

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
no. 3004

Geochemical Report 3
VICTIM GROUP
on Leora 1 and 2 Mineral Claims
50° 117° SE (82K/3W) adjoining NW side of
Slocan Lake between Shannon and
82E/3W Wragge Creeks
for ARGEM EXPLORATIONS LTD.
between July 20 - August 31, 1970
W.S. Read, B.Sc., P.Eng.
April 23, 1971

#1 Geochem Plan No 1
#2 No 1a
#3 No 1b

3004

WAYLAND S. READ, B.SC., P.ENG.

AREA CODE 604—TELEPHONE 922-1347

Consulting Geologist

860 YOUNETTE DRIVE, WEST VANCOUVER, B.C., CANADA

April 23, 1971

**The Board of Directors,
Argem Explorations Ltd.,
1950 Lonsdale Avenue,
North Vancouver, B.C.**

Gentlemen:

**At your request I have compiled and prepared a
geochemical report on the data collected and submitted by Mr.
C. D. Hoffman.**

**This details part of the area covered by my
reconnaissance geochemical survey of April and May, 1970.**

Yours very truly,



W.S. Read, P. Eng.

wsr/e

Geochemical Report

VICTIM GROUP

on

**Leora 1 and 2 Mineral Claims
50° 117° SE - 82K/3W**

**Adjoining northwest side of Slocan Lake
between Shannon and Wragge Creeks**

in the

SLOCAN MINING DIVISION

Province of

British Columbia, Canada

for

ARGEM EXPLORATIONS LTD.

by

**W.S. Read, B.Sc., P.Eng.
860 Younette Drive
West Vancouver, B.C.**

April 23, 1971

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1. Geochemical Plan - Scale 1 inch = 200 feet
 - 1 (a) Geochemical Plan Zinc " " "
 - 1 (b) Geochemical Plan Lead " " "
- Assay Sheets 1 - 9

LOCATION:

The Victim claims group, including the Leora 1 and 2 mineral claims, is located adjoining the northwest edge of Slocan Lake in the Slocan Mining Division, British Columbia, Canada, on map sheet 82K/3W of the National Topographic System with approximate coordinates of $50^{\circ} 04' N$, $117^{\circ} 28' W$. The approximate elevation of the claims in the area in which this work was done would be from the high water elevation of Slocan Lake of 1,754 feet to about 2,200 feet above sea level.

ACCESS:

The claims lie about 18 miles southeast of the town of Nakusp on Upper Arrow Lake and about 9 miles northwest of the town of New Denver on Slocan Lake. Both towns are on B. C. Highway No. 6 and served by a branch line of the Canadian Pacific Railway.

Castlegar, some 62 miles south of New Denver, has daily scheduled airline connection with Vancouver.

The claims are in part traversed by logging roads and old skid trails. The area covered by this survey is accessible by small boat along Slocan Lake and by road and trail from the northwest end of the lake.

GEOLOGY:

The area covered is underlain by rocks of the Slovan series of Triassic age with the coverage to the south extending over a projected contact with the Wragge Creek stock of quartz diorite and granodiorite, Cretaceous and/or Jurassic in age.

The geology west of longitude $117^{\circ} 30'$ was mapped by Dr. D. W. Hyndman of the Geological Survey of Canada and published in Bulletin 161 in 1968 at a scale of 1 inch = 1 mile.

The writer, during the reconnaissance geochemical survey of April and May 1970, report dated May 22, 1970, did geological mapping of a strictly preliminary nature, that shows the relationship of this detailed area with the geology of the surrounding area. This geological mapping was at a scale of 1 inch = 1/4 mile.

The only known mineralization that is nearby is the molybdenite showing near the lakeshore, about 1,900 feet south of the Leora 1 and 2 claim location line.

GEOCHEMICAL SURVEY:

One hundred and seventy-eight samples were taken along 19,700 feet of crosslines and 1,100 feet of baseline at 100 and 200 foot intervals, as plotted on the accompanying maps.

The writer was informed that an auger was used for digging the sample hole and where possible the upper part of the "B" soil horizon was sampled.

The samples were collected in brown Kraft soil sample bags. The samples were dried and screened by the assayers in Vancouver. All 178 samples were assayed for lead and zinc; 33 for molybdenum; and 31 for silver by Warnock Hersey International Limited and Bondar Clegg & Company Ltd., Vancouver, using hot aqua regia extraction with lead, zinc and silver determined by the atomic absorption process and molybdenum by colorimetric.

The assay results were plotted on a base plan at a scale of 1 inch = 200 feet and contoured within ranges as shown on the map.

The average of the 178 zinc assays was 154.2 parts per million. If the highest assay of 1100 (a resampling of station 45 from the 1970 survey which assayed 1092 parts per million) was held back, the average of the remaining 177 samples would be 148.9 p. p. m.

	<u>Pb</u>	<u>Zn</u>	<u>Mo</u>	<u>Ag</u>
Number of Samples 1971 survey	178	178	38	31
Average p. p. m.	20.2	154.2	5.0	1.44
Number of Samples 1970 survey		191	191	
Average p. p. m.		97.6	8.5	

The 1970 survey established the following concentration ranges for zinc and molybdenum after inspection and analysis of the data.

