

LOG NO: 1228	REV.
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GLIINI GROUP OF MINERAL CLAIMS

WHITE ELEPHANT MINE AREA

VERNON MINING DISTRICT

BRITISH COLUMBIA

N.T.S. 82 L 4E

FILMED

GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,486

Bryan T Muloin BSc BEd

Box 1312

Fort St James

British Columbia

July 1980

INDEX

	page
Location	2
Acknowledgement	2
History	2
Geology	3
Geophysics	4
Recommendations	5
Statement of Costs	7
Bibliography	7
Affidavit	7

MAPS

	page
LCP Location Survey	6
Detail Grid 2600E, Mag. VLF geology	in pocket
Detail Grid 3000E, Mag. & geology	in pocket
VLF Dip Angle & Field Strength	in pocket
Detail Grid 3600E, Mag. & geology	in pocket
VLF Dip ANGLE & Field Strength	in pocket

#### LOCATION:

The Gemini Group of mineral claims are on the west side of Okanagan Lake just north of Shorts Creek and 2 miles west of Fintry Estates. Access from Vernon is south of highway 97 along the Westside Road. Entrance is through the Valley of the Sun Recreational Estates, The Wood Road winds and connects with other trails through the claim group.

#### ACKNOWLEDGEMENT:

This study of the Gemini Group was sponsored by William B Blyth BSc of Coast Interior Ventures and associates.

#### HISTORY:

The Gemini Group encloses several Crown Granted and Leased Crown Granted claims originally staked and surveyed in the early 1920's through 30's. Principal of the claims is the White Elephant CG, Lot 4380 on which several shafts have been sunk and 6000 tons of ore mined. The principal companies involved with these activities have been: Okanagan Premier Gold Mines, Pre Cambrian Gold Mines, Mabron, Vernon Mining and its successors.

The author of this report contracted in 1973 with Mr H H Armstrong of Vernon Mining to do a geophysical study. The initial grid established starts at the SE corner of Lot 4380 with an east west baseline and was identified as 2000E BL, it extended 600 meters to both east and west, with picket lines of 400 meters to both north and south for a total length of 11.2 kilometers of magnetometer and geological study.

GEOLOGY:

Three rock types are classified on this hill. The oldest is a porphyritic volcanic of probably andesitic composition and is of reddish brown through buff brown coloration. Intrusive to the volcanic is a granite or granodiorite of fairly uniform composition containing about 10% mafics in a white ground mass of coarse crystalline texture. A third rock type occurring as dykes in the granite is tentatively identified as a lamprophyre uniformly black and fine textured it may be overlooked as part of the volcanic unit.

Contacts between the rock types are dominated by north south and east west lineal orientations. These are evidently due to tension and shearing stresses of intrusion. Part of the initial intent of this study was the examination of several north south contact structures as appropriate locii for gold mineralisation .

This study identified several alteration features: metal oxide stains on fracture surfaces, black of manganese ,reds and yellows of iron, and the white powdery coating of calcium and potassium, epidote fracture fillings, and color alteration of feldspars. These features are uncommon throughout the grid area but present between 100N and 260N of the 3000E detail grid. These were also seen around 400N of the 3600E detail grid. It is also believed that the quartz veining and lamprophyre dykes are associated features.

## GEOPHYSICS:

The existing grid was expanded upon by the addition of three areas of detail grid study: grids 2600E, 3000E, and 3600E. Of these detail grid 2600E has already been reported on as an earlier assessment study May '89 but is included with this report for completeness. Lines were set 20 meters apart with stations chained and marked every 10 meters using the existing grid as base and tie lines.

The grid was read using two different instruments: a Scintrex MP2 digital proton precession magnetometer capable of 1 gamma (nanotesla) accuracy, and a Crone Radem VLF III receiver capable of measuring four moduli of the transmitted field, dip angle and field strength of the horizontal maximum, imaginary, and reverse quadrature orientations. The VLF transmitter used was Seattle Washington, NLK, 24.8 kHz at about  $133^{\circ}$  magnetic from the grid area. Closure of both surveys was done by doubling or rereading all of the stations of the base lines and by looping back on the traverse lines to reread again the base lines.

Detail grid 2600E was the least interesting and smallest area studied. It was characterized by a pronounced magnetic pattern of lows along the volcanic granite contact, a weak EM conductor semi paralleling the contact and about 30 meters to the north east. At right angles to the conductor and contact, striking northeast a magnetic grain is evidenced in the granite.

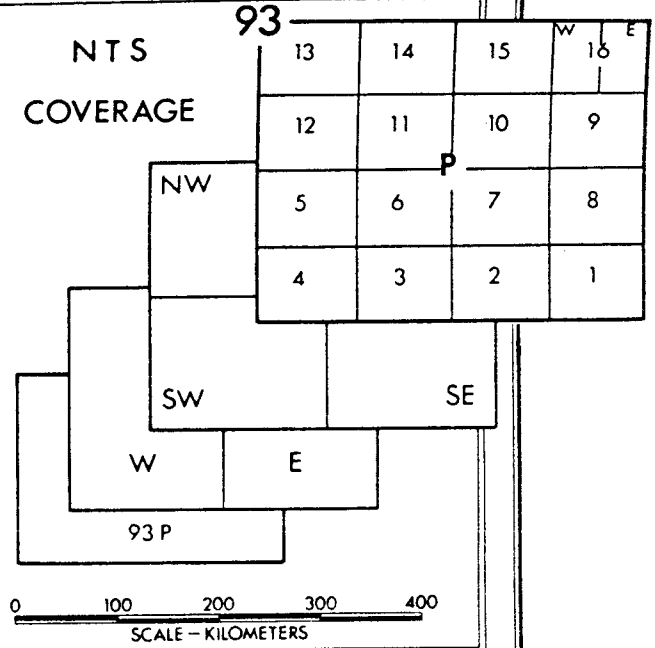
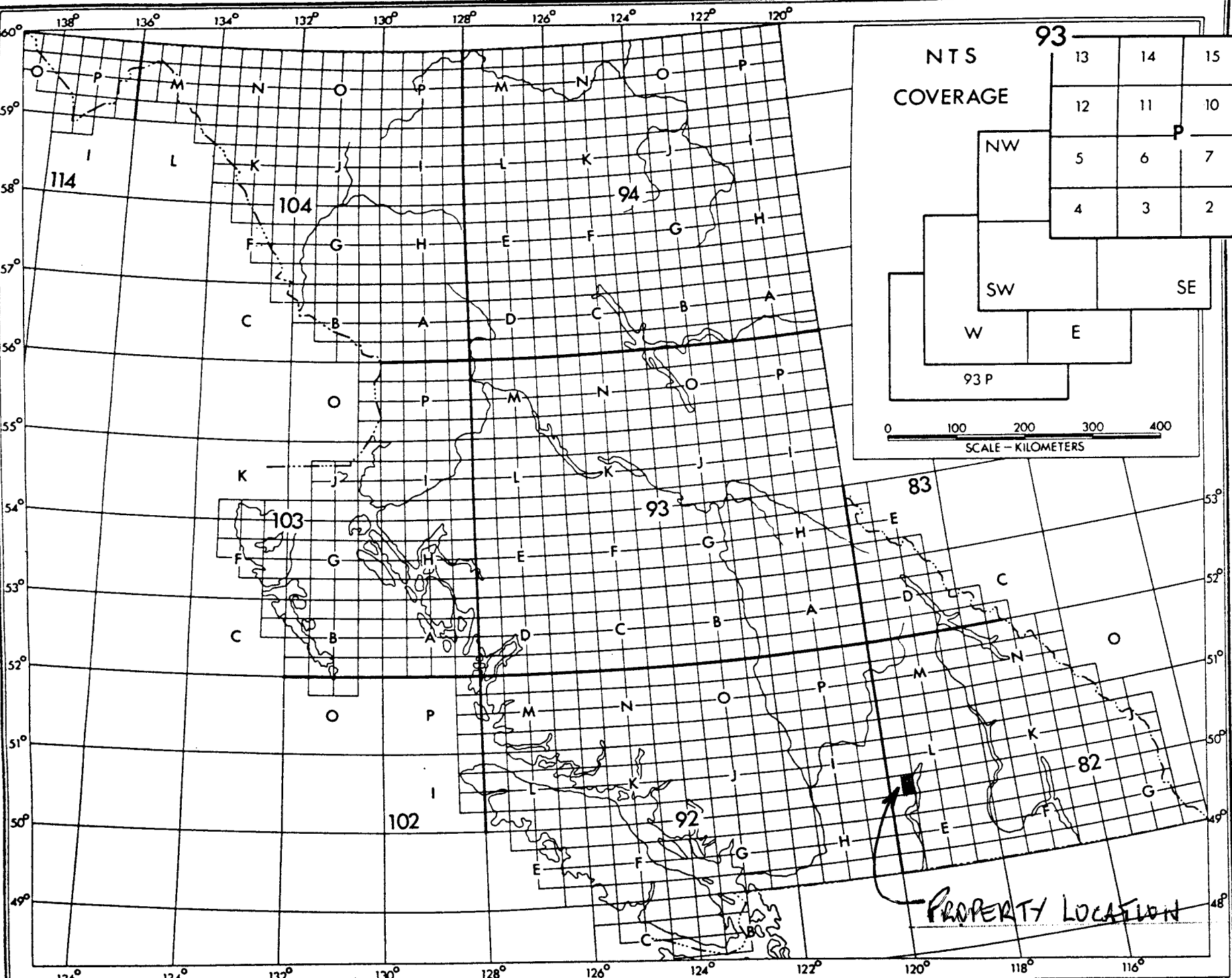
The detail grid 3000E, largest of the three grids, followed a mag low north south along a contact area between the volcanics to the east

