

2.765

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PROJECTS
SECTION



42A04NW0176 2.765 KENOGAMING

010

INTERNATIONAL NORVALIE MINES LIMITED
SUITE 1010, 360 BAY STREET
TORONTO, ONTARIO.

1971 DRILLING PROGRAM
KENOGAMING TOWNSHIP PROPERTY
40 MILES WEST OF TIMMINS, ONTARIO

BY

MICHAEL OGDEN, B.A.Sc., P.Eng.
TORONTO, ONTARIO

DECEMBER 15, 1971.

H. B. & O. ENGINEERING LIMITED

INTRODUCTION:

A PROGRAM OF SIX DRILL HOLES WAS COMPLETED DURING THE LATTER PART OF OCTOBER AND THE FIRST HALF OF NOVEMBER. THE HOLES VARIED FROM 80 FEET TO 175 FEET IN LENGTH, FOR A TOTAL FOOTAGE OF 726 FEET OF DIAMND DRILLING.

SUMMARY OF DRILL RESULTS:

HOLE No. 1.

ON LINE 8 WEST AT 2400 NORTH, DRILLED TO THE NORTH TO PROBE A VERY HIGH, NARROW, MAGNETIC ANOMALY (15,000 GAMMA RELIEF OVER 25 FEET) WHICH SEEMED ALSO TO BE A WEAK CONDUCTOR. THE HOLE ENCOUNTERED BANDED TUFFS WITH AN 8 FOOT SECTION OF GREEN SHEAR ZONE AT 107 FEET. THE SHEAR IS CERTAINLY THE WEAK CONDUCTOR AND PROBABLY THE MAGNETIC ZONE AS WELL.

HOLE No. 2.

ALSO ON LINE 8 WEST, BUT AT 1925 NORTH. THIS HOLE WAS TO PROBE A WEAK ELECTROMAGNETIC ^NCOUDTOR THAT MIGHT HAVE REFLECTED A ZONE OF GOLD MINERALIZATION. SERPENTINE, WHICH IS A WEAK CONDUCTOR, WAS FOUND FROM 43 TO 75 FEET IN THE HOLE BUT NO VISIBLE MINERALIZATION WAS ENCOUNTERED.

HOLES 3, 5 & 6.

WERE DRILLED TO TRY AND RELOCATE THE GOOD GOLD INTERSECTION OF OLD HOLE No. 1 WHICH WAS DRILLED IN SEPTEMBER OF 1960. AN INTERSECTION OF 0.92 OUNCES OF GOLD WAS ENCOUNTERED AT THAT TIME AT 65 FEET IN THE HOLE. SUCH VALUES COULD NOT BE REPEATED.

HOLES 1 & 2 SHOWED THAT THE FORMATIONS DIP TO THE SOUTHWEST AND THE GEOPHYSICS SHOWED A SOUTHEAST STRIKE. HENCE 3 5 & 6 WERE DRILLED TO THE NORTHEAST TO CUT THE STRATA AT RIGHT ANGLES. THE HOLES WERE ONLY 30 FEET APART, YET IT WAS VERY DIFFICULT TO CORRELATE ONE HOLE WITH THE NEXT. THE BLACK BANDING AT 93 FEET IN No. 3 SEEMS TO BE THE SAME ZONE AS AT 15 FEET IN No. 6, BUT NO QUARTZ VEINING

...2/

COULD BE CORRELATED FROM ONE HOLE TO THE NEXT.

ASSAYS OF HOLES 2, 3, 5 & 6.

THE SLUDGE WAS COLLECTED FROM EACH 10 FOOT LENGTH OF EACH OF THESE HOLES AND ASSAYED FOR GOLD. ONLY ONE SAMPLE (105 - 110 FEET IN HOLE No. 3) SHOWED ANY GOLD AND THE NEARBY VEINS IN THAT HOLE WERE DOUBLE ASSAYED TO NO AVAIL. ALL INTERESTING LOOKING VEINS WERE SAMPLED AND ASSAYED SEPARATELY.

HOLE No. 4.