<u>Range</u>	<u>Zinc p. p. m.</u>	<u>Mo p. p. m.</u>
Background	0 - 100	0 - 8
Threshold	100 - 200	8 - 11
Anomalous	+ 200	+ 11

Zinc and molybdenum had been selected because of the molybdenite outcrop at the lake and the chance of finding an overburden covered molybdenum or silver, lead, zinc deposit in the area.

There was very good correlation where the 1971 survey checked or was near sample points from the 1970 survey.

INTERPRETATION OF RESULTS:

The area of coverage is underlain by the Wragge Creek stock of quartz diorite and granodiorite and the Slocan group of altered volcanics and sediments. Much of the area is covered by light overburden. Relief is moderate.

The work was done under the supervision of Mr. C. D. Hoffman - Pharmacist, with the aid of prospectors Peter and George Leontowitz. The grid covered part of the area in which reconnaissance soil sampling in 1970 had given values between 12 and 40 parts per million molybdenite. Unfortunately, the samples in the present survey were not assayed for molybdenum in the northwestern part of the grid, in the area of and adjoining the previous reconnaissance highs and about 3,000 feet northwest of the molybdenite outcrop near the lakeshore, thus leaving molybdenum, the element of first importance, relatively untested.

Lead values which had previously not been assayed in sampling were plotted. Values were in a range normally found in sedimentary rocks, with the average for the 178 samples being 20.2 p. p. m. with a high of 74. These were contoured at values of 20 and 40 p. p. m. as an aid in showing distribution and trend.

Zinc readings were higher in this area than in the larger area of reconnaissance sampling in 1970. Station 45 - an anomalous high was resampled with remarkably similar results:

1970 assay	1092 p. p. m. Zinc
1971 assay	1100 p. p. m. Zinc

Sampling comparison zinc:

	<u>1970 Reconnaissance</u>		<u>1971 Detailed Area</u>	
Number of samples	191 (-1092)	190	178 (-1100)	177
Av. p. p. m.	97.6	92.4	154.2	148.9

When contoured within the regional ranges as established in 1970, much of the present grid area is covered by values within the threshold range, with little in the background range. The highest anomalous reading was 1100 p. p. m. with the next highest being 425 p. p. m.

The anomalous areas are discontinuous with the highest readings in the anomaly associated with station 45 of the 1970 survey.

The average of the 31 samples assayed for silver was 1.44 p. p. m. From the limited amount of data points, it would appear that the higher silver values associate with the higher zinc values rather than the higher lead values. The highest silver soil assay was 3.22 p. p. m.

BIBLIOGRAPHY

Hawkes, H.E., and Webb, J.S., *Geochemistry in Mineral Exploration.*
Harper and Row Publishers

Hyndman, D.W., *Bulletin 161, Geological Survey of Canada 1968.*

Read, W.S. - *Geochemical Report, Victim Group, May 22, 1970.*

CERTIFICATE OF QUALIFICATIONS

I, **Wayland Stuart Read**, of **860 Younette Drive, West Vancouver, B. C.**, do hereby certify that:

1. I am a practising mining geologist and my address is **860 Younette Drive, West Vancouver, B. C.**
2. I am a graduate in geology from **Acadia University, Wolfville, Nova Scotia**, and have been granted the degree of **Bachelor of Science in Geology** and have engaged in practising my profession for the past twelve years.
3. I am a member of the **Association of Professional Engineers of British Columbia and the Yukon Territory**, a **Fellow of the Geological Association of Canada** and a **Member of the Canadian Institute of Mining and Metallurgy**.
4. I have no interest in the securities of **Argem Explorations Ltd.**, nor in the property held by them and discussed in this report.
5. This report is compiled on data received from **Mr. C. D. Hoffman of Argem Explorations Ltd.** which is believed to be reliable. The writer did previous work on the property in **April and May 1970**.

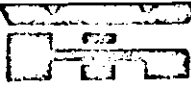
Respectfully submitted,



**Wayland S. Read, B.Sc., P.Eng.,
Consulting Geologist.**

**860 Younette Drive,
West Vancouver, B. C.**

April 23, 1971



REPORT OF: Geochemical Analysis

FILE NO: 468 - 12266

AT: Vancouver Laboratory

DATE: July 27, 1970

PROJECT: Soil Samples

REPORT NO.

REPORTED TO: Argem Explorations Ltd.,
1950 Lonsdale Avenue
North Vancouver, B.C.

ORDER NO.

ATTENTION: Mr. Hoffman

We have tested thirty-eight samples of Soil submitted by you on July 21, 1970 and report as hereunder:

- Fraction Analyzed - 80 mesh
- Digestion Method - HNO₃/H₂SO₄/HCl
- Analytical Method - Molybdenum - Colorimetric
Lead, Zinc - Atomic Absorption

TEST RESULTS

<u>Sample No.</u>	<u>Lead (ppm)</u>	<u>Zinc (ppm)</u>	<u>Molybdenum (ppm)</u>
A - 1 - S	20	85	5
A - 2 - S	30	238	10
A - 3 - S	74	138	6
A - 4 - S	35	163	9
A - 5 - S	16	181	5
B - 1 - S	35	110	10
B - 2 - S	16	275	5
B - 3 - S	30	413	6
B - 4 - S	20	219	6
A - 1 - N	20	175	5
A - 2 - N	5	95	7
A - 3 - N	13	206	4
A - 4 - N	13	104	3
A - 5 - N	25	116	3
B-O-D at G-5-W	20	425	10