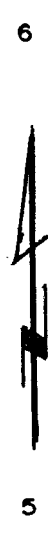
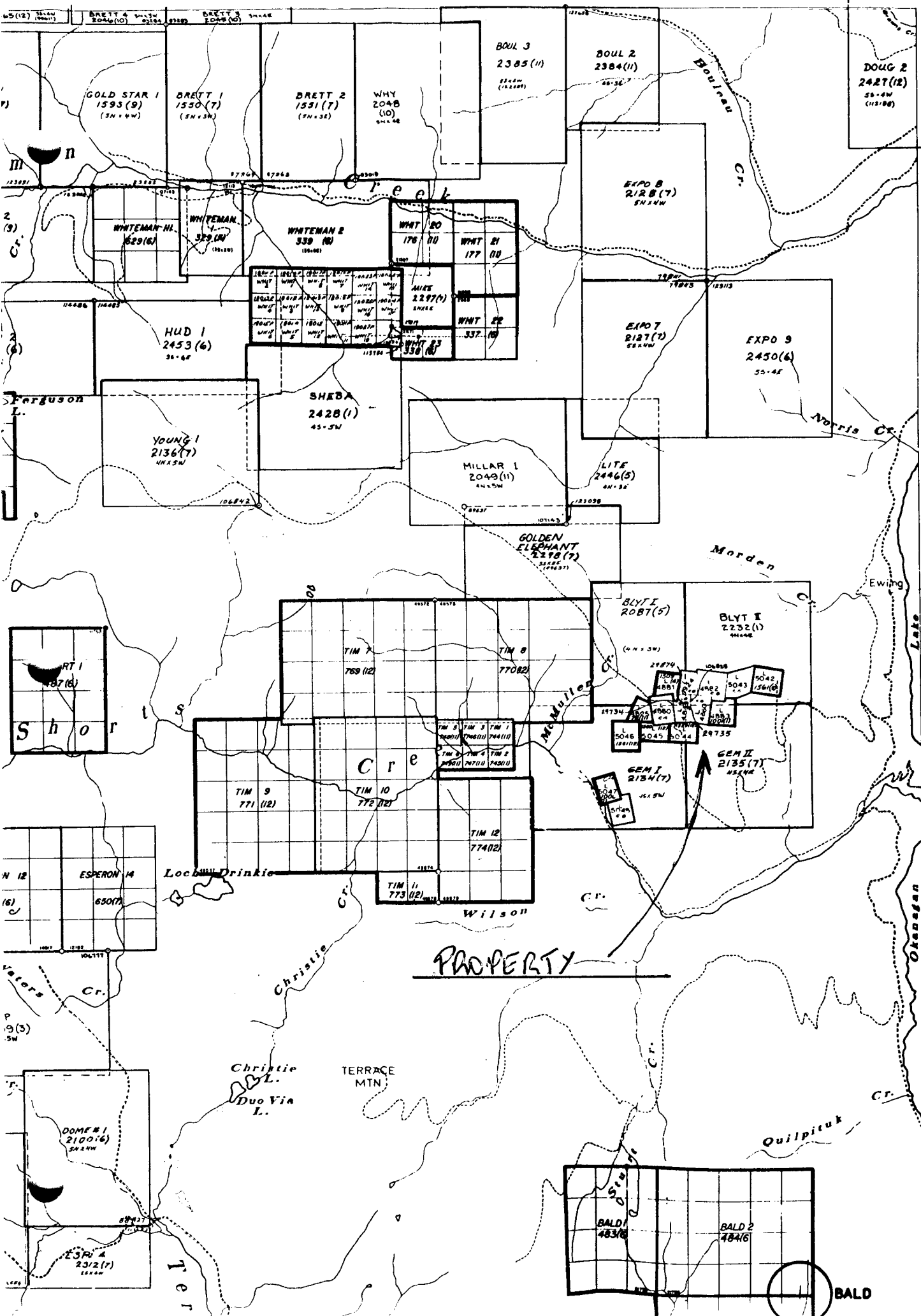
and the granite. From 80S to 200S the granite is seen to be a dyke structure with several apophyses penetrating through to the surface. An interesting association of this dyke is another paralleling conductor to the east and 70 to 80 meters away unfortunately centering on the edge of the detail grid. This conductor's greater intensity than that on the previous 2600E grid is possibly due to its correct alignment with the Seattle Washington transmitter. These structures may be radiating features from a source to the north at about 120N where visible alteration, more intense magnetic depressions and several EM conductive zones are present.

The third detail grid 3600E was located to test the area of an exploration trench dug during the 1930's. The trench contained an altered fracture and is associated alteration exposed in the road cut to the east of it. There is a coincident magnetic depression and EM conductive structure between 400N and 420N at about 3550E.

#### RECOMMENDATIONS:

Areas meriting trenching and possibly drilling are: 3550E between lines 400N and 420N on the 3600E detail grid and on the 3000E detail grid between lines 120N and 160N and from 2950E to 2990E. These are evidently centers of intrusive activity, they are probably related to each other as well. The intervening area between is gentle sloping and without prominent outcroppings. There are though several lamprophyre dykes exposed. This area requires detail study as it is the intervening area where these alteration features are probably being fed from.

