83-#924-11825

GEOLOGICAL BRANCH ASSESSMENT REPORT

11,825

FORT KNOX MINERALS LTD.

2000 - 609 GRANVILLE STREET
VANCOUVER, B. C.

ASSESSMENT REPORT
VLF-ELECTROMAGNETIC AND MAGNETOMETER SURVEYS

ON THE
GOLDEN SPIKE MINERAL CLAIM

GREENWOOD MINING DIVISION, B.C.

N. Lat. 49° 04' W. Long. 118° 38'

NTS 82E/2E

by

MICHAEL A. POND, B.Sc.

STRATO GEOLOGICAL ENGINEERING LTD.

103 - 709 DUNSMIUR STREET

VANCOUVER, B. C. V6C 1M9

January 19, 1984

STRATO GEOLOGICAL ENGINEERING LTD.

SUMMARY

A recently completed reconnaisance geophysical program has located a number of strong conductors within the northern 2/3 of the Golden Spike Mineral Claim. Coincident variable magnetics and a strong conductive zone on the west side of the claim may be indicative of massive, bedded sulfides similar to the Sylvester K discovery, located some 4 kilometers to the northeast.

Further exploration work in the form of detailed soil and rock geochemistry is therefore recommended for the Golden Spike Claim.

Respectfully submitted,
STRATO GEOLOGICAL ENGINEERING LTD.

Michael A. Pond, B. Sc.
Geologist

R. J. England, B.Sc.
Geophysicist

January 19, 1984

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INTRODUCTION

Pursuant to a request by the directors of Fort Knox Minerals Ltd., a VLF-Electromagnetic and a magnetometer survey were conducted over the northern two-thirds of the Golden Spike Mineral Claim. Work was done by Strato Geological Engineering Ltd. during November 1983.

The intent of the geophysical work was to outline any strongly conductive zones and/or structure which might be indicative of precious metal deposits, particularly of the bedded massive sulfide type. The Sylvester K property, four kilometers to the northeast and the Grenoble, a more complex property, three kilometers to the south are examples of this type and are now typically thought as being volcanogenic origin.

This report presents the results of some 20 kilometers of VLF-Electromagnetic and magnetometer survey work completed over the claim.

LOCATION, ACCESS AND TOPOGRAPHY

The property lies some three kilometers southeast of

Greenwood in south-central British Columbia. Approximate geographical coordinates are Latitude 49 degrees 04' North; Longitude 118 degrees 38' West. The property terrain is rolling to moderately rugged, ranging in elevation between 3500 and 5200 feet (1067 and 1585 meters) above sea level. In general the claim area has a heavy cover of second growth coniferous trees.

A well maintained gravel road along Lind Creek skirts the north boundry of the property. Several logging and local access roads lead into the central and southern parts of the property and connect with another good gravel road along McCarren Creek on the south (Figures 2 and 3).

CLAIM

The property comprises twelve contiguous mineral claim units located in the Greenwood mining division about three kilometers southeast of Greenwood, B.C. Information on file with the Gold Commissioner at Grand Forks, B.C. is as follows:

Claim Name:	Golden Spike
No. of units:	12
Record No.:	3308 (11)
Expiry Date:	November 9, 1983

Assessment work has been filed, this report being part of the work to maintain the claim in good standing until 1987. The

