

GEOCHEMICAL SURVEY REPORT

on the

92H / 6W

MILL GROUP MINERAL CLAIMS

49 121 SE

for

92H6

KELSO EXPLORATIONS LTD. (N.P.L.)

by

J.A. Mitchell, P.Eng.

Vancouver, British Columbia

July, 1967

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GEOCHEMICAL SURVEY REPORT

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MILL GROUP MINERAL CLAIMS

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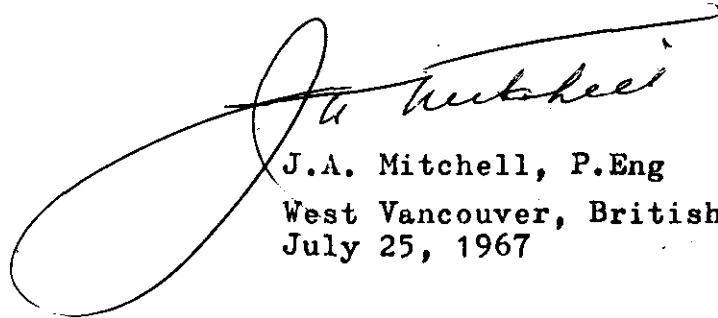
APPENDICES

CERTIFICATES OF ANALYSIS	Appendix I
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C E R T I F I C A T I O N

I, JAMES A. MITCHELL, of 2991 Mathers Avenue, West Vancouver, British Columbia, do hereby certify that:

1. I am a graduate of the University of British Columbia, 1932, and hold the Degree of Bachelor of Applied Science in Mining and have practised my profession since that time.
2. I am a registered Professional Engineer of the Province of British Columbia.
3. This report is based on a Geochemical Survey made in July, 1967 on the Mill Group Mineral Claims.
4. I have no interest directly or indirectly in the properties or securities of Kelso Explorations Ltd. (N.P.L.), nor do I intend to hold any such interest.



J.A. Mitchell, P.Eng
West Vancouver, British Columbia
July 25, 1967

GENERAL STATEMENT

The Mill Group Mineral Claims are held by record by Kelso Explorations Ltd. (N.P.L.), 470 Granville Street, Vancouver 2, British Columbia.

GEOLOGY

The claim area is underlain by a batholith of diorite, granodiorite and granite of early Mesozoic age. The batholithic rocks have been further intruded by a broad belt of pyroxenites and hornblendites occurring in elongated north-south trending zones along contact zones. The ultrabasic intrusives have in turn been intruded by diorite and quartz diorite and accompanying dikes of felsite and andesite.

On the Giant Mascot Nickel Mine property to the west, nickel mineralization is found in masses of pyrrhotite in hornblendite. Pentlandite, associated with the pyrrhotite and minor chalcopyrite and other accessory minerals accounts for the nickel production from the mine.

The geology of the region is shown on Geological Survey of Canada Map 737A, Hope Sheet.

PROPERTY

The Mill Group mineral claims are comprised of eight claims located at approximately 121°27' west longitude and 49°27.5' north latitude. The claim line of the group nearly bisects a topographic high west of Klahater Lake, north of Puckat Creek, and south of Stulkawhits (Texas) Creek. Klahater Lake lies approximately 5.2 miles north of Hope, British Columbia.

The mineral claims comprising the Mill Group and their corresponding record numbers are as follows:

Mill Group 1

<u>Claim Names</u>	<u>Record Numbers</u>
Mill 1 to Mill 8, inclusive	15861 to 15868 inclusive

TOPOGRAPHY

The topography is mountainous. The topographic high on which part of the claim group lies is approximately 2150 feet above sea level. Puckat Creek to the south, and Stulkawhits Creek to the north flow in steep V shaped valleys easterly to the Fraser River. The west side of the claim group slopes into a saddle point before a higher topographic high to the west. The east side of the claim group slopes to the Fraser River.

The area has been logged and there is a network of old logging roads over the area. However, travel other than along the old secondary roads is made difficult by the closely spaced young second growth coniferous forest which carpets the area.

