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ASSESSMENT REPORT
on

VLF-EM GEOPHYSICS

QUARTZ CREEK, SAW AND BURN CLAIMS

BURN GROUP

Sawmill Creek, Pitt Creek Area

FORT STEELE MINING DIVISION

NTS 82 F/9 E

Latitude 49° 35'N
Longitude 116° 02'W

by

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GEOLOGIST

August 27, 1992

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,492

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1.00 INTRODUCTION

1.10 Location and Access

The Burn group of claims is located approximately 12 kilometers southwest of Kimberley, B.C., in the Fort Steele Mining Division (Fig. 1). The claims straddle the ridge between the St. Mary River drainage to the north and the Perry Creek drainage to the south and are centered approximately at 49° 35' N Latitude, 116° 05' W Longitude.

Access to the property is via good logging roads from the Perry Creek side, which join the old highway between Kimberley and Cranbrook. Very recent Forestry thinning programs on and in the vicinity of the claims have created additional road access on the claims.

1.20 Physiography

The property is situated west of the Rocky Mountain Trench within the Moyie Range of the Purcell Mountains. The claims straddle a glacially rounded ridge which rises to 2070 meters.

Vegetation cover is mainly of pine, larch and fir. Part of the property has been clear-cut logged and the northern part was burned by the large Pitt Creek fire around 1950. These areas are in various stages of forest regeneration and locally contain thick stands of immature trees.

1.30 History of Previous Exploration

Sawmill Creek, which drains the south portion of the property, is a south-flowing tributary of Perry Creek. It is one of the better placer gold tributaries of Perry Creek, and has historically received considerable prospecting for lode gold sources.

Three important lode gold prospects occur in the vicinity of the Burn group of claims. The Birdie Lode and Price's Pit occur to the southeast while Kimberley Goldfield's is a small 2-unit block included within the boundaries of the Burn group (but has separate ownership). Each of these prospects are of gold with quartz, with associated pyrite and copper and lead sulfides. Each has seen minor production, in the case of Kimberley Goldfields about 1800 tons of 0.25 ounce gold/ton.

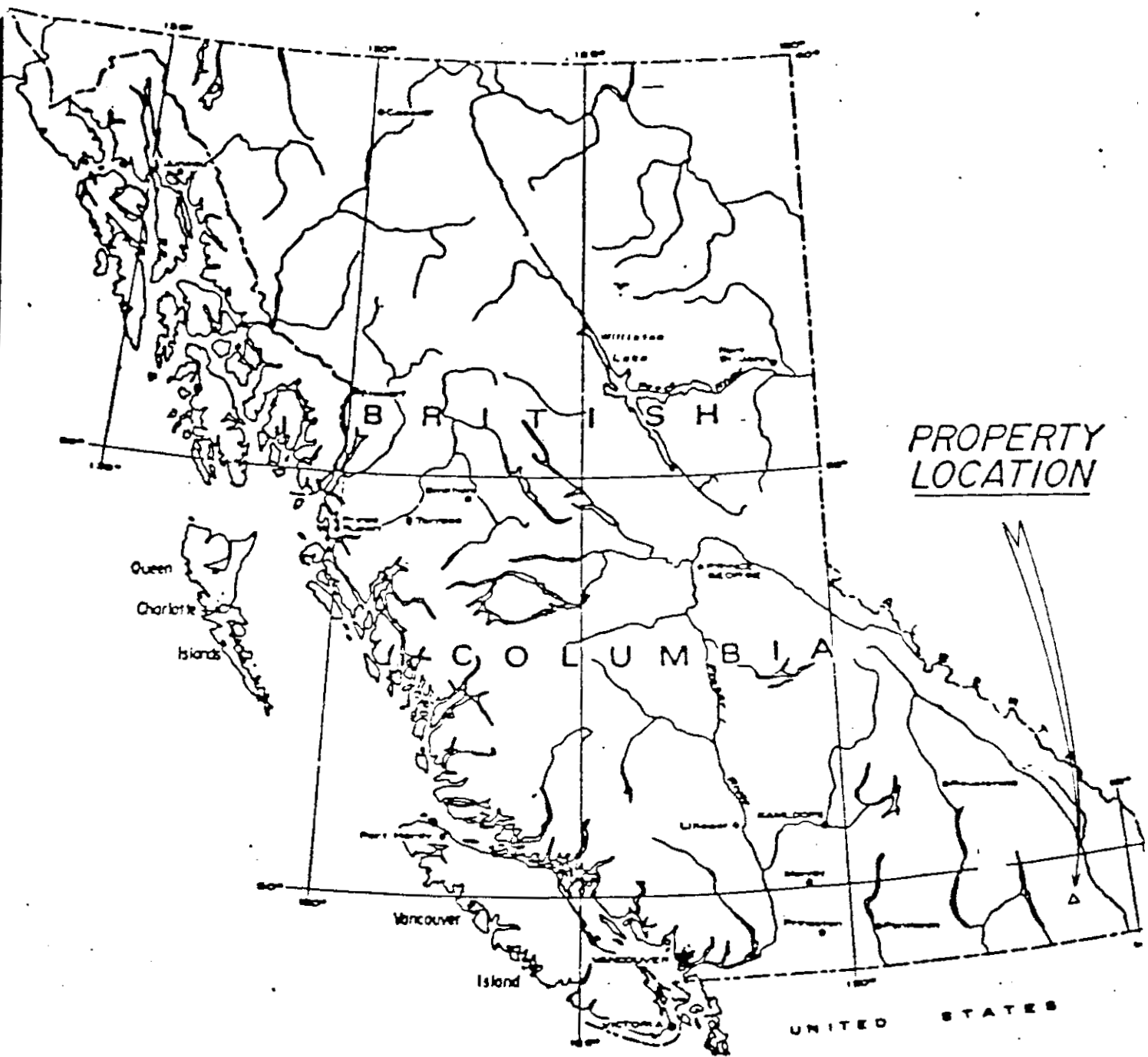
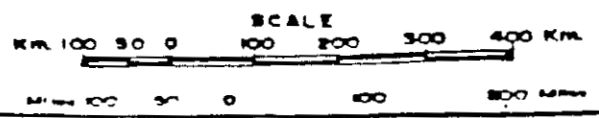


