

6205

GEOCHEMICAL REPORT

on

R.R.S.P. #3

REVELSTOKE MINING DIVISION

51° 35' N 118° 24' W 82 M 9

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT

NO. _____

for

HIGHHAWK MINES LTD.

by

J.W. MacLeod, P. Eng.

Vancouver, B.C.
February 23, 1977

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	<u>SCALE</u>
LOCATION MAP	1" - 38 mi
PLAN OF R.R.S.P. #3	1 : 50,000
MAP 1 PLAN OF SAMPLE LOCATIONS	1 : 5,000
MAP 2 ZINC IN SILTS & SOILS	1 : 5,000
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MAP 4 LEAD IN SILTS & SOILS	1 : 5,000

INTRODUCTION

The R.R.S.P. #3 claim was located in the staking rush that followed the announcement by Noranda of a significant copper-zinc discovery in the Goldstream River area north of Revelstoke.

The following report covers the work carried out as recommended in a preliminary report by Dr. R.H. Seraphin, and has been prepared to fulfill the requirements of the Mineral Act governing the filing of geochemical work for assessment credit.

SUMMARY & CONCLUSIONS

Between July 27 and August 5, R. Peel and R. Menzies, collected 146 silt and soil samples in a preliminary exploration test of claim R.R.S.P. #3.

All creeks draining the property were traversed and where possible silt and soil samples were taken. Except for one sample location, h2, where a trace of chalco was noted in the gneissic granite and this mineralization is confirmed by a copper high of 130 p.p.m., the samples returned low order values for copper, lead and zinc.

On the basis of the program only further prospecting in the vicinity of the limestone float can be recommended.

PROPERTY

Mineral claim R.R.S.P. #3 was recorded on March 4, 1976 by Larry Sostad. The claim consists of 20 units and is located about one unit west of the location shown on the claim map.

LOCATION & ACCESS

The claim is located 2 kilometers south east of Goldstream occurrences. This area is accessible from Revelstoke 70 kilometers on highway 23 then 14 kilometers east on good gravel road.

Although only 2 kilometers from the gravel roads, helicopter is necessary to work claim R.R.S.P. #3 because of the rugged nature of the terrain.

GENERAL

The claim is located on the steep northerly sloping side of the Goldstream River valley between elevation 1200 and 1800 meters.

Normal weather in this area is overcast with rain in summer and heavy snow in winter making a very short field season. Snow was still on the ground at the higher elevations when the program was started on July 27.

Overburden is general, with much large talus, which prevents the recovery of silt samples from portions of the streams.

GEOLOGY

The general geology of this area is available in G.S.C. Summary Report for 1928 and G.S.C. Paper 64-32.

The geology and mineral occurrence in the Goldstream area are thoroughly covered by the B.C. Minister of Mines Geological Field work report for 1976, p. 17 to 29 inclusive.

Claim R.R.S.P. #3 appears to be largely underlain by granite but the considerable granite talus from the numerous cliffs could cover other map units. This appears to be the case close to the north boundary where limestone float was noted.

Much of the granite is foliated and resembles a gneiss.

GEOCHEMICAL SURVEY

Between July 27 and August 5 R. Peel and R. Menzies, both experienced graduate geologists, carried out the preliminary geochemical test of the claim.

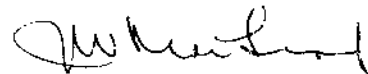
While prospecting the creeks which cross the property, silt samples were taken at regular intervals. Bank samples were also taken. A total of 146 samples were collected and analysed for copper, lead and zinc.

Only one sample site gave anomalous values, 130 p.p.m. copper and 235 p.p.m. zinc. These values are explained by the presence of minor chalco pyrite in the gneissic granite outcrop at this location.

RECOMMENDATIONS

On the basis of the results of the preliminary investigation only limited prospecting of this claim, in the vicinity of the limestone float, can be recommended.

Respectfully submitted,



J.W. MacLeod, P. Eng.

Vancouver, B.C.
February 23, 1977

APPENDIX I



VANGEOCHEM LAB LTD. 1521 PEMBERTON AVE., NORTH VANCOUVER, B.C., CANADA 604-988-2172

February 22, 1977

TO: High Hawk Mines Ltd.,
333 - 885 Dunsmuir Street,
Vancouver, B. C. V6C 1N5

FROM: Vangeochem Lab Ltd.,
1521 Pemberton Avenue,
North Vancouver, B. C. V7P 2S3

SUBJECT: Analytical procedure used to determine hot acid soluble Cu,
Pb and Zn in geochemical silt and soil samples.

Re: Geochemical Analytical Report # 76-42-001, August 10, 1976

1. Sample Preparation

- (a) Geochemical soil or silt samples were received in the laboratory in wet-strength 3½ x 6½ Kraft paper bags.
- (b) The wet samples were dried in a ventilated oven.
- (c) The dried soil and silt samples were sifted by using a shaking machine with 80-mesh stainless steel sieves. The plus 80-mesh fraction was rejected and the minus 80-mesh fraction was transferred into a new bag for analysis later.

2. Methods of Digestion

- (a) 0.50 gram of the minus 80-mesh samples was used. Samples were weighed out by using a top-loading balance.
- (b) Samples were heated in a sand bath with nitric and perchloric acids (15% to 85% by volume of the concentrated acids respectively).

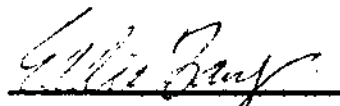
.....2

- (c) The digested samples were diluted with demineralized water to a fixed volume and shaken.

3. Method of Analysis

Cu, Pb and Zn analyses were determined by using a Techtron Atomic Absorption Spectrophotometer Model AA4 or Model AA5 with their respective hollow cathode lamps. The digested samples were aspirated directly into an air and acetylene flame. The results, in parts per million, were calculated by comparing a set of standards to calibrate the atomic absorption unit.

4. The analyses were supervised or determined by Mr. Conway Chun and the laboratory staff.


Eddie Tang
VANGEOCHEM LAB LTD.

