

GEOLOGICAL, GEOCHEMICAL, & GEOPHYSICAL REPORT

- on the -

MIR CLAIMS
ATLIN MINING DIVISION
BRITISH COLUMBIA

- for -

GRANVILLE SQUARE JOINT VENTURE,

Managed by: UNION OIL COMPANY OF CANADA LTD.,

Box 999,
CALGARY, Alberta.

WORK COMPLETED: June 25 - July 18, 1978.

LOCATION: NTS 104N/10W.
59°38'N; 132°50'W.
50 Km. due east of Atlin.

Part a of 2

Prepared by:

MINERAL RESOURCES BRANCH

ATLANTIC REGION

6905
NO.

KERR, DAWSON & ASSOCIATES LTD.,

#1 - 219 Victoria Street,
Kamloops, B. C.

John R. Kerr, P. Eng.,
September, 1978.

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SUMMARY

The Mir claims cover the east and central portion of the Surprise Lake batholith, and were located in 1976 to cover geochemical anomalies (U) and radioactive springs. Follow-up work in 1977 resulted in two areas of prime interest.

(1). Radon Cirque: Pb, Zn, Ag, Fe_3O_4 , U_3O_8 and MnO mineralization in highly fractured granitic rock.

(2). Graben Area: Very high Pb, Ag, and U silt and soil values associated with a major graben fault.

The obvious, and probably the only type of economic model in the claim area are polymetallic vein deposits, associated with fault and shear structures. The 1978 field programme was oriented at exploring for such deposits, and included:

- (1). Geological mapping of grids established in both areas.
- (2). Soil sampling, analysis for U, Pb, and Ag.

(3). Radiometrics.

(4). Electromagnetic surveys.

(5). Magnetometer surveys.

The magnetometer proved to be the most useful tool in the Radon Cirque area. A 350 meter long magnetic anomaly was delineated, and is associated with the known Pb, Ag, Zn, and U_3O_8 mineralization.

Within the Graben area, four soil and radiometric anomalies have been interpreted, and are worthy of further detailed exploration. The results of the 1978 programme were not successful in pinpointing specific bedrock targets in the graben area.

Two diamond drill holes were completed during 1978, one through the magnetic anomaly in Radon Cirque, and one intersecting the main graben fault in the Graben area. Results of this drill programme are not available for this report, and are to be submitted in a report by B. Price, P. Eng. at a later date.

Recommendations for further work are continued diamond drilling on the known magnetic anomaly, and detailed magnetics, geochemistry, radiometrics, electromagnetics and geological mapping in both the Radon Cirque and Graben areas.

INTRODUCTION

General Statement:

The Mir Group of claims were staked during 1976 to cover radioactive springs and swamps, and uranium geochemical anomalies resulting from a regional silt and water sampling programme completed during 1976. During 1977, a grid was established in what is referred to as the Radon Cirque area of the claims. Soil sampling, radiometrics and limited trenching were completed on this grid. PbS, MnO, Fe_3O_4 and Ag mineralization in shear and/or fault zones were discovered. Unexplained radon anomalous waters, and uranium soil anomalies resulted from the geochemical programme. Also during 1977 detailed soil, water and silt sampling was completed in what is referred to as the Graben area of the Mir claims. Anomalous values of lead, uranium and silver resulted from this programme over the entire surveyed length of the graben fault. Results of the 1977 programme are filed in a report by D. G. Leighton and Associates Ltd. (November, 1977).

The Mir claims cover the central and eastern portion of the Surprise Lake batholith. The eastern portion of the claims cover the western half of the Gladys River valley (Graben area). The obvious economic target for mineral exploration are polymetallic veins, within the batholith, and associated with major fault zones. The objective of the 1978 field programme was twofold:

- (1). To complete detailed magnetics, electromagnetics, and geological mapping over the existing grid area of the Radon Cirque Area.
- (2). To complete detailed soil sampling, radiometrics, magnetics, electromagnetics, and geological mapping on a grid established over the full length of the graben fault.

This report summarizes the results of this programme.

Location and Access:

The Mir claims are located 20 Km. east of Surprise Lake and 50 km. due east of Atlin, B. C.



GRANVILLE SQUARE JOINT VENTURE

**LOCATION MAP
PROJECT AREA
ATLIN DISTRICT
LIARD MINING DIVISION -
BRITISH COLUMBIA**

DATE : Sept. 1978

SCALE : 1 CM = 87 KM

DRAWN BY : G. S. JONES

DWG. NO. 175-1

DESIGNED & DRAWN BY : J. R. Kerr

Geographic coordinates are 59°38'N, and 132°50'W. Access to the property is directly possible by helicopter. Float equipped fixed-wing aircraft can land on Trout Lake, which provides a 2-3 Km. hike to the eastern portion of the claims.

Topography and Vegetation:

The claims are located on an unnamed mountain within the Snowdon Range. Local relief is moderate to steep, elevations ranging from 300m(a.s.l.) in the Gladys River valley to over 1,900 m (a.s.l.) on some of the peaks. Steep-walled cirques are common on north and east facing mountain slopes. Flat, felsenmeer strewn, mountain tops and ridges are evidence of non-glaciated areas.

The timber line is located at 1,200-1,300 m (a.s.l.). Above this elevation, vegetation consists of alpine growth, and small clusters of dwarf spruce. At the lower elevations, the north and east facing slopes are heavily timbered by jackpine, spruce, and balsam.

Claims:

The property consists of five contiguous claims, staked under the Modified Grid System, and grouped as follows:

<u>Group</u>	<u>Claim Name</u>	<u>No. Units</u>	<u>Record No.</u>	<u>Mining Div.</u>	<u>Expiry Date*</u>
Mir 2 & 3	Mir 2	20	92	Atlin	July 5, 1985
	Mir 3	20	93	Atlin	July 5, 1985
Mir 5	Mir 5	20	125	Atlin	Sept. 17, 1981
Mir 6 & 7	Mir 6	20	126	Atlin	Sept. 17, 1984
	Mir 7	20	127	Atlin	Sept. 17, 1984

*On acceptance of this report, and a drill report to be submitted by B. Price, P. Eng.

All claims are recorded in the name of Union Oil Company of Canada Ltd, on behalf of the Granville Square Joint Venture.

History of Work:

Canadian Johns-Manville Co. Ltd. held portions of the western half of the claims during the early nineteen

seventies. It was at this time that the "Snowbird" uranium occurrence was located on the ridge between Zenazie Creek and Trout Lake. There is no evidence of previous detailed ground surveys or diamond drilling completed on the Mir claims.

There are no operating mines within the general area of the Mir claims.

FIELD PROGRAMME (1978)

RADON CIRQUE: July 6 - 18, 1978

One crew spent five days completing geophysical surveys, limited geochemistry, and geological mapping on the existing grid area.

Geological Mapping: All outcrop and topographic features were noted, and tied into grid coordinates. The results are shown on Figure 175A-3.

E-M Survey: Readings were taken along all lines at 50 meter intervals with a Sabre Electronics VLF-EM Unit. EM profiles are shown on the accompanying 1:2,000 scale grid map - Figure 175A-4.

Magnetometer Survey: Readings were taken along all lines at 50 and 25 meter intervals with a McPhar-700 magnetometer. Traverses were tied into a base station at least twice a day (established on LO+00 at the baseline), and closed into known stations at the end of each traverse loop. Where necessary, readings were corrected for diurnal variation. Readings were plotted on the accompanying 1:2,000 scale map, and contoured to 50Yintervals (see Figure 175A-5).

A detailed grid was established along the strike of an interpreted magnetic anomaly, lines spaced at 25 meters. Readings were taken along all lines at 2 and 10 meter intervals across the full width of the anomaly. Values and appropriate contour intervals are shown on the accompanying 1:500 scale map, Figure 175A-6.

Geochemistry: 14 rock chip samples were collected from various outcrop areas. The samples were shipped to Min-En Laboratories in North Vancouver, B. C., where they were ground to -80 mesh. An aliquot of the sample was digested in hot HNO₃, and the uranium content was determined by fusion fluorometric methods. Results are expressed in parts per million (ppm) uranium, detected to 0.3 ppm U.

In addition, a total of 40 soil samples were collected along 4 selected lines of the detailed grid, to study the geochemical response across the magnetic anomaly. Samples were dried and sieved, the -80 mesh fraction being digested in a nitric, perchloric solution to extract Pb and Ag, and in hot nitric acid to extract the uranium. The silver and lead contents were determined by normal atomic absorption methods, and uranium by fusion - fluorometric methods.

Location and results of the rock chip samples are shown on the Geological Plan, Figure 175A-3. The soil sample values are not plotted; however, the lab reports are shown in Appendix C.

GRABEN AREA: June 26 - July 15, 1978.

Two crews spent 14 days each establishing a grid, and completing various geophysical, geochemical and geological surveys in the graben area. A baseline was established along the full length of the graben (4.5 km), and 31.5 km. of cross lines were chained and compassed at 100 meter intervals in the southern portion of the grid, and at 500 meter intervals in the northern portion. Stations were established at 50 meter intervals along all lines.

Geological Mapping: Outcrop areas, and topographic features were tied into grid coordinates. Results are plotted on the accompanying 1:2,000 scale map, Figure 175B-3, and 1:5,000 scale map, Figure 175B-9.

Radiometric Survey: The bulk of the scintillometer readings were taken with a McPhar-TV-1A unit. Due to a temporary short (due to moisture), four lines, L20N, 25N, 30N, and 35N, were completed using a Saphymo-Stell SPP2-NF unit. Values of each unit were calibrated in order to correlate the Saphymo-Stell readings (cps) to the TV-1A readings (cpm). Readings were taken along all lines at 50 meter intervals.

In addition to reading the total gamma-ray count, T_2 (Th+U), and T_3 (Th) readings were taken at all stations whiles using the McPhar unit. The residual uranium count was calculated ($T_2 - 3.5 T_3$).

All values were plotted on the accompanying 1:2,000 scale map, Figure 175B-4, for the southern portion of the grid. The total count is contoured at 1,000 cpm intervals. The 20 cpm contour is interpreted to indicate the residual uranium anomalies. Total count values only are plotted on the accompanying 1:5,000 scale map, Figure 175B-9, for the northern portion of the grid. Only the 3,000 contour is interpreted to express radiometric anomalies.

Geochemistry: Soil samples were collected along all lines at 50 meter intervals. Samples were collected from B horizon at all sample sites. Where the organic layer was too deep, or good B horizon samples could not be obtained, samples were not collected. In the eastern portion of the grid area, a deep glacial overburden exists in the Gladys River valley. Soil sampling over this glacial fill was considered not to reflect bedrock source; therefore, samples were not collected. Silt and water samples were collected from most creeks and seeps encountered on the grid. In addition, six test pits were dug into a swamp, up to 1 meter deep, and soil profile samples were collected from each pit. A number of erratically high sample values were rechecked, and some samples were re-collected. Rock chip samples were collected from various outcrops.

In summary, the following samples were collected:

Soil samples (original)	476
Test pit samples	17
Silt samples	8
Water samples	6
Duplicated samples	15
Rock Chip samples	8

All samples were shipped to Min-En Laboratories in North Vancouver, B. C. All soils and silts were analyzed for Pb, Ag, and U. Water and rock chip samples were analyzed for U only. Laboratory methods were similar to those collected in the Radon Cirque area.

Results are plotted on the accompanying 1:2,000 scale maps of the southern portion of the grid, and 1:5,000 scale maps of the northern portion of the grid. Statistical analysis of each method (discussed in next chapter), provided anomalous threshold contours.

Electromagnetic Survey: A Sabre Electronics VLF-EM unit was used to obtain readings at 50 meter intervals along each line. EM profiles were plotted on the accompanying 1:2,000 scale map, Figure 175B-8, and crossovers along each profile (positive to negative) are interpreted as EM conductors.

