84-#658(1)-13356

REPORT ON

GEOLOGICAL, GEOCHEMICAL, GEOPHYSICAL SURVEY

AND

TRENCHING PROGRAM

CONDUCTED ON THE

KILLARNEY, THUNDERHILL FRACTION AND LUCKY JIM FRACTION

CROWN GRANTED MINERAL CLAIMS

VERNON MINING DIVISION

BRITISH COLUMBIA

N.T.S. 82E/15E

Longitude 49° 53' N. Latitude 118° 30' W.

PART 2 OF 5

Owners of the Claims: O. Cooper et. al.

Operator: Mohawk Oil Co. Ltd.

Author: M.W. Waldner

Dated: August 10, 1984

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INTRODUCTION

Exploration on the Killarney, Thunderhill Fraction, and Lucky Jim Fraction Crown Granted Mineral Claims during the 1983 exploration field season included geophysics, and geology.

The geophysical work included Very Low Frequency Electromagnetic, Self Potential and magnetic surveys. The geological work consisted primarily of detailed backhoe trench mapping and rock sampling. These programs were supported by a Fiat-Allis FL-9 Backhoe-Loader, two 4 x 4 crew cab pick-up trucks, portable radios and geophysical instruments. All personnel were accommodated in a trailer camp located on the Kettle River near Stove Creek approximately 35 kilometers by road.

LOCATION AND ACCESS

The claims are located in the Monashee Mountains of British Columbia, approximately 1.5 kilometers northeast of Lightning Peak, map sheet N.T.S. 82E/15E, latitude 49° 53' N and longitude 118° 30' W.

Access to the property is via a four-wheel drive road which joins Highway 6 approximately 110 kilometers southeast of Vernon. This road to the old Waterloo Mine - Lightning Peak area intersects the claim block approximately 35 kilometers from the Highway. A new alternate access route is via a new logging road which intersects the main Kettle River Logging access road at kilometer 62. The Kettle River road intersects Highway 6 at Spruce Grove about 52 kilometers southeast of Lumby.

MOHAWK OIL Co. LTD.

KILLARNEY ET AL CLAIMS

LOCATION MAP

SCALE

100 50 0 100 200 300 400 KM

FIGURE I

PHYSIOGRAPHY

The topography slopes gently towards the south from an elevation of 1,880 metres a.s.l. to 1740 metres a.s.l. The property is cut by a southeasterly flowing stream which intersects the northeastern corner of the property. This stream is a tributary of Rampalo Creek which flows into the Granby River.

The claims are forested primarily by stands of fir, spruce and poplar. Rock outcrops are confirmed primarily to the deeply incised creek valley. Less than 20% of the claims area is exposed as outcrop. Some old workings exist on the Killarney Claim and access to one adit is possible and partial access to another level is also possible.

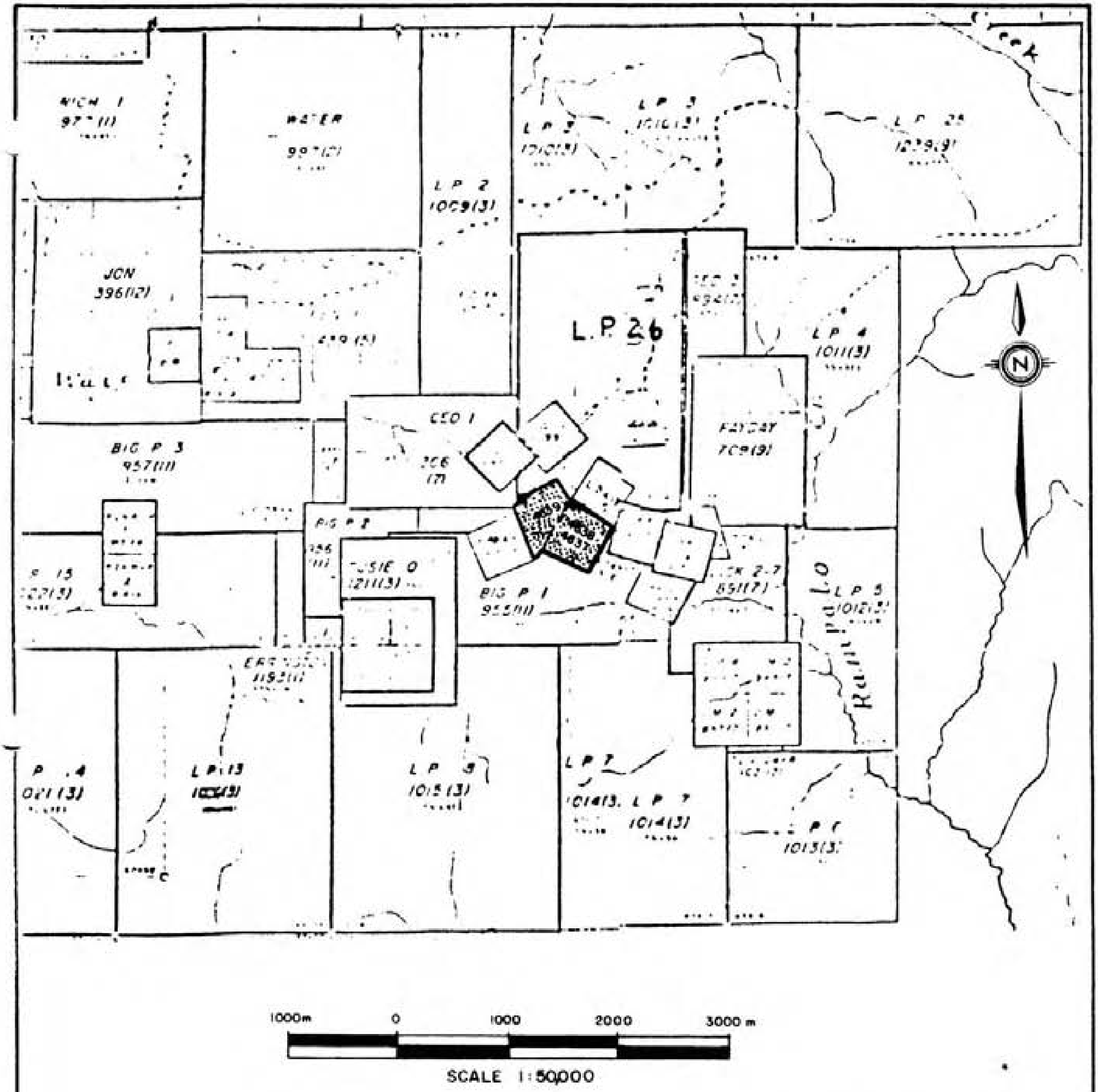
PROPERTY

The mining property is currently under option to Mohawk Oil Co. Ltd., from O. Cooper, D. Brekke and Messrs. R.E., R.W. and N.D. Anderson, the owners of the property. The three mineral claims are fully crown granted. They include:

Killarney	Lot No.	4637
Thunderhill Fraction	Lot No.	4638
Lucky Jim Fraction	Lot No.	4639

These claims are currently grouped with the following claims: Geo 1, Geo. 3, L.P. 26, L.P. 4 to 7, L.P. 24 Fr., Lost Cayuse, and Silver Lump.

Previous work on the property included some mining of silver, lead, and zinc ore in the 1930's plus a reconnaissance exploration program conducted during 1982. The 1982 work including geological and geochemical surveys was not applied as assessment work and thus no report on the work is on file.



N.T.S. 82E / 15E

MOHAWK OIL CO. LTD.

KILLARNEY ET AL PROPERTY

PROPERTY MAP

DATE : MAY, 1984	FIGURE 2

SUMMARY

Silver, galena, sphalerite mineralization occurs on the Killarney crown granted mineral claim in adits and is exposed on surface in trenches. Several other geologically and geophysically significant areas occur on the property. The silver, lead and zinc mineralization has been observed host in both the Anarchist Group Andesitic Rocks and the Nelson Intrusive Rocks.

Detailed geology and geophysics followed by diamond drilling during the 1984 field season will hopefully establish the grade and continunity of the high grade silver mineralization discovered to-date in the northeastern sector of the property. Geophysical and geochemical anomalies in the northern and southwestern sectors require detailed geophysics and perhaps follow-up trenching.

GENERAL GEOLOGY

The entire property has been mapped at a scale of 1:200 (Drawing No. 1). This reconnaissance type outcrop mapping used the various flagged grid lines established for a previous geochemical survey and the geophysical surveys conducted for control. In addition, detailed trench mapping and detailed line mapping was conducted in many locations on the property and near the existing underground workings. The general geology of the area has been described by Caines (1930) and Little (1957). The Anarchist Group rocks, considered to be Permian in age, consist of greenstone, greywacke, tuffs, limestone and paragneiss. These rocks host the lead, zinc, and silver mineralization exposed in the underground and on surface in the northeastern sector of the property. The Anarchist Group rocks form a roof pendant in the vicinity of the claims which are intruded by Cretaceous Valhalla and Nelson Intrusions. The granitic rocks on the property are most likely Nelson Intrusives.

The intrusive rocks have been mapped primarily in the eastern sector of the property. They are predominantly granodiorite, however, the compositon does vary from diorite to quartz monzonite in composition. The intrusive rocks in the vicinity of the adits are quartz monozorite in composition There are also numerous felsic dykes in the vicinity of the adit in the northeast sector of the property. These dykes appear related to the intrusive phases outcropping in the vicinity.

The Anarchist Group rocks which are predominant on the property are generally metamorphosed andesite and volcanic Breccias. The andesite is generally green, frequently foliated and often contains fine to medium -granular phenocrysts of biotite and less commonly hornblende. The felsic dykes often intrude the meta-volcanics especially in the vicinity of the galena, sphalerite mineralization exposed in the northestern corner of the proprty.

Structural Geology

The property is cross-cut by several northeasterly trending faults. The majority of these structures have been interpreted from VLF-EM, magnetic and S.P. data and air photos. The silver, galena, sphalerite mineralization exposed in trenches and adits is generally structurally controlled. These narow veins, fracture and fault infillings generally strike northwesterly and dip steeply towards the northeast. Post mineralization faulting along the mineralized structures and cross-cutting the veins is common. Observations on the property and the historic information regarding mineralization in the area suggest structural controls to mineralizatio are very important.

Economic Geology

Galena, sphalerite mineralization related to high grade silver values occur in the northeastern portion of the property. This mineralization has been exposed in the old underground workings and in recent trenches established to explore the distribution of the veins and their continunity. Of possible economic significance is the intersection area of two quartz - galena - sphalerite veins one up to 18 inches wide striking north to northwesterly and dipping 60° towards the west and the other in a mineralized shear zone striking northwesterly and dipping 40° to 60° towards the east. Surface continuity of this structure has been established over a strike length of about 70 metres. Assay results of more than 70 ozs./ton silver over 12 inches and grab samples in excess of 200 oz/ton silver have been taken from this structure. In addition, high grade silver ore over several feet has been mined from the existing mine workings. These structures and the intersection area of the structures could yield 250,000 tons. or more of ore amenable to underground mining methods. This type of relatively low tonnage high grade ore potential is considered the most realistic orebody target.

The silver - lead - zinc mineralization on the property is apparently confined to structural zones which acted as conduits for hydrothermal fluids and assisted in the localization of mineralization. Although the intrusive rocks are not considered the most favourable host for economic mineralization, close proximity of the intrusives to the mineralized meta-volcanic rocks does appear important. The intrusive rocks are considered to have been a source of hydrothermal fluids on at least provided a heat source for remobilization of the silver - lead - zinc mineralization.

TRENCHING

A total of twelve backhoe trenches were dug during the 1983 exploration as follow-up to the 1982 geochemical, geological and geophysical exploration program. The trench locations are shown on Drawing No. 1. Trenches L-1, L-4, L-5 L-8, L-10, L-11 and the adit 2 road-cut were mapped and sampled. The other trenches did not reach bedrock. The most significant trenches were L-11 and the adit 2 road-cut. Silver, lead and zinc mineralization was discoverd in these trenches. The rock samples collected from these and other trenches are described in Appendix I and some are also described on the trench maps (drawings 2 - 8).

The most significant mineralized structures exposed in trench L-11 strike betwen 305° and 312 ° azimirth and dip 66° to 82° towards the northeast. The rock samples collected from the trench were first analyzed using rock geochemical technique for arsenic, antimony, silver, gold, copper, lead and zinc. Any significant rock geochemical values were then assayed. Sample 4457 ran 9.8 oz/ton, Ag over 12 cm, sample 4459 ran 22.6 oz/ton - Ag and 3.17% Pb over 7 cm., and sample 4460 ran 65.7 oz/ton Ag, 39% Pb and 1.07% Zn over 7 cm. There were several other samples taken over up to 15cm which graded between 1 oz/ton and 5 oz/ton Ag. This mineralized structure was exposed over about 30 metres in trench L11. This is apparently an extension up dip and along strike from the mineralized zone mined in the old underground workings east of the trench. This mineralized zone tends to pinch and swell along strike and down dip. Therefore there is potential for ore grade mineralization over mineable widths.

Exposures in the adit 2 road-cut included a variety of rock types and mineralized structures. The geology is very complex in this area. The metamorphosed and altered andesite has been intruded by dioritic and quartz diorite grantic rocks. There are also seveal felsic dykes which post date the andasite and apparently the granitic rocks. Sulphide mineralization may be related to these felsic dykes, general quartz - Feldspar Porphyry Dikes. There are also several late (tertiary?) basalt dykes which cross-cut sulphide minealization and the other rock types. Two predominant structures mineralized with quartz, galena, spalerite, pyrite and minoir chalcopyrite occur in the rock cut. The stike of the veins is variable from N 20° W to North dipping westerly about 60° to a N 65° W strike dipping 70° northeasterly. The plunge of the intersection of these two mineralized structure is approximately 35° towards the northwest. This intersecton area may form an "ore shoot" of economic significance. The mineralized shear zones individually grade up to 70 oz./ton Ag over 11 inches (see Appendix I).

Significant silver values were also discovered in trenches L-8 and L-10. Although very little bedrock was exposed in trench L-10, a grab sample from trench L-8 also returned 1760 p.p.b. gold, although an assy of this Quartz-Plagiocla Porphyry Dyke returned less than 0.001 oz/t gold. The L-8 and L-10 trench area are still considered exploration targets for possible silver and gold mineralization.

GEOPHYSICAL SURVEY PROCEDURES

During the summer and fall of 1983, detailed magnetics (mag.) and Very Low Frequency - Electromegnetic (VLF-EM) surveys wre done in same parts of the property as well as blanket coverage of Self-Potential (S.P.), thorughout the entire area of the Killarney, Thunderhill and Lucky Jim fractions.

The purpose of the magnetics and VLF-EM detail was to better determine the location of anomalies as well as improve the resolution of data in target areas so that a more accurate interpretation is possible. The S.P. was done in order to find potential sulphide minealization as well as comparing the S.P. to other geophysical data so that a better understanding of the structure is possible.

The geophsical surveys conducted during the 1983 field season included:

Magnetics:

N.E. corner - 2.1 Km @ 10m/stn - 210 readings compiled and interpreted.
Lucky Jim 2.85 km @ 12.5m/reading - 228 readings compiled and interpreted.

VLF-EM

N.E. corner 2 km @ 10 m/stn - 200 readings compiled and interpreted.
Lucky Jim 3.2 km @ 12.5 m/stn - 256 readings compiled and interpreted.

S.P.:

Killarney & Lucky Jim 5.47 km @ 12.5 m/stn - 437 readings compiled and interpreted.

Total Mag: - 4.95 kim/438 readings
Total VLF-EM - 5.2 km/456 readings
Total S.P. - 5.47 km/437 readings.

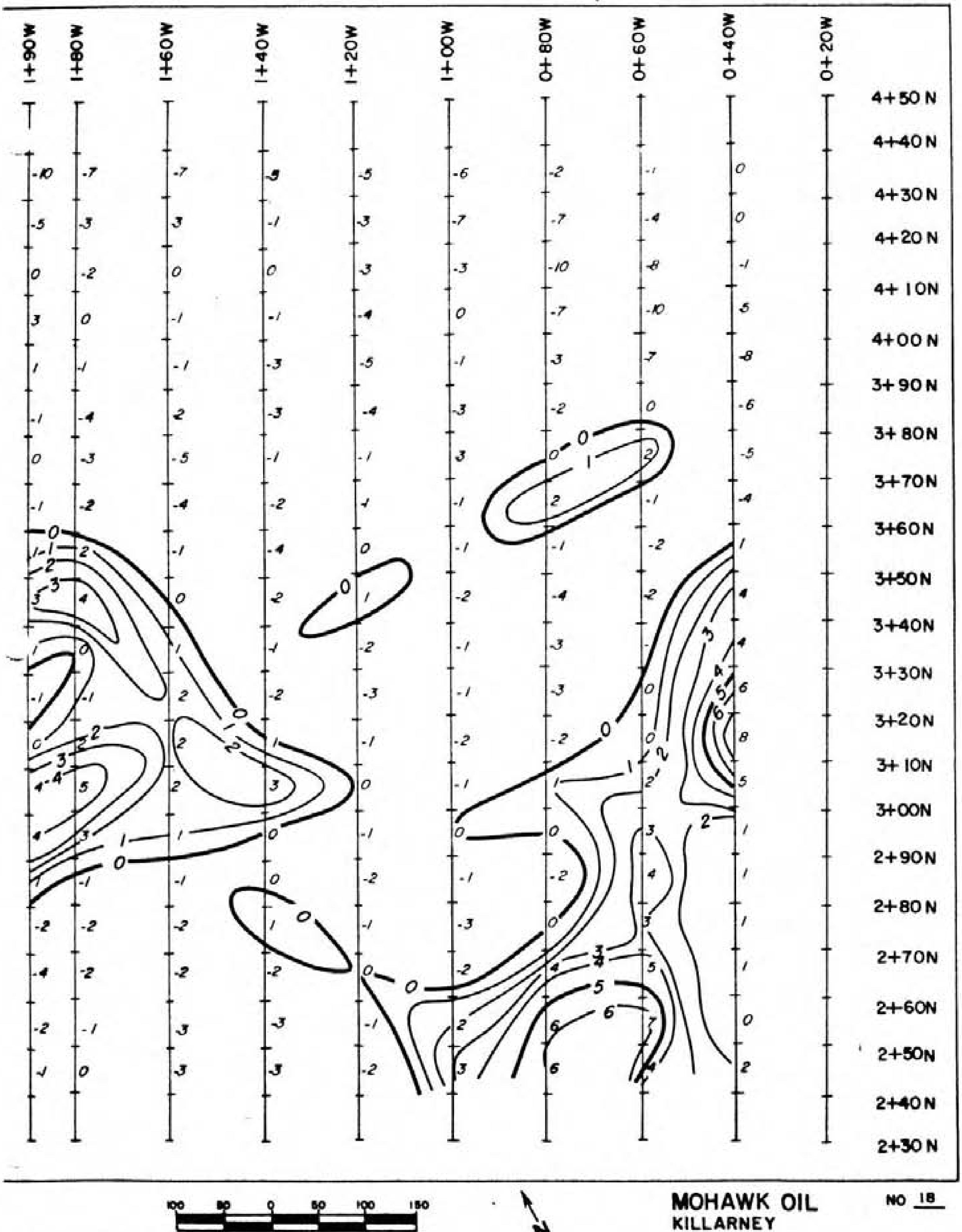
Procedure:

Detailed VLF-EM was done in the northeastern portion of the Killarney over a grid extending 200 metres to the west of the east boundary and extending 250m south of the

North Boundary. The drives run N/S at 0.28° azmuth with a spacing of 20 metres. The station interval was 10m. The grid was primarily designed in the hopes of picking up a lead - silver vein in the vicinity as well as improving resolution of the VLF-EM conducted during 1982. Although an extra grid was put in approximately the same location in the previous year at a line spacing of 30m and a stn spacing of 15m, the lines were running east-west. The strike of the veins is believed to be about azimuth 300°, thus it, was thought that north-south (0.28°) lines, running approximately across strike would be more appropriate in this case. Additional VLF-EM done near the west boundary of the Killarney and on to the Lucky Jim was done to pinpoint intersections of VLF-EM structures. At the present time it is believed that there is silver mineralization potential at fault intersections. The two types of dominant structures on the property are east-west and north-south structures. Target areas were determined from 1982 VLF-EM data. The detailed lines generally were at 50 mm spacings and 12.5m stn. spacing, running E/W as well as N/S. Finally blanket coverage of almost the entire First Chance crown grant was done in order to determine the structural relation between the First Chance (N-E of Killarney) and the Killarney. The lines were spaced 100 meteres apart with a station spacing of 25 metres. Most of the lines run north/south but some east/west lines were also done.