.....2

<u>Sample No.</u>	<u>Lead (ppm)</u>	<u>Zinc (ppm)</u>	<u>Molybdenum (ppm)</u>
B - 5 - S	20	175	5
B - 1 - N	25	275	11
B - 2 - N	13	113	2
B - 3 - N	9	83	5
B - 4 - N	20	120	3
B - 5 - N	16	133	2
C - 0	20	141	3
C - 1 - N	13	133	3
C - 2 - N	39	123	5
C - 3 - N	20	133	5
C - 4 - N	20	150	6
C - 5 - N	16	91	2
C - 1 - S	20	200	Less than 1
C - 2 - S	20	129	5
C - 3 - S	16	163	3
C - 4 - S	16	219	3
C - 5 - S	20	188	6
D - 0	16	188	4
D - 1 - N	20	156	4
D - 2 - N	20	133	3
D - 3 - N	20	163	10
D - 4 - N	13	83	1
D - 5 - N	25	163	6

WARNOCK HERSEY

B. Singh
 SUPERVISOR, GEOCHEMICAL DEPARTMENT



WARNOCK HERSEY
INTERNATIONAL LIMITED

PROFESSIONAL SERVICES DIVISION

125 East 4th Ave., Vancouver 10, B. C. Phone 876-4111 — Telex 04 50353

REPORT OF: Geochemical Testing
AT: Vancouver Laboratory
PROJECT: Soil Samples
REPORTED TO: Argem Explorations Ltd.
1950 Lonsdale Avenue
North Vancouver, B.C.

FILE NO: 108 - 12345
DATE: July 29, 1970
REPORT NO:
ORDER NO:

ATTENTION: Mr. D. Hoffman

We have tested six samples of soil submitted by you on July 21, 1970 and report as hereunder:

TEST RESULTS

Fraction Analyzed - 80 mesh
Digestion Method - HNO₃/H₂SO₄/ICl
Analytical Method - Atomic Absorption

<u>Sample No.</u>	<u>Silver (ppm)</u>
A - 2 - S	1.9
A - 3 - S	0.75
A - 4 - S	2.00
B - 1 - S	1.5
B - 3 - S	2.75
C - 2 - N	0.65

WARNOCK HERSEY

B. Singh
B. Singh
SUPERVISOR, GEOCHEMICAL DEPARTMENT



WARNOCK HERSEY
INTERNATIONAL LIMITED

PROFESSIONAL SERVICES DIVISION

125 East 4th Ave., Vancouver 10, B. C. Phone 876-4111 — Telex 04-50353

REPORT OF: **Geochemical Analysis**
 AT: **Vancouver Laboratory**
 PROJECT: **Soil Samples**
 REPORTED TO: **Argem Explorations Ltd.,
 1950 Lonsdale Avenue
 North Vancouver, B.C.**

FILE NO: **468 - 12414**
 DATE: **August 5, 1970**
 REPORT NO:
 ORDER NO:

ATTENTION: Mr. D. Hoffman

We have tested five samples of Soil submitted by you on July 21, 1970 and report as hereunder:

Digestion Method	-	HNO ₃ /H ₂ SO ₄ /HCl
Portion Analyzed	-	80 mesh
Analytical Method	-	Atomic Absorption

TEST RESULTS

<u>Sample No.</u>	<u>Silver Content (Ag)</u>
A - 1 - N	2.14 parts per million
A - 5 - N	0.86 parts per million
B - 1 - N	3.22 parts per million
B - 4 - N	0.95 parts per million
D - 5 - N	0.95 parts per million

WARNOCK HERSEY

B. Singh

B. Singh
SUPERVISOR, GEOCHEMICAL LABORATORY

**BONDAR-CLEGG & COMPANY LTD.***geologists • geochemists • analysts*1500 PEMBERTON AVENUE, NORTH VANCOUVER, B.C.
PHONE 988-5315**GEOCHEMICAL LAB REPORT**

No: 20 - 463

Extraction Hot aqua regia

From Argem Explorations Ltd.

Method Atomic absorption

Date August 13, 1970 19

Fraction Used -80 mesh

Analyst K.B.

SAMPLE NO.	Pb ppm	Zn ppm		SAMPLE NO.	Pb ppm	Zn ppm	REMARKS
A 6 N	11	205		E 2 S	19	175	
A 7 N	15	245	✓	E 3 S	20	130	
A 8 N	22	152		E 4 S	18	80	
A 9 N	11	108		E 5 S	18	192	
A 10 N	20	220		E 6 S	19	130	
B 6 N	23	215		E 7 S	9	62	✓
B 7 N	22	360	✓	E 1 N	20	200	✓
B 8 N	37	128	✓	E 2 N	10	125	
B 9 N	18	20		E 4 N	7	72	✓
B 10 N	10	102		E 5 N	18	118	
C 7 N	38	115	✓	E 6 N	12	88	
C 8 N	32	185	✓	E 7 N	7	62	
C 9 N	40	230	✓	E 8 N	10	145	
C 10 N	29	250		E 9 N	30	105	✓
C 11 N	21	130		E 10 N	18	210	
D 1 S	21	220		E 11 N	20	155	✓
D 2 S	20	155		E 12 N	20	78	
D 3 S ✓	36	175	✓	E 13 N	16	75	
D 4 S	20	180		E 14 N	10	100	
D 5A S	18	135		F 0	10	108	
D 5B S	20	130		F 1 N	19	150	✓
D 6 S	10	80		F 2 N	7	125	
D 7 S ✓	40	225	✓	(E?) 3 N	7	90	
D 6 N	1	155		F 3 N	11	120	
D 7 N	1	152		F 4 N	6	58	✓
D 8 N	1	175		F 5 N	10	150	
D 9 N	0	90	✓	F 6 N	8	108	✓
D 10 N	5	170		F 7 N	11	110	
D 11 N	5	148		F 8 N	10	90	
E 0 N	3	125		F 9 N	12	160	
E 1 S ✓	4	170	✓	F 10 N	20	225	