ET:mb



VANGEOCHEM LAB LTD.
1521 PEMBERTON AVE.,
NORTH VANCOUVER, B.C.,
CANADA V7P 2S3

TELEPHONE: 988-2172
AREA CODE: 604

• Specialising in Trace Elements Analyses •

Certificate of Geochemical Analyses

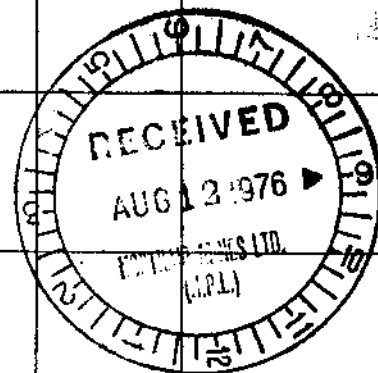
-IN ACCOUNT WITH-

High Hawk Mines Ltd.,
333 - 885 Dunsmuir Street,
Vancouver, B. C. V6C 1N5

Attention: 7

Report No: 76 42 001 Page 1 of 4
Samples Arrived: August 5, 1976
Report Completed: August 10, 1976
For Project:
Analyst: D.A., R.N.
Invoice # 3871 Job # 76-132

Sample Marking	Cu ppm	Pb ppm	Zn ppm			
H 1	25	40	75			
3	14	106	72			
4	10	65	58			
5	12	70	80			
6	14	110	95			
7	14	47	93			
11	14	46	100			
12	10	37	74			
13	15	48	95			
14	14	38	90			
15	15	27	63			
17	12	30	72			
H 18	15	32	73			
H 1.7 E	130	30	235			
2	14	21	55			
3	12	20	54			
4	5	11	10			
5	6	15	20			
6	9	20	43			
H 7 E	5	12	12			
8	10	16	35			
9	4	9	7			
10	10	21	47			
11	12	16	30			
12	8	15	23			
13	11	40	87			
14	10	18	36			
15	10	25	68			
17	10	16	44			
18	5	10	14			
19	7	14	32			
H20 E	7	12	30			
H 1.7 W	20	30	88			
3	12	20	42			
4	7	14	12			
5	11	22	55			
6	10	21	50			
8	7	17	35			
H 9 W	5	8	6			



MASTER PRINTING LTD

REMARKS:

Signed:

% Mo x 1.6683 = % MoS₂ 1 Troy oz./ton = 34.28 ppm 1 ppm = 0.0001% nd = none detected ppm = parts per million
All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.



VANGEOCHEM LAB LTD.
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 NORTH VANCOUVER, B.C.,
 CANADA V7P 2S3

TELEPHONE: 988-2172
 AREA CODE: 604

• Specialising in Trace Elements Analyses •

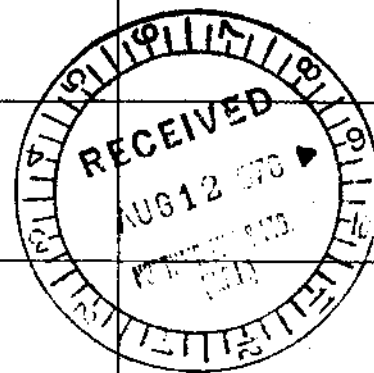
Certificate of Geochemical Analyses

-IN ACCOUNT WITH-
 High Hawk Mines Ltd.

Report No: 76 42 001 Page 2 of 4
 Samples Arrived:
 Report Completed:
 For Project:
 Analyst:

Attention:

Sample Marking	Cu ppm	Pb ppm	Zn ppm			
H 10 W	10	20	35			
11	10	17	50			
12	10	17	40			
13	19	20	28			
14	20	23	90			
15	10	32	18			
17	11	21	25			
18	19	23	58			
19	14	11	28			
H 20 W	19	20	44			
HT 10 E - 5	11	16	47			
K 1	15	26	84			
2	16	42	90			
3	15	30	75			
K 4	16	47	85			
K 2 W	10	20	38			
3	10	18	32			
4	5	20	10			
5	6	15	23			
K 6 W	12	16	21			
K 7A W	10	16	25			
7B	16	25	38			
K 8 W	10	16	30			
K 1 E	9	18	42			
2	8	15	20			
3	9	26	24			
4	9	18	17			
5	20	16	32			
6	22	20	54			
7	21	19	50			
8	4	12	7			
K 9 E	6	13	14			
KTO 1.1 E	10	38	98			
KT 51.1 E	12	33	78			
L 1	12	23	60			
L 3	15	20	43			
L 4	10	22	60			
L 6	10	26	37			
L 1 N	10	10	8			



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 NORTH VANCOUVER, B.C.,
 CANADA V7P 2S3

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Certificate of Geochemical Analyses

-IN ACCOUNT WITH-
 High Hawk Mines Ltd.


Report No: 76 42 001 Page 3 of 4
 Samples Arrived:
 Report Completed:
 For Project:
 Analyst:

Attention:

Sample Marking	Cu ppm	Pb ppm	Zn ppm			
L 2 N	7	15	27			
3	10	16	35			
4	7	20	10			
5	10	12	20			
9	4	8	12			
10	3	11	10			
L 11 N	5	13	10			
L 1 S	14	20	18			
2	25	20	77			
3	6	22	10			
5	10	14	15			
6	4	4	10			
9	5	17	25			
10	5	19	13			
L 11 S	14	20	10			
M 3	10	20	54			
4	10	17	50			
5	11	15	52			
6	10	18	52			
7	10	16	46			
8	10	17	52			
M 9	12	25	54			
M 0 E	15	18	55			
1	7	43	58			
2	13	32	35			
3	16	17	42			
4	15	15	20			
5	10	16	32			
6	9	11	23			
7	10	8	22			
8	10	10	27			
9	8	15	55			
M 10 E	10	12	37			
M 0 W	11	25	34			
1	10	13	45			
2	12	6	47			
3	13	11	38			
4	10	13	30			
M 5 W	16	12	57			

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REMARKS:

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1 ppm = 0.0001%

nd = none detected

ppm = parts per million

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 NORTH VANCOUVER, B.C.,
 CANADA V7P 2S3

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 AREA CODE: 604

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-IN ACCOUNT WITH-
 High Hawk Mines Ltd.

