

3780

Geophysical Report

on a combined

VLF-EM and Magnetometer Survey

on the

IKE Claim Group

for

The Granby Mining Company Limited
PHOENIX COPPER DIVISION

P.O. Box 490, Grand Forks, B. C.

82 E / 1W

by

J. Paxton

June, 1972

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 3780	MAP

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MAPS IN POCKET

- #1 1. IKE Claims, Magnetometer Survey
Scale: 1 inch = 200 feet
- #2 2. IKE Claims, VLF-EM Survey
Scale: 1 inch = 200 feet
- #3 3. IKE Claims, Geology and Surface Features
Scale: 1 inch = 200 feet
- #4 4. VLF-EM Profile on Lines 7E and 12E
Scale: 1 inch = 200 feet

SUMMARY

The area covered lies nine miles north of Grand Forks where Brooklyn Limestone is contacted by diorite and syenite intrusives. In March and April of 1972, 11.3 miles of VLF-EM and Magnetometer surveys were run over a zinc geochemical soil anomaly in the area. Five areas of interest were indicated where small vein type ore bodies might exist. A limited programme of additional soil sampling, EM survey and diamond drilling is recommended.

INTRODUCTION

This report covers a combined VLF-EM and ground Magnetometer survey done by personnel from the Grand Forks Exploration Office of the Granby Mining Company Limited during April and May, 1972. The work was done under the supervision of the writer on five claims of the IKE Group, optioned from Ryslo Silver Mines Limited, 837 West Hastings Street, Vancouver 1, B. C.. It was originally planned to also cover the Sailor Boy and Shickshock claims which bound the IKE group to the north, but a satisfactory option agreement could not be made with the owners, so the work was correspondingly restricted.

The claims are located nine miles north of Grand Forks at the head of Lime Creek and one half mile south of the C.P.R. tracks. Access is fairly difficult, the only good trails are at least a mile from the property. Several years ago Boundary Exploration Limited, brought a D-6 Cat into the area to do stripping on the Shickshock Claim, making a barely passable trail into the area. This trail is reached by taking the Granby River road north from Grand Forks for eleven miles, making a left turn up the Brown Creek road then following trails to the south, crossing the C.P.R. tracks 1,000 feet west of the tunnel and continuing on to Shickshock Mountain. This route was used to get to the survey grid and the difficult parts are marked with flagging.

Previous work on the property consisted of trenching on a number of scattered showings plus the sinking of a shaft at least 40 feet deep on the major showing. Most of this work appears to have been done prior to 1900 and no mention of it is made in the old Minister of Mines Reports.

In 1969, Boundary Exploration Limited, stripped the area around the shaft with a D-6 Cat, apparently under the impression that they were on the Shickshock Claim. This stripping uncovered fair zinc-copper mineralization in a strongly oxidized skarn zone around the collar of the shaft.

In 1970, the area was covered by the Granby Regional Mapping Project and was geologically mapped by Geologist C. Van Houten at a scale of one inch = 1,000 feet. In 1971, it was covered by the Granby Regional Soil Survey, under the direction of E. A. Shannon. This work indicated a zinc geochemical anomaly. It was in order to investigate this anomaly further that the work described in this report was undertaken.

The writer was assisted in the field work and calculations by Hun Kim, Kiwan Kim, Ray Houle and Ed Shannon.

PROPERTY

The option agreement with Ryslo Silver Mines Limited, covered the following mineral claims, staked in 1969 by Ike Wiebe of Grand Forks:

IKE # 7 - recorded August 4, 1969 - record number - 30211K
IKE # 8 - recorded August 4, 1969 - record number - 30212K
IKE #22 - recorded August 25, 1969 - record number - 30495M
IKE #23 - recorded August 25, 1969 - record number - 30496M
IKE #24 - recorded August 25, 1969 - record number - 30497M
IKE #25 - recorded August 25, 1969 - record number - 30498M

The posts of IKE 7, 8, 24 and 25 were located on the ground and verified by E. A. Shannon.

A thorough search was made for old Crown Grant posts in the area in order to fix the boundary with the Shickshock and the Sailor Boy accurately. Nothing could be located except three cairns which may mark the intersection of the old Crown Grants, Mountain Chief, Wolverine Fraction L 1235 and Shickshock L 992.

From the size of the timber in the area it appears to have been burned over very heavily sixty or seventy years ago and this may account for the lack of Crown Grant posts.

A search was made in the mine recorder's office in Grand Forks through the Crown Grant survey notes for located land marks. A ravine crossing the north-west boundary of the O.P. claim, L 1354 and a shaft and an adit near the centre line of the Sailor Boy claim, L 1093 were shown relative to the claim boundaries and these features have been located on our maps. They were

found to check well with the locations shown on the Government Claim Map. It is felt that the locations of the Shickshock and Sailor Boy claims relative to the IKE claims shown on the maps included with this report are accurate to within 100 feet.

SURVEY PROCEDURES

For location control of the VLF-EM and Magnetometer surveys it was decided to use a series of three out baselines as a reference, and to run the survey lines with chain and compass at right angles to them, marking the stations with flagging tape. The survey lines were 100 feet apart and the station intervals were 50 feet. The base lines were laid out at N 63°E which was at right angles to the E.M. field transmitted by VLF transmitter NPG (18.6 kHz) near Seattle, Washington, U. S. A. This transmitter was used for all the VLF-EM readings. The three baselines were cut 3,200 feet long and approximately 1,000 feet apart and joined by tie lines at each end forming two rectangles. All the cut lines were accurately chained and picketed every 100 feet. In running the survey lines a three man crew was used. The lead man, equipped with a compass and flagging tape took the front end of the chain and was responsible for aiming the line and flagging the stations. The second man, equipped with a felt pen and a field book, held the rear end of the chain, marked the station flags and took notes. The third man had the VLF-EM instrument (Ronka EM-16) and took the EM readings at each station.

The magnetometer survey was run later with one man taking notes and running the instrument (Sharpe MF-1) and using the stations marked up by the VLF-EM crew. On this survey the baseline (baseline 0) was run twice and the reading corrected for time variation to give an arbitrary standard baseline reading. Then the cross-lines were run in pairs and looped. These readings were first corrected to eliminate time variation in the loop and then the loops were corrected as a whole to agree with the standard baseline readings. The resulting corrected readings were then contoured on a one inch = 200 feet scale map of the grid. On the first day of survey it was found that the magnetometer was not adjusted correctly for the area and all the readings had to be made on

the second (0-3000) scale with a consequent loss of sensitivity. No strong magnetic anomalies were found to occur on these lines so they have been omitted from the map, rather than be re-run.

A Ronka EM-16 instrument was used on the VLF-EM survey which gave direct readings of the tilt of the EM field and the quadrature. These readings are listed in Appendix D of this report. The tilt readings were processed by the method of Fraser, in which adjacent pairs of readings are summed and then the difference between the sums taken and plotted as a point. This is said to eliminate much of the geologic noise associated with the VLF-EM method and converts the dip angle readings to "slope" readings which can be contoured. A one inch = 200 feet scale map showing the contoured results of this process is included in this report.

INTERPRETATION OF RESULTS

On the magnetic contour map we can see a number of short, east-west striking magnetic anomalies one of which is associated with the known mineralization at the shaft at 3N, 7E on the IKE #24 claim.

On the VLF-EM map we can see several strong linear east-west striking anomalies. These anomalies stop at, or a short distance west of the limestone contact. Most of the known showings and diggings occur close to or on negative VLF-EM anomalies.

The two major showings in the area, the shaft near the centre of the Shickshock claim and the shaft on the IKE #24 claim both consist of irregular masses of pyrite, black sphalerite, magnetite and chalcopyrite developed along east-west fractures in an elliptically shaped skarn zone.

Putting these observations together we can deduce the following picture:

1. An irregular, north-south trending limestone - intrusive contact zone.
2. A number of east-west striking mineralized fractures on the intrusive side of the contact and revealed by the VLF-EM survey.
3. A number of steep plunging "ore shoots" or fingers of magnetite-sphalerite skarn localized along the fractures and revealed by the magnetometer survey.

The major showing in the area, the shaft at 3N, 7E is coincident with a VLF-EM and a magnetometer anomaly. At four other locations coincident EM and magnetometer anomalies occur. These areas have been designated A to D on the maps included with this report. In most cases they are also associated with anomalous soil samples.

CONCLUSIONS

1. If we assume, that unless the grade is extremely high, the minimum ore reserve needed for a profitable mining operation in the present day is one million tons then we can visualize this as a block of rock 100 feet by 300 feet by 500 feet. And if we also assume that any base metal mineralization is restricted to the size of the magnetic anomalies in areas A to D then we must conclude that any orebodies which exist must be close to the minimum size.
2. Present soil sampling indicates that the strongest geochemical anomaly has been tested by a shaft.
3. It is difficult to assess the grade of the mineralization at the shaft showing because of the surface leaching that has taken place. The stripping done by Boundary Explorations does not penetrate the leached zone. Since there are no records of what came out of the shaft it is possible that the mineralization could be better here than it presently appears.
4. The best mineralization occurs in area A and this should be tested by drilling at some depth below the surface. Areas B to D could be as good or better than A and should also be tested to disclose the cause of the anomalies on them.

RECOMMENDATIONS

The following programme is suggested on the five areas A to D shown on the maps. Basic costs are estimated:

1. Run two lines of soil samples 100 feet apart at 50 foot intervals across each area in a north-south direction.

Number of samples 2 x 5 x 8 = 80
 Cost of collecting and analysing 80 x 5 = \$400

2. Run two lines of standard, horizontal loop E.M. survey across each area on the soil sample lines described above.

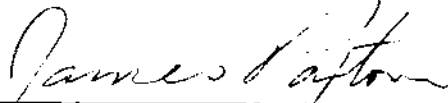
Cost of Labour	\$ 400
Equipment rental	\$ 200
<u>TOTAL</u>	<u>\$ 600</u>

3. Do 1,000 feet of shallow diamond drilling using about 500 feet to test the shaft zone (Area A) and the remainder distributed to the other areas as the results of steps 1 and 2 dictate.