Figure 1
BURN GROUP

LOCATION MAP



More regionally, historic exploration for lode gold has been generally similar to the Sawmill Creek area with small gold occurrences identified and a few with minor production. In 1990 Dragoon Resources Ltd. drilled the David Property and proved up a reserve of nearly 100,000 tonnes with a grade of about 10 grams gold/ton. The David deposit is hosted by a prominent shear zone and its discovery has provided a new focus to gold exploration in the East Kootenay region of B.C.

A program of prospecting and reconnaissance geophysics in 1991 on the current Burn Group claims detected anomalous gold mineralization and closely associated geophysical anomalies.

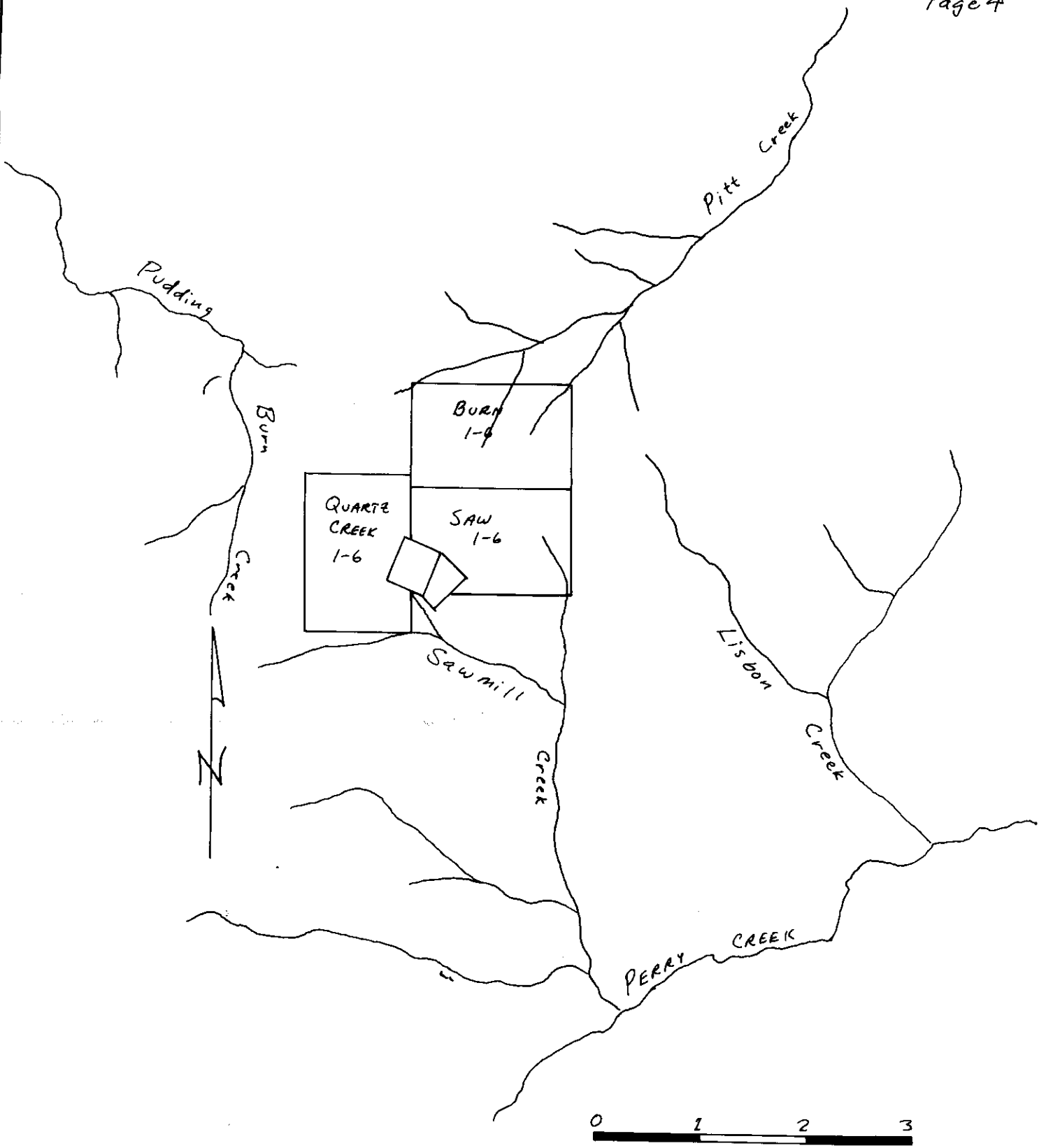
1.40 Property

The Burn group includes 18 2-post claims staked in 1990 and 1991 (Fig. 2):

Claim Name	Title Number	Date Staked	Due
Quartz Creek 1	212115	90-10-19	1994
Quartz Creek 2	212116	90-10-19	1994
Quartz Creek 3	212117	90-10-19	1994
Quartz Creek 4	212118	90-10-19	1994
Quartz Creek 5	212119	90-10-19	1994
Quartz Creek 6	212120	90-10-19	1994
Saw 1	300075	91-05-15	1995
Saw 2	300076	91-05-15	1995
Saw 3	300077	91-05-15	1995
Saw 4	300084	91-05-15	1995
Saw 5	300086	91-05-15	1995
Saw 6	300087	91-05-15	1995
Burn 1	301768	91-06-15	1995
Burn 2	301769	91-06-15	1995
Burn 3	301770	91-06-15	1995
Burn 4	301771	91-06-15	1995
Burn 5	301772	91-06-15	1995
Burn 6	301773	91-06-15	1995

1.50 Purpose of Survey

In 1992 a program of VLF-EM and Magnetic geophysical surveys were conducted on grids on the Burn Group claims in areas where anomalous gold mineralization and geophysical anomalies were detected by a prospecting and reconnaissance geophysical survey in 1991.