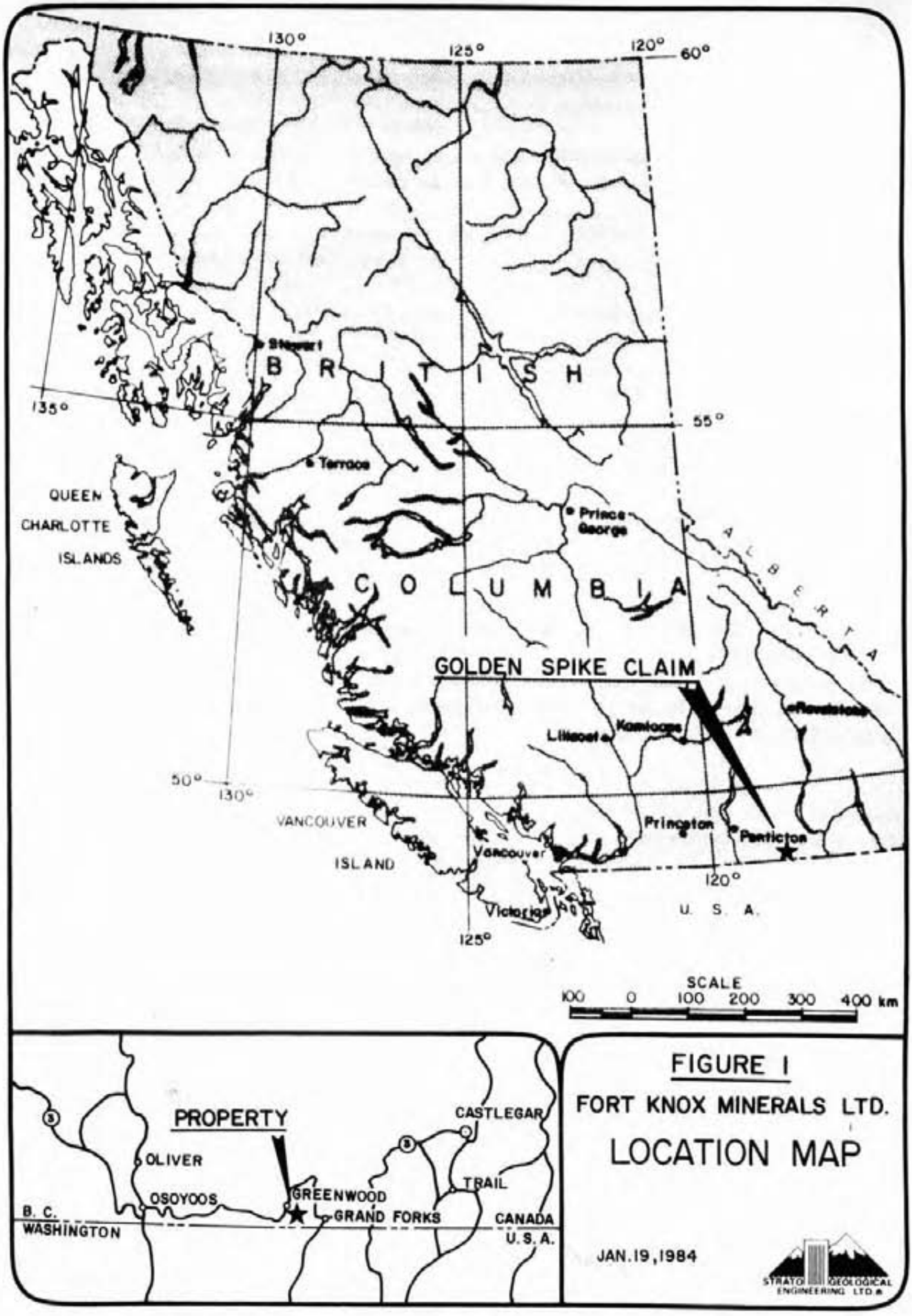

FIGURE 1

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LOCATION MAP

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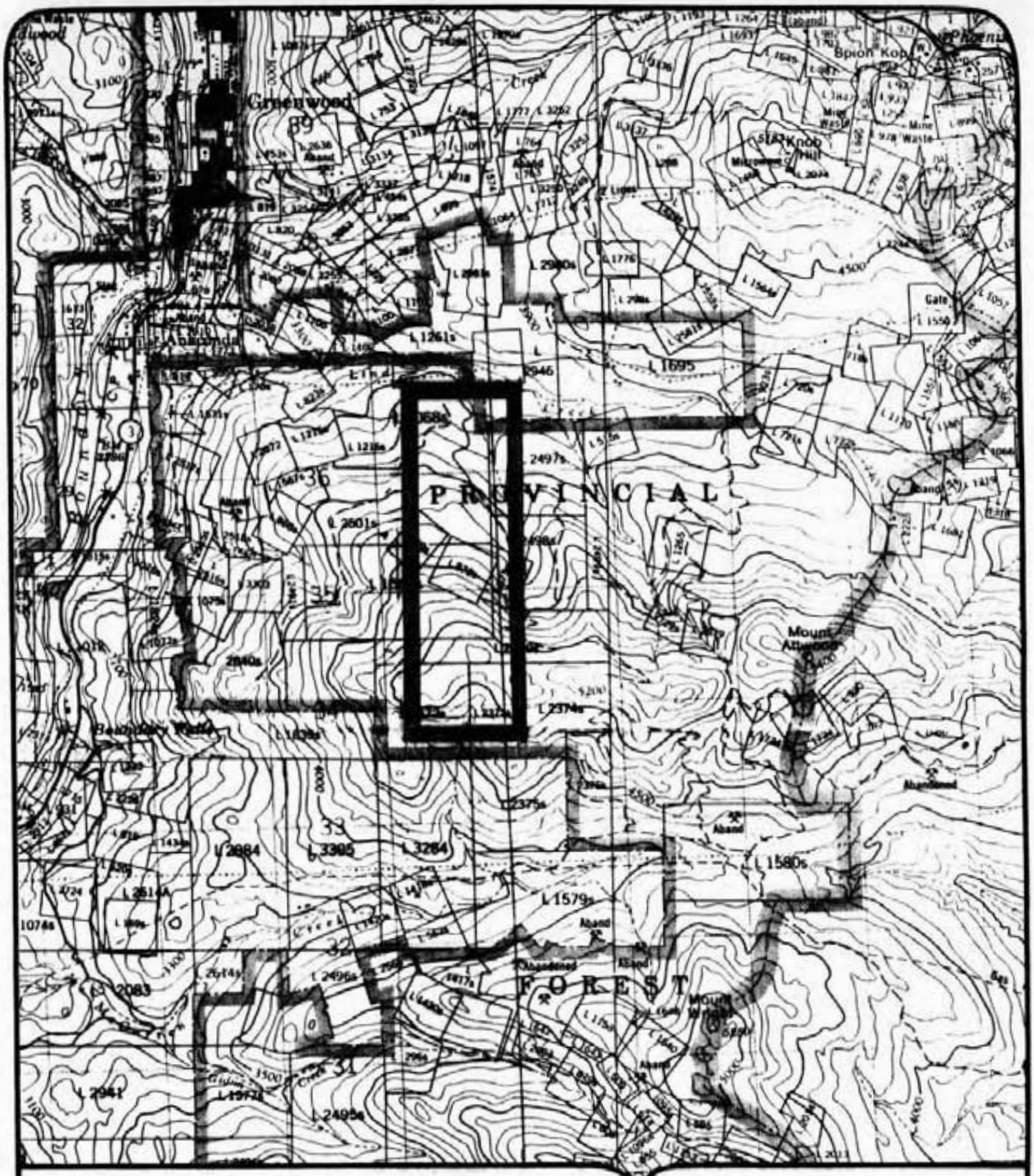

FORT KNOX MINERALS LTD.

GOLDEN SPIKE MINERAL CLAIM

GREENWOOD M.D. N.T.S. 82 E/2E

2.0 0 1.0 2.0 km

FIGURE 2

TOPOGRAPHIC MAP

JAN.19, 1984

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claim is shown on B.C. Department of Mines and Petroleum Resources Mineral Titles Reference Map 82E/2E (Figure 3).