Magnetics was done on most of the new 1983 VLF-EM lines on the Lucky Jim and Killarney Claims. No magnetics was done the First Chance. The purpose of the magnetics was to determine additonal information about the structure so that the VLF-EM and magnetics can be compared.

Blanket Self-Potential (S.P.) coverage of the Killarney and Lucky Jim properties was performed over the 1982 grid. The line spacing was 50 - 100 metres and the station internal was 15 m. It is hoped that this method is a useful prospecting method for identifying areas of possible sulphide mineralization and an additonal structural mapping tool.



N.E. CORNER OF KILLARNEY

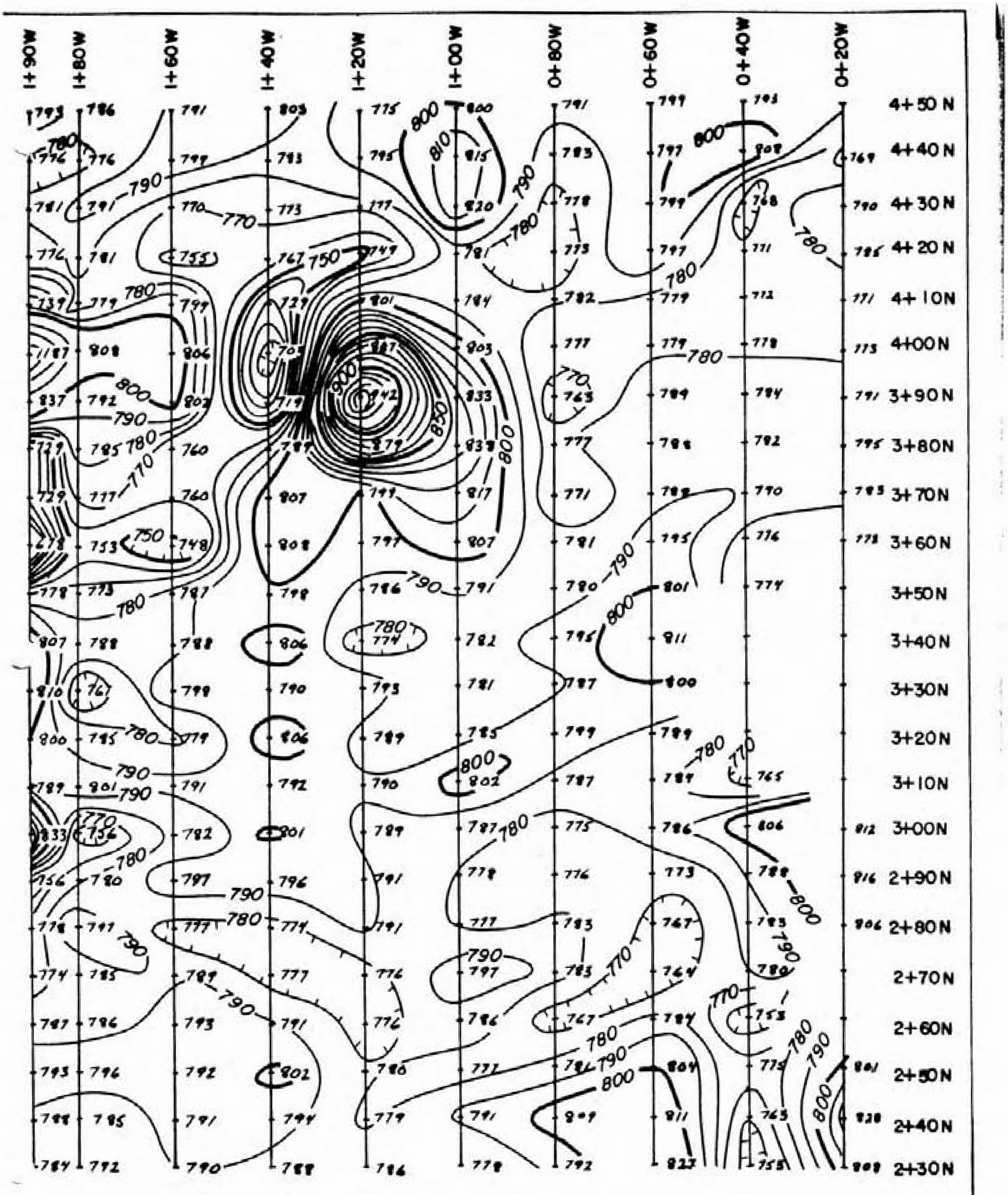
CONTOUR INT. 1° FRAZER FILTERED

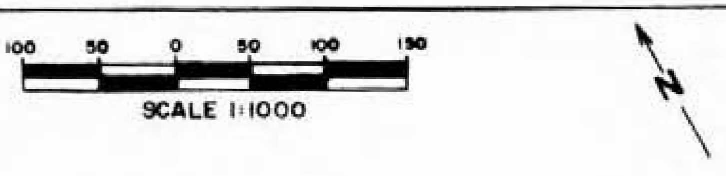
MOHAWK OIL NO 18

KILLARNEY

VLF CONTOURS ANNAPOLIS

SCALE 1:1000 DEC. 9/83





MOHAWK OIL NO 19

KILLARNEY

MAGNETIC SURVEY

N.E. CORNER OF KILLARNEY CLAIM

SCALE: 1:1000 NOV. 30/83

% FREQUENCY S.P. DISTRIBUTION FOR THE KILLARNEY / LUCKY JIM PROPERTIES

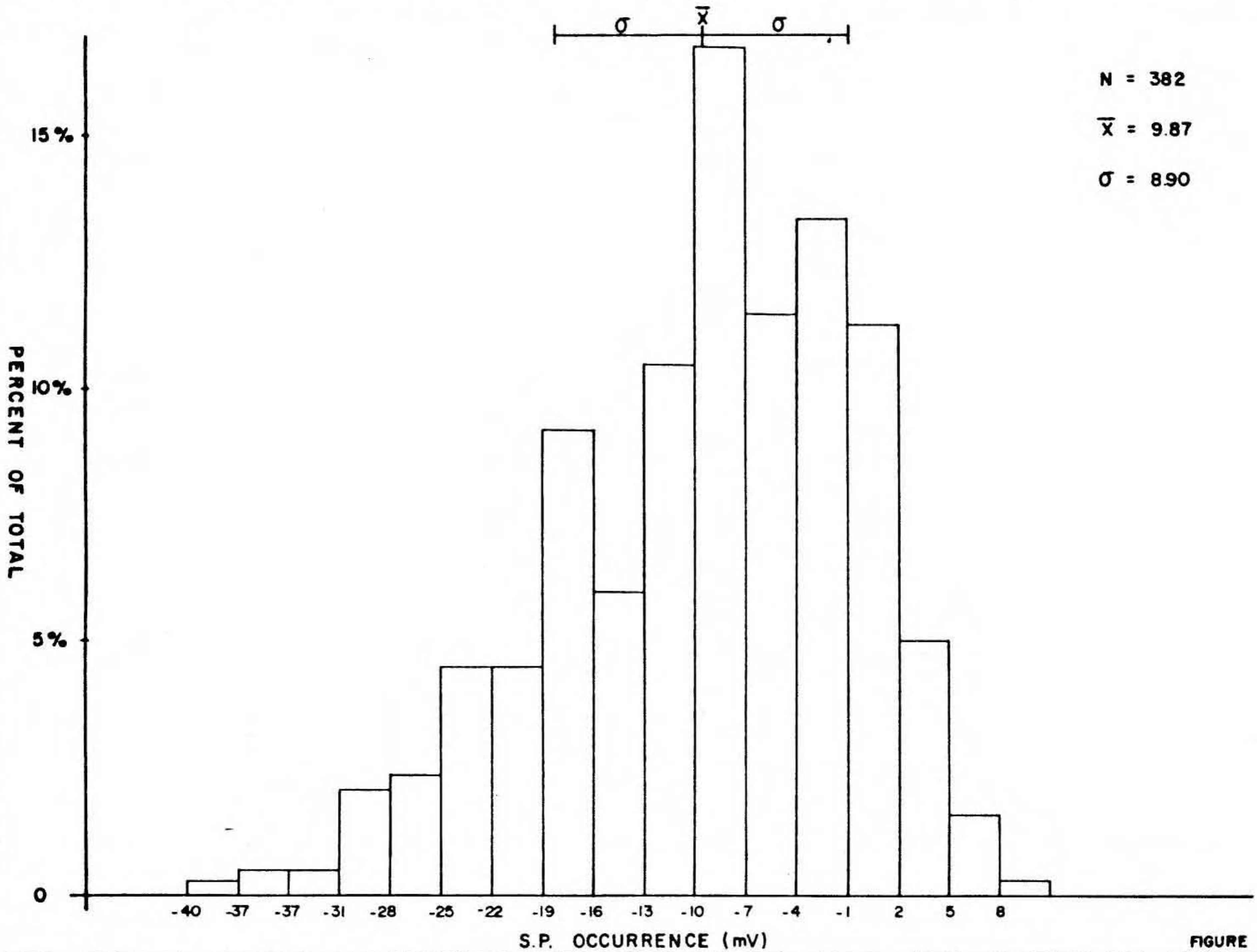


FIGURE 3

GEOPHYSICAL SURVEYS RESULTS AND INTERPRETATIONS

The number of S.P. readings taken on the property totalled 382. The mean was - 9.87 mV. and the standard deviation was 8.9 mV. A number of anomalies were encountered. The lowest S.P. evaluated was - 40 mV located on the west Killarney Boundary, the only one considered strongly anomolous. A number of anomolous zones were found in various locations on the property.

The causative sources for the geophysical anomalies have not yet been investigated but a number of observations can be made when comparing the results of the various surveys:

1. The S.P. anomaly in the southwestern corner of the Killarney Claim occurs near the intersection of two VLF-EM structures.

2. This is also true for the S.P. anomaly on the Lucky Jim on line 2E 140 m north of the west Killarney Boundary. A VLF-EM intersection occurs approximately 50 m to the north of this anomaly. One S.P. anomaly on line 300W an the Killarney is also coincident with an east-west VLF-EM structure (Hawaii).

3. The larger S.P. anomaly in the central part of the Killarney is not coincident with any VLF-EM strucutes, but a significant structure exists 100 metres to the North.

4. In the southeastern Killarney, a number of subanomallous S.P. values and VLF-EM structures coincide.

5. The lead silver vein known to be autocropping in the northeastern Killarney, did not produce a noticable S.P. response. This may be due to the fact that the vein is narrow and probably lensey. A more detailed investigation such as drilling the S.P. over the fine grid (1983) would be more appropriate for the purpose of actually trying to locate the vein. At the present time, only one S.P. Line runs through the vicinity in which veining is know to be outcropping, thus any claim that the S.P. does not works for this vein is unjustified until more detailed work is done.

6. Unfortunately little can be concluded from the magnetics of the property except for some magnetic anomalies in various locations. The VLF-EM and mag. generally cannot be correlated except for a low on the eastern sector of the Killarney claim where it occurs in conjunction with a N-S VLF-EM (Hawaii) structure.

7. A magnetic low in the southwestern Lucky Jim Claim occurs near some S.P. anomalies. The strike of magnetic low is approximately parallel to the S.P. structures there but the VLF-EM structure nearby strikes at a angle of 30° - 40° to the S.P. and mag.

8. Generally a band of slightly more active magnetism striking approximately north-south in the western part of the Killarney may reflect a rock type different from the rest of the property, possibly plutonic in origin.

9. A structure causing high magnetism occurs about 2 km. north of the property. (Aeramagnetics Sheet 82 E/15 - Damfino Ck.)

10. Magnetic high are often related to intrusive activity, suggesting that the property may be underlain by intrusives that are close to surface where the strong magnetic anomalies are located.

Detailed VLF-EM and magnetic surveys were conducted in the northestern corner of the Killarney Claim. Generally the magnetic relief in this area is low except for an anomaly of 150 gammas at 120W, 420N and a 300 gamma anomaly at 190W, 420N. The anomalies are likely due to concentrations of magnetite and possibly the anomaly at 120W, 420W may represent a small intrusive plug. In the southern portion of the mine grid some subtle lineations striking approximately E/W can be correalated to VLF-EM patterns indicating possible shearing or geologic contacts. The silver vein exposed in the northern part of this grid could not be picked up with the VLF-EM or the magnetometer.

CONCLUSIONS

1. Silver, Lead mineralization in shear zones have two primary attitudes:

   strike N 50 W dip 70° N E

   strike N to N 20W dip 60° SW

   Plunge of this intersection NW about 35°. These veins appear to flatten down dip.

2. There are several coincident VLF-EM and S.P. anomalies detailed in the geophysical Section which should be detailed and then trenched or drilled.

3. Although no strong VLF-EM or S.P. anomalies were identified in the area of known mineralization, a weak VLF-EM anomaly does exist along the possible intersection zone of the west and east dipping mineralized structure in the northeastern portion of the property.

4. In the vicinity of L-1 and L-3 trenches several structure may intersect. There is also a strong S.P. anomoly in the vicinity of those possible intersecting VLF-EM anomalies.

5. In the vicinity of the adits and known mineralization soil geochemical results are as follows:

   Zn up to 108 ppm

   Ag up to 2.4 ppm

   Cu up to 78 ppm

   Pb up to 38 ppm.

RECOMMENDATIONS

1. Conduct detailed S.P. on Induced Polarization (I.P.) surveys in the northeast sector of the property in order to identify possible depth and strike extensions to the known silver mineralization.

2. Conduct detailed S.P. and/or perhaps I.P. in the southwestern corner of the property near the L-1 and L-3 trenches.

3. Detailed Mag, VLF-EM, S.P. or I.P. may assist in identifying drill targets in the northeast corner of the property.

4. Conduct detailed S.P. near centre of line 4 + 00E at possible structural intersection coincident with a 1.7 ppm Ag. anomaly.

5. Drill possible extension of known mineralization in northwestern sector of property following detailed geophysical surveys outlined in 3 above.

CERTIFICATE OF QUALIFICATIONS

I, Matthew W. Waldner do certify that:

I graduated from the University of British Columbia in 1969 with a Bachelor of Science degree in Geology. Since graduating, I have continually practiced my profession in various levels of responsibility in industry.

The following is a synopsis of employment experience:

1969	Seven months Junior Geologist and Party Chief in Southern B.C. and Yukon Territory - Atlas Explorations Ltd. (N.P.L.)
1970 - 1973	Three and one-half years as Open Pit Geologist at Endako Mines Ltd. -Placer Development Ltd.
1973 - 1979	Six and one-third years as Pit Geologist, Mine Geologist and Chief Mine Geologist at Lornex in the Highland Valley of B.C. - Lornex Mining Corporation Ltd.
1979	Four months as Projects and Reclamation Engineer - Lornex Mining Corporation Ltd.
1979 - 1981	Thirteen months as Chief Mine Engineer, in charge of the Mine Engineer Department - Lornex Mining Corporation Ltd.
1981 (Jan.) - present	Chief Geologist - resposible for mining exploration in Canada and U.S.A. - Mohawk Oil Co. Ltd., Mining Division.

M. W. Waldner

M.W. Waldner
March 31, 1983

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2. Cairnes, C.E. (1930): Lightning Peak Area, Osoyoos district, B.C. G.S.C. Annual Report 1930, pages 79A to 115A.

3. Little, H.W. Kettle River (East Half) Map Area, B.C. G.S.C. map 6 - 1957 , Sheet 82E (East).

APPENDIX I

ROCK SAMPLE LOCATIONS, DESCRIPTIONS AND ANALYSES

APPENDIX I

Rock Sample Locaitons, Description and Analyses

Sample No.	Location	Description	As	Sb	Ag	Au	Cu	Pb	Zn
				ppm		ppb		ppm	
4451	Trench L-1	Grab Sample Andesite, 1% Py	1.0	0.1	1.5	1.0	60	120	95
4452	Trench L-1	Grab Sample Andesite, pyrolusite	1.0	0.1	0.6	1.0	10	32	24
4453	Trench L-1	Grab Sample Andesite, pyrolusite minor py	1.0	0.1	1.2	1.0	65	61	90
4445	Trench L-4	Grab sample Altered Andesite chl, Mn, Lim, Cer,	0.0	0.1	1.8	1.0	86	121	86
4446	Trench L-4	Grab, alt'd And., cal., 2% Py	1.0	0.1	1.6	1.0	79	109	83
4447	Trench L-4	Grab, alt'd And., cal., 1% Py	1.0	0.1	1.7	5.0	59	36	72
4448	Trench L-4	Grab, alt'd And., Lim., pyrolusite	1.0	0.1	1.2	10.0	69	20	93
4417	Trench L-5	Grab, qtz-dio.,	1.0	0.1	0.4	1.0	7.0	16	61
4418	Trench L-5	5' channel, pyro., cal., chl.,	1.0	0.1	0.7	5.0	9	14	120
4419	Trench L-5	1' channel	1.0	0.2	1.0	1.0	47	39	142
4420	Trench L-5	1' channel	1.0	0.1	2	5.0	17	175	260
4421	Trench L-5	2' channel	1.0	0.2	1.1	1.0	10	21	99
4422	Trench L-5	2' channel	1.0	0.2	1.2	1.0	42	19	92
4423	Trench L-5	3' channel	1.0	0.1	0.9	10.0	12	114	217
4425	Trench L-5	3' channel	1.0	0.1	1.3	5.0	62	45	104
4426	Trench L-5	6" channel	1.0	0.1	1.1	1.0	22	21	85
4450	Trench L-5	Grab, Fresh And., Py, Pyrr, (cpy)	1.0	0.4	1.1	1.0	106	51	47
4437	Trench L-8	21" channel, alt'd volcanics, chl, pyrol.	1.0	0.1	4.8	1.0	73	328	191
4438	Trench L-8	6" channel, alt'd Dio?, Kaol, pyro, lim, Lim.	1.0	0.1	2.0	1.0	16	476	405

Sample No.	Location	Description	As	Sb	Ag	Au	Cu	Pb	Zn
				ppm		ppb		ppm	
4439	Trench L-8	6" channel, qtz-chl., ag, 2% Py, vein, hem., pyro.	1.0	0.8	20.0 1.04 o./t.	5.0	56	910 0.1%	470
4440	Trench L-8	36" channel, fract. alt'd volc., chal, hem clay, (py), qtz. veinlets	1.0	0.2	20.0 1.22 o./t.	10.0	22	575 .06%	434
4441	Trench L-8	Grab, Fg, aplite, 2% py, (ga?)	1.0	0.6	20.0 2.88 o./t.	5.0	24	470 0.4%	730
4442	Trench L-8	Grab, alt'd and., chl clay, lim, (ga?), cerrosite?	1.0	0.4	20.0 1.67 o./t.	15.0	24	428 .04%	495
4443	Trench L-8	Grab qtz-plag dyke (py)	1.0	0.2	1.5 .27 o./t.	1760 .001 o./t.	13	65	45
4444	Trench L-8	1 m., chip, alt'd volc. chl. hem, 1% py	1.0	0.1	3.7u		5.0	75	464
4427	Trench L-10	Ga float	1.0	5.7	20.0	90.	820	4000	680
4428	Trench L-10	Blue-green Flt g.g qtz-ser., lim, 1% Py.,	1.0	1.0	2.7	1.0	16	720	29
4429	Trench L-11	48" channel, alt'd dio. lim., clay	1.0	0.2	2.1	25	114	396	105
4430	Trench L-11	15" alt'd fractured dio., pyro, qtz.	1.0	0.2	1.9	20	95	110	97
4431	Trench L-11	8" qtz-plg dyke, cal pyro, hem, chl	1.0	0.1	20.0 1.7 o./t.	5.0	91	4000 .01%	82 .71%
4432	Trench L-11	52" alt'd, fraut, And., cal,	1.0	0.1	1.6	5.0	82	51	96
4433	Trench L-11	2 3/4" qtz-pyro, hang, chl. alt'd.	1.0	0.1	1.4	5.0	20	279	57
4434	Trench L-11	8" Alt'd And., chl	1.0	0.1	1.6	1.0	82	36	107
4435	Trench L-11	6" qtz-plg proph dyke	1.0	0.1	0.6	1.0	8	49	41
4436	Trench L-11	48" fresh meta-volc. cal, 1% Py	1.0	0.1	1.4	1.0	60	31	114
4454	Trench L-11	1m/ alt'd int.,	1.0	0.5	4.3	1.0	73	91	179
4455	Trench L-11	5cm qtz vein, pyro (ga), (py), (sph)	1.0	2.8	20.0 5.4 o./t.	60 .003 o./t.	82	970 .11%	645