WAS DRILLED AT THE LAKESHORE TO RESAMPLE THE OLD HOLE No. 7 WHICH WAS DRILLED IN 1957 AND RETURNED 1020 FEET OF 0.26% NICKEL. THE FIRST 51 FEET OF ROCK, THAT IS 37 TO 88 FEET IN No. 4 AVERAGED 0.23% NICKEL WHEREAS THE FIRST 50 FEET OF THE OLD HOLE RAN 0.20% NICKEL. AN ACID SOLUBLE NICKEL ASSAY WAS ALSO RUN, WHICH RETURNED 0.14% NICKEL FOR THE 51 FEET. THIS SUGGESTS THAT ABOUT 60% OF THE NICKEL IS IN THE NORMAL SULPHIDE MINERALS AND COULD BE EXTRACTED BY STANDARD METALLURGICAL PROCESSES.

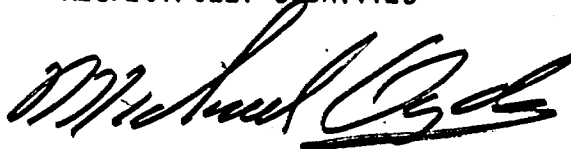
CONCLUSIONS.

1. THE GOLD SEEMS TO OCCUR IN AN ERRATIC MANNER WITHIN VERY SHORT QUARTZ VEINS. THE MOST ECONOMICAL METHOD OF EXPLORATION IS PROBABLY TO BULLDOZE LARGE AREAS OF POSSIBLE MINERALIZATION, CLEAR THEM OF OVERBURDEN, WASH THE ROCK CLEAN, THEN MAP, SAMPLE AND ASSAY THE VEINS.
2. WHEN NICKEL GETS BACK ABOVE \$1.50 PER POUND THE POSSIBILITY OF A LARGE LOW GRADE OPEN PIT NICKEL OPERATION SHOULD BE CONSIDERED. IT APPEARS THAT SOMEWHERE BETWEEN 2 & 3 LBS. OF NICKEL PER TON OF ROCK MAY BE RECOVERABLE.

...3/

3. THERE IS STILL ONE GOOD COMBINED MAGNETIC AND ELECTROMAGNETIC ANOMALY THAT SHOULD BE TESTED. IN CLAIMS S-124782 AND 125292, JUST SOUTH OF THE RIVER NEAR LINE 16 WEST. THIS ZONE OF PROBABLE FAULTING AND POSSIBLE MINERALIZATION COULD BE INVESTGATED WITH A FEW LINES OF GEOCHEMICAL SOIL SAMPLING AT ABOUT 25 FEET INTERVALS. IF AN INDICATION OF MINERALIZATION WERE OBTAINED, THEN THE AREA COULD BE TRENCHED OR DIAMOND DRILLED.

RESPECTFULLY SUBMITTED



MICHAEL OGDEN

TORONTO, ONTARIO.

DECEMBER 15, 1971.

INTERNATIONAL NORVALIE DRILLING
 OF JOHNSMITH GROUND
 KENO GAMING TRIP. ONT.
 OCT. 1971.

CORE SAMPLES SUBMITTED TO TIMMINIS
 RECORDERS.

<u>HOLE NO.</u>	<u>SAMPLE AT</u>	<u>HOLE NO.</u>	<u>SAMPLE AT</u>
1	10 FEET	4	39 FEET
1	40 "	4	50 "
1	60 "	4	81 "
1	100 "		
1	130 "		
1	160 "		
1	175 "		
2	20 "	5	25 "
2	30 "	5	45 "
2	60 "	5	65 "
2	80 "		
2	110 "		
2	150 "		
3	30 "	6	20 "
3	50 "	6	50 "
3	70 "	6	80 "
3	100 "		
3	130 "		
3	150 "		

TOTAL = 4 + 6 + 6 + 3 + 3 + 3 = 28 SAMPLES.