Report No: 76 42 001 Page 4 of 4
 Samples Arrived:
 Report Completed:
 For Project:
 Analyst:

Attention:

Sample Marking	Cu ppm	Pb ppm	Zn ppm			
M 6 W	16	18	55			
7	10	15	40			
8	13	19	42			
9	16	21	68			
M 10 W	11	25	40			
MT 3.5 W	12	17	42			
MT 6 W	17	16	64			
N 1	17	26	40			
1.5	16	30	38			
2	23	25	36			
2.5	39	27	63			
3	35	27	55			
3.4	15	32	40			
8	20	25	65			
9	20	35	70			
N 10	23	31	88			
N 1 N	12	26	23			
1.5	20	30	45			
N 2 N	10	30	60			
TH 12.1	9	14	40			
TH 12.8	10	22	47			
TH 1 12.1	8	18	33			
TH 1 12.8	11	21	47			
TKW 3.8	15	18	72			
TL-S 3.9	15	25	66			
TME 1-9.0	14	26	55			
9	13	20	55			
TME 3.5	20	15	55			
TMW 4.6	11	16	48			

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REMARKS:

Signed: 

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All values are believed to be correct to the best knowledge of the analyst based on the method and instruments used.

APPENDIX II

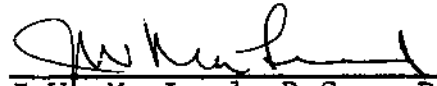
STATEMENT OF EXPENDITURE

MERV ENGINEERING INVOICE #205	\$ 32.09
MERV ENGINEERING INVOICE #213	1,315.53
MERV ENGINEERING INVOICE #220	544.39
VAN GEOCHEM LAB INVOICE #3871	379.60
ALTAIR DRAFTING & PRINT	143.97
REPORT PREPARATION	400.00
	<hr/>
TOTAL	\$ 2,816.08

ENGINEERS CERTIFICATE

I, James W. MacLeod, of 1220 Arbutus Street, in the city of Vancouver, in the Province of British Columbia,
DO HEREBY CERTIFY:

1. That I am a Consulting Engineer, with a business address at #333-885 Dunsmuir Street, in the City of Vancouver, in the Province of British Columbia.
2. That I am a graduate of the University of Alberta with the degree of B.Sc. in Mining Engineering.
3. That I have actively practiced my profession in Mineral exploration since graduation in 1946.
4. That I am a registered Professional Engineer in the Province of British Columbia.
5. That this report on claim R.R.S.P. #3 is based on the results of field work carried out by R. Peel and R. Menzies between July 27 and August 5, 1976 under the direction of the writer.



J.W. MacLeod, B.Sc., P. Eng.

Dated at the City of Vancouver,
Province of British Columbia,
the 23 day of February, 1977.

MERV ENGINEERING CORP.
335 - 885 DUNSMUIR ST.
VANCOUVER, B.C. V6C 1N5

PHONE: 604 689-8325

May 31, 1976.

Invoice # 205

In Account With:

Highhawk Mines Ltd.,
333-885 Dunsmuir St.,
Vancouver, B. C.

To expense paid out per photo's

.....\$32.09

Respectfully submitted,

J. W. MacLeod, P. Eng.

GOODS REC'D	6-18-76	OK FOR PAYMENT
PRICES FXT. OK	<i>[initials]</i>	AMOUNT 1354
	4.02	32.09

28 1-1-5

MERV ENGINEERING CORP.
 335 - 885 DUNSMUIR ST.
 VANCOUVER, B.C. V6C 1N5

PHONE: 604 689-8325

August 6, 1976.

Invoice # 213

In Account With:

Highhawk Mines Ltd.,
 333-885 Dunsmuir St.,
 Vancouver, B. C.

Per: RRSP 2
 Revelstoke, B.C.

To the disbursements of the wages of Mr. Peel and Mr. Menzies.

Mr. Peel- 9 days @ \$50.00 per day.....	\$450.00	
Mr. Menzies - 9 days @ \$40.00 per day.....	360.00	
		\$ 810.00
Plus 25% overhead.....		<u>202.50</u>
		\$ 1012.50

1/4 share of rental S.P. Unit 8 days @ \$10.00 ..	\$80.00.....	20.00
1/4 share of Mr. Peels Expense Account of	\$332.09.....	83.02
1/4 share of Co.Op. Groceries ...	\$ 208.03.....	52.01

153.03

Professional Services of J. W. MacLeod,

One day @ \$150.00.....	<u>150.00</u>
-------------------------	---------------

Total.....	<u>\$ 1,315.53</u>
------------	--------------------

Respectfully submitted,

J. W. MacLeod, P. Eng.

8/13/76	RRSP PAYMENT
B	4363
RRSP	1012.50
410	153.03
409	150.00

MERV ENGINEERING CORP.
 335 - 885 DUNSMUIR ST.
 VANCOUVER, B.C. V6C 1N5

PHONE: 604 689-8325

August 31, 1976

Invoice # 220

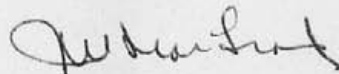
Highhawk Mines Ltd.,
 333-885 Dunsmuir St.,
 Vancouver, B. C.

Per: RRSP Group
 IDA Group

To the disbursement of the wages of Mr. Peel:

2 days RRSP	\$100.00	
1 day IDA	<u>50.00</u>	
		150.00
Plus 25% overhead		<u>37.50</u>
		187.50
Professional Services J. W. MacLeod 2 days divided by 4 ...IDA..		75.00
J. W. MacLeod expense account \$89.87 divided by 4 ...IDA.....		22.47
Helicopter charge July 28th....RRSP.....		251.62
Helicopter charge August 4RRSP.....		<u>168.27</u>
	TOTAL.....	<u><u>704.86</u></u>

Respectfully submitted,



J. W. MacLeod. P. Eng.

RRSP 4-01 125.00
 IDA 4-01 62.50
 IDA 4-07 97.47
 RRSP 4-24 419.89
704.86

704.86
 1-50
 # 369

Handwritten note: In 1-30



VNGEOCHEM LAB LTD. 604-988-2172
 1521 PEMBERTON AVE., NORTH VANCOUVER, B.C.
 CANADA

IN ACCOUNT WITH:

High Hawk Mines Ltd.,
 # 333 - 885 Dunsmuir Street,
 Vancouver, B. C.,
 V6C 1N5

INVOICE: 3871

DATE: August 10, 1976

TERMS: NET 21 DAYS

FOR REPORT 76 42 001 PROJECT: ORDER NO.
 Job # 76-132

146 soil samples for preparation	@ \$0.35	\$ 51.10
146 geochem analysis for Cu, Pb, Zn	@ \$2.25	<u>328.50</u>
	Total	<u>\$379.60</u>



GOODS RECV'D	OK FOR PAYMENT
PRICES & EXT. OK 9/30/76	CHEQUE NO. 366
code	AM. UNT
Penelstake	379.60

OUR NUMBER	13800
DATE	21 Feb 77
CUSTOMER'S ORDER	
SALESMAN	
TERMS	
F.O.B.	

