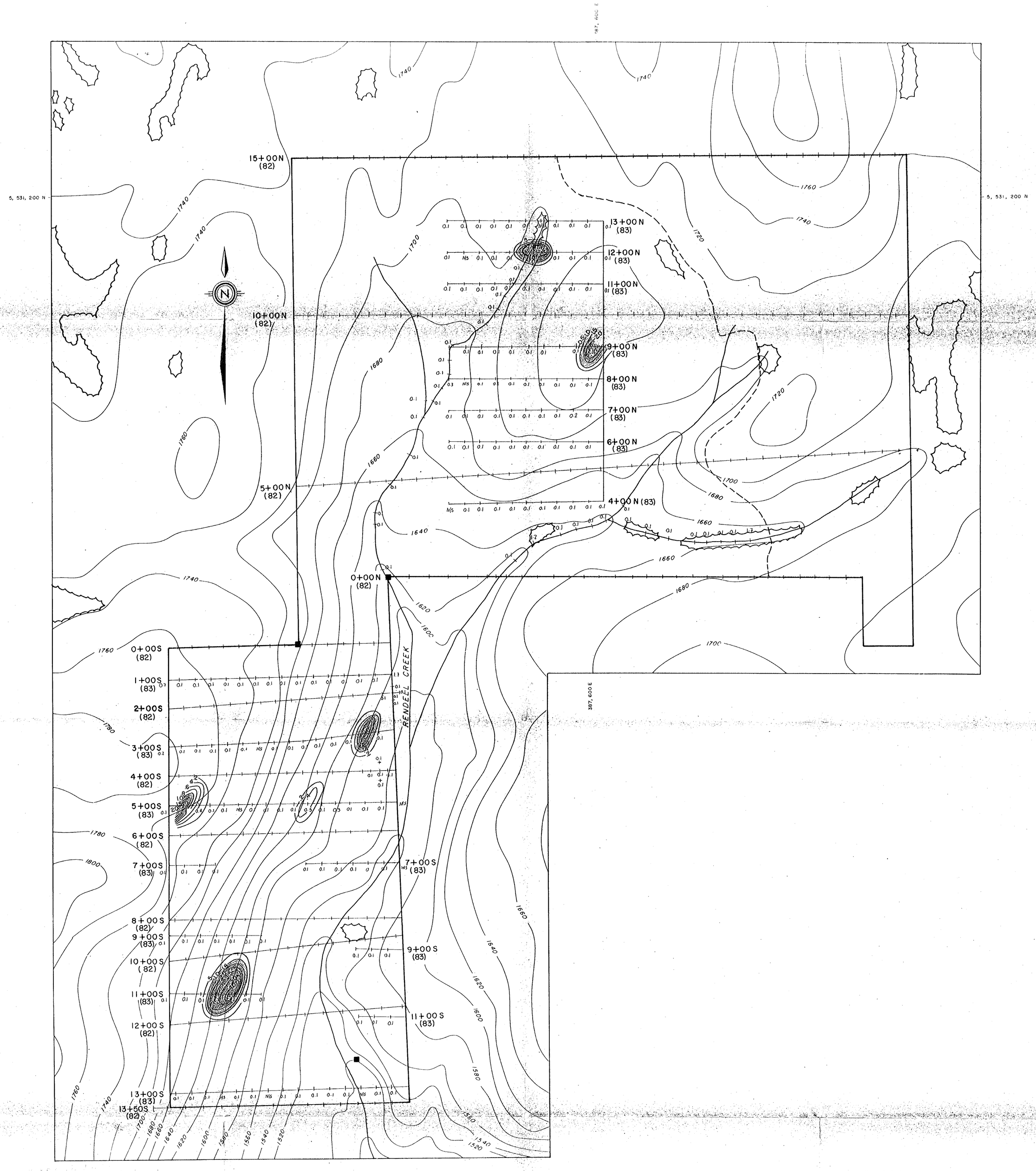
MOHAWK OIL COMPANY LTD.			
LIGHTNING PEAK AREA			
RICH I - VII			
COPPER SOIL & SILT GEOCHEMISTRY			
DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:5000	MARCH, 1983	8



SCALE 1:5000

200m 100 0 100 200 300 400 500m

LEGEND

- SUBANOMALOUS — ANARCHIST GROUP INTRUSIVES
- ANOMALOUS — ANARCHIST GROUP INTRUSIVES
- 2ND ORDER ANOMALY — ANARCHIST GROUP INTRUSIVES
- SOIL SAMPLE GRID LINE (values in ppm)
- CONTOUR LINE (ppm) —80—
- TOPOGRAPHIC CONTOUR —1620—
- ROAD