Surface water supplies in the area are adequate providing the drilling is done in the April - May period.

Estimated contract cost of drilling 1,000 x \$ 8.00	\$ 8,000
Supervision, Logging, Assaying, estimated at	\$ 2,000
<u>TOTAL COST OF PROGRAMME</u>	<u>\$11,000</u>

This report is respectfully submitted by:



James Paxton
 Senior Mine Geologist
 The Granby Mining Company Limited
 PHOENIX COPPER DIVISION



JP:lv

G. B. Hardwicke
 Reg. No 5780,
 A.P.E.B.C., 1966

STATEMENT OF TIME DISTRIBUTION

Ed Shannon and Tim Nurse reconnoitering trails on snowmobiles.....March 12

J. Paxton and Ed Shannon lay out baselinesMarch 29

Ed Shannon supervising line cuttingApril 3-6

Line Cutters Smith and Guthro contracted from James Forshaw Ltd.
cutting linesApril 3-7

H. Kim, K. Kim and R. Houle running VLF-EM surveyApril 10,11,13,17,
18,19,20

J. Paxton running magnetometer surveyApril 10,18,19,20
25,26,27

J. Paxton on calculations and drafting.....April 21,
May 9,10,23

H. Kim on calculations and draftingApril 12,21
May 10

K. Kim on calculations and draftingApril 12,
May 19,23

R. Houle on calculations and draftingApril 14,
May 15,17

J. Paxton writing reportJune 8,9,10,11

Lil Vereschagin typing reportJune 13

APPENDIX B

STATEMENT OF COST DISTRIBUTION

CONTRACTORS

1. T. Nurse and snowmobile	\$ 45.00
2. James Forshaw Ltd. cutting and picketing 13,200 feet of line	\$ 525.00

RENTALS

1. Snowmobile, one day, Bills Iron Works	\$ 12.00
2. E.M.-16 instrument from Geophysical Electronics Services Ltd. Vancouver at \$333.00 per month for six work days 6/21 x 333 =	\$ 95.00

LABOUR (COST INCLUDES FRINGE BENEFITS)

1. J. Paxton 16 days at \$ 60	\$ 960.00
2. H. Kim 10 days at \$ 50	\$ 500.00
3. K. Kim 10 days at \$ 50	\$ 500.00
4. E. Shannon 6 days at \$ 40	\$ 240.00
5. R. Houle 10 days at \$ 35	\$ 350.00
6. L. Vereschagin 2 days at \$ 40	\$ 80.00

EQUIPMENT

1. Pickup Truck 44-80 10 days at \$ 10	\$ 100.00
2. Bronco Jeep 44-78 10 days at \$ 10	\$ 100.00
3. Granby Magnetometer 10 days at \$ 10	\$ 100.00
4. Office and overhead 2 weeks at \$100	\$ <u>200.00</u>

TOTAL \$ 3,807.00

APPENDIX C

STATEMENT OF QUALIFICATIONS

The supervision, report writing, and part of the field work was done by the author. He graduated in 1953 from the University of Saskatchewan with a bachelor of Arts and Science degree in Geology. He also took one year of post graduate work in honors geology at the University of Manitoba in 1955. He has worked for the Granby Mining Company Limited since December, 1964 in charge of Exploration and Mine Geology. He has supervised a number of geophysical projects in previous years in the area, and he did the magnetometer survey included in this report.

The VLF-EM work was done by Mr. Hun Kim and Mr. Kiwan Kim, graduates in Geology from Seoul University in Korea. They have both worked for Granby on exploration projects for the past three years. They have a good understanding of the VLF-EM method and in the operation of the EM-16 instrument. They were assisted by Raymond Houle who has worked as a field assistant on Granby Exploration projects for four years.

The line cutting and chaining of the baselines was under the supervision of Mr. E. A. Shannon who is a graduate of B.C.I.T. and has worked on Granby Exploration projects for the past two years.

APPENDIX D

VLF-EM READINGS

①

Tide gauge

April 10, 1971

Time	Tide	Depth	Temp	Remarks
10:00 AM	+3	+2	-4	SEAS (1800)
9:50	+6	+1	+2	
9:40	+4	+1	+1	
8:50	0	+2	+1	
8:40 AM	-2	+5	+3	
7:50	-1	+4	0	
7:40	-2	+4.5	-2	
6:50	-1	+6.5	-1	
6:40	-11	+11.5	+4	
5:50	-4	+11.0	-3	
5:40 AM	-5	+12.0	-2	
4:50	0	+11.0	+1	
4:40	-1	+10.5	+2	
3:50	-2	+9.0	+4	
3:40 AM	+2	+12.0	-4	
2:50	+1	+15.0	+2	
2:40	-2	+27.0	0	
1:50	-6	+38.0	-1	
1:40	-7	+34.0	+15	
0:50 AM	-2	+27.0	+15	
0	-2	+9.0	+1	
0:50 S	0	+9.0	+8	

creek

(2)

LINE CODE	TR	Quod	To, to	Reward
1+005	+2	+4	+12	
1+505	+5	+6	+11	
2+005	+1	+5	+9	
2+505	+1	+4	+1	
3+005	+1	+3	-4	
3+505	+1	+2	-15	20000 10000 377071
4+005	+4	0	-6	
4+505	+1	-1	-2	
5+005	-3	0	0	
5+505	-5	+1	0	
6+005	-3	0	-5	
6+505	-1	-1	-7	
7+005	-1	-3	-4	
7+505	-2	-3	-5	
8+005	-1	-7	-3	
8+505	+1	-15	-6	out-top
9+005	+4	-19	-21	
9+505	+1	-15	-2	↓
10+005	0	-29	+15	out-top
10+505	0	-25	+3	
11+005	+3	-25	+2	
11+505	+2	-19	+1	

(3)

Line IE				
9+005	0	-20	+12	
8+50				
8+00				
7+50				
7+00				
6+50				
6+00				
5+50				
5+00				
4+50				
4+00				
3+50				
3+00				
2+50				
2+00				
1+50				
1+00				
11+50				
11+00				
10+50				
10+00				
9+50				
9+00				
8+50				
8+00				
7+50				
7+00				
6+50				
6+00				
5+50				
5+00				
4+50				
4+00				
3+50				
3+00				
2+50				
2+00				
1+50				
1+00				

END OF 10 10 10 10 10
N 64 E

(4)

LINE 0100E

	7/17	8/17	7/10
124005	+1	-19	+4
124505	0	-158	+2
124005	-2	-12	+2
134505	-4	-10	+2
14005	-5	-9	+2
14505	-6	-8	+3
15005	-7	-3	
LINE 1E			
57			
1551E	-10	-13	-1
144605	-6	-12	-4
144005	-7	-16	-2
134505	-6	-19	-2
134005	-5	-26	+1
124505	-3	-21	-2
124005	0	-23	-3
114505	-2	-24	-1
114005	+5	-31	-7
104505	-2	-23	+5
104005	-3	-15	+5
74505	-4	-12	+4
1E 94005	0	-20	+12

Remains

100' from
1E 15005

191' from
01-205

(5)

LINE 1E

	7/17	8/17	7/10
94505	0	-5	+13
84005	0	0	+20
7450	-4	0	+15
7400	-4	+1	+10
64605	-1	+1	+12
6400	-3	+2	+5
5450	-4	+1.5	+1
54005	-2	+1.5	+2
4450	-2	+3	+9
4400	-2	+1	+10
34505	-1	+2	+8
3400	-1	+2	+10
24505	-1	+3	+2
24005	+1	+4	-1
1450	0	+5	0
1400	+1	+4	0
0450	+1	+6	-4
04005	+1	+7	-4
04504	-1	+11.5	-5
14004	-3	+15	-4
14504	-5	+13	-1
24004	-3	+10	+8
24504	-6	+13	-1

Remains

second station
0, +3, +5

at east end
of tunnel

290', 04'
from 1E 3005
to 04, 3005

Pinestone
+ 25' creek
PIT
Pine knots
scum

⑥	Tilt	Grav	Temp	Remarks
Line 1 E				adpccr/b
3+00 N	-7	+11	-1	
3+50	-5	+9	0	"Traction"
4+00 N	-3	+7	+2	
4+50	-2	+5	+4	
5+00 N	-5	+8	+4	
5+50	-5	+7	+2	Sh. ...
6+00	-6	+7	-2	
6+50	-7	+6	+1	
7+00	-6	+5	+2	
7+50	-5	+5	-1	pit
8+00	-6	+6	-3	pit
8+50	-6	+6	-1	
8+90 N	-5	+6	+1	
+ 260'				} pond
700 N	+4	-3	+12	
7+50 N	+8	+2	+8	
10+00 N	-1	+3.5		14' W of SE

⑦	Tilt	Grav	Temp	Remarks
Line 2 E				
10N	-1	+5	-5	1E 10N to 1E 10N
9+50 N	0	+2	-2	60'
9+00	0	0	+2	Dist. B. 100 yds
8+50	-3	+1	0	Pond
8+00	-5	+3	0	
7+50 N	-6	+3	0	
7+00	-5	+5	+1	
6+50	-6	+4	-2	
6+00	-6	+4.5	-2	Slump
5+50 N	-7	+5.5	-2	
5+00	-6	+7.5	-2	
4+50	-7	+8	+7	
4+00	-7	+9.5	+7	
3+50 N	-7	+12	+4	
3+00	-6	+13	-3	
2+50	-5	+13	+6	
2+00	-3	+13	-7	Palustrine Trench
1+50 N	-2	+13	-10	
1+00	-2	+14	-5	
0+50	+2	+10	-3	
0+50 N	+2	+11	+17	
0+00 N	+1	+13	+17	