Magnetometer Survey: A McPhar - 700 unit was used to take magnetic readings along all lines at 50 meter intervals. Tie - in to a base station (L5+00N 0 0+75W) was completed at least twice per day, with loop closures every 2-3 hours. Diurnal variation was noted, and readings for two days were corrected where this variation exceeded 20 gammas.

Readings were plotted on the accompanying 1:2,000 scale map, Figure 175B-8, and contoured to 100' intervals.

GEOLOGY

The geology of the Surprise Lake batholith and general area is well documented in G.S.C. Memoir 307, Atlin Map Area (104N), by J.D. Aitken.

The Mir claims are underlain entirely by rocks of the Surprise Lake batholith. Aitken describes the batholith as a fine-coarse grained alaskite. On the Mir claims the general description of the rock has been a fine-coarse grained, occasionally porphyritic, biotite > hornblende rich quartz-monzonite.

Three various rock-type differentiates of the Surprise Lake batholith have been identified:

- (1). Medium-coarse grained, biotite rich (minor hornblende), monotonous quartz-monzonite.
- (2). Fine-medium grained, biotite-hornblende rich quartz-monzonite, possibly a granodiorite.
Occasional large phenocrysts of orthoclase up to 1" diameter.

(3). Coarse-grained, porphyritic, biotite hornblende rich quartz-monzonite. Phenocrysts are equally quartz and orthoclase up to 1" diameter.

There is evidence of textural zoning within the grid areas mapped. An interpretation of this zoning is not possible due to lack of extensive outcrop exposures.

In the Radon Cirque area, air photo interpretation indicates three major structural trends:

- (1). N - S
- (2). N60°-70°E
- (3). N35°-45°W

The interpreted magnetic anomaly indicates a trend of N80E dipping steeply to the north. This zone possibly relates to the N60-70°E lineaments.

During the 1977 programme, a test pit was dug into area of abundant mineralized float. A grab sample of the float assayed:

Pb	.65%
Ag	.43 oz/T
U_3O_8	.007%

Manganese and magnetite are also very abundant. The magnetite content is estimated at 3-10%, and is the cause of the interpreted magnetic anomaly. Mineralization is within altered and fractured quartz-monzonite, undoubtedly related to a fault or shear zone.

In the Graben area, the main structural feature is the main graben fault, trending N35°E, and believed to dip steeply to the west. The graben is not exposed within the claim area. The baseline of the graben grid approximates the location of the interpreted fault. A parallel lineament at 2+50W extends from 3+00N to 13+00N. Separating the two lineaments is a steep ridge of glacially deposited boulders, interpreted as an esker. It is therefore possible that the preglacial valley, now occupied by the esker, is the location of the main graben fault.

Outcrop exposed in the area of Delta Pool to the east of the graben indicates extreme jointing, and some secondary K-feldspar, sericite, quartz and limonite on fracture and joint faces. The trend of the

19.

joints are N35°E, with dips 70°W, and 40-60°E.

A fault has been interpreted through Delta Pool, paralleling and probably related to the main graben fault.

Mineralization of economic significance has not been discovered in the graben area. Detailed prospecting with a scintillometer has indicated radioactivity associated with fractures in the Delta Pool area.

GEOCHEMISTRY

A statistical analysis of the soil samples collected in the graben area is summarized in the following table:

	<u>Ag</u>	<u>Pb</u>	<u>U</u>
No. of samples	(n) 476	476	476
Mean	(m) 1.08 ppm	44.14 ppm	25.78 ppm
Std. Deviation	(s) 0.94 ppm	88.52 ppm	69.09 ppm
Poss. Anomalous	($\gt m$) $\gt 1.1$ ppm	$\gt 45$ ppm	$\gt 26$ ppm
Prob. Anomalous	($m+s$) $\gt 2.0$ ppm	$\gt 133$ ppm	$\gt 94$ ppm
Def. Anomalous	($m+2s$) $\gt 2.9$ ppm	$\gt 221$ ppm	$\gt 164$ ppm

The accompanying geochemical maps of the graben area are contoured according to these anomalous limits.

Four anomalies are considered of definite interest.

I. Uranium: L2+00N to L7+00N from 2+50^W to 3+50^W. This anomaly contains the highest value of uranium in soil (3,050 ppm U), and the highly anomalous pit samples in the swamp. (100-350 ppm U). Silver and lead values

are low in this area, which suggests that the uranium may have been transported.

II. Lead (Minor Uranium and Silver). L6+00N to L10+00N from 0+50^E to 1+50^E. This area contains the highest lead value (2,750 ppm), and some high silver and lead values in the northern portion of the anomaly. The silver anomaly is strong to the north on L12+00N. Delta Pool, and strong jointing on L9+00N, are within this anomalous area.

III. Uranium (Minor Silver). Baseline, from 20+00N to 45+00N. This anomaly contains soils > 150 ppm U, that has been interpreted from lines spaced at 500 meters. The zone approximates the interpreted location of the graben fault.

IV. Lead (Minor Uranium). L20+00N and L25+00N at 4+00^W to 4+50^W. Four soil samples contain lead ranging from 250 - 860 ppm.

Rock chip samples collected from both grid areas probably reflect the average uranium content in the

leached capping of the Surprise Lake batholith (~11 ppmU). It is interesting to note that uranium content is highest in the Radon Cirque grid within rock outcrops near the known mineralized float.

Soil samples collected across the magnetic anomaly on Radon Cirque reflected metal values within the magnetic zone on two of the lines. The interpretive value of the detailed sampling at this point in time is questionable.

RADIOMETRICS

Radiometrics was not completed on the Radon Cirque grid during 1978, therefore this chapter deals specifically with the survey completed on the Graben grid.

In general, contour interpretation of the total count relates to topographic features. Radiometric highs reflect outcrop areas, and lows reflect deep overburden in swamps. It is therefore necessary to attempt to interpret anomalies within the general contoured anomalies as presented on the accompanying radiometric map. Within the southern portion of the grid, interpretation of residual uranium anomalies assists in delineating radiometric targets.

The four radiometric anomalies listed below correlate to the geochemical anomalies mentioned in the preceding chapter:

- I. L2+00N to L7+00N from 2+50^W to 3+00^W. Values in this area exceed 3,000 cpm, peaking at 4,500 cpm. Although the values are not high, much of the anomaly

exists over swamp area, where overburden is 10-30 meters deep. A strong residual uranium anomaly correlates well to the total count anomaly. This radiometric anomaly is coincident with the strong uranium soil anomaly.

II. L5+00N to L10+00N, from 0+50^E to 1+00^E. A large portion of this anomaly corresponds with the large outcrop exposure, giving rise to zones > 5,000 cpm. However, the western portion of the anomaly is covered by overburden 3-6 meters deep. A residual uranium anomaly corresponds with the total count anomaly. Strong lead, and weak silver and uranium in soils correspond with the radiometric anomaly.

III. Baseline from 20+00N to 45+00N. A radiometric anomaly correspond with the graben area and uranium values in soil.

IV. L26+00N and L30+00N @ 4+50^N. Strong radiometrics correspond with high lead values in soil.

ELECTROMAGNETIC SURVEY

In the Radon Cirque area, results of the electromagnetic survey were negative. Two small crossovers were interpreted in the northern portion of the grid; however, results are considered inconclusive to interpret conductors. Some detailed traverses were completed over the magnetic anomaly; however, crossovers were not interpreted. It can therefore be concluded that the magnetic anomaly contains less than 20% metallic minerals, and is probably disseminated throughout the zone.

In the Graben area, three conductors have been interpreted.

I. L5+00N to L17+00N from 5+00^E to 7+00^E.

This conductor probably contains the strongest values of the surveyed area, and is made up of three en echelon interpreted conductors. The conductor corresponds quite well with the glacial fill-bedrock interface, and may represent a clay horizon within the glacial fill. There are no other geophysical or geochemical features associated with this anomaly; therefore, the conductor is not considered an exploration target.

III. L5+00N to L17+00N, along the baseline. The conductor corresponds with the interpreted trace of the main graben fault.

III. L2+00N to L5+00N @ 2+50^W. This weak conductor correlates to the anomalous swamp, and radiometric anomaly.

MAGNETOMETER SURVEY

The magnetometer appeared to be the most useful tool in the Radon Cirque area for detailing the mineralized structures. The survey completed on the main original grid encountered only one station that showed a marked magnetic response to the zone; however, a weak magnetic response was realized in the general area. The original grid was misoriented to the actual strike of the zone; therefore, a new detailed grid was established with the baseline paralleling the strike of the zone, N80°E.

The accompanying detailed magnetic map illustrates the irregular shape and dimensions of the anomaly (350 meters long x 30 meters wide). Four features of the zone are:

(1). A small branch of the main zone strikes N60°E, over a detected length of 80 meters.

(2). The zone is abruptly terminated at both ends. The eastern termination correlates with an air-photo interpreted N-S fault. The western termination is within 50 meters of an interpreted fault.

(3). Magnetics has delineated a second magnetic zone 100 meters to the NW of the main zone. The anomaly attains the same strike, and the eastern limit of this zone corresponds to the western limit of the main zone. Fault offset of approximately 100 meters (lateral) is suspected. This anomaly is wider and weaker than the main anomaly, which suggests the magnetic source may be at depth.

(4). The magnetic profile (L1+2SW shown) indicates a northerly dipping structure ($60\text{-}70^\circ$), approximately 6-10 meters wide.

Magnetics in the graben area was generally negative. Total magnetic relief in the surveyed area is 150γ , (compared to $3,000\gamma$ in the Radon Cirque Area). Two weak anomalies, around 100γ , have been delineated.

I. L9+00N @ $1+00^E$, in the area of Delta Pool.

II. L11+00N to L14+00^N, near the baseline.

As readings were taken at 50 meter intervals, it is very possible that strong, narrow anomalies were missed in the survey. The broad, weak interpreted zones may reflect small magnetite rich fault zones in the area. These two zones should be detailed, with magnetic readings at 10 meter intervals.

CONCLUSIONS AND RECOMMENDATIONS

At this report time, it is understood that two diamond drill holes have been completed on the Mir Claims, one hole through the magnetic anomaly in the Radon Cirque area, and one hole into the main graben and corresponding geochemical and radiometric anomaly on L6+00N & S+00W. Results of the drilling have not been compiled, and therefore are inconclusive. Results are to be submitted at a later date in a report submitted by B. Price, P. Eng.

RADON CIRQUE AREA

The delineated magnetic anomaly provides a very real target for further exploration. Assays of a grab sample of mineralized float indicate low subeconomic values in lead, silver, and uranium; however, previous sampling (1977) indicates 12.3% Pb, 4.35% Zn, 15.5 oz. Ag/Ton, and 1.30 lbs. U_3O_8 /Ton.

The trace of the known magnetic anomaly corresponds well with the downhill dispersion pattern of the geochemical anomalies in the grid area, and

the radioactive, radon springs. There are other radon producing springs in the claim area to the north of the grid.

It is felt that the only economic target within the Radon Cirque area are polymetallic veins. Further exploration should be testing the known magnetic anomaly with at least three diamond drill holes, accompanied by detailed magnetics and prospecting the peripheral area of the grid.

GRABEN AREA:

As in the Radon Cirque area, the most likely target for economic deposits in the graben area are polymetallic veins associated with the main graben structure. Geochemistry has provided very interesting and strong anomalies; however, a rather confused relationship with the various associated elements. The interpreted geochemical anomalies show very little correlation between lead, silver, and uranium. It is concluded that the graben area is a highly mobile geochemical environment, and that further geochemistry alone is not sufficient to pinpoint small polymetallic veins for drill targets.

In contrast to the Radon Cirque area, electromagnetic methods delineated very real conductors in the graben area. The two interpreted conductors related to bedrock source, may reflect the main graben fault. The one diamond drill hole through the graben did not encounter massive sulphides; therefore, the conductor can be explained by non-metallic conducting minerals associated with fault zones (clay, etc.)

Radiometric surveys provided anomalous zones within the grid area; however, caution is required in interpretation, as radiometric anomalies are closely related to topographic features and proximity to bedrock. Furthermore, as great mobility of uranium in soils is suspected, interpretation of radiometric anomalies may reflect transported uranium.

