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VLF-EM GEOPHYSICS

HOMESTAKE PROPERTY

Liverpool Creek

Fort Steele Mining Division

NTS 82 F/8 E

Latitude $49^{\circ} 28' N$
Longitude $116^{\circ} 07' W$

FILMED

by

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September 25, 1993

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

23,022

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1.00 INTRODUCTION

1.10 Location and Access

The Homestake mineral claim group is located in the Fort Steele Mining Division, 25 kilometers east of Cranbrook, B.C., in the Perry Creek drainage, immediately north of Liverpool Creek. The claims are centered approximately at 49° 28' north latitude and 116° 07' west longitude, on reference map NTS 82 F/8E (Figures 1 & 2). Access is via good logging roads along the northwest side of Perry Creek.

1.20 History

Significant gold mineralization has been known at the Homestake property since the early 1900's. The 1926 Minister of Mines report describes active development mining by the Cranbrook Gold Mining Company Limited. Workings on the property include 3 caved adits, a caved shaft and numerous sloughed surface pits. There appears to be no record of any production and no record of any more recent work of economic significance.

1.20 Property

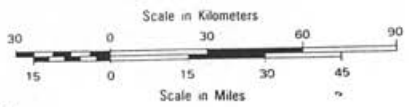
The Homestake property consists of 9 two-post mineral claims owned by L.D.Morgan of Cranbrook, B.C.:

Claim	Title No.	Staked	Expiry Date
Homestake 1	316858	April 5, 1993	April 5, 1994
Homestake 2	316859	"	"
Homestake 3	316860	"	April 5, 1995
Homestake 4	316861	"	"
Homestake 5	316862	"	April 5, 1996
Homestake 6	316863	"	April 5, 1995
Homestake 7	311210	July 19, 1992	July 19, 1994
Homestake 8	311214	July 19, 1992	July 19, 1994
Columbia	301520	July 5, 1991	July 5, 1995