0 1 2 3
Km

Scale 1: 50,000

NTS 82 F/9E

Figure 2. Burn Group Claim Map

2.00 GEOLOGY

The area of the Burn claim group is cut by the major ENE oriented St. Mary Fault which separates younger Creston Formation siltstones on the south from older Aldridge Formation siltstones to the north. The fault is a complex feature in the claim area and has probably influenced younger northeast structures which are more directly related to the gold mineralizing process. The resultant product is an extensively brecciated and altered package of rocks with both northeast and ENE structures.

The Precambrian Purcell Supergroup Aldridge and Creston Formation rocks have been intruded by Precambrian age diorite and gabbro composition sills and dikes of the Moyie Intrusions. Locally these are magnetic, apparently due to an overprinting effect of the oxidizing Cretaceous felsic intrusives which are present in the area.

4.00 GEOPHYSICS

4.10 Introduction

The 1992 geophysical surveys on the Burn claim group were located in two areas called the South Grid and North Grid and shown in Figure 3. Both grids were oriented with survey lines at an azimuth of 120 degrees to cross structures inferred from the 1991 reconnaissance work and geological mapping to be at an azimuth of 030 degrees. The lines were prepared using a hip-chain and compass and survey stations were marked with numbered flagging. Line spacing is generally at 50 or 100 meters as shown on Figures 4 and 5. VLF-EM readings were taken at 25 meter spacings along the lines with magnetic readings taken at 12.5 meter spacings.

A total of 11.4 kilometers of line were surveyed with VLF-EM and 1.15 kilometers were surveyed with magnetometer.

Figures 4 and 5 show grid survey plans of Dip Angle and Fraser Filter data with the strongest conductive zones identified with Fraser Filter contours. Figures 6 and 7 show profiles of VLF-EM data with Figure 6 also showing Magnetic profiles. No magnetic surveying was done on the North Grid. The VLF-EM data includes Field Strength (+ symbol), Dip Angle (. symbol), and Fraser Filter (x symbol) values.

