MAGNETOMETER GEOPHYSICAL SURVEY

FIFTYMILE CREEK PROJECT

PLACER LEASE PL 7564 (5 mile)

N.T.S. 115 J 15 : 63 51' N 140 32' W

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120116

Prepared For :

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JULY 8 1989

Yukon Engineering Services

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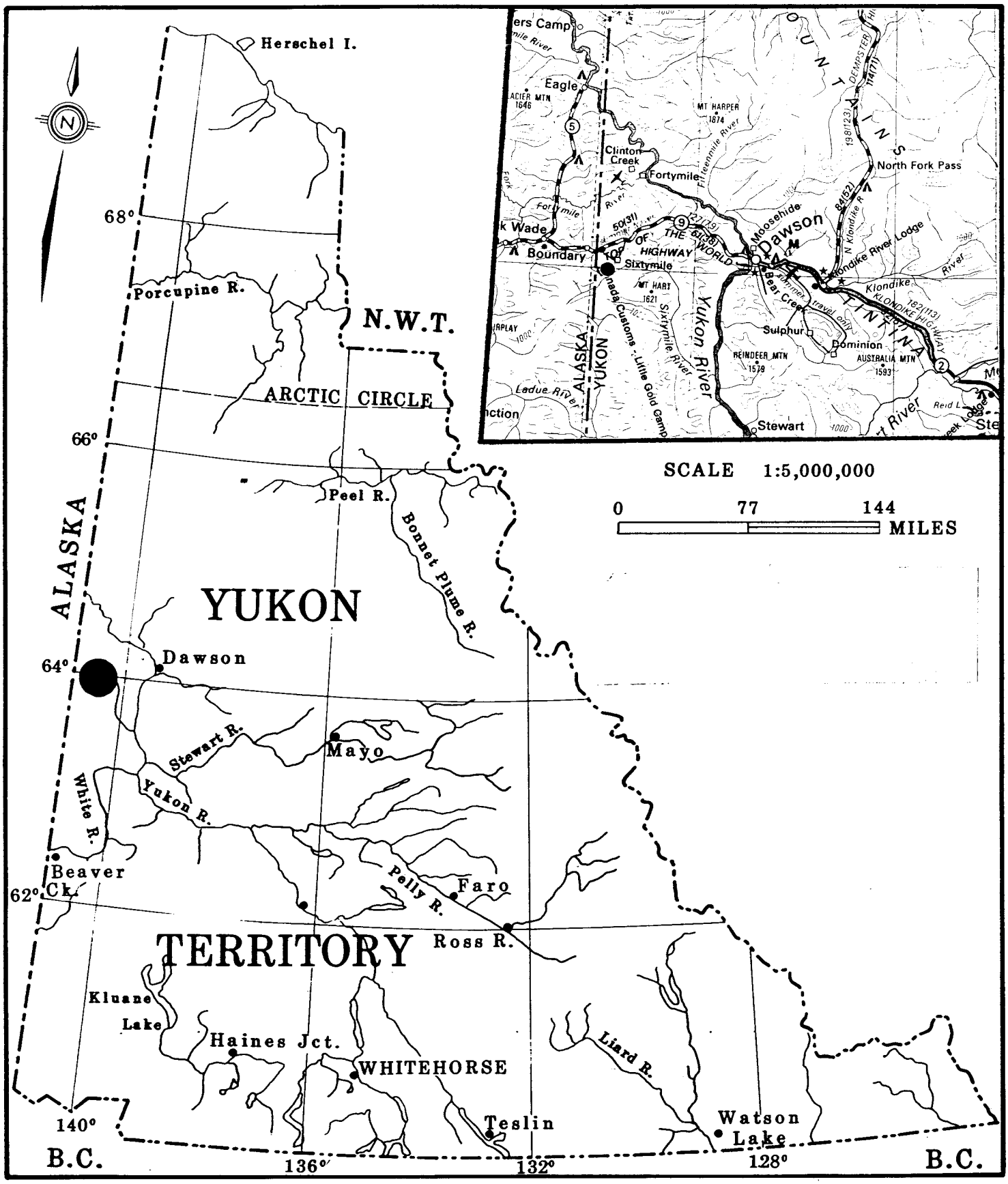
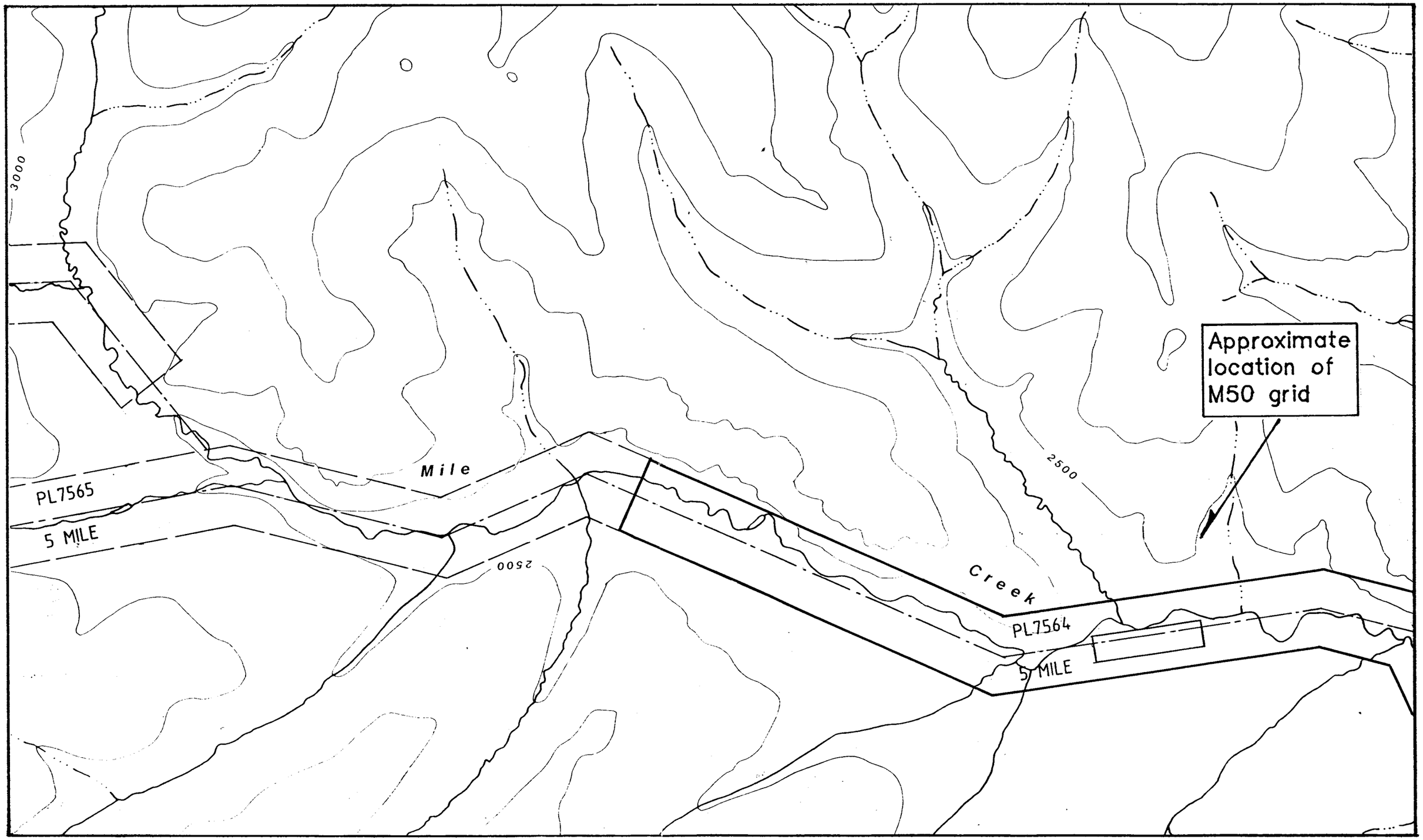
Figure 1. Location Map