The lack of apparent success with the magnetometer in pinpointing targets within the graben area is twofold.

(1). Magnetite is not necessarily a constituent of all known polymetallic deposits.

(2). The 50 meter station interval, and 100 meter line interval were statistically too great to detect any magnetic response from 5-15 meter wide veins.

The following targets in the graben area are considered worthy of further exploration.

I. L2+00N to L7+00N @ 2+50W. Strong uranium soil and radiometric anomaly, associated with an EM conductor and the main graben fault. If the results of the initial drill hole are totally negative, the priority of this anomaly is greatly reduced. Lack of lead and silver values with the soils suggest a transported accumulation of uranium in the swamp area. Further surface exploration in this area is difficult due to the esker ridge possibly covering the main graben fault.

II. L6+00N to L10+00N @ 1+00^W - Delta Pool Area. Strong lead, weak uranium and silver soil anomalies associated with a strong radiometric anomaly and extreme fracturing and jointing within the quartz-monzonite. Work during the 1977 season indicated springs at Delta Pool were emitting a very high content of radon gas (not experienced in 1978).

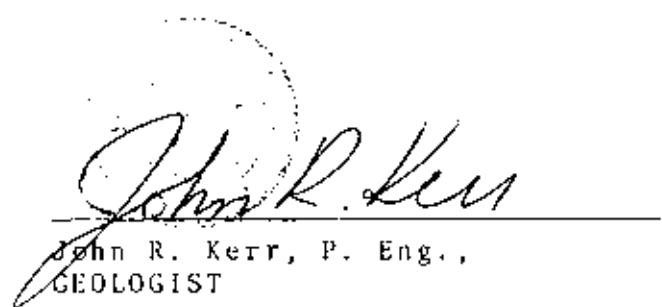
II. Base Line from 20+00N to 45+00N. A strong uranium soil and radiometric anomaly associated with the main graben.

IV. L25+00N & L50+00N @ 4+50^W. Strong lead, and moderate uranium soil anomalies associated with strong radiometric anomalies.

Further exploration in these target areas should be oriented at delineating polymetallic veins on a detailed grid (line spacing ~ 50 meters, and station interval ~ 25 meters). Methods recommended are soil sampling, magnetics, electromagnetics, radiometrics, geological mapping and prospecting.

Respectfully Submitted By:

KERR, DAWSON & ASSOCIATES LTD.,



John R. Kerr
GEOLOGIST

APPENDIX A

COST STATEMENT

COST STATEMENT

Mir Claims, Atlin Mining Division

Labour: June 26 - July 4, 1978
July 6, 7, 8, 9, 15, and 18, 1978.

John R. Kerr, P. Eng.,
15 days @ \$175.00/day \$2,625.00

W. Gruenwald, Geologist
14 days @ \$125.00/day 1,750.00

B. Cross, Assistant
13 days @ \$95.00/day 1,235.00

R. MacArthur, Assistant
14 days @ \$95.00/day 1,330.00 \$ 6,940.00

Transportation:

Helicopter Charter Bell 47G-3B1
24.6 hrs. @ \$207/hr. \$5,092.20

Truck Rental
14 days @ \$20.00/day \$280.00
280 mi. @ \$0.25/mi. 70.00 350.00 . . . 5,442.20

Geochemical Analysis:

565 soil samples @ \$6.05/sample
(Pb, Ag U) \$3,418.25

22 rock samples @ \$5.25/sample
(U) 115.50

6 H₂O samples @ \$5.00/sample
(U, Ph) 30.00 . . . 3,563.75

Prorated Cost - Mobilization and Field Preparation:
(61.9% x \$5,470) 3,385.90

Supplies and Equipment Rental: 1,656.40

Report Preparation:

John R. Kerr, P. Eng.,
11 days @ \$175.00/day \$1,925.00

Drafting 560.00

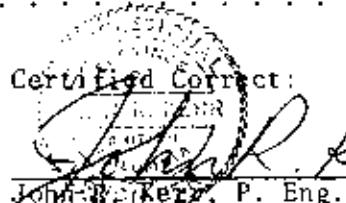
Photo copying and Reproduction. 210.00 . . . 2,695.00

TOTAL \$23,683.25

Applied as follows:

Mir 5 & 6	\$6,314.20
Mir 2 & 3	5,446.20
Mir 7	11,922.85

Certified Correct:


John R. Kerr, P. Eng.

APPENDIX B

CERTIFICATE OF QUALIFICATIONS

JOHN R. KERR, P.ENG.
GEOLOGICAL ENGINEER

1 - 219 VICTORIA STREET
KAMLOOPS, B.C.
PHONE (604) 374-9544

CERTIFICATE

I, JOHN R. KERR, OF KAMLOOPS, B. C. DO HEREBY CERTIFY THAT:

- (1). I am a member of the Association of Professional Engineers of British Columbia and a Fellow of the Geological Association of Canada.
- (2). I am a geologist employed by Kerr, Dawson and Associates Ltd. of #1 - 219 Victoria Street, Kamloops, B. C.
- (3). I am a graduate of the University of British Columbia (1964), with a B. A. Sc. degree in Geological Engineering.
- (4). I have practised my profession continuously since graduation.
- (5). I supervised and assisted in the collection of data as compiled in this report. I am the author of this report which is based on the aforementioned data.



September, 1978,
KAMLOOPS, B. C.

APPENDIX C

GEOCHEMICAL RESULTS

COMPANION UNION OIL CO.

GEOCHEMICAL ANALYSIS DATA SHEET

No. 8-230

PROJECT No.: _____

MIN-EN Laboratories Ltd.

DATE: July 13

705 WEST 15TH ST. NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

ATTENTION: J. Kerr

Soils - Graben Grid

1978.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
	ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm								
61	85	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
MH00N5+00W		52						08						40.5		
4+50W		23						05						3.4		
3+50W		39						14						13.5		
3+00W		32						09						2.3		
2+50W		38						23						460.0		
2+00W		17						05						35.5		
1+50W		33						09						140.0		
1+00W		53						23						725.0		
0+50W		14						04						30.5		
8L		19						08						29.5		
0+50E		24						09						45.5		
1+00E		25						14						155.0		
1+50E		14						06						9.0		
2+00E		14						07						75.0		
M1N2+50E		14						05						22.5		
M2N5+00W		38						07						46.5		
4+50W		50						07						15.0		
4+00W		55						09						31.0		
3+50W		24						06						12.0		
3+00W		25						09						60.0		
2+00W		25						07						1.8		
1+50W		21						09						1.3		
1+00W		11						04						0.8		
0+50W		21						20						3.4		
0+00		12						05						0.3		
0+50E		13						06						0.3		
1+00E		27						15						2.3		
1+50E		15						06						1.3		
2+00E		24						07						0.8		
M2N2+50E		14						08						0.3		

Q. 1181

COMP union oil co.

PROJECT No. _____

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814No. 8-230DATE: July 13ATTENTION: J. Kerr1978.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
	ppm	ppb	ppm	ppm	ppb	PPM	PPM	PPM								
SI	86	90	95	100	105	110	115	120	125	130	135	140	145	155	155	160
M3N5+00W		15						0.9						0.8		
4+50W		14						0.7						1.8		
4+00W		24						1.2						184.0		
3+50W		3.6						0.8						11.5		
3+00W		2.9						0.7						14.5		
2+50W		2.2						0.8						98.0		
2+00W		1.0						0.7						2.3		
1+50W		1.1						1.1						1.3		
1+00W		1.3						0.9						1.3		
0+50W		1.4						0.9						1.3		
0+00		9						0.6						1.8		
0+50E		7						0.6						23.5		
1+00E		1.5						1.0						75.0		
1+50E		1.0						0.5						3.4		
2+00E		9						0.6						24.5		
2+50E		10						0.6						1.8		
M3N3+00E		2.0						1.8						14.0		
M4N0+00		9						0.6						1.8		
0+50E		1.9						1.6						7.5		
1+00E		1.4						0.9						1.3		
1+50E		1.5						1.0						1.3		
2+00E		9						0.6						1.3		
2+50E		1.3						0.9						2.3		
3+00E		1.8						1.2						2.8		
3+50E		1.6						1.4						3.4		
4+00E		1.5						2.1						12.5		
4+50E		1.0						0.6						0.8		
0+50W		1.1						0.7						1.3		
1+00W		1.0						0.8						0.8		
M4N1+50W		8						0.6						1.8		

COMPA

Union Hill Co.

PROJECT No.: 4

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

205 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-58141-1
No. 8-230

DATE: July 13

ATTENTION: J. Kerr

1978.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	U	70	75	80
	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb		PPM ₅₀			
61	86	90	95	100	105	110	115	120	125	130	135	140	145	PPM ₅₀	155	160	
M4N2+00W			7					0.8		Esker					1.3		
2+50W			1.4					0.7		near to swamp					1.8		
3+00W			2.8					0.6		Boulders near Tallys					21.0		
3+50W			1.9					0.7							82.0		
4+00W			9					0.6							2.8		
4+50W			1.9					0.7							4.5		
M4N5+00W			9					0.8							5.0		
M5N0+00			1.7					1.7		in Br. st / sed					1.8		
0+50W			9					0.9							1.3		
1+00W			6					0.5							2.8		
1+50W			1.2					0.9		Esker					1.8		
2+00W			1.4					1.2							2.3		
2+50W			9					0.6		near swamp					9.5		
3+00W			1.3					0.6		edge of swamp					90.0		
3+50W			84					40		Boulders Tallys					305.0		
4+00W			1.0					0.6							6.5		
4+50W			1.6					0.9							9.0		
5+00W			1.3					1.0							3.4		
0+50E			1.2					0.7		Br. st / sed					2.3		
1+00E			1.5					0.8							2.3		
1+50E			1.6					1.0							1.8		
2+00E			1.8					1.0							2.3		
2+50E			1.0					0.7							1.8		
3+00E			1.0					0.7							2.3		
3+50E			1.3					1.3							7.5		
4+00E			1.8					2.0							5.0		
4+50E			1.1					1.0							4.0		
M5N5+00E			1.4					0.8							15.0		
M6N0+00			1.0					0.7							1.8		
M6N0+50E			2750					28		(no conc)					50.0		

(13.266)

COMPA union Oil Co.

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.: _____

MIN - EN Laboratories Ltd.

No. 8-230

705 WEST 15TH ST., NORTHL VANCOUVER, B.C. V7M 1T2
PHONE 604-980-5814

DATE: July 13

ATTENTION: J. Kerr

1978.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	U	70	75	80
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
S:	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	
M6N1+00E			37					11		Soil from dry meadow				1.8			
1+50E			2.20					26						21.5			
2+00E			2.2					09		Gx/Bx 37/sd				0.8			
2+50E			1.9					10						14.0			
3+00E			1.2					09						12.5			
3+50E			1.9					14						9.0			
4+00E			1.5					11						3.4			
4+50E			1.3					11						1.8			
5+00E			2.2					19						1.8			
0+50W			1.2					08						0.8			
1+50W			0.9					07		Esker				1.8			
2+00W			1.6					09						1.8			
2+50W			2.6					10		root & silt				4.0			
3+00W			1.7					09		Edge of swamp				5.0			
3+50W			2.7					13		Freshwater talus				5.5			
4+00W			1.2					09						1.8			
4+50W			1.7					09						2.3			
M6N5+00W			1.2					10						2.8			
M7N5+00W			2.0					29		Mixed talus & B horizon				122.0			
4+50W			2.0					12		"				8.0			
4+00W			1.5					14						11.5			
3+50W			1.3					10		"				1.8			
3+00W			1.0					09		"				4.5			
2+50W			34					11		Silt sample				218.0			
2+00W			9					05		Esker				1.8			
1+50W			1.7					10		"				2.8			
1+00W			1.8					12		"				5.0			
0+50W			9					06		Edge of Lake				1.3			
M7N0+00			1.3					08		Gx/Bx st/soil				1.3			

COMPA union Oil Co...