Sample No.	Location	Description	As	Sb	Ag	Au	Cu	Pb	Zn
				ppm		ppb		ppm	
4456	Trench L-11	29cm chl And.?	1.0	0.3	9.4	1.0	180	395	900
4457	Trench L-11	12cm, And., qtz-(ga.), sph vein	1.0	0.1	20.0	30.	88	752	470
						9.8 o./t.		.08%	
4458	Trench L-11	3m, wkly alt'd qtz. dio	1.0	0.1	4.9	1.0	108	271	315
4459	Trench L-11	7cm, ga veinlets, alt'd, dio, 2%ga	21.0	5.7	20.0	105.	314	4000	650
					22.6o./t.	.006o./t.	.04%	3.17%	.07%
4460	Trench L-11	7cm qtz-ga-sph (cpy), (mal)	40.0	20.0	20.0	20	1310	4000	4000
					65.7 o./t.		.15%		39%
4461	Trench L-11	71 1/2m wkly alt'd dio.	1.0	0.1	1.9	15.0	16	109	145
4462	Trench L-11	13cm Breccia, chl, pyro	1.0	0.1	20.0	20.0	47	830	430
					3.3 7o./t.			.09%	
4463	Trench L-11	15cm alt'd zone, pyro 2% Py, ((cpy)), ((ga))	35.0	5.2	20.0	10	48	829	302
					1.89 o./t.			10%	
4464	Trench L-11	95cm, schistar, dio ham, 1-2% Py, on fracts.	1.0	5.0	2.5	5	126	82	161
4465	Trench L-11	150cm, alt'd volc.? chl, lim.,	1.0	0.5	2.4	1.0	56	46	137

Sample No.	Location	Description	%	%	Alt	Alt	%	%	%
4189	Adit 2 Road Cut	6" chip shear zone with qtz, Py + Pyro	1.0	0.2	2.42	.077	.13	.78	.13
4188	Adit 2 Road Cut	8" shear zone with ga py, pyro., qtz.	.02	.02	.43	.002	.02	.09	.03
4189	Adit 2 Road Cut	14" shear zone with 2" ga + qtz.	.06	.02	2.39	.009	.03	5.96	.08
4190	Adit 2 Road Cut	12" shear zone with ga	.07	.02	18.5	.005	.09	3.63	1.07
4191	Adit 2 Road Cut	4" qtz-ga vein	.4	.02	16.3	.048	.4	49.5	1.55
4192	Adit 2 Road Cut	6" qtz-lim-pyro vein	.02	.01	.55	.001	.01	.2	.03
4193	Adit 2 Road Cut	27" qtz-ga-lim, flt g.g.	.04	.02	.93	.003	.03	4.13	.12
4194	Adit 2 Road Cut	11" shear zone qtz-ga.,		.01	.01	70.4	.030	.17	3.82
4195	Adit 2 Road Cut	3" qtz-ga vein	.05	.02	45.2	.001	.28	21.4	.25

APPENDIX II

UNFILTERED VLF-EM DIP ANGLES - 1983 SURVEYS

APPENDIX II

Unfiltered VLF-EM Dip Angles - 1983 Surveys

VLF-EM NORTHEAST CORNER

ANNAPOLIS

Stn.	Time	190W	180W		160W		140W		120W		100W		80W		60W	
	-6		-6		-7		-7		-7		-5		-5		-5	
	-3		-3		. -5		-4		-6		-4		-5		-5	
		-10		-7		-7		-5		-5		-6		-2		-1
450N	0		-1		-3		-3		-4		-3		-5		-5	
		-5		-3		-3		-1		-4		-7		-7		-4
	+1		-1		-2		-3		-4		0		-3		-4	
		0		-2		0		0		-3		-3		-10		-8
	+1		0		-3		-3		-3		0		0		-2	
		3		0		-1		-1		-4		0		-7		-10
	0		0		-2		-3		-2		0		+2		+1	
		1		-1		-1		-3		-5		-1		-3		-7
	-1		-1		-2		-2		-1		0		+2		+3	
		-1		-4		-2		-3		-4		-3		-2		0
400N	+1		+2		-2		-1		+1		+1		+3		+3	
		0		-3		-5		-1		-1		-3		0		2
	-1		+1		0		-1		0		+2		+3		+1	
		-1		-2		-4		-2		-1		-1		2		-1
	+1		+3		+1		-1		+1		+2		+2		+3	
		1		2		-1		-4		0		-1		-1		-2
	0		+2		+1		+1		+1		+2		+2		+2	
		3		4		0		-2		1		-2		-4		-2
	-1		0		+1		+1		0		+3		+4		+4	
		1		0		1		-1		-2		-1		-3		-1
350N	-1		+1		+1		+1		+1		+3		+4		+3	
		-1		-1		2		-2		-3		-1		-3		0
	-1		+1		0		+2		+2		+3		+5		+4	
		0		2		2		1		-1		-2		-2		0
	0		+1		0		+7		+2		+4		+6		+4	
		4		5		2		3		0		-1		1		2
	-2		-1		-1		0		+2		+4		+5		+3	
		4		3		1		0		-1		0		0		3
	-3		-2		-1		+1		+2		+4		+5		+3	
		1		-1		-1		0		-2		-1		-2		4
300N	-3		-1		-1		+1		+3		+4		+6		+1	
		-2		-2		-2		1		-1		-3		0		3
	-3		-1		0		0		+3		+5		+6		+1	
		-4		-2		-2		-2		0		-2		4		5
	-1		0		0		+1		+3		+6		+5		0	
		-2		-1		-3		-3		-1		2		6		7
	-1		0		+1		+2		+3		+5		+3		-3	
		-1		0		-3		-3		-2		3		6		4
	-1		0		+2		+2		+4		+4		+2		-3	
250N	0		0		+2		+4		+4		+4		0		-4	

		40W			
470N	-6		337N		-2
					8
	-6		325N		-5
		0			5
450	-6			-6	
		0			2
	-6			-7	
		-5			-1
	-5			-6	
		-8		0	
	-2		-6		
		-6		2	
400N	-1		-7		
		-5			
	0		250N		-7
		-4			
	+2				
		2			
	+1				
		4			
	0				
		4			
[illegible]0N	-1				
		6			

VLF-EM Northeast Corner

1983 Hawaii

Date October 1, 1983 VLF on Killarney & Lucky Jim Fractions

	Line 150W		Line 0+50W		Line 2+00W		Line 100W		Line OE/W		Line 50E	
	o	FF	o	FF	o	FF	o	FF			o	FF
									-1			
										-1		
0S									-1			
	-2		+2		+1		+1			-2		
	-2		+2		+2		+1		0			
		0		0		-2		-4		-3		
	-2		+2		+3		+2		0			
		-1		1		2		-5		-4		
	-2		+2		+2		+4		+2			
		-2		5		3		-2		-4		
50S	-1		+1		+1		+4		+2		+5	
		-1		8		2		-1		-2		
	-1		-2		+1		+4		+3		+6	
		1		10		1		-2		-3		-4
	-1		-5		0		+5		+3		+7	
		-2		3		-1		-2		-7		-3
	-2		-6		+1		+5		+5		+8	
		-7		-4		-1		-1		-9		0
1+00S	+2				+1		+6		+8		+8	
		-4		-4		-2		1		-3		4
	+2		-3		+1		+5		+9		+7	
		0		-2		-5		1		5		7
	+2		-3		+3		+5		+7		+5	
		0		-3		-4		-1		10		11
	+2		-2		+4		+5		+5		+3	
		-1		-5		-1		-3		13		12
1+50S	+2		-1		+4		+6		+1		-2	
		-1		-5		1		-4		11		10
	+3		+1		+4		+7		-2		-4	
		1		-4		4		-2		7		5
	+2		+1		+3		+8		-3		-5	
		2		-3		4		2		6		2
	+2		+3		+1		+7		-5		-6	
		2		2		0		4		5		0
2+00S	+1		+2		+2		+6		-6		-5	
		0		7		0		3		4		2
	+1		0		+2		+5		-7		-6	
		-2		4		2		0		3		4
	+2		-1		-1		+6		-8		-8	
		1		4		-3		-4				

	Line 150W o	FF	Line 0+50W o	FF	Line 2+00W o	FF	Line 100W o	FF	Line OE/W	Line 50E o	FF
2+50S	+1		-2		-2		+7		-9	-9	
		-1		5		-2		-2			
	+2		-4		-3		+8				
		-2		-4		1		1			
	+2		-4		-2		+7				
		-2		2		1		2			
	+3		-6		-2		+7				
		-1		-3		0					
3+00S	+3		-4		-2		+6				
		0		-4		0					
	+3		-3		-2						
		-1		-2		3					
	+3		-3		-2						
		-3		-3		6					
	+4		-2		-1						
		-4		-5		1					
3+50S	+5		-1		-1						
		-3		-7		-6					
	+6		+1		+1						
		-2		-7		-4					
	-6		+3		+3						
		-3		-4		5					
	+7		+4		+1						
		3		0		9					
4+00S	+7		+4		-2						
		14		6		5					
	+2		+3		-3						
		14		11		2					
	-1		-1		-3						
		7		10		3					
	-3		-3		-4						
		2		10		3					
4+50S	-3		-5		-5						
		0		11		7					
	-3		-9		-5						
		0		7		1					
	-3		-10		-5						
		1		4		2					
	-3		-11		-6						
		4		6		2					
5+00S	-4		-12		-6						
		6		5		2					
	-6		-15		-7						
		4		-2		3					
	-7		-13		-7						
		1		-4		5					
	-7		-12		-9						
						4					
5+50S	-7		-12		-10						
					-10						

Stn.	Line 200S		Line 150S	
100W	+7		+6	
	+6		+7	
		8		8
	+4		+4	
		9		10
	+1		+1	
		6		5
50W	0		0	
		7		-1
	-2		0	
		7		-3
	-4		+2	
		5		0
	-5		+1	
0W/E	-6		+1	

Stn.	Line 150W		Line 0+50W		Line 2+00W		Line 100W		Line OE/W		Line 50E	
)0W	-5		-3		-2							
	-5		-2		0							
		-1		-9		-9						
	-5		0		+3							
		-3		-12		-5						
	-4		+4		+4							
		-3		-8		-2						
150W	-3		+6		+4		0		-3		-4	
		-3		-3		-3						
	-3		+6		+5		0		-3		-5	
		-4		-3		-4		-6		-3		-3
	-1		+7		+6		+2		-3		-4	
		-2		-4		-4		-5		-8		-5
	-1		+8		+7		+4		0		-2	
		0		-4		-4		1		-7		-1
100W	-1		+9		+8		+3		+2		-2	
		0		-2		-3		3		3		0
	-1		+10		+9		+2		+2		-3	
		0		2		3		5		7		-5
	-1		+9		+9		+2		0		-1	
		4		8		13		10		12		-4
	-1		+7		+5		-2		-3		+1	
		+3		14		16		5		10		7
0+50W	-5		+4		0		-4		-7		-1	
		11		13		8		-7		0		11
	-8		-2		-2		-1		-6		-6	
		4		10		1		-11		-7		2
	-9		-4		-1		+2		-4		-5	
		0		5		6		-10		-7		-5
	-8		-4		-2		+4		-2		-4	
		3		12		14		-4				
0+00W	-9		-8		-6		+5		-1		-2	
		6		11		13		-1				
	-11		-12		-11		+4					
		3		1		1		-2				
	-12		-11		-10		+6					
		0		-3		-4		0				
	-11		-10		-8		+5					
		1		-3		-4		0				
0+50E	-12		-10		-9		+5					
		0		-1		+5		-3				
	-12		-10		-8		+6					
		-3		-3		0		-5				
	-11		-9		-9		+7					
		-3		-4		-1		-3				
	-10		-8		-8		+9					
1+00E	-10		-7			-8		+7				

APPENDIX III

CORRECTED MAGNETIC DATA - 1983

APPENDIX III

Corrected Magnetic Data - 1983

Date: - September 19, 1983

Mag. on Killarney from September 16th and 19th

Drift Observation

	t	$\Delta\gamma$	$\Sigma\Delta\gamma$	
September 16			-48	(based on 57800 for base stn)
	10:19	+10	-38	
	10:38	+13	-25	
	11:10	+14	-11	
	1:10	+14	+3	
	1:58	+14	+17	
	t	$\Delta\gamma$	$\Sigma\Delta\gamma$	
September 19			+20	
	10:51	+6	+26	
	11:30	-6	+20	
	11:55	+10	+30	
	12:51	-6	+24	
	2:02	+46	+70	
	2:42	+18	+88	
	2:46	-8	+80	
	3:01	+1	+81	

Date: - October 1, 1983
Corrected Mag.

Stn.	Line 4+50S	Line 400S	Line 350S	Line 100S	0+50S	0S
200W	57733	57752	57842			
	739	747	996			
	750	751	817			
	755	768	764			
150W	738	768	746	755	784	869
	769	752	864	755	761	880
	996	751	882	811	750	929
	700	773	807	552	754	781
100W	743	764	754	684	763	783
	738	785	771	699	772	785
	733	775	797	703	805	787
	728	753	757	707	760	785
0+50W	728	746	731	717	755	786
	730	740	738	711	753	787
	728	742	741	736	778	821
	727	740	753	700	786	817
0E/W	721	734	737	678	778	837
	770	738	731			
	775	740	733			
	724	734	737			
50E	736	726	760			
	746	731	755			
	739	737	746			
	747	735	751			
100E	57748	57740	747			

	200S	150S
0	726	746
	743	750
	757	741
50W	756	751
	758	740
	737	742
	734	752
100W	726	718

Stn.	Line 200W	Line 150W	Line 0+50W	Line 0E/W
0S	57777	57930		858
	795	916		812
	797	873		790
	797	924		787
50S	780	850	809	
	775	806	763	
	800	810	770	
	757	815	755	
100S	741	776		714
	737	743		748
	753	746		762
	735	774		748
150S	745	755		865
	768	746		
	782	750		
	766	737		
200S	743	752		
	736	724		
	753	741		
	788	741		
250S	774	744		
	773	721		
	751	624		
	743	739		
300S	727	721		
	711	734		
	616	751		
	680	727		
350S	689	651		
	830	751		
	799	770		
	772	780		
400S	764	784	57746	
	752	760	753	
	753	751	719	
	746	751	724	
450S	737	744	722	
	744	735	744	
	753	730	741	
5+00S	755	740	761	
	771	730	723	
	733	735	743	
	738	742	724	
5+50S	57736	57765	57709	

Corrected Mag. Killarney (Northeast corner)

Stn.	Line 20W	40W	60W	80W	100W	120W	140W	160W	180W	190W
470N		793	799	791	800	775	803	791	786	793
	769	808	797	783	815	795	783	799	776	776
450N	790	768	799	778	820	777	773	770	791	781
	785	771	797	773	781	749	767	755	781	776
	771	772	779	782	784	801	729	799	779	57739
	773	778	779	777	803	887	703	806	808	58187
	791	784	789	763	833	942	719	802	792	57837
400N	795	782	788	777	838	879	782	760	785	729
	783	790	788	771	**817**	799	807	760	777	726
	773	776	795	781	807	797	808	748	753	678
		774	801	780	791	786	798	787	773	777
			811	795	782	774	806	788	788	807
350N			800	787	781	793	790	798	761	810
			789	799	785	789	806	779	785	800
		765	784	787	802	790	792	791	801	789
	812	806	786	775	787	789	801	782	756	833
	816	788	773	776	778	791	796	797	780	756
(Control line) 0N	**817**	**852**	**795**	**791**	**786**	**797**	**779**	**801**	**766**	**57805**
300N	806	783	767	783	777	791	774	777	797	778
		780	764	783	797	776	777	789	785	774
		753	784	767	786	776	791	793	786	787
	801	775	804	781	777	780	802	792	796	793
	828	763	811	809	791	779	794	791	785	788
250N	808	753	827	792	778	786	788	790	792	784

APPENDIX IV

TREATMENT OF S.P. DATA - 1983

APPENDIX IV

Treatment of S.P. Data - 1983

Date: - October 15, 1982

Stat. results on Lucky Jim and Killarney

mean	=	-9.874
S. Dev	=	8.897
N	=	38.2
MAX	=	9
MIN	=	-40

Control Interval

-19	trend (sub-anomalous)
-28	Anomalous
-37	Strongly Anomalous

Frequency:

S.P.	% of Total
-10 to -37	.3
-37	.5
-34	.5
-31	2.1
-28	2.4
-25	4.5
-22	4.5
-19	9.2
-16	6
-13	10.5
-10	16.8
-7	11.5
-4	13.4
-1	11.3
2	5
5	1.6
8	.3
11	0

Killarney - 1983

Stn.	W.Bdy	Stn.	375W	300W	250	200	100W	6W
0S	-13	0	-25	-5	0	+3		-8
	-4		-3	-12	+1	+5		0
	-20		+1	-18	0	+1		+3
	-2			-28	+6	0	-1	-11
50S	-3	60S	+2	-12	-11		-3	-17
	-1		+1	-21	+5	0	-7	+3
	+1		-1	-18	-7	-1	-9	+2
	-1		-2	-13	-9	-9	-3	-4
100S	-2	120S	+1	-6	-6	-6	-3-	-3
	0		0	-3	0	-2	-5	+1
	-2		0	-13	+4	-3	-8	-2
	0		0	-13	+1	-8	-14	0
150S	-7	180S	-4	-13	0	-1	-15	+1
	-9		-3	-9	-1	-7	-18	-1
	-4		-11	-7	-8	-10	-16	-4
	-17		-10	-36	+2	-1	-13	-10
200S	-9	240S	-10	-19	-13	-18	-29	+9
	-9		-8	-15	-30	-26	-13	-5
	-9		-5	-13	-8	-5	-12	-4
	-10		-4	-28	-11	-26	-10	-4
250S	0	300S	-3	-13	-8	-4	-13	+1
	-1		-8	-8	-4	-9	-18	-9
	0		-10	-13	-10	-25	-27	-7
	-27		-25	-10	-17	-17	-16	-8
300S	-14	360S	+2	-10	-11	-7	-23	-7
	-6		-18	-23	-4	-5	-18	-5
	-7		-34	-12	-5	-5	-20	-8
	-19		-26	-14	-2	-9	-23	-10
350S	-4	420	-27	-13	+3	-11	-5	-13
	-12		-19	-24	-3	-9	-17	-10
	-8		-17	-24	-8	-7	-24	+2
	-5			-13	-3		-17	-7
400S	-9	480		-10	-8			
	-40			-12				
	-30	510						
	-17							
450S	-7							
	-3							
	-17							

APPENDIX VI

VERY LOW FREQUENCY ELECTROMAGNETIC SURVEY

INSTRUMENTATION AND THEORY

APPENDIX VI

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 VII

MAGNETIC SURVEYS - INSTRUMENTATION AND THEORY

APPENDIX VII

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 VIII

SELF POTENTIAL SURVEY - INSTRUMENTATION AND THEORY

APPENDIX VIII

Self Potential Survey - Instrumentaiton and Theory

S.P. stands for Self Potential or Spontaneous Potential. A millivoltmeter - potentiometer is used to take S.P. readings. Well insulated, strong, light, thin wire is connected to the copper electrode which protrude above the foward (positive) pot cap. The millivoltmeter and rear (negative) pot are set up at a single control station. Tying into the control station for traverse balancing is desirable. Two porcelain ceramic pots with porous bottoms are used in the survey. Copper electrodes are suspended down into the pots from the caps. A saturated copper sulphate solution is used as the medium to connect the porous pot contact with the ground, which establishes a mediated electrical contact with the copper electrodes suspended in solution. By convention the forward advancing pot should be linked to the positive or far millivoltmeter connection and the stationary or rear control station pot should be linked to the negative, rear connection. With the positive pot moving "ahead", anomalies are negative after the traditional Carl Barus method which is the currently accepted convention.

S.P. is a potential caused either by Background Potential or Mineralization Potential. Background potentials are caused by biochemical and geochemical action such as bioelectric activity in vegetation and fluid streaming as well as varying electrolytic concentrations in the ground. Their amplitudes vary but are generally less than 100mV and their potentials add up to zero over a long distance because they are as likely to be positive as well as negative.

Mineralization Potentials are of main interest when prospecting and are associated with metal sulphides, graphite,and sometimes oxides such as magnetite. The most common mineralization potentials are caused by pyrite, chalocpyrite, pyrrhotite, sphalerite, galena and graphite. These potentials are negative.