DIAMOND DRILL LOG

PROPERTY: *INTERNATIONAL NORVALIE MINES LTD.* HOLE NUMBER: *1.*
 LOCATION: *CLAIM S-114786, MENORAMING TWP. ONT.* DIP TESTS *NIL*
 Latitude: *2400 NORTH* Dip: *45°* Footage Reading Corrected
 Departure: *LINE 8 WEST* Depth: *175 FT.*
 Elevation: *GROUND* Commenced: *OCT 27/71*
 Azimuth: *GRID NORTH 37°* Finished: *OCT. 28* Logged by: *M. Ogden*

SAMPLE NUMBER	DESCRIPTION	Au.	Cu.
	<i>0-13 : CABING</i>		
	<i>13-107: BANDED GREENSTONE TUFF. A DARK GREEN TO BLACK ROCK WITH DISTINCT LIGHT GREY BANDINGS OF 1/32 TO 4 INCHES IN WIDTH AT 70° ± 10° TO CORE 87 = 1/4" QTZ VEIN AT 90° + PYRITE FOR 1 INCH</i>		
<i># 1</i>	<i>107-115 : GREEN SHEAR ZONE. FINE GRAINED, WELL SHEARED. 107.0-107.5 = 1/2 FOOT OF 4% PYRITE IN FINE BANDS =</i>	<i>NIL</i>	<i>0.1%</i>
<i># 2</i>	<i>115-175 : GREY BANDED TUFF 128-129 = 1 FOOT OF SILICEOUS SHEARING AT 80° + 2% PYRITE AND A 1 INCH QTZ VEIN.</i>	<i>NIL</i>	<i>0.035%</i>
<i># 3</i>	<i>156-157 = 1 FOOT WITH A 1" SHEAR AT 80° CONTAINING 1/8" BAND OF CHALCOPYRITE AND ANOTHER 1"</i>	<i>NIL</i>	<i>0.32%</i>

R	DESCRIPTION	GOLD	COPPER
#3	156-157 CONTINUED SHEAR WITH A GOB OF CHALCO. 175 END OF HOLE.	NIL	0.32%

DIAMOND DRILL LOG

PROPERTY: *INTERNATIONAL NORVALIS MINES LTD.*

HOLE NUMBER: *2*

LOCATION: *CLAIM: S-114788, KENDRAMING TWP. ONT.*

DIP TESTS *NIL*

Latitude: *1925 NORTH* Dip: *45°*

Footage

Reading

Corrected

Departure: *805 WEST* Depth: *152 FT.*

Elevation: *GROUND* Commenced: *29 OCT. /71*

Azimuth: *37° TRUE* Finished: *30 "*

Logged by: *M. Ogden*

SAMPLE NUMBER	DESCRIPTION		
	<i>0-10 : CASING</i>		
	<i>10-43 : BANDED GREY TUFF AT 45°, FEW SPECKS OF PYRITE</i>		
	<i>43-63 : WHITE SHEARED SERPENTINE WITH CALCITE STRINGERS. BANDING AT 90° TO CORE.</i>		
	<i>63-75 : DARK SERPENTINE WITH CALCITE STRINGERS AT VARIOUS ANGLES.</i>		
	<i>75-90 : GRAY TUFF</i>		
	<i>90-152 : DIABASE WITH GREEN ISLANDS OF EPIDOTE?. TRACE OF PY. & CP.</i>		
	<i>152 END OF HOLE</i>		

DIAMOND DRILL LOG

PROPERTY: *INTERNATIONAL NORVALIE MINES LTD.* HOLE NUMBER: *3*
 LOCATION: *CLAIM: S-114788, MENOMANING TWP. ONT.* DIP TESTS *NIL*
 Latitude: *2025 NORTH* Dip: *45°* Footage Reading Corrected
 Departure: *650 WEST* Depth: *150 FEET*
 Elevation: *GROUND* Commenced: *OCT. 31, 1971*
 Azimuth: *37° T (GRID NORTH)* Finished: *NOV. 1.* Logged by: *M. Ogden*

