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ASSESSMENT REPORT

on

GEOPHYSICS

BRACEBRIDGE PROPERTY

St. Mary River Area  
Fort Steele Mining Division

NTS 82 F/15 E

Latitude 49° 45' N  
Longitude 116° 31' W

by

Peter Klewchuk  
Geologist

November 8, 1990

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**20,515**

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## 1.00 INTRODUCTION

### 1.10 Location and Access

The Bracebridge property is located approximately 40 kilometers west of Kimberley, B.C., in the St Mary River valley (Figure 1). Access is via paved road from Kimberley west to St Mary Lake, then via good gravel logging roads to the property.

### 1.20 History

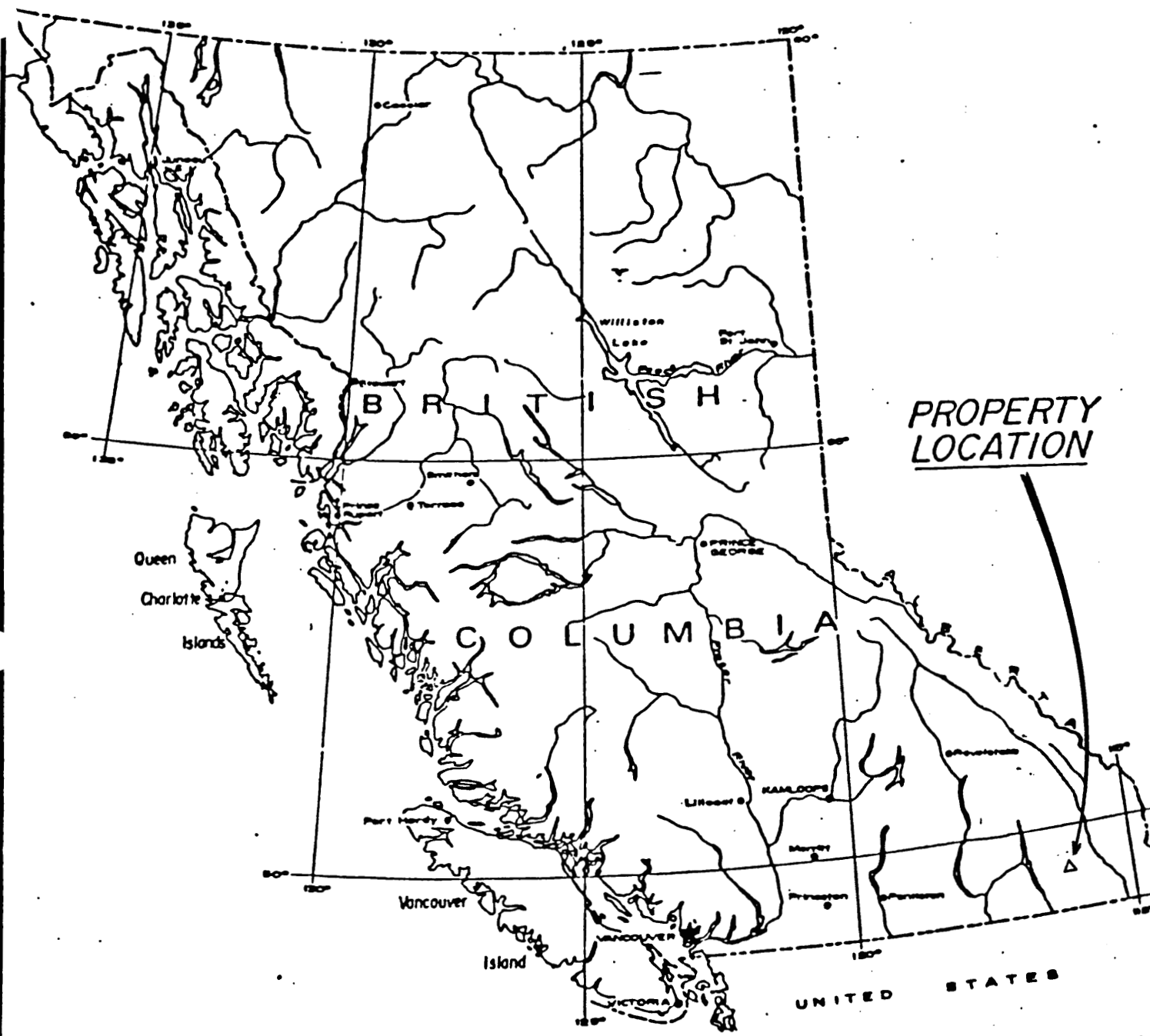
Little is known about exploration activities on the property prior to 1966. In that year Cominco Ltd. completed 4 diamond drill holes at the northern known limit of a copper-mineralized shear zone. The drill holes intersected copper values ranging from 0.20% to 3.30% over widths of 1.5 to 7 meters. The best intersection was 4.4 meters of 3.3% copper.