The mechanism for S.P. In mineralization zones is not completely understood, although a number of theories have been developed that try to explain it. The theories generally consider a massive sulfide body, which acts as an electrochemical cell because part of the body is in a state of oxidation. The oxidation potential causes a flow of electrons within and outside the body causing a spontaneous potential at the surface of the earth. The most common weaknesses in the theory are that S.P.

responses have been observed over bodies which were well below the water table in the area. Also S.P. responses in excess of the theoretical values have been observed for graphite. In other instances potentials measured along the surface were about the same magnitude as those measured in drill holes drilled through the presumable sources, when clearly the surface measurements should be less.

Although Self potential has played a minor role in geophysics, it is a fast and cheap method that is useful for base metal exploration when combined with other geophysics, geochemistry and geology.

Treatment of Data

The Data acquired was found to vary differently in different areas. The standard deviation varies from one area to another. This, of course, may be due to one area having stronger sources of S.P. than the other, but other factors such as a conductive overburden cover in one area may also be a factor. Given similar sources of S.P. in two areas, one of which has a conductive overburden cover, the other having regular "B" and "C" horizons, the area with the conductive overburden will show much less S.P. activity due to the "flattening" effect of the overburden cover. By doing statistics on each different area some control is obtained in determining what is anomalous and what isn't for each area. It should be noted that the statistical method gives a quantative guideline to what is anomalous, however, in most circumstances this should be intuitively obvious, but having the statistics will provide better justificaiton for decisions made resulting from the S.P. measurements.

Field Procedure and treatment of Data

The Method used to acquire the Data was the Base (fixed electrode) station method. An arbitarary point along a line was chose to be the base. All measurements on that line were taken with respect to the base. The bases were then tied together so that the entire grids potentials are given with respect to one of the base stations.

Statistical Analysis was applied to the Data in order to determine the contour interval. The actual value of the data is arbitrary; the relative changes of the self potential over the grid area being more important. The contour interval was determined in the following way:

1. values one standard deviation below the means were considered subanomalous values.
2. standard deviations below the mean were considered anomalous and values
3. standard deviations or more below the mean were considered strongly anomalous.

In order where a few large anomalous values were encountered, much larger standard deviations were calculated. This presented a special problem in those areas because of the large standard deviations generated by a few very large data. The large standard deviations sets a contour interval such that small values (which could become subanomalous trends in the absence of the large data) are wiped out. Thus a dynamic range problem exists: smaller anomalies are "wiped out" when a few large values are present.

A method developed to deal with the above problem is proposed in the following way: The standard deviation and the mean of the entire population were computed. All values of two or more standard deviations below the mean were discarded from the population. The remaining Population was re-computed for a new mean and standard deviations. The general result was a drastically reduced standard deviation (as much as 50% less) and also a higher background value (mean). The new standard deviations were generally more representative of areas which did not contain huge S.P. values.

Error and Uncertainty in S.P.

There are a number errors associated with each S.P. measurement. One error is due to a difference in potentials between the pots when they are placed in the same hole. The error is less than 2mV (if the error is greater than 2mV, the pots are cleaned and recharged with a fresh solution of copper sulfate). This error is a systematic one and thus is common to all readings if the base pot is always used as a base pot. There is reason to believe that there is a much larger random error associated with each reading, the cause of which cannot fully be explained. Part of this may be time dependent because measurements taken on different days of the same station produce difference in the readings. The error is in the order of 5 - 10 mV. Some possible causes are differing ground moisture conditions groundwater flow, the amount of water added to the pot hole, telluric currents associated with solar activity and others. Instrument measurement errors are minimal and are estimated to be ± 1mV at the most.

APPENDIX IX

ITEMIZED COST STATEMENT

KILLARNEY, LUCKY JIM FRACTIONS, THUNDERHILL FRACTIONS

APPENDIX IX

Killarney, Luck Jim Fraction, Thunderhill Fraction

Itemized Cost Statement

Personnel Equipment	Months Worked	Pay Rate per day	Hours Worked	Total
A. Gamp (Geophysicist)	Aug.	$ 95	1	$ 95.00
	Sept	"	11	1,045.00
	Oct., Nov.	"	13	1,235.00
	Dec.	"	2	190.00
B. Callaghan (Project Geologist)	Feb., Mar.	$110	3	330.00
	Sept.	"	13	1,430.00
	Oct., Nov.	"	2	220.00
	Dec.	"	5	550.00
W. Gillick (Geophysical Assistant)	Oct.	$ 50	3	150.00
4 x 4 Pick-up	July	$ 46	6	276.00
	Aug.	"	2	92.00
	Sept.	"	16	736.00
	Oct.	"	3	138.00
VLF-EM/S.P. Magnetometer	Aug.	$ 15	1	15.00
	Sept.	"	9	135.00
	oct.	"	3	45.00
Radio	Aug.	$ 15	2	30.00
	Sept.	"	40	600.00
	Oct.	"	3	45.00
FL-9 Backhoe-Loader	July	$ 55	48	2,640
	Sept.	"	113	6,215
Assays	Oct.			525.00
	Nov.			1,212.00
M. Waldner	Feb., Mar.	$250	72	750.00
	Sept.	"	96	1,000.00
	Oct.	"	24	250.00
	Dec.	"	48	500.00
D. Newton (Geological Assistant)	Aug.	$84.50	24	84.50
Room & Board	July	$ 55	144	330.00
	Aug.	"	48	110.00
	Sept.	"	960	2,200.00
	Oct., Nov.	"	240	550.00
Miscellaneous	July			50.00

Personnel Equipment	Months Worked	Pay Rate per day	Hours Worked	Total
Misceallaneous equipment and supplies	Aug.			$ 150.00
	Sept.			200.00
	Oct., Nov.			117.52
	Dec.			50.00
	Jan.-Apr./84			432.95
Freight				100.00
M. LeTilly (Draughtsman)	Feb - Apr/84	$12/hr.	73	876.00
B. Callaghan (Geologits-Rept. Prep)	Jan-Apr/84	$110	120	550.00
A. Gamp (geophysicist-Rept. Prep)	Jan/84	95	120	475.00
M. Waldner (Ch. Geol. - Rept. Prep)	Jan-Apr/84	$225	192	1,800.00
Typing and copying				450.00
			Total	$28,975.79

Lucky Jim - 1983

Stn	5+00E	4+50	400	3E	2E	1E	0	
0N	-3	+2	+1	0	-6	-3		
	0	-15	+3	-3	-19	-30		
	+3	-19	-7	-5	-11	-17	-10	
	-11	-9	0	-4	-8	+3	-4	
60N	-10	-11	-2	-3	-15	+3	-18	
	0	-5	-11	0	-10	-5	-5	
	-16	-14	-7	0	-27	+1	-8	
	-8	-12	-22	-2	-20	-9	-3	
120N	-12	-5	-1	-3	-14	-22	-18	
	-18	-15	-21	-14	-31	-8	-29	
	-10	-4	+4	+2	-14	-13	-4	
	-18	-12	-15	-6	-13	-20	-4	
180N	-2	-15	-20	+3	-10	-19	-36	
	-10	-19	-8	-3	-18	-16	-34	
		-13	-10	-13	-19	-23	-22	
		-8	-5		-15	-19	-24	
240N		-4	0		-5	-6	-29	
			+4		-20	-8	-31	
			-2		-16	-8	-22	
			+5			-20	-8	-5
300N			+6		-19	-8	-23	
					-9	-8	-25	
					-10	-5	-18	
					-15	-21	-22	
360N					-14	-21	-17	
					-14	-20	-5	
					-7	-23	-13	
					-2	-25	-9	
420N						-23	-7	
						-24	-5	
						-30	-8	
480N								

Date: - October 15, 1983

Killarney Tie in Values

Line	ΔV	ΣΔV (value added)
West Bdy	0	0
375W	-8	-8
300W	-5	-13
250W	+5	-8
200W	-10	-18
100W	+6	-12
0W	+8	-4

Lucky Jim tie in values

Line	ΔV	ΣΔV (value added)
5+00E		-3
4+50E	+5	+2
400E	-1	+1
300E	-14	-13
200E	-7	-20
100E	+12	-8
0	-15	-23

APPENDIX V

UNFILTERED VLF-EM DIP ANGLES - 1982 READINGS

Date: Aug 7/[illegible]
Weather: Sun
Claim: Killarney

		(H)	FFD	(A)	FFD
4+50W	3+00S	+10	3	+6	3
	3+15	+7	1	+5	5
	3+30	+9	4	+13	2
	3+45	+7	4	+13	2
	3+60	+5	-2	+13	3
	3+75	+7	-4	+11	-2
	3+90	+7	-4	+12	-6
	4+05	+9	-3	+4	-5
	4+20	+9	-3	+5	-6
	4+35	+10		+6	
	4+50	+11		+9	

0+00	+3	0	
0+13N	+4	-2	
0+30W	+5	-6	1+95 on L3F
0+45	+8	-6	[illegible]
0+60	+7		[illegible]
0+75	+9		

3+75W	(H)	FFD	(A)	FFD
4+505	+13		+5	
4+35	+11		+5	
4+20	+10	-4	+4	[illegible]
4+05	+10	-2	+3	[illegible]
3+90	+8	-5	+4	0
3+75	+7	-4	+3	-1
3+60	+7	-1	+3	-1
3+45	+7	-1	+3	-1
3+30	+6	1	+2	0
3+15	+9	5	+4	3
3+00	+9	2	+4	3
2+85	+8	4	+5	1
2+70	+6	-1	+4	-1
2+55	+10	5	+4	0
2+40	+7	3	+5	0
2+25	+10	[illegible]	+3	[illegible]
2+10	+7	[illegible]	+4	1
1+95	+11	4	+5	2
1+80	+10	0	+5	-1
1+65	+8	[illegible]	+3	[illegible]
1+50	+7	[illegible]	+1	[illegible]
1+35	+1	-3	-4	-16
1+20	-3	[illegible]	-5	-18

Kill (cont)

3+25W	(H)	FFD	(A)	FFD
1+05	-10	-12	-12	14
0+90	-10	-6	-8	-2
0+75	-9	5	-10	7
0+60	-6	10	-9	9
0+45	-3	7	-5	6
0+30	-5	-1	-8	-4
0+15	-5	-1	-10	-6
0+00	-4	-5	-9	
0+15N	-1	[illegible]		
0+30N	+1	[illegible]		
0+45	+3	-8		
0+60	+5	8		
0+75	+7			

[illegible]

[illegible]

Kill (cont)

	(I)	FFD	(J)	FFD
3+00W 0+05	[illegible]		+1	
0+[illegible]	0	[illegible]	-2	1
0+[illegible]	-[illegible]	1	-2	[illegible]
0+[illegible]	1	[illegible]	-3	
0+[illegible]	+1	[illegible]	-4	1
0+[illegible]	+5	4	-1	3
0+[illegible]	+3	7	-2	3
1+[illegible]	-1	[illegible]	-6	1
1+[illegible]	+2	1	-2	1
[illegible]	0	[illegible]	-2	[illegible]
[illegible]	+2	13	-2	[illegible]
[illegible]	+5	11	+1	[illegible]
[illegible]	+10	[illegible]	+7	[illegible]
[illegible]	+9	[illegible]	+4	[illegible]
2+[illegible]	+7	3	+2	2
2+[illegible]	+6	2	+3	[illegible]
2+[illegible]	+6	1	+1	[illegible]
2+[illegible]	+5	1	+2	[illegible]
2+[illegible]	+6	1	[illegible]	[illegible]
2+[illegible]	+4	[illegible]	+1	[illegible]
3+00	+2	0	+1	[illegible]
3+[illegible]	+5	1	+1	[illegible]

	(I)	FFD	(II)	FFD
3+00W [illegible]	+5	-1	+2	0
[illegible]	+5	3	+3	4
[illegible]	+6	-2	0	0
[illegible]	+7	1	+1	[illegible]
[illegible]	+6	0	+2	1
4+[illegible]	+6	-1	+1	1
4+[illegible]	+7	0	+1	[illegible]
4+[illegible]	+6	0	+1	5
4+[illegible]	+7	1	+3	[illegible]
4+[illegible]	+6	0	+4	[illegible]
4+50	+6		+5	
4+75	+7		+7	

0+[illegible]	+4	10
0+[illegible]	+5	6
0+3[illegible]	+5	3
0+45	+7	0
0+60	+3	

Line	Stn	(L)	FFD		FFD
2+00W	4+50S	+9		+7	
	4+35	+7		+5	
	4+20	+4	-2	+3	[illegible]
	4+05	+5	-2	+3	[illegible]
	3+90	+4	-2	+2	-1
	3+75	+3	-3	+3	-1
	3+60	+3	[illegible]	+1	[illegible]
	3+4[illegible]	+3	3	-2	-2
	3+30	+3	4	-1	-2
	3+1[illegible]	+2	[illegible]	-2	[illegible]
	3+00	+5	[illegible]	+1	1
	[illegible]	+6	1	0	[illegible]
	[illegible]	+5		+1	[illegible]
	[illegible]	+4	[illegible]	+2	0
	2+40	+5	2	-1	
	[illegible]	+6		+2	[illegible]
	2+[illegible]	+5		+2	4
	1+[illegible]	+5	[illegible]	+3	[illegible]
	1+80	+5	[illegible]	+1	-1
	1+6[illegible]	+5	[illegible]	+3	1
	1+50	+7	2	+2	1
	1+35	+5	2	+2	1

	Stn	(+1)	FFD	(A)	FFD
	1+20	+5	-3	+3	0
	1+[illegible]	+4	-3	+2	-3
	0+[illegible]	+3	-2	~~+3~~ +1	-2
	[illegible]	+4	2	+2	2
	[illegible]	+5	2	+3	1
	0+45	+4	-1	+1	-1
	[illegible]	+4	-1	+3	1
	[illegible]	+4	0	+2	1
	[illegible]	+4		+3	

.75

2+00W	0+00N	+9	5	@ clock
	0+15	+7	0	[illegible]
	0+30	+7	0	[illegible]
	0+45	+7	1	
	0+60	+10		

Line	Stn	(+)	FFD	(-)	FFD.
100 W	0+00 S	+6		+5	
	0+15	+3	6	+4	[illegible]
	0+30	+2	1	0	3
	0+45	+1	0	+3	[illegible]
	0+60	+11	-2	-2	[illegible]
	0+75	+1	-1	-4	[illegible]
	[illegible]	+13	4	-5	[illegible]
	[illegible]	+20	2	-2	[illegible]
	[illegible]	0	3	-1	[illegible]
	[illegible]	+1	6	-2	[illegible]
	[illegible]	-4	1	-6	[illegible]
	[illegible]	-1	0	-4	-4
	[illegible]	-3	-1	-2	0
	[illegible]	-2	-5	-4	[illegible]
	[illegible]	-1	-5	-2	[illegible]
	[illegible]	+1	[illegible]	+2	[illegible]
	[illegible]	+1	-4	+3	[illegible]
	[illegible]	+4	-6	+3	-3
	[illegible]	+6	3	+4	-4
	[illegible]	15	6	+5	-4
	[illegible]	+8	-10	+6	-7
	[illegible]	+9	-12	+7	[illegible]
	[illegible]	+14	7	+10	[illegible]

Line	Stn	(+)	FFD	(-)	FFD
1+00W	3+45	+15	0	+10	-1
	[illegible]	+15	-1	+10	-3
	[illegible]	+14	-6	+12	-2
	[illegible]	+17	-4	+11	-4
	[illegible]	+18	-1	+13	-4
	[illegible]	+17	-4	+14	-1
	[illegible]	+19		+14	
	[illegible]	+20		+14	

Stn	
0+00	+7
0+15W	+8
0+30	+11
0+45	+12
0+60	+13
0+75	+11
0+90	

		(H)	FFD	(A)	FFD
0+00	4+50S	+11		+9	
	4+35	+14		+12	
	4+20	+15	[illegible]	+11	2
	4+05	+15	0	+12	0
	3+90	+14	-3	+11	-[illegible]
	3+75	+11	-5	+10	0
	3+60	+13	0	+13	1
	3+45	+12	1	+9	[illegible]
	3+30	+13	[illegible]	+11	[illegible]
	3+15	+11	-3	+9	-1
	3+00	+11	-5	+7	-[illegible]
	2+85	+8	-4	+5	-4
	2+70	+10	[illegible]	+7	[illegible]
	2+55	+[illegible]	[illegible]	+7	[illegible]
	2+40	+9	[illegible]	+7	[illegible]
	2+25	+9	[illegible]	+6	
	2+[illegible]	+9	[illegible]	+7	
	1+[illegible]	+8	-1	+5	
	1+[illegible]	+9	1	+6	
	1+[illegible]	+9	2	+6	[illegible]
	1+[illegible]	+10	1	+6	1
	1+2[illegible]	+9	0	+7	1
	1+[illegible]	+10	1	+6	0

	(H)		(A)	
1+05	+10	-3	+7	-2
[illegible]	+6	-7	+4	-6
[illegible]	+7	-3	+3	-5
[illegible]	+6	5	+3	9
[illegible]	+12	12	+13	21
[illegible]	+13	7	+14	10
[illegible]	+12	-3	+12	-4
0 [illegible]	+10		+11	

0+00N	+11
0+[illegible]N	+9
0+30N	+4
0+45N	+5

Line		(H)	FFD	(A)	FFD
3+90S	0+00E	+12		+10	
	0+15	+13	-1	+11	1
	0+30	+13	0	+10	3
	0+45	+13	4	+10	6
	0+60	+13	9	+8	5
	0+75	+9		+6	
	0+90	+8		+7	
3+60S	1+20E	+11		+9	
	1+05	+10		+7	
	0+90	+13	7	+9	4
	0+75	+15	4	+11	5
	0+60	+12	-6	+10	-1
	0+45	+10	-8	+9	[illegible]
	0+30	+9	-6	+7	-5
	0+15	+7	-6	+7	-4
	0+00	+6		+5	

Date: Aug [illegible]
Weather: [illegible]
Crew: [illegible] Killorney

Line		(H)	FFD	(A)	FFD
3+30S	0+00E	+1		0	
	0+15	+3	-5	+1	-8
	0+30	+4	-5	+3	-9
	0+45	+5	-9	+6	-7
	0+60	+7	-10	+7	-4
	0+75	+11	-2	+9	1
	0+90	+11	5	+8	5
	1+05	+9		+7	
	1+20	+8		+5	
3+00S	1+35	+9		+6	
	1+20	+9		+7	
	1+05	+10	3	+10	4
	0+90	+11	-3	+9	-2
	0+75	+5	-5	+4	-4
	0+60	+1	-5	-2	-16
	0+45	0	-8	-1	-5
	0+30	-2	-4	-2	-3
	0+15	-1	1	0	
	0+00	0		0	

		(L)	FFD	(R)	FFD.
2+70S	0+00E	-1		0	
	0+15	0	1	-1	5
	0+30	-1	1	-2	4
	0+45	-1	0	-4	0
	0+60	-1	-5	-3	-7
	0+75	-1	-16	-3	-16
	0+90	+4	-17	+3	-14
	1+05	+10	-16	+7	-4
	1+20	+10		+7	
	1+35	+10		+7	
2+40S	0+00	+3		+3	
	0+15	+2	2	+1	5
	0+30	+4	3	0	6
	0+45	-1	4	-2	1
	0+60	-1	2	-3	4
	0+75	0	3	0	[illegible]
	0+90	0	[illegible]	-1	[illegible]
	1+05	+2	[illegible]	+2	[illegible]
	1+20	+5	[illegible]	+4	[illegible]
	1+35	+9		+7	
	1+50	+9		+8	

		(H)	FFD	(A)	FFD
14+80S	0+00E	+5		+3	
	0+15	+4	-1	+1	0
	0+30	+5	-1	+2	-1
	0+45	+5	0	+2	3
	0+60	+5	2	+2	4
	0+75	+5	2	-1	0
	0+90	+3	0	+1	1
	1+05	+5	3	0	1
	1+20	+3	1	-1	-5
	1+35	+2	-9	+1	12
	1+50	+5	-13	+3	-6
	1+65	+7	-9	+9	
	1+80	+11		+11	
	1+95	+17		+12	
14+50S	0+00W	+3		+7	
	0+15	+7		+5	
	0+30	+6	1	+3	-6
	0+45	+5	-3	+3	2
	0+60	+5	0	+3	2
	0+75	+6	3	+5	2
	0+90	+7	1	+3	2

Kill (cont)

		(H)	FFD	(A)	FFD
14+50S	1+05W	+5	-2	+3	-5
	1+20W	+6	1	0	-4
	1+35	+7	3	+2	1
	1+50	+7	1	+2	5
	1+65	+7		+5	
	1+80				

40m to 14+80S

4+00		(H)		(I)	
4+00	4+355	+16		+12	
	4+20	+17	10	+13	8
	4+05	+13	13	+10	9
	3+90	+10	10	+7	3
	3+75	+7	2	+7	2
	3+60	+6	-4	+7	4
	3+45	+9	3	+5	2
	3+30	+8	8	+5	3
	3+15	+4	0	+5	4
	3+00	+5	-1	+2	-2
	2+85	+7	1	+4	-3
	2+70	+3	-1	+5	2
	2+55	+5	3	+4	5
	2+40	+6	-2	+3	1
	2+25	+5	-6	+1	-2
	2+10	+8	-4	+2	1
	1+95	+9	2	+4	8
	1+80	+8	5	-2	1
	1+65	+7	8	0	-1
	1+50	+5	10	+1	5
	1+35	+2	4	-2	2

Claim: Lucky Jim Frac.