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GEOCHEMICAL LAB REPORT

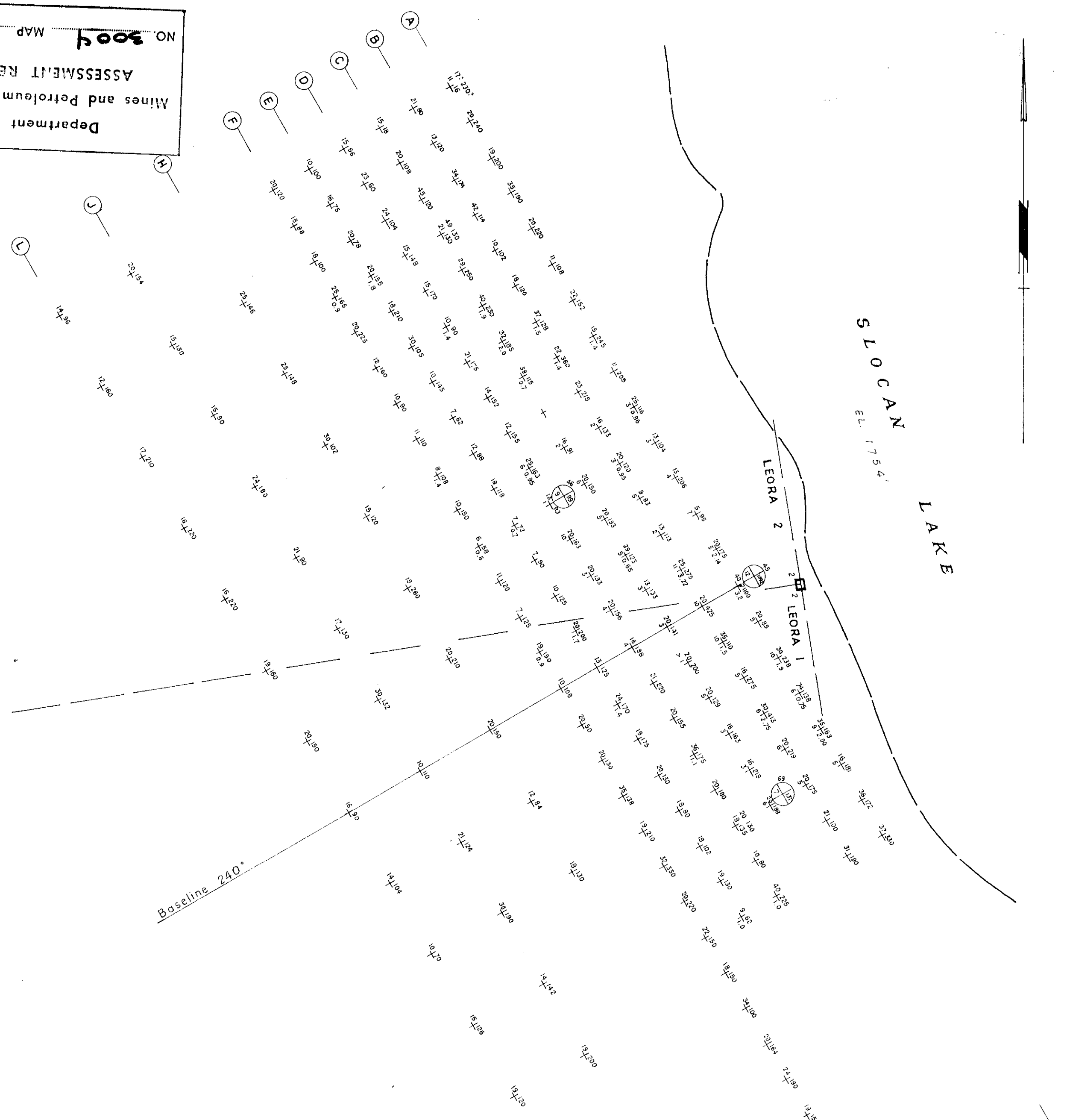
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Extraction Hot Aqua Regia
Method Atomic Absorption
Fraction Used -80 Mesh