Since Cominco's drilling, a number of companies have explored the property by trenching, percussion drilling, geologic mapping and electromagnetic surveying. This work established an extensively mineralized shear zone, up to 60 meters wide and 3 kilometers long.

### 1.30 Property

The present Bracebridge property consists of 9 single claims, two of which are Crown Grants (Figure 2):

Claim Name	Record Number	Date Due
Shrewsbury	1397	April 13, 1992
Surprise	1626	April 13, 1992
Andy	2218	August 12, 1991
Donna	2219	August 12, 1991
Michel	2220	August 12, 1991
Wes	2221	August 12, 1991
Lillian	2272	September 15, 1991
Verne	2273	September 15, 1991
Helen	2274	September 15, 1991



BRACEBRIDGE PROPERTY  
LOCATION MAP

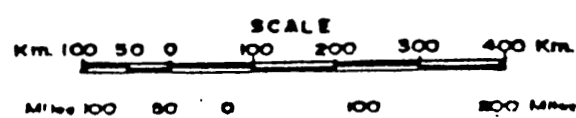
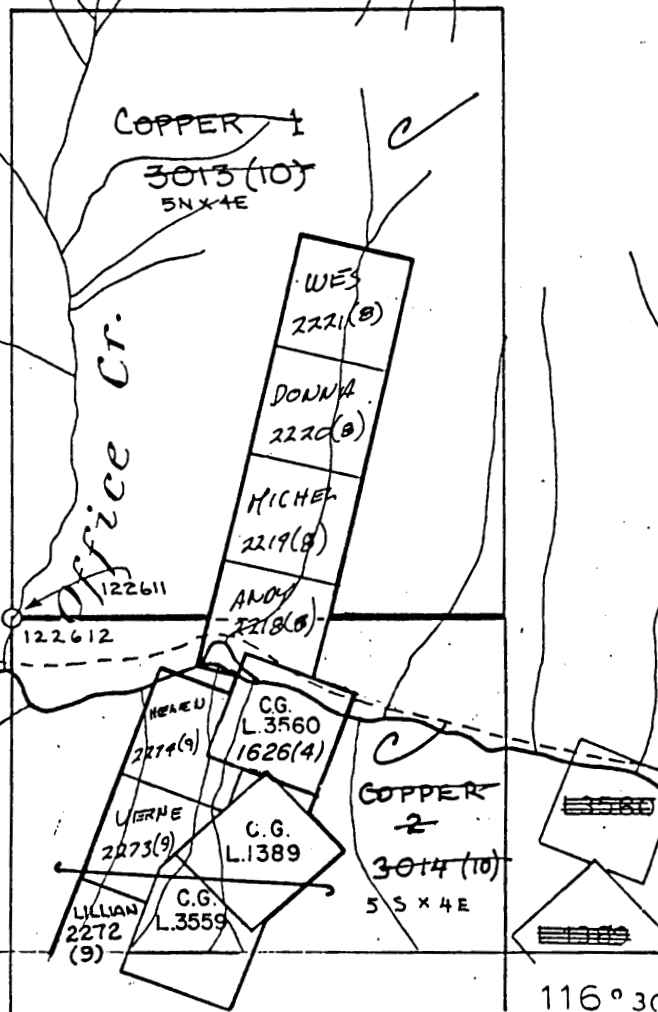


Figure 1

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Copperty Cr.



BRACEBRIDGE PROPERTY  
Claim Map NTS 82 F/15 E

Figure 2

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This map is prepared to serve as a guide to the positions of located mineral claims and Placer Mining Leases only. Unsurveyed claims and leases are plotted from locators sketches and are not guaranteed. Letters C.G. indicate claim is Crown-Granted.

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#### 1.40 Scope of Present Program

The extensive copper mineralization known on the Bracebridge property has been located only at relatively high elevations on the property, in rugged topography where exploration is both difficult and costly. The mineralization is known on both sides of the St. Mary River valley and it may be continuous across the valley but overburden in the valley bottom area covers any mineralization which may exist.

A program of VLF-EM and Magnetic surveying was undertaken in the lower part of the valley to determine if any anomalies were present which might be related to the known mineralized shear. If successful, the program would allow exploration via trenching or diamond drilling in the more accessible terrain.