Limestone
183' to complete
line
2' off-end of
line

8

	11/1	11/2	11/3
LINE 2E			
0+00 S	+3	+8	+10
1+00	+4	+5	+15
1+50	+2	+7	0
2+00	+2	+5	+1
2+50 S	+1	+5	+2
3+00	0	+4.5	-2
3+50 S	-1	+4	-1
4+00	-2	+3.5	-7
4+30 S	-3	+3	-7
5+00	-3	+3.5	-13
5+50 S	-4	+4	-14
6+00	-5	+4	-10
6+50	-3	+4	-20
7+00 S	-3	+4	-20
7+50	-2	+4	-66
8+00 S	-2	+4	-5
8+50	-1	+1	+0
9+00 S	+1	-4	-3
April 174			
9+50 S	+3	-11	0
10+00 S	+2	-11.5	-3

11/1
11/2
11/3
old C.P.
29's half
on bearing

9

	11/1	11/2	11/3
10+50 S	0	-15	-1
11+00	-5	-17	0
11+50	-5	-21	0
12+00 S	-3	-20	-2
12+50	-3	-22	+1
13+00	-2	-21	+2
13+50 S	0	-20	+12
14+00	+3	-24.5	+25
14+50	+2	-15.0	+16
15+00 S	-2	-13	
LINE 3E			
15+00 S	-2	-21	-16
15+50	-3	-22	-10
16+00 S	-6	-23	+2
16+50	-9	-20	±0
17	-11	-17	0
17 1/2	-11	-18	0
17 S	-10	-19	+1
17 1/2	-7	-18	-1
17	-5	-15	0
17 1/2 S	-4	-12	0
17	+2	-10	+1
17 1/2	+1	-5	+0

11/1
11/2
11/3
970 from 100
1500 S (w/02)

(10)

Line 3E

	Flt	Wind	Temp	Notes
9+00S	+2	0	+1	
8 1/2 S	+1	+1	+5	
8	+1	+3S	+5	
7 1/2 S	-3	+7	+14	
7	-4	+5	+12	
6 1/2 S	-4	+5	+15	
6	-4	+6	+15	
5 1/2	-5	+6	+15	
5 S	-5	+5	+17	
4 1/2	-5	+3	+10	
4	-5	+4	+12	
3 1/2	-2	+4	+1	
3	0	+5	-3	
2 1/2	+2	+5	0	
2	+3	+6	-3	
1 1/2	+4	+7	-6	
1	+4	+6S	-18	
1/2	+5	+8S	+1	
0	+5	+10	+10	
0.5 N	+3	+11	+9	
1 N	+3	+13	+5	
1+50	-1	+13	+20	
2+00 N	-2	+13	+15	

Wind

20 SE 95

570 500W 135

R 1000W

(11)

Line 3E

	Flt	Wind	Temp	Notes
2+50 N	-4	+13	0	
3+00	-4	+10	-2	
3+50	-5	+10	0	
4+00 N	-6	+9	-1	
4+50	-8	+9	-2	
5+00	-7	+8	-0	
5+50	-8	+7	+2	
6+00 N	-8	+6	+4	
6+50	-8	+6	0	
7+00	-7	+4	-1	
7+50	-6	+4	-3	
8+00	-7	+6	0	
8+50	-2	+2	+6	
9+00	-2	+3	+2	
9+50	-3	+5	+4	
10+00	-2	+6		
10+50				
11+00				
11+50				
12+00				
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40+50				
41+00				
41+50				
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Right on
N61°E
Towards 4E

12

Line 4E

Line	1st	2nd	3rd
7+50N	-7	+5	0
7+00N	-7	+7	+3
6+50N	-8	+7	0
6+00N	-8	+7	+2
5+50	-7	+8	0
5+00N	-7	+9	-6
4+50	-6	+9	0
4+00	-6	+11	+3
3+50N	-5	+11	0
3+00	-3	+11	-3
2+50	-2	+13	-7
2+00N	-1	+12	-14
1+50	+1	+13	-10
1+00	+1	+13	-15
0+50N	+4	+11	-20
0+00N	+4	+11	-10
0+50S	+8	+8	-9
1+00S	+8	+7	-5
1+50S	+8	+9	+20
2+00S	+7	+8	+1
2+50	+5	+8	-6
3+00S	+2	+8	-15
3+50	0	+8	-15

2500

5' 1/2

c.p. Torr

25

13

Line 4E

Line	1st	2nd	3rd
4+00 S	-6	+10	+2
4+50	-6	+9	-7
5+00	-6	+7	-5
5+50 S	-5	+5	-10
6+00	-4	+9	-3
6+50	-4	+5	-4
7+00 S	-4	+6	-10
7+50	-3	+7	-0
8+00	-1	+7	-15
8+50	+1	+6.5	-2
9+00 S	+5	+5	+1
9+50	+5	+2	-2
10+00 S	+2	-2	0
10+50	+1	-7	-2
11+00	-5	+11.5	-9
1+50	-20	-15	0
12+00 S	-33	-16	0
12+50	-38	-14	+2
13+00	-36	-5	+4
13+50 S	-30	-16	+4
14+00	-21	-18.5	+10
14+50	-15	-17.0	+15
15+00	-16	-13	

note

31' E of sta

61' E of sta

14

LINE SE	T/F	Depth	WPS	Notes
15 S	-19	-13	-4	50'
14 1/2	-17	-13	-4	
14	-26	-18	0	
13 1/2 S	-33	-15	0	
13	-38	-13	0	
12 1/2	-43	-12	0	
12 S	-37	-13	0	
11 1/2	-17	-12	0	Res 1450'
11	+5	-8	0	1250'
10 1/2 S	-4	+2	0	
10	-15	+2	0	
9 1/2	-16	+2	0	40' LWS
9	+11	+8	+2	52' FS
8 1/2	-3	+12	+4	
8 S	-5	+9	+7	
7 1/2	-7	+6	+15	
7 S	-4	+5	+15	
6 1/2	+3	+4	+10	
6 S	+4	+2	+10	
5 1/2	-1	+4	+6	
5	-4	+6	+14	
4 1/2	-3	+7	+10	
4	0	+8	-25	

15

LINE SE	T/F	Depth	WPS	Notes
15 S	-11	+115	-14	crack
14	-18	+14	+16	
13 1/2 S	+5	+18	+46	crack
13	+8	+13	+85	L=
12 1/2	+9	+10	+25	
12 S	+8	+11	+15	
11 1/2	+7	+10	+20	Right side ↓
11 S	+6	+11	+23	
10 1/2 S	+3	+12	+20	
10 S	+2	+12	+15	
9 1/2	0	+14	+15	
9	-1	+13	+15	
8 1/2 S	-2	+13	+6	
8 S	-3	+12	0	
7 1/2	-5	+12	0	
7 N	-6	+12	-3	
6 1/2	-6	+11	-2	
6 S	-7	+10	-1	
5 1/2	-6	+9	-1	
5 S	-7	+9	-5	
4 1/2	-10	+8	-3	
4	-7	+8.5	+2	
3 1/2	-7	+7	0	

16

Line 5E

8+100N

-5 +7 +2

9 1/2

-4 +5 +3

9

-3 +4 -2

9 1/2

-3 +6 0

10 N

-2 +8 -

Line 6E

10+100N

-1 +8 +4

8 1/2

-4 +9 +8

9 N

-15 +7 +4

5 1/2

-6 +7 0

8

-8 +8 -25

1 1/2 N

-8 +7.5 -10

7

-9 +9 -8

6 1/2

-7 +9 0

6 N

-8 +9 +2

5 1/2

-9 +10 +4

5

-6 +10 +3

4 1/2

-5 +10.5 +1

4+100

-4 +11 -1

3 1/2

-3 +10 -4

3

-2 +13 -4

20'

30'

15' CR = 200N
200E
6150E

17

GE	Tilt	Quad	Top
2.5N	+2	+14	-2
2N	-1	+13	-12
1.5N	+1	+12	-4
1N	+4	+12	-10
0.5	+5	+12	-15
0	+8	+11	-7

6E	Apr	13
0+50S	+9	+12 +8
1S	+6	+12 -5
1.5S	+9	-14 -35
2S	+4	+22 -25
2.5S	+8	+21 -5
3S	+9	+15.5 -12
3.5S	+11	+12 -5
4S	+9	+8 -12
4.5	+5	+5 -3
5	-8	+7 -1
5.5	-7	+5 0
6S	+6	-1.5 0
6.6	+14	-2 0
7	+15	+7 0

Right side

Gully side
Creek
Swamp
Swamp

18

Stations	Tilt	Dist	Temp	Remarks
7.5	+4	+1	0	Swamp
8 S	-17	0	0	Swamp
8.5	-12	+8	0	Swamp
9 S	+8	+13	0	Road on B. Line
9.5	+22	+4	0	
10 S	+22	+2	0	
10.5	-6	+4	0	
11	+10	+35	+11	
11.5	+2	-5	+7	
12 S	-50	-11	0	
12.5	-41	-19	0	
13	-47	-9	+5	
13.5	-38	-11.5	+3	
14 S	-28	-12	+2	
14.5	-26	-11	+20	
15 S	-20	-11		
	X		X	
7E 15 S	-26	-10	-4	
14.5S	-33	-11	-1	
14	-37	-10	0	
13.5	-47	-5	+4	