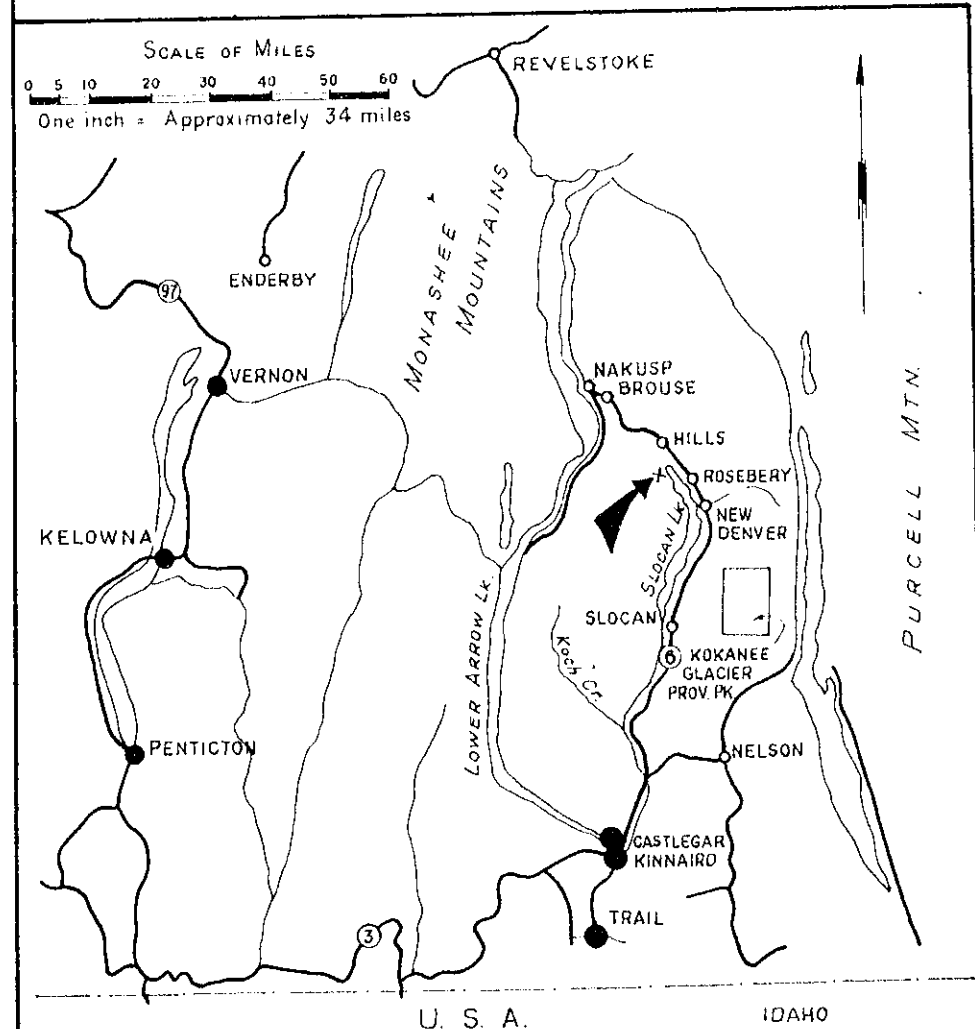
From Argem Explorations
Date August 27 1970
Analyst K.B.

SAMPLE NO.	Pb ppm	Zn ppm		SAMPLE NO.	Pb ppm	Zn ppm	REMARKS
A-6-S	36	172		F-11-S	24	190	
A-7-S	37	330		F-12-S	19	150	
A-11-N	35	190		F-13-S	10	114	
A-12-N	19	200		F-14-S	13	98	
A-13-N	20	240		F-15-S	30	180	
A-14-N	11	16		F-16-S	13	22	
A-14-N	17	230		F-17-S	16	132	
B-6-S	21	100		F-18-S	20	196	
B-7-S	31	190		F-19-N	26	200	
B-11-N	42	114		F-20-N	18	152	
B-12-N	34	174		H-0-S	20	150	
B-13-N	13	120		H-2-S	12	84	
B-14-N	21	80		H-4-S	18	130	
C-11-N	49	130		H-2-N	20	210	
C-12-N	45	120		H-4-N	15	260	
C-13-N	20	108		H-6-N	15	120	
C-14-N	15	18		H-8-N	30	102	
D-12-N	24	104		H-10-N	25	148	
D-13-N	23	60		H-12-N	25	146	
D-14-N	15	56		S-6-N	21	90	
F-1-S	20	50		J-2-S	21	124	
F-2-S	20	130		J-4-S	30	190	
F-3-S	35	138		J-6-S	14	142	
F-4-S	19	210		J-8-S	19	200	
F-5-S	32	330		J-0-N	10	110	
F-6-S	20	220		J-2-N	30	132	
F-7-S	22	150		J-4-N	17	130	
F-8-S	18	150		J-8-N	24	180	
F-9-S	34	100		J-10-N	15	80	
F-10-S	20	164		J-12-N	15	130	

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3004
MAP #1



3004 M-1



LEGEND

Pb, Zn, Ag. determined by Atomic Absorption.
Mo. by Colorimetric.
All in parts per million.

⊗ Location of samples, sample number and results. From 1970 survey.

To accompany Geochemical Report by W.S. Read, P.Eng. on data submitted by Mr. C. D. Hoffman of Argem Explorations Ltd.

W. S. Read

ARGEM EXPLORATIONS LTD.
50° 04' N. 117° 28' W.

GEOCHEMICAL PLAN
Pb, Zn, Mo, Ag.