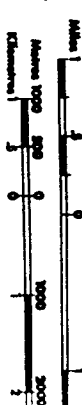




NTS 82L AE

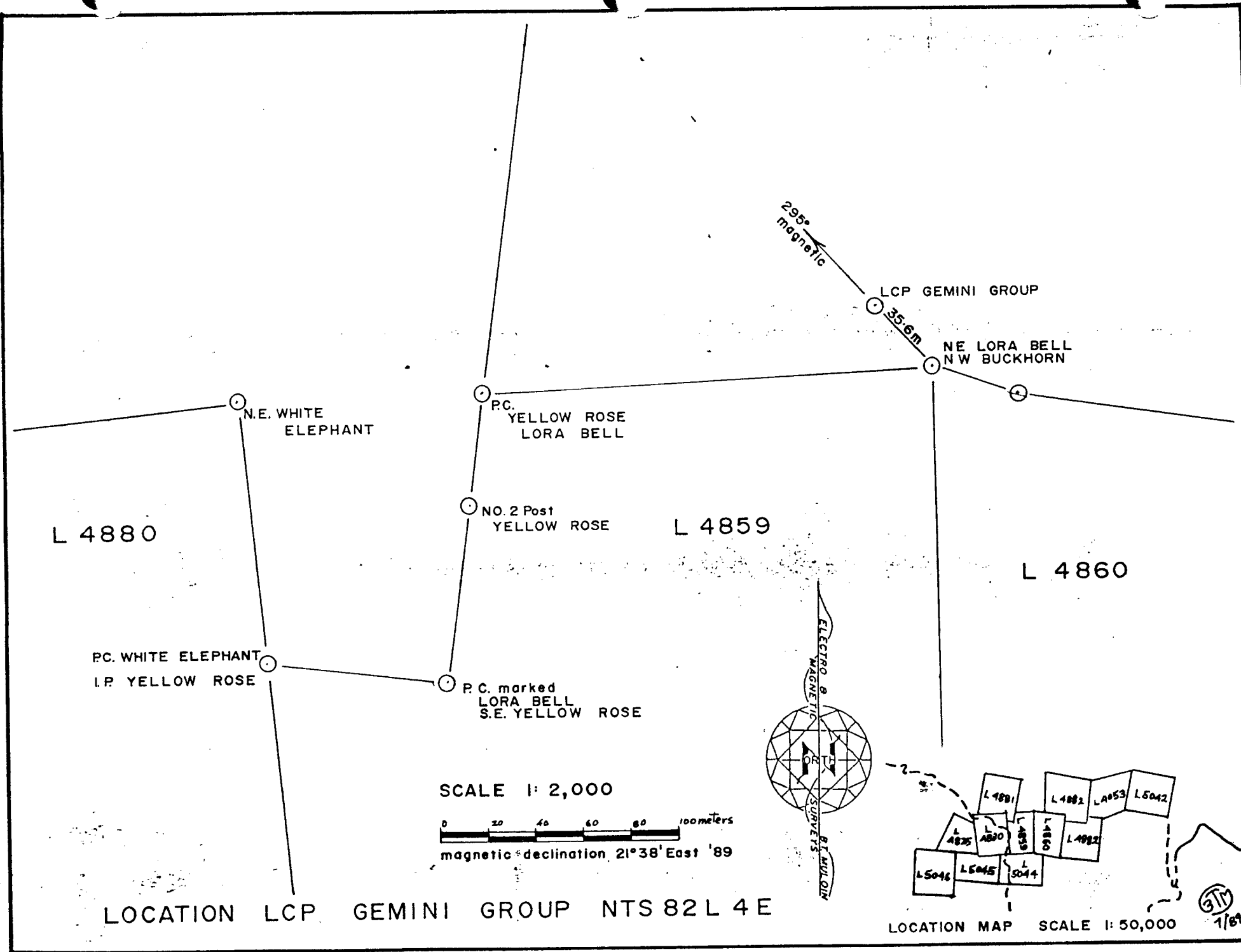
MCL 728 MAP E. LOCAL, DISTRICT, SHEET 8. THIS DRAWING IS FOR

GENERAL INFORMATION ONLY. LOCAL DISTRICT ENGINEER'S OFFICE HAS REVIEWED THIS DRAWING FOR GENERAL INFORMATION ONLY. LOCAL DISTRICT ENGINEER'S OFFICE HAS REVIEWED THIS DRAWING FOR GENERAL INFORMATION ONLY.



Province of British Columbia  
Ministry of Forests, Lands and Natural Resource Operations





29.5° magnetic

LCP GEMINI GROUP

NE LORA BELL  
NW BUCKHORN

N.E. WHITE  
ELEPHANT

P.C.  
YELLOW ROSE  
LORA BELL

L 4880

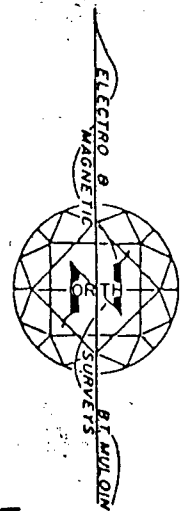
L 4859

L 4860

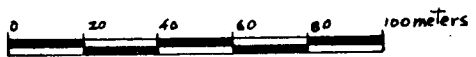
NO. 2 Post  
YELLOW ROSE

P.C. WHITE ELEPHANT  
I.P. YELLOW ROSE

P.C. marked  
LORA BELL  
S.E. YELLOW ROSE

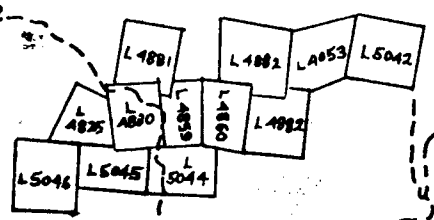


SCALE 1: 2,000



magnetic declination 21°38' East '89

LOCATION LCP GEMINI GROUP NTS 82 L 4 E



LOCATION MAP SCALE 1:50,000

317  
1/89

STATEMENT OF COSTS:

This study was contracted at a total price of 3800 dollars. This covers the cutting and chaining of 5 kilometers of detail grid and 1 kilometer of location lines, (note: 2600E grid area not included, it is part of a previous assessment report), The accurate location of the LCP, see page 6, magnetometer and VLF surveys, geological mapping, transportation by four wheel drive vehicle, board and lodging, equipment rentals, drafting and report preparation, and visits to appropriate government agencies.

BIBLIOGRAPHY:

Canada Department of Mines Summary Report for 1931, Part A; Mineral Resources of Northern Okanagan Valley, B.C.- C.E. Cairnes

Revised Mineral Inventory Map 82 L SW

Mineral Deposit Land Use Map 82 L, Vernon

Gerini Group Mineral Claim Assessment Report 1987

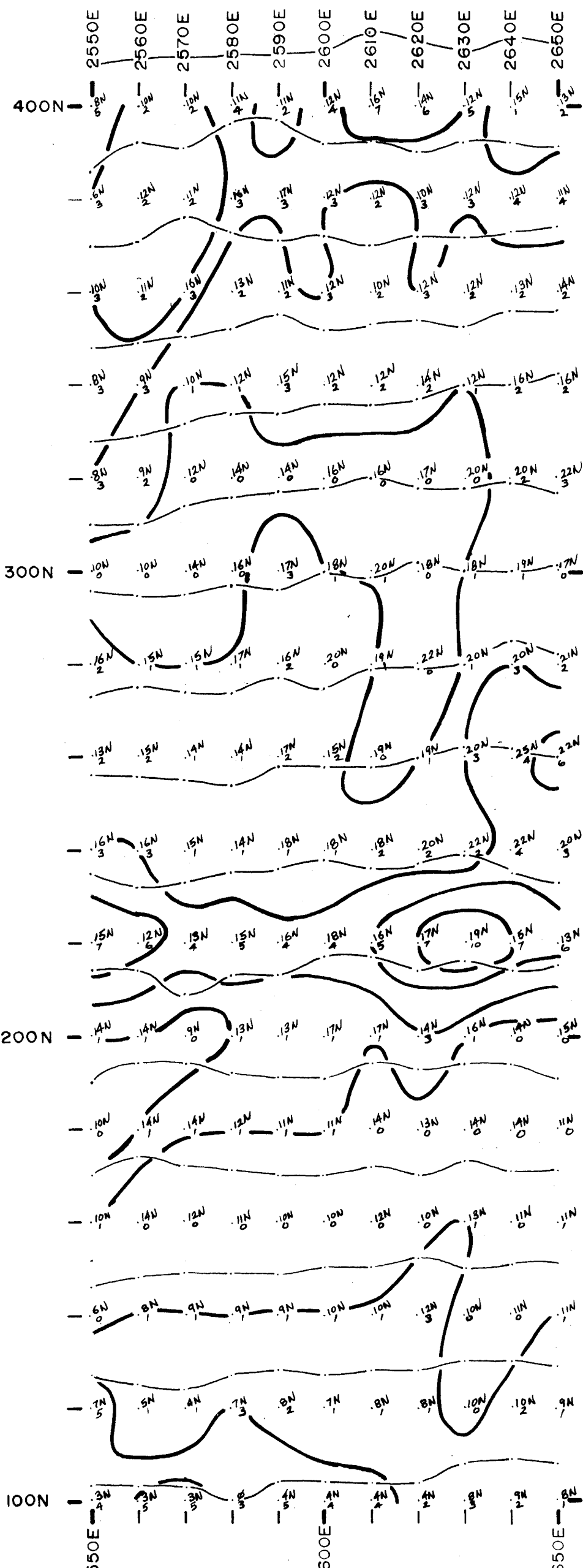
AFFIDAVIT:

I, Bryan Thomas Muloin, am a graduate of Queen's University, Kingston Ontario, having a Bachelor's degree in engineering geology from the Faculty of Applied Sciences. Since graduating in 1971 I have actively practiced the profession of geologist and geophysicist.