19

Sta.	Tilt	Dist	Temp	Remarks
7E 13.5	-40	-17	-9	
12.5	-28	-22	-9	
12	-29	+35	0	
11.5	+6			
11	+5	+5	+7	
10.5	+11	+1	0	
10 S	+33	+7.5	0	
9.5	+20	+7.5	0	
9	+1	+12	0	74' NW of 95 (Swamp)
8.5	-25	+15	0	Swamp
8	-19	-5	0	Swamp
7.5	-7	+3	0	Swamp
7	+20	+13	+7	
6.5	+20	-2	+10	
6	+1	-1	+15	
5.5	-18	+10	+15	
5	-1	-1	+33	
4.5	+15	+9	+30	
4	+16	+9	+20	
3.5	+13	+11	+20	
3	+11	+10	+20	
2.5	+9	+16	+5	
2	+6	+13	+9	

(20)

Station	TILT	Quadr	Top	Remarks
7 E 15 S	+5	+22	+22	white, 1.900y Ls with crop
1	+8	+15	+15	
0.5	+4	+12	+20	
0	+3	+13	+18	Right in D.L.
0.5	+3	+11	+20	
1 N	+2	+13	+20	
1.5	+1	+13	+15	
2	0	+13	+15	
2.5	-1	+14	0	Top of bulldozed passing road: Aspy ? H. Count of rocks Ls
3	-2	+14	0	
3.5	+1	+9	+4	
4	-1	+9	-1	
4.5	-2	+9	0	
5	-2	+9	-3	
5.5	-4	+12	-2	
6	-7	+12	+1	
6.5	-7	+10.5	+2	
7	-7	+9	+4	
7.5	-7	+9	+12	
8	-7	+8	+12	
8.5	-5	+9	+7	
9	-5	+8	+10	

(21)

Sta.	TILT	Quadr	Top	Remarks
7 E 9 S	-6	+10	+2	
10 N	-4	+11		28' E of 10N 7E
	x	x		
8 E 10 N	-5	+11	-15	
9.5	-6	+11	-10	
7	-7	+9	-10	
8.5	-6	+8	-9	
8	-6	+9	-7	
7.5	-6	+10	+2	
7	-7	+10	-3	
6.5	-10	+10	-20	
6	-5	+10	-12	
5.5	-5	+10	-12	
5	-2	+10	+2	
4.5	-1	+9	0	
4 N	+1	+7.5	-2	
3.5	+1	+7	+2	
2	+1	+10	+2	
2.5	+1	+10.5	0	
2	0	+13.5	-4	
1.5	0	+13	-20	
1 N	0	+13	-20	

22

23

Stations	Tilt	Quadr	Topo	Remarks
8 ^E 0.5	+2	+13	-32	(L.S.)
0	+3	+12	-15	R-9 / B.L. 1
0.5	+2	+18	-19	-7 Raymond
1 S	0	+20	-9	Raymond
1.5	+1	+19	-3	
2 S	+3	+18	-7	
2.5	+5	+17	-1	
3 S	+8	+16	-21	
3.5	+11	+13	-47	
4 S	+18	+11	-25	
4.5	+21	+8	-25	
5 S	+20	+1	-18	
5.5	-16	+5	-1	
6 S	-17	+9	-4	
6.5	-1	+0.5	-20	
7 S	+8	+9	-8	
7.5	+26	+3	-2	
8 S	-22	-5	0	Swamp
8.5	-28	+14	0	Swamp
9 S	-7	0	0	Right side 1 st
9.5	-5	0	0	Swamp
10 S	+4	-3	0	Swamp

Station	Tilt	Quadr	Topo	Remarks
8 ^E 10.5	+12	-4	0	Raymond Swamp
11.5	-2	+7	0	
11.85	+15	-1	-5	
12.5	-34	-10	-2	Swamp
12.85	-47	-10	-3	
13.5	-53	-18	+9	
13.85	-53	-7	+9	
14.5	-46	-8	+27	
14.85	-34	-10	+14	
15.5	-27	-9		
			-x	
Line 9E				
15.5	-33	-9	-9	
14 1/2	-39	-9	-6	
14 S	-50	-8	-9	
13 1/2	-55	-10	+4	
13	-61	-10	+2	
12 1/2 S	-53	-9	+2	
12	-25	-8	0	

+10' off
 112' between
 14.5, 15.5 and 17E

24

LINE 9E

	Tilt	Quad	Topo	NOTE
1 1/2	+14	+1	+7	
11	-2	+55	0	
10 1/2	+2	-8	0	
10	-8	-6	0	
9 1/2 B	-12	-35	0	
9	-10	0	0	
8 1/2	-10	-9	0	
8	-30	-15	+4	
7 1/2 S	+23	+1	+15	
7	+13	+4	+27	
6 1/2	-2	+4	+20	
6	-18	+10	-15	
5 1/2	-19	+35	+6	
5 S	+19	+15	+20	
4 1/2	+22	+85	+34	
4	+19	+10	+35	
3 1/2	+14	+13	+33	
3 S	+10	+16	+12	
2 1/2	-3	+20	0	
2	+1	+18	+2	
1 1/2	+1	+15	+10	
1 C	+2	+15	+15	

Swamp

"
"

4
20' left
" west

"
"
"

LSml
otcp.

25

LINE 9E

	Tilt	Quad	Topo	NOTE
1/25	0	+10	+20	
05	-1	+20	+24	
05.2	-3	+20	+30	
1 N	-3	+20	+22	
1.5	-2	+15	+12	
2 N	0	+13	+12	
2.5	+1	+7	+15	
3	+1	+9	+15	
3.5	+1	+10	0	
4	+1	+9	+2	
4.5	0	+9	0	
5	-1	+9.5	+9	
5.5	-2	+10	+9	
6	-3	+11	+10	
5.5	-5	+11	+9	
7	-5	+11	+7	
2.5	-6	+11	+8	
8	-5	+9	+7	
8.5	-5	+9	+20	
9	-5	+10	+19	
9.5	-6	+12	+10	
10 N	-3	+14		

Repeat on
B.C.

LS along

LS along

along ditch
N. 95
Schedler
2.5 front
6.5 (N. 95)

Repeat on
B.C.

26

Station	Tilt	Dist	Th	Sp	Remarks
10 ¹⁰ 10 N	-2	-110	-25	100%	50%
9.5	-3	-110	-25		
9 N	-3	-110	-26		
8.5	-4	-109	-26		
8	-2	-109	-26		
7.5	-3	-109	-26		
7 N	-3	-109	-26		
6.5	-3	-109	-26		
6 N	-3	-109	-26		
5.5	0	-109	0		
5 N	+1	-109	0		
4.5	+2	-109	0		
4	+2	-109	0		
3.5	+2	-109	0		
3	+2	-109	-4		
2.5	+1	-109	-25		
2	-2	-109	-33		
1.5	-12	-109	-75		
1	-10	-109	-25		
0.5	-6	-109	-20		
0	+2	-109	-8		
0.5 S	+5	-109	-10		

137th St
9 feet
front

Right in

H. N. N.

27

Station	Tilt	Dist	Th	Sp	Remarks
10 ¹⁰ 1.5	-1.5	-116.5	-8	100%	
9.5 S	+1.5	-114	-7		
9	+4	-120	-10		
8.5	0	-118	-20		
8	+2	-120	-20		
3.5	+10	-116.5	-25		
4	+13	+9	-22		
4.5	+20	-110	-15		
5	+15	-114	-10		
5.5	-22	+6	-8		
6	-15	+16	-20		
6.5	-9	+0	-30		
7	+10	-1	-11		
7.5	+14	+3	0		
8	+5	+8	+3		
8.5	-25	-1	-2		
9	-20	-2	0		
9.5	-18	-4	0		
10	-15	+3	0		
10.5	+2	-4	0		
11	0	-25	-2		
11.5	+15	-8	-3		

137th St
9 feet
front

Right in

H. N. N.

28

Station	Tilt	Quadr	Depth	From
10E 12.5	-22	-6	-5	11.5
12.5	-80	-6	0	
13	-72	-10	0	
13.5	-65	-7.5	0	✓ creek
14	-60	-8	+10	
14.5	-44	-9.5	+12	
15.5	-35	-9		92.7 ft from 15.5
	X		X	
11E 13.5	-36	-8	-7	11.5
14	-42	-5	0	10E 14.5
14.5	-55	-6	+2	
15.5	-70	-1	0	
17.5	-80	-5	+8	
17.5	-70	-6	+15	
17.5	+5	-6	+10	
16.5	+5	-7	+10	
11.5	+1	-5	-3	
10.5	-3	-7	-20	
10.5	+12	-4	-8	
9.5	-25	-7	0	
9.5	-26	-10	+4	

29

Sta.	Tilt	Quadr	Depth	Remarks
11E 8.5	-8	-5	0	H.A.
8.5	+20	-18	0	
7.5	+15	+25	-6	
7.5	+15	+3	0	✓ Group
6.5	-1	+4	-18	
6.5	-15	+6	+10	
6.5	-15	+8	+5	
6.5	+3	+8	+5	
4.5	+10	0	+13	
4.5	+11	+8.5	+14	
3.5	+13	+12	+20	
3.5	+9	+16	+25	
2.5	+8	+18	+25	
2.5	+10	+21	+15	
1.5	0	+21.5	+10	
1.5	0	+20	+5	
0.5	+1	+16	+18	
0	+3	+16	+10	Right on BL
0.5 N	0	+15.8	+9	365 1.5
1 N	0	+22	+15	1.5 under op
1.5	-2	+22	+15	10E 202
2 N	-10	+20	+28	branch

30

Sta	Tide	Depth	Temp	Remarks
11E	2.5-N	0	+9	H.K.
	3 N	0	+5	1.5
	3.5	0	+7	1.5
	4 N	+2	+7	1.5
	4.5	+3	+7	"
	5 N	+6.5	+8	"
	5.5	+7	+9	1.5
	6 N	+2	+8	
	6.5	+1	+8.5	
	7 N	+1	+8	1.5
	7.5	+2	+7.5	
	8 N	+1	+7	
	8.5	+3	+7	
	9 N	+2.5	+9	
	9.5	+3	+7.5	
	10 N	-1	+10	4' W of 100' NE
	10.5	x		
12E	10 N	0	+6	100' East of 11E 10.5
	11.5	-1	+14	
	12 N	-1	+11.5	
	12.5	+2	+4	
	13 N	+2	+2.5	