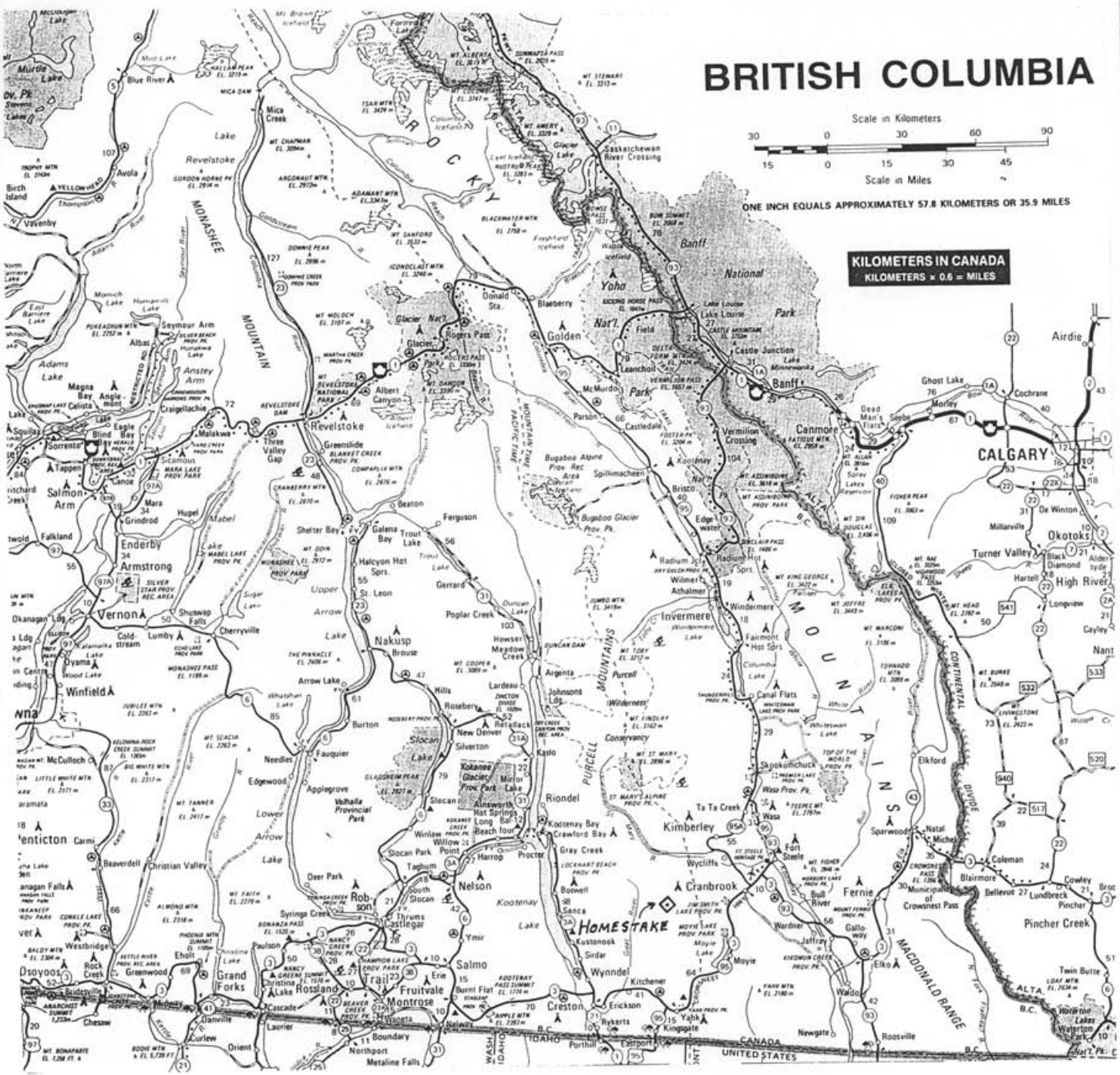
1.30 Purpose of Survey

A reconnaissance geophysical survey was conducted on the Homestake property in June, 1993, in the hope of identifying geological structures which might have influenced the deposition of gold.