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7T 1T2
PHONE 1604-980-5814

No. 8-230

DATE: July 13
1978.

ATTENTION: J. Kerr

Sample Number	6 61	10 86	15 90	20 95	25 100	30 105	35 110	40 115	45 120	50 125	55 130	60 135	65 140	70 145	75 150	80 155	U 160
M7N0+50E		295							10	65	1Bn sand				5.5		
1+00E		24							04	5.5	soil from depression				1.8		
1+50E		47							16	10	soil sps				4.5		
2+00E		22							07	65	1Bn sand				0.3		
2+50E		35							06						1.3		
3+00E		114							20						4.3	5	
3+50E		9							06						1.3		
4+00E		11							07						4.5		
4+50E		11							07						5.0		
M7N5+00E		25							18		1min 07 sec				23.5		
M8N0+00		17							08	65	1Bn sand				2.8		
0+50E		87							17	"	"				1.8		
1+00E		48							04	soil from depression					9.5		
1+50E		62							15	4m 0/0					25.0		
2+00E		61							24	65	1Bn sand				8.0		
2+50E		11							03						1.8		
3+00E		10							04						0.3		
3+50E		12							07						0.3		
4+00E		16							10						1.3		
4+50E		17							11						7.0		
0+50W		3.1							07	Edges of ravine					245.0		
1+00W		2.5							06	Esker					5.5		
1+50W		3.2							07	Esker					7.5		
2+00W		3.2							10						0.8		
2+50W		34							08	Ravine talus					3.4		
3+00W		6.1							07	Good soil strd					1.3		
3+50W		1.8							07						2.3		
4+00W		1.5							07						7.5		
4+50W		7.6							37		(mineral)				240.0		
M8N5+00W		1.9							11						10.5		

O. 117

COMPANION OIL CO.

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

705 WEST 15TH ST., NORTH VANCOUVER, BC V7M 1T2
PHONE (604) 980-5814

No. 8-230

PROJECT No. _____

DATE: July 13

ATTENTION: J. Kerr

1978.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	U	70	75	80
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppm	ppm	ppm	ppm
M9N0+00				14				09							1.8		
0+50E				29				11							2.3		
1+00E				3.30				37							13.20		
1+50E				740				53							55.0		
2+00E				7.2				14							4.0		
2+50E				5.6				08							4.0		
3+00E				1.4				06							1.8		
3+50E				3.9				18							39.5		
4+00E				3.6				33							105.0		
4+50E				24				14							7.5		
5+00E				20				22							50.0		
5+50E				1.9				06							4.0		
6+00E				12				06							2.3		
0+50W				34				13							55.0		
1+00W				32				11							3.4		
1+50W				22				09							12.0		
2+00W				3.8				08							12.5		
2+50W				6.2				12							13.5		
3+00W				3.1				08							9.5		
3+50W				7.2				12							37.0		
4+00W				17.9				14							115.0		
4+50W				16.1				24							224.0		
M9N5+00W				6.3				13							14.0		
M10N0+00				24				14							4.5		
0+50E				12.9				21							5.5		
1+00E				4.3				16							25.5		
1+50E				6.95				32							6.0		
2+00E				2.3				09							2.3		
2+50E				17				08							1.8		
M10Q3+00E				47				18							11.0		

COMPANION OIL CO.

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1Z2
PHONE (604) 980-5814

No. 8-230

DATE: July 13

PROJECT No.: _____

ATTENTION: J. Kerr

1978.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	PPM ₁₅₀	PPM ₁₅₅	PPM ₁₆₀
M10N3+50E		18					0.8							1.3		
4+00E		15					1.0							0.8		
4+50E		8					0.9							1.3		
5+00E		13					0.6							2.3		
5+50E		11					0.5							1.8		
6+00E		2.7					1.3							2.8		
0+50W		3.8					0.9							16.0		
1+00W		3.2					1.2							2.3		
1+50W		4.5					1.8							6.0		
2+00W		7.6					1.7							14.0		
2+50W		2.1					0.8							2.8		
3+00W		2.4					0.8							4.0		
3+50W		6.7					0.7							4.5		
4+00W		3.3					0.8							4.5		
4+50W		3.2					0.6							5.0		
M10N5+00W		34					0.8							4.5		
M11N0+50E		6.2					1.3							2.3		
1+00E		8.6					2.2							2.8		
1+50E		2.5					0.9							4.0		
2+00E		11.6					2.0							20.0		
2+50E		5.2					1.5							1.8		
3+00E		2.2					0.7							2.3		
3+50E		2.3					1.4							1.8		
4+00E		1.2					0.7							1.8		
4+50E		1.3					1.0							1.8		
5+00E		6					0.5							0.8		
M11N5+50E		7					0.5							0.8		
M11N0+00		1.2					1.2							5.5		
0+50W		1.3					0.4							84.0		
M11N1+50W		2.5					0.7							3.4		

J. Kerr

COMPANY: union oil co.

PROJECT No.: _____

GEOCHEMICAL ANALYSIS DATA SHEET

MIN + EN Laboratories Ltd.

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

PHONE: (604) 980-5814

No. 8-230

DATE: July 131978.ATTENTION: J. Kerr

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	U	70	75	80
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
SI	R6	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	
M11N2+00W		27					08								2.3		
2+50W			12				05								1.8		
3+00W			32				08								3.4		
3+50W			30				05								3.4		
4+00W		28					06								3.4		
4+50W			63				07								12.0		
M11N5+00W			59				06								11.0		
M12N0+00			26				13								1.8		
0+50E			12				05								1.3		
1+00E			22				07								2.8		
1+50E		14					06								2.3		
2+00E		37.0					148								640.0		
2+50E		1.8					07								3.4		
3+00E		1.9					12								1.8		
3+0E		1.6					10								1.8		
4+00E		8					03								0.8		
4+50E		6.1					18								60.0		
5+00E		1.6					08								1.8		
0+50W		1.9					07								105.0		
1+00W		20					06								6.5		
1+50W		2.6					09								4.0		
2+00W		29					08								2.3		
2+50W		1.6					05								2.3		
3+00W		1.8					08								2.8		
3+50W		3.6					06								4.0		
4+00W		5.3					1.3								2.8		
4+50W		1.8					1.2								0.8		
M12N5+00W		2.6					0.7								2.3		
M13N0+00		1.6					0.6								1.3		
M13N0+50E		3.6					0.7								2.3		

Q.M. 11

COMPAG union oil co.

GEOCHEMICAL ANALYSIS DATA SHEET

No. 8-230

PROJECT No. _____

MIN - EN Laboratories Ltd.

DATE: July 13

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980 5814

1978.

ATTENTION:

J. Kerr

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	PPM	PPM	PPM
61	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
M13N1+00E		1.9						0.7							1.3	
1+50E		7.3						0.4							1.3	
2+00E		1.25						0.9							4.0	
2+50E		3.9						1.1							0.8	
3+00E		1.1						0.6							0.3	
3+50E		1.3						0.6							1.3	
4+00E		2.1						0.9							1.3	
4+50E		2.8						1.3							1.3	
5+00E		1.7						0.9							0.8	
5+50E		1.7						0.8							0.8	
0+50W		2.8						0.9							5.0	
1+00W		4.1						1.0							6.0	
2+00W		3.6						0.7							5.5	
2+50W		2.2						0.6							2.3	
3+00W		1.7						0.6							7.0	
3+50W		2.1						0.8							11.5	
4+00W		1.1						0.3							4.5	
4+50W		3.2						1.1							24.0	
M13N5+00W		2.7						1.1							2.8	
M14N0+00		3.7						0.8							4.5	
0+50E		1.2						0.6							1.3	
1+00E		4.2						1.7							18.0	
1+50E		4.2						0.8							2.3	
2+00E		4.2						0.8							2.8	
2+50E		4.1						0.9							5.5	
3+00E		1.3						0.6							1.3	
3+50E		1.3						0.5							1.3	
4+00E		2.4						0.8							1.8	
4+50E		1.9						1.0							0.8	
M14N5+00E		2.3						1.0							1.8	

Q.D.

COMMUNION OIL CO.

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No:

MIN-EN Laboratories Ltd.

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

No. 8-230

DATE: July 13

1978.

ATTENTION:

J. Kerr

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	PPM	PPM	PPM
M14N1+0.0W			15					0.8						22.5		
1+50W			81					1.8						26.5	0	
2+00W			51					0.8						4.5		
2+50W			44					0.6						4.5		
3+00W			24					0.5						4.0		
3+50W			4.8					0.7						5.5		
4+00W			3.1					0.6						13.5		
4+50W			7.5					0.9						60.0		
M14N5+0.0W			3.7					0.9						2.8		
M15N0+0.0			1.8					0.6						1.8		
0+50E			2.6					1.1						10.5		
1+00E			3.2					1.0						5.5		
1+50E			2.4					0.7						2.8		
2+00E			1.9					0.6						2.3		
2+50E			6.5					1.0						6.5		
3+00E			1.9					0.5						1.3		
3+50E			2.5					0.4						1.8		
4+00E			3.3					1.9						10.5		
4+50E			1.2					0.4						1.8		
5+00E			1.5					0.6						2.3		
0+50W			44.8					2.2						320.0		
1+00W			14.5					1.0						60.0		
1+50W			2.5					0.8						7.0		
2+00W			2.4					0.4						5.5		
2+50W			4.7					0.7						7.5		
3+00W			2.9					0.6						5.0		
3+50W			3.0					0.7						9.0		
4+00W			1.4					0.2						3.4		
4+50W			1.3					0.6						2.3		
M15N5+0.0W			1.6					0.6						2.8		

(Dated)

COMPA

viation Oil Co.

PROJECT No.: _____

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd.

705 WEST 15TH ST., NORTH VANCOUVER, BC V7M 1T2

PHONE 604-980-5814

No. 8-230

DATE: July 13

ATTENTION: J. Kerr

1978.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
	Mo ppm	Cr ppm	Gu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb	U ppm		
	R6	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
M16N0+00			1.4					0.6						2.8		
0+50E			1.4					0.4						1.3		
1+00E			2.0					0.8						1.8		
1+50E			4.9					1.5						1.8		
2+00E			2.5					3.7						47.0		
2+50E			1.8					0.6						1.3		
3+00E			1.4					0.8						0.3		
3+50E			1.8					1.0						0.8		
4+00E			1.4					0.7						0.3		
4+50E			1.9					1.1						0.3		
1+00W			2.8					0.7						3.4		
1+50W			2.4					0.7						5.5		
2+00W			5.0					2.1						3.4		
2+50W			5.3					1.1						4.5		
3+00W			12.5					0.7						29.0		
3+50W			3.0					0.7						2.3		
4+00W			2.1					0.8						10.5		
4+50W			2.0					0.7						12.0		
M16N5+00W			6.5					2.6						55.0		
M17N0+50E			1.8					0.5						2.3		
1+00E			5.4					0.9						2.8		
1+50E			2.2					0.8						0.8		
2+00E			1.7					0.6						1.8		
2+50E			7.8					1.1						7.5		
3+00E			3.3					0.5						0.3		
3+50E			1.2					0.6						0.3		
0+50W			4.9					0.4						9.5		
1+00W			6.6					0.9						6.0		
1+50W			7.4					0.6						7.5		
M17N2+00W			5.0					0.5						8.0		

Q. M. C.

www.aicoi.co

PROJECT No.: 100-0000000

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

205 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

Na 8-230

DATE: July 13

1978.