SURVEY CONTROL

A base line was established and stations were located at intervals of 100 feet using a compass and nylon chain. Lines were run parallel to the base line on a spacing of 200 feet with control maintained by frequent cross tying to adjacent lines and stations. Lines were run on a bearing 30 degrees east of north. Horizontal distance along lines was maintained by applying calculated slope corrections.

GEOCHEMICAL PROSPECTING

A soil profile is well developed and soil samples were collected at the top of the "B" soil horizon at each station location.

Analysis

Soil analyses were made by T.S.L. Laboratories Ltd., 325 Howe Street, Vancouver 1, British Columbia.

Copper and molybdenum determinations were made on 173 soil samples gathered from the Mill Group mineral claims. The samples were treated as follows at T.S.L. Laboratories:

After receipt, the samples were sorted in numerical order, dried at 200 degrees fahrenheit and screened through a minus 80 mesh nylon screen. From the minus 80 portion a 1 gram

sample was weighed and treated for one hour at 212 degrees fahrenheit with Hydrochloric Acid.

After cooling the sample was brought to a certain volume and the copper content of this solution was measured by atomic absorption spectrophotometer (A.A.). The copper value in the soil sample was then calculated and reported in parts per million (P.P.M.).

An aliquot of the same solution was treated with Zinc-dithiol for determination of the molybdenum content. The molybdenum value in the soil sample was then calculated in parts per million.

Results

Copper- No copper anomalies were discovered. The largest copper concentration was found to be 63 parts per million in a background of copper values less than 20 parts per million.

Molybdenum- No molybdenum anomalies were discovered. The general molybdenum background was found to be less than 0.5 parts per million with 3.0 parts per million being the largest value obtained.

CONCLUSIONS

No anomalous areas of copper and molybdenum were found as the result of analyses of 173 soil samples taken at locations described herein.

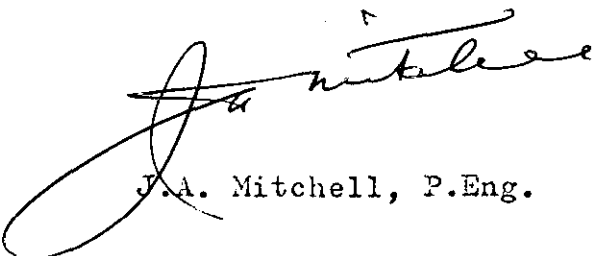
Detailed geological mapping should precede further physical work in this area. In this way favourable host rocks, alteration zones, geological structures, rock contacts, or intrusive rocks may be recognized.

STATEMENT OF EXPENDITURE

Geochemical sampling was supervised by J.M. Ashton as part of a programme as suggested by J.A. Mitchell, P.Eng., and was conducted by those shown below:

<u>Name</u>	<u>Dates Employed</u>	<u>Expenditure</u>
J.M. Ashton (BASc)	June 30; July 1, 2, 3	\$ 150.00
E.J. Boldt	July 3	25.00
R.L.J. Dunsterville	July 3	25.00
L. Forrest	July 1, 2	50.00
L. Johnson	July 3	<u>25.00</u>
	<u>Total</u>	275.00
Compensation and benefits @ 15%		41.25
Room and board, 8 man days @\$10.00/day		80.00
Jeep employed in collecting samples		
3 days @\$25.00/day		75.00
Geochemical analyses, 173 samples @ \$1.80/sample		311.40
Reports and maps		<u>135.00</u>
	<u>Total</u>	642.65
	<u>TOTAL</u>	<u>\$ 917.65</u>

Vancouver, British Columbia
July 1967


J.A. Mitchell, P.Eng.

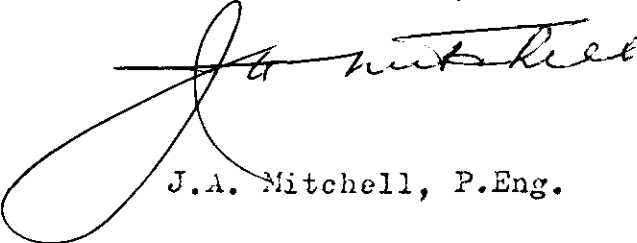
EVIDENCE OF QUALIFICATION

Mr. J.M. Ashton, B.A.Sc., is a graduate of the University of British Columbia, 1965, in Electrical Engineering. He is presently engaged by M.A. Thomas and Associates Ltd., Consulting Electrical Engineers.