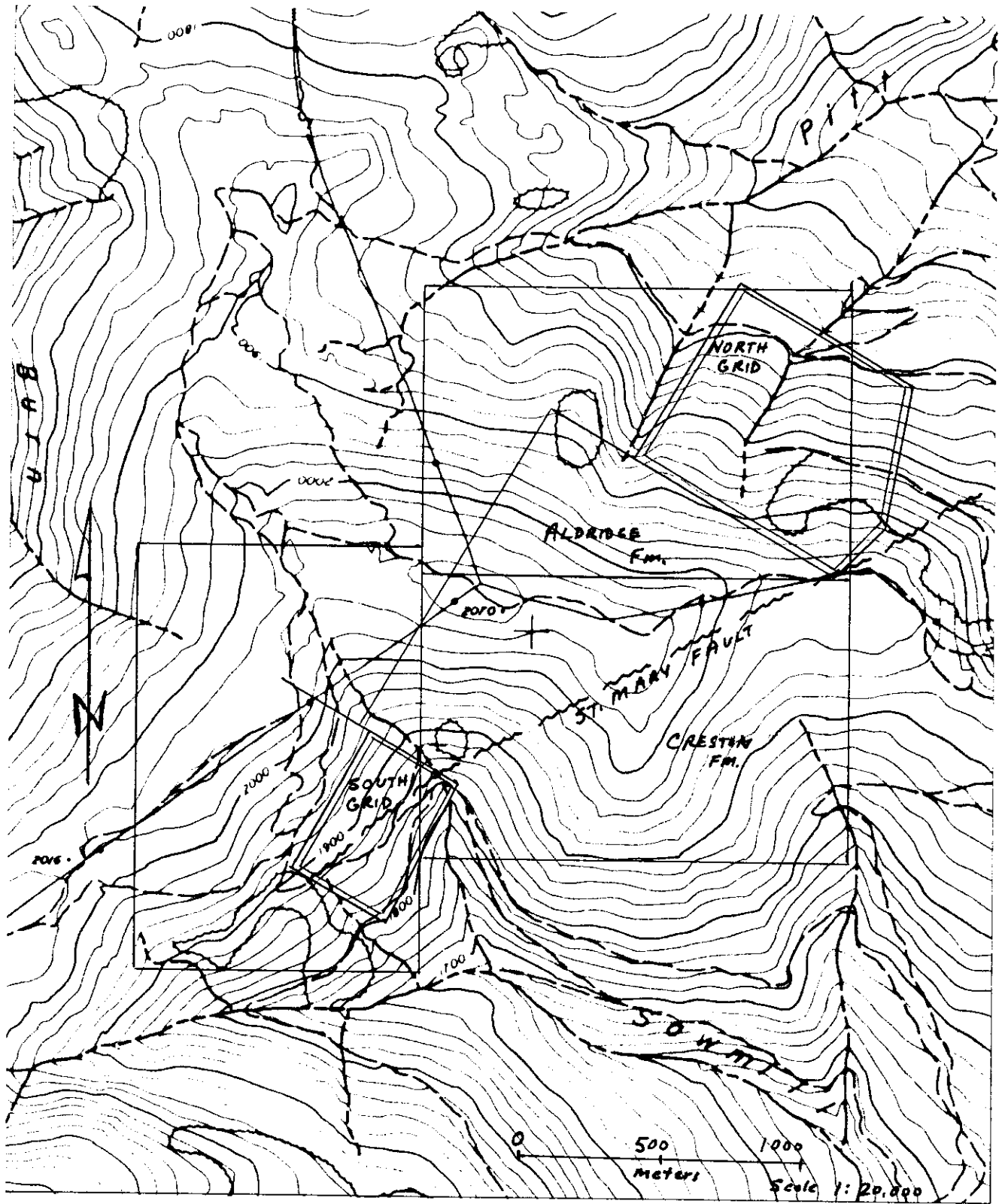


FIGURE 3 LOCATION MAP OF SURVEY GRID AREA

3.20 VLF-EM Survey

3.21 Instrumentation and Survey Procedure

A Crone Radem VLF-EM receiver, manufactured by Crone Geophysics Ltd. of Mississauga, Ontario was used for the VLF-EM survey. Seattle, Washington was used as the transmitting station.

In all electromagnetic prospecting, a transmitter produces an alternating magnetic (primary) field by a strong alternating current usually through a coil of wire. If a conductive mass such as a sulfide body is within this magnetic field, a secondary alternating current is induced within it which in turn induces a secondary magnetic field that distorts the primary magnetic field. The VLF-EM receiver measures the resultant field of the primary and secondary fields, and measures this as the tilt or 'dip angle'. The Crone Radem VLF-EM receiver measures both the total Field Strength and the Dip Angle.

The VLF-EM uses a frequency range from about 15 to 28 KHz, whereas most EM instruments use frequencies ranging from a few hundred to a few thousand Hz. Because of its relatively high frequency, the VLF-EM can detect zones of relatively lower conductivity. This results in it being a useful tool for geologic mapping in areas of overburden but it also often results in detection of anomalies that are difficult to explain. However the VLF-EM can also detect sulfide bodies which have too low a conductivity for other EM methods to pick up.

For the survey on the Burn Group claims, readings were taken every 25 meters along survey lines spaced either 50 or 100 meters apart as shown on Figures 4 and 5. Grid lines were oriented at 120 degrees azimuth to cross the inferred structures at approximately right angles.

Results were reduced by applying the Fraser Filter, and the filtered values are plotted on Figures 4 and 5; they are shown between the survey points and between the dip angle readings. The higher Fraser Filter values are also contoured on these figures. Profiles of the survey lines are plotted on Figures 6 and 7, with Field Strength, Dip Angle and Fraser Filter values shown.

The Fraser Filter is essentially a 4-point difference operator, which transforms zero crossings into peaks, and a low pass smoothing operator which induces the inherent high frequency noise in the data. Thus the noisy non-contourable data are transformed into less noisy contourable data. Another advantage of this filter is that a conductor which does not show up as a crossover on the unfiltered data quite often shows up on the filtered data.

3.22 Discussion of Results

South Grid

The South Grid (Figures 4 and 6) covers an area where 1991 exploration work detected weak gold mineralization associated with a linear northeast occurrence of felsic dike material within Middle Aldridge Formation rocks. The detailed grid lines from 500 N to 850 N show only relatively flat data and no anomaly was detected in association with the felsic dike material. One weak northeast oriented conductor was detected near 200 E on lines 500 N and 700 N; it occurs sub-parallel to the trend of the felsic dike material and may represent a structure which is related to the felsic dike material.

Line 1000 N at the north end of the grid area crosses a power line which was detected as a sharp strong anomaly. At 0 on this line a moderate conductor is present with a distinct Field Strength peak. Additional adjacent lines should be surveyed to determine the orientation and extent of the conductor.

North Grid

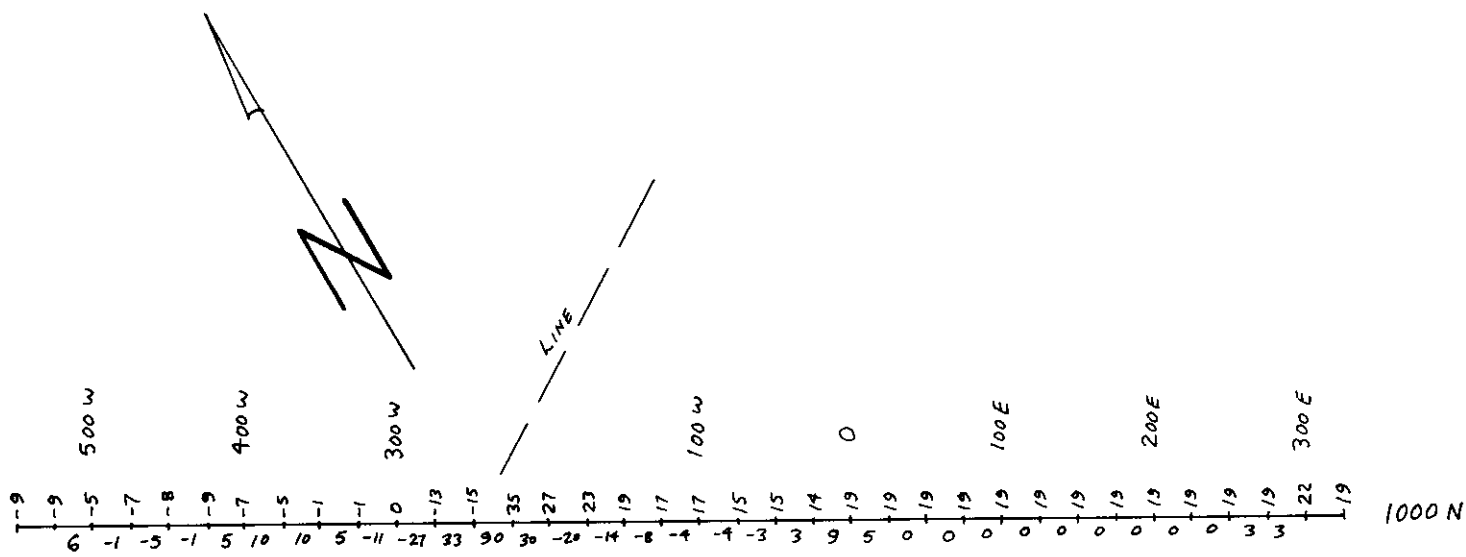
The North Grid (Figures 5 and 7) covers an area where exploration work in 1991 detected strongly anomalous gold mineralization. Reconnaissance VLF-EM and Magnetic surveying along two roads detected a strong anomaly, apparently trending northeasterly.