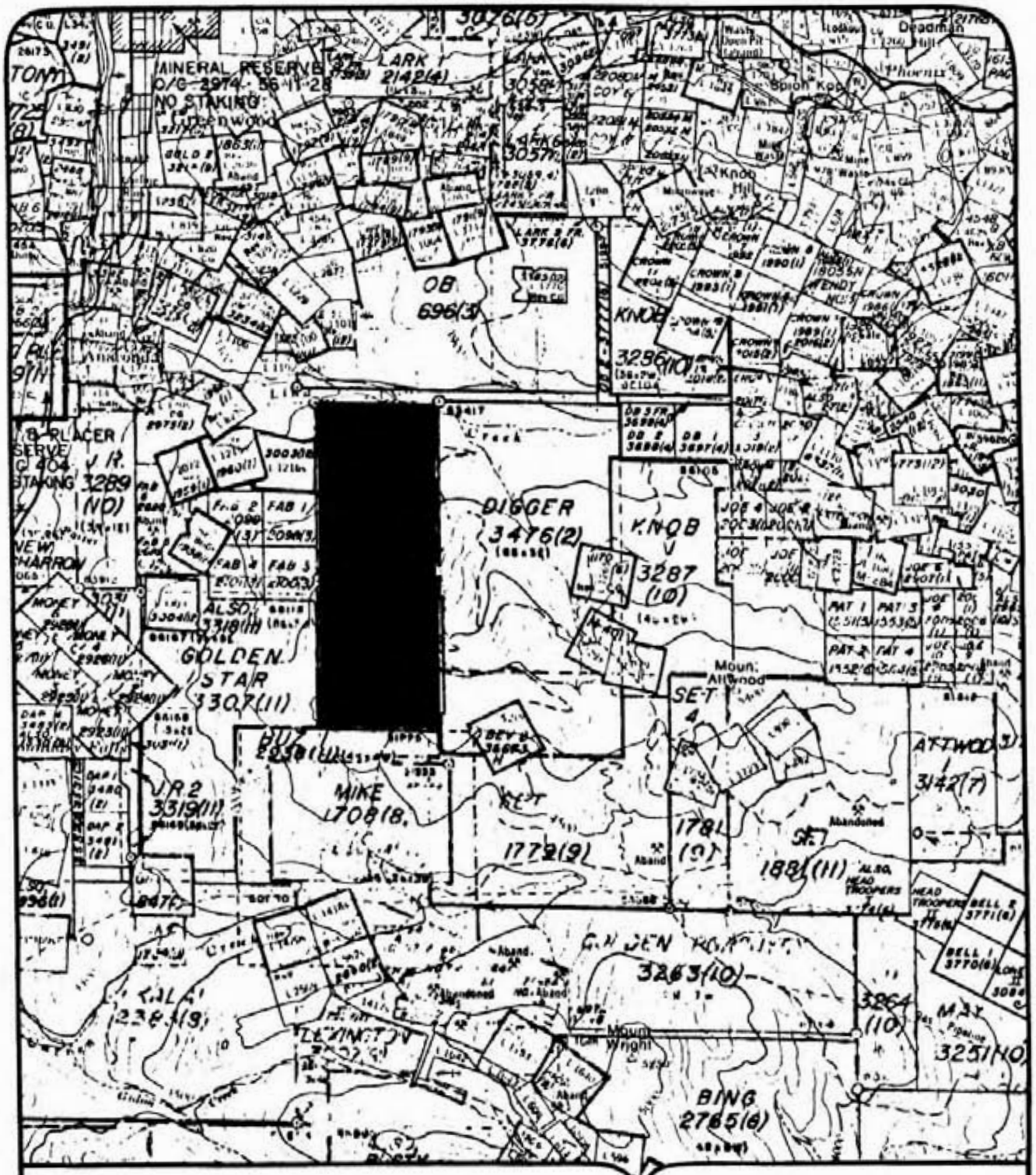
REGIONAL GEOLOGY

The regional geology of the Kettle River area was mapped by Little in 1956 (Geological Survey of Canada's Map 6-1957).

The mapping shows the property to be dominantly covered by the Permian aged Anarchist Group of greenstone, greywacke, limestone and paragneiss. Later mapping, also by Little, in 1964 has shown much of the claim to be covered by overburden and those areas where outcrop is observed, units consist mainly of amphibolite, bedded chert, cherty silstone and minor chert sharpstone conglomerate. A small area of Cretaceous serpentine and pyroxinite is also mapped in the west central portion of the claim area (Figure 4).

INSTRUMENTATION AND SURVEY PROCEDURE

The survey grid was established from the Golden Spike legal corner post. A base line was run from the LCP due south for 3000 meters and survey lines were run east from the base line for 1000 meters, with a 25 meter station interval from Line 1+00S through



FORT KNOX MINERALS LTD.

GOLDEN SPIKE MINERAL CLAIM

GREENWOOD M.D. N.T.S. 82 E/2 E

2.0 0 2.0 km

FIGURE 3

CLAIM MAP

JAN. 19, 1984

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Line 20+00S. A total of 20 kilometers each of VLF-EM and total field magnetic data was collected.

The VLF-EM survey was conducted with a Geonics EM-16 receiver, (serial number 89). The transmitter station used was NPG, Jim Creek (Seattle), Washington, at a frequency of 24.8 kHz and a radiated power of 250 kilowatts. Both dip angle (in phase) and quadrature (out of phase) measurements were recorded; dip angle measurements were filtered and contoured by the writer using the Fraser Filter method to permit presentation of data in a contour map form (Figures 6 and 7). The method is well known and fully described in literature.

The magnetometer survey was conducted using a Scrintex Model MP-2 proton precession magnetometer, (serial number 8007643). Data was corrected for diurnal drift and plotted as a profile plot plan map (Figure 8).