ATTENTION: J. Kerr

OMF

Section 341

PROJECT No.: _____

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

205 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

No. 8-257

DATE: July 20

ATTENTION:

J. Kerr

1978

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
	ppm	ppb	ppm	ppm	ppm											
M20000				45				19								105.0
0+50E				52				17								16.5
1+00E				26				07								2.3
1+50E				25				12								2.3
2+00E				25				11								1.8
2+50E				88				23								8.5
3+00E				60				23								4.0
3+50E				61				21								1.8
4+00E				114				28								9.5
4+50E				75				07								5.0
5+00E				41				10								2.3
5+50E				46				08								1.8
0+50W				82				33								175.0
1+00W				68				18								26.0
1+50W				58				33								135.0
2+00W				104				37								95.0
2+50W				33				08								6.0
3+00W				26				07								12.5
3+50W				35				14								19.5
4+00W				22				10								6.5
M0N4+50W				21				10								4.0
M2N1+00E				16				08								6.0
1+50E				30				10								34.0
2+00E				38				20								155.0
2+50E				20				25								255.0
3+00E				20				08								7.0
3+50E				20				05								2.8
4+00E				45				16								15.5
4+50E				17				05								2.8
M2N5+00E				20				10								1.8

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COMP

Union Oil

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.: _____

MIN-EN Laboratories Ltd.

No. 8-257

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

DATE: July 20

ATTENTION: J. Kerr

1978

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	U	70	75	80
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	PPM	ppm	ppm	ppm
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	
M2N5+50E		97						14		Ga/Ba 5d/51				13.0			
6+00E		95						21		"				7.5			
6+50E		19						09		"				1.8			
7+00E		26						07		"				4.0			
0+00		14						08						0.8			
0+50W		44						13		Med Step Hill Soil Values.				95.0			
1+00W		66						18						13.0			
1+50W		19						06						9.0			
2+00W		19						09						16.5			
2+50W		28						12						95.0			
3+00W		4.6						13						155.0			
3+36W		9.3						26						315.0			
3+50W		2.7						14						18.5			
4+00W		4.0						08						9.5			
4+50W		86.0						52						345.0			
M2N5+00W		58						09						6.5			
M3N0+00BL		46						11		No. Not 25				12.5			
0+50E		2.0						11						9.5			
1+00E		1.6						08						5.0			
1+50E		3.3						14						4.0			
2+00E		1.6						10						27.0			
2+50E		34						09						6.5			
3+50E		3.8						11						2.8			
4+00E		5.6						22						4.5			
4+50E		22						54						160.0			
5+00E		16						08						10.5			
0+50W		3.2						11						Step Hill			
1+00W		5.1						49						255.0			
1+50W		3.7						10						23.5			
2+00W		4.9						12						4.0			

1161

COMP Union Oil

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.: _____

MIN-EN Laboratories Ltd.
705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE (604) 980-5814

No. 8-257

DATE: July 20

ATTENTION: T. Kerr

1978

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
	ppm	ppb	ppm	ppm	ppb	PPM	PPM	PPM									
61	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160	
M3N3+00W		61					10								6.5		
3+50W				43				06							3.4		
4+00W			358					09							1.8		
4+50W				252				06							7.0		
5+00W			568				19								14.0		
M3N5+50W				5.7				07							2.8		
M3N0+00E			19					11							7.5		
0+50E			13					04							2.8		
1+00E			42					18							34.0		
1+50E			32					06							3.4		
2+00E			3.6					03							4.0		
2+50E			58					13							80.0		
3+00E			2.9					09							3.4		
3+50E			4.9					13							55.0		
4+00E			42					29							165.0		
4+50E			17					07							1.8		
5+00E			18					05							2.8		
0+50W			19					09							1.8		
1+00W			134					22							235.0		
1+50W			33					10							5.0		
2+00W			34					11							3.4		
2+50W			38					09							3.4		
3+00W			91					07							4.5		
3+50W			85					12							10.5		
M3N4+00W			30					10	Y						3.4		
M4N0+00			31					08							25.5		
0+50E			63					29							180.0		
1+00E			28					12							100.0		
1+50E			67					10							8.5		
M4N2+00E			59					10							25.0		

COMH

- Union Oil

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.: - - - - -

MIN-EN Laboratories Ltd.

No. 8-257

DATE: July 20

ATTENTION: ~~Do Not Eat~~

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE: 604-980-5814

1978

20M

Jn... O...

PROJECT No.

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1Z2

PHONE: (604) 960-5814

No. 8-257

DATE: July_20

ATTENTION: J. Karp

1978.

COMPA } - Union - 941

PROJECT No.

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd

795 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1J2

PHONE (604) 980-5814

U No. 8-257

DATE: July 20

1978.

ATTENTION: _____ J. Kerr

COMPAG

Union Oil

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd

PROJECT No.: 100-100000000000000000

C 3-200R
8-272R

DATE: Sept. 6,
1978.

ATTENTION - Mr. Gidluck, J.Kerr

Lab Re-runs
Graben Grid

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2
PHONE 504-580-5514

COMPANY UNION OIL

PROJECT No. 1000000000000000000

GEOCHEMICAL ANALYSIS DATA SHEET

No. 8-272

MIN-EN Laboratories Ltd.
705 WEST 15TH ST. NORTH VANCOUVER, B.C. V7M 1T2
PHONE 682-9800-5414

T2 Pit Samples Swamp DATE: July 25
Graben Grid 1978.

ATTENTION: J. Keef

100

www.Oje

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

PROJECT No.: _____

205 WEST 15TH ST. NORTH VANCOUVER, B.C. V7N 1T
PHONE 604-585-5814

ATTENTION: J. Kerr

No. B-272 R

DATE: Aug. 10,

1978.

COMP

Union Oil

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.

File No. 8-329

ATTENTION: J. Kerr

DATE: Aug. 10,

MIN-EN Laboratories Ltd.
705 WEST 5TH ST., NORTH VANCOUVER, B.C. V7N 1T2
PHONE 604-880-5814

1978.

^T Graben Grid

Re-collected Samples

CCWIP

Union 013

GEOCHEMICAL ANALYSIS DATA SHEET

No. 8-257

PROJECT No.: _____

MIN-EN Laboratories Ltd.

MAIN - EN Laboratorio Ltd.

705 WEST 15TH ST NORTH VANCOUVER, BC V7M 1T2

PHONE (304) 939-5574

ATTENTION

- 5 -

1979

1978.

COMPA

Value 012

PROJECT No. 12

ATTENTION: J. Kerr

GEOCHEMICAL ANALYSIS DATA SHEET

MIN-EN Laboratories Ltd.

705 WEST 15TH ST. NORTH VANCOUVER, B.C. V7N 1T2
PHONE 604-980-5814

No. 8-272

DATE: July 25

Radon Cirque
Detailed Grid
No. notes

1978.

Sample Number	Mo ppm	10 ppm	15 ppm	20 ppm	25 ppm	30 ppm	35 ppm	40 ppm	45 ppm	50 ppm	55 ppm	60 ppm	65 ppm	70 ppm	75 ppm	80 ppm	U ppm
MR0+25W																	
0+03N		168						19									4.0
0+06N		300						24									5.0
0+09N		618						17									4.0
0+12N		526						17									17.0
0+15N		355						17									8.0
0+18N		198						08									11.0
0+00		92						11									4.0
0+03S		66						17									2.8
0+06S		62						13									5.5
0+09S		178						16									6.0
0+12S		189						12									7.5
0+15S		66						04									5.5
0+18S		940						49									21.0
0+21S		152						24									13.0
0+24S		127						24									7.0
MR0+25E																	
0+03S		233						24									41.5
0+06S		194						11									38.0
0+09S		1060						68									95.0
0+12S		236						14									19.5
0+15S		415						08									11.0
0+00		1110						87									18.5
0+03N		1425						95									215.0
0+06N		1220						76									160.0
0+09N		329						17									39.5
MR0+78																	
0+00		2260						102									550.0
0+03N		74						04									11.0
0+06N		178						14									9.5
0+09N		36						08									4.5
0+12N		25						07									4.5
0+15N		70						10									4.0

Scribble

COMPA

union of

GEOCHEMICAL ANALYSIS DATA SHEET

MIN - EN Laboratories Ltd

PROJECT No.: _____

Rec No. 8-272

DATE: July 25

ATTENTION: J. Kerr

705 WEST 15TH ST. NORTH VANCOUVER, B.C. V7M 1T2
PHONE 6-5641 530-5524

*Radon Cirque
Detailed Grid
No notes.*

DATE: July 23

1978.

COMP

Union_014

PROJECT No.:

GEOCHEMICAL ANALYSIS DATA SHEET

MINT-EN Laboratories Ltd.

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T1
PHONE 580-5814

Mc. B-297

DATE: Aug. 1

1978.

ATTENTION: J. Kerr

COMPA **Union Oil**
PROJECT No. _____

GEOCHEMICAL ANALYSIS DATA SHEET

MINT-EN Laboratorieteknik AB

TBS WEST 1518 ST., NORTH VANCOUVER, B.C. V7N 1T2
PHONE 562-5515

No. 8-257

DATE: July 20

1978.

ATTENTION: J. Kerr

July 25, 1978.

