

ARIS SUMMARY SHEET

Regional Geologist, Cranbrook

Off Confidential: 96.09.20

ASSESSMENT REPORT 24044

MINING DIVISION: Fort Steele

PROPERTY: Mar 3

LOCATION: LAT 49 21 15 LONG 115 59 30
UTM 11 5467097 573229
NTS 082G05W

CLAIM(S): Mar 3

OPERATOR(S): O'Grady, Frank

AUTHOR(S): O'Grady, Frank

REPORT YEAR: 1995, 18 Pages

COMMODITIES

SEARCHED FOR: Lead, Zinc

KEYWORDS: Helikian, Aldridge Formation, Quartzites, Argillites, Shear zones
WORK

DONE: Geophysical

EMGR 6.5 km; VLF

MAGG 6.5 km

RELATED

REPORTS: 18117, 19217, 19989

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORTS

DATE RECEIVED
SEP 26 1995

GEOPHYSICAL REPORT

on the

MAR 3 Mineral Claim

situated in the

FORT STEELE MINING DIVISION

NTS 82F/8E and 82G/5W

Latitude 49 21' 15" N
Longitude 115 59' 30" W

Owner / Operator: Frank O'Grady, P.Eng.
587 Wallinger Ave.
Kimberley, B.C. V1A 1Z8

Work performed during August 1995

FILMED

Report by Frank O'Grady, P.Eng.

Report submitted: September 20, 1995

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

24,044

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INTRODUCTION

The MAR 3 claim consists of 12 units, with record number 209787. It is situated in the Fort Steele Mining Division. The anniversary date for this claim is 20 September.

The registered owner and operator of the property is Frank O'Grady of 587 Wallinger Ave., Kimberley, B.C. V1A 1Z8.

The MAR 3 claim is situated 22 kilometers southwest of Cranbrook, B.C., (map 1), and is centered at latitude 49°21'15", longitude 115°59'30" (map 2).

Access to the claim is by proceeding South of Cranbrook on Highway 3 a distance of 12 kilometers to the Lumberton Road, also known as the Moyie River Road. This road is followed West a distance of 13 kilometers to the junction with the Semlin Creek Road. The Semlin Creek Road is followed South to the 4 kilometer sign, during which the Moyie River is crossed. The McNeil Creek is then followed South. The northern boundary of MAR 3 mineral claim is crossed a few meters North of the 7 kilometer sign on the McNeil Creek Road, this point is 560 meters West of the northeast corner of MAR 3 (map 3).

The claim is on the West facing slope of McNeil Creek valley. The elevation ranges from 1600 meters to 1930 meters above sea level. Forest cover near the bottom of McNeil Creek valley is primarily Balsam and Spruce. Approximately 40% of the claim has been clear cut logged and replanted. The remainder of the claim is covered with small diameter Lodgepole Pine growing close together.

The type of deposit being explored for on the claim is either a Sullivan type massive sulphide body or a Vine type shear zone with economically mineable reserves.

From May 1988 to March 1989 a program of linecutting, geophysical surveying, geological mapping and diamond drilling was conducted on a portion of the MAR 3 mineral claim. The owner of the property was South Kootenay Goldfields Inc. The exploration program was directed by Bapty Research Ltd. During 1987 a program of reconnaissance geochemistry and geology was conducted by owner Ed Frost. During 1979 a limited program of reconnaissance soil sampling and one chip sample was conducted by St. Eugene Mining Corporation on behalf of owner Ed Frost.

The exploration program conducted on behalf of South Kootenay Goldfields during 1988 and 1989 was focused on the contact between the Lower Aldridge and the Middle Aldridge (LMC) Formation which is present at depth on MAR 3. The focus of the 1995 exploration program was to search for mineralized shear zones similar to the VINE deposit which is situated 12 kilometers northeast of the claim.

The rocks underlying the claim are of the Aldridge Formation. Geological evidence indicates the rocks underlying the claim group belong to the Middle Aldridge Formation. The rock types are sediments, composed of quartzites and argillites, and intrusives of diorite composition belonging to the Moyie intrusives. The Middle Aldridge rocks are stratigraphically above the Sullivan orebody at Kimberley, B.C. 35 kilometers to the North.