SCALE 1:30,000

1000 0 1000 2000

METRES METRES

MAGNETOMETER GEOPHYSICAL SURVEY:

50 MILE CREEK, YUKON TERRITORY 115 J 15

1. SUMMARY:

This report presents the methods, results, and exploration implications of a total field magnetometer ground geophysical survey conducted on the right limit of the upper reaches of 50 Mile Creek, Sixtymile area, Yukon Territory. The survey was conducted by R.L. McIntyre, C.E.T., and D. Holcombe, Geophysicist, of Yukon Engineering Services.

The survey was performed to extend information obtained from a previous gradiometer survey (M. Mollot, 1988), in order to determine first order priorities for follow up physical testing.

Magnetic anomalies, that can be interpreted as local concentrations of unconsolidated magnetite in the stream gravels, were detected on this grid. Exploration implications are discussed on page 4 of this report.

It is important to note that the magnetometer method gives broadly interpreted qualitative information for magnetic minerals located in the stream bed gravels, that may or may not bear a direct relationship to placer gold content. It is therefore recommended that the results of this, and previous surveys, be used to indicate locations for quantitative testing.

The entire premise of the program is based on the assumptions that;

1. **- regionally and locally, (within the area influenced by this creek drainage) the host rocks for gold mineralization, and/or the associated rock types, also bear magnetic mineralization;**
2. **- the stream sedimentation processes that controlled alluvial gold deposition also controlled deposition of other heavy minerals to roughly the same degree;**
3. **- old stream channels, presently buried by alluvium, exist in the valley at varying displacements from the present stream channel.**

The above assumptions have been made for this creek.

2. Property Location and Access

The M50 Grid is located on Placer Lease PL7564 (5 mile), situated on the upper reaches of 50 Mile Creek, approximately fifty miles west-southwest of Dawson City, Yukon. The property is at 63 51'N, 140 32'W, on NTS map sheet 115-N-15, and is fourteen miles east of the Alaska Border. Access is by helicopter aircraft from Dawson City.

3. Equipment and Survey Procedures

The survey was conducted using an EDA Instruments (now Scintrex) OMNI IV proton precession magnetometer, operated in the Total Field mode, with an EDA OMNI IV Base Station Magnetometer for correction of the diurnal drift. Due to the expected high occurance of solar influenced "magnetic storms" in the summer of 1989, operation in the Tie Line mode was not considered an option. On July 3 1989, a severe magnetic storm prevented collection of meaningful data. The day was spent line cutting, and the survey was carried out the following day.
The Base Station was programmed to take total field readings at twenty second intervals to ensure accurate corrections for the rapidly collected field survey data. The instrument is sensitive to 0.1 nano-Teslas (1 nT=1 gamma), necessitating diurnal drift and micropulsation correction to survey data to discern true anomalies.

The grid parameters and direction of travel are programmed into the OMNI IV by the operator and are automatically updated at each position increment. The position information, sensor decay rate and sensitivity, total magnetic field and statistical error are displayed to the operator, who then stores the information in the 48k memory of the magnetometer. This system enables the operator to assess measurement quality, and take repeat readings if necessary.

The daily survey information is manipulated with the following procedure:

a) - field mag unit connected to base station; data transferred and corrected;
b) - base station unit connected to laptop computer; corrected field data, as well as base station readings, dumped to gwbasic software;
c) - both data files transferred to EMXS software for review and preliminary data manipulation.

The final review, interpretation and presentation of results is performed in the Whitehorse office of Yukon Engineering Services. This involves the computer generation of a three dimensional digital terrain model, and extraction of cross sections of each grid line. The corrected total field magnetic values are presented in this report as both cross sections and planimetric contour maps.