		(F)		(A)	
0+00	1+20	0	-2	-2	-4
	1+05	+3	0	-1	-2
	0+90	+1	4	+1	5
	0+75	+2	10	-2	10
	0+60	-2	9	-3	11
	0+45	-5	-2	-8	3
	0+30	-4	-8	-8	-5
	0+15	-1		-6	
	0+00	0		-5	
1+00E	4+50N	+5		+1	
	4+35	+4		+2	
	4+20	+5	0	+3	1
	4+05	+4	2	+1	-4
	3+90	+7	3	0	-3
	3+75	+5	-3	+1	-1
	3+60	+3	-7	-1	-7
	3+45	+2	-6	-5	-9
	3+30	0	-9	-4	-4
	3+15	-4	-9	-6	1
	3+00	-3	3	-2	7
	2+85	+2	11	-1	6

Line	#	(H)		(A)	
1+50E	2+70	+8	8	-1	3
	2+55	+5	4	+1	2
	2+40	+3	-1	-1	-2
	2+25	+3	-2	-1	0
	2+10	+3	-6	+1	2
	1+95	-3	-10	-1	-7
	1+80	-1	-3	-6	-10
	1+65	-2	0	-4	0
	1+50	-2	-6	-3	0
	1+35	-7	-10	-7	-9
	1+20	-7	-6	-9	7
	1+05	-8	2	-8	5
	0+90	-4	7	-3	11
	0+75	-4	10	-3	8
	0+60	+2	15	0	10
	0+45	+5	13	+4	14
	0+30	+11	14	+7	11
	0+15	+10	6	+8	8
	0+00	+12		+11	

Date: Aug 12/82
Weather: Rain
Claim: Lucky Jim Fr[illegible]

Line	#	(H)		(A)	
0+50S	0+00 0+15N	[illegible]	-12	-5	-6
(should be 4+50E)	0+30	+3	-3	-4	-3
	0+45	+5	5	-1	7
	0+60	+2	7	-5	5
	0+75	+1	4	-7	-4
	0+90	-1	-1	-4	-2
	1+05	0	-2	-4	5
	1+20	+1	2	-5	8
	1+35	0	-1	-8	0
	1+50	-1	-5	-9	-6
	1+65	+3	-3	-4	-3
	1+80	+1	-6	-7	-4
	1+95	+4	-8	-3	-3
	2+10	+6	-2	-4	-3
	2+25	+7	4	-3	-6
	2+40	+5		-1	
	2+55	+4 EOL		0	
	2+70	2+46N LJ F From 2+50S			
	2+85				
	3+00				

	3+15N				
	3+30				
	3+45				
	3+60				
	3+75				
	3+90				
	4+05				
	4+20				
	4+35				
	4+50				
Line		(H)		(A)	
4+00E	3+00N	+2		-6	
	2+85	+3		-2	
	2+70	+5	5	-5	-4
	2+55	+5	1	-7	0
fault	2+40	+4	-1	0	10
	2+25	+5	2	-2	6
	2+10	+6	3	+1	0
	1+95	+6	0	-3	-1
	1+80	+5	1	+1	1
	1+65	+6	-1	-2	-7
	1+50	+4	-5	-7	-14

		(H)		(A)	
4+00E fault ↗	1+35	+2	-10	-8	-4
	1+20	-2	-11	-5	6
	1+05	-3	2	-9	5
	0+90	+5	15	-4	4
	0+75	+5	10	-1	3
	0+60	+7	-4	-4	-7
	0+45	-1	-20	-8	-11
	0+30	-7	-17	-8	-3
	0+15	-4	3	-7	4
	0+00	-1		-5	
3+00W (should read 3+00E)	3+00S	+3		11	
	2+85	+2	13	-3	12
	2+70	-5	-2	9	-3
	2+55	-3	-14	-5	-5
	2+40	+2	-2	-4	5
	2+25	+4	14	-5	11
	2+10	-3	11	-9	4
	1+95	-5	-2	-11	-7
	1+80	-5	-10	-7	-9
	1+65	-1	-10	-6	-8
	1+50	+1	-7	-3	-6
fault	1+35	+3	-3	-2	-5
	1+20	+4	-2	-1	-2

		(H)		(A)	
3+00N	0+05	+3	-1	+1	3
	0+90	+6	6	-2	6
	0+75	+2	8	-1	7
	0+60	+1	7	-6	4
	0+45	-1	2	-4	0
fault	0+30	-3	-7	-7	-7
	0+15	+1		-3	
	0+00	+2		-1	
2+50S (should be 2+50E)	3+60N	+3		-3	
	3+45	+1		-4	
	3+30	-2	-6	-7	-4
	3+15	0	0	-4	1
	3+00	-1	5	-6	2
	2+85	+4	8	-3	8
	2+70	+3	8	+1	3
	2+55	+8	3	-7	-8
	2+40	+2	-8	-3	-2
	2+25	+1	-8	-5	2
	2+10	+1	3	-3	4
	1+95	+5	4	-1	5
	1+80	+1	-6	-2	0
	1+65	-1	-5	-2	2
	1+50	+2	3	+1	4
	1+35	+1	-6	-1	-6

fa

	(L)		(P)	
4+20	-6	-12	6	-10
1+05	-3	-1	4	2
0+90	-3	7	-1	9
0+75	+1	11	0	4
0+60	+4	10	-1	1
0+45	+4	2	+1	5
0+30	+5	4	+3	10
0+15	+9	13	+7	9
0+00	+1		+6	

		(I)		(A)	
2+00E	0+00N	+2		+6	
	0+15	+4	1	+1	3
	0+30	+1	-3	+1	-3
	0+45	+5	-3	+3	-1
	0+60	+3	1	+2	0
	0+75	+6	8	+3	4
	0+90	+1	8	+2	6
	1+05	0	4	-1	0
	1+20	-1	4	0	-5
	1+35	-2	-3	+1	-7
	1+50	-3	-11	+2	-4
	1+65	+3	-7	+5	1
	1+80	+3	-3	+3	-1
	1+95	+4	-3	+4	-3
	2+[illegible]	+5	0	+5	1
	2+[illegible]	+5	7	+5	7
	2+40	+4	9	+3	9
fault	2+[illegible]	-1	-1	0	3
	2+[illegible]	+1	-4	-1	-3
	2+[illegible]	+3	-2	+1	-4
	3+[illegible]	+1	-4	+1	-7
	3+[illegible]	+5	-3	+5	-5

		(I)		(A)	
	3+30	+3	-5	+6	2
	3+45	+6	0	+3	4
	3+60	+7	9	+4	5
fault	3+75	+2	3	+1	6
	3+90	+2		41	
	4+05	+4		-2	
		(I)		(A)	
Start (marked stake)	0+00S	+8		+3	
	0+15S	+9		+5	
	0+30	+7	-4	+5	-1
	0+45	+6	-6	+2	-7
	0+60	+4	-10	+1	-7
	0+75	-1	-11	-1	-4
	0+90	0	-5	0	-6
fault?	1+05	-2	2	-6	-7
	1+20	+3	6	-2	4
	1+35	+1	1	0	11
	1+50S	+1	3	+3	4
	1+65	+6	12	-1	0
	1+80	+8	6	+1	5
	1+95	+5	-6	+3	-2
	2+10	+3	-8	-2	-9
	2+25	+2	-9	0	-6
	2+40	-3		-3	

Line		(H)		(A)	
1+00W	0+00N	+12		+9	
	0+15 N	+13	-3	+9	1
	0+30	+14	0	+9	3
	0+45	+14	2	+8	3
	0+60	+13	3	+7	1
	0+75	+13	1	+7	0
	0+90	+11	9	+7	2
	1+05	+14	14	+7	5
	1+20	+11	-4	+5	4
	1+35	+10	-5	+4	2
	1+50	+7	7	+4	3
	1+65	+7	10	+3	7
	1+80	+5	12	+2	12
	1+95	+1	7	-2	7
	2+10	-1	-3	-5	-3
	2+25	0	-8	-2	-4
	2+40	+3	-6	-2	-5
	2+55	+4	-5	-1	6
	2+70	+5	-5	+2	1
	2+85	+7	-1	+1	2

Date: Aug 17/82
Weather: Sun
Clar Killarney

		(H)	
0+00	2+85	-1	-11
3+30S	3+00	+5	-8
3+45	3+15	+5	-6
3+60	3+30	+7	-8
3+75	3+45	+9	-7
3+90	3+60	+11	-5

(Continued Line # with right coordinates)

2+10 is lab 2+40

3+75S	+12	-3	
3+90S	+13	-2	5m East
4+05S	+13	-3	of LINE
4+20	+14	-3	0+00
4+35	+15	0	
4+50	+15	3	CORNER OF
4+65	+14	4	S & E Boundary
4+80	+13	3	
4+95	+12	3	
5+10	+12		
5+25	+10		

1+00W
6PX

(F)

0+00N	+20		
0+15	+19	6	
0+30N	+17	5	
0+45	+16	4	
0+60N	+15	7	
0+75	+14	12	
0+90	+10	13	
1+05	+7	10	
1+20	+4	5	
1+35	+3	2	
1+50	+3	1	
1+65	+2	-2	
1+80	+3	-5	
1+95	+4	-6	2 285S 2+00W
2+10	+6	5	
2+25	+7	-2	
2+40	+8	0	
2+55	+7	-2	
2+70	+8	-4	
2+85	+9	-3	
3+00	+10	4	
3+15	+10	9	

3+30F	+5	-1	
3+45	+6	-6	
3+60	+10	5	
3+75	+7	11	
3+90	+4	9	
4+05	+2	6	1+405 3+00W
4+20	0	7	
4+35	0	8	
4+50	-5	1	
4+65	-3	0	
4+80	-3	3	
4+[illegible]	-5	0	
5+10	-4		
5+25	-4		0+00 3+75W

LINE STARTS @ 1+00W AND
HEADS. NORTH

Date: Aug 18/82
Weather: Sun
Claim: Killarney

Line	Station	(H)	F	(A)	
2+50W	0+00	+4		+1	
	0+15S	0		-1	
	0+30S	+2	3	-3	-5
	0+45	+5	6	-2	1
	0+60	+3	-3	-1	3
	0+75	+1	-2	-1	5
	0+90	+5	5	+3	6
	1+05	+4	7	+1	3
	1+20	+9	12	+4	7
	1+35	+12	12	+7	11
fault 88°	1+50	+13	3	+9	3
	1+65	+11	-3	+5	-6
	1+80	+11	-3	+5	4
	1+95	+10	-1	+5	0
	2+10	+11	-1	+5	0
	2+25	+9	4	+5	-2
	2+40	+8	-5	+3	-5
	2+55	+7	4	+2	-4
	2+70	+6	4	+2	-3
	2+85	+5	5	0	-5

	Station	(H)		(A)	
	3+00S	+3	-2	-1	-4
	3+15	+6	3	-1	0
	3+30	+5	5	0	1
Acid ✱	3+45	+9	3	-1	-1
	3+60	+5	-3	-1	-3
	3+75	+6	-1	-3	-1
	3+90	+7	3	0	4
	4+05	+7	-4	0	2
	4+20	+2	-8	-1	0
	4+35	+4	-1	+1	4
	4+50	+4	4	+2	5
	4+65	+6	3	+3	4
	4+80S	+5		+4	

42m From 2100W

2035 [illegible] 2+85m 3+5[illegible]

Line 2+00W started @ 2+00W
end ~~[illegible]~~ on BL
15S

Line 6+90W ~~[illegible]~~ Lucky Jim
9:57N

@ 1+20 From BL.

Lucky Jim

		(H)		(A)	
0+90W	0+00W	+6		+6	
	0+15N	+7	0	+5	2
	0+30N	+7	5	+4	1
	0+45	+6	6	+5	3
	0+60N	+3	0	+3	0
	0+75	+4	0	+3	0
	0+90	+5	12	+5	10
	1+05	+2	22	+1	19
	1+20	-5	16	-3	17
	1+35	-10	3	-10	3
	1+50	-9	[illegible]	-9	-8
	1+65	-9	1	-7	-9
	1+80	-5	-3	-4	-1
	1+95	-4	3	-3	4
	2+10	-7	-1	-7	-2
	2+25	-5	-2	-4	-4
	2+40	-5	-1	-1	-2
	2+55	-5	-3	-3	-2
	2+70	-4	-3	-3	0
	2+85	-3	0	-2	4
	3+00	-3	3	-4	6
	3+15	-4	5	-5	5

	(H)		(A)	
3+30	-5	3	-7	0
3+45N	-7	-4	-7	-4
3+60	-5	-5	-5	0
3+75	-3	1	-5	5
3+90	-4	-4	-7	7
4+05	-5	0	-8	6
4+20	-6	-4	-11	-3
4+35	-3		-10	
4+50	-4		-6	

4+57N Hit 1+20 N on line

1+33 S on K11 N BL

~~0+00~~
~~0+15 +6~~
~~0+30 +9~~
~~0+45 +9~~
~~0+60 +5~~

Line		①	FFD
1+50W	0+00N	+21	
1+50W	0+15	+18	7
	0+30	+17	6
	0+45	+15	6
	0+60	+14	8
	0+75	+12	10
	0+90	+9	10
	1+05	+7	11
	1+20	+4	10
	1+35	+1	2
	1+50	0	4
	1+65	+3	-2
	1+80	+2	-3
	1+95	+3	-6
	2+10	+5	-3
	2+25	+6	4
	2+40	+5	7
	2+55	+2	0
	2+70	+2	-8
	2+85	+5	-6

Date: Aug 20 1987
Weather: [illegible]
Crew: [illegible]

1+50W	3+00	+7	-1	
	3+15	+8	3	GP
	3+30	+5	0	1+65S BL
	3+45	+7	-1	
	3+60	+6	-2	
	3+75	+7	1	
	3+90	+8	10	
	4+05	+4	11	
	4+20	+1	-2	
	4+35	+0	-15	
	4+50	+7	-12	
	4+65	+9	-4	
	4+80	+10	3	BL
			15m E of 2+00W	
	0+00	+10	5	
	0+15	+6	-2	
	0+30	+7	1	
	0+45	+9		
	0+60	+5		

LEGEND

FAULT (approximate) (inferred)

CONTACT (approximate) (inferred)

BEDDING (inclined, vertical, unknown)

FOLIATION (inclined, vertical, unknown)

FRACTURES (inclined, vertical, unknown)

OUTCROP

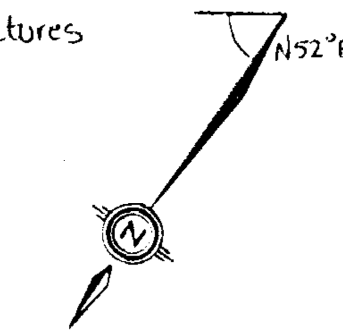
ROAD

GEOCHEM SOIL TRAVERSE

ROCK GEOCHEM SAMPLE

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

Highly altered andesite (porphyritic) green mottled, c̄ manganese as druzy coatings in cavities calcite occurs as h/L fractures and as larger calcite crystals, some andesite fresher at base of trench, limonite occurs along fractures minor disseminated pyrite



GEOLOGICAL BRANCH
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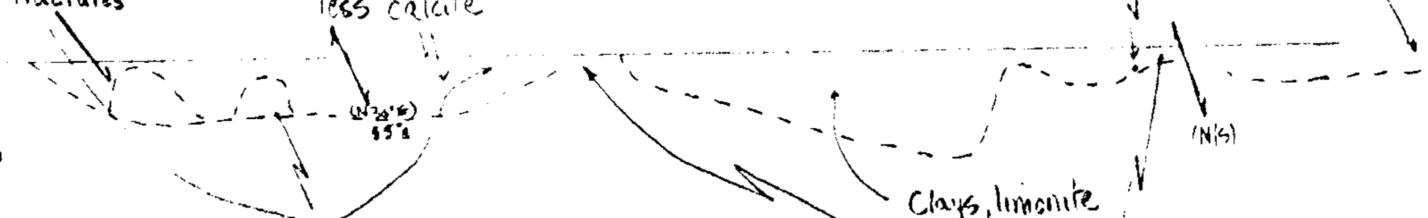
Volcanic andesite grey non-competent less alteration - fine grained massive indication of original sugary - Py along fractures 1% less calcite

subconchoidal fracture disseminated

Hematite and limonite is noticeable along fractures



Clays, limonite

Fresher tough breaking very fine grained grey sugary andesite, massive, Py blebs disseminated along fracture surfaces - 1% calcite infills along fractures

Highly altered andesite
5% grey quartz rounded as inclusions
manganese. Drusy coatings within cavities partly infilled by calcite
no visible sulphides other than Py
calcite crystals up to 1cm

Calcite <5%

4451 grab in place 31m
Andesite massive subconchoidal fractures
Py blebs along fractures disseminated 1%

4452 grab in place 8m
quartz and plag intrusion 4" wide some limonite along fracture surfaces, pinches out in volcanics. Druzy cavities coated c̄ manganese, no visible sulphides

4453 grab in place 3½ m
Highly altered andesite green mottled colour manganese along cavities calcite slightly brecciated. Py very minor

5m 0 5 10m
SCALE 1:200

Cross Section.

MOHAWK OIL CO. LTD.

SCALE: 1:200	APPROVED BY: B. Callaghan.	DRAWN BY S.M.
DATE: Sept. 11, 83		REVISED

TRENCH LI

KILLARNEY CLAIM

DRAWING NUMBER 2

11X17 PRINTED ON NO. 1000H CLEARPRINT

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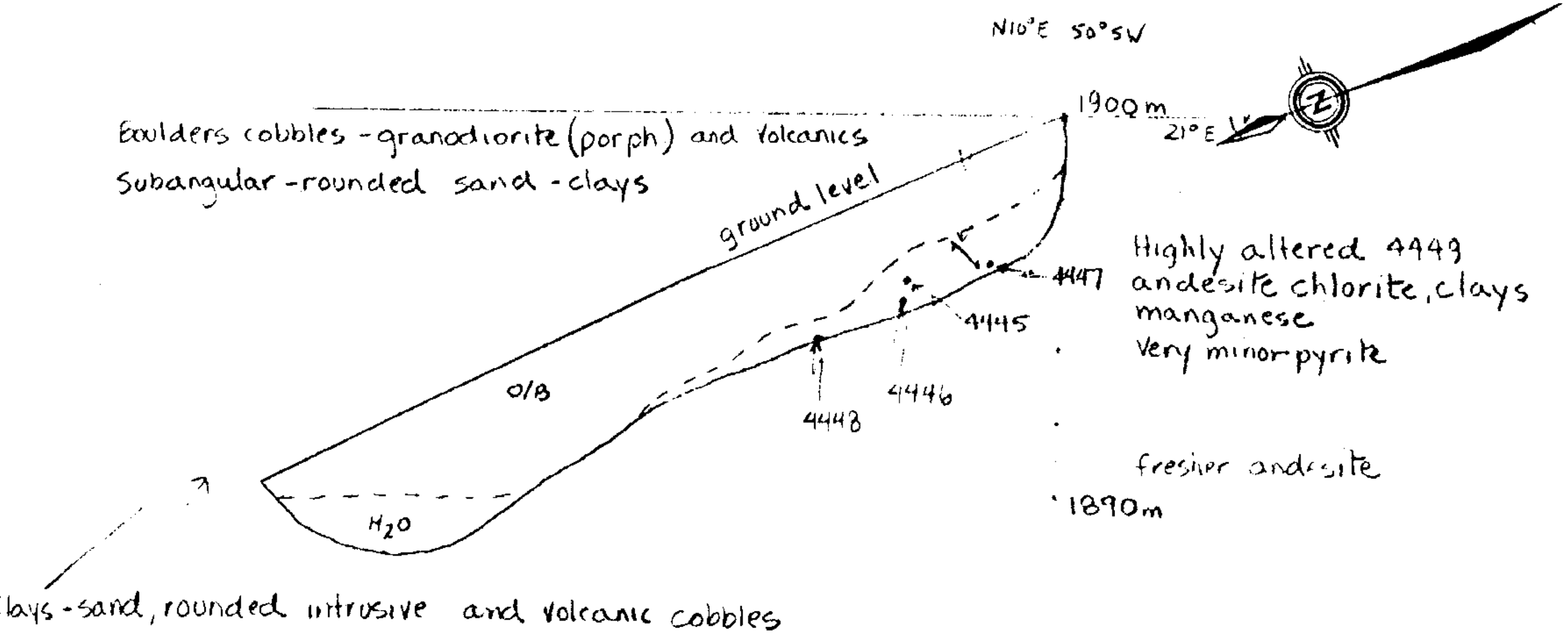
4445 grab in place on westwall
highly altered andesite
chlorite, manganese - cerussite limonite
very similar to alteration at Killarney adits
no visible sulphides, not competent, fractured

4446 grab in place East wall
fresher, dark green sugary andesite
fine grained, slightly banded;
cross cut by 4mm calcite stringers
2% Py is associated with calcite

4447 grab in place westwall
fresher massive dark green andesite
calcite infills fractures
containing pink stained clays Py 1%

4448 grab in place East wall
Highly altered andesite
limonite and pyrolusite along fractures
- no visible sulphides



SCALE 1:200

Refer to map No. 1 for legend.