SOLD TO HIGHHAWK MINES LTD

 SHIPPED TO _____
 ADDRESS _____ VIA _____

INVOICE

1	OR 16 x 3 DYLAR @ 1.00 SF = 12 SF	12.00
4	" " 1 BLACKLINE @ 10 ⁴ SF = 16 SF	1.60
		<u>13.60</u>
	12% Fed tax	1.63
		<u>15.23</u>
	7% PROV tax	1.07
		<u>16.30</u>
	TOTAL	\$ 16.30

REDIFORM - 7M32

ADDRESS _____ VIA _____

INVOICE

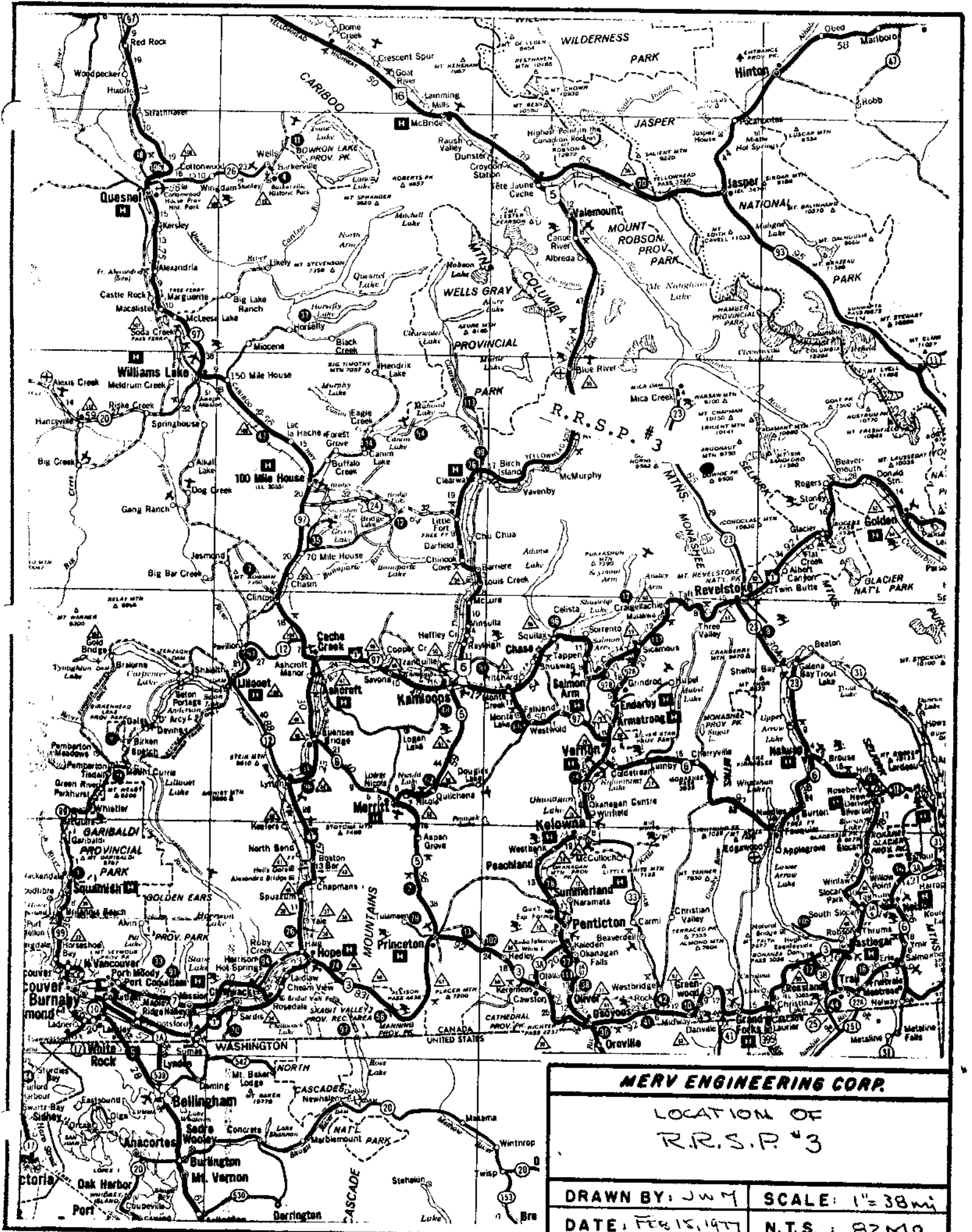
4	OR 16 x 4 BLACKLINE @ 10 ⁴ SF = 64 SF	6.40
		77
	12% Fed tax	<u>7.17</u>
		50
	7% PROV tax	<u>7.67</u>
	TOTAL	\$ 7.67