In his undergraduate days he spent time in the summer on mineral exploration, and all his spare time is so spent. He shows a keen interest in all aspects of this work and has the necessary engineering and ethical approach to his work.

He supervised a geochemical programme; under the direction of the writer and W.D. Tompson, Geologist; on a much larger scale than the present and did a thoroughly satisfactory job. His work is reflected by the quality of the maps attached herewith, which speaks for itself.

Respectfully submitted,

A handwritten signature in cursive script, reading "J.A. Mitchell". The signature is written in dark ink and is positioned above the typed name.

J.A. Mitchell, P.Eng.

T S L

Laboratories Limited

325 HOWE STREET - VANCOUVER 1, B.C.

TELEPHONE 684-1374

ASSAYERS
CHEMISTS
GEOCHEMISTS

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM MR. J. M. ASHTON
204-2930 SPRUCE STREET
VANCOUVER 9, B.C.

REPORT NO.
V1235-1

SAMPLE(S) OF

SOIL

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	1 20	10					<.5	
2	21	10					<	
3	1 22	9					<	
4	2 22	3					<	
5	23	3					<	
6	24	2					<	
7	25	2					<	
8	26	4					<	
9	27	3					<	
10	28	3					<.5	
11	29	3					<.5	
12	29 E	6					<	
13	30	3					<	
14	3 20+15	3					<	
15	20	3					<	
16	31	4					<	
17	22	4					<	
18	23	4					<	
19	24	5					<	
20	3 25	3					<.5	

< = less than .5 ppm.

DATE July 9, 1967

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SAMPLE(S) FROM MR. J.M. ASHTON

REPORT NO.
V1235-2

SAMPLE(S) OF

SOIL

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	3 26	3					<.5	
2	27	6					<	
3	28	5					<	
4	3 29	4	✓				<	
5	4 20	6					<	
6	21	4					<	
7	22	3					<	
8	23	4					<	
9	24	3					<	
10	25	8					<.5	
11	26	13					<.5	
12	27	9					<	
13	28	2					<	
14	29	2					<	
15	31	4					<	
16	32	3					<	
17	33	6					<	
18	34	3					<	
19	35	3					<	
20	4 37	5					<.5	

DATE July 2, 1967

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SAMPLE(S) FROM MR. J. M. ASHTON

REPORT NO.
V1235-3

SAMPLE(S) OF

SCIL

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	4 38	5					<.5	
2	39	5					<	
3	40	5					<	
4	41	5					<	
5	4 41+1E	4					<	
6	5 17	9					<	
7	17+1E	8					<	
8	17+1W	7					<	
9	18	8					<.5	
10	19	9					<.5	
11								
12	20	4					<.5	
13	21	7					<	
14	22	5					<	
15	23	5					<	
16	24	3					<	
17	25	5					<	
18	26	7					<	
19	27	8					<	
20	28	7					<	
	29	8					<.5	

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SAMPLE(S) FROM

MIR. J. M. ASHTON

REPORT NO.

V1235-4

SAMPLE(S) OF

SOIL

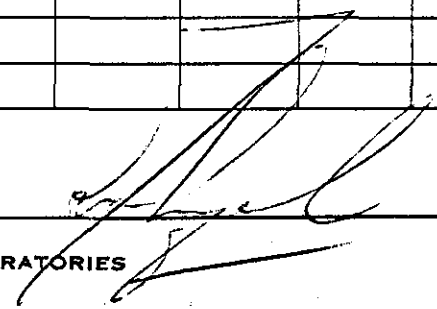
RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	5 30	13					<.5	
2	31	10					<	
3	32	7					<	
4	33	9					<	
5	34	5					<	
6	35	7					<	
7	36	11					<	
8	37	3					<	
9	38	5					<	
10	39	6					<.5	
11	40	3					<.5	
12	5 41	7					<	
13	6 17	4					<	
14	17+1E	6					<	
15	18	10					<	
16	17	8					<	
17	20	7					<	
18	21	10					<	
19	22	14					<	
20	6 23	9					<.5	