BRITISH COLUMBIA

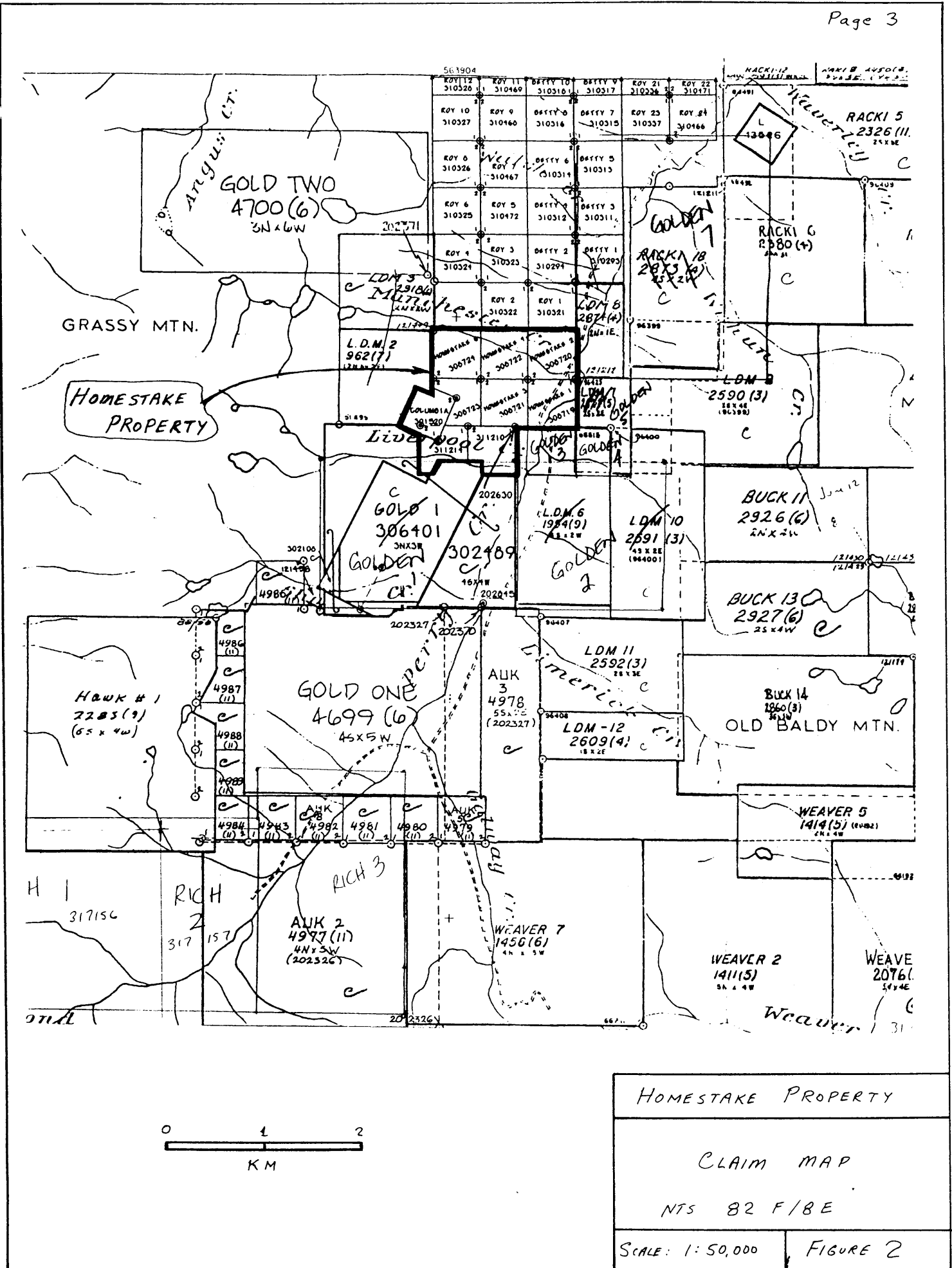


KILOMETERS IN CANADA
KILOMETERS x 0.6 = MILES



HOMESTAKE
PROPERTY LOCATION MAP

FIGURE 1



2.00 GEOLOGY

The area of the Homestake property is underlain by Helikian age Precambrian rocks of the Purcell Anticlinorium. These are fine-grained clastic and carbonate rocks of the Aldridge, Creston and Kitchener Formations.

Regional structure consists of NNE striking beds with moderate to steep west dips. Bedding is cut by numerous NNE-striking, steep west dipping faults. Gold mineralization occurs locally within the NNE faults, within parallel trending narrow shear zones, and in cross-cutting structures.

One of these structures, the Perry Creek Fault, juxtaposes western Creston Formation rocks with eastern Kitchener Formation rocks in the central part of the Homestake property. A narrow quartz vein / shear zone, which parallels this fault a short distance to the west, is the prime target of economic interest known on the property.

3.00 GEOPHYSICS

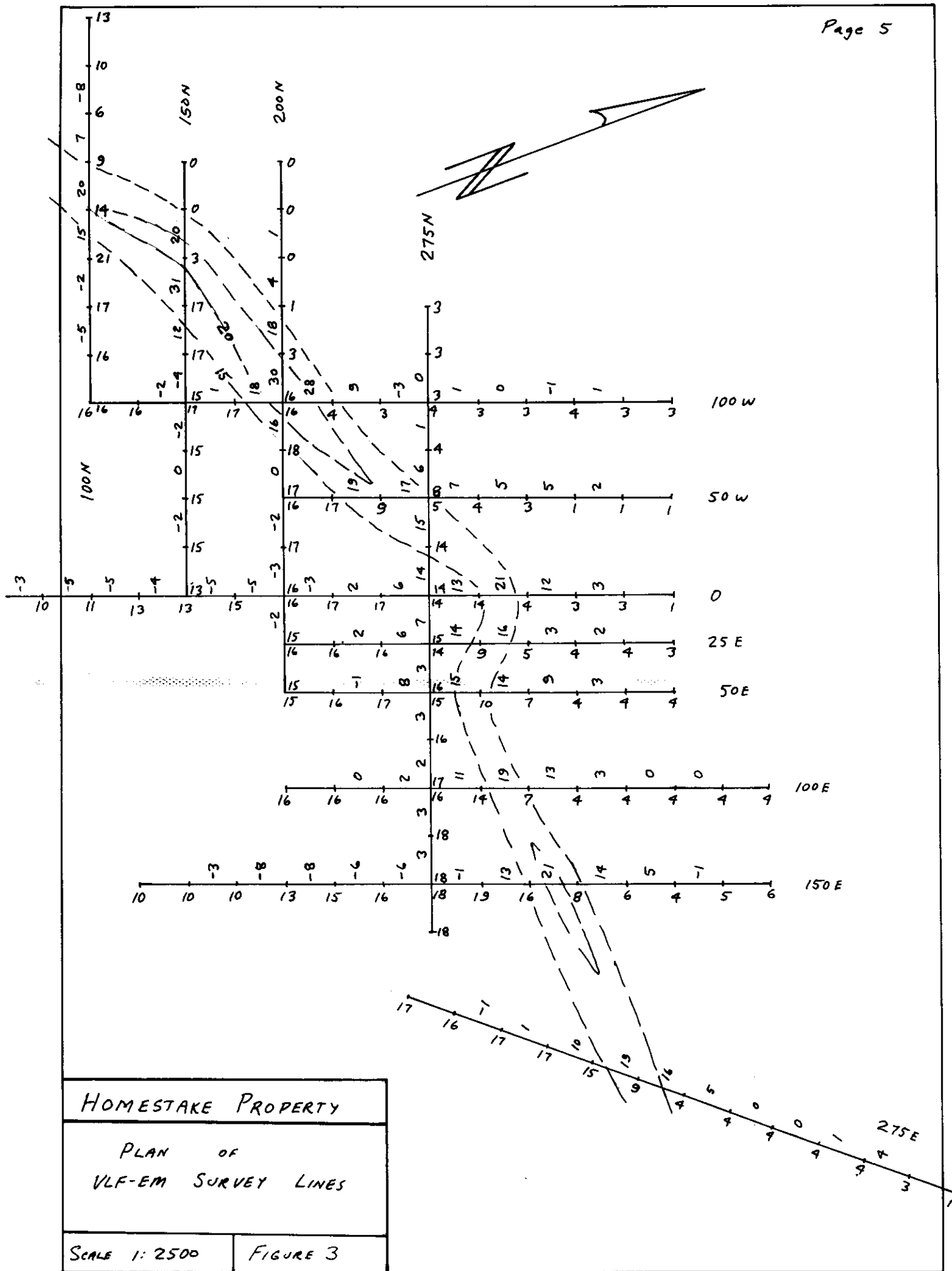
In early 1993, a reconnaissance VLF-EM geophysical survey was conducted over a part of the Homestake property to identify structures which might have influenced the deposition of gold.

