



53C13SE0017

010

MINOREX LTD.

SETTING NET LAKE MOLYBDENUM DEPOSIT

DISTRICT OF KENORA, ONTARIO

ANALYSIS OF CORE AND SLUDGE VALUES

by R. H. Janes

November 18, 1969

File 396-1

DDK No. 101 :-

C O R E				S L U D G E					
Sample No.	Interval	Weight, kilos	MoS ₂ %	Sample No.	Interval	Weight, kilos	MoS ₂ %		
A 7001	0 - 15	26.456	0.053	A 5001	4 - 15	0.804	0.035		
	15 - 30	20.658	0.064		15 - 30	1.370	0.063		
	45	20.764	0.040		45	1.410	0.063		
	60	22.363	0.100		60	1.005	0.123		
	75	21.798	0.038		75	1.240	0.072		
	90	20.400	0.038		90	0.648	0.031		
	105	21.412	0.057		105	1.104	0.092		
	120	21.208	0.056		120	0.928	0.082		
	135	21.318	0.096		135	0.588	0.126		
	150	21.283	0.046		150	0.395	0.065		
	165	20.457	0.035		165	0.702	0.039		
	180	21.531	0.035		180	0.243	0.043		
	195	21.280	0.027		195	0.673	0.028		
	210	21.957	0.055		210	0.905	0.072		
	225	21.565	0.051		225	0.795	0.065		
	240	20.785	0.059		240	1.075	0.032		
	255	20.015	0.028		255	1.271	0.039		
	270	20.665	0.086		270	1.150	0.092		
	285	21.425	0.057		285	1.186	0.061		
	300	21.552	0.059		300	0.635	0.067		
	7021	300 - 315	21.700		0.055	5021	300 - 315	0.998	0.069
		330	21.936		0.055		330	1.122	0.052
		345	21.780		0.089		345	1.028	0.086
		360	21.635		0.039		360	0.937	0.068
		375	21.512		0.077		375	1.515	0.059
		390	21.592		0.077		390	0.632	0.096
		405	21.674		0.138		405	0.723	0.185
420		21.643	0.059	420	0.726		0.077		
435		21.360	0.051	435	0.439		0.093		
450		20.770	0.094	450	1.252		0.104		
7030	465	21.051	0.036	465	1.657	0.049			
	480	22.258	0.049	5032	465 - 480	1.168	0.051		
	495	20.920	0.035	5033	480 - 510	3.249	0.057		
	510	20.948	0.045	---	---	---	---		
	525	21.177	0.043	---	---	---	---		
	540	21.657	0.027	---	---	---	---		
	555	21.750	0.054	5034	540 - 555	1.431	0.039		
	570	21.408	0.031	---	---	---	---		
	585	21.317	0.039	---	---	---	---		
	600	21.514	0.078	5037	585 - 608.2	0.139	0.086		
A 7041	600 - 608.2	11.905	0.063						

Sludge collection: - 0 - 375 in fibre glass bags; 375 - 510 in canvas bags; 540 plus, in pairs

Grade Comparison: - core sludge sludge/core

15 - 375	0.0559	0.0662	1.184
375 - 510	0.065	0.0854	1.314
540 - 608	0.0505	0.057	1.129
15 - 510 and 540 - 608	0.0575	0.0699	1.216

DDH. No. 102 :-

C O R E

S L U D G E

Sample No	Interval	Weight, Kilos	Mo. S ₂ %	Sample No	Interval	Weight, Kilos	Mo. S ₂ %
A 7042	19 - 30	15.869	0.048	A 5038	19 - 30	0.584	0.073
7043	30 - 45	21.812	0.032		30 - 45	1.953	0.054
		21.865	0.047			0.987	0.060
		21.415	0.060			1.606	0.063
		21.238	0.059	5042	75 - 85	1.492	0.094
		20.634	0.037	---	---	---	---
		21.446	0.076	---	---	---	---
		21.467	0.131	---	---	---	---
		20.728	0.061	---	---	---	---
		21.608	0.067	---	---	---	---
		21.193	0.092	---	---	---	---
		21.386	0.029	---	---	---	---
7054	195 - 210	20.805	0.083	5043	202 - 210	0.496	0.086
		22.016	0.040			0.599	0.051
		21.545	0.032			0.766	0.042
		21.150	0.040			1.055	0.037
		21.409	0.083			1.091	0.054
		20.708	0.065			0.291	0.051
7060	285 - 300	21.525	0.042	5049	285 - 300	0.300	0.048

Sludge collection:- pits, packing at *T* inadequate for 195 - 300.