SAMPLE NUMBER	DESCRIPTION	GOLD	COPPER
	<i>0-22 CASING</i>		
	<i>22-25 GRANITE</i>		
<i>9477</i>	<i>22.0-22.5: BROKEN RUSTY QTZ. = 1/2 FT.</i>	<i>NIL</i>	<i>—</i>
	<i>25-42: GREY, EVEN, TUFF</i>		
<i>9478</i>	<i>25.5-26.0: BROKEN RUSTY QTZ. 1/2 FT.</i>	<i>NIL</i>	<i>—</i>
<i>9479</i>	<i>27: 3 INCHES QTZ + PYRITE = 0.2 FT.</i>	<i>NIL</i>	<i>—</i>
<i>9480</i>	<i>31.0-31.6: QTZ + PY = 0.6 FT.</i>	<i>NIL</i>	<i>—</i>
	<i>42-70: GREY-GREEN, FINE PINK LINED TUFF @ 60° TO CORE</i>		
	<i>70-139: GREY BANDED TUFF AT 60° TO CORE</i>		
<i>9481</i>	<i>90.0-90.2: 2 INCH QTZ VEIN = 0.2</i>	<i>NIL</i>	<i>—</i>
<i>9496</i>	<i>- OR - 90.0-90.5 = BROKEN ROCK ≈ 0.5</i>	<i>TRACE</i>	<i>—</i>
<i>9487</i> <i>9497 =</i>	<i>90.0 = 2 INCH BANDED QTZ + PY = 0.2</i>	<i>TRACE</i>	<i>—</i>
	<i>93: 6 INCHES OF VERY BLACK BANDING</i>		
	<i>91: 1 1/2 INCH QTZ VEIN</i>		
	<i>91-115 MANY QTZ STRINGERS</i>		
<i>9482</i>	<i>133-135: 2 IN QTZ VEIN + PY = 2.0</i>	<i>NIL</i>	<i>—</i>
<i>9483</i>	<i>135-138.5: QTZ STRINGERS + PY = 3.5</i>	<i>NIL</i>	<i>—</i>
	<i>139-150: HEAVILY BANDED TUFF @ 70° MANY WHITE QTZ VEINS.</i>		
<i>9484</i>	<i>139.5-141.0: QTZ + CHALC + PY = 1.5 FT.</i>	<i>NIL</i>	<i>—</i>

DIAMOND DRILL LOG

PROPERTY: *INTERNATIONAL NORVALIE MINES LTD.* HOLE NUMBER: *4*
 LOCATION: *CLAIM S-114783, KENOGAMING TWP. ONT.* DIP TESTS: *NIL*
 Latitude: *1500 NORTH* Dip: *VERTICAL* Footage Reading Corrected
 Departure: *1100 EAST* Depth: *88 FEET*
 Elevation: *LAKE SHORE* Commenced: *NOV. 10, 1971*
 Azimuth: *NIL* Finished: *" 10 "* Logged by: *M. Ogden*

SAMPLE NUMBER	DESCRIPTION	TOTAL NICKEL	SULPHIDES NICKEL
	<i>0-37: CASING, MOSTLY SAND WITH GRAVEL IN THE LAST FEW FEET.</i>	<i>90</i>	<i>90</i>
<i>9490</i>	<i>37-39: GREY SERPENTINE, VERY SOFT, VERY LITTLE SULPHIDES VISIBLE</i>	<i>0.21</i>	<i>0.15</i>
	<i>39-88: GREEN SERPENTINE WITH 18-22% FINE PYRRHOTITE & PYRITE IN FRACTURES & DISSEMINATED.</i>		
<i>9491</i>	<i>39-49: FINE SULPHIDES = 10.0 FT</i>	<i>0.25</i>	<i>0.14</i>
<i>9492</i>	<i>49-59: MORE SULPHIDES = 10.0</i>	<i>0.24</i>	<i>0.14</i>
<i>9493</i>	<i>59-69: AS IN 39-49 = 10.0</i>	<i>0.26</i>	<i>0.18</i>
<i>9494</i>	<i>69-79: AS ABOVE = 10.0</i>	<i>0.23</i>	<i>0.12</i>
<i>9495</i>	<i>79-88: " " = 9.0</i>	<i>0.20</i>	<i>0.13</i>
	<i>88: END OF HOLE</i>		

X-RAY ASSAY LABORATORIES

LIMITED

45 LESMILL ROAD

DON MILLS ONTARIO

445-5755

Certificate of Analysis

NO. 8020

TO: Halet Broadhurst & Ogden Engineering Ltd.,
360 Bay Street, Suite 1010,
TORONTO, Ontario.