31

Sta	Tide	Depth	Temp	Remarks
12E	7.5	+2	+4	H.K.
	7.5	+1	+6.5	
	6.5	+3	+9.5	
	6.5	+3	+10.5	
	5.5	+2	+7.5	
	5.5	+2	+8	
	4.5	+2	+8.5	
	4.5	+2	+6	
	3.5	+3	+6	
	3 N	+1	+7	-28
	2.5	0	+9.5	1.5
	2 N	-5	+14	-30 1.5
	1.5	-16	+24	-24
	1 N	-10	-20	-16
	0.5	+3	+16	-11
	0	+4	+14.5	-20 50' West of 13.5
	0.5 S	0	+16	-22
	1.5	-3	+18	-20 7.5
	1.5	-5	+21.5	-20 1.5
	2.5	-5	+22	-24
	2.5	+5	+18	-14
	3.5	+3	+19	-22

32

Sta	Tot	Buad	Tot	Remarks
12.5	+14.5	+12	-3	H.H.S.
13.5	+15	+7.5	-3	
4.5	+6	+4	-5	
5.5	-11	+12.5	-2	
6.5	+2	+5	-5	
6.5	-20	+11	-6	
6.5	+9	+10.5	-2	
7.5	+5	+3	+10	
2.5	+15	+2	+14	
8.5	+14	+3	0	
8.5	+14.5	-4	-3	
9.5	+23	-6	-13	
9.5	-30	-5	0	
10.5	-15	-13	-3	
10.5	-2	-13.5	-1	
11.5	-5	-10	0	
11.5	+9	-14	0	
12.5	-25	-13	-14	
12.5	-65	-8	-20	
13	-84	-2	-3	
13.5	-70	0	-3	
14	-60	-4	0	

19 West
1 E.L.

33

Sta	Tot	Buad	Tot	Remarks
12.5	-67	-7.5	-19	H.H.S.
13.5	-47	-8.5		
	x		x	
13.5	-45	-10	+10	100' from east of 12.5 15.5
10.5	-45	-6	+10	check?
19.5	-50	-3	+10	
13.5	-62	0	+10	
13.5	-72	+2	+9	
12.5	-70	-8	+4	20' east of pit
12.5	-29	-6.5	0	
11.5	-16	-17	+1	
11.5	-11	-15	+3	
10.5	-9	-12.5	+5	
10.5	-0.5	-9.5	+4	
9.5	-31	-1	+2	100' west of 10.5
9.5	-20	-6	+2	
8.5	+18	0	+3	
8.5	+20	0	0	
7.5	+14	+5	-18	
7.5	+5	+4	-3	
6.5	-1	+6	0	

34

Sta	Tide	Bound	Tide	Remarks
13E	6.5	-8.5	+10	0
5.5	-5.5	+16	-8	
5.5	-4	+7	+10	mid
4.5	-8	+17	+9	
4.5	+5	+8.5	+5	
3.5	+11	+11	+14	
3.5	+16	+16	+18	
2.5	+9	+20	+19	
2.5	+3	+23.5	+20	
2.5	-5	+25	+26	
1.5	-5	+19	+27	
0.5	+1	+10	+20	
0	+10	+14	+30	1.5.
0.5 N	+8	+19	+35	mid?
1 N	0	+22	+15	mid?
1.5	-4	+16.5	+20	
2 N	-5	+24	+26	
2.5	-10	+13.5	+25	1.5.
3 N	0	+9.5	+10	1.5.
3.5	0	+7.5	+5	
4 N	0	+9.5	0-4	
4.5	+1	+7.5	0	

35

Sta	Tide	Bound	Tide	Remarks
13E N	+2	+19	-2	1.5.
5.5	+3	+7	-4	
6 N	+3	+6.5	-2	
6.5	+5	+4.5	0	
7 N	+6	+4	-1	
7.5	+6	+3.5	-1	
8 N	+8	+3	-2	
8.5	+9	+2	0	
9 N	+7	+6	+4	
9.5	+5	+7.5	+2	
10 N	+3	+7.5		
	0		0	
14E				
10 N	+14	0	0	1.5. East of 13E
9.5	+10	0	0	
9 N	+9	+4	+4	
8.5	+9	+3	+9	
8 N	+10	+4	+5	
7.5	+8	+4	+8	
7 N	+8.5	+2	+13	
6.5	+9	+2	+5	
6 N	+8	+4	+4	

10' N
47033 (400)
1 X 200, 200m
0.9.12.69

23' west of
2.5.

(36)

Sta	Tilt	Quilt	Temp	Remarks
5.3 N	+4	+4.5	+3	11.5m
3. N	+4	+4.5	+2	
3.5	+7	+4.5	0	
3. N	0	+6.5	+3	
3.4	-1	+8	-7	
3. N	-5	+10	-20	
2.4	-8	+13	-20	
2. N	-15	+16	-8	
1.1	-12	+18	-10	
1. N	-2	+7	-50	
0.1	+2	+15	-16	
0	+14	+7.5	-15	
April 0.5 S	+19	+1.5	-10	K.K.
18th. 72 1.5	-7	+14	-5	
1.4	-7	+2.5	-10	
2.5	+3	+17	-5	
2.4	+8	+18	-11	Pond
3.5	+13	+14.5	-6	3.25 S
3.4	+5	+16	0	to 3.10 S
4.5	+5	11.6	0	
4.4	+4	+14	+2	
5.5	+3	+8	+8	

(37)

Sta	Tilt	Quilt	Temp	Remarks
10.8	+2	+10	+3	
5.5	+2	+5	-2	
6.5	-7	+5	0	
7.5	-3	+9	+4	
7.4	+12	+4.5	+4	
8.5	+20	+1	0	
8.4	+25	-1.5	0	
9.5	-4	-12.5	-2	
9.4	-35	-8	-2	
10.5	-26	-10	-10	
10.4	-26	-8.5	-4	
11.5	-10	-13	0	
11.4	-41	-11	0	
12.5	-61	-8	-8	
13.4	-66	-5	-4	
13.5	-63	-1	-10	
13.4	-56	-4	-10	
14.5	-52	-5.5	+4	
14.6	-45	-8.5	0	
15	-43	-10	0	

(Note: distance between 18th. 15.5 & 15.10')

distance 10
west

rock
water?

Distance of
water?

140 (15.5)

38

L:15E line	Tilt	quad	Topo	DATE	
155	-37	-11	-2	10/1	100' Eul.
14 1/2 S	-40	-8	0	"	141E 155
14	-43	-6.5	-1	"	
13 1/2 S	-48	-5	0		
13	-53	-5.5	+7		
12 1/2	-55	-3	+10		
12 S	-52	-4	+15		Trench Basin
11 1/2	-41	-7	0		
11	-43	-9	-2		
10 1/2	-45	-7	-2		Lin. Eul.
10 S	-48	-5	+2		Swamp
9 1/2	-35	-10	+2		141E 10' S Long
9	-11	-12	+14		
8 1/2	+17	-7	+12		
8 S	+17	-2	-2		o. par.
7 1/2	+8	+2	-3		
7	-6	+7	-2		
6 1/2	-7	+4	+0		
6 S	+2	+2	+4		shelf
5 1/2	+7	+5	-2		
5	+9	+8	-5		
4 1/2	+16	+8	-10		
4 S	+23	+9.5	-3		

39

L:15E line	Tilt	quad	Topo	DATE	
3 1/2	+10	+15	0		Don't add
3 S	+17	+1.5	+2		
2 1/2	+15	+9	+25		
2	+8	+14	+10		
1 1/2 S	+3	+14	+5		
1	+2	+11	+15		
1/2	+11	+5	+20		Right
0 S	+7	+9	+25		
1/2	+6	+11	+30		
1	0	+12	+30		
1/2	-3	+13	+15		o. par. chn
2 N	-4	+11	0		"
2 1/2	-6	+10	+12		
3	-7	+9	0		
3 1/2 N	-8	+8.5	+2		
4	-10	+9	-7		
4 1/2	-12	+9	-5		
5 1/2	-8	+7	+4		o. par. E
5 1/2	-3	+6	+2		Swamp
6	+8	+2	0		
6 1/2 N	+13	0	-2		
7	+14	0	0		
7 1/2	+13	0	0		

(40)

line

	TILT	Speed	Angle
15E			
9	+14	0	+2
8 1/2 N	+16	-1	0
9	+18	-3.5	0
9 1/2	+15	-4	0
10 W	+12	-2	
L. 16E			
10 W	+11	-1	+2
9 1/2	+12	-2	0
9	+15	-4	+9
8 1/2 N	+16	-3.5	0
8	+17	-3	-2
7 1/2	+14	-1	-3
7	+15	-1	0
6 1/2	+14	-2	-4
6	+10	0	0
5 1/2 N	+3	+3	0
5	-4	+5.5	+4
4 1/2	-4	+5	+5
4 N	-2	+5	+2
3 1/2	-4	+6	0
3	-6	+8	-5
2 1/2 N	-6	+8	-12

5' in 10' S down

20' shot

LINE IS ONE
Slope of slope
off 330' at
NE of Lincoln
500'

chert

(41)

line

	TILT	Speed	Angle
L. 16E			
2 1/2	-5	+10	-8
1 1/2	-3	+10	-20
1 1/4	-2	+10	-25
1/2	+2	+8.5	-18
0 N	+4	+8	-15
1/2 S	+6	+7.5	-7
1 S	+10	+5	-10
1 1/2 S	+16	+2	-10
2	+18	+4	0
2 1/2	+8	+11	0
3 S	+11	+9	0
3 1/2	+13	+8	+3
4	+24	+2	+13
4 1/2 S	+30	0	+5
5	+32	+1	0
5 1/2	+20	+1	0
6	+10	-1	+7
6 1/2 S	+5	-6.5	+6
7	-10	+3	0
7 1/2 S	-2	+3	-2
8	+11	-7	-5
8 1/2	+14	-8.5	-9
9 S	-5	-16	-4