A grid was installed over the area to be explored during 1994. During 1995 a program of geophysics, including a VLF-EM survey and a Magnetometer survey, was conducted. A total of 6.55 kilometers of VLF-EM survey and 6.55 kilometers of magnetometer survey were conducted.

GEOPHYSICAL SURVEY

VLF - EM SURVEY

A VLF-EM (very low frequency electromagnetic) survey was conducted by traversing the lines and taking a reading at 25 meter intervals.

The instrument utilized for the survey was an EM16 VLF-EM manufactured by GEONICS LTD. of Mississauga, Ontario, Canada. The specifications of the instrument form appendix 1 of this report. The VLF transmitting station utilized for the survey was NLK Seattle, Washington, U.S.A.

The readings were taken by orienting the reference coil along the magnetic lines. This was accomplished by swinging the instrument back and forth to locate the minimum sound. The sound was further minimized by adjusting the quadrature component. The reading on the inclinometer was then noted along with the quadrature.

The profiles were plotted on a horizontal scale of 1:5000 and a vertical scale of 1 centimeter equals 40% (map 4). A plan with the conductors and other interpretations by the authour was plotted at a scale of 1:5000 (map 5).

STATION SELECTION

No VLF transmitter is ideally situated to detect shear zones oriented similarly to the mapped shear zone present on the property. The Seattle station was selected for clarity of signal.

ANALYSIS OF VLF-EM RESULTS

Conductor One

This conductor is considered, by the author, to be the most important conductor encountered on the survey because of its proximity to the mapped shear zone situated approximately 100 meters West of the base line between line 6 North and 8 North.

On line 8 North, the electromagnetic profile, while remaining positive, exhibits a sharp dip in the negative direction at station 1+00 West, with a substantial positive (+60%) shoulder adjacent to it on the East side. The readings on this section of line 8 North were repeated because of the fluctuation to determine if they were valid readings. The second set of readings were nearly identical. This is probably caused by the mapped shear zone. On line 10 North, station 1+00 West to station 2+50 West, the in phase component crosses the positive to negative reference line four times. This is probably an extension of the mapped shear zone, described on line 8 North. Widening of the zone would cause the wider, less well defined, electromagnetic

profile. The slight electromagnetic cross over at the base line on line 12 North probably indicates the phasing out to the northwest of the mapped shear zone.

As a result of comparing profiles of the quadrature with models of known electromagnetic conductors there appears to be more than one well defined conductor on line 8 North and line 10 North. This is compatible with a shear zone interpretation rather than a tabular, metallic conductor. On line 12 North the quadrature is not affected. This also indicates the phasing out of the mapped shear zone.

Conductor Two

The axis of this conductor is situated at station 6+50 West on line 10 North. Modeling of this conductor indicates a spherical conductor. This conductor is not present on line 12 to the North or line 6 to the South.

There are two interpretations for conductor two:

1. An isolated conductive clay or conductive boulder in the overburden.
2. An increase in sulphides locally concentrated in the Aldridge sediments or Moyie intrusive.

Conductor Three

The electromagnetic profile dips from positive to negative briefly at station 3+00 East on line 8 North. There is no model available to assist in interpretation of this profile. The most probable explanation of this phenomenon is that it is caused by the adjacent conductive overburden that appears to be present on line 8 North to the end of the line at 6+00 East.

Conductor Four

The electromagnetic profile is high positive at the following locations:

Line 8 North; station 3+00 East to station 6+00 East.

Line 10 North; station 2+00 East to station 6+00 East.

Line 12 North; station 2+00 East to 6+00 station East.

The electromagnetic profile appears to be a reflection of conductive clay overburden. A high clay content is exhibited in several of the road cuts on the claim and in the surrounding area.

Conductor Five

The western extremity of line 8 North and line 10 North exhibit a high positive electromagnetic profile. This phenomenon is also present to a lesser extent on line 6 North.

The most probable explanation is the influence of the well documented McNeil Creek fault situated to the West of the westerly extent the lines.

MAGNETOMETER SURVEY

Instrument Description

The survey was conducted with a Scintrex MP-2 Proton Precession Magnetometer (S.N.70238) rented from T. Hasek Associates Ltd. with offices at 704-850 West Hastings Street, Vancouver.