Limited outcrop exposure within the survey grid area was reported on by J. Langewitz, Mining Technologist, who completed some mapping and soils sampling in conjunction with the geophysical survey work (Figure 5).

10 Phoenix Volcanic Group
9 Kettle River Formation
8 Coryell Intrusions
7 Valhalla Intrusions
6 Nelson Intrusions
5 Ultrabasic Intrusions
3 Anarchist Group
1 Monashee & Grand Forks Group

AFTER H.W. LITTLE 1953-56

FIGURE 4

FORT KNOX MINERALS LTD.

REGIONAL GEOLOGY

2.0 0 4.0 km

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DISCUSSION OF RESULTS

VLF-EM Survey

The VLF-EM results indicate a number of generally north-south trending conductive zones within the survey area. There are three major conductors (A, B, and C) showing considerable strength and strike length; and three minor, less continuous conductors (D, E, and F). All conductive zones are parallel to subparallel.

Anomaly A

This strongly conductive zone shows excellent continuity with a strike length of over 1400 meters and, in the northern area, is flanked by a significant magnetic discontinuity. This northerly trending zone extends from Line 16+00S, 1+50E to Line 3+00S, 4+25E where the anomaly splits and continues to Line 1+00S, 2+75E and 4+00E.

Although weaker at this point, the conductor may continue north of Line 1+00S. The anomaly width is a fairly constant 100 meters over the strike length. Especially strong zones occur on Line 15+00S, 2+00E with a 53 degree response and on Lines 5+00S and 6+00S, 3+75E at 40 and 30 degrees respectfully.

Anomaly B

This anomaly, located on the eastern part of the grid, is open to the south. The known strike length is 1000 meters extending from Line 20+00S, 5+00E to Line 10+00S, 9+00E. The conductor width varies between 50 and 100 meters with Fraser Filter response as high as 55 degrees.

Anomaly C

This anomaly, showing weak continuity, consists mostly of spotty highs forming a linear pattern. The strike length appears to be some 900 meters running from Line 14+00S, 5+60E to Line 5+00S, 9+25E. The anomaly width varies from 50 to 100 meters. Strong highs, greater than 30 degrees occur at Line 12+00S, 5+40E, at Line 10+00S, 6+10E, and at Line 8+00S, 7+35E.

Anomaly D

This is a small conductive zone located in the southeast corner of the grid and is open to the south. The known strike length is 200 meters from Line 18+00S, 8+75E to Line 20+00S, 7+00E. The anomaly width is quite variable, ranging from 50 to 200 meters, and conductivity is variable with Fraser Filter values ranging from 10 to 30 degrees.

Anomaly E

This conductive zone was located on Lines 19+00S and 20+00S,

1+60E and is open to the south. The conductivity of this zone appears to be similar to that of conductors A, B, and C.

Anomaly F

This conductive zone shows an approximate strike length of 200 meters and relatively weak conductivity with Fraser Filter values between 10 and 22 degrees. Since the zone is near to and parallel with Lind Creek, the cause of the anomaly may be attributable to near surface features and/or groundwater.

Graphitic shales and schists were found near the baseline, south of the survey grid. Because graphite, if present as a large percentage of the rock will respond electromagnetically, the presence of graphitic schists in the area must be considered as a possible source of some of the anomalous results.

Magnetometer Survey

The magnetic profiles (Figure 8) show a highly variable response on the west side of the survey grid and a very flat response on the east. The break between the variable and flat magnetic response is quite sharp and can be followed from Line 12+00S through Line 2+00S. The magnetic break flanks the major EM Anomaly "A", and may be related to this conductive zone. The possibility that the magnetic break represents a contact in the Anarchist Group of rocks between a greenstone with patchy magnetic mineralization and a magnetically less responsive

greywacke rock unit must be considered.

Soil and Stream Silt Samples

Four soil and seven stream silt samples were collected over the survey grid and sample locations are shown on Figure 5. Because of the limited number of samples taken and because no results are obviously anomalous no interpretation can be made from the limited information obtained.

CONCLUSIONS

Geophysical results have outlined six VLF-EM conductors and an area of variable magnetic response. The zone of variable magnetics may be related to a magnetite bearing greenstone within the Anichist Group of rocks. Although the break between the variable and flat response on the magnetic map is sharp there is no visible break in the Fraser Filter Contour Map. EM conductors occur in both the variable and flat response areas of the magnetic contour map. The three strongest VLF-EM anomalies, (A, B, and C) have good strike length and good conductivity. All electromagnetic conductors are considered important in the Greenwood area. Conductive zones may be caused by massive sulfides similar to the Sylvester K deposit, or by broad shear zones which could also have associated mineralization. Follow up geochemical soil sampling and trenching to bedrock will be required before comments regarding the economic potential of the conductive zones can be attempted.

RECOMMENDATIONS

A full geochemical soil sampling program is recommended for the grid area, particularly in the area of VLF-EM anomalies "A", "B", and "C". Geochemical results would prove useful in determining the mineral potential of presently outlined conductive zones.

Geological mapping and rock chip sampling is recommended. Although outcrop exposures appear to be limited, mapping is thought essential to determine the geological nature of the outlined conductive and variable magnetic zones.

The present geophysical exploration should be extended to cover the southern claim areas and, dependent on results of the above recommendations, a trenching program to expose and sample bedrock in anomalous areas should be considered.

Respectfully Submitted,
Strato Geological Engineering Ltd.

Michael A. Pond, B.Sc.
Geologist

Ralph J. Englund, B.Sc.
Geophysicist.

January 19, 1984

STRATO GEOLOGICAL ENGINEERING LTD.

REFERENCES

1. A report on the Golden Spike Mineral Claim, Greenwood Mining Division, B.C., for Fort Knox Minerals Ltd., by G. H. Rayner, P. Eng., G. H. Rayner and Associates Ltd., dated May 23, 1983.