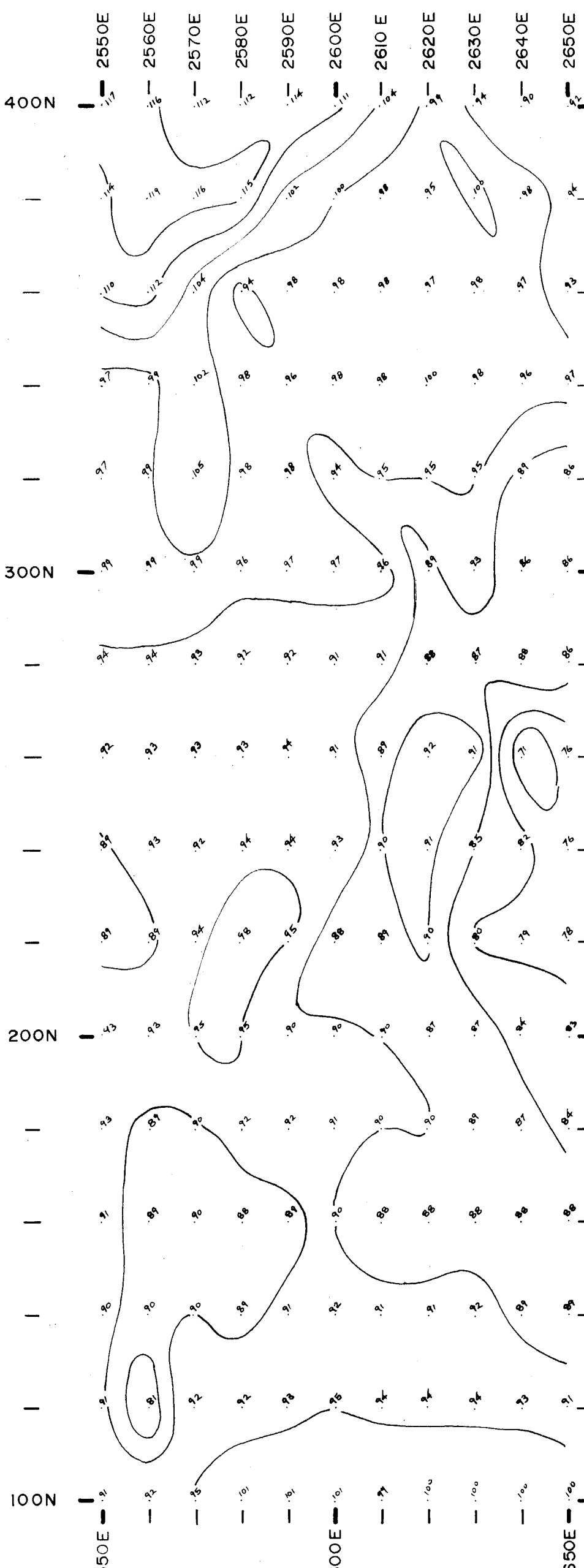


Bryan T Muloin, BSc BEd

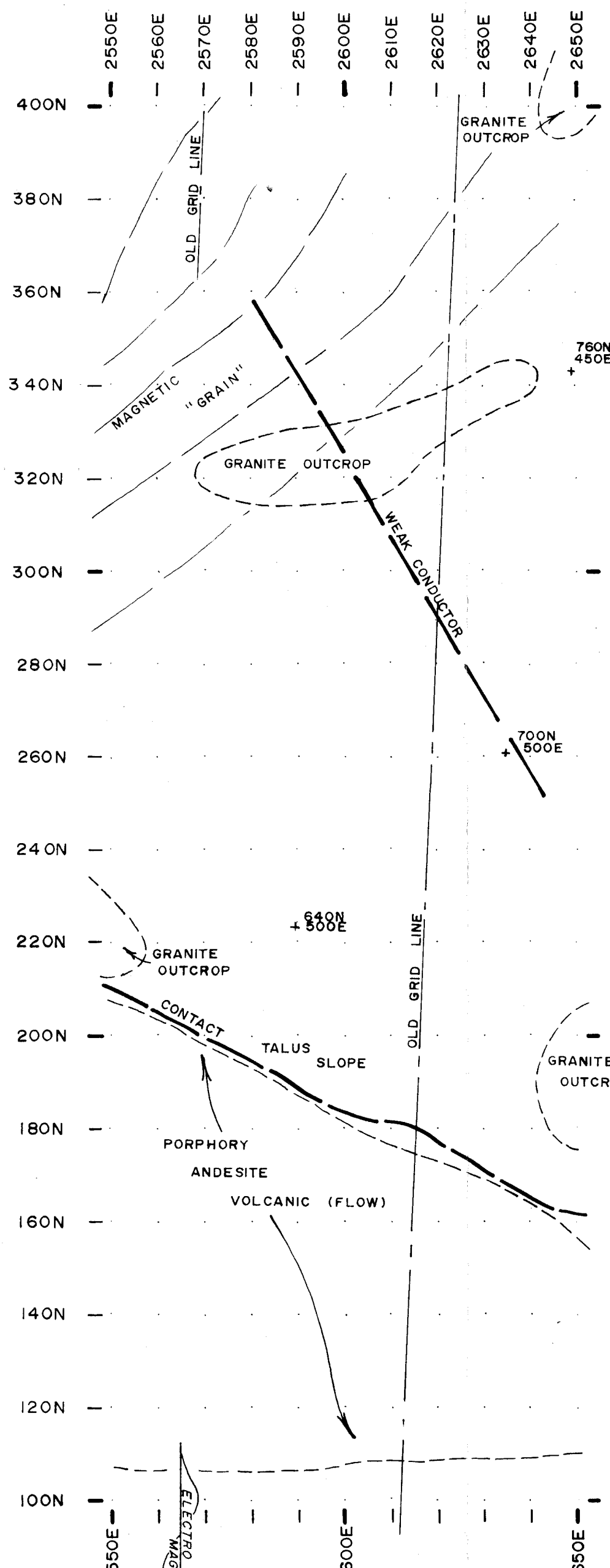
18 July, 1989, Fort St James, B C



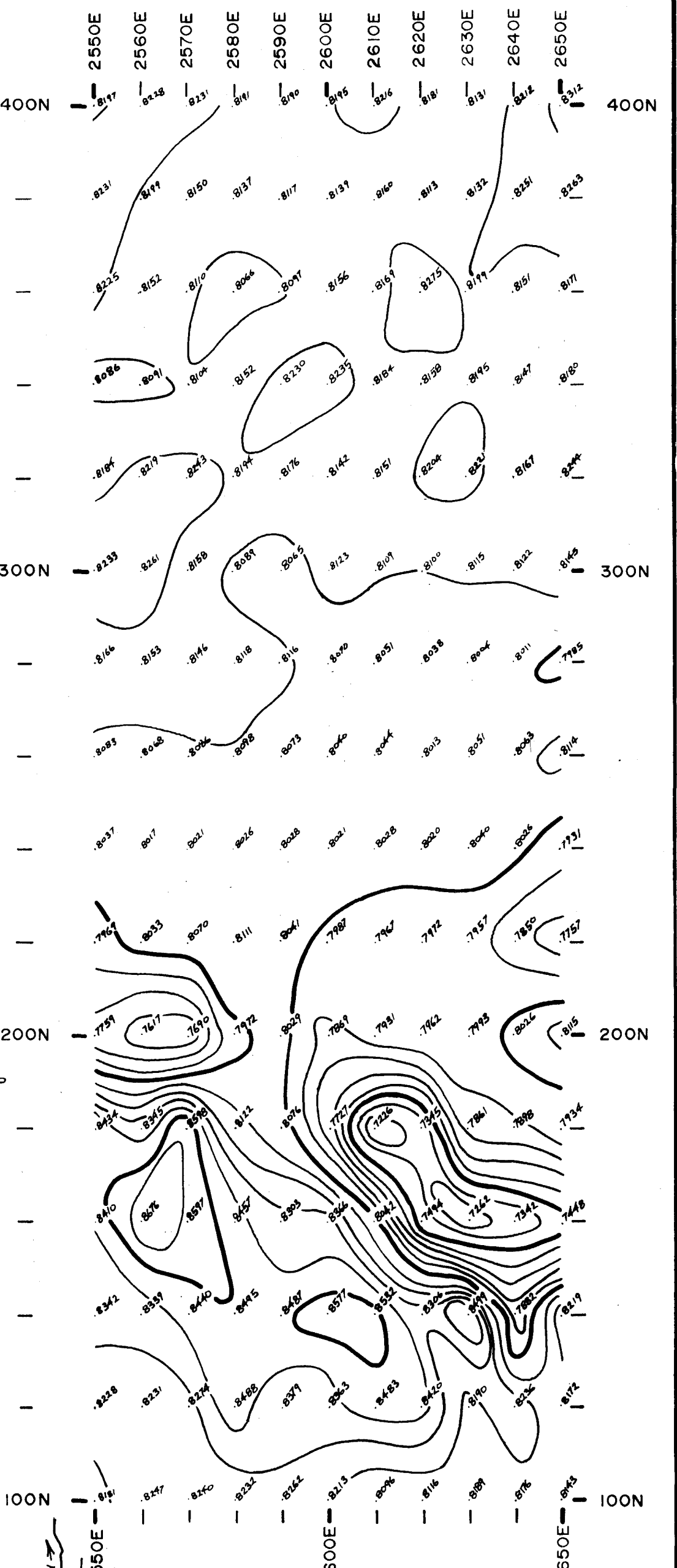
DIP ANGLE & IMAGINARY COMPONENTS OF VLF EM SURVEY — USING A "CRONE" RADEM INSTRUMENT  
 DIP ANGLE PROFILE SCALE — 1cm. = 10°  
 IMAGINARY CONTOURED — 1, 3, 5, 7%