The data is interpreted and geophysical anomalies are discussed later in this report.

4. Geophysical Grid Parameters

The grid was established on the right limit bench of upper Fiftymile Creek, approximately seven kilometres downstream from the U50 Grid. This area was selected because it contains some of the largest bench type deposits on the clients property. In this area, the alluvial deposits are present over approximately 200 metres accross the valley, with the present day creek constrained on its left limit by a 10 to 50 metre high, near vertical rock face.

The grid was entirely cut out by hand methods, with the following dimensions:

Baseline	: 750 metres; Azimuth 270
Crosslines (stationing)	: at fifty metre intervals
Offsets	: at five metre intervals
Line length (max. offset)	: 100 m N, 80m S

5. Regional Geophysics and Geology : Magnetic Implications

The 1:63,360 scale aeromagnetic map (GSC Map 4268G) in the immediate area of the grid shows low magnetic relief, with a slight northwest-southeast grain. The high magnetic relief of the Cretaceous syenite unit approximately six kilometres to the north would not affect this grid, therefore allowing the ability to discern the magnetic response from the Quaternary deposits.

The U50 Grid area is entirely underlain by the Paleozoic age Pelly Gneiss unit, a foliated to gneissic granodiorite; the sparse outcrop exposure indicates a generally shallow (<20)dipping, W-N-W strike of the unit in this area. This area of Fiftymile Creek has a thick enough surficial blanket to enable a differentiation between the bedrock magnetic signature and that of the alluvium. Bedrock exposures at the creek level were noted during the survey, and magnetic response checked for correlation.

6. Results and Recommendations

As previously discussed in this report, the results are indicative of magnetic mineralization, rather than gold.

The target in this area (perhaps the best potential for tonnage of alluvial gravels within the clients Fiftymile Creek holdings) is stranded channels in the bench itself. The grid covers a fairly large expanse of virtually flat terrain. It exhibits typical permafrost features, including grass hummocks, stunted Black Spruce, and faint polygonal texture. A ridge of outcrop parallels the creek adjacent to its right limit, therefore the mag grid was established with cross lines at least twenty metres from the creek edge.

Inspection of the contour plan of the entire grid shows low overall magnetic relief, but an alignment of the contoured highs does parallel the creek, on both sides of the baseline. This can be interpreted as response from two separate strata of gravels, stranded after succesive regional uplifting and stream downcutting. The "channel" aligned along 60 m N, throughout the grid length, shows the best response. The best single point anomaly is centred at Station 400 W, 60 N.

A program of backhoe or bulldozer trenching should be implemented on this grid, in order to intersect these interpreted "channels". Obviously, cross-valley trenching would give the most detailed information about ore volumes and grade. Depending on the testing-indicated relationship between magnetite and gold content, inferences can be made about the relative value of the northern and southern mag-indicated channels.

7. References

1. Geological Survey of Canada, Geophysics Paper 4268 Crag Mountain (115 N 15) Aeromagnetic Series 1966; 1:50,000 Scale map.

2. Breiner, S. , 1973 "Applications manual for Portable Magnetometers", GeoMetrics, Sunnyvale California.

3. Hood, P.J., 1977 "Geophysics and Geochemistry in the Search for Metallic Ores", G.S.C. Economic Geology Report 31.

4. Mollot, M. 1988, Fiftymile Creek Gradiometer Survey, unpublished report submitted to D.I.A.N.D for assessment credit.

CERTIFICATE

I, Robert L. McIntyre, C.E.T., of Whitehorse, Yukon Territory, do hereby certify that;

1. I hold a Geological Technician Diploma from Sir Sandford Fleming College, Lindsay, Ontario, and I have been practising continuously since graduation in 1979;

2. I am a Certified Engineering Technician (Geology) for Alberta and Yukon, by the Alberta Society of Engineering Technologists.