GEOLOGICAL BRANCH
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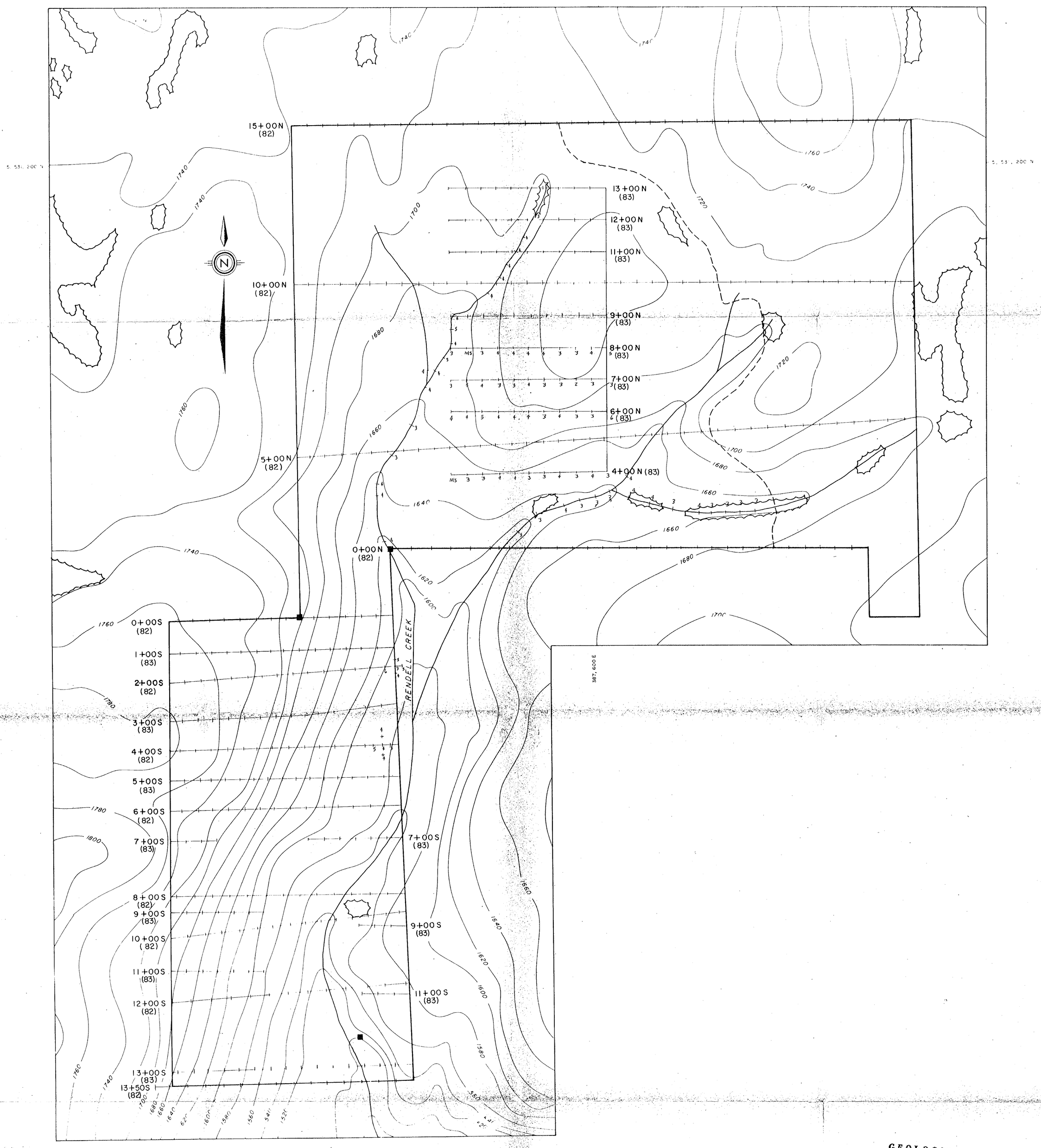
MOHAWK OIL COMPANY LTD.			
LIGHTNING PEAK AREA			
RICH I – VII			
ANTIMONY SOIL & SILT GEOCHEMISTRY			
DRAWN BY	SCALE	DATE	DRAWING NO
M. LETILLY	1:5000	MARCH, 1984	9



SCALE 1:5000

200m 100 0 100 200 300 400 500m

LEGEND

SUBANOMALOUS	ANARCHIST GROUP INTRUSIVES	SOIL SAMPLE GRID LINE (values in ppm)	6 9 2
ANOMALOUS	ANARCHIST GROUP INTRUSIVES	CONTOUR LINE (ppm)	—60—
2ND ORDER ANOMALY	ANARCHIST GROUP INTRUSIVES	TOPOGRAPHIC CONTOUR	—1620—
		ROAD	

GEOLOGICAL BRANCH
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PART 4 OF 5

MOHAWK OIL COMPANY LTD.			
LIGHTNING PEAK AREA			
RICH I – VII			
MOLY SOIL & SILT GEOCHEMISTRY			
DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:5000	MARCH, 1984	10

387,600E

5,531,200N

5,531,200 N

5+00 E

10+00E

13+00 N

12+00N

11+00N

9+00N

8+00 N

7+00 N

6+00 N

4+00N

2+00 W

2+00 E

2+50N

2+00N

1+50N

1+00N

0+50N

0+00N

387,600

0+00S

1+00S

2+00S

3+00S

4+00S

5+00S

6+00S

7+00S

8+00S

10+00S

12+00S

13+50S

N

ANNAPOLIS (21.4 KHz)

SEATTLE (18.6 KHz)

SCALE 1:5000

200m 100 0 100 200 300 400 500 m

GEOLOGICAL BRANCH
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PART 4 OF 5

MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

RICH

VLF-EM DIP ANGLES

ANNAPOLIS AND SEATTLE

CONTOUR INT. 5°

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:5000	APRIL, 1984	NO. 11