Scale: 1" = 200'

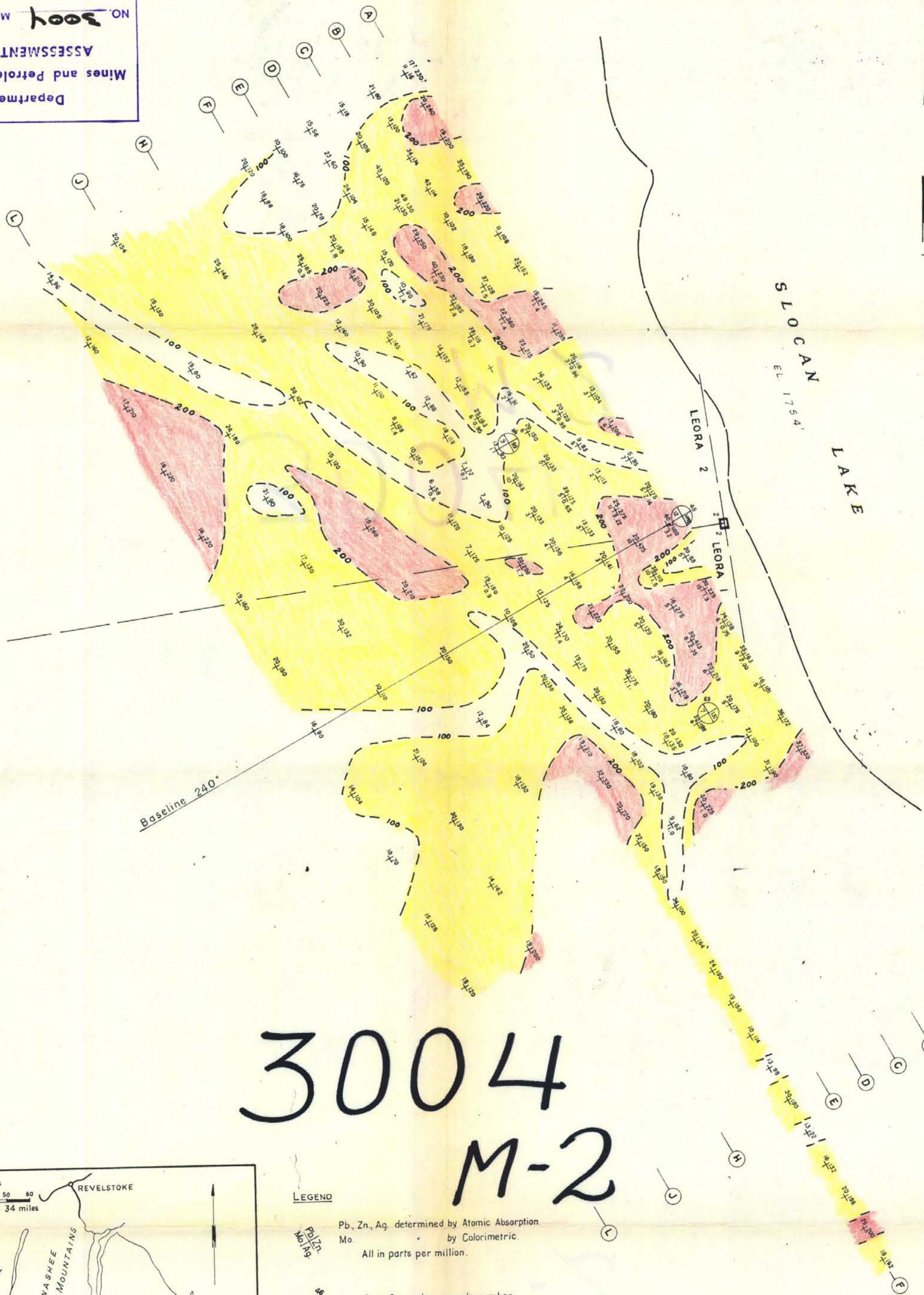
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WAYLAND S. READ, P. Eng.
Consulting Geologist, West Vancouver, B.C.