2. Geological Survey of Canada, Geology Map 6-1957 Kettle River, by Little (1956).

TIME-COST DISTRIBUTION

The claim group toward which work is being applied with this report consists of the following mineral claim:

Mineral Claim:	Golden Spike
Record No.:	3308 (11)

This report describes the geophysical survey data on the Golden Spike Claim. Field work was done by Strato Geological Engineering Ltd. during the period October 31 to November 9, 1983.

A listing of personnel and distribution of costs is as follows:

Personnel

Field Crew	- Andrew Van Wersch	-	Magnetometer Operator
	- Joerg Langewitz	-	VLF-EM-16 Operator
Report	- Michael Pond, B.Sc.	-	Geologist
	- R. J. Englund, B.Sc.	-	Project Supervisor
		-	Geophysicist

Cost Distribution

Labour	$ 4,080.00
Room and Board	1,320.00
Vehicle Rental 4WD (gas, oil, etc.)	1,080.00
Field Supplies	215.50
Equipment Rental VLF-EM & MAG.	1,020.00
Geochemical Assays	59.40
Maps & Report - Drafting, Reproduction Copying, etc.	532.25
Report - Data Reduction, Interpretation	1,800.00
TOTAL	$10,107.15

Signed _____
Strato Geological Engineering Ltd.

STRATO GEOLOGICAL ENGINEERING LTD.

CERTIFICATE

I, Michael A. Pond, of 312 - 1165 West 13th Avenue of the City of Vancouver, Province of British Columbia, do hereby certify as follows:

1. I am a graduate of the University of British Columbia where I obtained my Bachelor of Science Degree (Geology), in May, 1982.

2. I have been engaged in the study and practice of exploration geology since graduation and for two summer field seasons prior to graduation.

3. I have primarily worked in British Columbia with Utah Mines Ltd. and with Strato Geological Engineering Ltd.; and in the Henik Lakes region of the N.W.T. with Suncor Inc.

4. I have no direct, indirect or contingent interest, nor do I expect to receive any such interest in the properties of Fort Knox Minerals Ltd.

Dated at Vancouver, Province of British Columbia, this 19th day of January, 1984.

Michael A. Pond

Michael A. Pond, B.Sc.

CERTIFICATE

I, Ralph J. Englund, of 1112 Grover Ave., Coquitlam, British Columbia, do hereby certify as follows:

1. I am a Consulting Geophysicist with offices at 103 - 709 Dunsmuir Street, Vancouver, B. C. V6C 1M9

2. I graduated in 1971 from the University of British Columbia, with a degree of Bachelor of Science.

3. I have been engaged in the study, teaching, and practice of exploration geophysics continuously for a period of 11 years. I have worked as a geophysical consultant on numerous projects in Western North America since 1972.

4. I am a member in good standing of the British Columbia Geophysical Society.

5. The field work and the interpretation of results in this report were done under my direct supervision.

6. I have no direct, indirect, or contingent interest in the properties of Fort Knox Minerals Ltd, nor do I expect to receive any such interest.

Dated at Vancouver, Province of British Columbia, this 19th day of January, 1984.

R.J. Englund, B.Sc.

APPENDIX A

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS, VANCOUVER B.C.
PH:253-3158 TELEX:04-53124