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SAMPLE(S) FROM MR. J. M. ASHTON

REPORT NO.
V1235-5

SAMPLE(S) OF SOIL

RESULTS IN PARTS PER MILLION

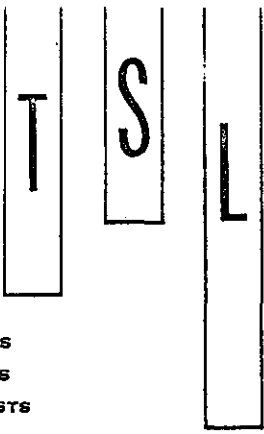
	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	6 24	5					<.5	
2	25	3					<	
3	26	15					<	
4	27	6					<	
5	28	2					<	
6	29	7					<	
7	30	6					<	
8	31	13					<	
9	32	6					<	
10	33	3					<.5	
11	34	9					<.5	
12	35	5					<	
13	36	4					<	
14	37	14					<	
15	38	5					<	
16	39	3					.5	
17	40	4					<	
18	6 41	5					1	
19	7 17	6					<	
20	18	19					<.5	

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SAMPLE(S) FROM MR. J.M. ASHTON

REPORT NO.
V1235-6

SAMPLE(S) OF SOIL

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	7 19	15					<.5	
2	20	9					<	
3	21	11					<	
4	22	21					<	
5	23	12					<	
6	24	15					<	
7	25	10					<	
8	26	39					<	
9	27	10					<.5	
10	28	4					1	
11	29	9					<.5	
12	30	7					<	
13	31	14					<	
14	32	9					<	
15	33	40					<	
16	34	11					<	
17	35	4					<	
18	36	6					<	
19	37	12					<.5	
20	7 38	5					3.0	

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SAMPLE(S) FROM MR. J.M. HUGHTON

REPORT NO.

V1235-7

SAMPLE(S) OF

Soil

RESULTS IN PARTS PER MILLION

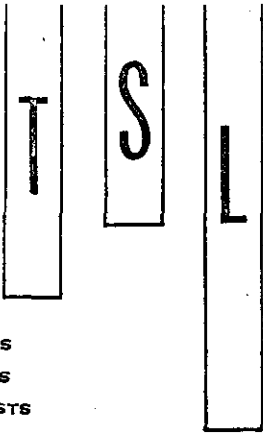
	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	7 39	14					<.5	
2	40	63					<.5	
3	41	20					.5	
4	7 41+100E	7					<.5	
5	8 17	7					<	
6	17+166W	6					<	
7	18	20					<	
8	19	6					<	
9	20	9					<	
10	21	8					<.5	
11	22	6					<.5	
12	23	3					<	
13	24	6					<	
14	26	5					<	
15	27	5					<	
16	28	14					<	
17	29	7					<	
18	30	13					<	
19	30	5					<	
20	8 32	6					<.5	

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SAMPLE(S) FROM MR. J. M. ASHTON

REPORT NO.
V1235-8

SAMPLE(S) OF Soil

RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	8 33	5					<.5	
2	34	5					<	
3	35	1					<	
4	36	9					.5	
5	37	7					<	
6	38	5					<	
7	39	13					<	
8	40	10					1.5	
9	40+HCOE	4					<	
10	8 41	4					<.5	
11	9 20	3					4.5	
12	21	15					<	
13	22	11					<	
14	23	17					<	
15	24	8					<	
16	25	28					<	
17	26	6					<	
18	27	11					<	
19	28	22					<	
20	29	13					<.5	

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254 1647

SAMPLE(S) FROM

MR. J. M. ASHTON

REPORT NO.