Survey Method

A base station was established on the North edge of the grid. Readings, representing total magnetic field in gammas, were then taken at 25 meter intervals along the grid lines and recorded in a note book. The instrument was looped back to the base station at approximately two hour intervals.

Data Treatment

A diurnal correction was made for each loop traverse. In addition, the total drift during the traverse was distributed evenly over the traverse. The finished data is on Map 6 MP-2 Proton Magnetometer Survey of this report.

Interpretation and Valuation

The showing on claim Mar 3 mineral claim is situated 100 meters West of the base line between line 6 North and line 8 North. There is no magnetic expression associated with the mineralized shear zone that represents the showing on this property.

Four weak magnetic highs are present on line 10 North and line 12 North (map 6). The most easterly magnetic high is centered approximately 100 meters East of the base line. The most westerly magnetic high is centered 725 meters West of the base line 12 North. A third weak magnetic high is situated slightly West of the base line on both line 10 North and line 12 North. The fourth weak magnetic high is centered 250 meters West of the base line and is present on line 10 North only.

A weak magnetic low is present on line 6 North approximately 300 meters East of the base line.

The four weak magnetic highs are possibly caused by the Moyie intrusives known to underlay portions of this general area. No significance is attributed to these weak anomalies in the search for mineralized shear zones on this claim.

The weak magnetic low may represent a transition from intrusive to sediment. Again, no significance is attributed to this weak low anomaly.

The absence of well defined magnetic highs and lows on mineral claim Mar 3 probably reflects the presence of underlying sediments.

The highly magnetic mineral, pyrrhotite, is associated with the Sullivan deposit. The Sullivan deposit is hosted by the Aldridge Formation; therefore, the magnetometer survey was conducted to expose the presence of pyrrhotite, if it were present. There does not appear to be any pyrrhotite present in the area underlying the area surveyed.

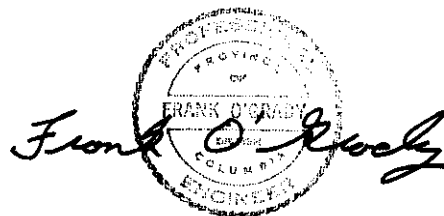
ITEMIZED COST STATEMENT

	TOTAL COST
Frank O'Grady, P.Eng. August 28 - 31; 4 days @ \$300/day	\$1,200.00
Field Assistant, J. O'Grady August 28 - 31; 4 days @ \$100/day	400.00
Transportation: one 4 x 4 truck August 28 - 31; 4 days @ \$75/day	300.00
Instrument Rental Scintrex MP-2 Proton Precession Magnetometer and EM 16 VLF-EM, August 28 - 31: 4 days, 1 week @ \$641/wk	641.00
Delivery	20.97
Report Preparation	<u>400.00</u>
TOTAL	\$2,961.97