A grid of eight lines at 100 meter spacing were surveyed across the areas of anomalous gold mineralization and the previously detected VLF-EM and Mag anomalies (this area was not surveyed with the magnetometer in 1992).

Three distinct linear northeast anomalies were detected by the survey. The western anomaly is close to the anomalous gold mineralization found by prospecting in 1991; it may represent a structure which has controlled the gold mineralization. The middle anomaly is the strongest but is entirely in an area of overburden; trenching is required to determine the cause of this anomaly. The eastern anomaly coincides with a shear zone which hosts hematitic breccia. Gold mineralization may be associated with this structure.

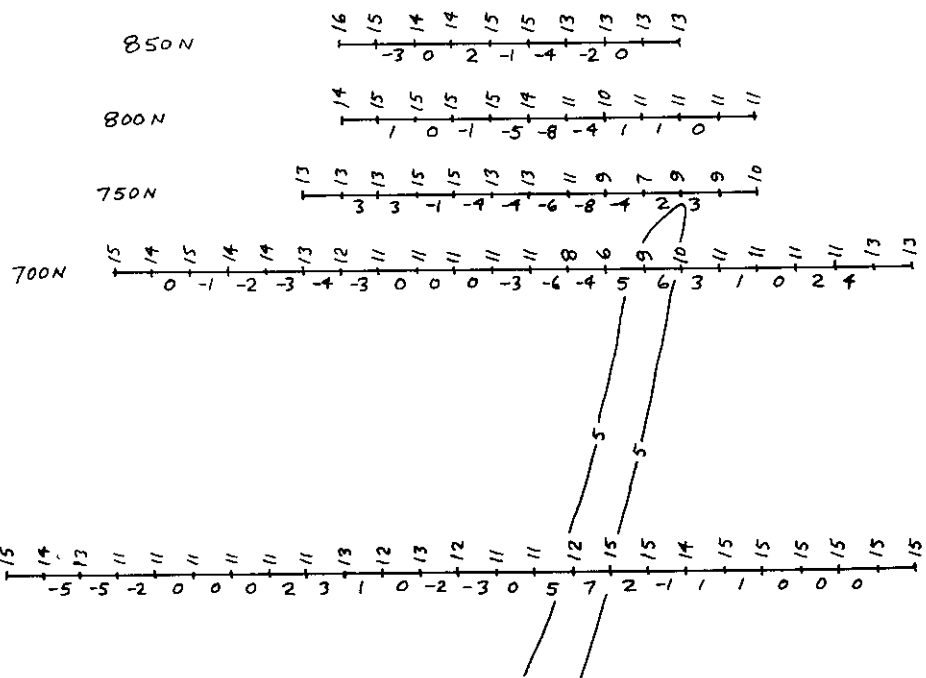
3.30 Magnetic Survey

A Geometrics model G816 portable proton precession magnetometer capable of detecting magnetic variations of one gamma was used for the magnetic survey. Repeat readings were taken along the survey lines in a 'closed loop' system of surveying to allow correcting for diurnal variation.