RECEIVED November 16, 1971

INVOICE NO. 8020

SAMPLE(S) OF 8 S. Core & 4 rock SUBMITTED TO US SHOW RESULTS AS FOLLOWS:

Sample No.	% Ni (total)	^{SULPHUR} % S ₂ -Ni	Au oz./ton
9490	0.21	0.15	
91	0.25	0.14	62% <u>SULPHUR</u>
92	0.24	0.14	
93	0.26	0.18	
94	0.23	0.12	
95	0.20	0.13	
96	139	86	Trace
97			Trace
1	23	14	Trace
2			Trace
3			0.01
4			Trace

Rest a silicates
oxides
Alloys

Electron Probe.
Microscope.
\$100 ± for 2013 Analysis

John Buckley

X-RAY ASSAY LABORATORIES LIMITED

DATE November 18, 1971

CERTIFIED BY *E. Broad*

DIAMOND DRILL LOG

PROPERTY: *INTERNATIONAL NORVALIE MINES LTD.* HOLE NUMBER: *5*
 LOCATION: *CLAIM: S-114788, MENOGAMING TWP. ONT.* DIP TESTS *NIL*
 Latitude: *2095 NORTH* Dip: *45°* Footage Reading Corrected
 Departure: *620 WEST* Depth: *80 FEET*
 Elevation: *GROUND* Commenced: *Nov. 6, 1971*
 Azimuth: *37°T (GRID N)* Finished: *" 6. "* Logged by: *M. Ogden*

SAMPLE NUMBER	DESCRIPTION	GOLD	COPPER
	<i>0-24: CASING</i>		
<i>9485</i>	<i>24-44: GREY BANDED TUFF @ 50°</i>		
	<i>24 = 3" GRANITE, - BOULDER?</i>		
<i>9486</i>	<i>25.5-26.0: 1/2 FOOT PORPHYRY</i>	<i>NIL</i>	
	<i>42.0-42.2: 3 IN. PORPHYRY</i>	<i>NIL</i>	
<i>9487</i>	<i>44-51: LIGHT GREY CLOSELY BANDED TUFF AT 70° TO CORE</i>		
	<i>50.9-51.0: 1 INCH RUSTY QTZ. + PY</i>	<i>NIL</i>	
<i>9488</i>	<i>51-66: GREY TUFF AT 60°</i>		
	<i>61.0-61.3: 4 INCH OF QTZ + CHALCO ON BOTH WALLS</i>	<i>NIL</i>	
	<i>66-72: PINK TUFF @ 65°</i>		
	<i>72-80: GREY TUFF</i>		

DIAMOND DRILL LOG

PROPERTY: *INTERNATIONAL NORVALIE MINES LTD.*
 LOCATION: *CLAIM: S-114788, HENOGAMING TWP. ONT.*
 Latitude: *2095 NORTH* Dip: *45°*
 Departure: *680 WEST* Depth: *81 FEET*
 Elevation: *GROUND.* Commenced: *NOV. 7, 1971*
 Azimuth: *37° TRUE (GRID N)* Finished: *NOV. 8 "*

HOLE NUMBER: *6*
 DIP TESTS *NIL*
 Footage Reading Corrected

Logged by: *M. Ogden*

SAMPLE NUMBER	DESCRIPTION	GOLD	COPPER
	<i>0 - 8 : CASING</i>		
	<i>8 - 76 : GREY TUFF @ 65° TO CORE</i>		
	<i>13" 1 IN. QTZ VEIN</i>		
	<i>15" : SOME VERY BLACK BANDS</i>		
	<i>LIKE AT 92 FT. IN HOLE 3.</i>		
	<i>19 1/2" : 1 INCH QTZ.</i>		
<i>9489</i>	<i>33.0 - 34.0 : QTZ BANDS IN FRACTURES</i>	<i>NIL</i>	
	<i>WITH PYRITE IN FRACTURES</i>		
	<i>47 : 1 INCH QTZ</i>		
	<i>57 : OPEN CRACK, SAND IN IT.</i>		
	<i>73 : 3 INCH QTZ.</i>		
	<i>76 : TWO 1/2 INCH QTZ STRINGERS</i>		
	<i>76 - 81 : LIGHT GREY TUFF @ 65° WITH</i>		
	<i>SOME QTZ STRINGERS.</i>		
	<i>81 END OF HOLE</i>		

HOLLINGER MINES LTD.

Lab Report

No. 13060

From H. B. & O. Engineering

Extraction HNO_3 - HCl

Date Nov. 10, 1971

Method Atomic Absorption.

Analyst L.B.