3. The geophysical field work, and report preparation was performed by me personally, with the assisstance of Mr. D. J. Holcombe, B.Eng. .

4. I have based conclusions and recommendations contained in this report on my knowledge of geophysics, my previous experience, and on the results of field work conducted on the property.

5. I hold no interest, directly or indirectly, in this property other than professional fees, nor do I expect any interest in the property, or any other of Mr. Mollots' holdings.

R. L. McIntyre, C.E.T.
Manager, Exploration Division

Whitehorse, Yukon Territory
July, 1989

APPENDICES

N

N 1200

N 1000

N 800

E 800

E 1000

MIDDLE 50 MILE CREEK

TOTAL FIELD MAGNETOMETER

2 GAMMA CONTOURS

DATE	SCALE	DRAWING
06-09-1988	1: 2640	

YUKON ENGINEERING SERVICES

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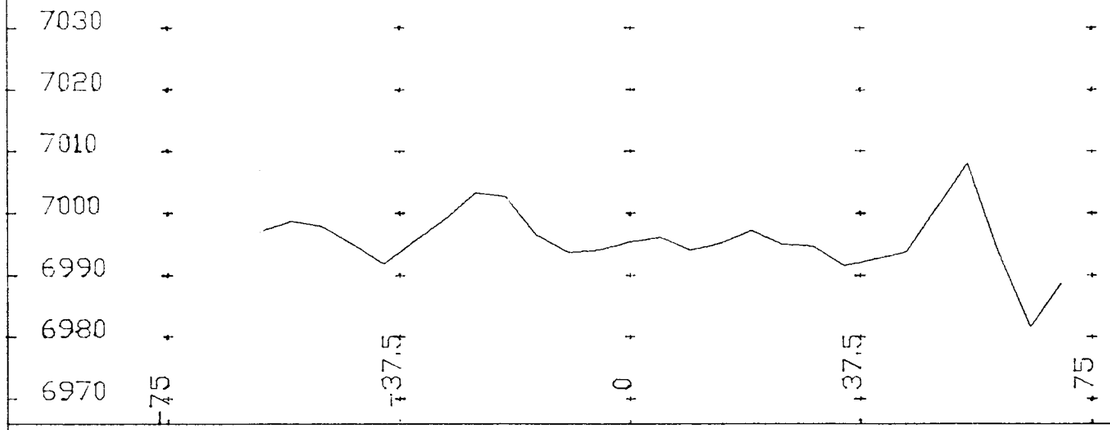

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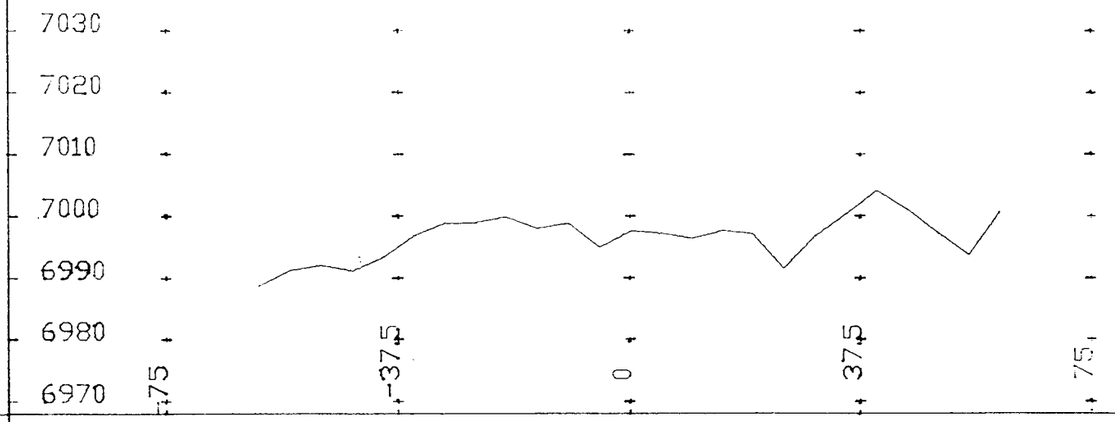