CROSS SECTION

MOHAWK OIL CO. LTD.

SCALE: 1:200	APPROVED BY: B. Callaghan.	DRAWN BY S.M.
DATE: Sept. 83.		REVISED

TRENCH L4

KILLARNEY CLAIM

DRAWING NUMBER 3

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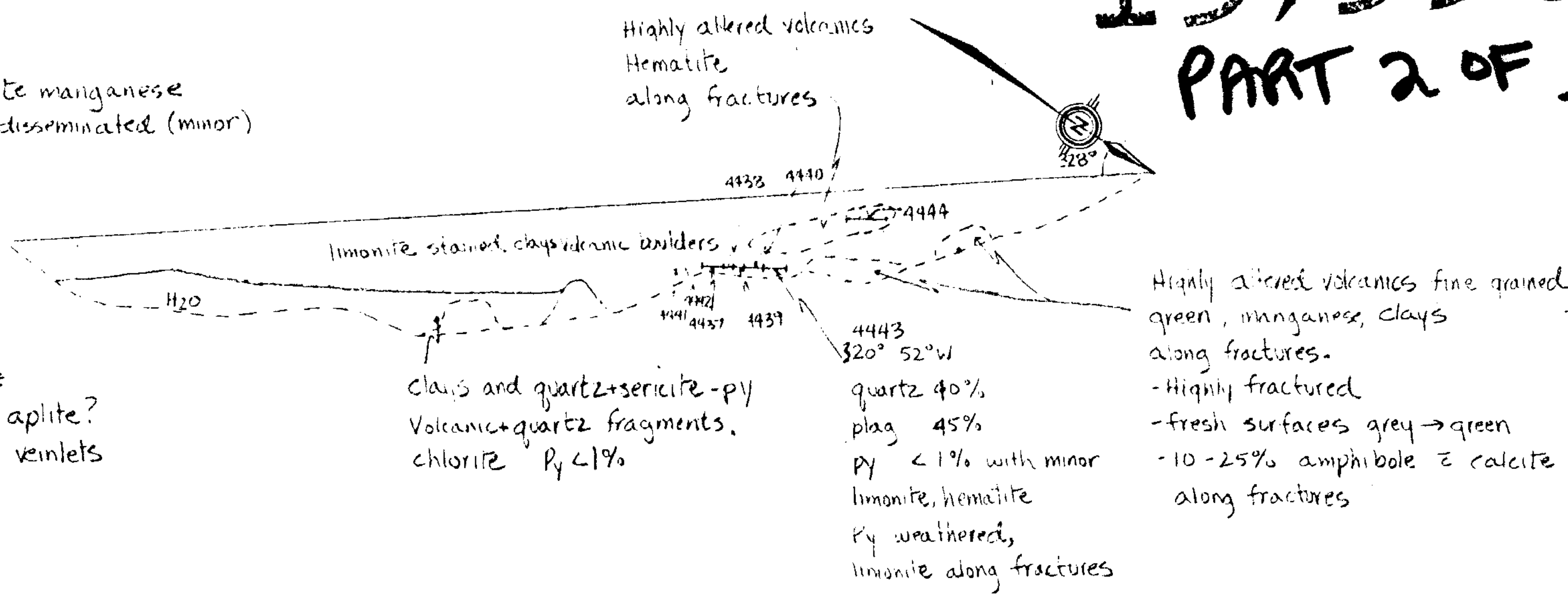
4437 21" Highly fractured and altered volcanics chlorite clays (hematite and limonite) along fracture surfaces also manganese. no visible sulphides orientation 286° 82°N

4438 6" Highly altered brown mottled cream rock? Kaolinized manganese dendrites, limonite, hematite friable and soft, no visible sulphides - looks like highly altered aplite or diorite

4439 6" Vein quartz chlorite clays hematite manganese galena disseminated about 2%. py disseminated (minor)

4440 36" Fractures multi directional N31°E Highly altered volcanics intermixed c̄ aplite? chlorite hematite clays minor quartz veinlets minor Py in quartz <1%



Refer to map No 1 for legend.
Cross Section

5m 0 5 10m
SCALE 1:200

MOHAWK OIL CO. LTD.		
SCALE: 1:200	APPROVED BY: B. Callaghan	DRAWN BY S.M.
DATE: Sept. 20, 83		REVISED
TRENCH L8		
KILLARNEY CLAIM		DRAWING NUMBER 5

11X17 PRINTED ON NO. 1000H CLEARPRINT

4417 fractured fine grained intrusive equigranular non-porphyritic mottled green-cream colour

4418 5' channel manganese coats minor cavities in filled with calcite Some chlorite alteration

4419 1' channel

4420 1' channel

4421 2' channel

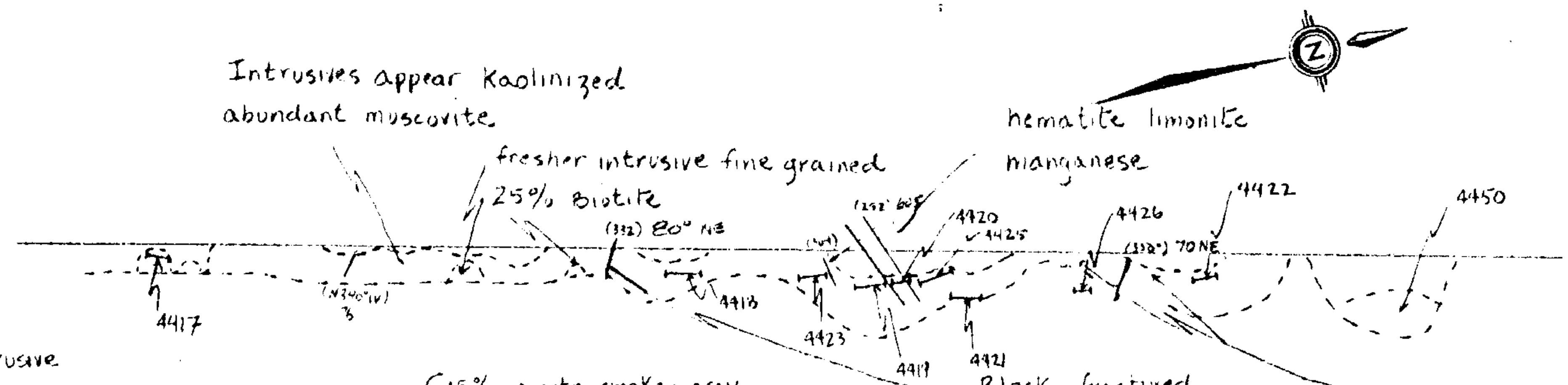
4422 2' channel

4423 3' channel

4425 3' channel

4426 6" channel 278° 60°N

4450 blocky fresh fine grained sugary black andesite. Py along fracture surfaces blebs pyrr + cpy



Blocky fractured intrusive hematite along fractures + clays

fine grained fresh andesite with amphibole porphyroblasts

quartz diorite
- 15% quartz smokey gray
- 55% Plag - clays - chlorite (epidote)
- 20% hornblende + biotite → chlorite
- 10% K-spar

calcite along fractures and in host
very minor py disseminated irregular masses

structures
1) N61°E 64° SE fractures
2) N 332° W 80° NE

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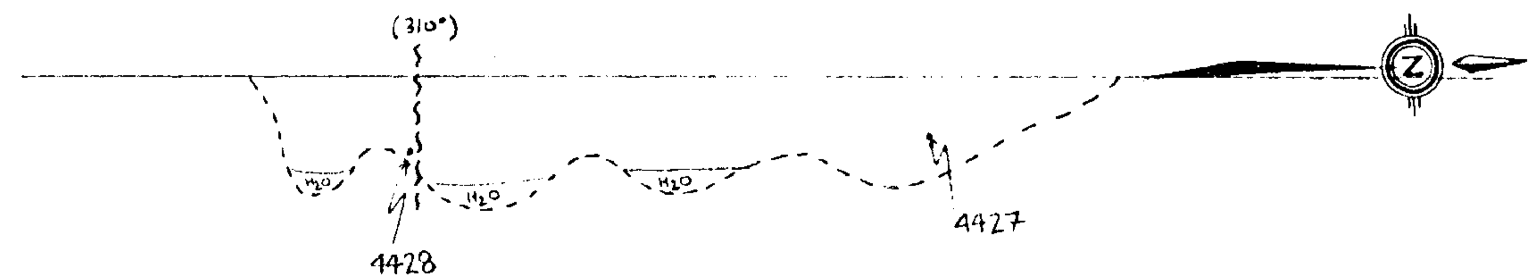
Refer to map No. 1 for legend.
CROSS SECTION

MOHAWK OIL CO. LTD.		
SCALE: 1 : 200	APPROVED BY: B. Callaghan	DRAWN BY S.R.
DATE: Sept. 22, 83		REVISED
TRENCH L5		
KILLARNEY CLAIM		DRAWING NUMBER 4



4427 Rounded cobble of massive galena float

4428 green blue fault gouge
quartz, sericite, limonite
Py < 1%
Fault appears to strike approx 310°

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5m 0 5 10m
SCALE 1:200

Refer to map No. 1 for legend.
CROSS SECTION

MOHAWK OIL CO. LTD.		
SCALE: 1:200	APPROVED BY: B. Callaghan.	DRAWN BY S.M.
DATE: Sept. 22, 83		REVISED
TRENCH L-10		
KILLARNEY CLAIM		DRAWING NUMBER 6

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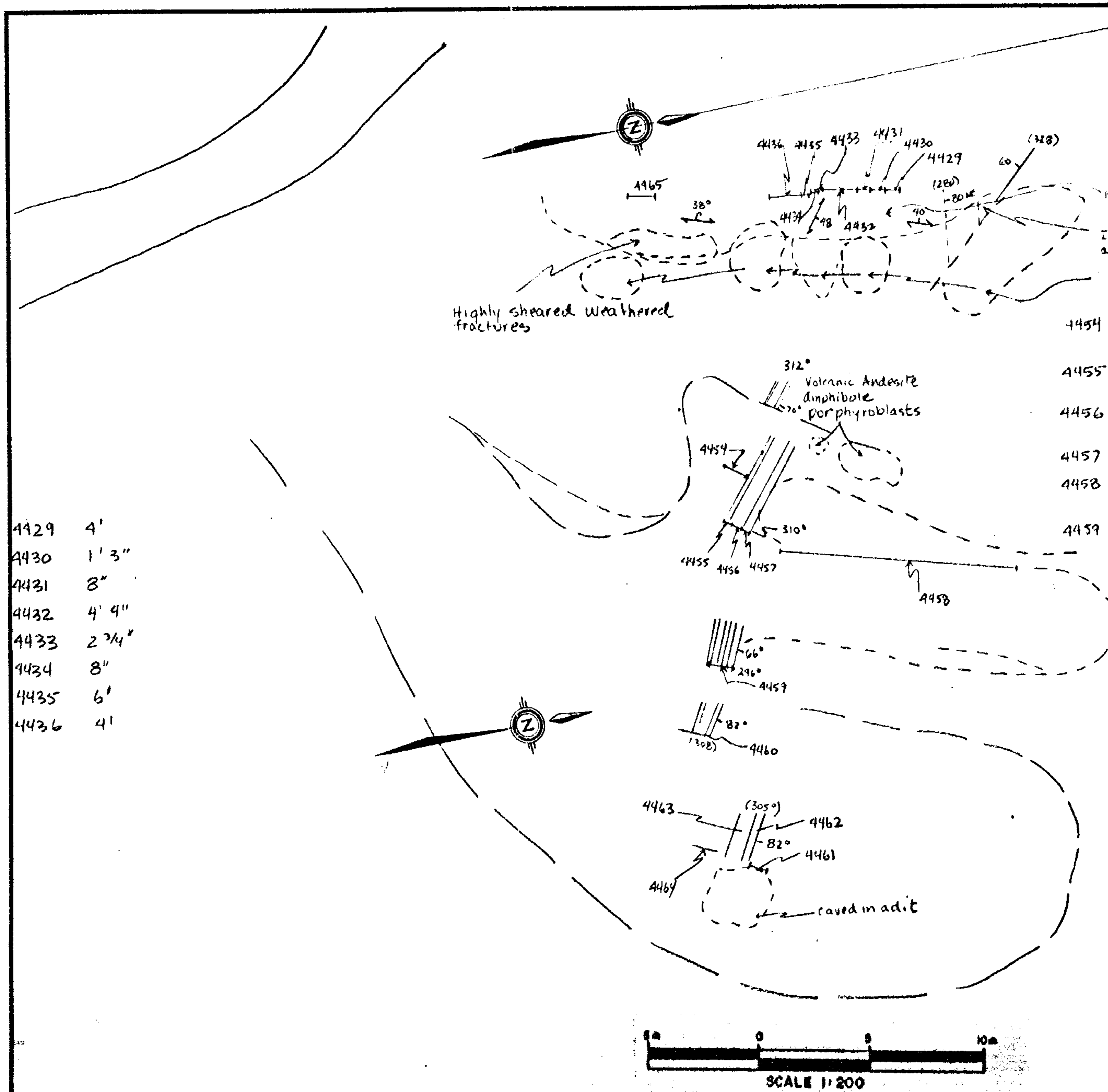


Intrusive composition quartz diorite near contact manganese infills cavities also flooded ē calcite veinlets Py <1% — granitized Volcanic (not sure)

andesite fresh 20-30% amphibole porphyroblasts

4454	1m	F/W highly altered intrusive chlorite manganese some hematite along fracture surfaces quartz blebs grey smokey
4455	5cms	Quartz vein within highly altered 'intrusive'? manganese infills cavities, wallrock chloritized + limonite very minor galena disseminated + minor py, sph (trace)
4456	29cm	Not sure what it is. Chloritized + hematite manganese no visible sulphides probably volcanic?
4457	12cm	Quartz more mineralized ē sulphides galena (trace) + sph within volcanics
4458	3m	Wall rock on hanging wall side is schistose quartz diorite slightly altered no visible sulphides
4459	7cms	Visible galena veinlets in highly altered diorite most sulphides fine grained galena 2%
4460	7cms	Representative sample of vein massive course fine galena py sph Cpy trace malachite stain galena 15%-20% of rock
4461	1½m	fresher, chlorite on H/W side of vein away from vein. near vein schistose this is in roof of old adit.
4462	13cms	Brecciated chlorite mineralized zone but no visible sulphides chlorite + manganese
4463	15cms	Altered mineralized zone chlorite hematite lots of manganese Py 2% trace Cpy + galena
4464	¾m	Schistose diorite ē hematite along fractures py 1-2%
4465	1½m	Highly altered volcanic? clays chlorite limonite no visible sulphides

Refer to map No. 1 for legend.
Plain View

MOHAWK OIL CO. LTD.

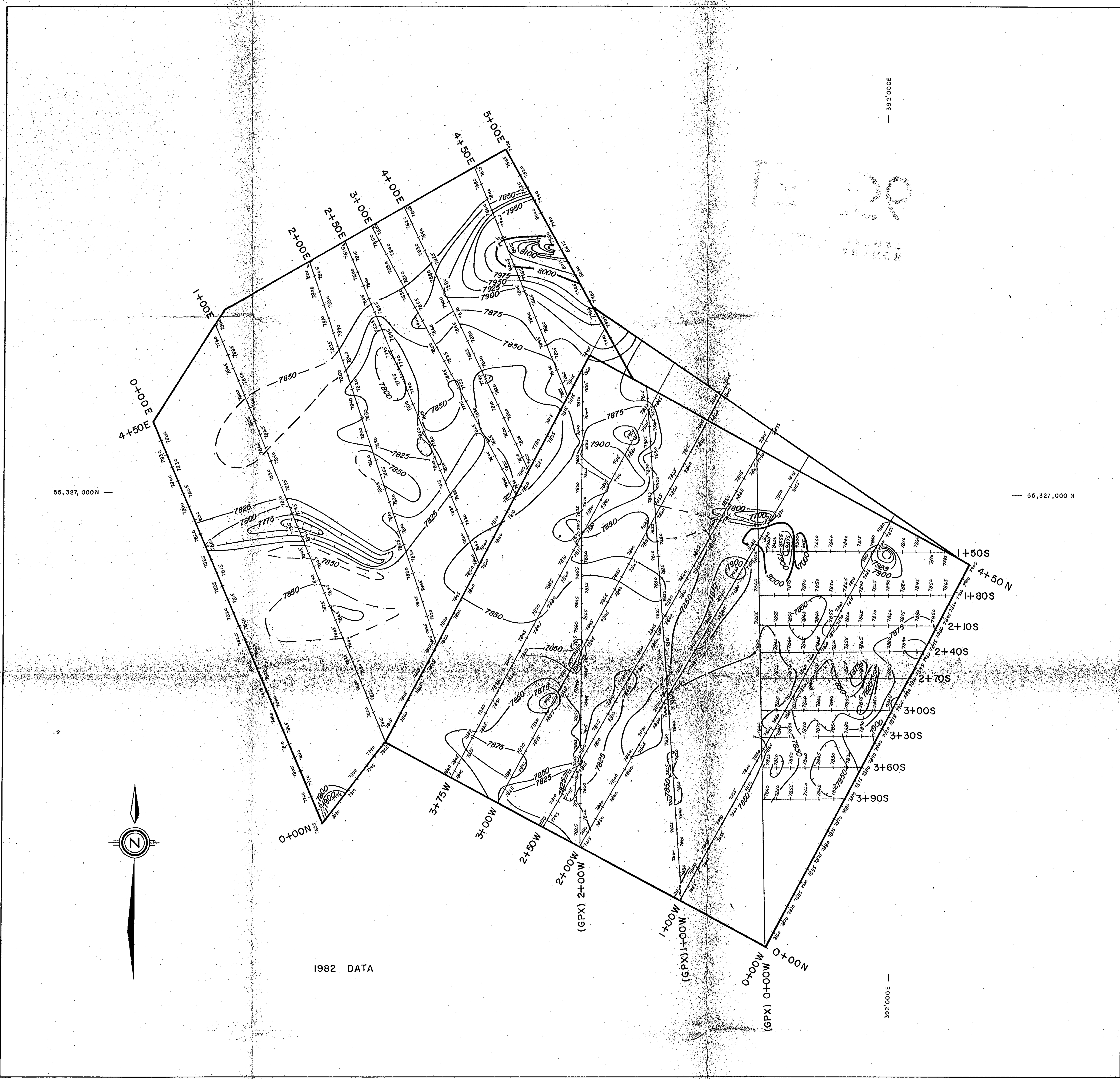
SCALE: 1:200	APPROVED BY: B. Callaghan.	DRAWN BY S.M.
DATE: Sept. 20, 83		REVISED

TRENCH L11

KILLARNEY CLAIMS

DRAWING NUMBER 7

11X17 PRINTED ON NO. 1000H CLEARPRINT



SCALE 1:2000

100m 50 0 50 100 200m

BASE 50,000 γ (EXCEPT AS NOTED)

GEOLOGICAL BRANCH
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MOHAWK OIL COMPANY LTD.