Fraction Used - 100 mesh

SAMPLE NO.	Au oz/ton	REMARKS
9405	Nil	
9400	Nil	
9487	Nil	
9400	Nil	
9489	Nil	
Hole #5		SLUDGE - DDM - 5
20-30	Nil	
30-40	Nil	
40-50	Nil	
50-60	Nil	
60-70	Nil	
70-80	Nil	
Hole #6		SLUDGE DDM - 6.
10-20	Nil	
20-30	Nil	
30-40	Nil	
40-50	Nil	
50-60	Nil	
60-70	Nil	
70-81	Nil	

INVOICE

● X-RAY ASSAY LABORATORIES

LIMITED

45 LESMILL ROAD

DON MILLS ONTARIO

445-5755

Halet Broadhurst & Ogden Engineering Ltd.,
360 Bay Street, Suite 1010,
Toronto, Ontario.

DATE Nov. 18, 1971

INVOICE No 8020

ASSAY REPORT NO. 8020

ITEM		PRICE	AMOUNT
6	% Ni (total)	@4.50	\$ 27.00
6	% S ₂ -Ni	@4.50	27.00
6	Gold Assays	@3.50	21.00
<p align="center"><i>O.K. - M.O. ASSAYING - NORMAL</i></p> <p align="center"><i>Pd. Dec 7/71</i></p> <p align="center"><i>IF 560</i></p>			\$ 75.00

TERMS. NET 30 DAYS

4 1/2 M

SEWELL TWP. 3M

3.2 MI. TO HWY

1 1/2 M

INTERNATIONAL NORVALIE MINES LTD.

NICKEL-GOLD OPTION IN

KENOGAMING TWP.

DISTRICT OF SUDBURY

NOW IN PORCUPINE MINING DIVISION

SCALE: 1 IN. = 1/2 MI.

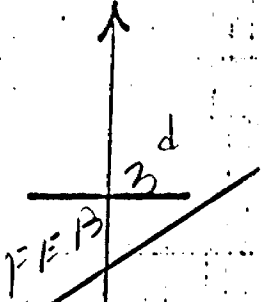
by
MICHAEL ORDEN OCT. 2, 1970

REVISED WITH TRACTOR
ROAD OCT. 20 / 71

7 MILES TO
HIGHWAY

AKWESKHA
LAKE

EXP. RD



FALCONBRIDGE
CLAIMS
(PATENTED)

S		S		6		S		S		P		P	
125300	125301	125299		114788	114782	124783	282173	282174	282175	282176	282177	282178	282179
125297	125298	125295		114785	114783	114789	282180	282181	282182	282183	282184	282185	282186
125293	125292	124781	114789	114785	114783	282177	282178	282179	282180	282181	282182	282183	282184
124782	114789	114785	114783	282177	282178	282179	282180	282181	282182	282183	282184	282185	282186
209876	209877	209878	209879	209880	209881	209882	209883	209884	209885	209886	209887	209888	209889

M.O.

STEATITE
TALCOSE PERID
± PY + PENT.

S-114786

APPROX. LOC. OF
DDH-7 DRAILED FEB
1957 TO 1060 FT AT
75°. RETURNED 1020'
OF 0.26% NiKEL.

SOUTH BAY OF AKWESKWA
IN THE NORTH EAST CORNER
OF KENO GAMING TOWNSHIP
ONTARIO. CAN.

S-114783

No 1
BANDIED TUFF @ 45° SHEARING AT 35°
3.0' OF PY + QT @ 38" = 0.07 oz Au.
50 TO 103'
BANDIED TUFF SOME PY + QTZ.
No 2
BANDIED TUFF
No 3
BASE TO 12'
THEN BANDIED TUFF
SEAMS = 5' PY + CP Pb = 0.92 Au.
SEAMS = 0.16 oz Au.
SEAMS = 5' SEVERAL 2" MASS. PY
50 TO 115'
POSSIBLE S.P.

S-114788

14785

1" 200'
M.O.

No 4

2000 N

D-4 @ 45° to 55°

D-6 @ 45° to 55°

FALK #3 @ 50° to 55°

FALK. N-16 @

VARIOUS GR

12E

V. 171

STEATIZED &
TALCOS PERIDOTITE
± PY + PENT.

No 1

5-11-4786

BANDED TUFF @ 45° SHEARING AT 35°
3-0' OF PY + QT @ 38' = 0.07 oz Au.