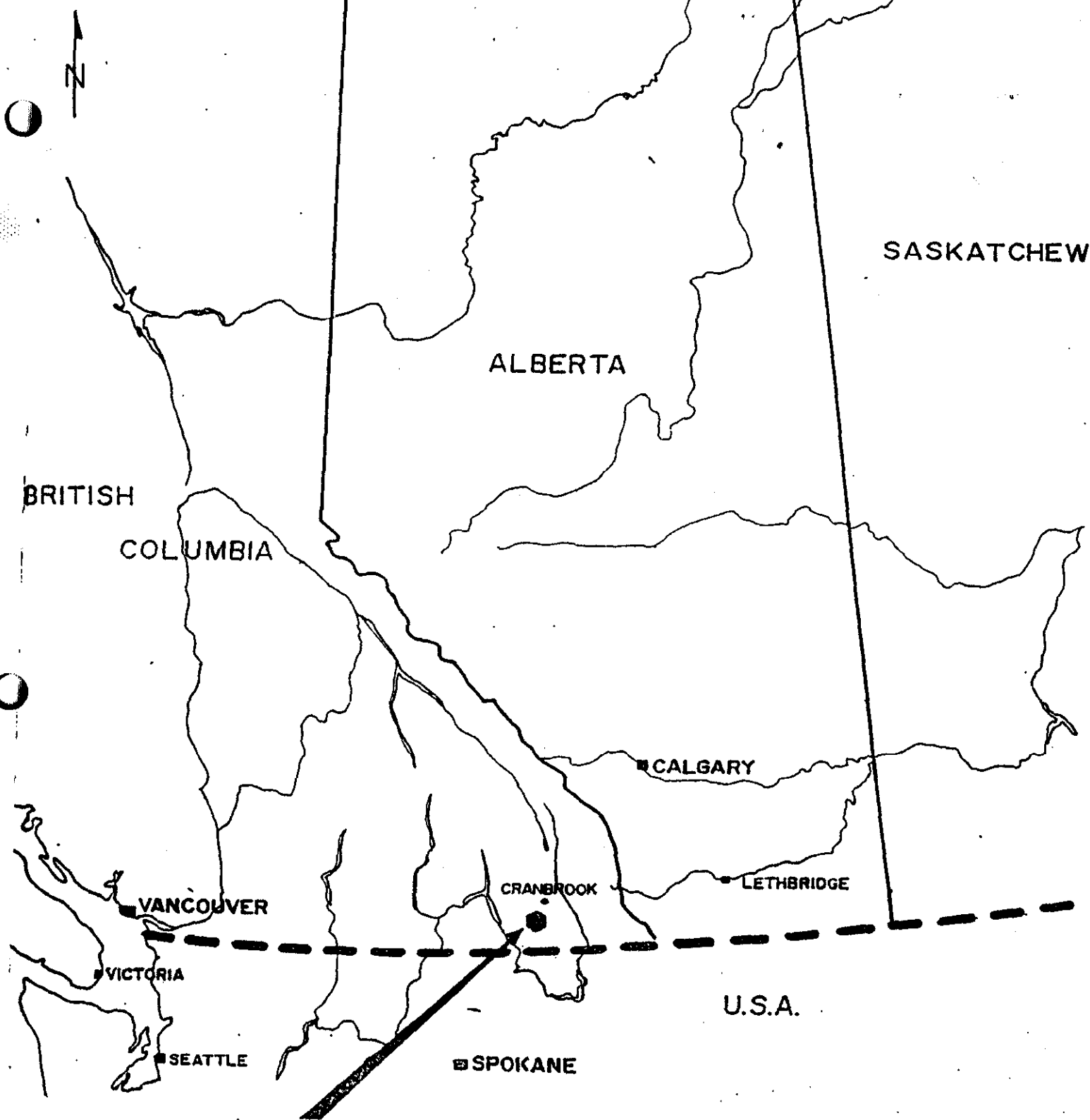
AUTHOUR'S QUALIFICATIONS

I, Frank O'Grady, address 587 Wallinger Ave., Kimberley, B.C. V1A 1Z8, 604-427-5670, hereby certify that:

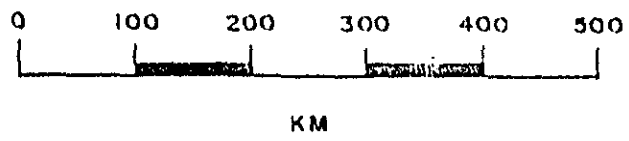
- 1) I am a graduate of the University of British Columbia, B.Sc. Geology 1969.
- 2) I am a graduate of the University of Missouri - Rolla (Missouri School of Mines), B.S. Mining Engineering 1977.
- 3) I am a registered Professional Engineer in the province of British Columbia since 1978.
- 4) I have practiced my profession as a Geologist since 1969 and as a Geologist - Mining Engineer since 1977.

The image shows a handwritten signature "Frank O'Grady" in cursive script. Overlaid on the signature is a circular professional seal. The seal contains the text "PROFESSIONAL ENGINEER" around the top inner edge, "PROVINCE OF" at the top, "BRITISH COLUMBIA" at the bottom, and "FRANK O'GRADY" in the center.