REDIFORM - 7M32

INVOICE

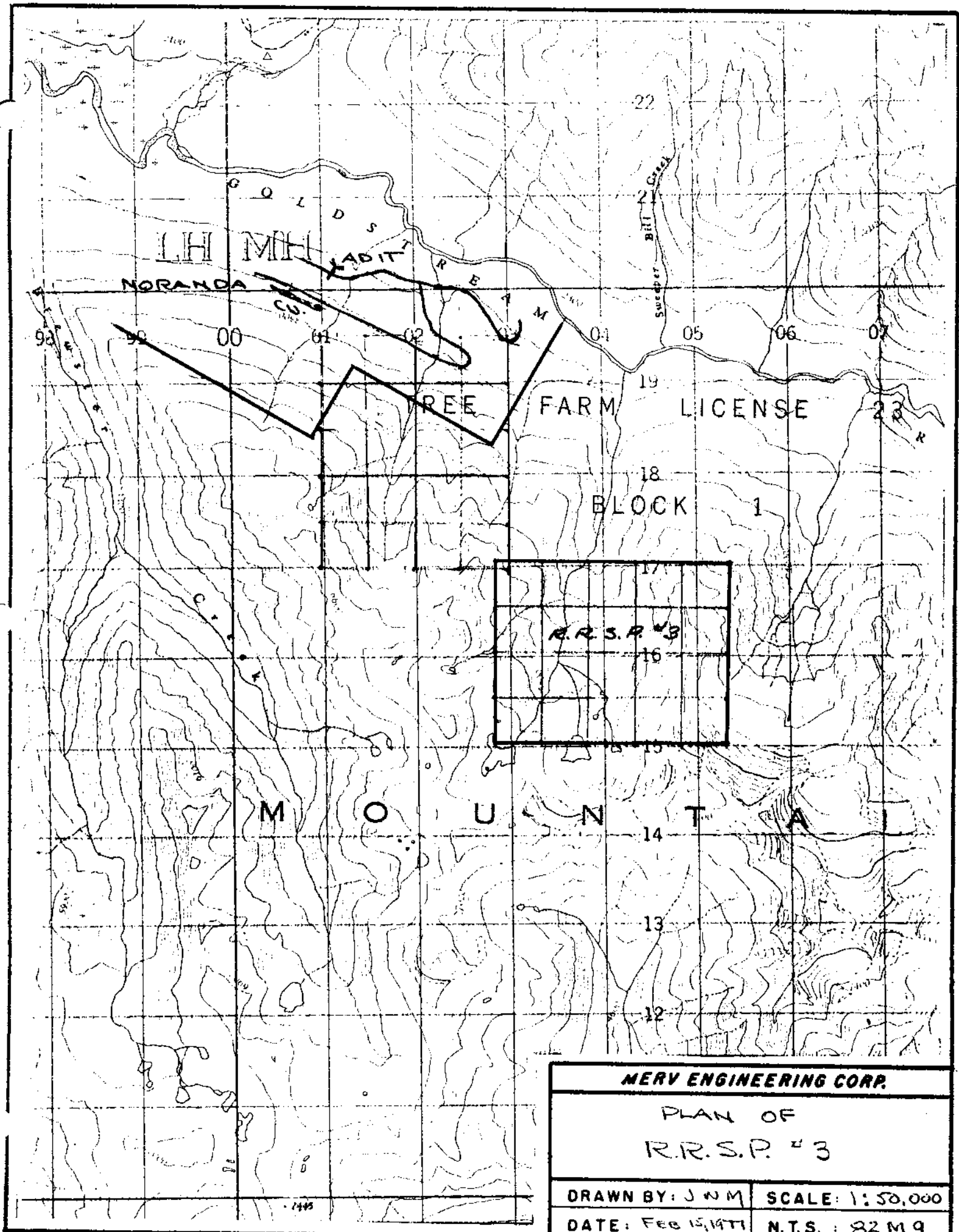
	Draft 4 maps showing sample locations, Copper, Lead and Zinc in ppm.	
	10 m/m @ 12.00 p.h.	120.00

APPENDIX III



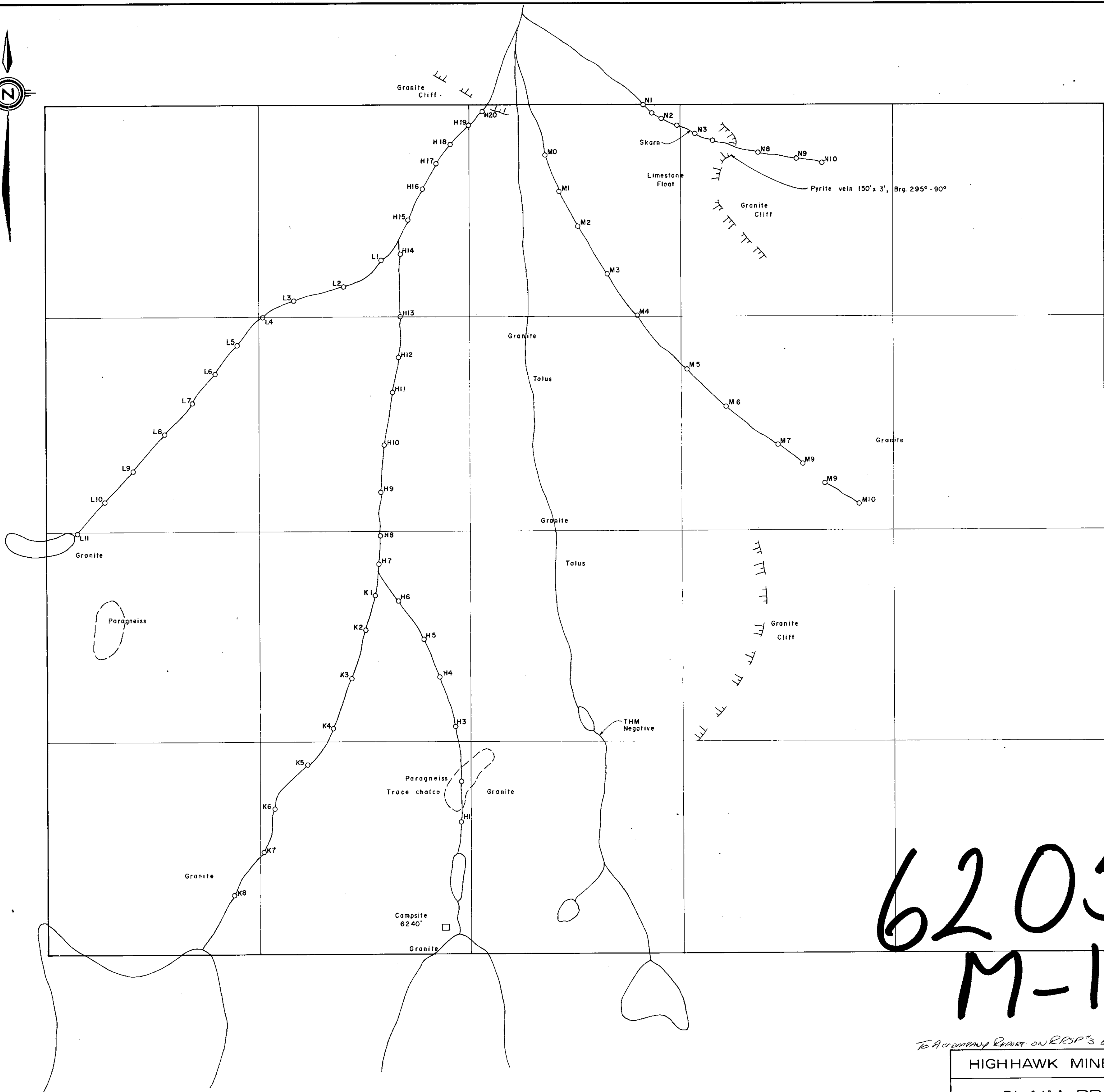
MERV ENGINEERING CORP.	
LOCATION OF R.R.S.P. #3	
DRAWN BY: JWM	SCALE: 1" = 38 mi
DATE: FEB 15, 1977	N.T.S.: 82M9