Grade comparison:-	core	sludge	sludge/core
30 - 90	0.0495	0.0678	1.370
195 - 300	0.055	0.0527	0.958

D.P.H. No. 103

C O R E				S L U D G E			
Sample No.	Interval	Weight, kilos	MoS ₂ %	Sample No.	Interval	Weight, kilos	MoS ₂ %
A 7082	0 - 15	12.590	0.055	---	---	---	---
	15 - 30	21.138	.071	A 5090	26 - 30	0.130	0.054
		21.246	.068	---	---	---	---
		21.454	.052	5091	45 - 60	0.395	0.034
		21.009	.032			0.572	.028
		22.067	.084			0.540	.040
		21.721	.040	5094	90 - 105	0.627	.062
		21.052	.070	---	---	---	---
		21.622	.054	5095	120 - 135	0.689	.078
		21.487	.094			0.238	.059
		21.646	.062			0.162	.051
		21.301	.063			1.023	.065
		21.327	.033			.505	.058
		20.965	.046			.308	.036
		21.566	.072			.780	.076
		21.264	.060			1.491	.063
		21.316	.088			1.493	.059
		21.534	.117			1.829	.088
		21.377	.043			1.026	.042
		21.510	.027			1.327	.059
7102		21.755	.083			1.287	.097
		21.738	.060			0.478	.063
		21.640	.036			1.140	.051
		22.270	.030			1.091	.042
		20.820	.018			1.172	.026
		21.581	.076			1.080	.031
		21.664	.045			1.614	.049
		21.774	.045			1.118	.048
7110	420 - 435	21.450	.036			1.145	.035
---	---	---	---			1.120	.037
---	---	---	---			1.170	.034
---	---	---	---			1.539	.037
---	---	---	---			0.922	.039
---	---	---	---			0.940	.034
---	---	---	---			0.998	.022
---	---	---	---			0.856	.032
---	---	---	---			1.106	.039
---	---	---	---			1.010	.032
---	---	---	---			0.859	.023
---	---	---	---	5126	585-600	0.635	.036

Sludge collection - pits, packing at 'T' inadequate 26-125.

Grade comparison:-	core	sludge	sludge/core
45-105	0.052	0.041	0.788
120-435	0.0566	0.056	0.989
45-435	0.0564	0.0536	0.95

* Possible topographical error corrected.

ANALYSIS OF GRADE COMPARISONS

Comparison of sludge/core ratios:

f. g. b.: 15-375, 1.184 ; 30-240, 1.331* ; ∴ ratio (weighted) = 1.24

c. b.: 375-510, 1.314 ; 240-420, 1.234* ; ∴ ratio (weighted) = 1.27

pails:

D. H.	101	540-608'	interval too short
	102	30-90	short interval
	102	175-300	packing inadequate (0.958)
	103	45-105	packing inadequate (0.788)
	103	120-435	0.989
	104	30-300	packing inadequate (0.872)
	NR-2*	60-570	1.072

∴ ratio (weighted) = 1.04

COMMENTS

1. Cuttings from the hole represent 65% of the rock removed. Therefore assays made on sludge samples at full recovery (approximately 1/8 of 34 kilos) merit more weight than assays made on core samples. However, as the actual sludge recovery is about one quarter of the calculated full recovery such weighting is not justified. The sludge is also subject to salting from the hole walls but as the mineralized granite is very competent the effect of such salting is considered to be minimal.
2. Sludge collected in pails gives a very close assay agreement with core. Visual examination of core indicates that MoS₂ is lost from the core and that some salting of the sludge must result. Consequently a small selective loss of MoS₂ is assumed to take place in the stages of collecting and decanting. If no loss of MoS₂ from the sludge is assumed then a sludge/ore ratio of 1.1 is indicated.