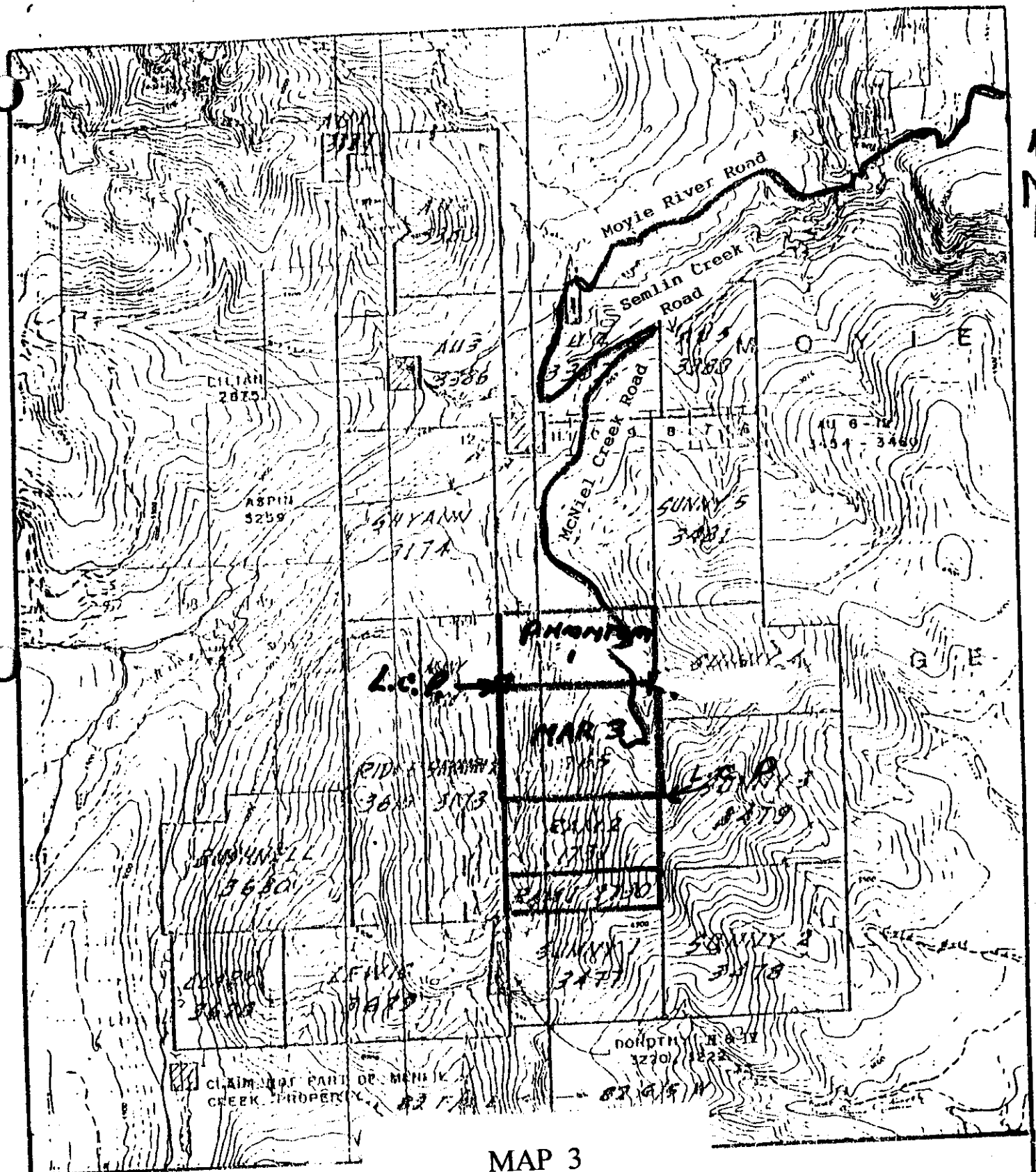
Frank O'Grady, P.Eng.
20 September 1995



PROPERTY
LOCATION

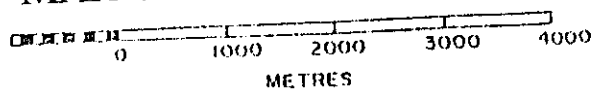


MAP 1
MAR 3 Mineral Claim
Fort Steele Mining Division
Location Map



MAP 3

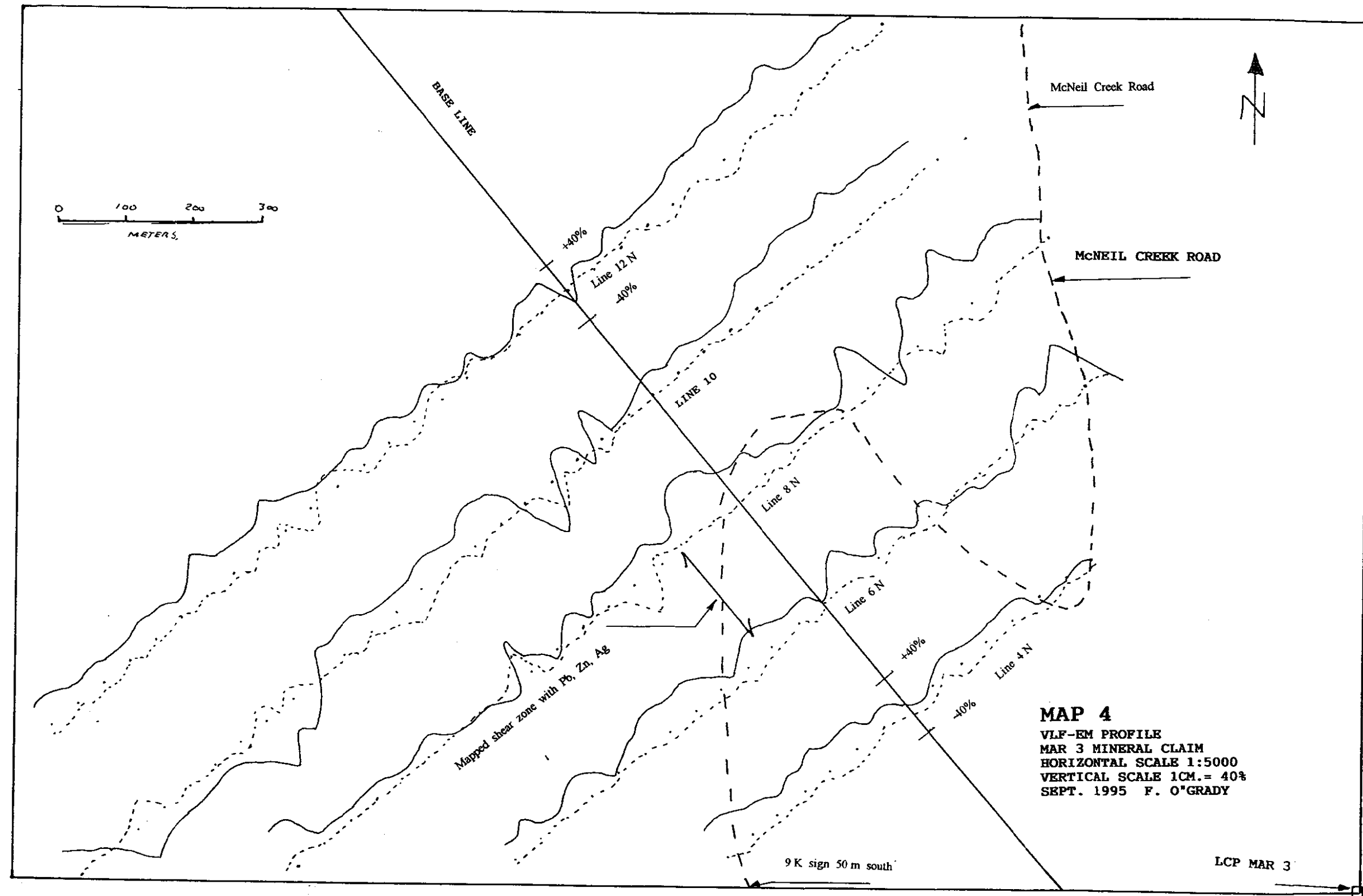
MAR 3 ACCESS MAP

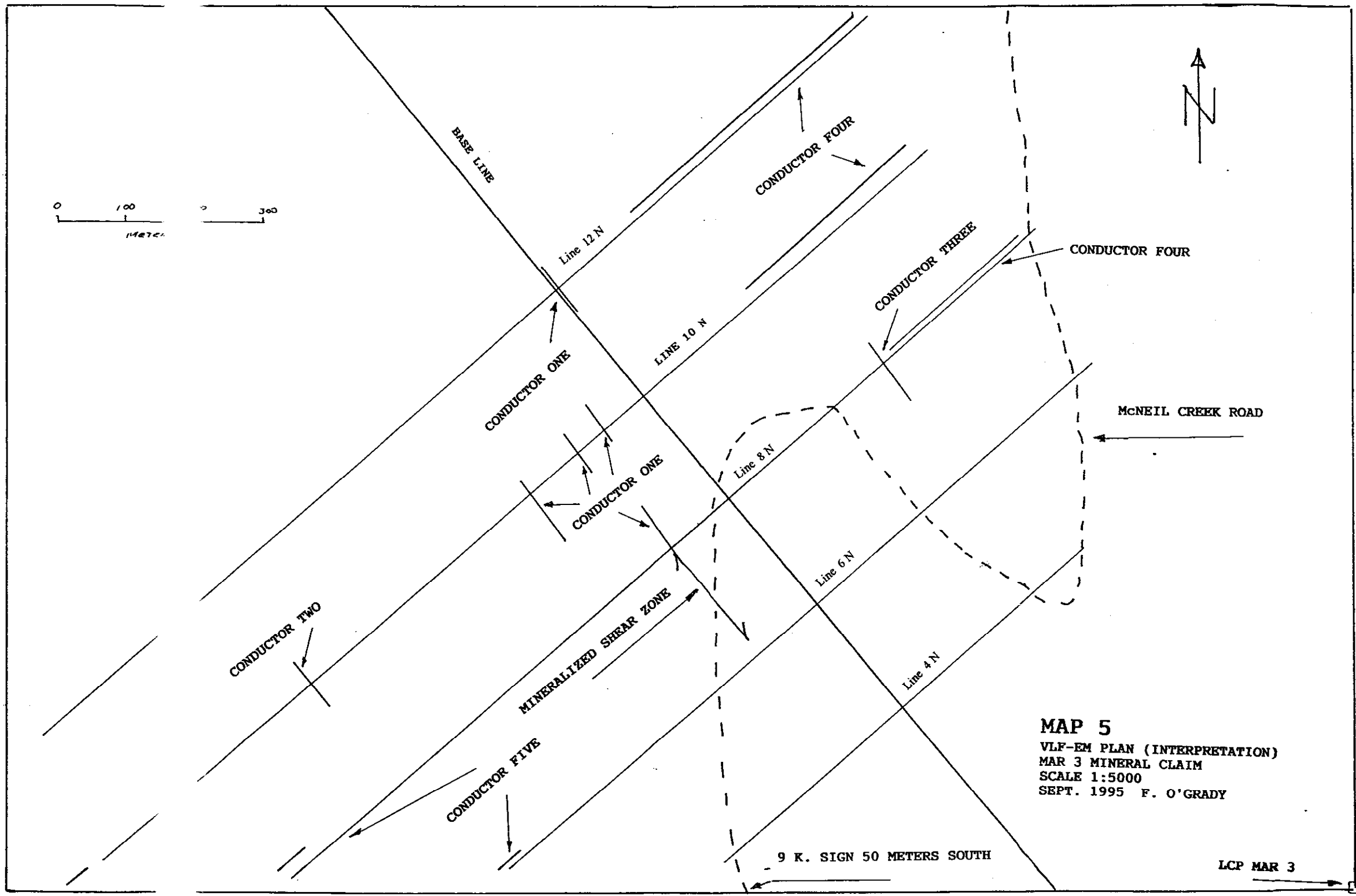


APPENDIX 1