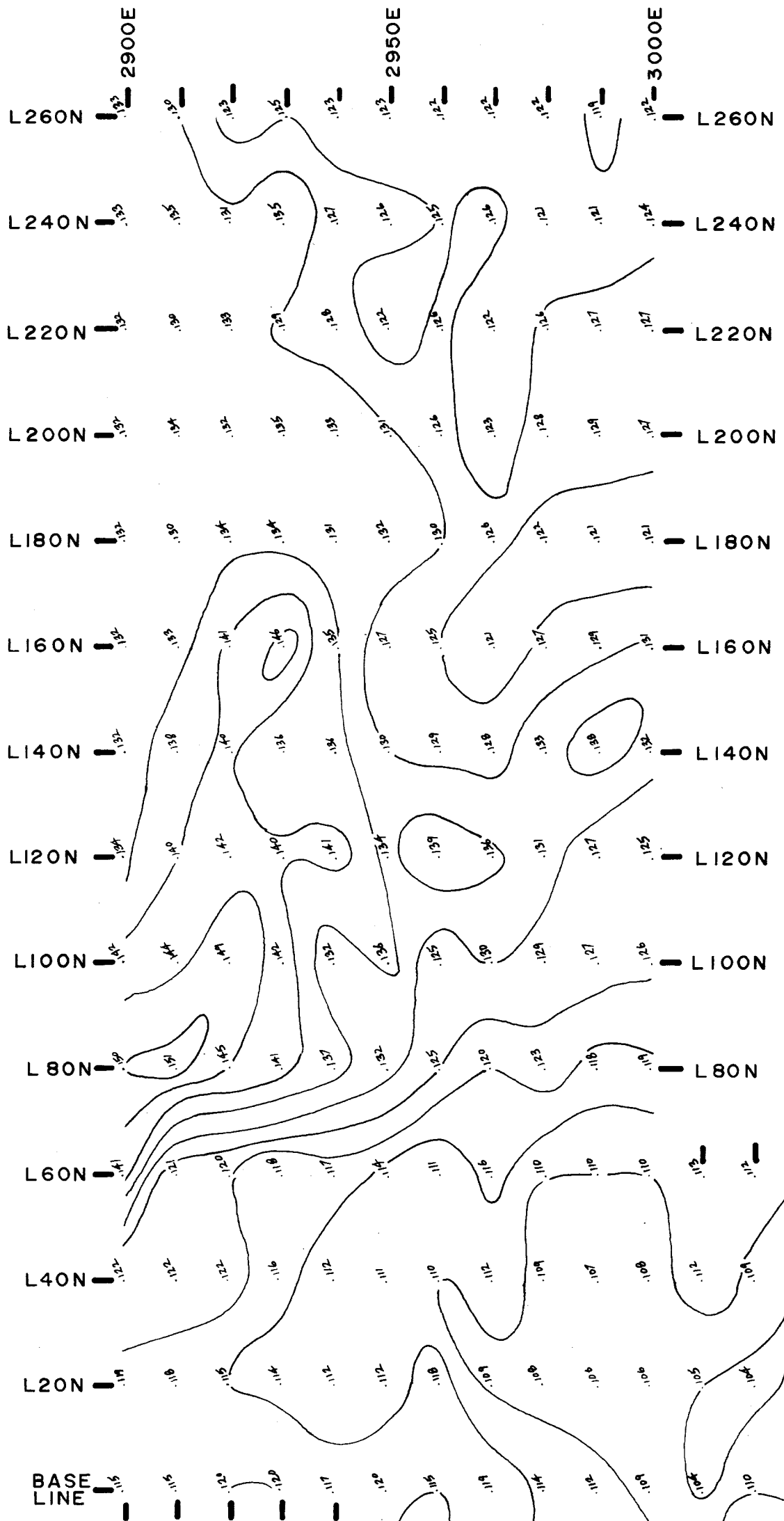
FIELD STRENGTH COMPONENT  
 A "CRONE" RADEM INSTRUMENT  
 CONTOUR INTERVAL — 5%  
 TRANSMITTER:  
 SEATTLE WASHINGTON  
 SCALE 1 : 1000  
 0 10 20 30 40 50 meters



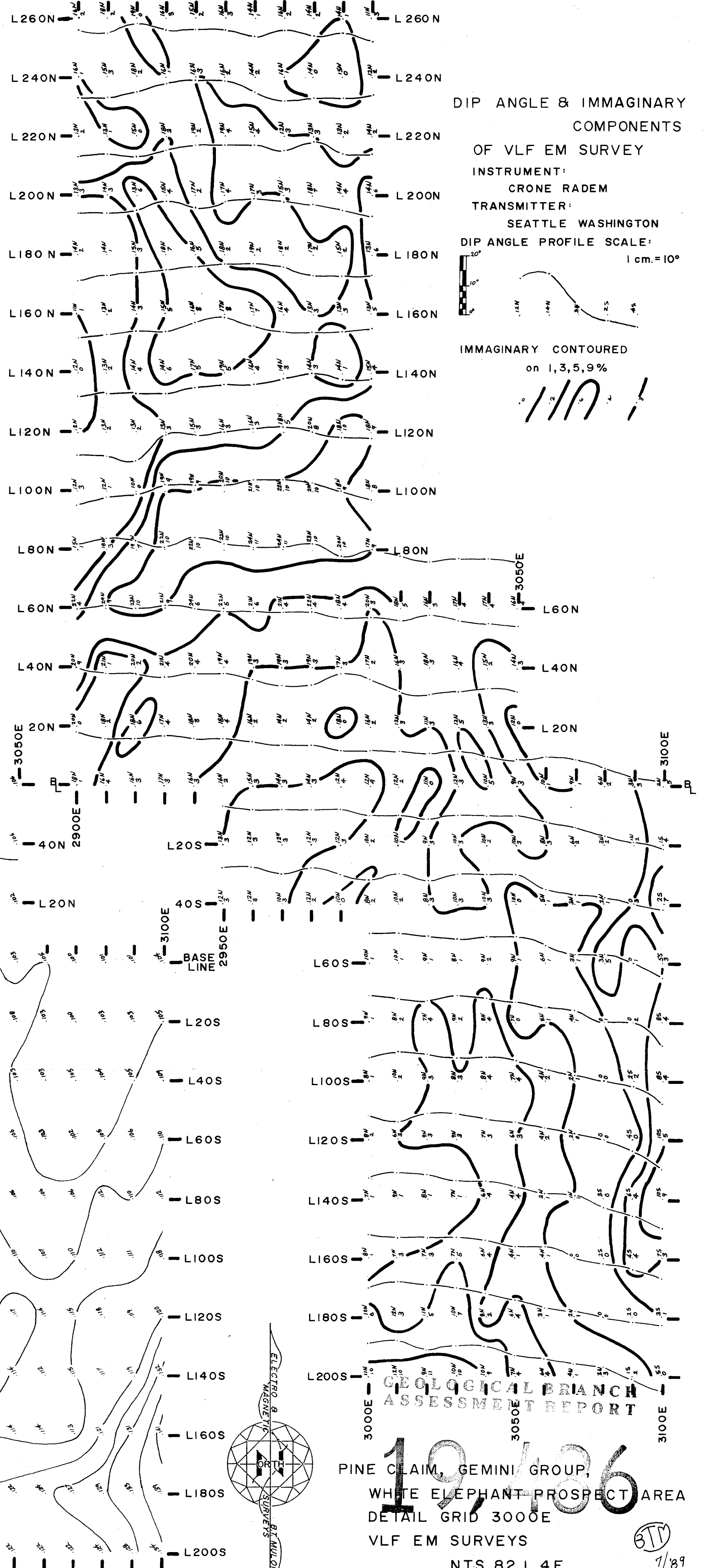
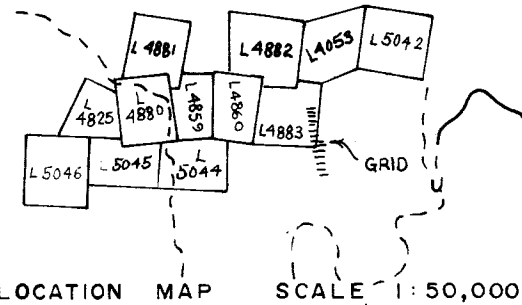
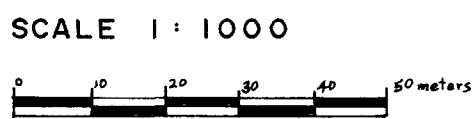
GEOLOGY & INTERPRETATION  
 LOCATION MAP SCALE 1 : 50,000  
 ELECTRO M AGNETIC SURVEYS BY WILLIAM



MAGNETOMETER SURVEY  
 INSTRUMENT — SCINTREX MP2  
 CONTOUR INTERVAL — 100 & 500  
 NOTE: BACKGROUND 58,000  
 GEOLOGICAL BRANCH ASSESSMENT REPORT



FIELD STRENGTH COMPONENT  
 INSTRUMENT: CRONE RADEM  
 TRANSMITTER: SEATTLE WASHINGTON  
 CONTOUR INTERVAL: 5%



DIP ANGLE & IMAGINARY COMPONENTS OF VLF EM SURVEY  
 INSTRUMENT: CRONE RADEM  
 TRANSMITTER: SEATTLE WASHINGTON  
 DIP ANGLE PROFILE SCALE: 1 cm = 10°