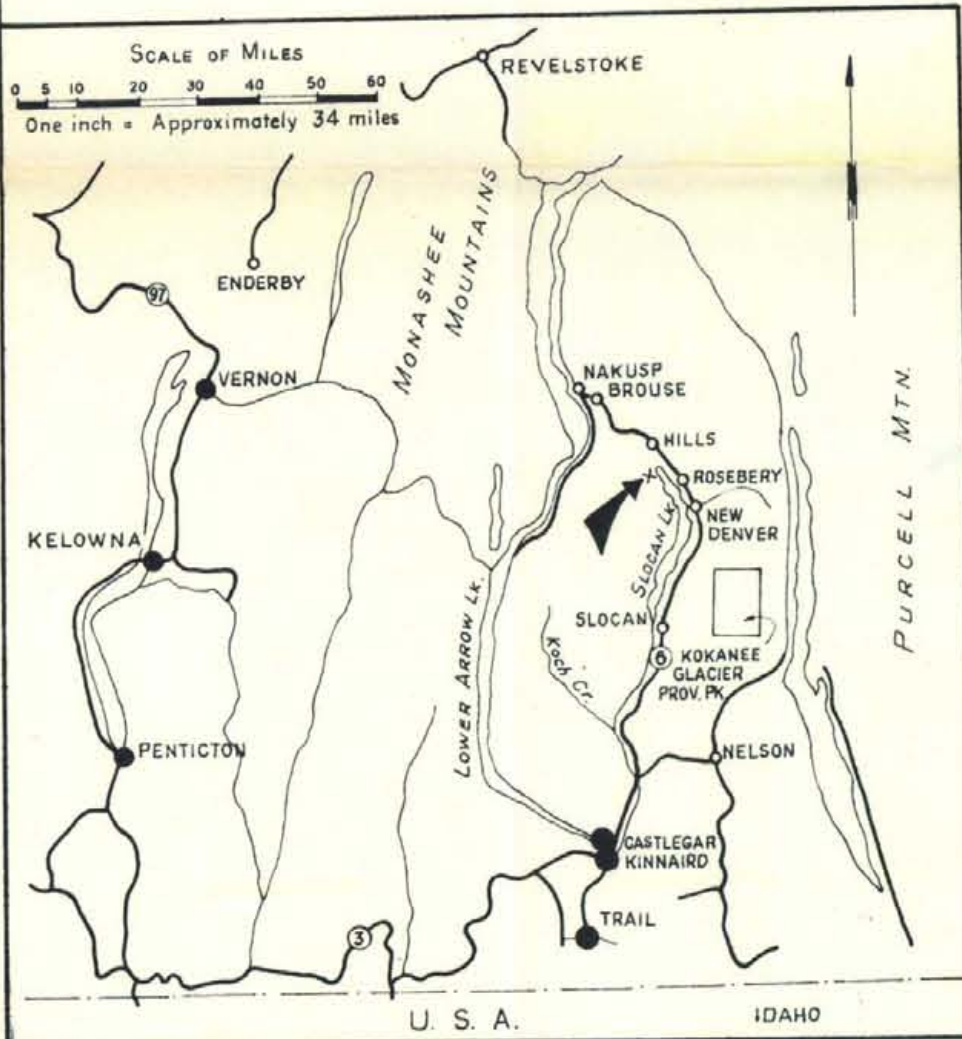
Drawn: J.W./W.R.
Date: April 23, 1971

No. 1

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
MAP NO. 3004
#2



3004
M-2



LEGEND

Pb, Zn, Ag determined by Atomic Absorption
Mo. by Colorimetric.
All in parts per million.



Location of samples, sample number and results. From 1970 survey.

ARGEM EXPLORATIONS LTD.

50° 04' N. 117° 28' W.

GEOCHEMICAL PLAN

Pb, Zn, Mo, Ag.

Scale: 1" = 200'



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on data submitted by Mr. C. D. Hoffman of
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W.S. Read

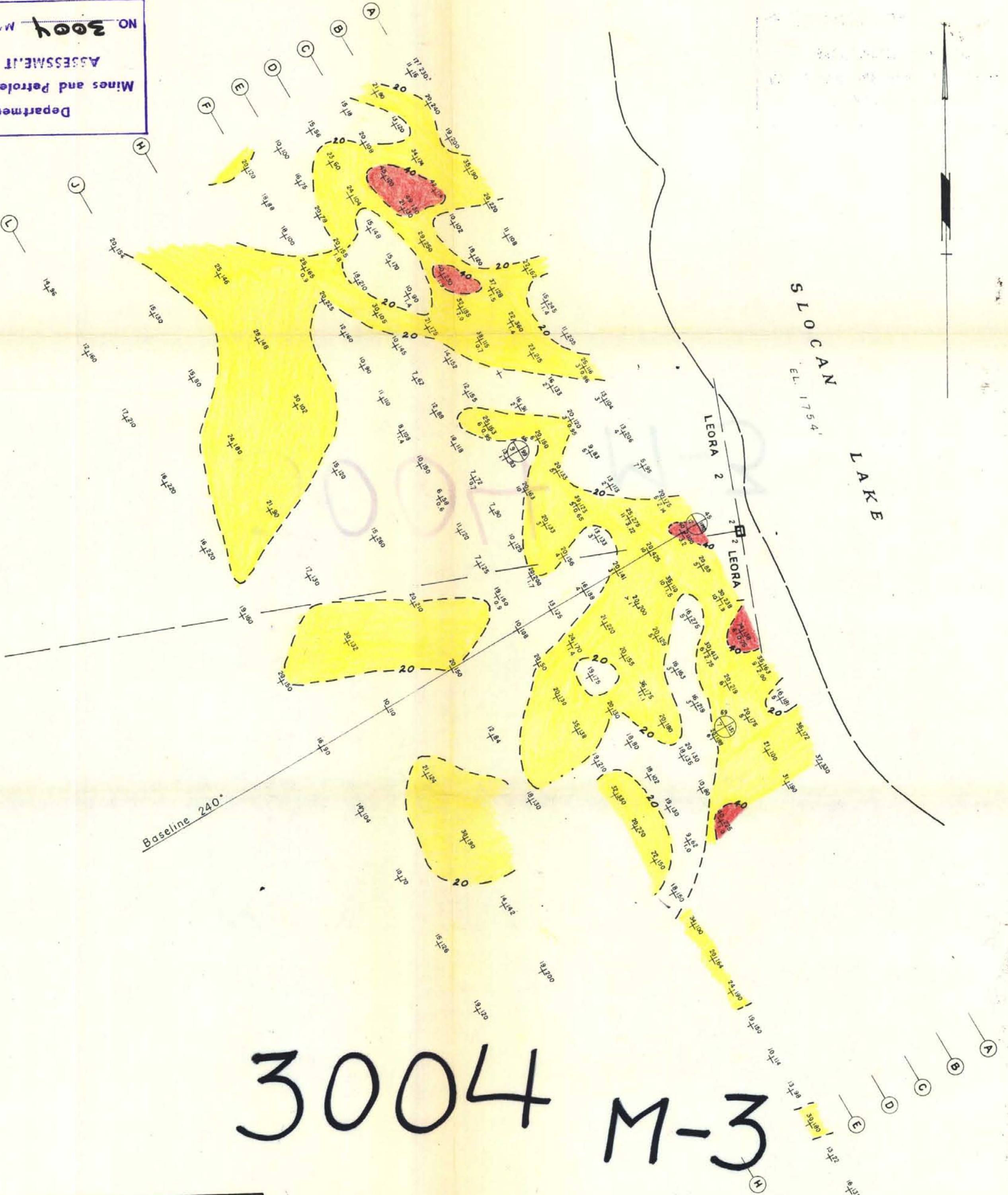
WAYLAND S. READ, P. Eng.
Consulting Geologist, West Vancouver, B.C.