* Conwest data

3. Sludge collected in fibreglass and canvas bags is characterized by consistently higher assays than the core (ratio of 1.25). This indicates a selective loss of waste fines through the bags' walls. If no loss of waste fines from the sludge is assumed then a sludge/core ratio of 1.1 is indicated.
4. Due to salting, sludge values are probably increased by 10% of the core values.
5. Giving equal weight to the core and sludge values the core values are increased by 5%.
6. To determine grades:

Use core values and increase by 5%

When only (pail collected) sludge values available,
increase these by 5%.

Hole	Interval (feet)	MoS ₂				Corrected grade
		Core values		Sludge values		
		Averaged	Amended	Averaged	Amended	
101	15-600	0.056	0.059	-	-	<u>0.059</u>
102	30-300	0.060	0.063	-	-	<u>0.063</u>
103	0-435	0.057	0.060	-	-	<u>0.060</u>
	435-600	-	-	0.033	<u>0.035</u>	<u>0.035</u>
104	30-314	0.069	0.072	-	-	<u>0.072</u>

7. A more exact method of grade calculation is described in this section. However, the method is not applicable to the present project as the requirements noted under b(i)(ii) and (c) were not fulfilled.

Following terms apply to corresponding core and sludge samples:

C_{TW}	=	weight of core at 100% recovery (known to within 1%)
C_{MW}	=	measured weight of core
C_{WLS}	=	weight of core lost in transit from hole to time sampled (can be made negligible)
C_{WCG}	=	weight of core ground, lost to sludge (unknown)
S_{MW}	=	measured weight of sludge (approximate if splitter used)
S_{WLS}	=	weight of sludge lost during sampling procedures (can be made negligible)
S_{TW}	=	weight of sludge at 100% sludge recovery and no contamination (known to within 1%)
S_{WHW}	=	weight of sludge originating from hole walls (unknown).

$$(I) \quad C_{TW} = C_{MW} + C_{WLS} + C_{WCG}$$

$$\text{or} \quad C_{TW} = C_{MW} + C_{WCG}$$

$$(II) \quad S_{TW} = S_{MW} - C_{WCG} - S_{WHW} + S_{WLS}$$

$$\text{or} \quad S_{TW} = S_{MW} - C_{WCG} - S_{WHW}$$

To calculate grade of hole:

$$(III) \quad \frac{(C_{TW} \times \text{Assay}) + (S_{TW} \times \text{Assay})}{C_{TW} + S_{TW}} = \text{True grade of intersection}$$

Now

$$(C_{TW} \times \text{Assay}) \neq (C_{MW} \times \text{Assay}) + (C_{WCG} \times \text{Assay})$$

$$(S_{TW} \times \text{Assay}) \neq (S_{MW} \times \text{Assay}) - (C_{WCG} \times \text{Assay}) - (S_{WHW} \times \text{Assay})$$

and

$$C_{TW} + S_{TW} = C_{MW} + C_{WCG} + S_{MW} - C_{WCG} - S_{WHW} = C_{MW} + S_{MW} - S_{WHW}$$

Therefore, true grade of intersection equals

$$\frac{(C_{MW} \times \text{Assay}) + (C_{WCG} \times \text{Assay}) + (S_{MW} \times \text{Assay}) - (C_{WCG} \times \text{Assay}) - (S_{WHW} \times \text{Assay})}{C_{MW} + S_{MW} - S_{WHW}}$$

$$= \frac{(C_{MW} \times \text{Assay}) + (S_{MW} \times \text{Assay}) - (S_{WHW} \times \text{Assay})}{C_{MW} + S_{MW} - S_{WHW}}$$

For the Setting Net Lake deposit S_{WHW} is considered to be negligible.

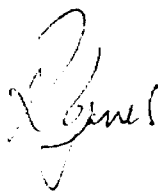
Therefore, true grade of intersection equals

$$(IV) \quad \frac{(C_{MW} \times \text{Assay}) + (S_{MW} \times \text{Assay})}{C_{MW} + S_{MW}}$$

However, for equations III and IV to be applicable the following physical conditions are required:

- a) Core and sludge sample weights must be accurately determined (for this reason the Humble and other splitters may not be acceptable).

- b) Core and sludge samples must be from exactly the same intervals. This condition can be insured only if
 - (i) the hole is washed out between sample intervals (several large settling boxes required);
 - and (ii) the core is pulled at the end of each sample interval (wire line equipment required).
- c) Sludge losses must be minimal.
- d) An adequate number of specific gravity values must be available.