#### 2.00 REGIONAL AND PROPERTY GEOLOGY

The area of the Bracebridge property is included in Geological Survey of Canada Memoir 238 "Nelson Map Area" by H.M.Rice.

Some mapping has been done by Cominco Ltd. who identified the host rocks on the property to be of the Precambrian Kitchener Formation.

Detailed mapping on a property scale has been done by F. Holcapek (Assessment Report 6206) on the Bracebridge property. He identified a number of metasedimentary and intrusive units and established that extensive structural deformation exists in the area. This geologic mapping was considerably hindered by poor exposure; continuity of stratigraphic and structural units was difficult to attain.

The property occurs within a northerly-trending zone of more intense folding.

Copper mineralization is apparently related to shearing which accompanied deformation.

### 3.00 GEOPHYSICS

The geophysical survey done in 1990 on the Bracebridge property was initially intended primarily to establish whether any anomalous response could be detected in the general vicinity of the projected trend of the known mineralization. Reconnaissance survey lines were run along the St. Mary River logging road and then (Magnetometer only) along the river.

Once a strong magnetic anomaly and an apparently associated VLF-EM anomaly were detected, additional lines were run to the north of the main road (Figure 3). The grid lines were first marked out with flagging and measured with a 'hip chain' to allow more efficient acquisition of geophysical data in the dense second growth cedar-hemlock forest.

#### 3.10 VLF-EM Survey

A Crone Radem VLF-EM unit was used for the survey with Seattle, Washington used as the transmitting station for the duration of the survey.

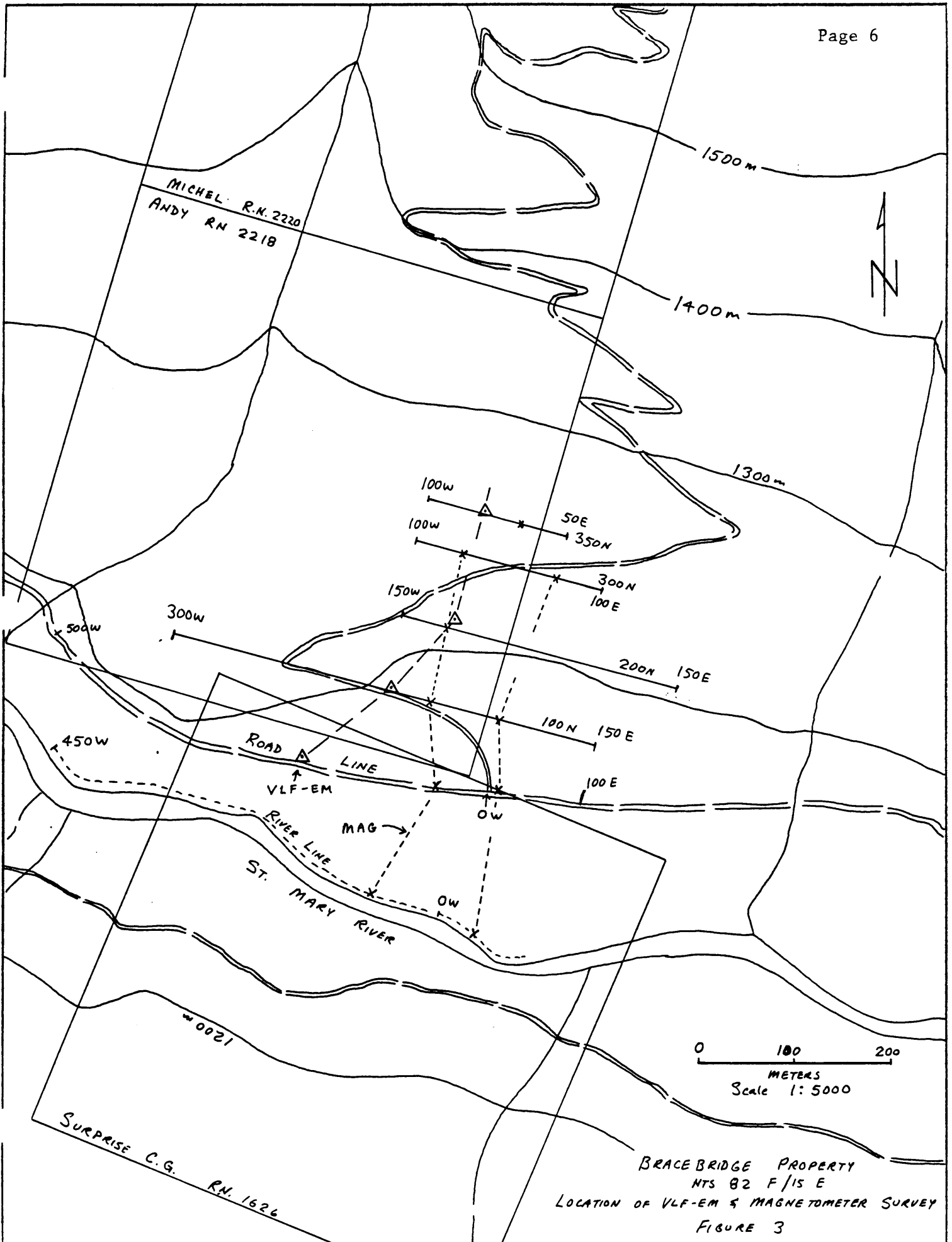
VLF transmitting stations are not well located to allow detection of northerly-striking structures in southern B.C. For this reason it may be necessary to more carefully evaluate responses which appear as weak anomalies.