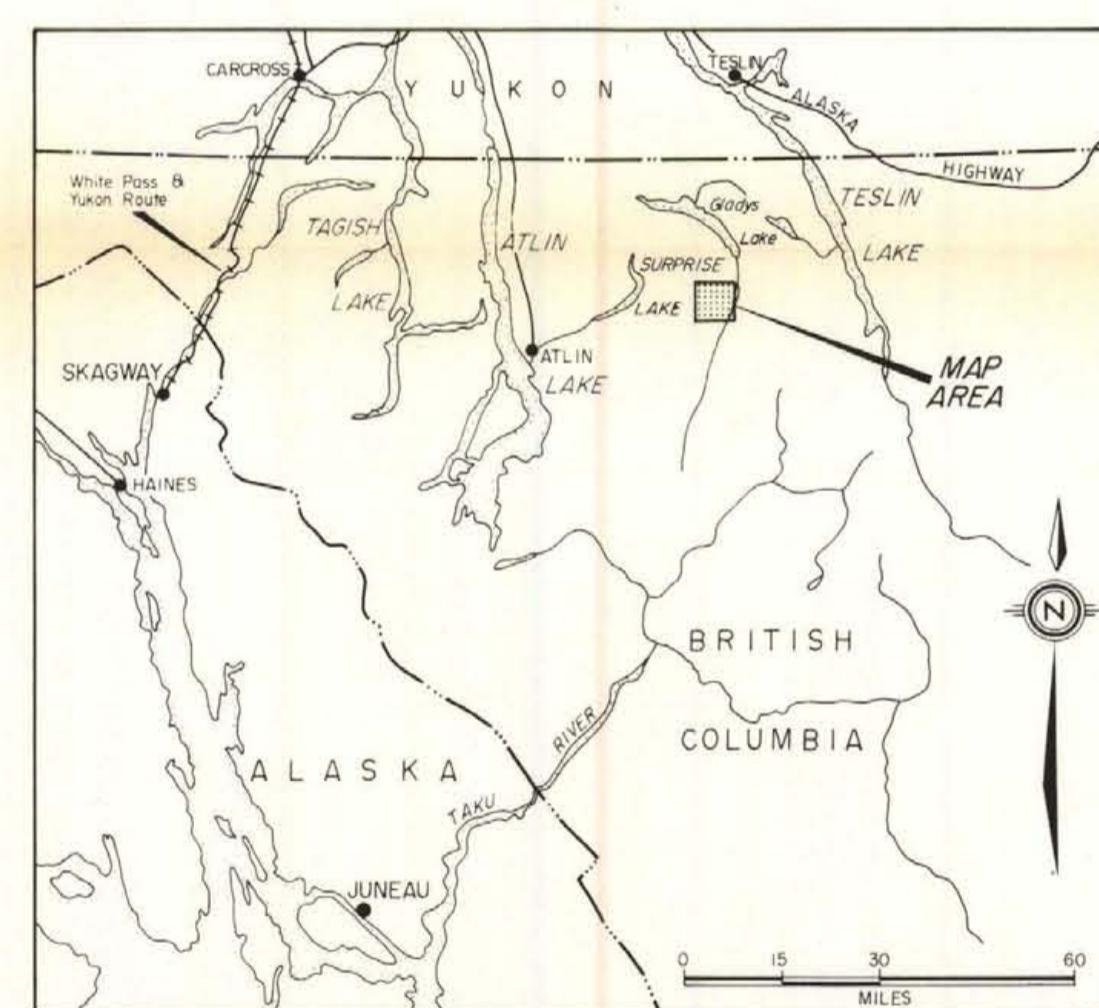
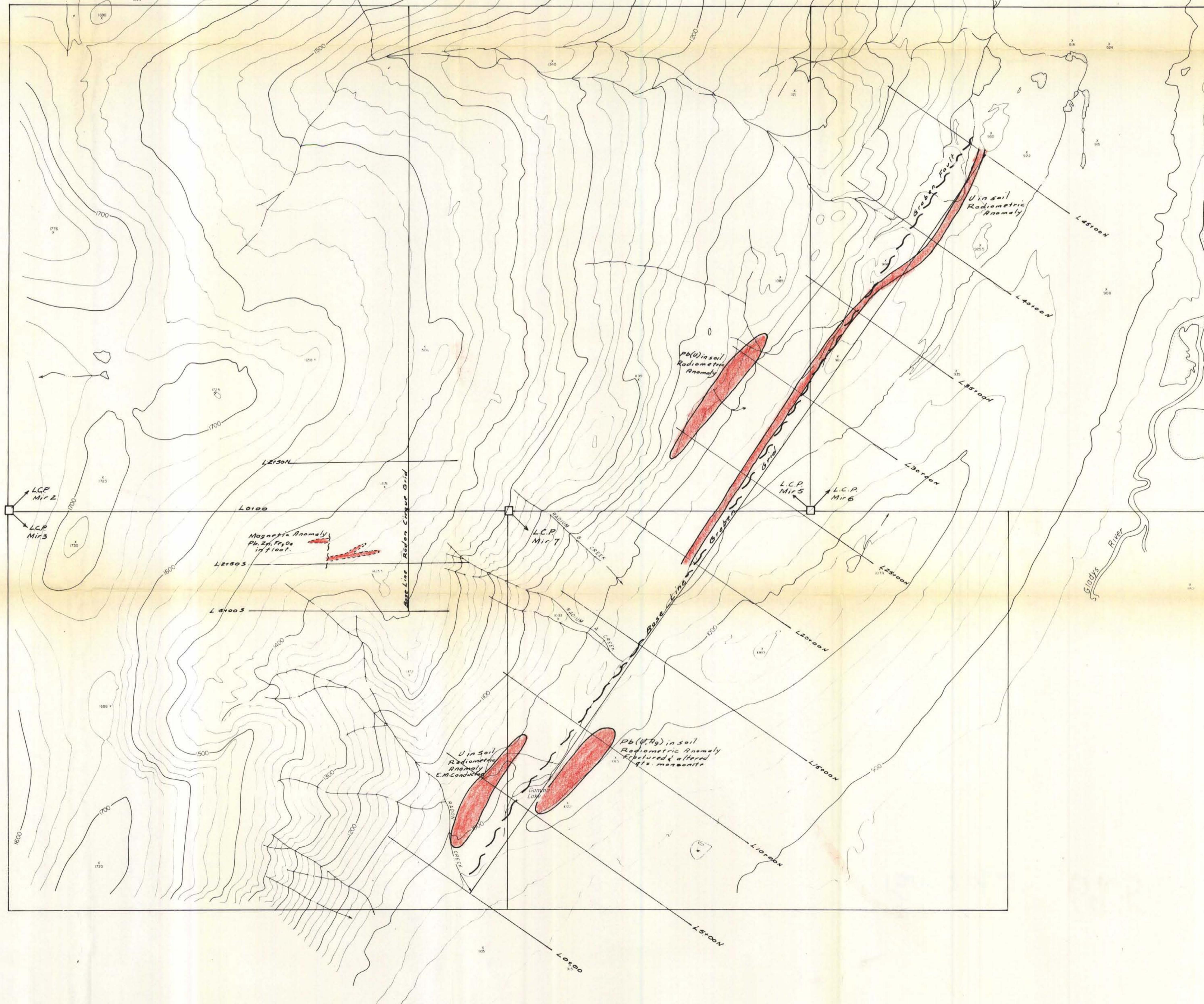
Union Oil Co. of Canada,
335-8th Ave. S.W.,
Box 999,
Calgary, Alta.
T2P 2K6.

File No: 8-272

WATER SAMPLES

<u>Sample Number</u>	<u>U</u> <u>ppb</u>	<u>pH</u>
✓ D-4+00E1+00S	0.2	6.5
✓ D6+00E0+50S	0.2	6.5
D9+70E9+00E	0.2	6.5
E-0+00-3-50W	0.5	7.5
M2N2+50W	3.9	6.7
M35N1W	6.8	6.6
M4N3+40W	8.5	6.7
M11N0+50W	10.3	6.9
M40N3+15E	4.6	7.0
M45N1+50W	3.1	6.7
✓ R1-14+50S	0.5	7.0
✓ R1-23+55S	0.5	7.1
✓ R1-26+84S	0.5	7.2
✓ R1+50S4+50W	1.3	7.3
✓ R2S3+35W	0.5	7.0
✓ R8W24+00S	0.5	7.1
✓ R11W16+00S	0.5	6.9
✓ R11W17+50W	0.5	7.1
✓ R11W19+30S	1.0	6.7
✓ R11W20+00S	0.5	6.9
✓ R15S13+50W	0.2	6.6
✓ R15W14+70S	0.5	6.5
✓ R15S14+50W	0.5	6.9
✓ R15W10+70S	0.1	6.9
✓ R15W11+80S	0.2	6.8
✓ R15W12+50S	0.3	7.0
✓ R18S9+50W	0.5	6.6
✓ R18S12+50W	1.0	6.5
✓ R19S8+80W	0.5	7.1
✓ R24S6+20W	0.2	7.2

Certified By

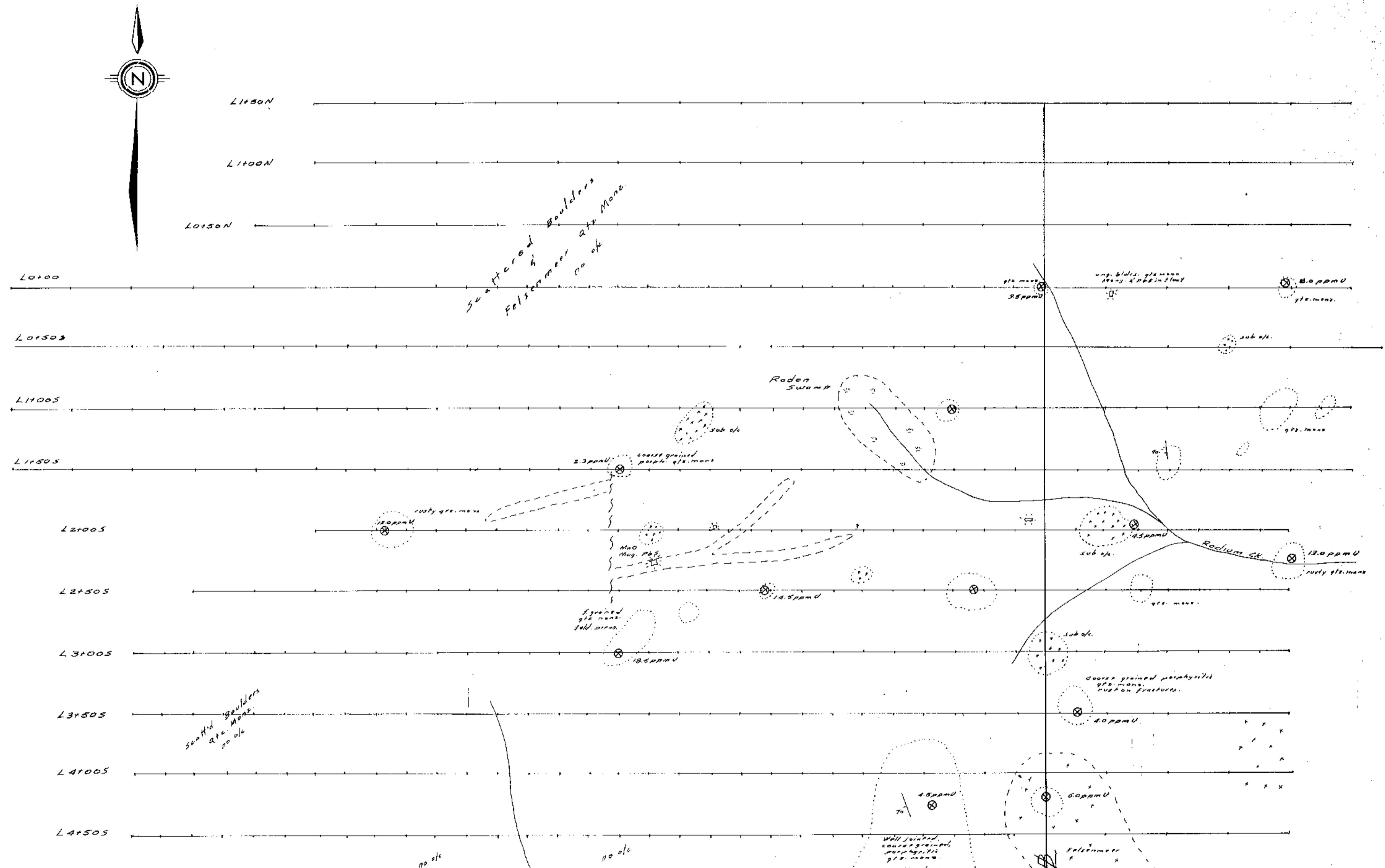


Targets recommended for further exploration
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6905

Part 2 of 2

Contour interval 25 metres

GRANVILLE SQUARE JOINT VENTURE			
MIR PROPERTY			
TROUT LAKE, B.C.			
INDEX MAP			
Grid locations	m. 200 100 0 200 400 600 800 m	1:10,000	PROJECT No. 101A DATE SEPT., 1978 DRAWN J.R.K.
FIG. 175 M&B 2	100	200 400 600 800 m	1:10,000



Part 2 of 2


6905

GRANVILLE SQUARE JOINT VENTURE
MIR CLAIMS - RADON CIRQUE AREA
GEOLOGICAL PLAN
≠
TOPOGRAPHIC FEATURES

LEGEND


- (○) Rock outcrop
≥ 50% exposure
- (X) Strike/Dip - joints & fractures
- (⊗) Rock chip sample - content U
- (□) Hand dug trench
- (*) Boulders
- ==== Interpreted Magnetic Anomaly

Tech. Work By : Kerr, Dawson & Associates Ltd.	Scale : 1:20000 0m 20 50 meters 100
Drawn by : J.R.K.	Date : Sept., 1978
Approved by J.R.Kerr , P.Eng.	Fig No. 175 A 3