DATE RECEIVED JAN 11 1984

DATE REPORTS MAILED Jan 12/84

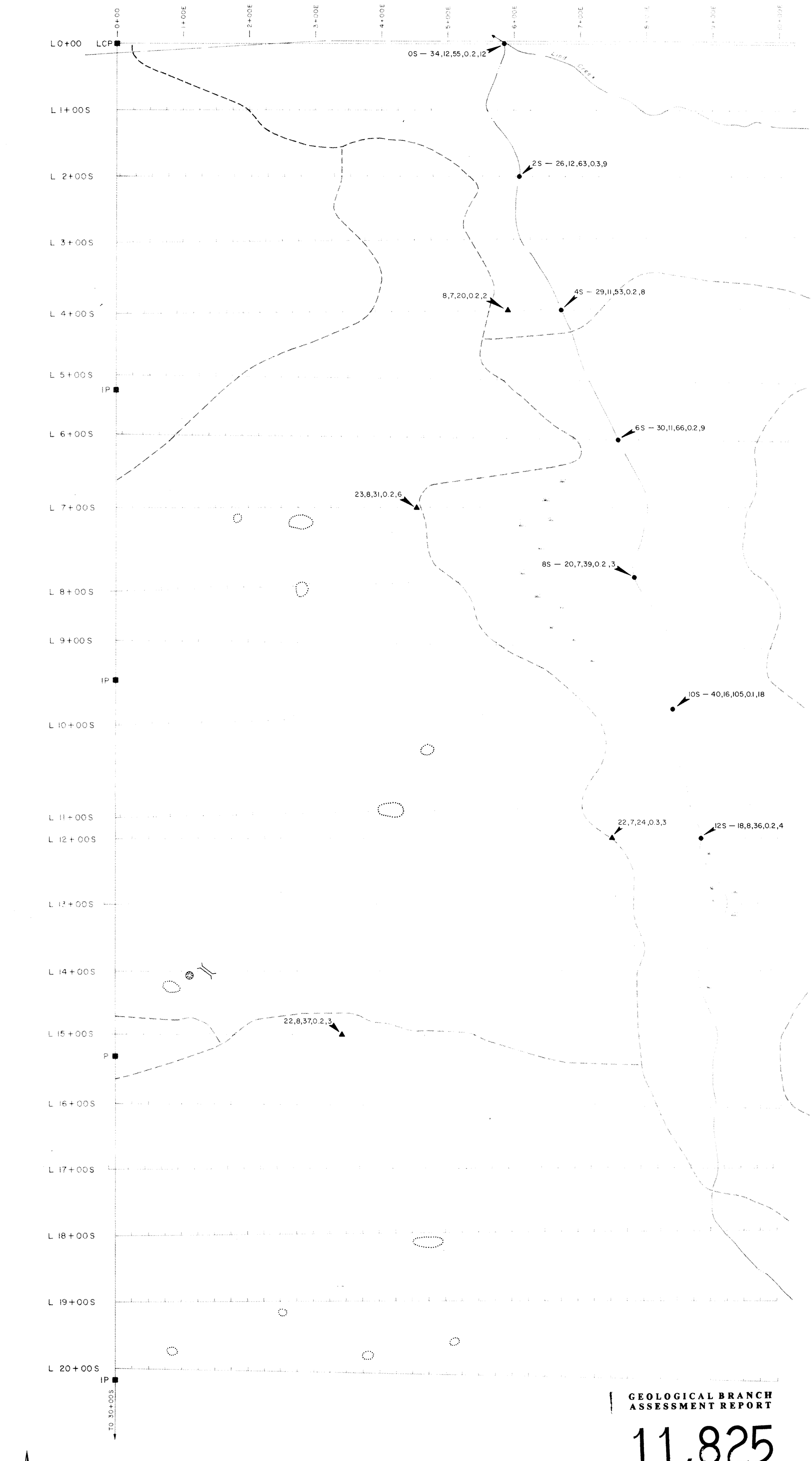
ICP GEOCHEMICAL ANALYSIS

A .500 GRAM SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO3 TO H2O AT 90 DEG.C. FOR 1 HOUR.
THE SAMPLE IS DILUTED TO 10 MLS WITH WATER.
THIS LEACH IS PARTIAL FOR: Ca,P,Mg,Al,Ti,La,Na,K,W,Ba,Si,Sr,Cr AND B. Au DETECTION 3 ppm.
SAMPLE TYPE - STREAM SED

ASSAYER D. Toye DEAN TOYE, CERTIFIED B.C. ASSAYER

STRATO GEOLOGICAL PROJECT # 598 FILE # 84-0045

SAMPLE	CU ppm	PB ppm	ZN ppm	AG ppm	AS ppm
0S	34	12	55	.2	12
2S	26	12	63	.3	9
4S	29	11	53	.2	8
6S	30	11	66	.2	9
8S	20	7	39	.2	3
10S	40	16	105	.1	18
12S	18	8	36	.2	4
4S 6E	8	7	20	.2	2
7S 4+62E	23	8	31	.2	6
12S 7+50E	22	7	24	.3	3
15S 3+50E	22	8	37	.2	3
STD A-1	30	39	182	.3	11



LEGEND

- Stream sediment sample location (Cu,Pb,Zn,Ag,As in ppm)
- Soil sample location (Cu,Pb,Zn,Ag,As in ppm)
- Outcrop
- Trench
- Pit
- Road
- Creek
- Swamp

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FIGURE 5

FORT KNOX MINERALS LTD.

GOLDEN SPIKE MINERAL CLAIM
GREENWOOD M.D. N.T.S. 82 E/2E

GEOLOGY & GEOCHEMISTRY

100 0 100 metres

To accompany a report by M. POND, B.Sc.
STRATO GEOLOGICAL ENGINEERING LTD.

DRAWN BY: DNH | DATED: JAN. 19, 1984

STRATO GEOLOGICAL ENGINEERING LTD.