65' @ -50 to 103'

No 2

No 5

@ -50° to 101°

DABASE TO IL THEN BANDED TUFF
@ 65' = 5' PY + CP + PB = 0.97 Au.
@ 70' = 5' SEVERAL 2" MASS. PY
SEAMS = 0.16 oz Au.

BANDED TUFF SOME PY + QTZ.

-50 to -175
POSSIBLE S.P.

11" = 260'

1770.



APPROX. LOC. OF
DDH-7 DRILLED FEB
1957 TO 1060 FT AT
75° RETURNED 1020'
OF 0.26% NKAEL.

SOUTH BAY OF AKWESKWA
IN THE NORTHEAST CORNER
OF KENOGAMING TOWNSHIP,
ONTARIO, CAN.

LAKE,

5-114783

Nº 4

(3 REVISIONS AVAILABLE)

14E

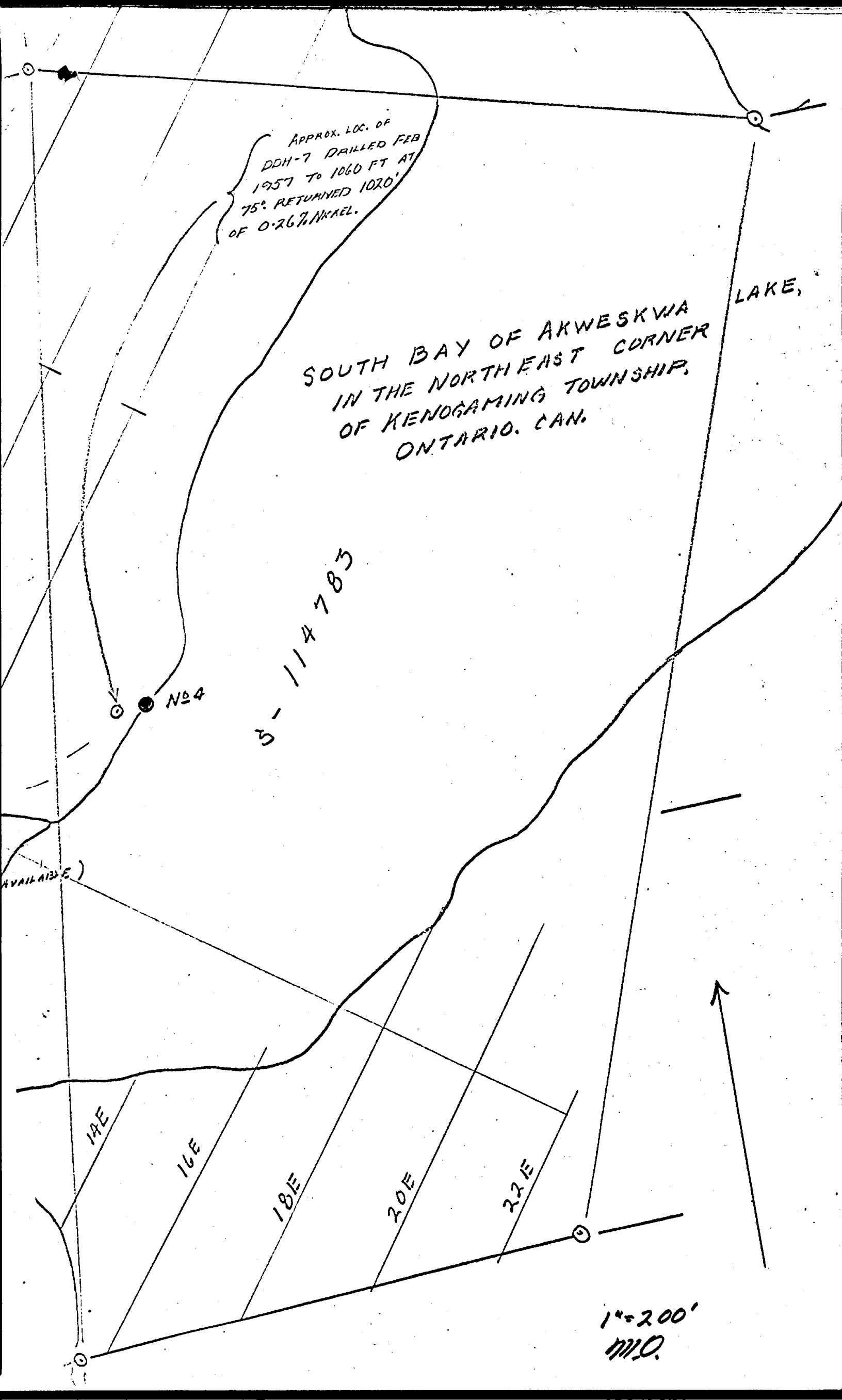
16E

18E

20E

22E

1"=200'
M.D.