TO ACCOMPANY REPORT ON R.R.S.P. #3 BY J.W. MERV ENGINEERING CORP.



MERV ENGINEERING CORP.	
PLAN OF R.R.S.P. #3	
DRAWN BY: JWM	SCALE: 1:50,000
DATE: FEB 15, 1971	N.T.S.: 82 M 9

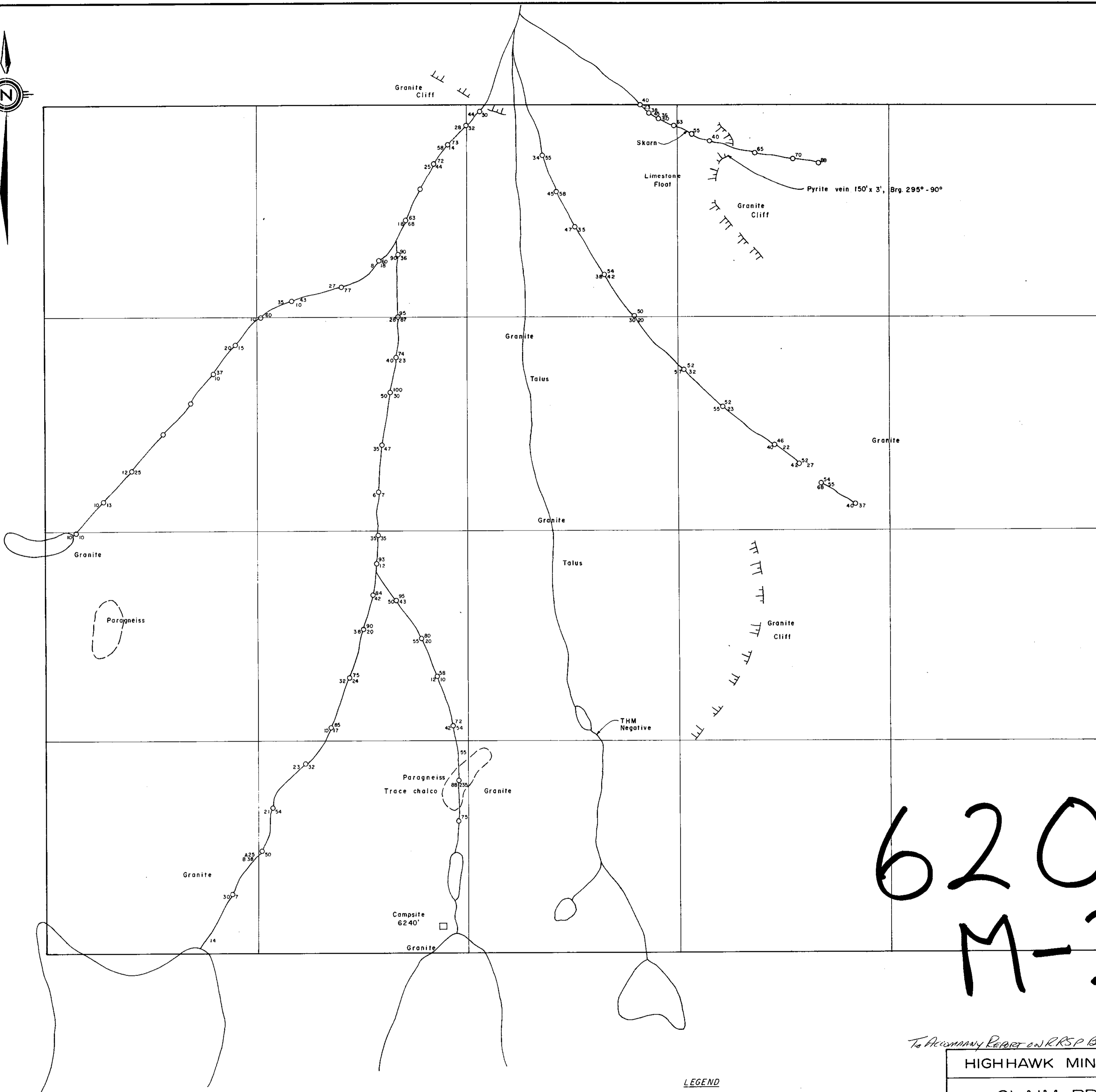
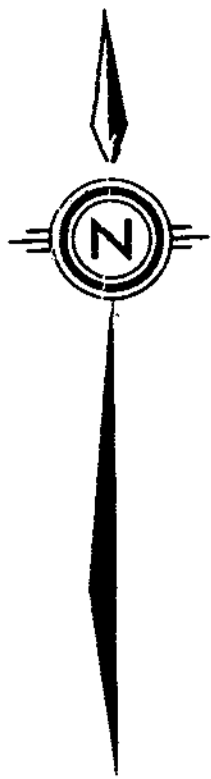
To Accompany Report on RRSP #3 by J. W. Merv Engineering Corp.