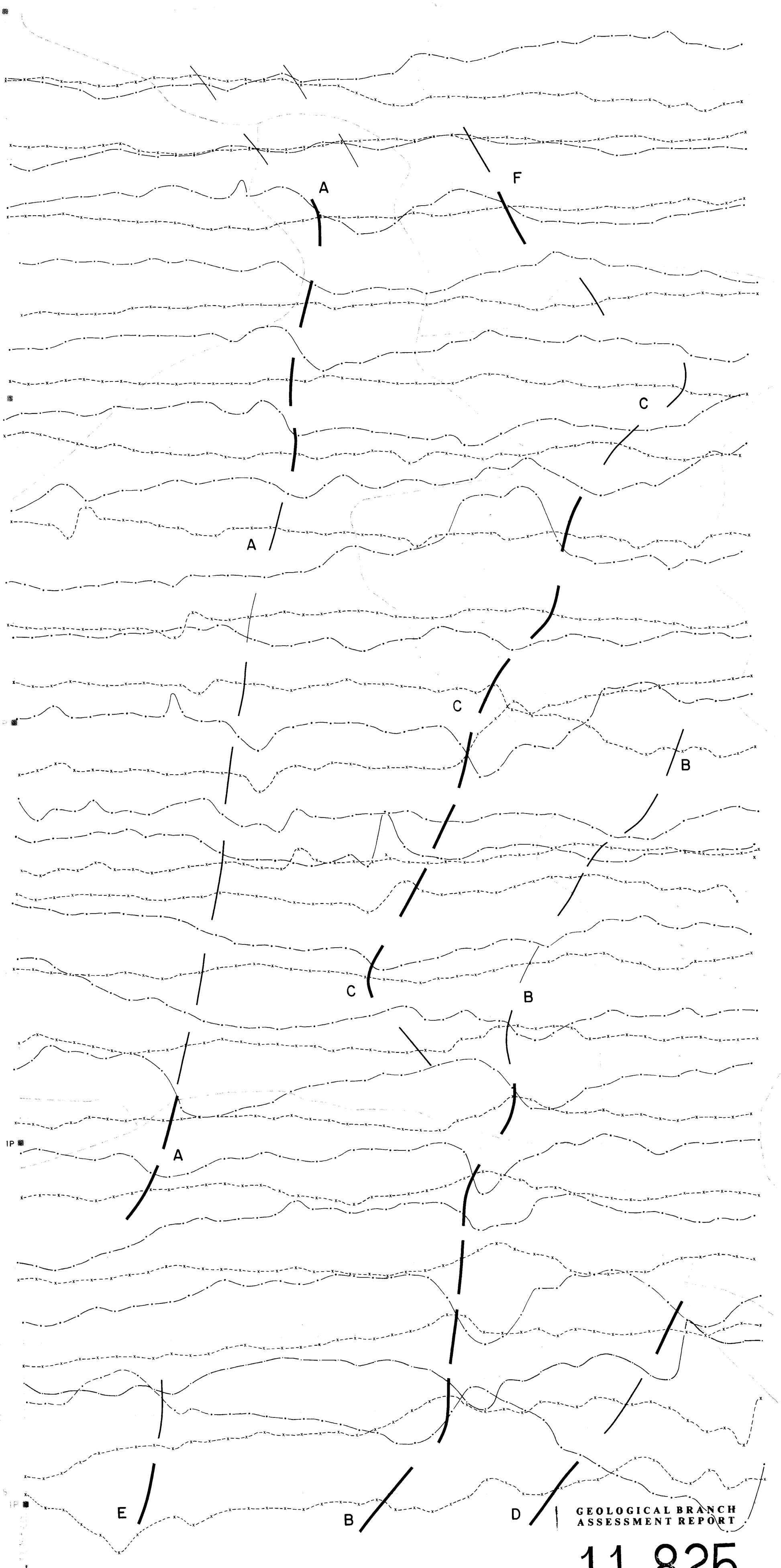

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FIGURE 6

NOTES:
- Instrument: Geonics VLF EM-16
- Transmitter: NPG Jim Creek; frequency 24.8 KHz

Definite conductor
Probable conductor
Possible conductor

DIP- ANGLE: 20° 10° 0 -10° -20°

QUADRATURE: 20% 10% 0 -10% -20%

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GOLDEN SPIKE MINERAL CLAIM
GREENWOOD M.D., N.T.S. 82 E/2E

VLF-EM SURVEY
(PROFILE PLOT PLAN)

100 0 100 metres

To accompany a report by M. POND, B.Sc.
STRATO GEOLOGICAL ENGINEERING LTD.

DRAWN BY: MP/SG | DATED: JAN.19,1984

STRATO GEOLOGICAL ENGINEERING LTD.

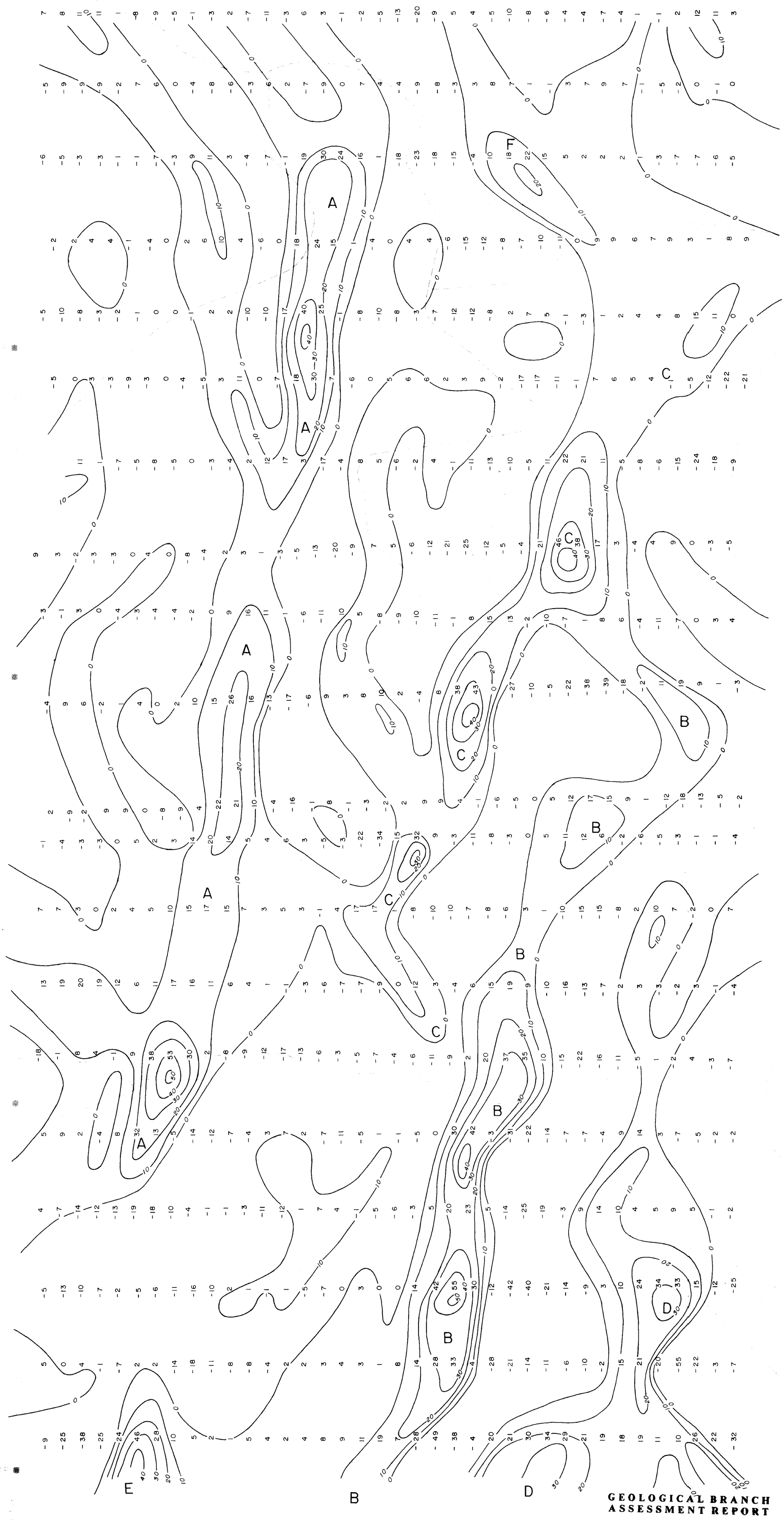

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FIGURE 7

LEGEND

--- Road

10
2
Fraser filter data plotted

--- Creek

--- Swamp

NOTES:
- Instrument : Sabre Electronics Model 27 Reciever
- Transmitter: NPG Jim Creek; frequency 24.8 KHz
- Contour interval 0,10,20,30,40,50