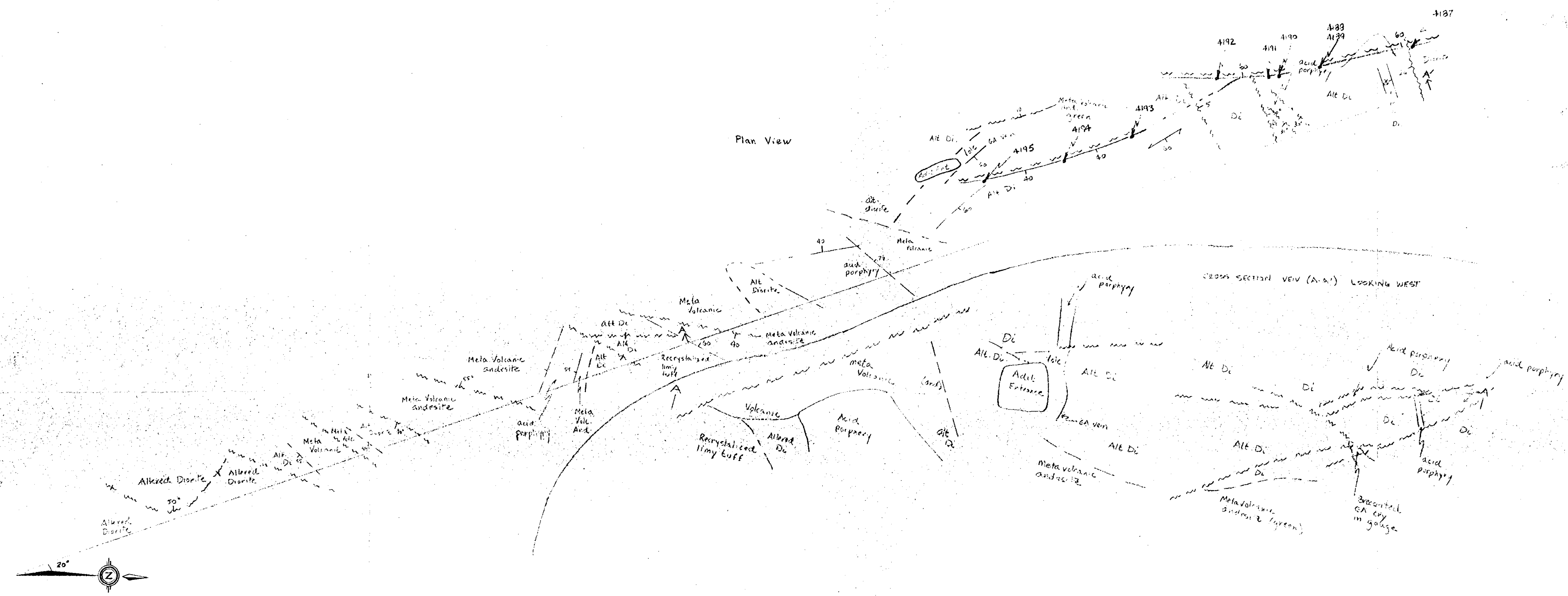
LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
THUNDERHILL FRACTION

MAGNETIC SURVEY

CONTOUR INT. 25 γ

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:2000	APRIL, 1984	16



GEOLOGICAL BRANCH
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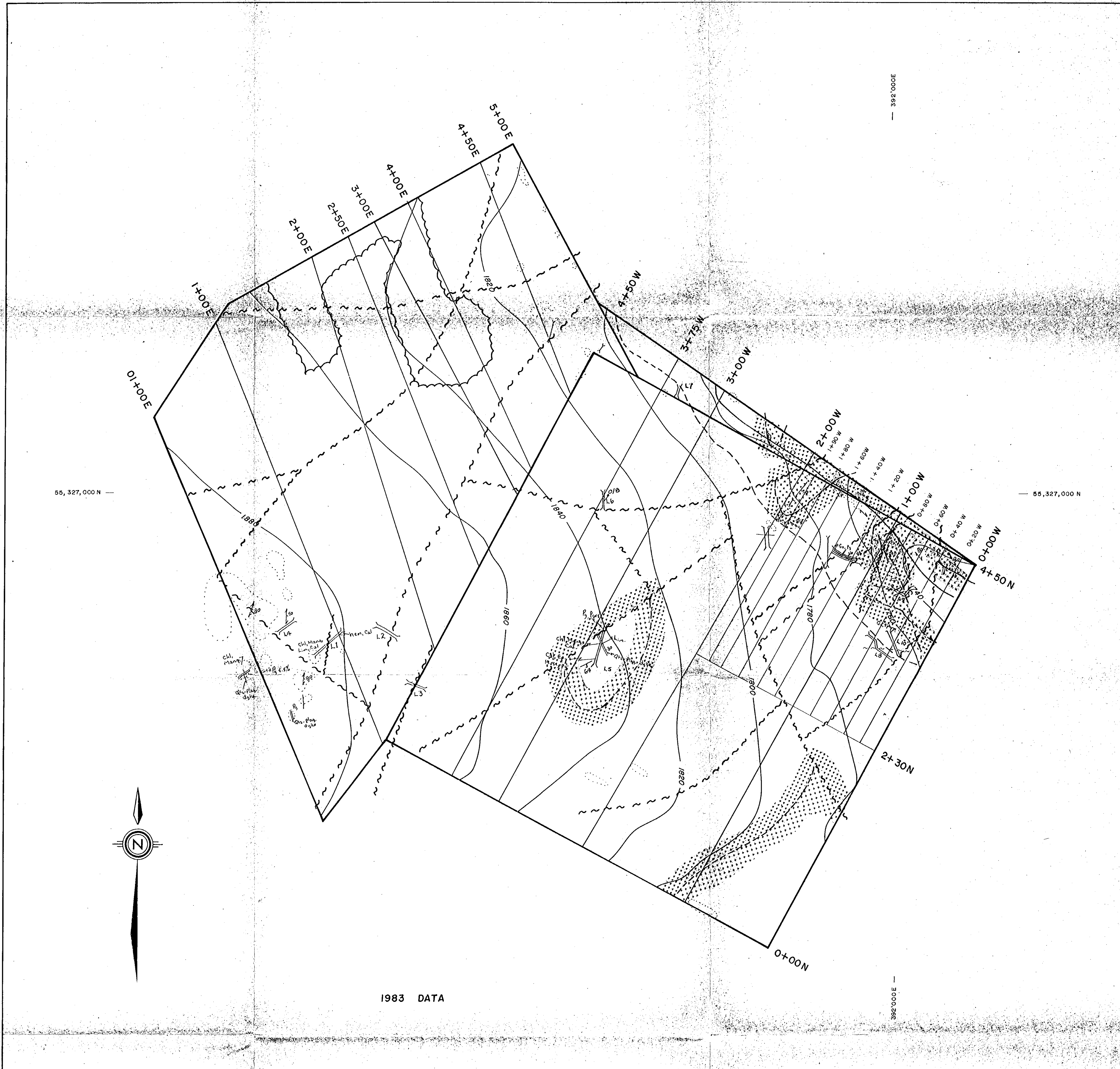
SCALE 1:100

Refer to map No 1. For Legend.

MOHAWK OIL CO. LTD.		
SCALE: 1:100	APPROVED BY: B. Callaghan	DRAWN BY S.M.
DATE:		REVISED
Along creek bank and Adit 2 road cut.		
KILLARNEY CLAIM		DRAWING NUMBER 8



SCALE 1:2000

100m 50 0 50 100 200m

GEOLOGICAL BRANCH ASSESSMENT REPORT

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LEGEND

ROAD		FAULT (approximate) (inferred)		Qz	QUARTZ
NO VEGETATION		CONTACT (approximate) (inferred)		Peg	PEGMATITE
SLIDE AREA		BEDDING (inclined, vertical, unknown)		Grt	GARNET
GEOCHEM SOIL TRAVERSE	10+00N	FOLIATION (inclined, vertical, unknown)		Apl	APLITE
GEOCHEM SILT TRAVERSE		FRACTURES (inclined, vertical, unknown)		Calc	CALCITE
MARSH		TRENCH		Hem	HEMATITE
ROCK GEOCHEM. SAMPLE	•9999	PIT	Δ	Mag	MAGNETITE
DIRECTION OF GLACIATION		OUTCROP		Pyrr	PYRRHOTITE
				Sph	SPHALERITE
				Ga	GALENA
				Br	BORNITE

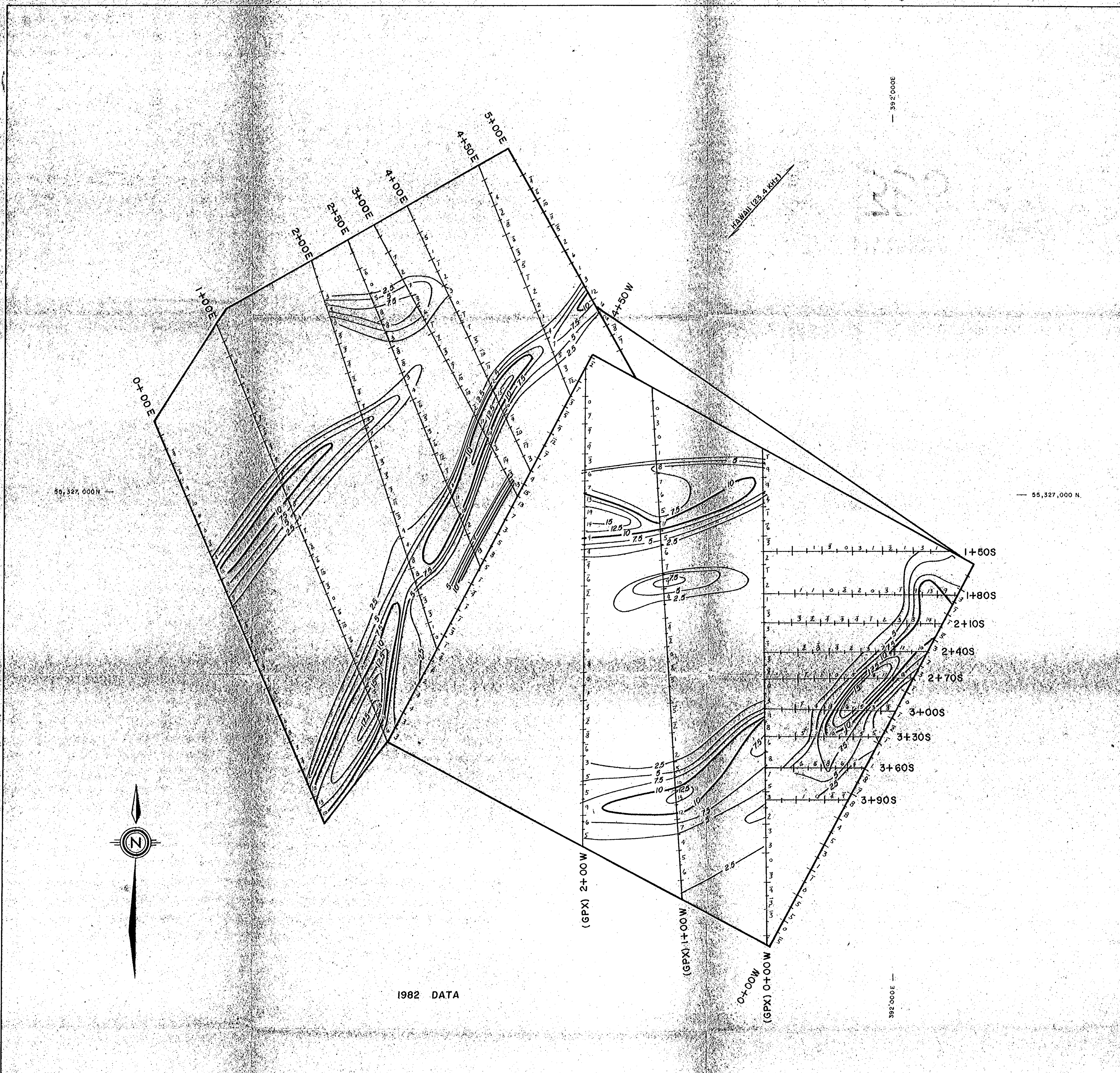
MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
THUNDERHILL FRACTION

GEOLOGY

DRAWN BY	SCALE	DATE	DRAWING NO.
	1: 2000	APRIL, 1984	1



SCALE 1:2000

100m 50 0 50 100 200m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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MOHAWK OIL COMPANY LTD.

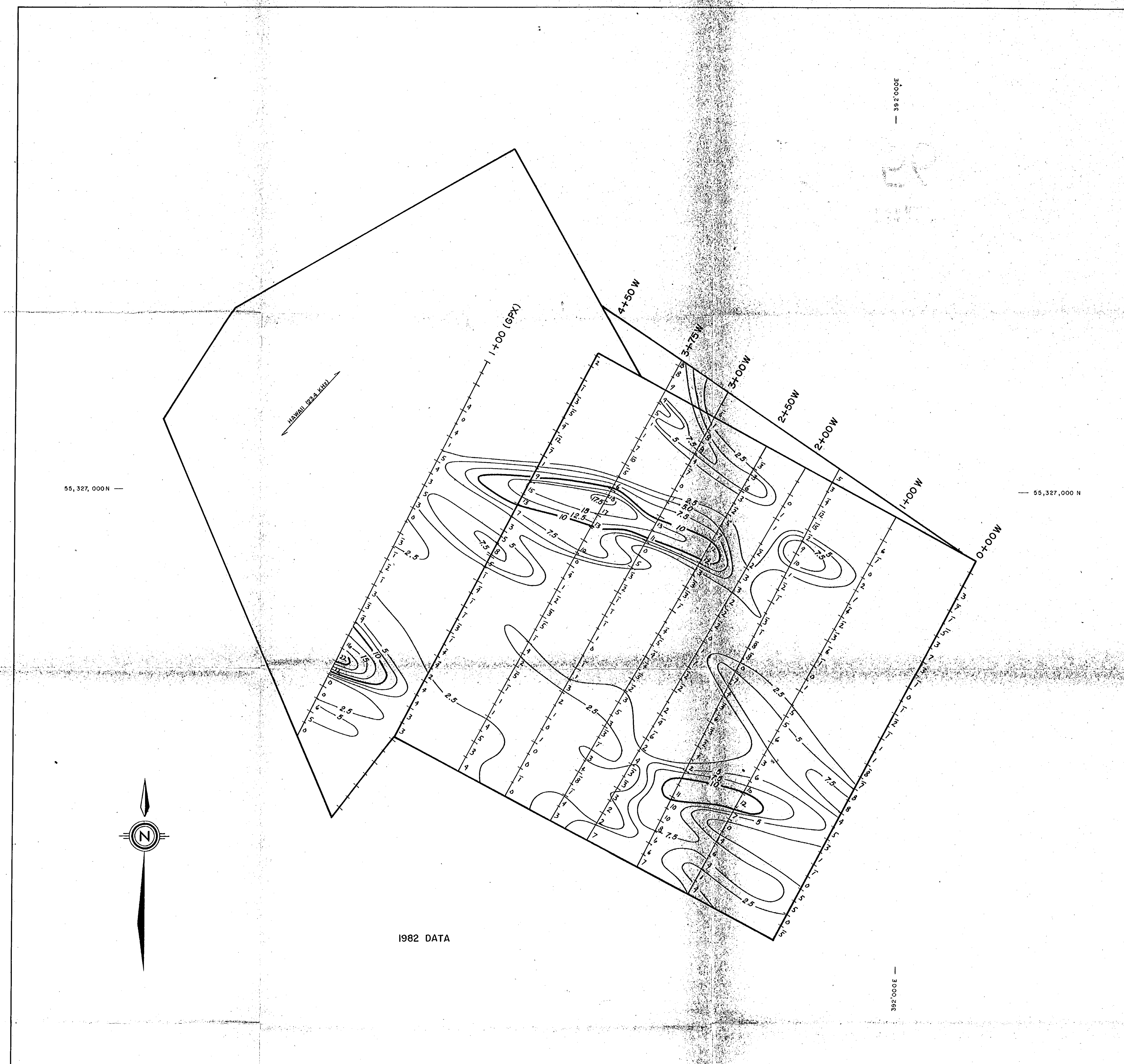
LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
THUNDERHILL FRACTION

VLF-EM DIP ANGLES
HAWAII

CONTOUR INT. 2.5

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:2000	APRIL, 1984	9



SCALE 1:2000

100m 50 0 50 100 200m

GEOLOGICAL BRANCH
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MOHAWK OIL COMPANY LTD.

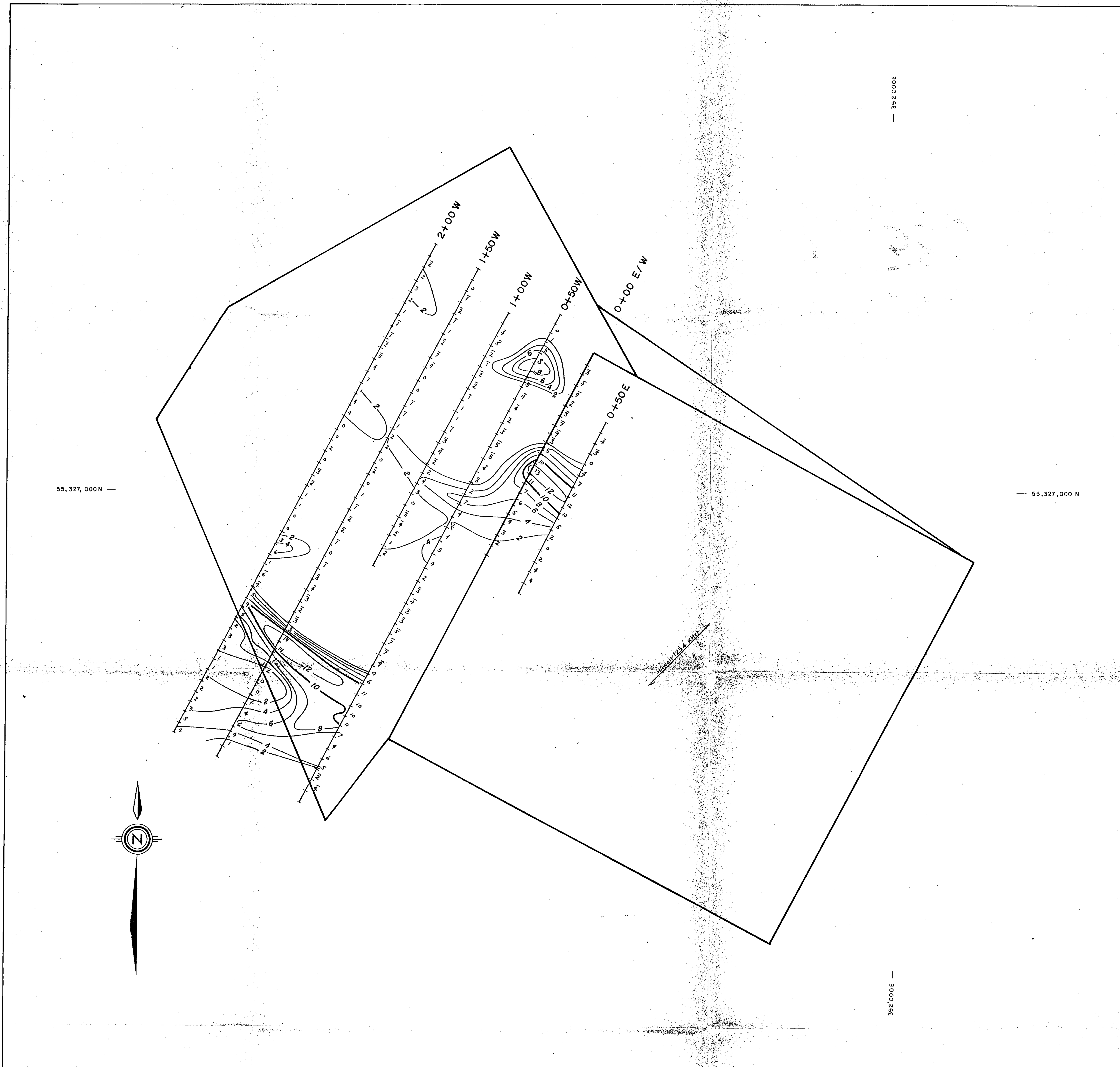
LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
THUNDERHILL FRACTION

VLF - EM DIP ANGLES
HAWAII

CONTOUR INT. 2.5

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:2000	APRIL, 1984	10



SCALE 1:2000

100m 50 0 50 100 200m

GEOLOGICAL BRANCH
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MOHAWK OIL COMPANY LTD.