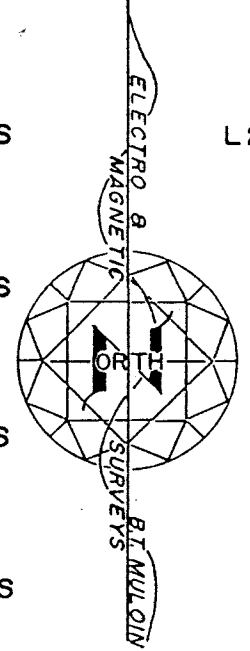


IMAGINARY CONTOURED on 1,3,5,9%

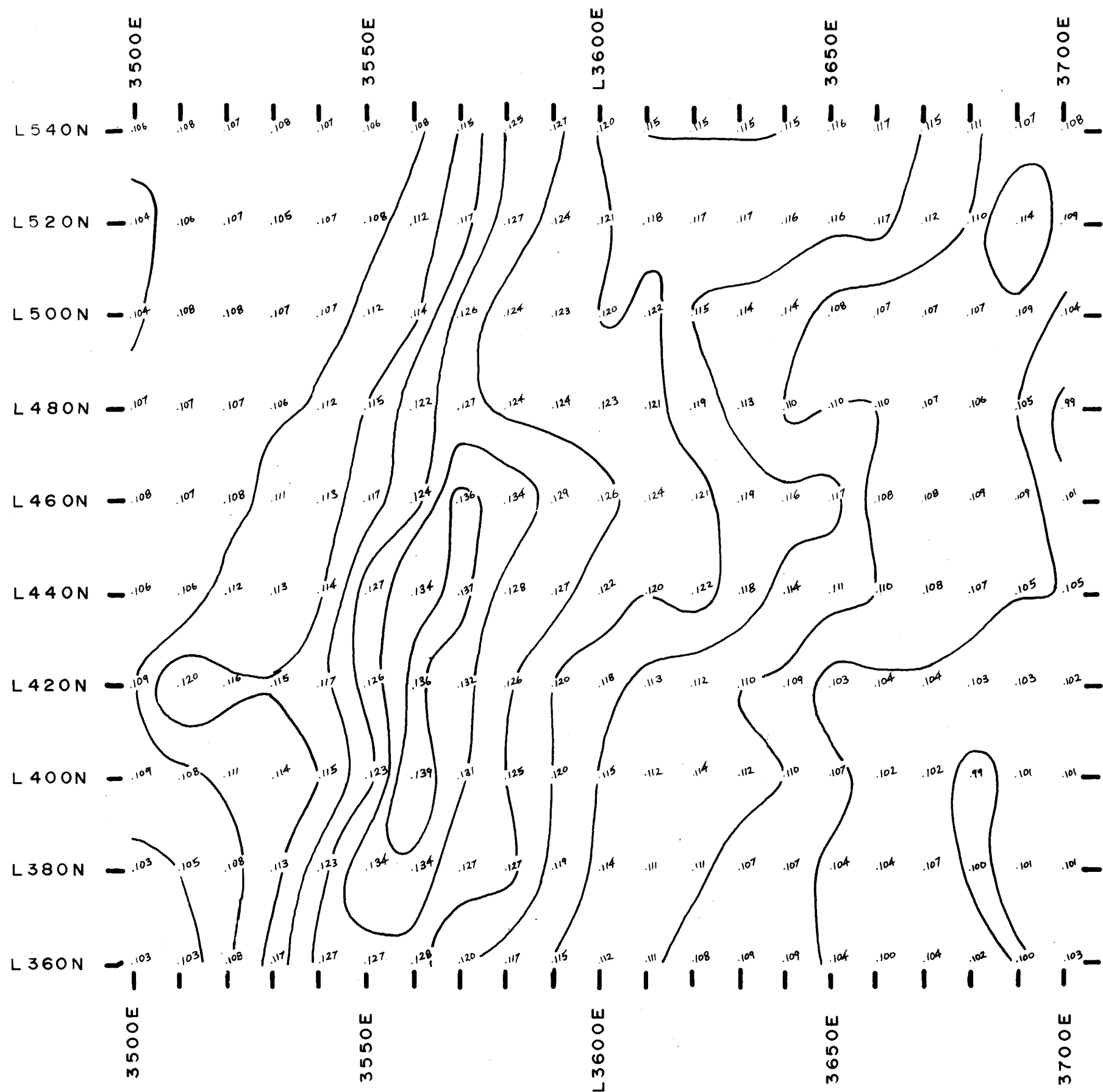
110-1

GEOLOGICAL BRANCH ASSESSMENT REPORT

PINE CLAIM, GEMINI GROUP,  
 WHITE ELEPHANT PROSPECT AREA  
 DETAIL GRID 3000E  
 VLF EM SURVEYS  
 NTS 82 L 4E

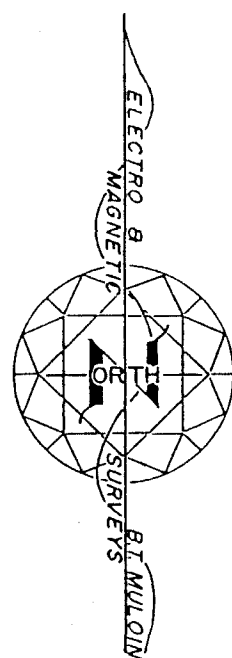


317  
 7/89

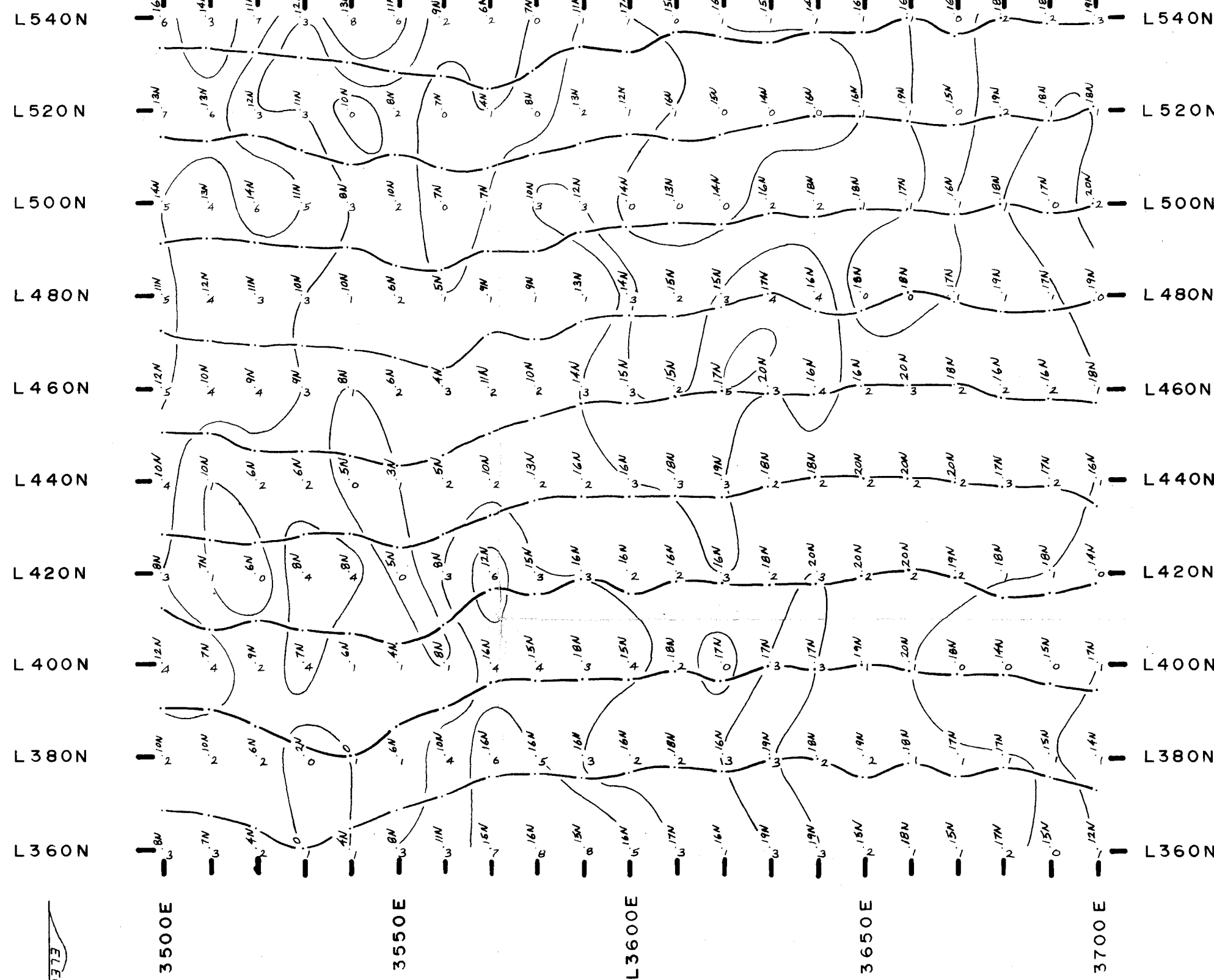
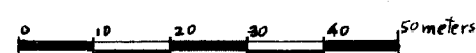