R. H. Janes

November 19, 1969

(007)	475-476.5 Fracture zone					
485		485 22258	15	A7032	2049	1160 15 A5022.0051
(009)	489.5-486.5 crush zone fracture zone					
480		480 20220	15	A7033	2035	
(005)	498.5 (approx. loc. 15) 625: crushed zone of G, mineralized & brecciated matrix					
495		495 20248	15	A7034	2045	3.249 15 A5023.0157
(011)	510.7-510.6 F, G, A0					
510		510 21177	15	A7035	2045	
(010)						
525	529-528.4 Q 100	525 21657	15	A7036	2027	
(004)	529-529.4 CRUSH ZONE Dark grey green granitic fracture with sparse boundary transitions, some boundary sharp (near A 10: W. K. MoSa point), mostly for det. MoSa					
540		540 21750	15	A7037	2054	1431 15 A5024.0059
(005)	549.4-608.2 MIXED FRAGMENT MICHURIN (GFP) Mottled grey, siliceous and ground granitic matrix, 23% qtz, 22% alk feld ca. 20% feld, some square. Fine grains, MoSa content less than in GFP. Also fine light feldspar, some with MoSa points (may consist of 40% of MoSa points)					
555		555 21600	15	A7038	2054	1600 15 A5025.0049
(004)	559.1-563 Transition zone. Parahexite feldspar with coarse feldspar, qtz grains also appear					
570		570 21817	15	A7039	2030	1820 15 A5026.0154
(004)	563.6-563.3 F.D. Dark red band of feldspar (ca. 10% in F.D.) MoSa point in feldspar					
585		585 21514	15	A7040	2070	1739 202 A5027.0056
(005)	600-600.1 Fractured leading to loss of matrix					
600		600 21805	0.2	A7041	2063	

COMMENTS:

Geology: GFP fairly constant in character in content, size & shape of paracrystalline feldspar & quartz content. (variable content degree of alteration) less than with GFP
 with 60% quartz most of time between 50-55%
 GFP noticeably different, have good feldspar (crush zone) content.

Minerals: (1) and (2) are similar with similar grades at 20% of feldspar - apparent
 MoSa in 15% of feldspar
 Dark measurements generally stability off (K3/N)
 The cut is 530 mm, one thick angle in tube is 70°

Sludges: 0-2.25 Collected in fine glass bags; 345 & 485 cut in coarse bags
 495 & 600 cut in bags

Grade: Estimate 0.11% MoSa
 Core (Loring Labs) 0.056% MoSa for 15-600
 Sludge (Loring Labs) 0.072% MoSa for 15-480