6205
M-1

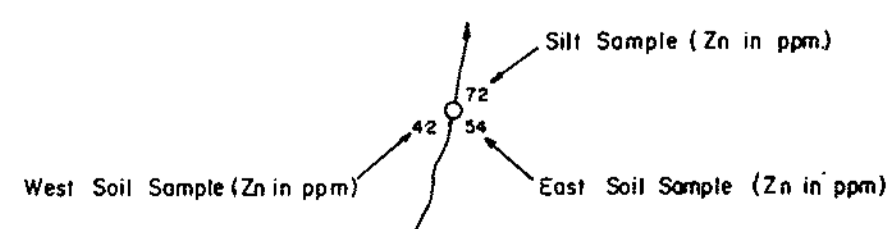
To Accompany Report on RRSP³ by *Whitford*

HIGHHAWK MINES LTD.			
CLAIM RRSP3 GOLDSTREAM RIVER AREA SAMPLE LOCATIONS			
SCALE 1:5000			
Metres 100 50 0 100 200 300 Metres			
DRAWN: Altair	N.T.S.	DATE: FEB.15,1977	FIG.



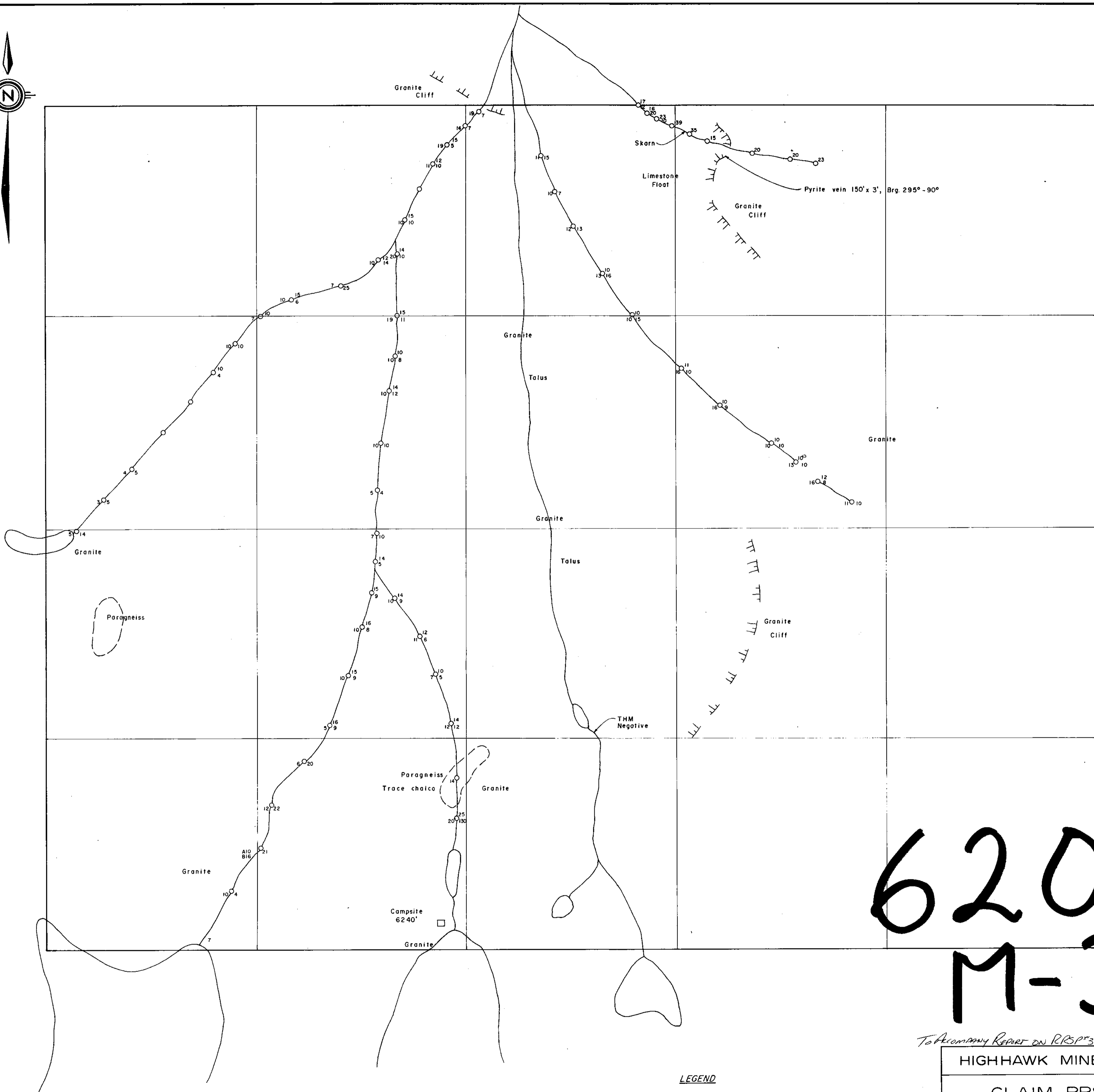
6205
M-2

LEGEND



To ACCOMPANY REPORT ON RRSP By *John S. ...*

HIGHHAWK MINES LTD.			
CLAIM RRSP3 GOLDSTREAM RIVER AREA ZINC IN SILTS AND SOILS (PPM)			
SCALE 1" = 5000			
Metres 100 50 0 100 200 300			
DRAWN: Altair	N.T.S.	DATE: FEB 15, 1977	FIG.