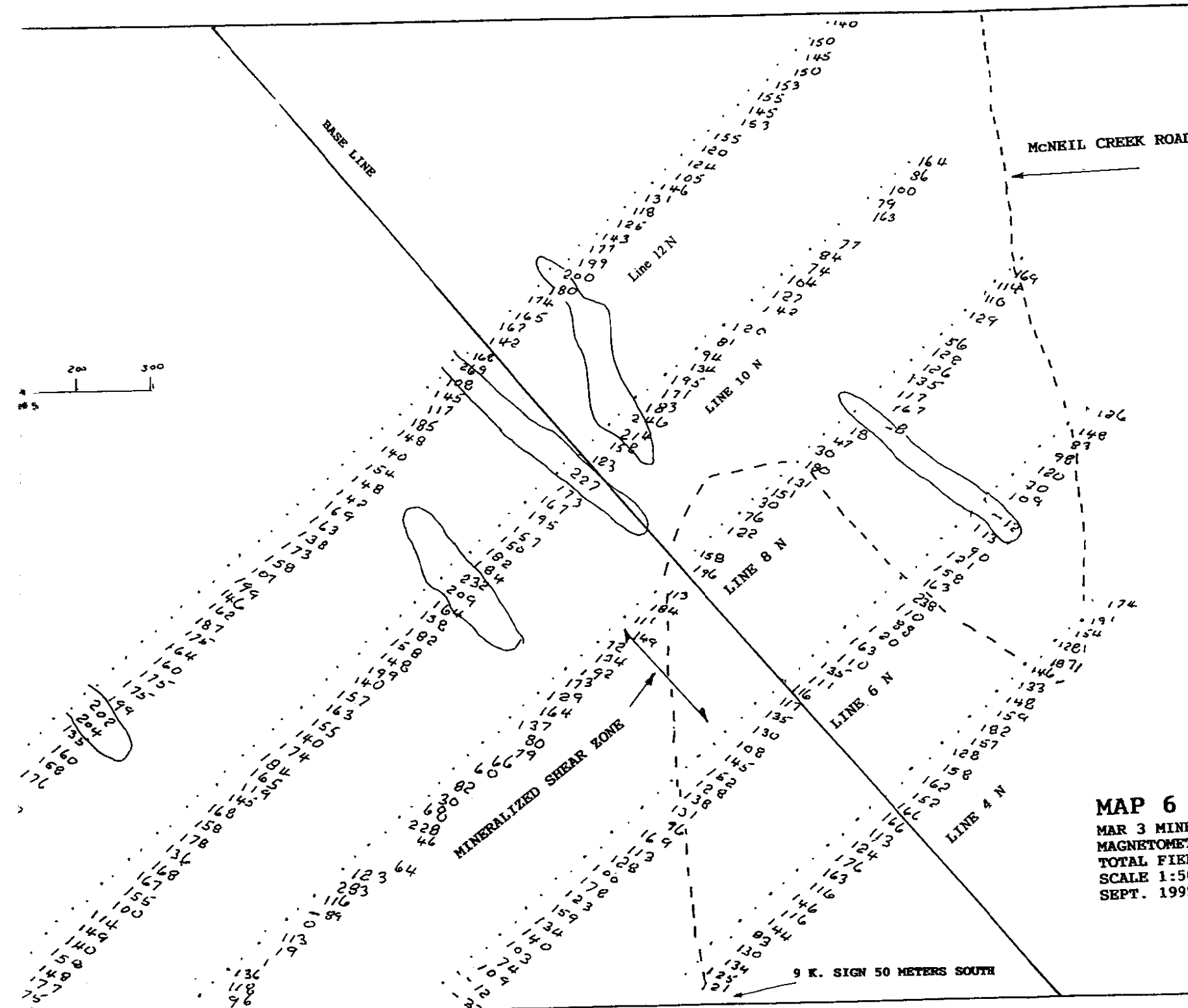
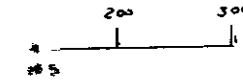
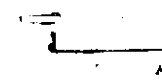
EM16 SPECIFICATIONS

MEASURED QUANTITY	Inphase and quad-phase components of vertical magnetic field as a percentage of horizontal primary field. (i.e. tangent of the tilt angle and ellipticity).
SENSITIVITY	Inphase: $\pm 150\%$ Quad-phase: $\pm 40\%$
RESOLUTION	$\pm 1\%$
OUTPUT	Nulling by audio tone. Inphase indication from mechanical inclinometer and quad-phase from a graduated dial.
OPERATING FREQUENCY	15-25 kHz VLF Radio Band. Station selection done by means of plug-in units.
OPERATOR CONTROLS	ON/OFF switch, battery test push button, station selector switch, audio volume control, quadrature dial, inclinometer.
POWER SUPPLY	6 disposable 'AA' cells.
DIMENSIONS	42 x 14 x 9cm
WEIGHT	Instrument: 1.6 kg Shipping: 5.5 kg





MAP 5
VLF-EM PLAN (INTERPRETATION)
MAR 3 MINERAL CLAIM
SCALE 1:5000
SEPT. 1995 F. O'GRADY



MAP 6
MAR 3 MINERAL CLAIM
MAGNETOMETER SURVEY
TOTAL FIELD - 5700
SCALE 1:5000
SEPT. 1995 F. O'GRADY