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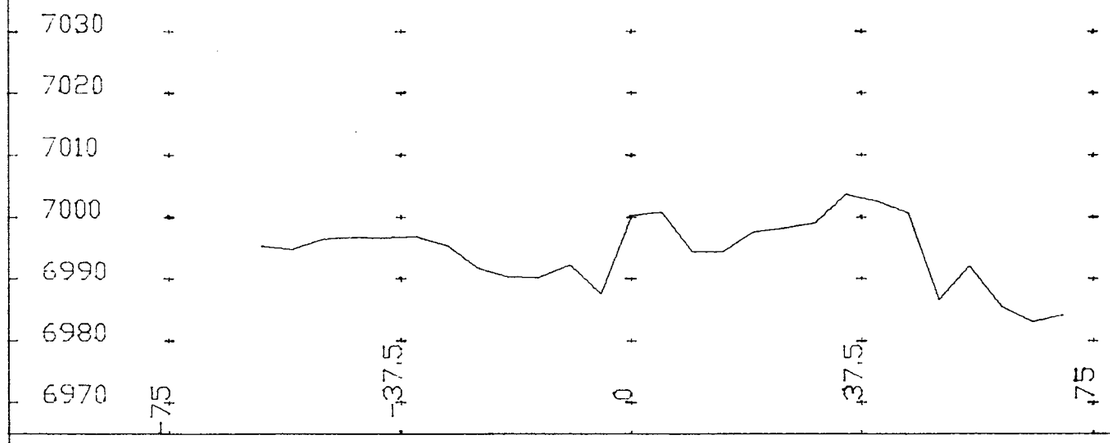

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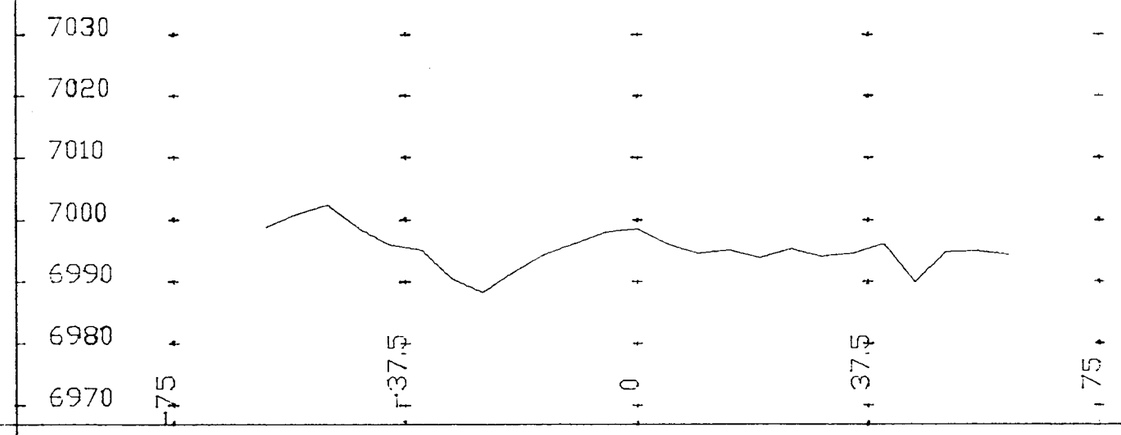