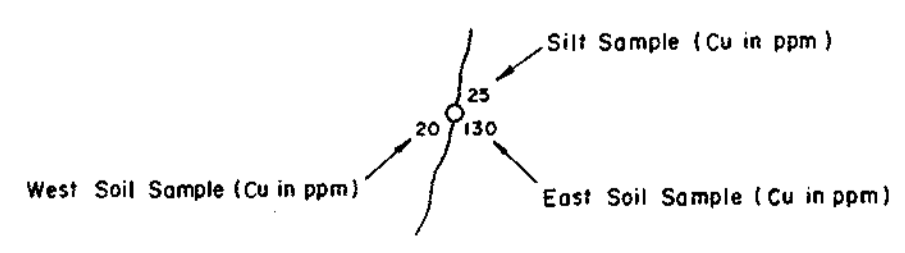


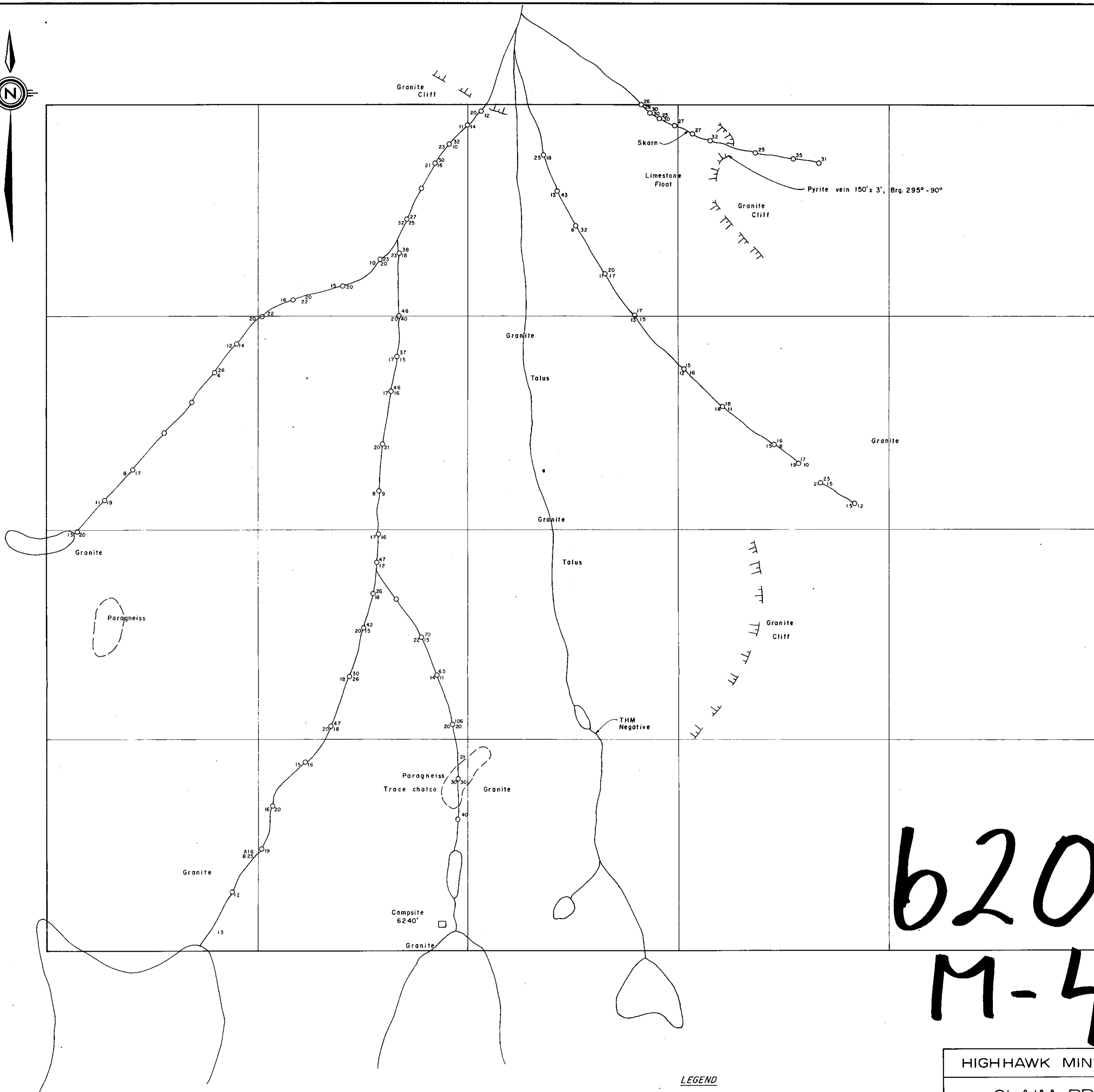
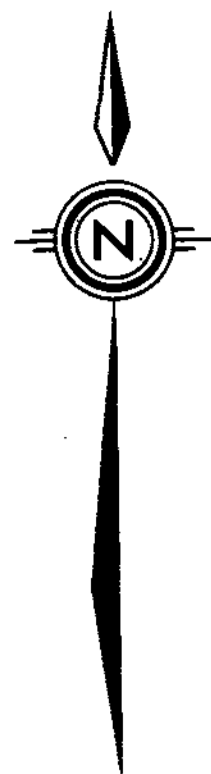
6205
M-3

To Accompany Report on RRSP's By J.W. [Signature]

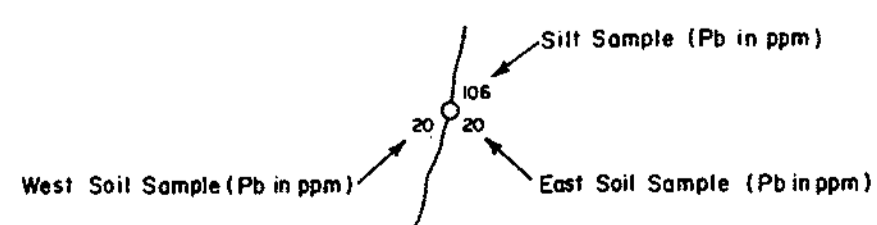
HIGHHAWK MINES LTD.			
CLAIM RRSP3			
GOLDSTREAM RIVER AREA			
COPPER IN SILTS AND SOILS			
(PPM)			
SCALE 1:5000			
Metres 100 50 0 100 200 300 Metres			
DRAWN: Altair	N.T.S.	DATE: FEB 15, 1977	FIG.

LEGEND





LEGEND



HIGHHAWK MINES LTD.		
CLAIM RRSP3 GOLDSTREAM RIVER AREA LEAD IN SILTS AND SOILS (PPM)		
SCALE 1" = 5000		
Metres 100 50 0 100 200 300		
DRAWN: Altair	N.T.S.	DATE: FEB. 15, 1977 FIG.