GRANVILLE SQUARE JOINT VENTURE
MIR CLAIMS - GRABEN AREA
GEOLOGICAL PLAN
TOPOGRAPHIC FEATURES

GRANVILLE SQUARE JOINT VENTURE
 MIR CLAIMS - GRABEN AREA
 GEOLOGICAL PLAN
 &
 TOPOGRAPHIC FEATURES



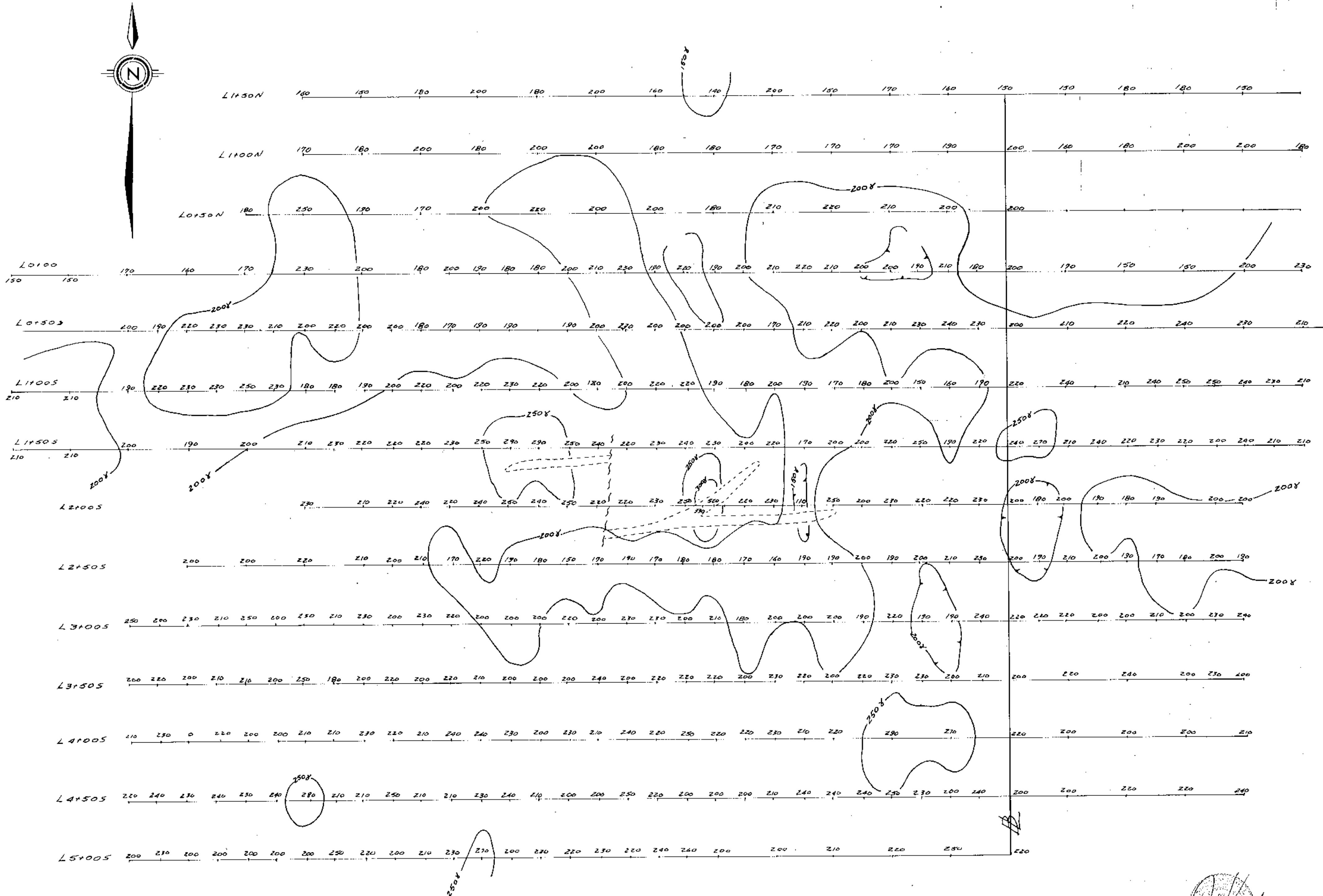
Part 2 of 2

MINERALOGICAL RECORDS ASSOCIATION
6905

LEGEND

- Total Count
Contour Interval - 1000 cpm
 - Residual Uranium Count
20 cpm contour

GRANVILLE SQUARE JOINT VENTURE
MIR CLAIMS - GRABEN AREA
RADIOMETRIC PLAN
Total count + Residual Uranium
McPhar TV-I



Contour Interval - 50 G

Interpreted Magnetic Anomaly


Part 2 of 2 6906

GRANVILLE SQUARE JOINT VENTURE

MIR CLAIMS - RADON CIRQUE AREA
MAGNETIC PLAN

McPhar 700 Magnetometer

Tech Work by : Kerr, Dawson & Associates Ltd.	Scale : 1:2000 0m 20 50 100
Drawn by : J.R.K.	Date : Sept 1, 1978.
Approved by : J.R. Kerr, P.Eng.	Fig No. 175 A 5



Part 2 of 2

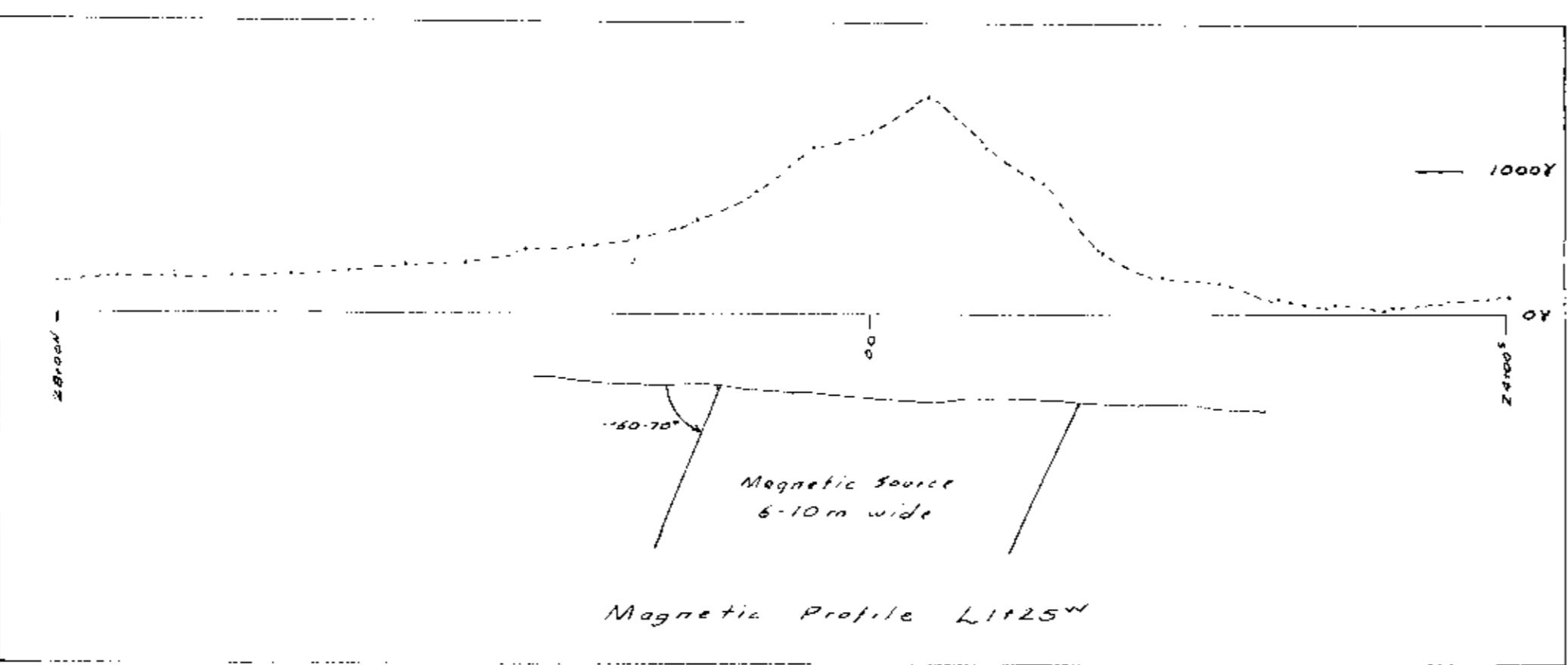
AMERICAN LIBRARIES MONTH
April 1987
6905

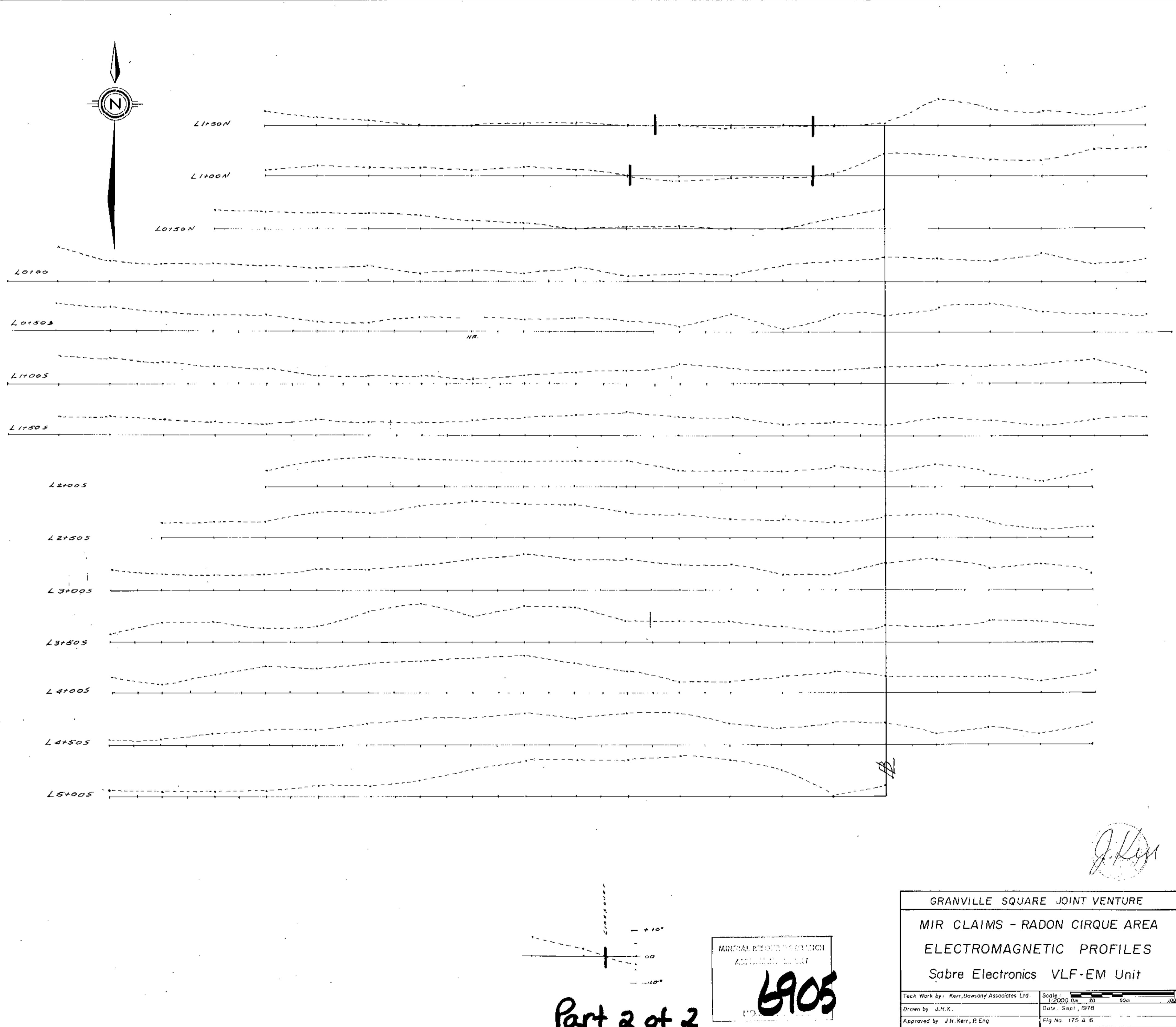
LEGEND


- (Possibly Anomalous 26 - 94 ppm
 - (Probably Anomalous 95 - 164 ppm
 - (Definitely Anomalous > 164 ppm

J. K.

GRANVILLE SQUARE JOINT VENTURE
MIR CLAIMS - GRABEN AREA
GEOCHEMICAL PLAN
URANIUM DISTRIBUTION
IN SOIL







Part 2 of 2

MINERAL SURVEY
LEAD CONCENTRATION
6905


LEGEND

- (1) Possibly Anomalous 45 - 130 ppm
- (2) Probably Anomalous 130 - 220 ppm
- (3) Definitely Anomalous > 220 ppm