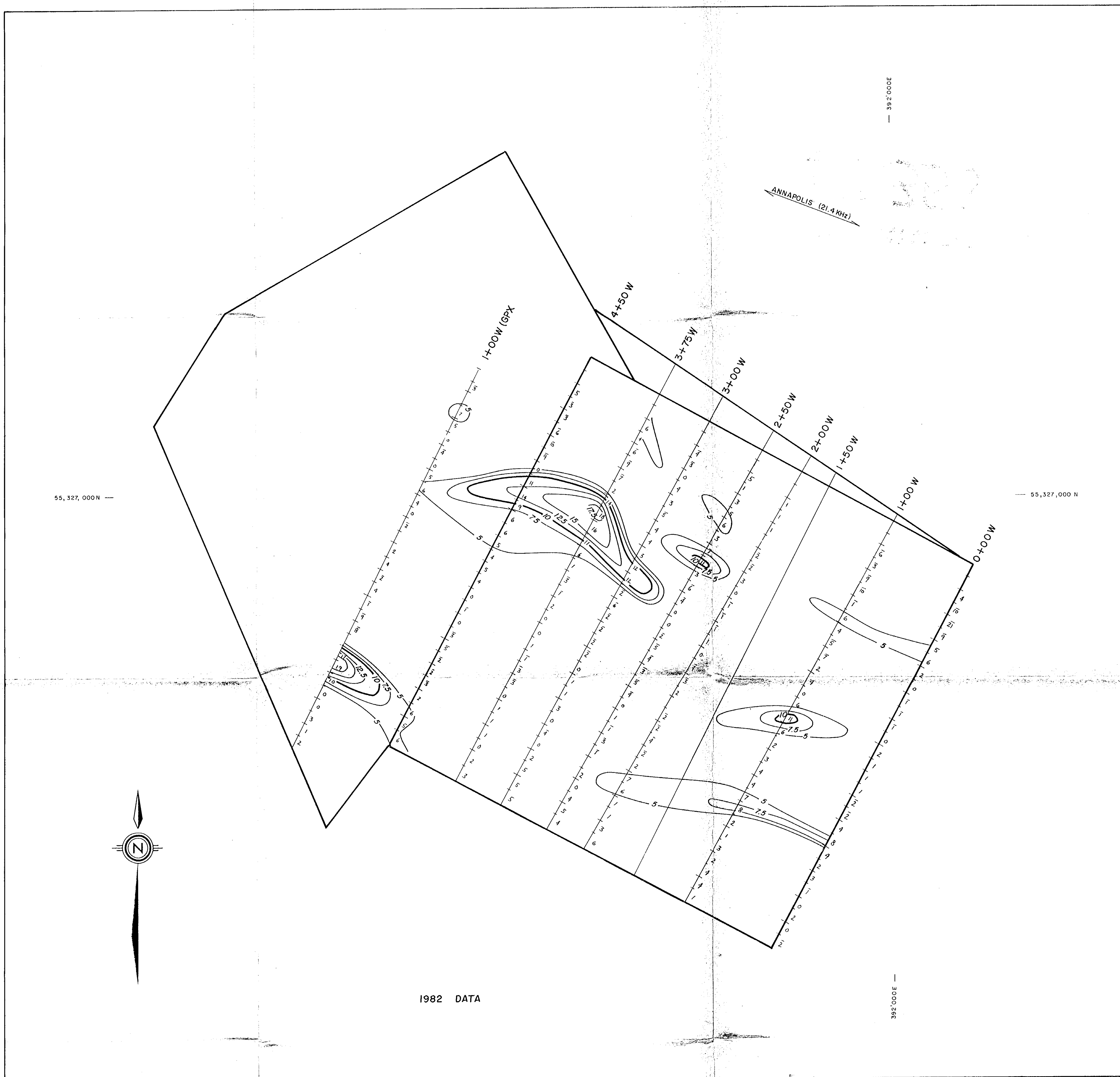
LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
THUNDERHILL FRACTION

VLF-EM DIP ANGLES
HAWAII

CONTOUR INT. 2

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:2000	APRIL, 1984	11



SCALE 1:2000

100m 50 0 50 100 200m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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MOHAWK OIL COMPANY LTD.

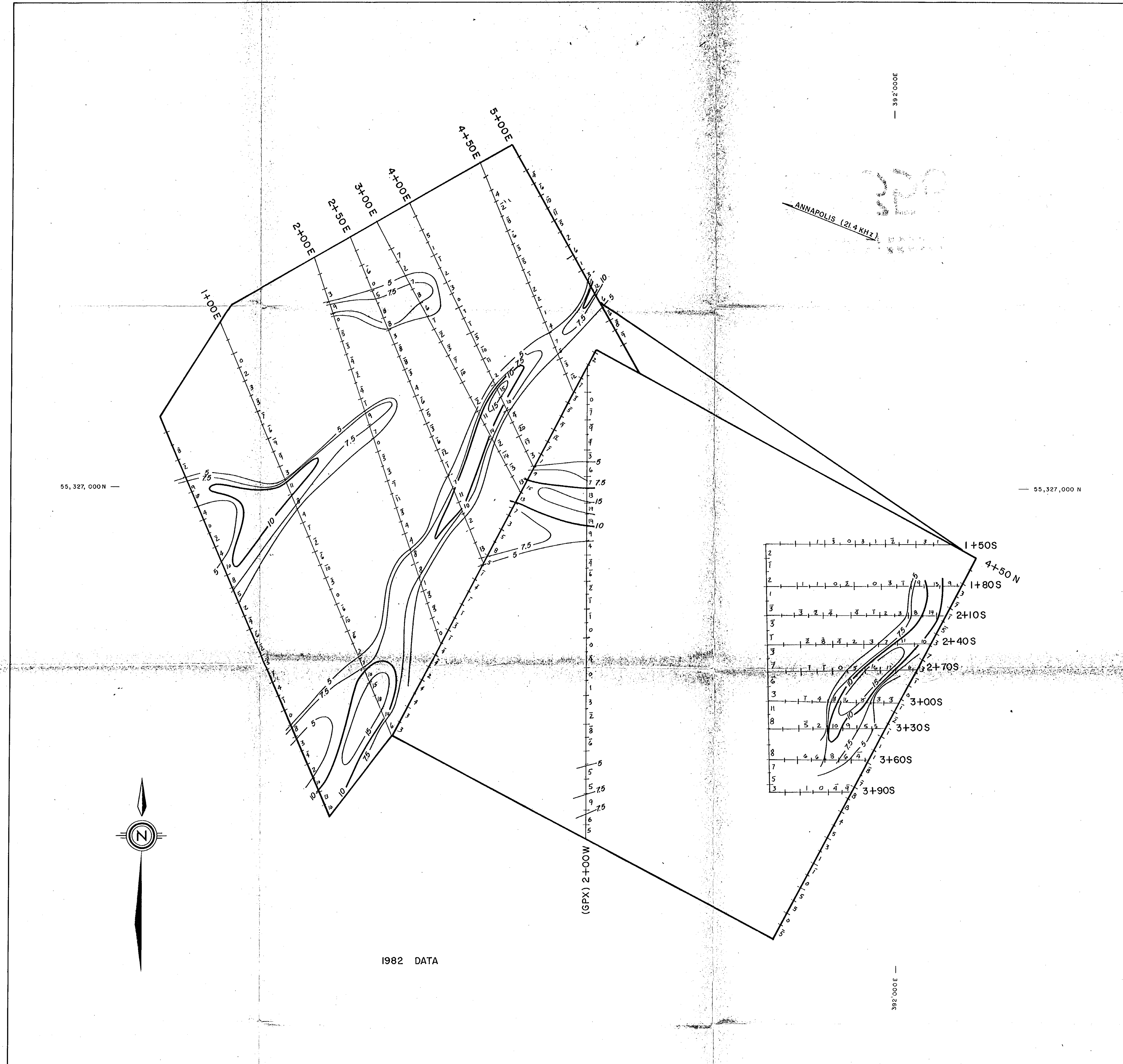
LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
& THUNDERHILL FRACTION

VLF-EM DIP ANGLES
ANNAPOLIS

CONTOUR INT. 2.5

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1: 2000	APRIL, 1984	12



SCALE 1:2000

100m 50 0 50 100 200m

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
THUNDERHILL FRACTION

VLF - EM DIP ANGLES
ANNAPOLIS

CONTOUR INT. 2.5

DRAWN BY	SCALE	DATE	DRAWING NO.
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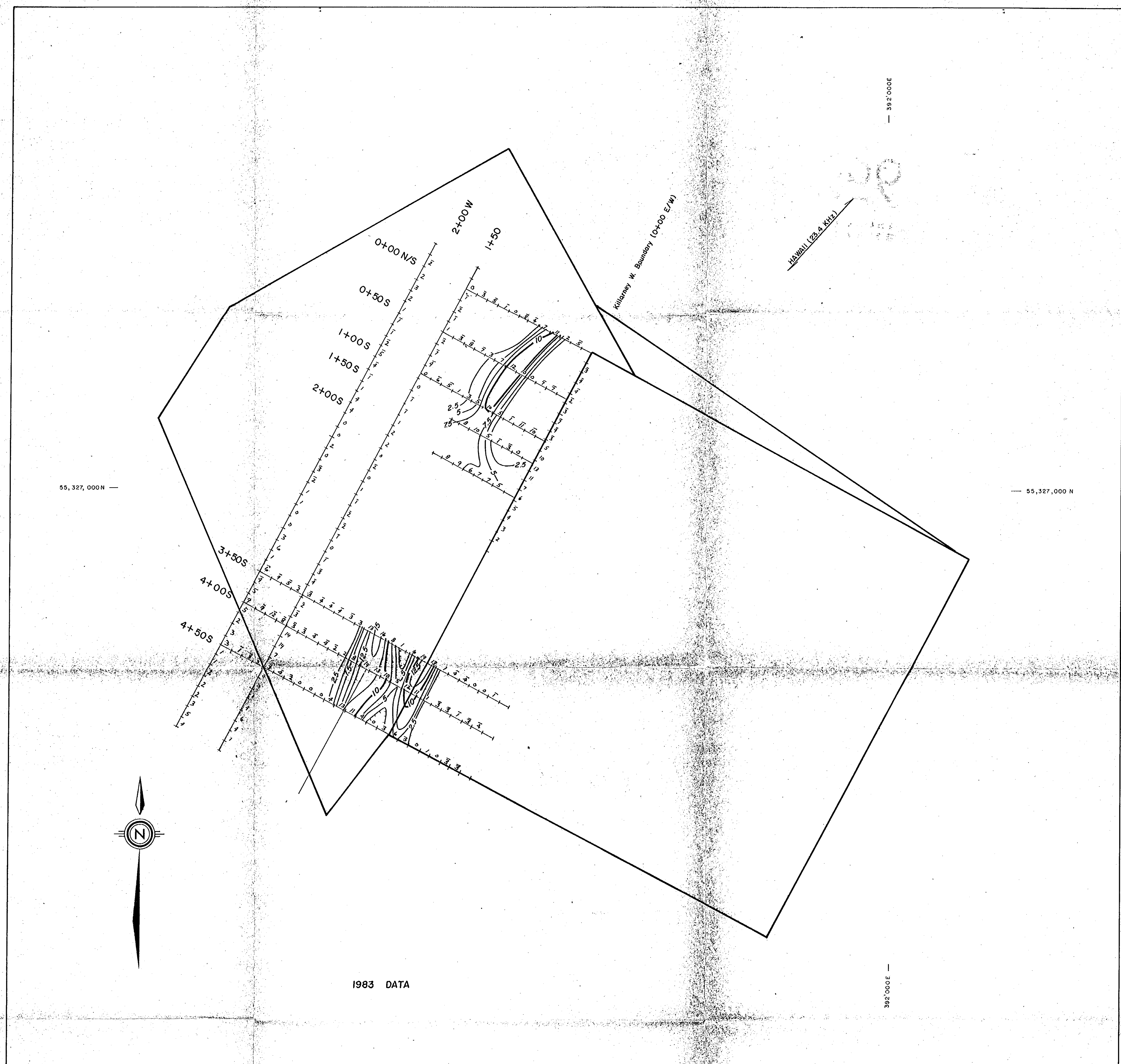

SCALE 1:2000

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
THUNDERHILL FRACTION

VLF - EM DIP ANGLES
HAWAII

CONTOUR INT. 2.5

DRAWN BY	SCALE	DATE	DRAWING NO.
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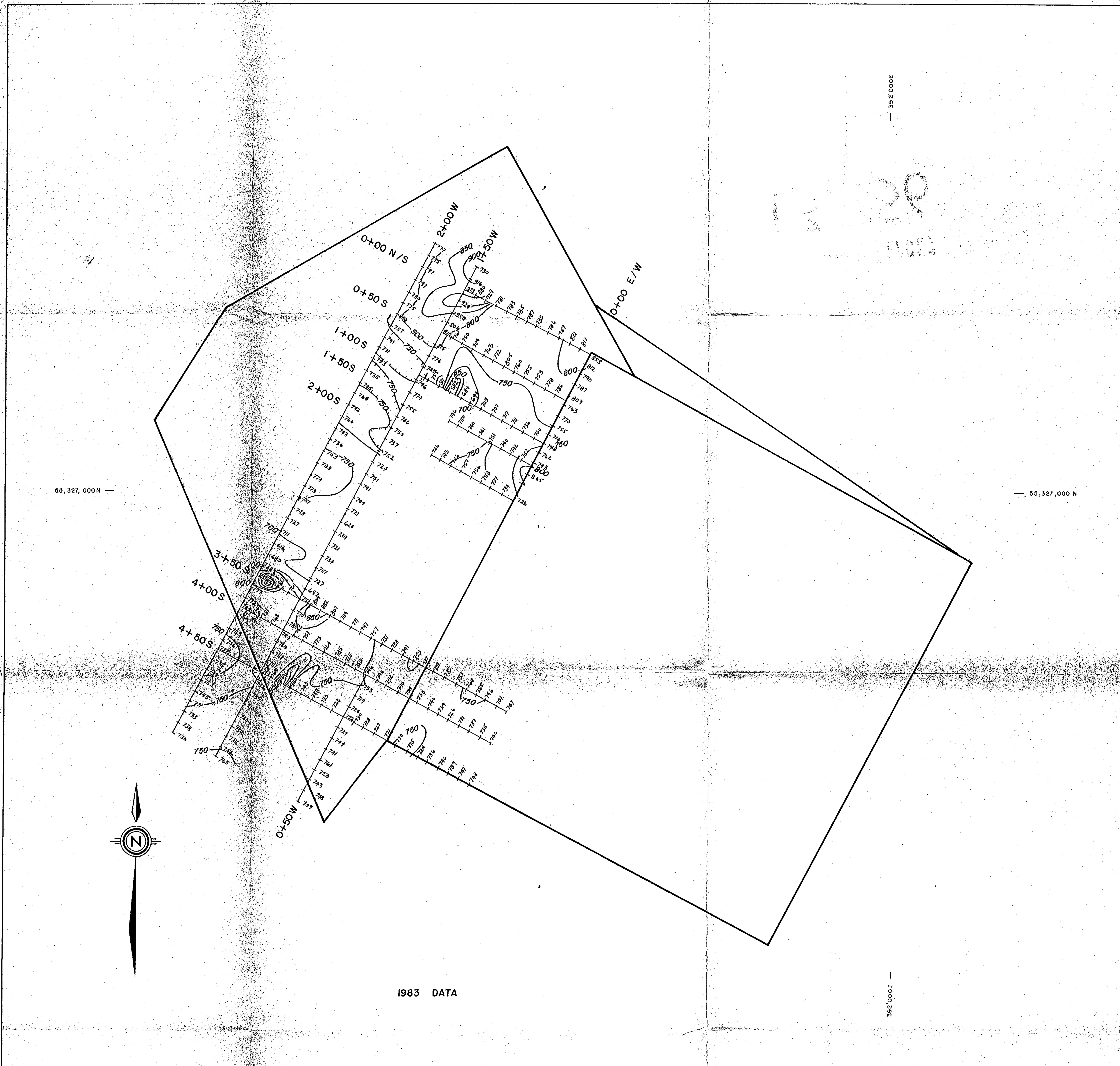

SCALE 1:2000

GEOLOGICAL BRANCH ASSESSMENT REPORT

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BASE 57000γ (TOTAL FIELD)

MOHAWK OIL COMPANY LTD.

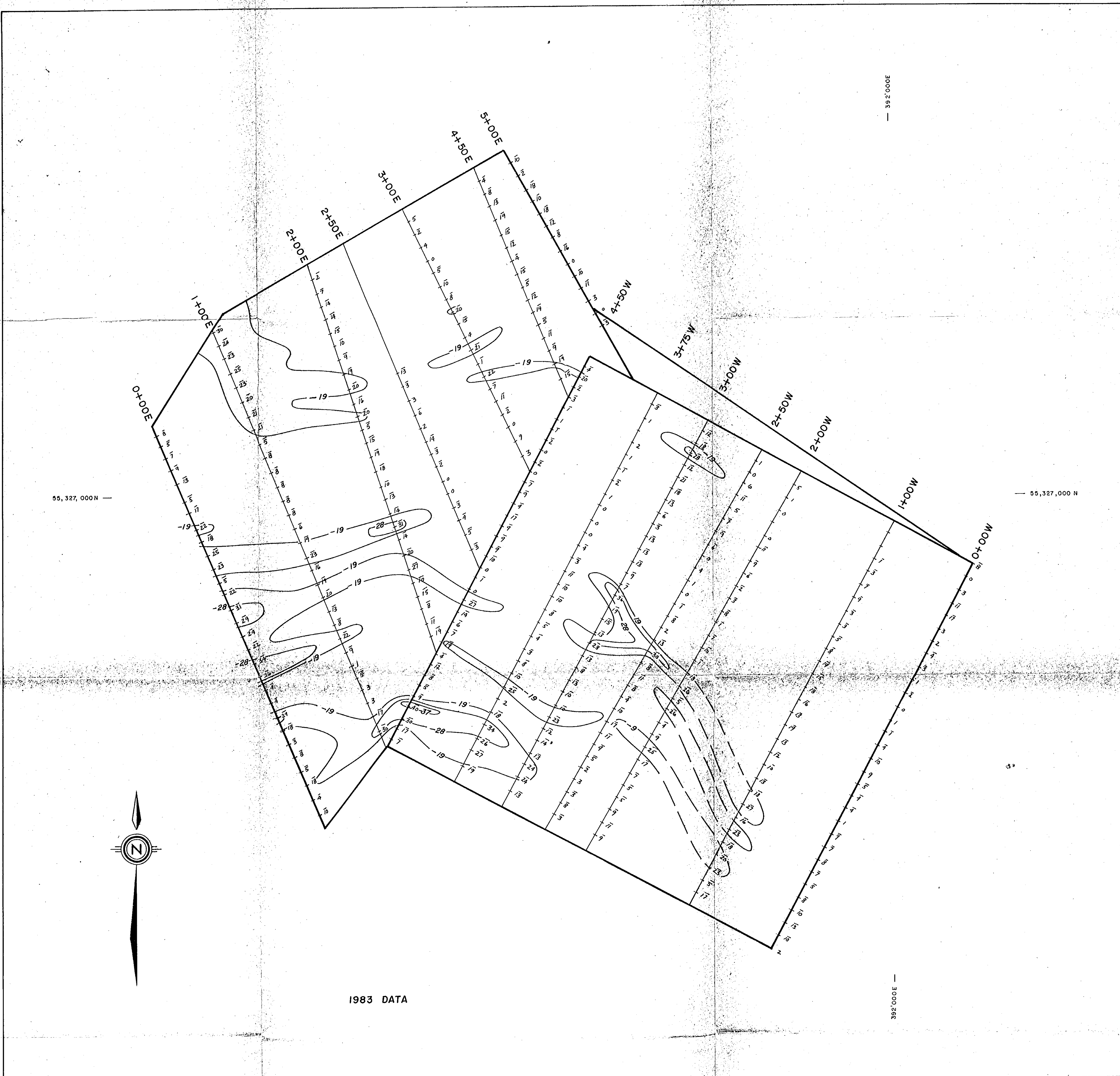
LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM & THUNDERHILL FRACTION

MAGNETIC SURVEY

CONTOUR INT. 50γ

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LEFILLY	1:2000	APRIL, 1984	15



SCALE 1:2000

100m 50 0 50 100 200m

CONTOUR INTERVAL

- 19 mV (Subanomalous)
- 28 mV (Anomalous)
- 37 mV (Strongly Anomalous)

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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MOHAWK OIL COMPANY LTD.

LIGHTNING PEAK AREA

KILLARNEY, LUCKY JIM
THUNDERHILL FRACTION

SELF POTENTIAL

DRAWN BY	SCALE	DATE	DRAWING NO.
M. LETILLY	1:2000	APRIL, 1984	17