Survey profiles are plotted on Figure 4 and the inferred possible VLF-EM trend is shown in plan on Figure 3. The VLF-EM responses detected are weak and some of the shorter survey lines did not completely define the response. The association of a strong magnetic anomaly aligned roughly parallel to the regional structure supports the possibility of the VLF data being significant. Further work is required, both to evaluate the survey method over areas of known bedrock mineralization and to expand the data gathered in 1990.

#### 3.20 Total Field Magnetic Survey

A Geometrics portable proton precession magnetometer capable of detecting magnetic variations of one gamma was used for the survey. A system of closed loop traverses was used to allow correcting for diurnal variation. Generally good repeatability was experienced; line 300 N was surveyed twice with nearly identical readings.

A strong mag anomaly was detected at the east end of the lower reconnaissance survey lines and subsequent lines to the north were restricted in length to determine the extent and location of the mag anomaly. The anomaly was detected on all 5 survey lines; its trend is NNE, parallel to the regional structure. No bedrock was seen on the survey lines but the anomaly is very likely related to a magnetic bedrock unit of restricted width.





Further magnetic surveying is warranted to define the extent of the anomaly and to evaluate the areas of known mineralization for the presence of this magnetic unit.

#### 4.00 CONCLUSIONS

The VLF-EM and Magnetic survey has shown that sufficient anomalous response is present on the Bracebridge property that buried mineralization might be detected through additional detailed work of this kind.

#### 5.00 RECOMMENDATIONS

1. Further geophysical surveying is warranted. The anomalies detected by the present work should be further delineated and areas of bedrock mineralization should be surveyed to establish whether the anomalous geophysical responses can be related to known mineralization.
2. A soil geochemical survey should be done over the geophysical anomalies to establish any correlation between bedrock mineralization and the geophysical anomalies.

## 6.00 STATEMENT OF COSTS

4 man-days @ \$275.00/day	\$1100.00
2 vehicle days @ \$50.00/day	100.00
VLF-EM and MAGNETOMETER rental	120.00
Report and drafting	550.00
Field Supplies	25.00

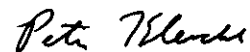
TOTAL COST	\$1895.00
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7.00 AUTHOR'S QUALIFICATIONS