V1235-9

SAMPLE(S) OF

SOIL

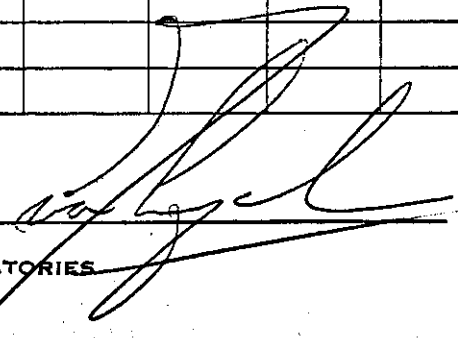
RESULTS IN PARTS PER MILLION

	SAMPLE No	Cu	Pb	Zn	Ag	Ni	Mo	Co
1	9 30	9					<.5	
2	31	8					<	
3	32	14					<	
4	33	11					<	
5	34	12					<	
6	35	14					<	
7	36	12					<	
8	37	13					<	
9	38	9					<	
10	39	10					<.5	
11	40	12					<.5	
12	9 6-41+200E	8					<	
13	No number	9					<.5	
14								
15								
16		Cu, Mo					BY HOT HCl—ACID EXTRACTION	
17								
18							Cu DETERMINED BY A.A.	
19							Mo DETERMINED BY Zn—DITHIOL METHOD	
20								

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July 2, 1967

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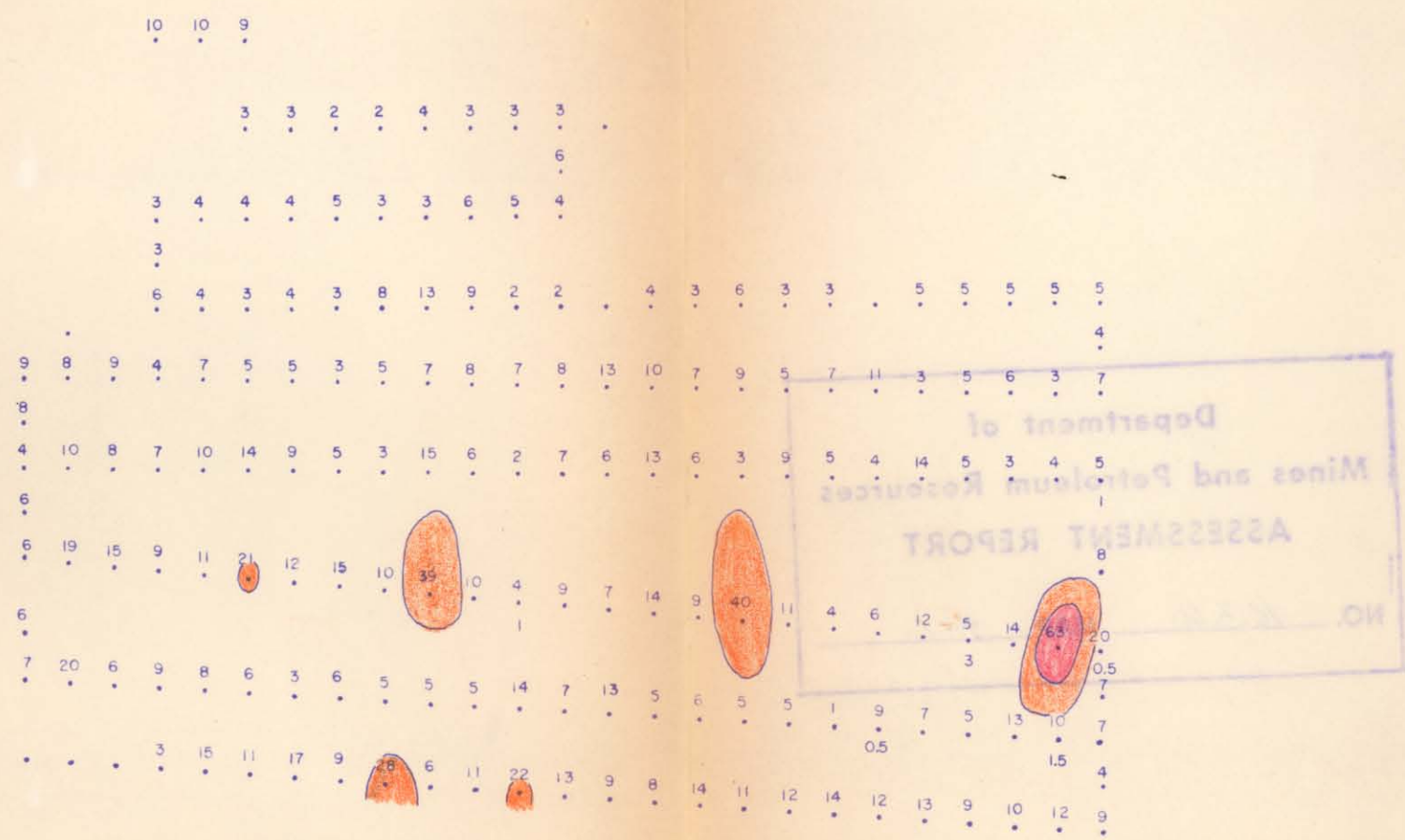
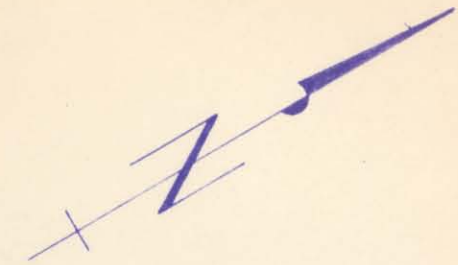
STATION 16 18 20 22 24 26 28 30 32 34 36 38 40 42