FIELD STRENGTH COMPONENT  
OF VLF EM SURVEY

INSTRUMENT:  
CRONE RADEM  
TRANSMITTER:  
SEATTLE WASHINGTON  
CONTOUR INTERVAL:  
5%



SCALE 1:1,000



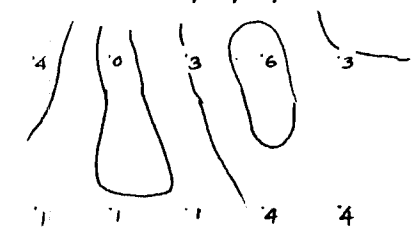
DIP ANGLE & IMAGINARY COMPONENTS  
OF VLF EM SURVEY

DIP ANGLE PROFILE SCALE:

1 cm. = 10°

IMAGINARY CONTOURED

on 1, 3, 5, 9%



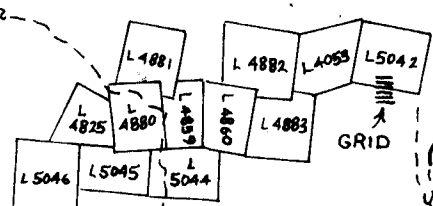
GEOLOGICAL BRANCH  
ASSESSMENT REPORT

19,486

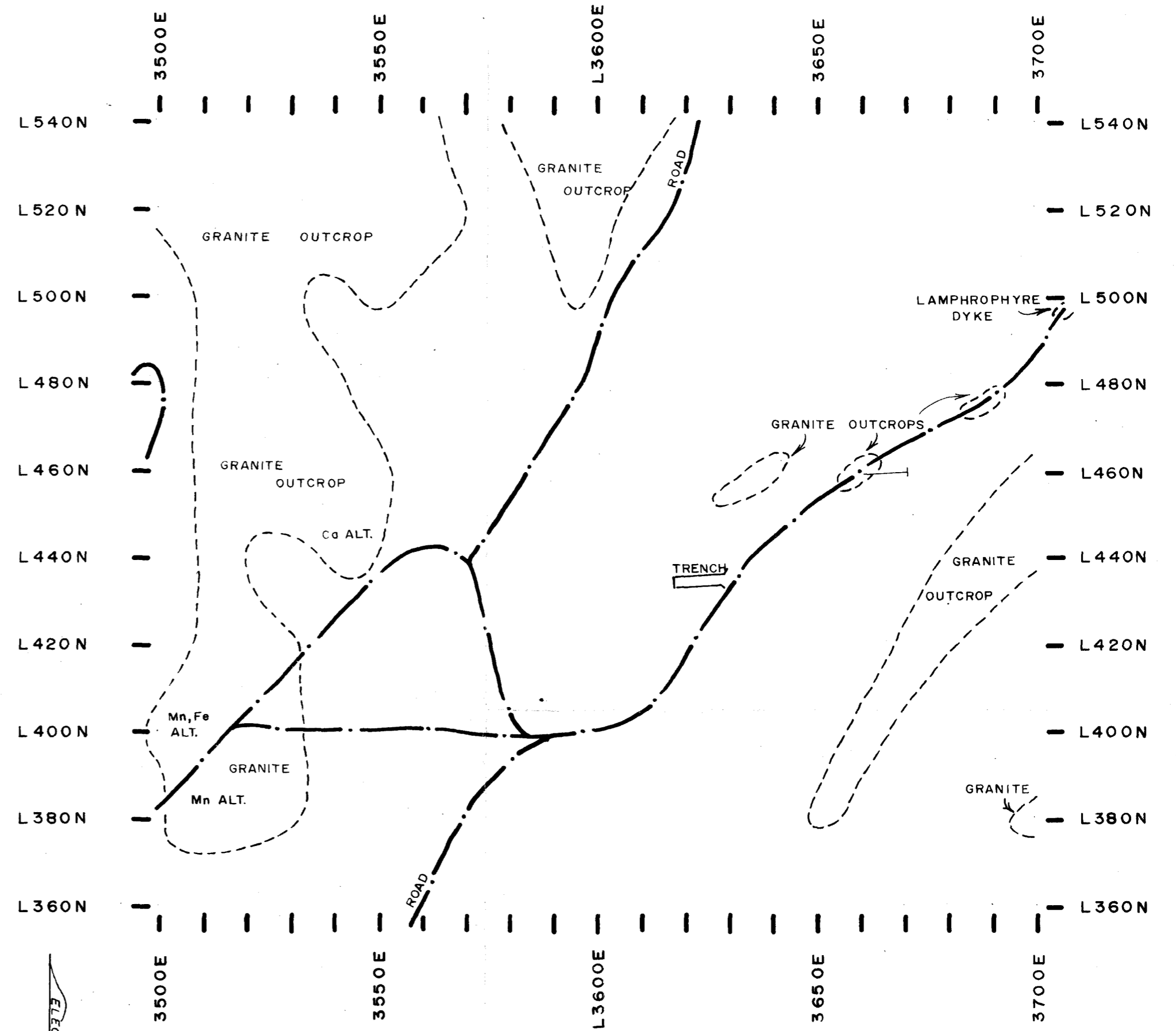
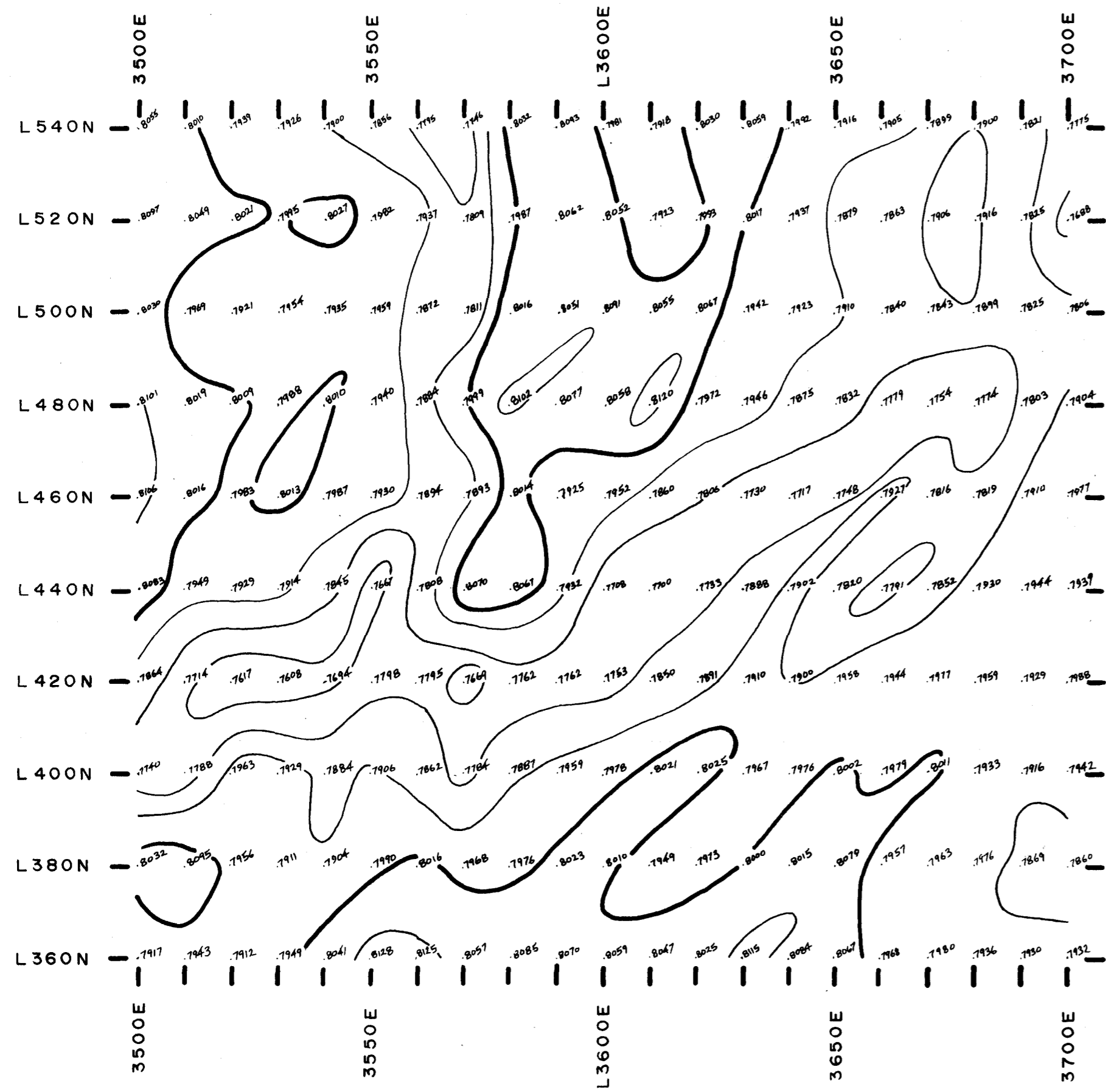
RAFRED CLAIM, GEMINI GROUP  
WHITE ELEPHANT PROSPECT AREA  
DETAIL GRID 3600E  
VLF EM SURVEYS  
NTS 82 L 4 E