Pulaski

Reg. for

Slope
neglect 5' with
line

42

Line

Line 166

Line	F	S	E	Remarks
9.5	-48	-3	+4	
10.5	-54	-2	+4	
10.1	-51	-4	+2	
11.5	-47	-6.5	-2	
11.5	-47	-6.5	-7	
12.5	-50	-3	-7	
12.5	-48	-3	-3	
13.5	-46	-4.5	+2	
13.5	-43	-5	+1.5	prock
14.5	-37	-7	-3	
14.5	-33	-8.5	-10	
15.5	-30	-11		prock
17.5	-29	-9	+5	outcrop
14.5	-31	-8	+15	grs
14.5	-33	-7	+3	
13.5	-38	-5	-2	outcrop
13	-40	-4	-2	
12.5	-43	-3	0	
12.5	-41	-6	-7	
11.5	-44	-4	0	
11.0	-46	-5	-3	
10.5	-50	-2	-5	

43

50-2-5

Sto

Line	F	S	E	Remarks
9.5	-53	+1.5	-2	
10.5	-46	+1.5	-3	
9.5	-10	-3	+5	
9.5	0	-15.5	+11	
8.5	+3	-12	+10	outcrop
8.5	+2	-8	+2	grs
7.5	-3	-3.5	-1	
7.5	-8	+2	-10	
6.5	-11	-0.5	-2	
6.5	+2	-4	-4	
6.5	+18	-6	-2	
5.5	+24	-4	-3	
5.5	+27	-3	0	
4.5	+25	-2	-10	
3.5	+17	+3.5	-3	
3.5	+10	40	0	
2.5	+4	+12	+2	west side is
2.5	+10	+5	+4	50' deep
1.5	+19	-1	+5	
1.5	+12	+3	+15	
0.5	+6	+9	+18	all in 10' deep of
0	+2	+8	+16	Sto
0.5	+2	+8	+25	

44

Station	Time	Dist	Temp	Remarks
Line 170	0	+85	+25	
1.5	-3	+10	+25	
2.0	-4	+10	+16	
2.5	-7	+9.5	+5	
3.0	-1	+9.5	+18	
3.5	-6	+7	+10	about outcrop
4.0	-5	+6	-10	
4.5	-3	+5	-3	
5.0	-1	+4	0	
5.5	+2	+4	-2	53.5772
6.0	+4	+4	-1	
6.5	+7	+3	0	
7.0	+12	+1	+2	
7.5	+16	0	+2	
8.0	+17	-1	+15	
8.5	+17	-3	+2	
9.0	+18	-3	0	
9.5	+15	-3	-5	after the outcrop is over
10.0	+12	-1.5		

45

Station	Time	Dist	Temp	Remarks
Line 170	+11	-3	+13	
2.5	+14	-3	+6	
3.0	+16	-3.5	+12	
3.5	+13	-4	0	
4.0	+19	-4	0	
4.5	+20	-4	0	
5.0	-16	-2	+2	
6.5	+13	0	+4	
6.0	+8	+2.5	+6	
6.5	+6	+2.5	+11	
7.0	+2	+2.5	+5	
7.5	-1	+3	-2	rock
8.0	-5	+5	-2	"
8.5	-7	+6	-7	"
9.0	-8	+7	-10	"
9.5	-8	+8.0	-10	
10.0	-6	+8	-5	54.5 } near outcrop } fault
10.5	-4	+8	-12	
11.0	0	+7	-15	54.5 }
11.5	+1	+7	-15	
12.0	0	+9.5	-5	
12.5	+6	+6	-2	small scarp

46

1.80	1.5	1.0	0.5	
		+10	+4	
	1.5	+10	+3	+13
	2	+12	+1.5	-3
	2.5	+9	+6	+2
	3	+12	+5	+4
	3.5	+14	+2	-5
	4	+14	-0.5	0
	4.5	+13	-1.5	+5
	5	+14	3	+17
	5.5	+8	-4	0
	6	-4	+1.5	0
	6.5	-7	0	+10
	7	-4	-5	-2
	7.5	-3	-6	-12
	8	-7	-6	-11
	8.5	-12	-10	-10
	9	-13	-14	0
	9.5	-37	-7	+7
	10	+50	+1	+15
	10.5	-43	-3	+6
	11	-42	-6	+16
	11.5	-43	-5.5	+3

SCANT
 GRIP
 SWAMP

176
 177
 178

47

Sta.	Net	Quad	1870
180			
12.5	-41	-5	+2
12.5	-39	-3	+17
13	-43	-4	+5
13.5	-34	-5.5	-3
14	-32	-7	-9
14.5	-29	-5	-9
15.0	-23	-5	
LINE			
17E15	-32	-5	+1
14.5	-26	-4	+6
14	-30	-4	+2
13.5	-31	-5	-2
13	-35	-3.5	-2
12.5	-34	-4	0
12	-37	-5	-3
11.5	-36	-7	-8
11	-34	-8	-5
10.5	-37	-3	-4
10	-37	-3	0
9.5	-31	-5	+1
9	-24	-5	+4
8.5	-17	-6	+7

Remarks
 50' E of 176, 177
 off shore of 178
 outcrop

Distance bet
 176 & 180
 12.5'

outcrop
 "

Scamp

7' E of
 Point

(48)

LINE	TILT	SPAD	TAPE
17E 8.5	-12	-5	-2
7.5	-5	-5	0
7	+1	6.5	+2
6.5	-2	-4	+3
6	-2	-2	-1
5.5	+1	-2	-1
5	+7	-3.5	-2
4.5	+9	-2	+2
4	+9	+2	+4
3.5	+10	0	0
3	+10	+0.5	-15
2.5	+9	+2	-15
2	+10	+1.5	0
1.5	+7	+4	0
1	+4	+7	+2
0.5	+5	+5	+3
0	+2	+6.5	
<hr/>			
LINE 20E 0	+4.5	+3	-2
0.5	+4	+6	-2
1	+5	+7	0
1.5	+5	+3.5	+2

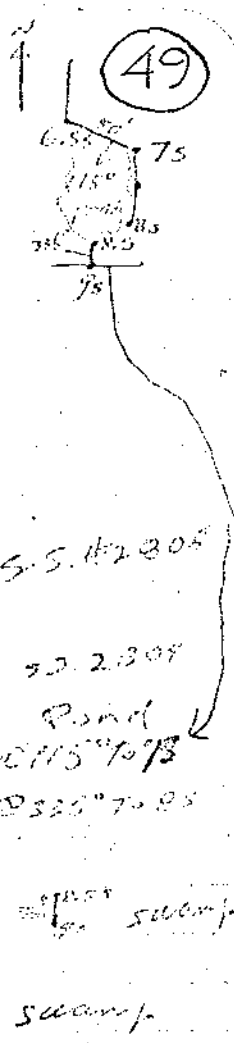
Date
 on top of
 Pond
 30' long or
 1 side

swamp

(49)

LINE	TILT	SPAD	TAPE
2	+9	0	+30
2.5	+11	-3.5	-10
3	+9	-2	+4
3.5	+7	-1	+0
4	0	+1.5	-1
4.5	-2	+1	-4
5	+2	-3	0
5.5	+3	-6	-7
6	+3	-7	-2
6.5	+6	-10	0
7	+8	-9.5	0
7.5	+3	-10	0
8	-12	-5	0
8.5	-17	-6	0
9	-22	-4	0
9.5	-33	+3	+3
10	-36	-3.5	+14
10.5	-36	-5.5	+13
11	-30	-7	+18
11.5	-31	-7	+16
12	-30	-6	+12
12.5	-29	-6	-0

Date
 Pond
 swamp



50

Sta	Tilt	Dist	Corr	Notes
20E				
13.	-29	-5	+1	
13.5	-29	-2	+1	
14	-29	-2	-10	100' from 196
14.5	-22	-2	-12	Ship
15	-21	-4		100' from 196
21E				
18.5	-19	-3	+12	100' from 196
19.5	-25	-3	0	Ship
19	-23	-4	-4	
18.5	-22	-4	-4	
18	-21	-8	-9	
12.5	-24	-5	-2	
12	-26	-5	-7	
11.5	-25	-8	-7	
11	-26	-8	-7	
10.5	-29	-5	-7	
10	-30	-4.5	0	
9.5	-25	-4.5	0	
9	-18	-6	0	
8.5	-12	-7	+1	
8	-10	-6.5	+2	
7.5	-6	-7	0	

51

Sta	Tilt	Dist	Corr	Notes
7	0	-8	+2	
6.5	+5	-10.5	+4	
6	+5	-8	0	
5.5	+3	-7.5	0	
5	+2	-5	+0	
4.5	-2	0	+2	
4	-7	+4	-2	Chart
3.5	+5	-6	-4	
3	+9	-6	-5	
2.5	+8	-4	-6	
2	+9	-3	-7	
1.5	+6	+2	0	
1	+5	+3.5	0	
0.5	+4	+4	0	
ON	+6	+2		
22E	+4	+11	+6	
0	+5	+10	+2	
0.5	+4	+9	+2	
1	+6	-1	0	
1.5	+5	-1	0	
2	+4	-3.5	+7	
2.5	0	-1	+14	
3	-1	-2	+2	

52

22E

Sta.	11'	12'	13'
3.5	-1	-2	+2
4	-1	-3	+8
4.5	-2	-2	+5
5	-0	-3	+2
5.5	+1	-5.5	0
6	+1	-7	-2
6.5	+1	-8.5	-1
7	-3	-6	0
7.5	-8	-5.5	-3
8	-11	-5	-4
8.5	-12	-6	0
9	-20	-6	+12
9.5	-22	-7.5	+15
10	-26	-4	+13
10.5	-23	-5	+8
11	-26	-4	+6
11.5	-25	-6	+3
12	-28	-5	+12
12.5	-22	-5	+8
13	-19	-5	+10
13.5	-17	-6	-0
14	-18	-5	-2

S. 1/4 Sec 31 E 7 S 4

53

22E

Sta	Tall	Quick	Topo
14.5	-16	-4	-11
15	-16	-3	
LINE			
23.5	-11	-5	+18
14.5	-12	-5.5	+13
14.5	-14	-4	-2
17.5	-16	-4	-6
7	-18	-4	-5
17.5	-19	-4	-5
12.5	-20	-4	-10
11.5	-23	-3	-5
11	-23	-4	-11
10.5	-24	-2.5	-20
10.5	-22	-4	-16
9.5	-20	-4.5	-10
9	-21	-3	-3
8.5	-13	-6	+5
8.5	-12	-6	+7
7.5	-10	-5.5	+3
7	-6	-5	0
6.5	-3	-6.5	+1
6	-1	-7	0

120' distance
7-18, 15.5

100' distance
22E #23, 15.5

Sho?