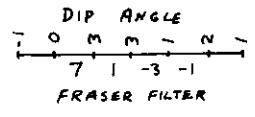


Power

200w



SEATTLE 24.8 kHz



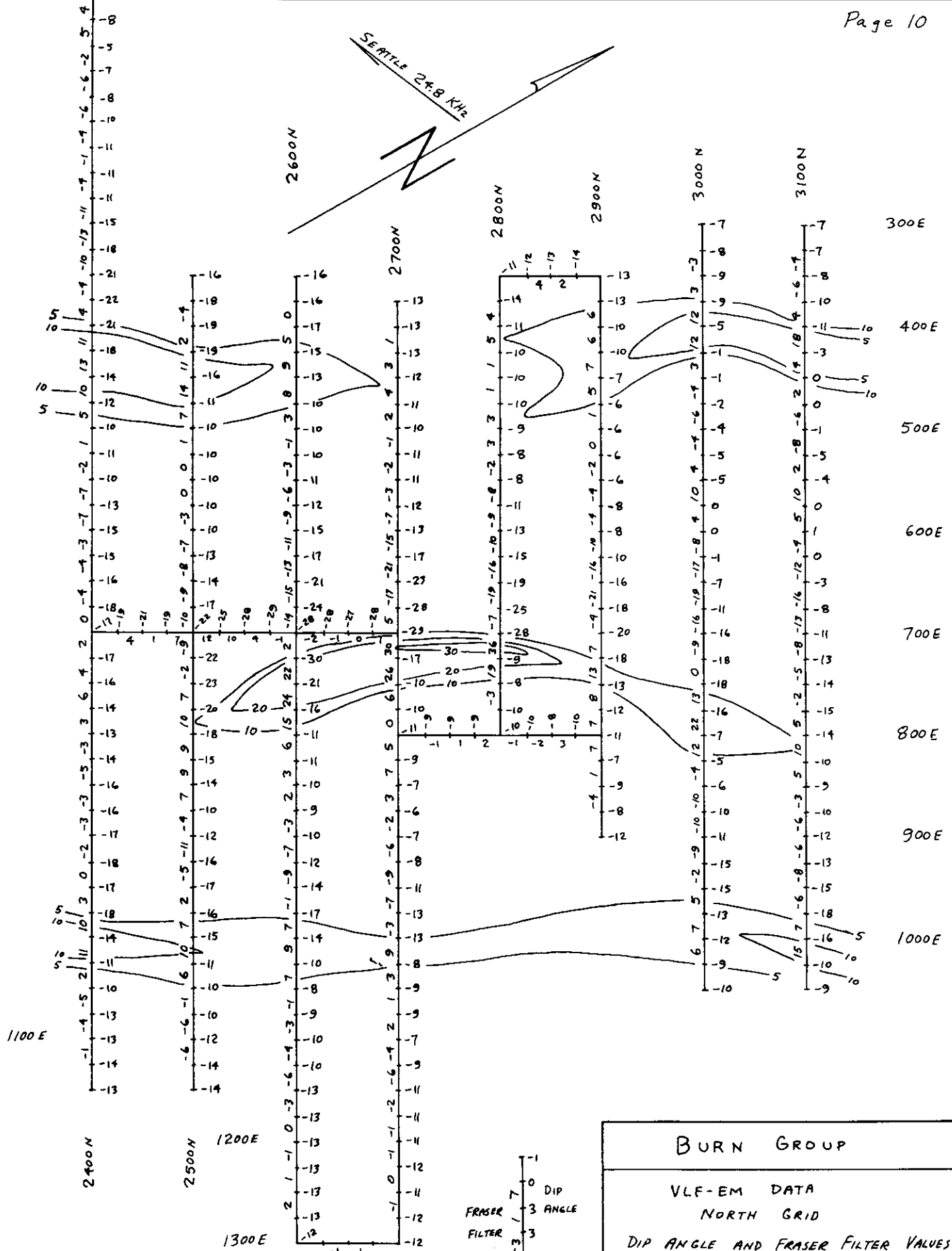
BURN GROUP

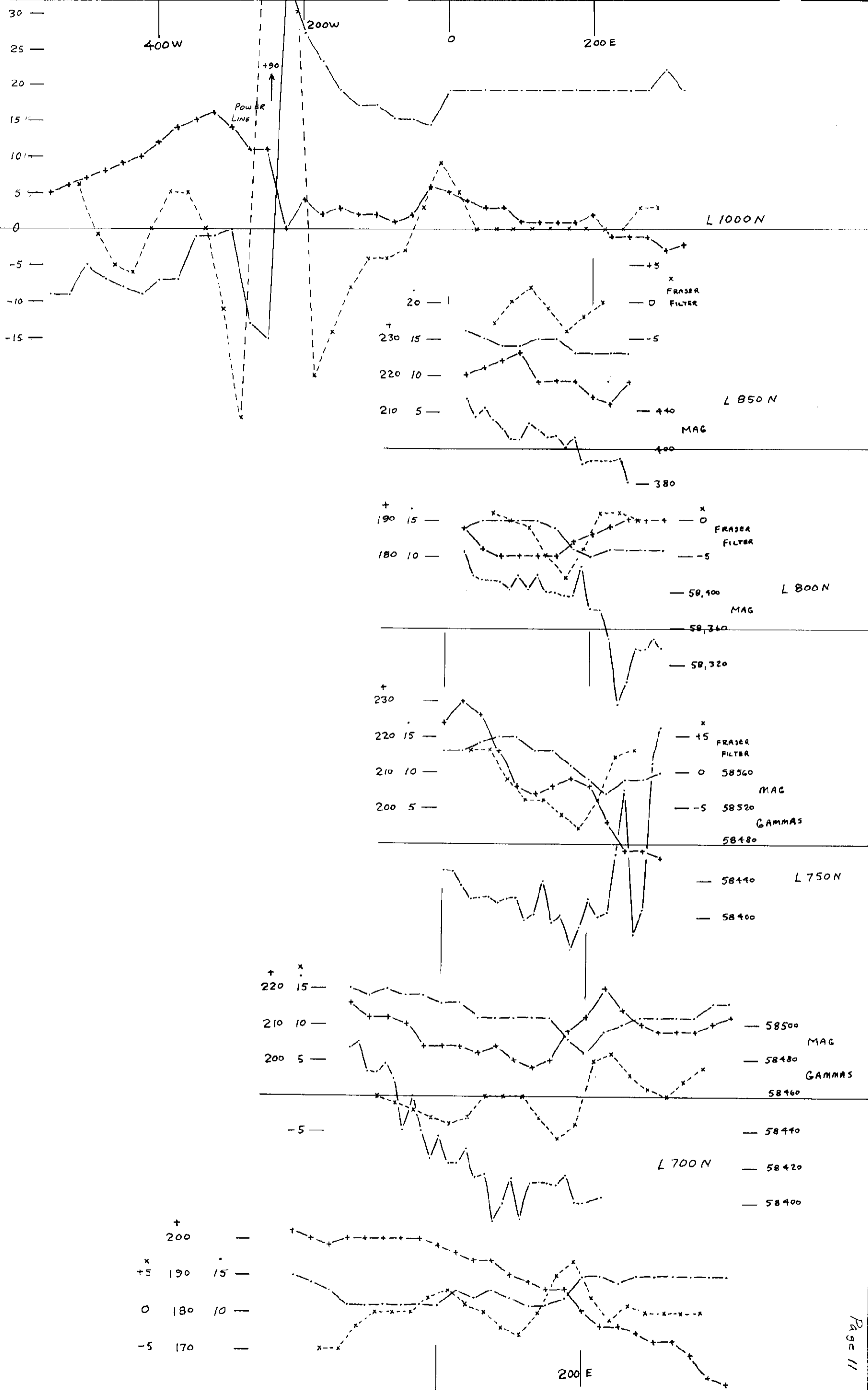
VLF-EM DATA

SOUTH GRID

DIP ANGLE AND FRASER FILTER VALUES

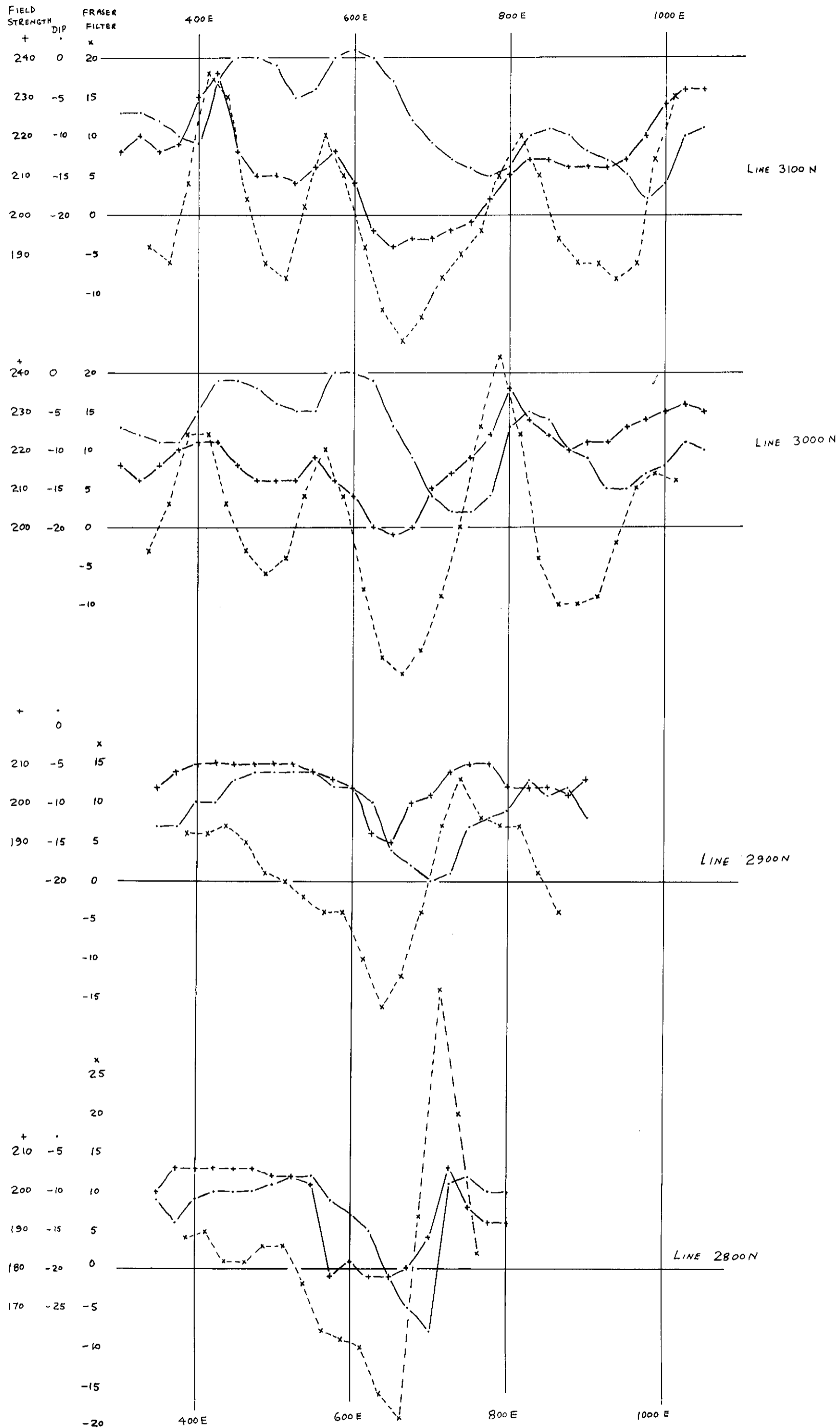
SCALE 1:5000 FIGURE 4





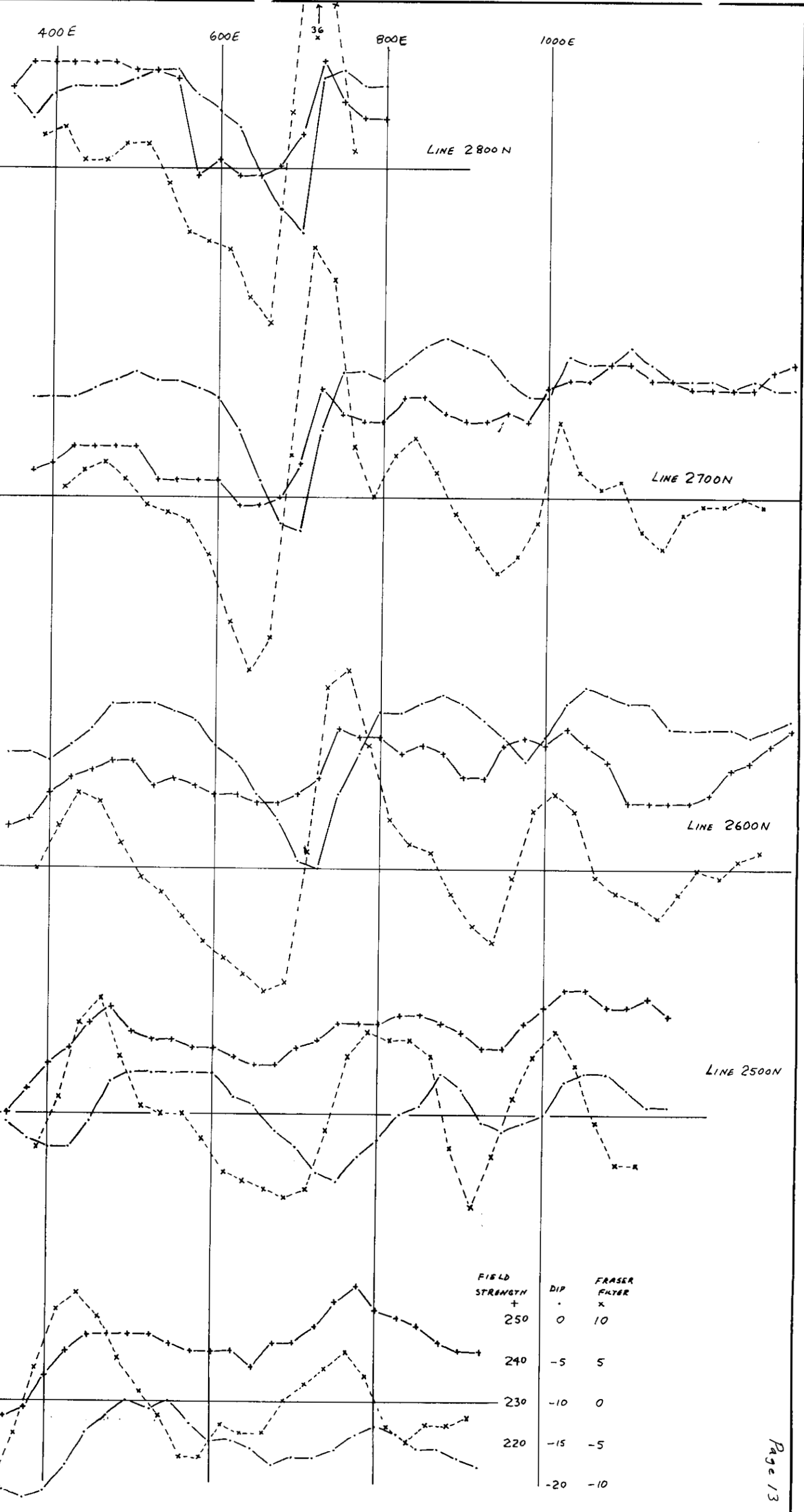
BURN GROUP SOUTH GRID
VLF-EM & MAGNETIC PROFILES
TRANSMITTING STATION: SEATTLE 29.8 KHZ

SCALE 1:5000	FIGURE 6
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BURN GROUP	
NORTH GRID	
VLF-EM PROFILES	
TRANSMITTING STATION: SEATTLE 24.8 KHZ	
SCALE 1:5000	FIGURE 7a

FIELD STRENGTH +	DIP -	FRASER FILTER x
210	-5	15
200	-10	10
190	-15	5
180	-20	0
	-25	-5
	-10	-15
	-15	20
250	-10	15
240	-15	10
230	-20	5
220	-26	0
210	-30	-5
	-10	-15
	-15	20
260	-10	20
250	-15	15
240	-20	10
230	-25	5
	0	0
	-5	-5
	-10	-10
250	0	15
240	-5	10
230	-10	5
220	-15	0
210	-20	-5
200	-25	-10



FIELD STRENGTH +	DIP -	FRASER FILTER x
250	0	10
240	-5	5