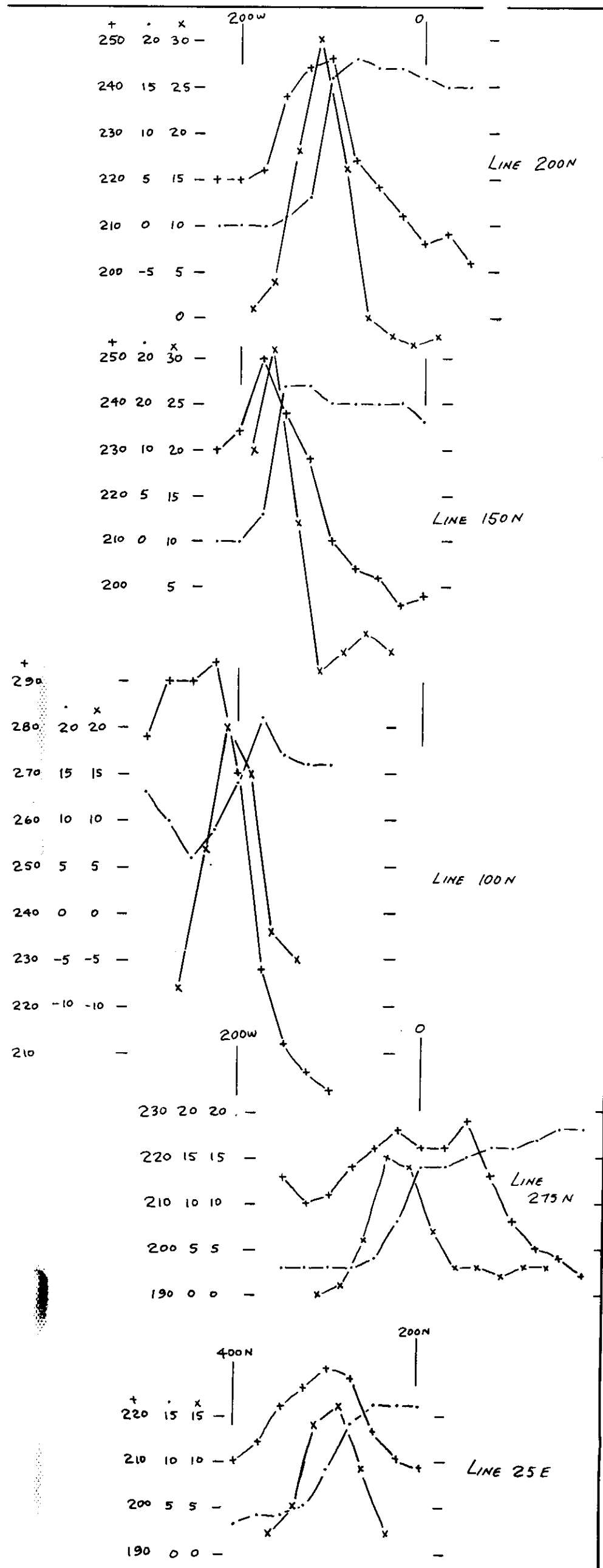
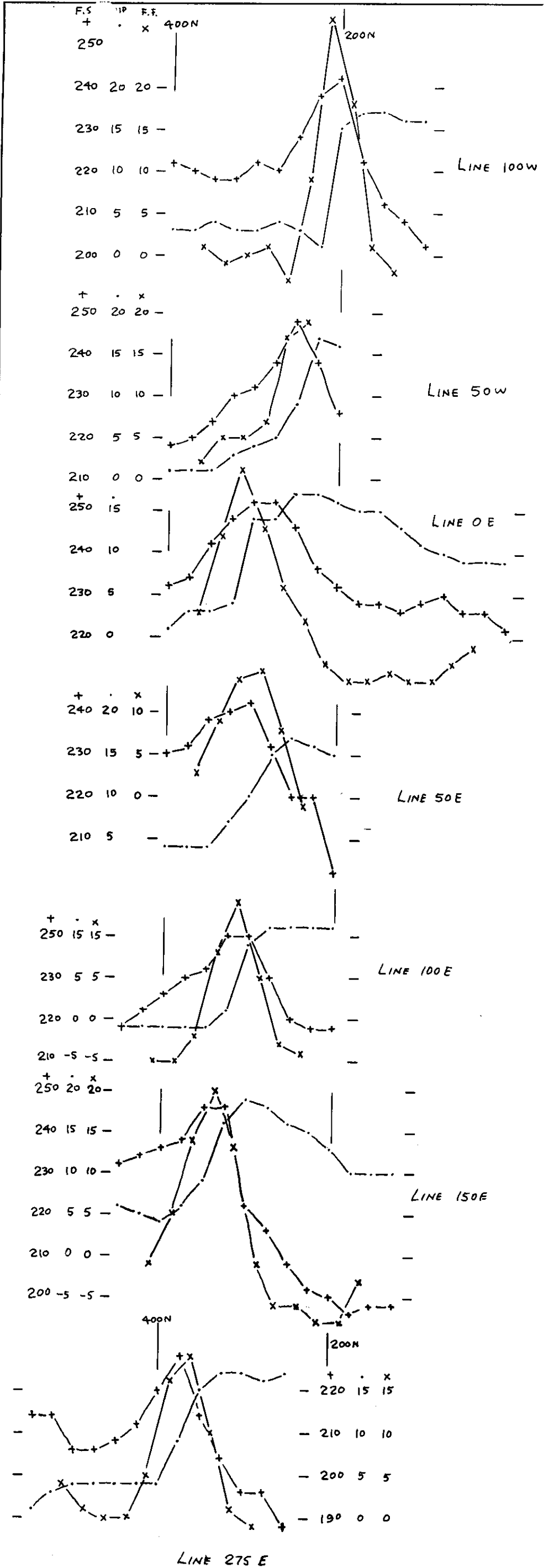
A Crone RADEM VLF-EM receiver, manufactured by Crone Geophysics Ltd. of Mississauga, Ontario, was used for the VLF-EM survey. Annapolis, Maryland (21.4 KHz) was used as the transmitting station.