A – Conductor

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GOLDEN SPIKE MINERAL CLAIM
GREENWOOD M.D. , N.T.S. 82 E / 2E

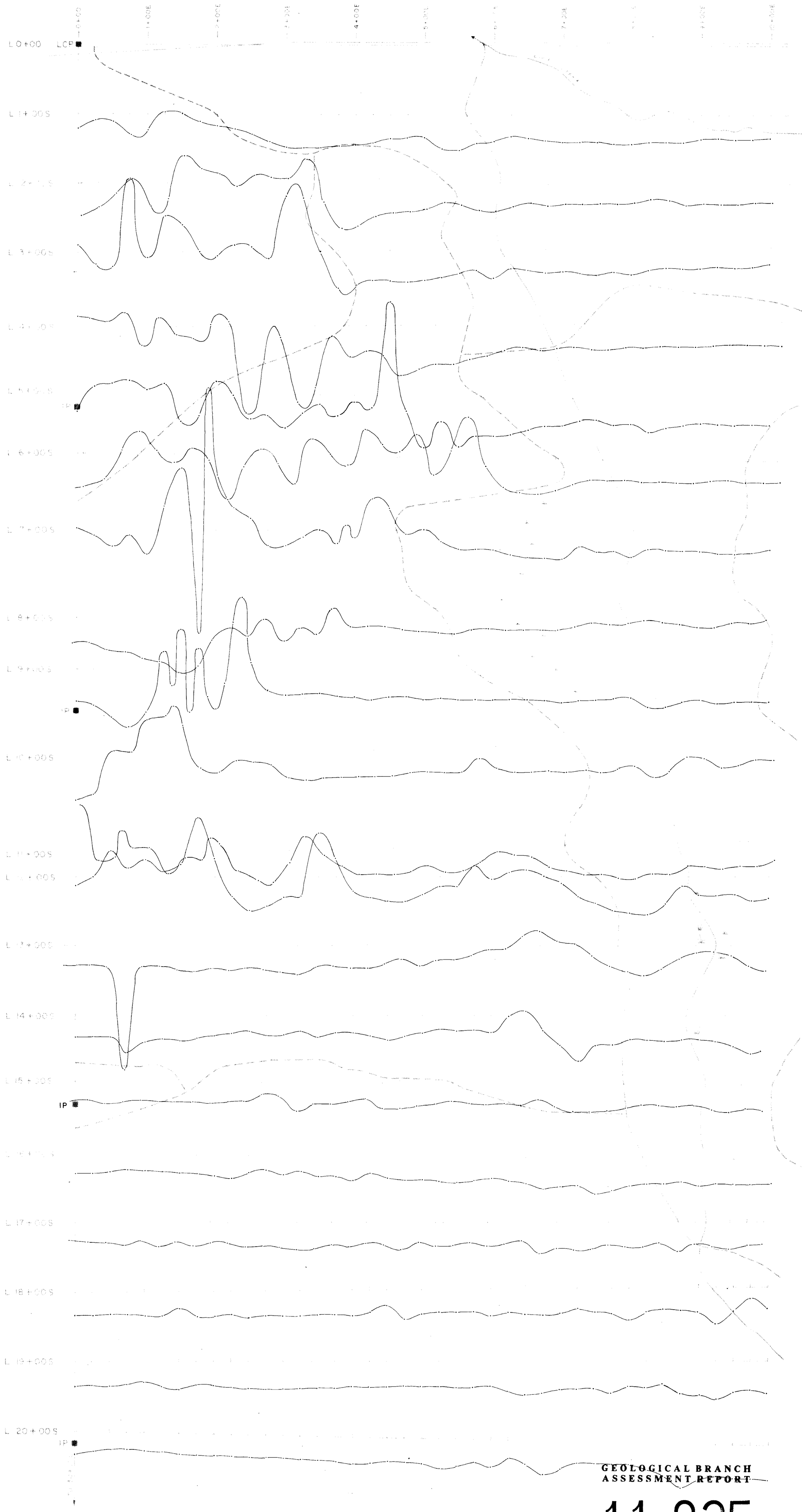
VLF - EM SURVEY
FRASER FILTER CONTOUR MAP

100 0 100 metres

To accompany a report by M. POND, B.Sc.
STRATO GEOLOGICAL ENGINEERING LTD.

DRAWN BY : MP / DNH | DATED : JAN.19,1984

STRATO GEOLOGICAL ENGINEERING LTD



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ASSESSMENT REPORT

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FIGURE 8

NOTES:

- 57,400 gammas (base station)
- All data drift corrected to base station
- Instrument - Sintrex MP-2 Proton Manetometer

LINE — 59,000 gammas
58,500 gammas
58,000 gammas
57,500 gammas
57,000 gammas
Vertical scale

FORT KNOX MINERALS LTD.

GOLDEN SPIKE MINERAL CLAIM
GREENWOOD M.D. , N.T.S. 82 E / 2E

MAGNETOMETER SURVEY
(PROFILE PLOT PLAN)

100 0 100 metres

To accompany a report by M. POND, B.Sc.
STRATO GEOLOGICAL ENGINEERING LTD.

DRAWN BY : JL / SG | DATED: JAN.19,1984

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