230	-10	0
220	-15	-5
	-20	-10

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BURN GROUP	
NORTH GRID	
VLF-EM PROFILES	
TRANSMITTING STATION: SEATTLE 24.8 KHZ	
SCALE 1:5000	FIGURE 7b

Magnetic surveying was done only on some lines in the South Grid area (Figure 6). The magnetic profiles show numerous small fluctuations which represent short term magnetic interference, probably from sun activity.

Generally, the magnetic profiles show a decrease in magnetic intensity to the east. Line 750 N has two sharp spikes at the extreme east end of the line. Although neither adjacent line shows a similar response, further work should be done in the area of the anomaly to establish its orientation and extent.

4.00 CONCLUSIONS

VLF-EM surveying on the South Grid failed to detect any conductive response in the immediate area of a felsic intrusive where prospecting in 1991 detected weakly anomalous gold mineralization. A weak northeast conductive response occurs east of the felsic intrusive.

VLF-EM surveying on the North Grid defined three northeast oriented conductors; the western one occurs close to a 1991 discovery of strongly anomalous gold mineralization and may represent a controlling structure. Trenching should be carried out to determine the cause of the anomalies.

Magnetic surveying on the South Grid picked up one anomaly at the east end of Line 750 N. Further surveying is necessary to establish the attitude and extent of this anomaly.

5.00 STATEMENT OF EXPENDITURES

12 man-days, field work, drafting and report, @ 225.00	\$2700.00
Truck Rental 8 days @ \$50.00/day	400.00
VLF-EM and Mag Rental 8 days @ \$30.00/day	240.00
Field and Report Supplies	91.00

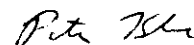
TOTAL EXPENDITURE	\$3431.00
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6.00 AUTHOR'S QUALIFICATIONS

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 27th day of August, 1992.



Peter Klewchuk