Survey lines were spaced 25 to 50 meters apart with readings taken at 25 meter intervals. Lines were run in two orientations, at azimuths of 020 and 110 degrees (Figure 3). A total of 3200 meters of line were surveyed.

The survey identified a fairly strong ENE trending conductive feature. The anomaly appears to be continuous across the area of the survey; it was identified on all 12 lines of the survey.

Figure 3 shows a detailed plan of the survey lines with some of the pertinent VLF-EM data. Figure 4 shows profiles of the survey data for all 12 survey lines and includes data for Field Strength (+ symbol), Dip Angle (. symbol) and the calculated Fraser Filter values (X symbol).





FOR LINE LOCATION SEE
FIGURE 3

HOMESTAKE PROPERTY	
VLF-EM PROFILES	
+ FIELD STRENGTH	
- DIP ANGLE	
x FRASER FILTER	
SCALE 1:5000	FIGURE 4

4.00 CONCLUSIONS

A 3200 meter VLF-EM geophysical survey on twelve lines on the Homestake property successfully detected an ENE trending moderately strong conductive zone. Further work is required to establish the cause of the anomaly and to establish whether it had any influence on the deposition of gold on the Homestake Property.

5.00 STATEMENT OF COSTS

Fieldwork, drafting and report	
3 1/2 days @ \$225.00/day	\$800.00
4x4 truck rental	
2 days @ \$50.00/day	100.00
VLF-EM rental	
2 days @ 35.00/day	70.00
TOTAL COST	\$970.00
	=====

6.00 AUTHOR'S QUALIFICATIONS

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

1. I am a member of the Association of Professional Engineers and Geoscientists of the Province of 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 and have worked for seven years as a consulting geologist.

Dated at Kimberley, British Columbia, this 25th day of September, 1993.

Peter Klewchuk

Peter Klewchuk