0.07/11
00
03
0.02
01

285

15 A1060

0.100

15 A5089C and

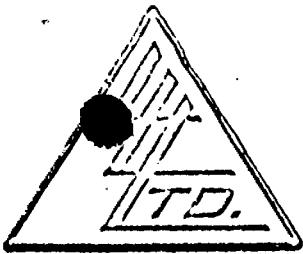
Stopped at 303.1

Grade Estimate 0.09% MoS₂ from 30 → 300.
Cor (Aging) 0.061% MoS₂ from 30 → 285



Depth (ft)	Interval	MoS ₂ Content (%)	Sample No.	MoS ₂ Content (%)	MoS ₂ Content (%)	MoS ₂ Content (%)	MoS ₂ Content (%)
285	285-295.5 FD	285	21510	15	A 7101	0.027	1.327 15 A5106 029
300	295-300 MoS ₂ test	300	21755	15	A 7102	0.083	1.287 15 A5107 027
310	300-310.3 Fracturing	310	21758	15	A 7103	0.060	1.278 15 A5108 023
315	310-315 MoS ₂ test	315	21758	15	A 7103	0.060	1.278 15 A5108 023
320	315-325, 325-330 MoS ₂ test	320	21840	15	A 7104	0.034	1.140 15 A5109 021
330	322-322.6 Fracturing, 55'	330	21840	15	A 7104	0.034	1.140 15 A5109 021
345	330-345.3 MoS ₂ test	345	22270	15	A 7105	0.030	1.094 15 A5110 022
360	345-362.3 FD	360	20820	15	A 7106	0.018	1.172 15 A5111 026
375	362.3-370.8 FD with pyrophyllite filigree	375	21581	15	A 7107	0.076	1.084 15 A5112 021
390	370-395, 395-390, 390-395 MoS ₂ test (all along fracture plane)	390	21844	15	A 7108	0.045	1.144 15 A5113 024
405	395-405.3 FD	405	21776	15	A 7109	0.045	1.118 15 A5114 023
420	405-420.8 FD with pyrophyllite filigree	420	21450	15	A 7110	0.036	1.145 15 A5115 025
435		435		-	-	-	1.170 15 A5116 027
450	420.8-452.8 FD	450		-	-	-	1.170 15 A5117 024
465	450-471.6 FD Several bands of calcination locally highly pyrophyllitic (0.03)	465					1.239 15 A5118 027
480		480					0.922 15 A5119 029
495		495					0.900 15 A5120 026
510		510					0.998 15 A5121 022
525		525					0.856 15 A5122 033
540		540					1.106 15 A5123 029
555		555					1.016 15 A5124 022
570		570					0.839 15 A5125 023
585	570.8-600.0 Fracturing	585					0.637 15 A5126 036
600	600 END OF HOLE						

Comments: Geology: Reddish coloration of filigree absent. Pyrophyllite filigree well developed. Epididymite
 moderate to weak. Qtz and calcite well developed (especially calcite), particularly
 below 415 depth of 200ft. Below 425 calcite not seen for 200ft.
 Grade: Calcite 0.05% MoS₂ from 0-435 Sludge 435 to 600
 Calc (by Loring) 0.05% MoS₂ from 0-435
 Drilling: Dia 4 1/2 at 530, drilled angle on hole 55°, inclination hole 48°



LORING LABORATORIES LTD.

Phone 277-6797

Ship Samples to:
LAB LOCATION
629 Deaverdam Rd. N.E.
Calgary, Alberta

SAMPLE PREPARATION & ASSAY PROCEDURES

SAMPLE PREPARATION

Core samples are crushed to 1/8"
Mixed and riffled to 150 grams
Placed in dryer for one hour at 105° C.
Pulverized in a Brawn type pulverizer without draught system.
The sample is then passed through a 100 mesh screen
The plus 100 mesh material is hand milled to pass through the
100 mesh screen
The entire sample is now rolled on a plastic mat for 50 times
Poured into sample bag and sent to the laboratory for assay

PROCEDURE FOR ASSAY

2 gms. are weighed and placed into 250 ml. beaker
50 mls. 30% HCl are added and boiled on a low plate to
dissolve the oxides of moly
The assay is filtered through #2 papers and washed 3 times
with hot water.
Paper and contents are placed into the original 250 ml. beaker,
15 mls. HNO₃; 5 mls. HCl, and 10 mls. HClO₄ are
added, lids placed on the beakers and then taken
to perchloric fumes
Beakers are then removed from the plate, allowed to cool, 20 mls.
of conc. HCl are added, sides and lids washed down
with H₂O
Beakers are then placed on the plates and boiled gently for
5 minutes.
The assays are now filtered through #42 papers, washed 3 times
with hot 30% HCl, then 5 times with hot H₂O
The filtrate is caught in a 200 ml. volumetric flask containing
50 mls. of 0.26% AlCl₃ solution
The assays are now bulked to the neck, allowed to stand one
hour in the constant temperature bath. The flasks
are then bulked to the mark, shook well and taken
into the instrument room where they are aspirated
through the atomic absorption spectrophotometer.
Standards are used daily to obtain a standard working
curve and the assay results are determined from
this curve.



53C13SE0017

900

308 - 1075 MELVILLE STREET,
VANCOUVER 5, BRITISH COLUMBIA

1940 - 1155 METCALFE STREET,
MONTREAL 110, QUEBEC



2.904
P.O. BOX No. 7421,
RENO, NEVADA, 89502

P.O. BOX No. 9,
THETFORD MINES, QUEBEC

RECEIVED

JUN 19 1972

PROJECTS
SECTION

MINOREX LTD.

(formerly Asbestos Corporation Explorations Ltd.)

Vancouver 5, B.C.,
June 15, 1972.

RECEIVED

JUN 19 1972

MINING LANDS
BRANCH

Mr. F.W. Matthews,
Supervisor, Projects Section,
Ministry of Natural Resources,
W1617, Whitney Block,
Parliament Buildings,
Queens Park, Toronto, Ontario.