LINE

1
2
3
4
5
6
7
8
9
10
11

LINE

1
2
3
4
5
6
7
8
9
10
11



NOTES:

1. COPPER AND MOLYBDENUM WERE EXTRACTED FROM SOIL SAMPLES BY HOT HCl ACID.
2. COPPER WAS DETERMINED BY ATOMIC ABSORPTION SPECTROPHOTOMETER.
3. MOLYBDENUM WAS DETERMINED BY ZINC-DITHIOL.
4. ALL MOLYBDENUM VALUES ARE LESS THAN 0.5 PARTS PER MILLION UNLESS SHOWN.

LEGEND:

- 10 Copper value in parts per million (ppm)
- Sample location
- 1 Molybdenum value in ppm
- 0-20 ppm copper
- 21-40 ppm
- 41-80 ppm

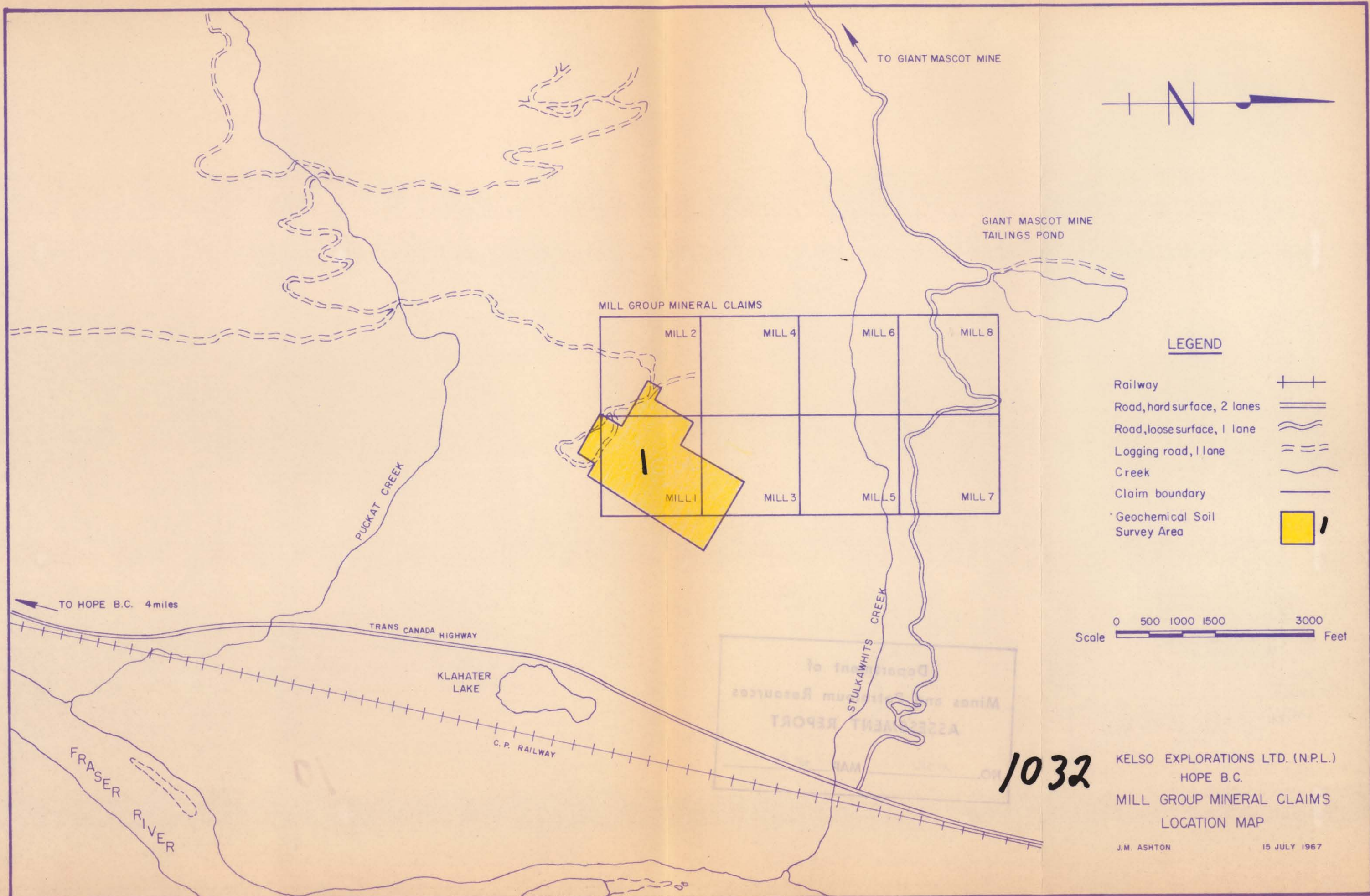


STATION 16 18 20 22 24 26 28 30 32 34 36 38 40 42

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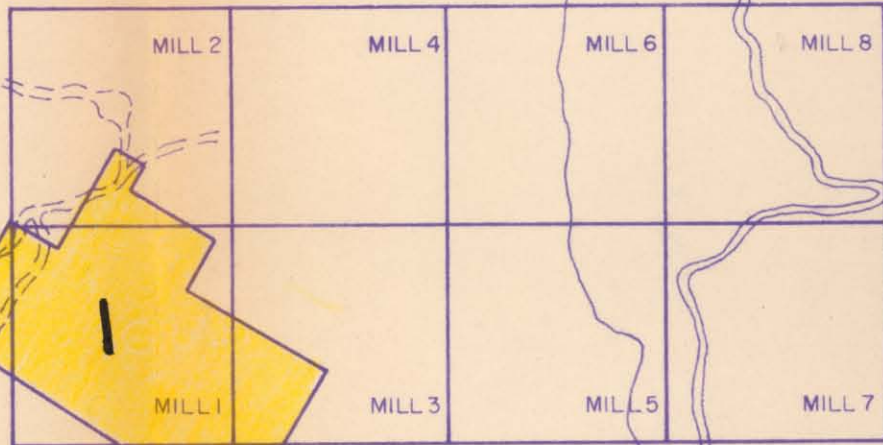
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HOPE B.C.
GEOCHEMICAL SOIL SURVEY
of
MILL GROUP MINERAL CLAIMS
J.M. ASHTON 15 JULY 1967



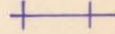
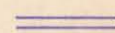




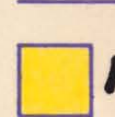
TO GIANT MASCOT MINE

GIANT MASCOT MINE
TAILINGS POND

MILL GROUP MINERAL CLAIMS



LEGEND

- Railway 
- Road, hard surface, 2 lanes 
- Road, loose surface, 1 lane 
- Logging road, 1 lane 
- Creek 
- Claim boundary 
- Geochemical Soil Survey Area 



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KELSO EXPLORATIONS LTD. (N.P.L.)
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MILL GROUP MINERAL CLAIMS
LOCATION MAP