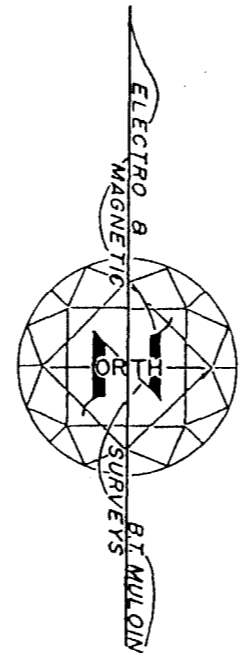
7/89



LOCATION MAP SCALE 1:50,000

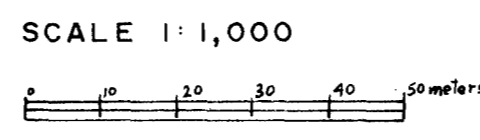
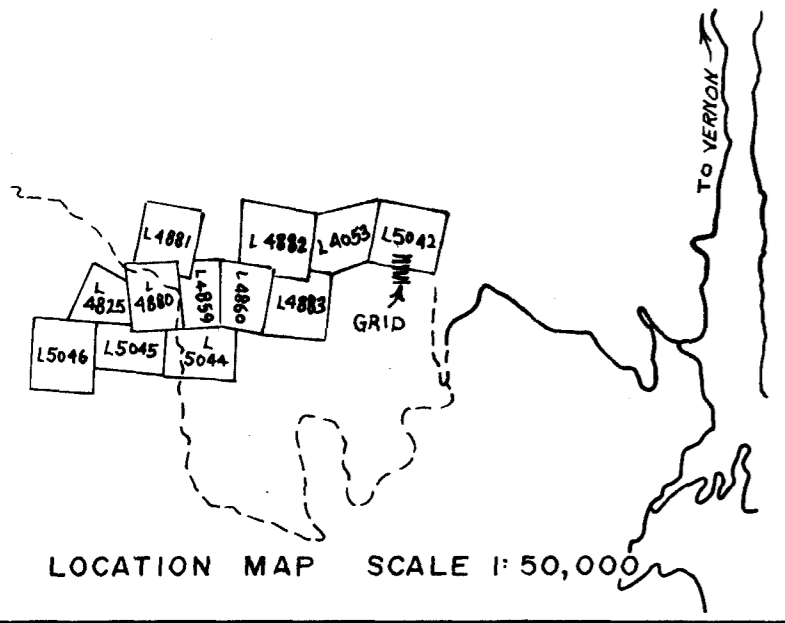


MAGNETOMETER SURVEY  
 INSTRUMENT:  
 SCINTREX MP2, DIGITAL,  
 PROTON PRESSION  
 CONTOUR INTERVAL:  
 100γ, 500γ  
 BACKGROUND: 57,000γ



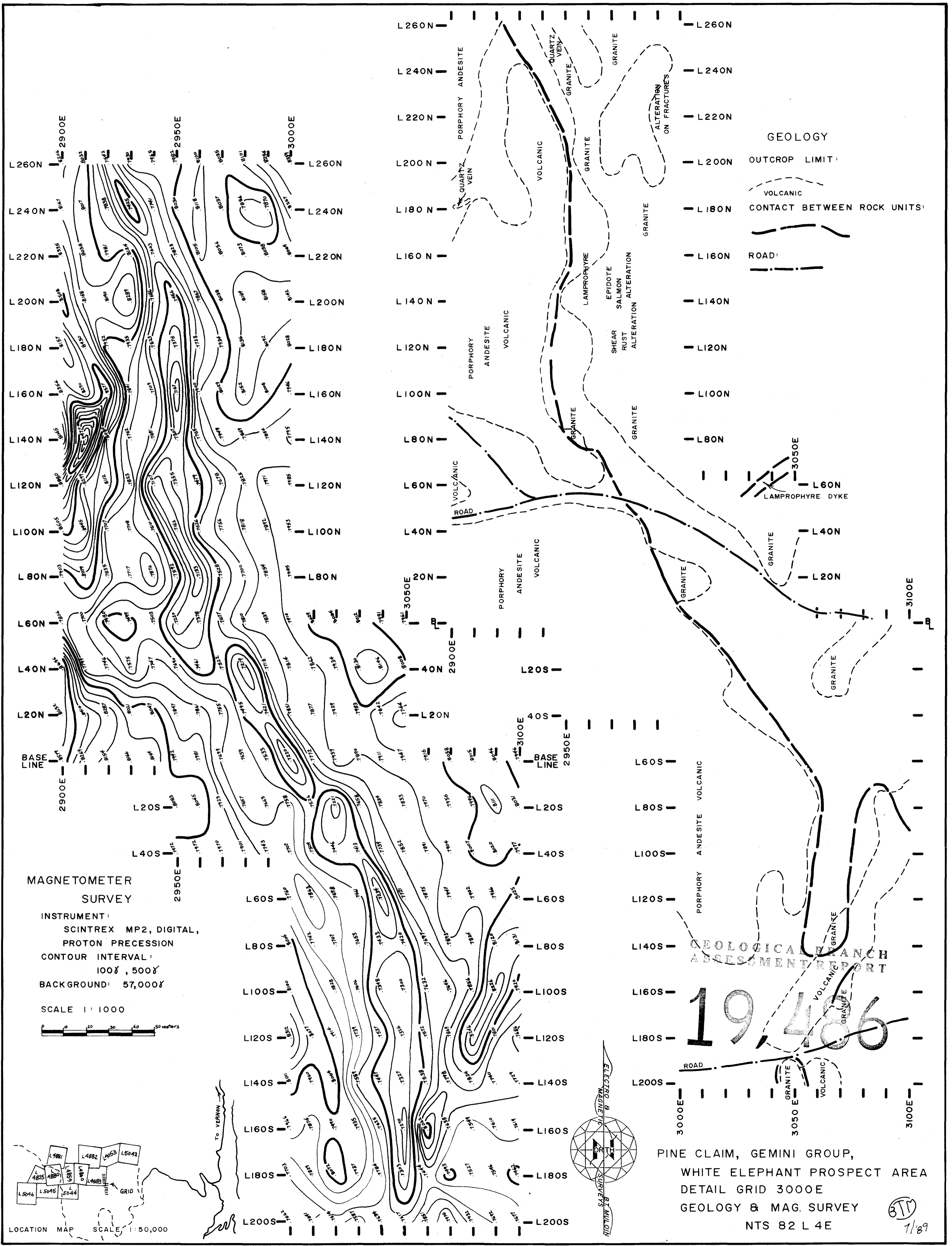
GEOLOGY  
 OUTCROP LIMIT:  
 ROAD:

GEOLOGICAL BRANCH  
 ASSESSMENT REPORT  
 19,486



RAFRED CLAIM, GEMINI GROUP  
 WHITE ELEPHANT PROSPECT AREA  
 DETAIL GRID 3600E  
 VLF EM SURVEYS  
 NTS 82 L 4E

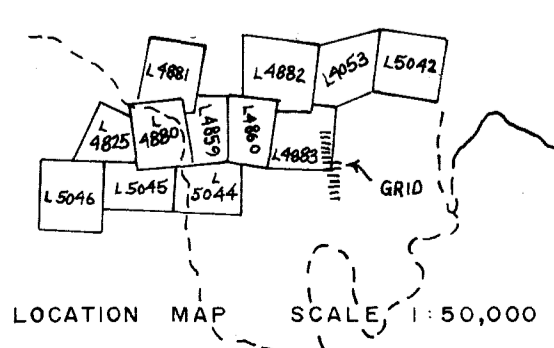
3TV  
 7/89



**GEOLOGY**

- OUTCROP LIMIT:
- VOLCANIC
- CONTACT BETWEEN ROCK UNITS:
- ROAD:

**MAGNETOMETER SURVEY**  
 INSTRUMENT: SCINTREX MP2, DIGITAL, PROTON PRECESSION  
 CONTOUR INTERVAL: 100, 500  
 BACKGROUND: 57,000  
 SCALE 1:1000



**19,486**

GEOLOGICAL BRANCH  
 ASSESSMENT REPORT

PINE CLAIM, GEMINI GROUP,  
 WHITE ELEPHANT PROSPECT AREA  
 DETAIL GRID 3000E  
 GEOLOGY & MAG. SURVEY  
 NTS 82 L 4E

3/89