Dear Mr. Matthews:

Re: Mining claims KRL 72684 et al,
Setting Net Lake Area

In response to your letter of June 13, we regret that, through some oversight, the maps and technical reports in connection with the assessment report of work under Section 86 (18) covering the above mentioned claims had not been forwarded to you.

Enclosed herewith you will find, in duplicate, Chapman, Wood & Griswold Ltd reports entitled:-

'Notes on the Setting Net Lake Molybdenum Deposit', dated October 1969, and

'Setting Net Lake Molybdenum Deposit Analysis of Core and Sludge Values', dated November 18, 1969.

Also enclosed, in duplicate, are the following maps:-

- ✓ Assay Results Location Map, dated October 1969, which refers to the rock pits which were dug to provide the chip samples,
- ✓ Drill Hole Location Map, dated October 1969,
- ✓ Drill Hole Sections Showing Percent Molybdenite, dated November 1969

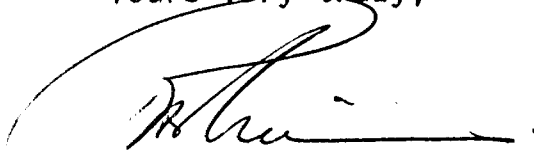
Mr. F.W. Matthews

- 2 -

June 15, 1972

I trust that this information will suffice to fulfill the necessary requirements.

Yours very truly,

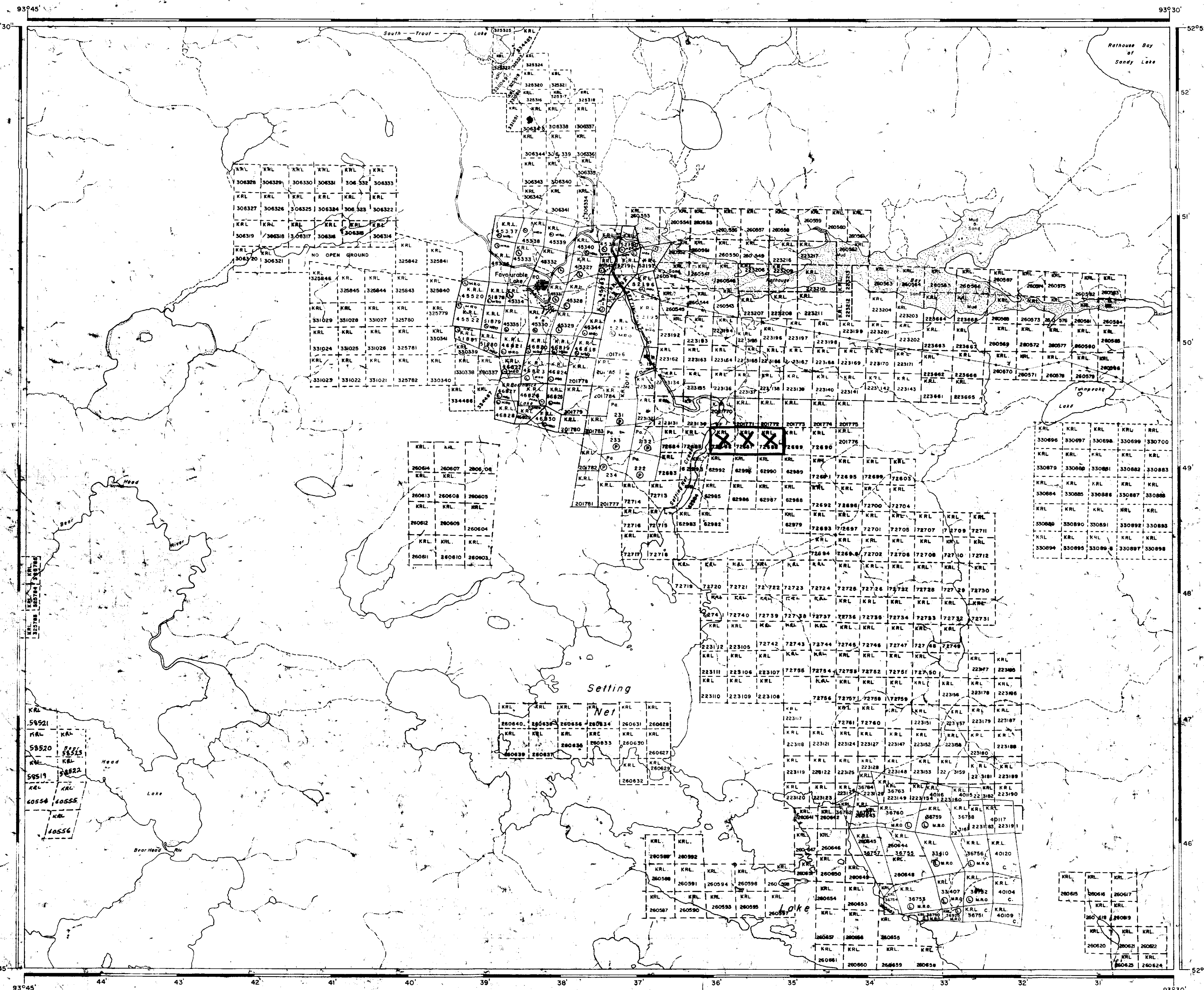
A handwritten signature in black ink, appearing to read "P. H. Riordon". The signature is fluid and cursive, with a large, sweeping initial "P" that loops back under the rest of the name.