6'E of 15'

dist. from ?
chart?

54

Line

Tilt

Quad

Topo

notes

23E

5 1/2

-1

-6.5

0

5 S

-3

-4

-4

4 1/2

-2

-4

-6

4

-2

-4

-1

3 1/2

-2

-3

-1

3 S

-1

-2

-7

2 1/2

0

-2

-5

2

-1

-3.5

-2

1 1/2

+1

-3

-1

1

+2

-1.5

-1

1/2 S

+5

-2

0

20' W of STA

0

+5

-1

0-

x

x

24E OS

+4

-1

+7

1 1/2 S

+4

-2

+6

1

+3

-4

+8

1 1/2

+3

-5

+10

2 S

+2

-5

+10

2 1/2

+1

-5

+8

3

+1

-6

+12

3.5

-1

-4

+6

4 S

-2

-5

+3

4.5

-3

-4

+1

55

Line

Tilt

Quad

Topo

notes

24E

5

-3

-4.5

+3

5.5 S

-3

-6

+2

6

-6

-4

-3

6.5

-7

-6

-5

7 S

-9

-6

-4

7.5

-10

-6

-4

8

-10

-7

-2

8.5

-17

-4

+4

5' W of STA

9 S

-19

+4.5

+7

9.5

-17

-6

+6

10

-23

-1

+21

10.5

-24

-3

+6

11 S

-21

-3

+6

11.5

-19

-3

+15

12

-20

-4

+4

12.5

-16

-4

+1

Diabase

13 S

-14

-4.5

0

STA

13.5

-14

-5

-4

Sharp pt line

14

-11

-5

-6

14.5

-10

-5

-3

15 S

-11

-4

-

110' between

23E & 24E

20

2480 W-1



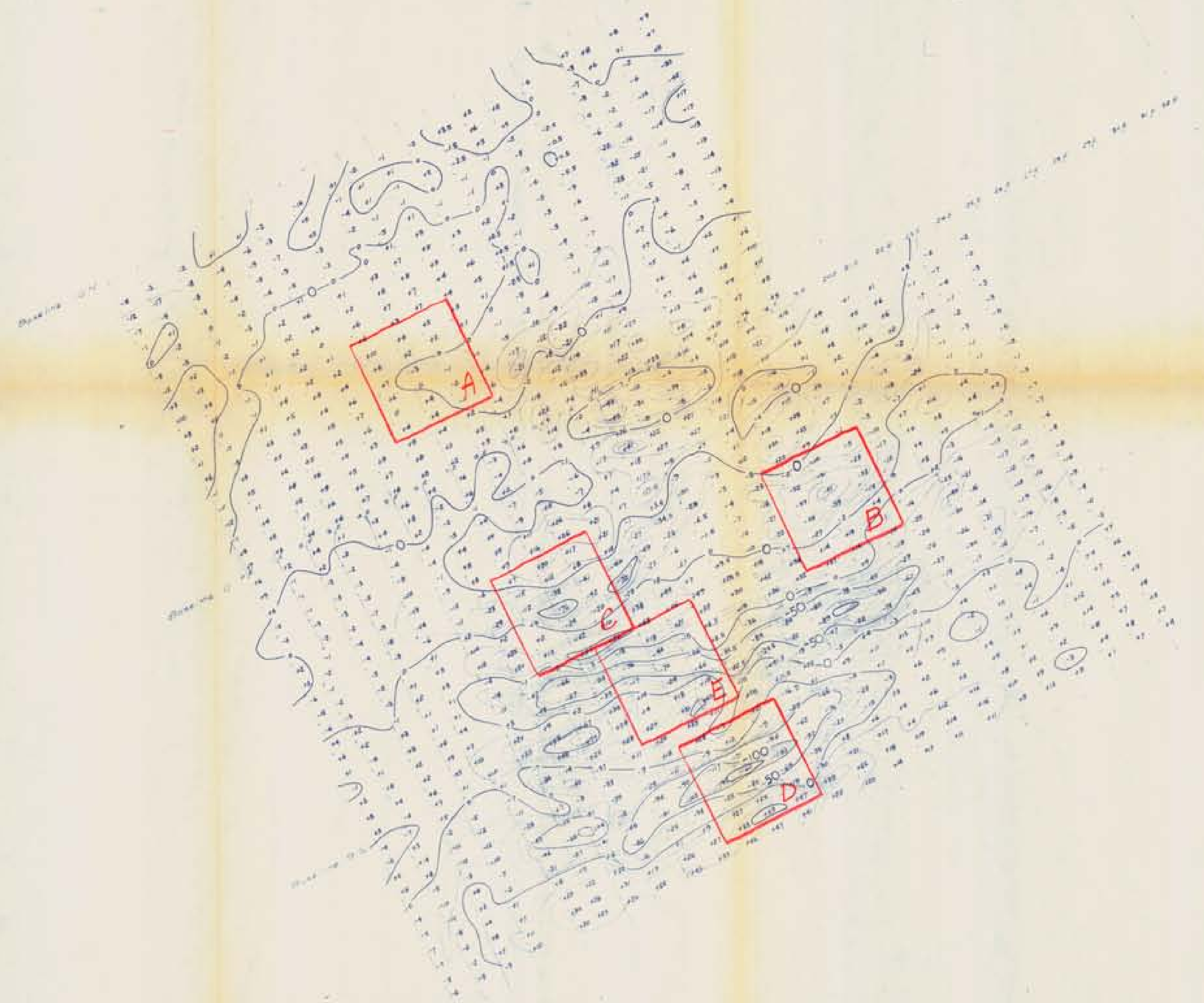
Scale 1:50,000
Contour interval 100
Magnetic intensity in gamma
with dipping in 10° N 45° E

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3780 MAP #1

To accompany report on the Ike
Claims, Greenwood Mining Division
by James Paton, June 1972

3780 M-1

THE STRAUBER ENGINEERING COMPANY LIMITED
200-490 GERRARD STREET E. TORONTO, ONT. M5C 1K7
SLICKSHOOF, LINDSEY CREEK AREA
IKE CLAIMS
MAGNETOMETER SURVEY
Designed by SHARPE Survey Date/Time: MAY/72 Drawn by J. Paton J. Paton
MF-1



Notes

1. Base line set and chained. Cross lines made by chain and compass and stations marked with flagging every 50 feet.
2. The numbers shown on the map are reduced from the original T.M. readings according to the method of Fraser as follows:

$$T.M. - 5 \quad -10 \quad -2 \quad +8 \quad +2 \quad +18$$

$$\quad \quad -15 \quad +10$$

$$\quad \quad \quad -5$$
3. Readings were taken on a Ranko RM-16 using transmitter NPG at 18.6 KHz.