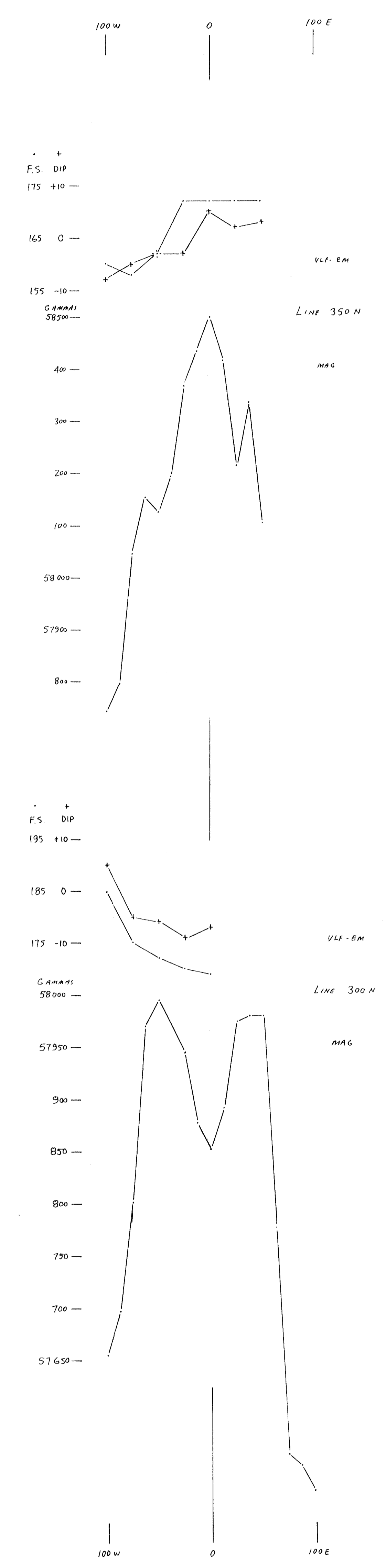
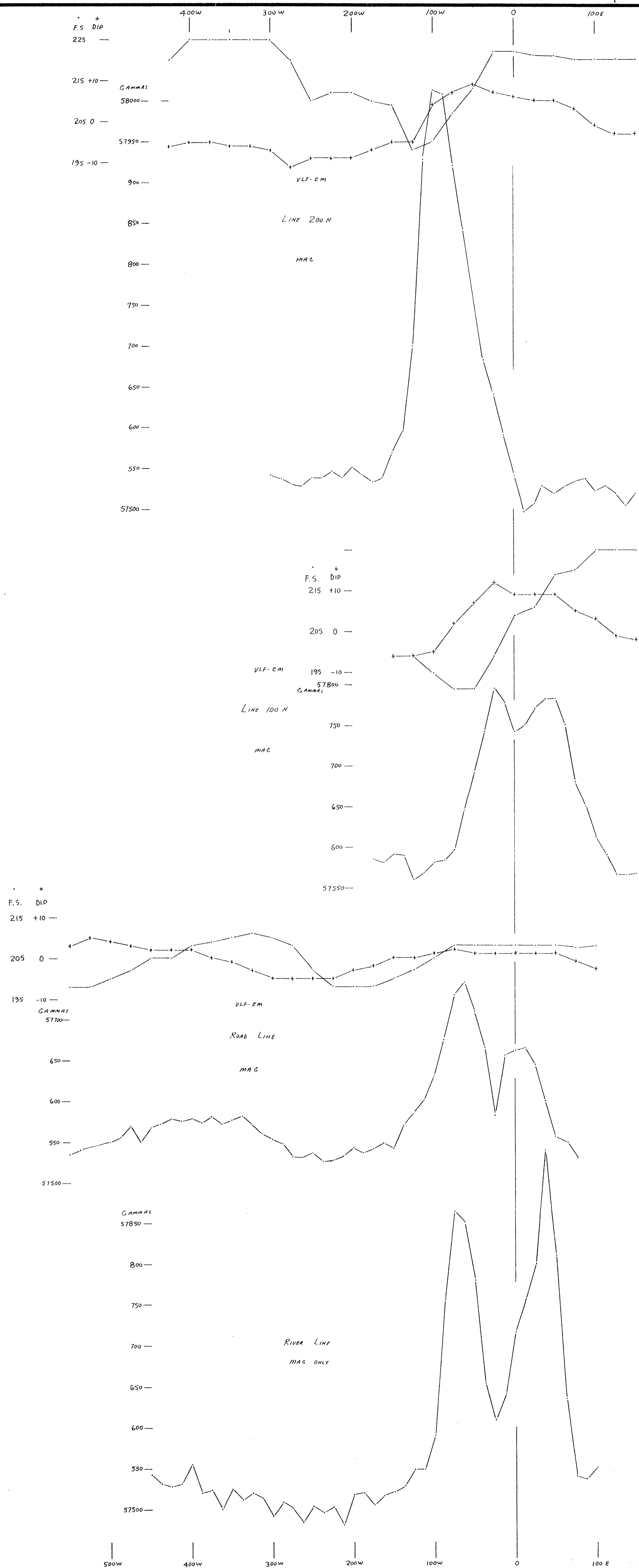
As author of this report I, Peter Klewchuk, certify that:

1. I am an independent consulting geologist with offices at 246 Moyie Street, Kimberley, British Columbia.
2. I am a graduate geologist with a BSc degree (1969) from the University of British Columbia and an MSc degree (1972) from the University of Calgary.
3. I am a Fellow in good standing of the Geological Association of Canada.
4. I have been actively involved in mining and exploration geology, primarily in the province of British Columbia, for the past 18 years.
5. I have been employed by major mining companies and provincial government geological departments.

Dated at Kimberley, British Columbia, this 19th day of October, 1990.



Peter Klewchuk  
Geologist



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BRACEBRIDGE PROPERTY

NTS B2 F/15 E

VLF-EM

TOTAL FIELD MAGNETIC PROFILES

Figure 4