GRANVILLE SQUARE JOINT VENTURE

MIR CLAIMS - GRABEN AREA
GEOCHEMICAL PLAN
LEAD DISTRIBUTION
IN SOIL

Scale 1:2,000,000	Date Sept 1970
Drawn by [Signature]	Drawn No. 175-B6



Part 2 of 2

MINERAL INVESTMENT
ACQUISITION

69

L E G E N D

C_2H_5 Possibly Anomalous 1.1 - 2.0 ppm

Probability Estimate (e.g. 2.0 - 2.8 percent)

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GRANVILLE SQUARE JOINT VENTURE

MIR CLAIMS - GRABEN AREA


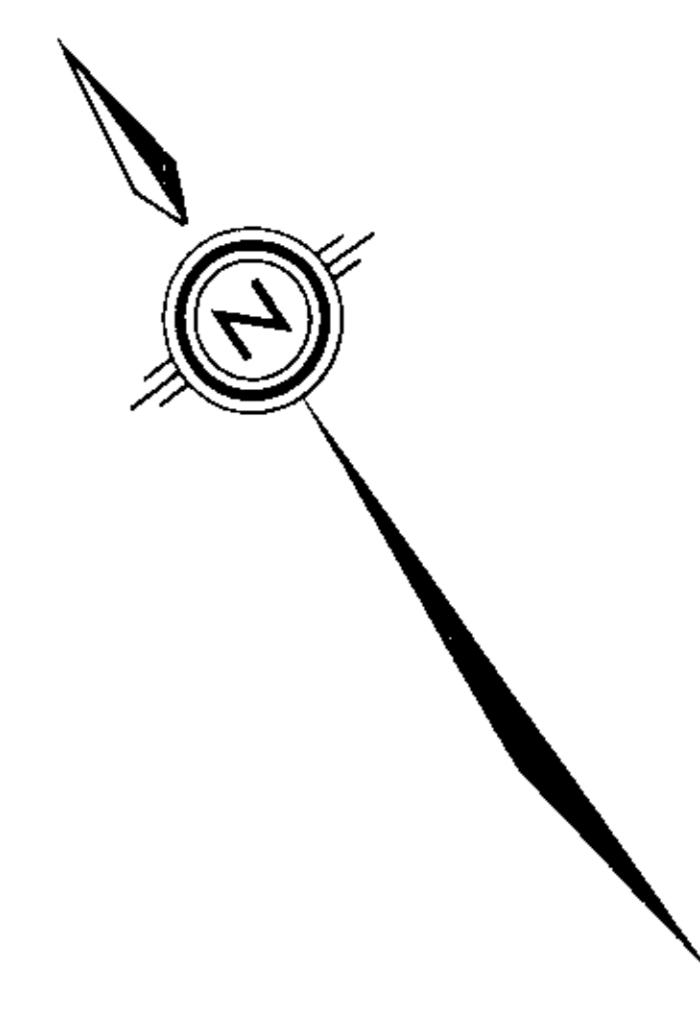
GEOCHEMICAL PLAN

GEOCHEMICAL TRENDS SILVER DISTRIBUTION

SILVER DISTRIBUTION IN SOIL

IN SUIT

Scale 1:2000000

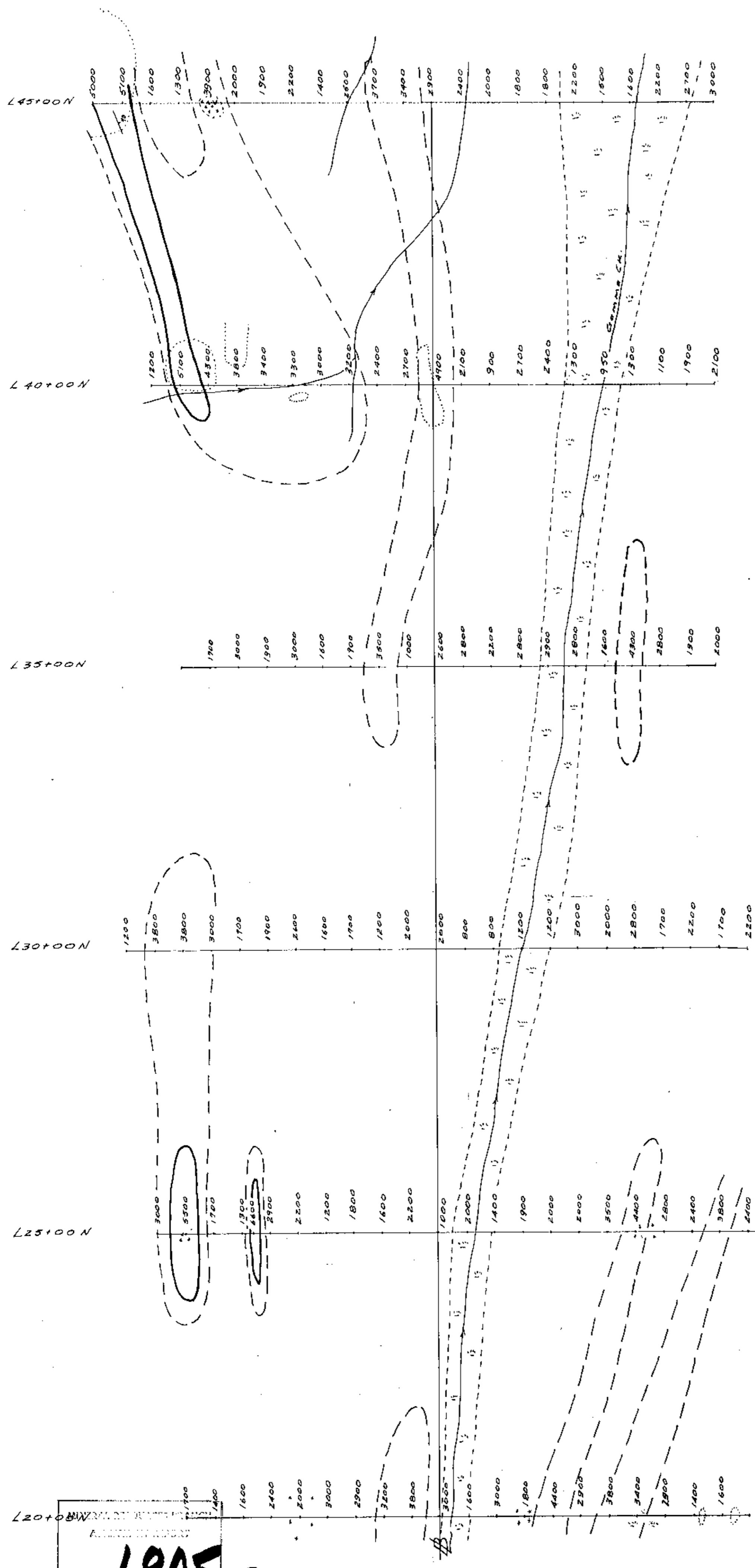


Part 2 of 2

6906

Magnetic Contour Interval - 100Y

GRANVILLE SQUARE JOINT VENTURE	
MIR CLAIMS - GRABEN AREA	
MAGNETIC PLAN	
ELECTROMAGNETIC PROFILES	
Check Work by: Koen Janssen and Associates Ltd	Scale: 1:2000
Drawn by: G.C. Janssen	Date: Sept. 1978
Approved by: J.H.K.	File No.: 175-R-B



LEGEND

- (○) Outcrop Areas
- (◎) Swamps
- (*) Boulders
- (—) 3000 cpm Contour
- (○) 5000 cpm Contour

[Handwritten signature]

GRANVILLE SQUARE JOINT VENTURE

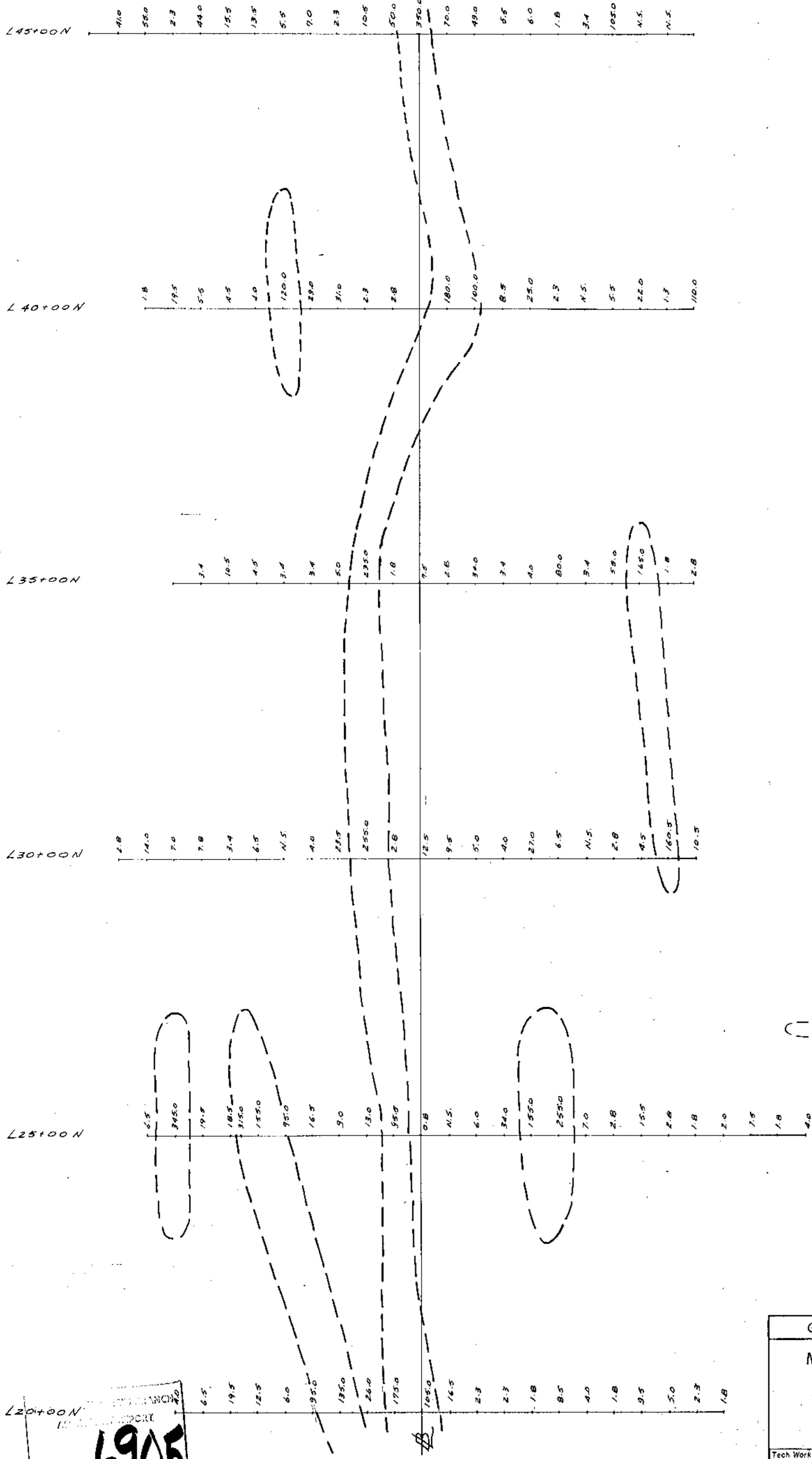
MIR CLAIMS GRABEN AREA
(NORTH EXTENSION)

GEOLOGY & RADIOMETRIC PLAN

Tech Work by: Kerr,Dawson Associates Ltd.	Scale: 1:5000 0m 50 100 meters
Drawn by: J.R.K.	Date: Sept., 1978.
Approved by: J. R. Kerr, P. Eng.	Fig No. 175 B 9

120+00N 125+00N 130+00N 135+00N 140+00N 145+00N

6905 Part 2 of 2



() - Probably Aromalous
Contour $U > 95\text{ ppm}$

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FBI - MEMPHIS

Part 2 of 2

GRANVILLE SQUARE JOINT VENTURE
MIR CLAIMS – GRABEN AREA
GEOCHEMICAL PLAN
URANIUM DISTRIBUTION
IN SOIL