PHR/fm
encls.

P. H. Riordon,
President

c.c. - Mr. V. Tukkanen,
Red Lake, Ontario.

North Trout Lake Area - M.2883



Favourable Lake (South part) M.2881

Northwind Lake Area - M.2885

AREA OF
SETTING NET LAKE
 DISTRICT OF KENORA
 PATRICIA PORTON
 RED LAKE MINING DIVISION
 SCALE 1 INCH = 40 CHAINS

- LEGEND**
- PATENTED LAND
 - CROWN LAND SALE LEASES
 - LOCATED LAND
 - LICENSE OF OCCUPATION
 - MINING RIGHTS ONLY
 - SURFACE RIGHTS ONLY
 - ROADS
 - IMPROVED ROADS
 - KING'S HIGHWAYS
 - RAILWAYS
 - POWER LINES
 - MARSH OR MUSKEG
 - MINES
 - CANCELLED

NOTES

400' Surface Rights Reservation around all lakes and rivers.

DATE OF ISSUE
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 ONT. DEPT. OF MINES AND NORTHERN AFFAIRS



NATIONAL TOPOGRAPHIC SERIES 53C

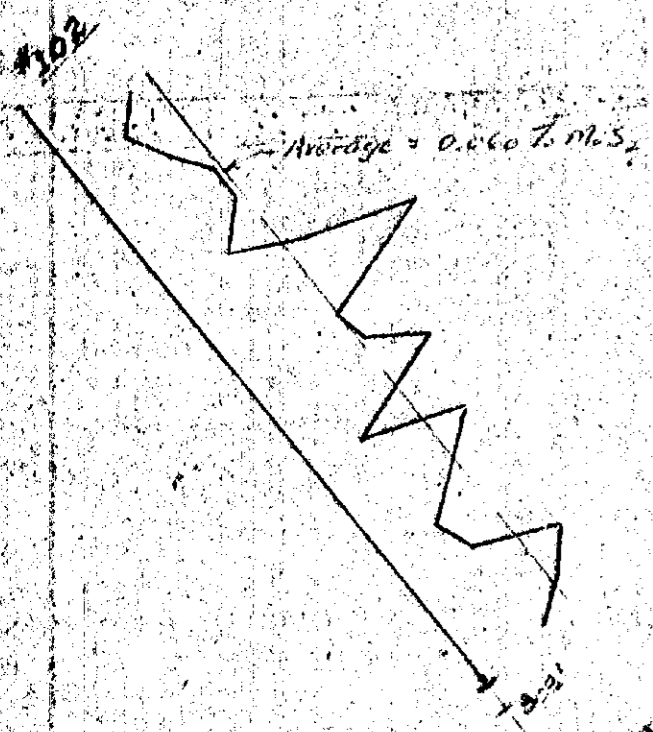
PLAN NO. M.2199

ONTARIO DEPARTMENT OF MINES AND NORTHERN AFFAIRS

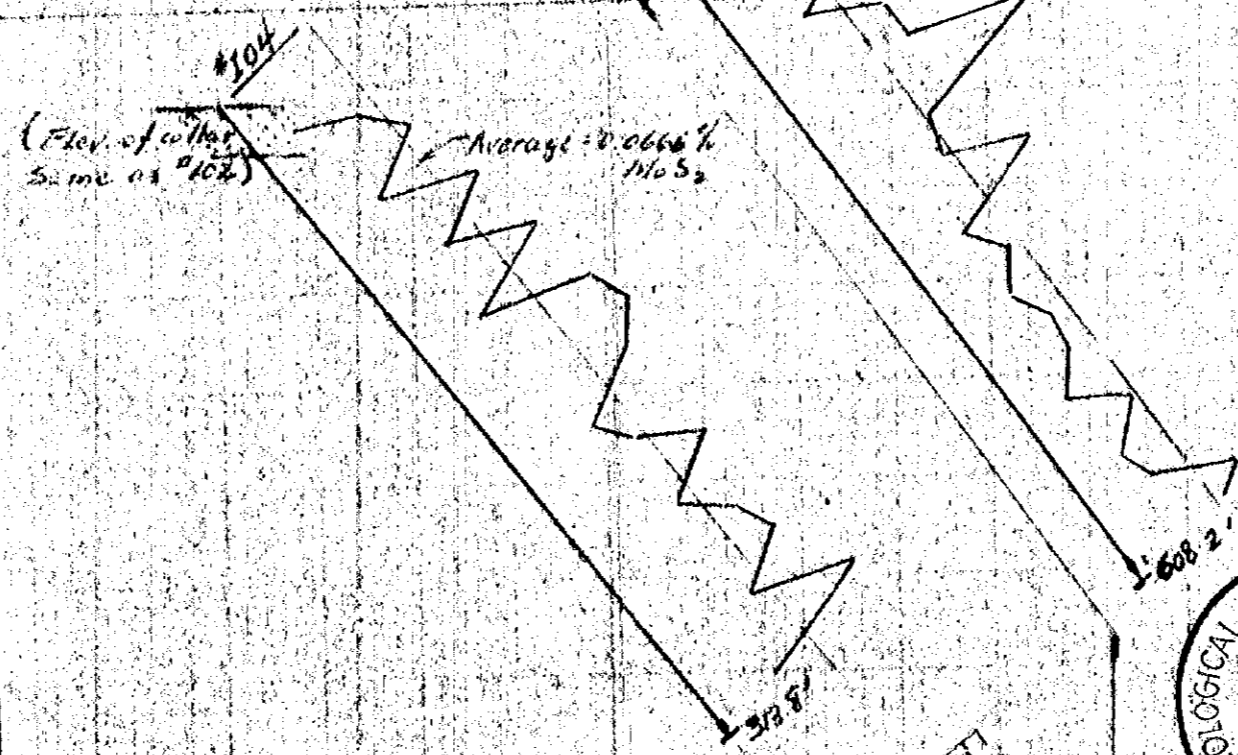
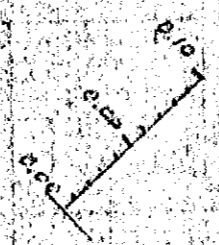
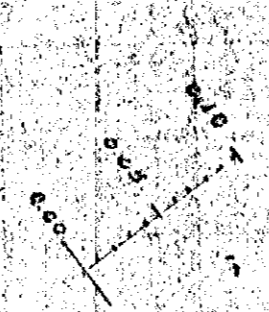
2-904

S.E.

N.W.



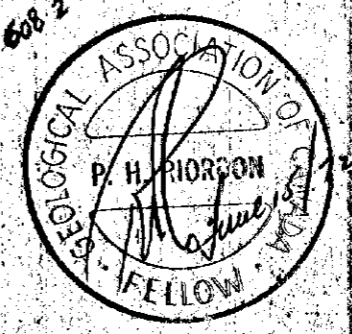
(162' NE. of Section)
0.060



(400' NE. of Section)
0.066



210



ASBESTOS CORP. (EXPL.) LIMITED,

SETTING NET LAKE
RED LAKE M.D., ONT.

PERCENT MOLYBDENITE

IN
D.D. HOLES.

SCALE: 1 in = 75 ft. Nov. 69