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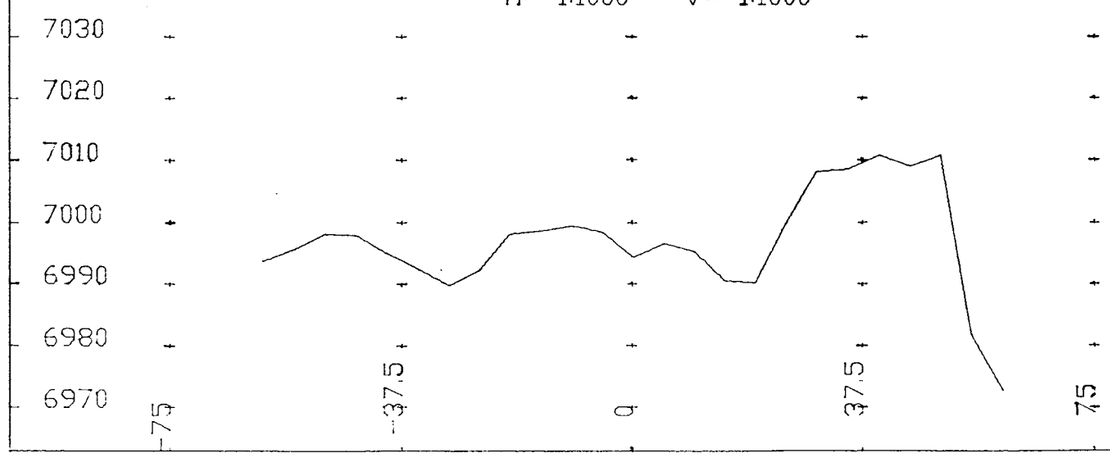

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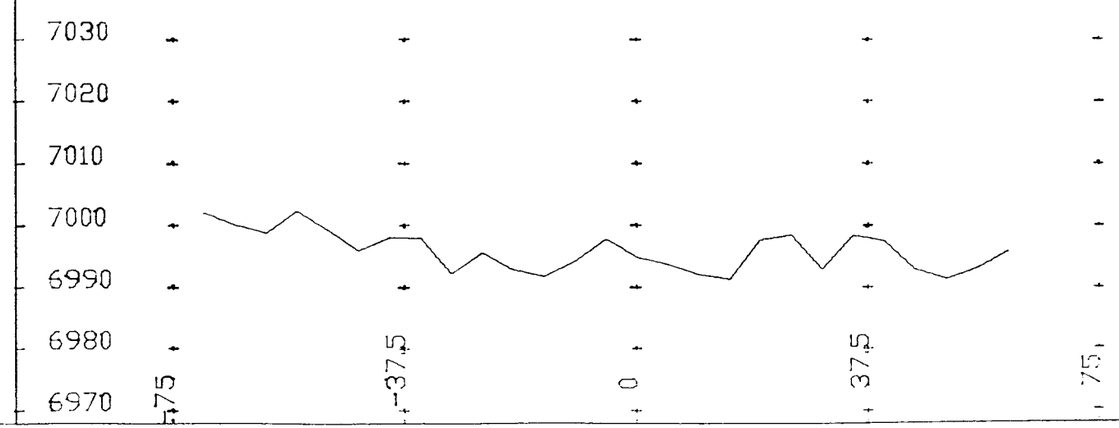

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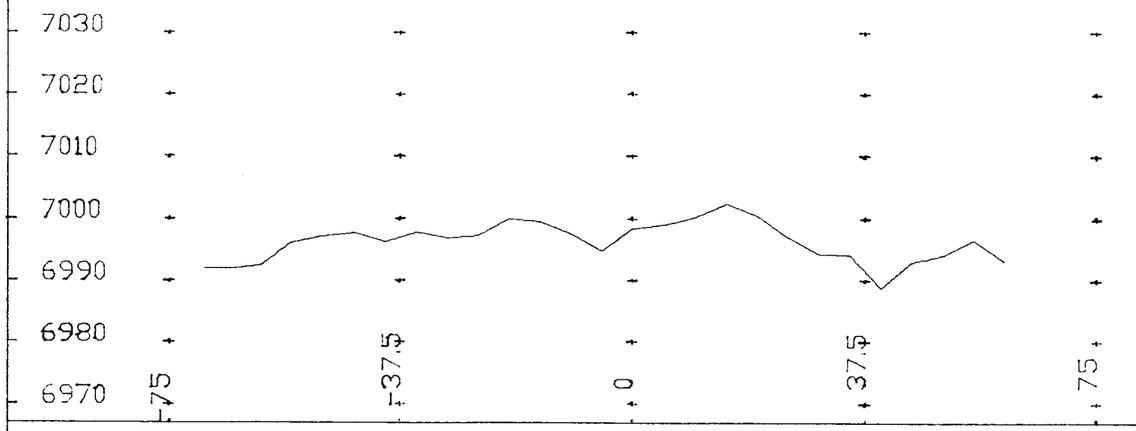