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3780 MAP #2

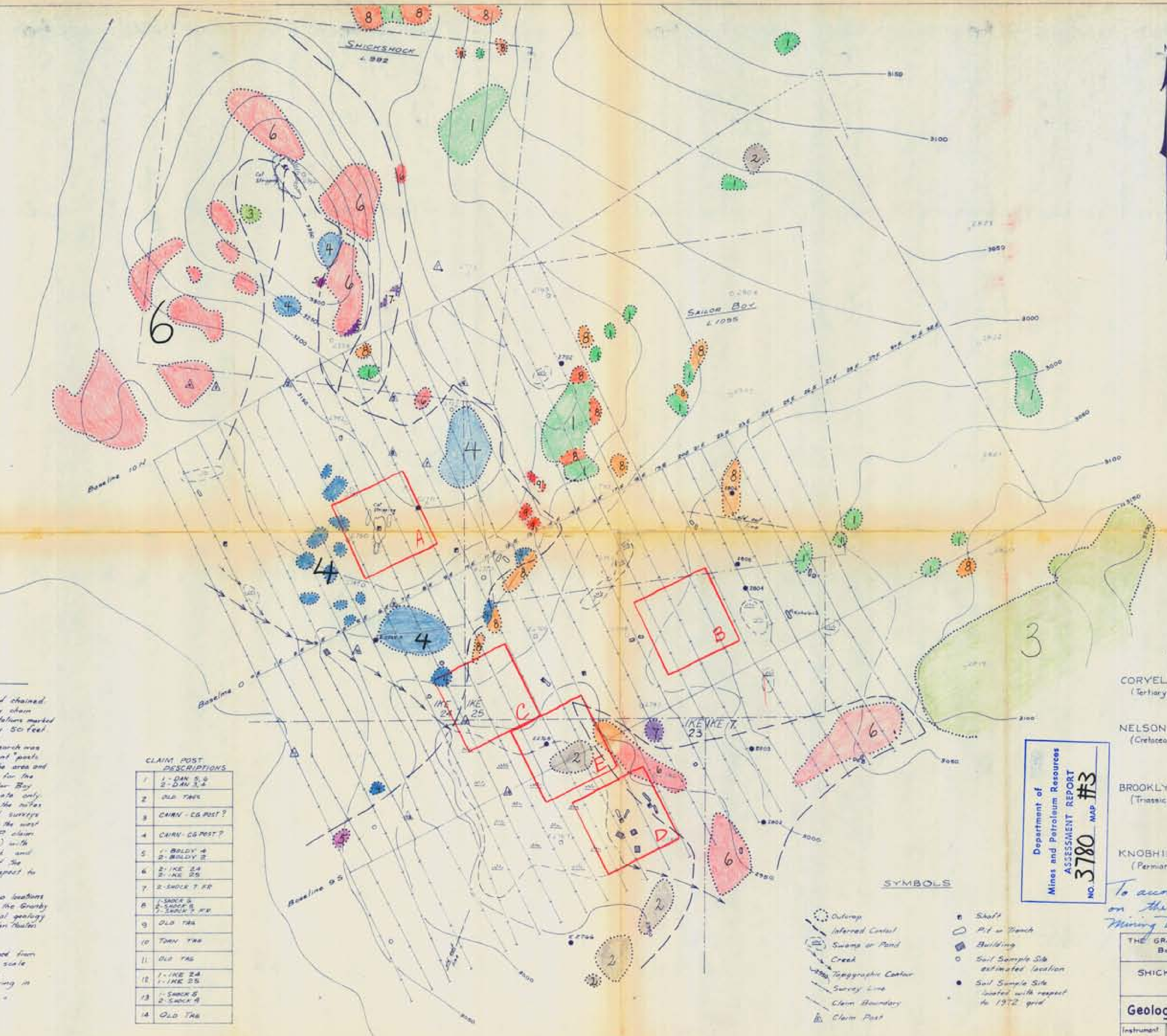
To accompany a geophysical
 report on the Ike Claims,
 Greenwood Mining Division
 June 1972 by James Paton
 GREENWOOD MINING CORPORATION LIMITED
 801-803 JARVIS STREET, OREGON, B.C.

SHICKSHOCK LIME CREEK AREA
 IKE CLAIMS
 VLF-EM SURVEY

EM16 April '72 K. Kim May '72
 J. Paton

1971
SOIL SURVEY

SAMPLE NO.	PPM Cu	PPM Zn
2746	16	40
2747	23	70
2748	74	60
2749	24	123
2750	139	150
2751	30	405
2752		
2753	154	281
2754	212	1129
2766	18	23
2767	44	105
2768	31	132
2769	40	100
2770	45	125
2771	30	75
2772	36	50
2784	11	10
2785	20	14
2786		
2787	10	4.8
2788	3.4	107
2789	37	331
2790	50	25
2791	41	50
2792	31	67
2793	27	52
2802	31	50
2803	23	20
2804	19	120
2805	2.4	223
2806	2.5	51
2807	22	75
2808	3.4	55
2819	2.6	201
2820	17	42
2821	15	40
2822	17	40
2823	23	53



Notes

1. Base lines cut and chained. Cross lines made by chain and compass and stations marked with flagging every 50 feet.
2. Although a diligent search was made, no brown granite pebbles could be located in the area and the locations shown for the Shickshock and Sailor Boy claims are approximate only. A search through the notes of the original legal surveys of the claims fixed the west boundary of the O.P. claim (south of Shickshock) with respect to the creek and the location line of the Sailor Boy with respect to an old well.
3. Geology and outcrop locations are enlarged from the Granby 1":1000' scale regional geology map made by Cavan Thaler in 1971.
4. Topography is enlarged from the Granby 1":1000' scale base map made by McArthur Engineering in 1969.

CLAIM POST	DESCRIPTIONS
1	1 - DAN 5, 6 2 - DAN 3, 4
2	OLD TAG
3	CHAIN - CG POST?
4	CHAIN - CG POST?
5	1 - BOLDY 4 2 - BOLDY 2
6	1 - IKE 24 2 - IKE 25
7	2 - SHOCK T RR
8	1 - SHOCK 5 2 - SHOCK 6 3 - SHOCK 3, 4
9	OLD TAG
10	OLD TAG
11	OLD TAG
12	1 - IKE 24 1 - IKE 25
13	1 - SHOCK 5 2 - SHOCK 4
14	OLD TAG

LEGEND

- CORYELL (Tertiary)
 - Monzonite
 - Syenite
- NELSON (Cretaceous)
 - Diorite
 - Quartz Diorite
- BROOKLYN (Triassic)
 - Greenstone
 - Limestone
 - Sharpstone Conglomerate
 - Argillite
- KNOBHILL (Permian?)
 - Chert & Quartzite

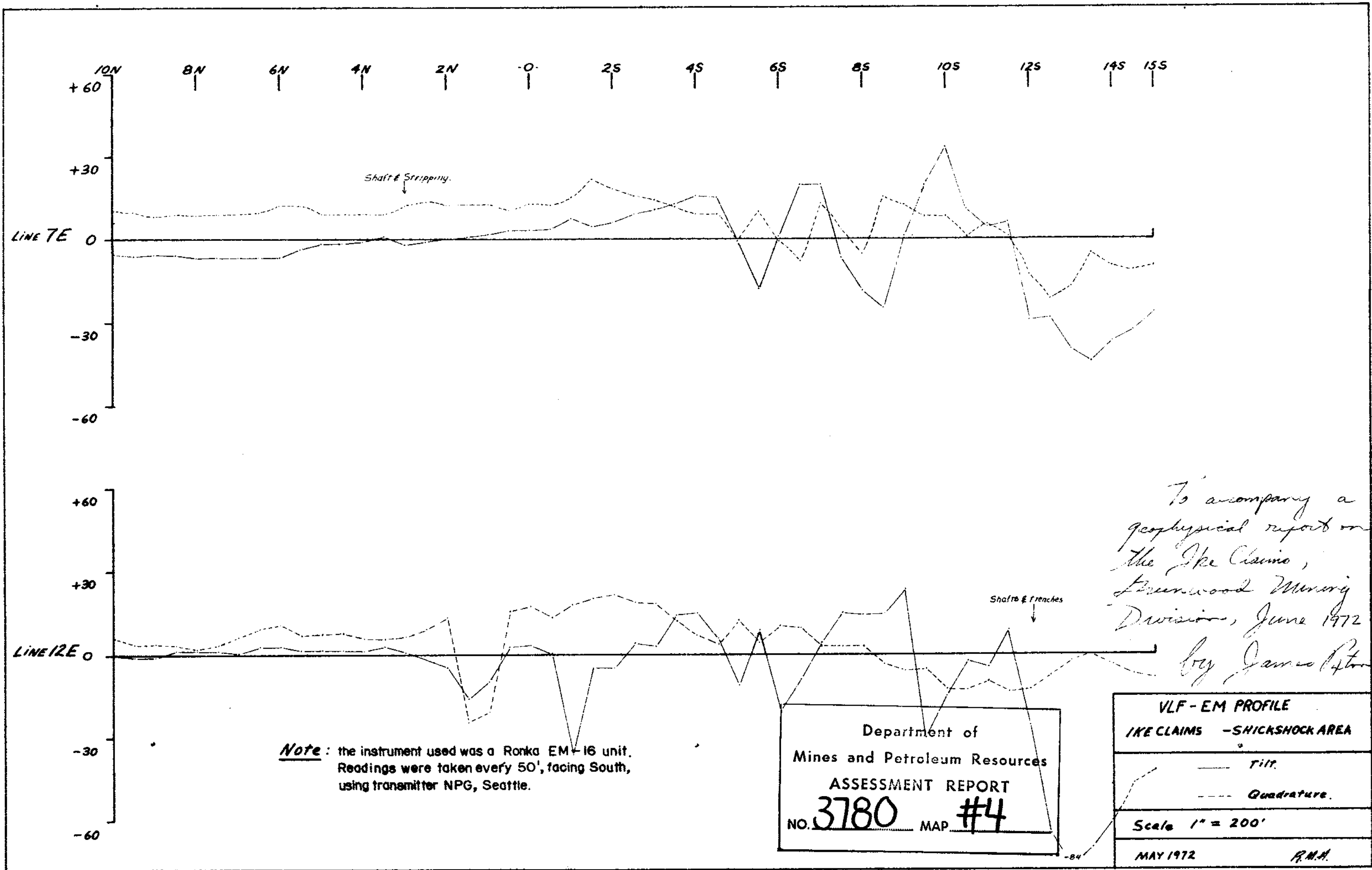
SYMBOLS

- Outcrop
- Inferred Contour
- Swam or Pond
- Creek
- Topographic Contour
- Survey Line
- Claim Boundary
- Claim Post
- Shaft
- Pit or Bench
- Building
- Soil Sample Site estimated location
- Soil Sample Site located with respect to 1972 grid

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3780 MAP #3

To accompany a geophysical report
on the Ike Claims, Greenwood
Mining Division, June 1972, James Foster

THE GRANBY MINING COMPANY LIMITED Box 490 GRAND FORKS B.C.				
SHICKSHOCK - LIME CREEK AREA IKE CLAIMS				
Geology and Surface Features				
Instrument	Survey Date	Operator	Compiled	Scale:
	April - May 1972		J. Foster	1" = 200'



Note: the instrument used was a Ronka EM-16 unit. Readings were taken every 50', facing South, using transmitter NPG, Seattle.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **3780** MAP **#4**

VLF-EM PROFILE
IRE CLAIMS - SHICKSHOCK AREA
— Tilt.
--- Quadrature.
Scale 1" = 200'
MAY 1972 R.M.A.

To accompany a
geophysical report on
the Ike Claims,
Greenwood Mining
Division, June 1972
by James P. ...