Drawn: J.W./W.R.
Date: April 23, 1971

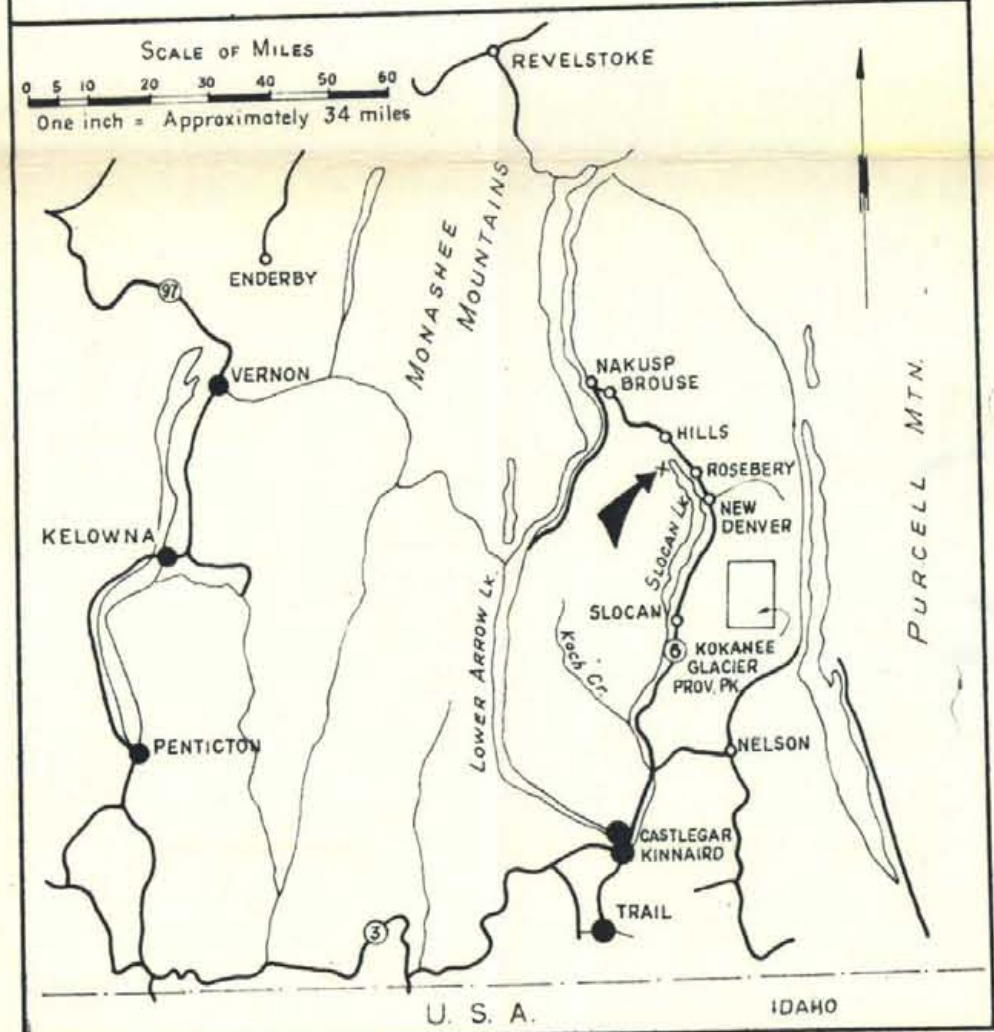
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1a

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3004 M-3



3004 M-3



LEGEND

Pb, Zn, Ag, determined by Atomic Absorption
Mo. by Colorimetric
All in parts per million.

⊕ Location of samples, sample number and results. From 1970 survey.

ARGEM EXPLORATIONS LTD.
50° 04' N. 117° 28' W.

GEOCHEMICAL PLAN
Pb, Zn, Mo, Ag.

Scale: 1" = 200'

0 100 200 400 600 800

WAYLAND S. READ, P. Eng. Consulting Geologist, West Vancouver, B.C.	Drawn: J.W./W.R. Date: April 23, 1971	No. 1b
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To accompany Geochemical Report by W.S. Read, P. Eng.
on data submitted by Mr. C. D. Hoffman of
Argem Explorations Ltd.

W.S. Read