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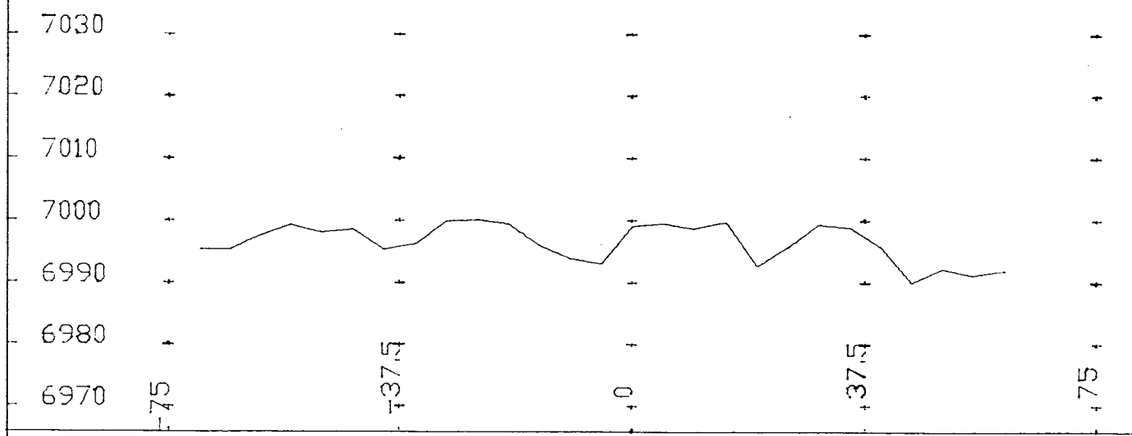

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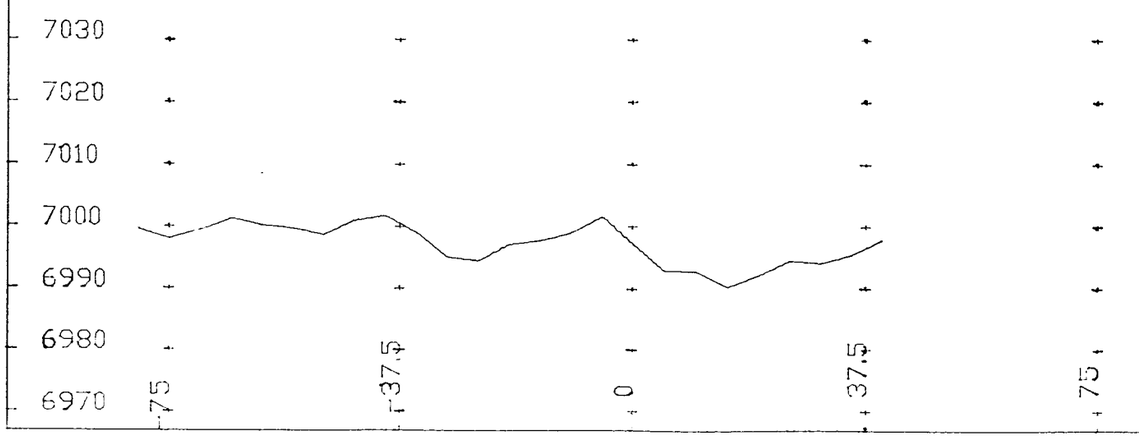

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