Duplicate
Report

INTERNATIONAL NORVALIE MINES LIMITED
SUITE 1010, 360 BAY STREET
TORONTO, ONTARIO.

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KENOGAMING TOWNSHIP PROPERTY
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BY

MICHAEL OGDEN, B.A.Sc., P.Eng.
TORONTO, ONTARIO

DECEMBER 15, 1971.

H. B. & O. ENGINEERING LIMITED

- 1 -

INTRODUCTION:

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SUMMARY OF DRILL RESULTS:

HOLE No. 1.

ON LINE 8 WEST AT 2400 NORTH, DRILLED TO THE NORTH TO PROBE A VERY HIGH, NARROW, MAGNETIC ANOMALY (15,000 GAMMA RELIEF OVER 25 FEET) WHICH SEEMED ALSO TO BE A WEAK CONDUCTOR. THE HOLE ENCOUNTERED BANDED TUFFS WITH AN 8 FOOT SECTION OF GREEN SHEAR ZONE AT 107 FEET. THE SHEAR IS CERTAINLY THE WEAK CONDUCTOR AND PROBABLY THE MAGNETIC ZONE AS WELL.

HOLE No. 2.

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HOLES 3, 5 & 6.

WERE DRILLED TO TRY AND RELOCATE THE GOOD GOLD INTERSECTION OF OLD HOLE No. 1 WHICH WAS DRILLED IN SEPTEMBER OF 1960. AN INTERSECTION OF 0.92 OUNCES OF GOLD WAS ENCOUNTERED AT THAT TIME AT 65 FEET IN THE HOLE. SUCH VALUES COULD NOT BE REPEATED.

HOLES 1 & 2 SHOWED THAT THE FORMATIONS DIP TO THE SOUTHWEST AND THE GEOPHYSICS SHOWED A SOUTHEAST STRIKE. HENCE 3 5 & 6 WERE DRILLED TO THE NORTHEAST TO CUT THE STRATA AT RIGHT ANGLES. THE HOLES WERE ONLY 30 FEET APART, YET IT WAS VERY DIFFICULT TO CORRELATE ONE HOLE WITH THE NEXT. THE BLACK BANDING AT 93 FEET IN No. 3 SEEMS TO BE THE SAME ZONE AS AT 15 FEET IN No. 6, BUT NO QUARTZ VEINING

...2/

COULD BE CORRELATED FROM ONE HOLE TO THE NEXT.

ASSAYS OF HOLES 2, 3, 5 & 6.

THE SLUDGE WAS COLLECTED FROM EACH 10 FOOT LENGTH OF EACH OF THESE HOLES AND ASSAYED FOR GOLD. ONLY ONE SAMPLE (105 - 110 FEET IN HOLE No. 3) SHOWED ANY GOLD AND THE NEARBY VEINS IN THAT HOLE WERE DOUBLE ASSAYED TO NO AVAIL. ALL INTERESTING LOOKING VEINS WERE SAMPLED AND ASSAYED SEPARATELY.

HOLE No. 4.

WAS DRILLED AT THE LAKESHORE TO RESAMPLE THE OLD HOLE No. 7 WHICH WAS DRILLED IN 1957 AND RETURNED 1020 FEET OF 0.26% NICKEL. THE FIRST 51 FEET OF ROCK, THAT IS 37 TO 88 FEET IN No. 4 AVERAGED 0.23% NICKEL WHEREAS THE FIRST 50 FEET OF THE OLD HOLE RAN 0.20% NICKEL. AN ACID SOLUBLE NICKEL ASSAY WAS ALSO RUN, WHICH RETURNED 0.14% NICKEL FOR THE 51 FEET. THIS SUGGESTS THAT ABOUT 60% OF THE NICKEL IS IN THE NORMAL SULPHIDE MINERALS AND COULD BE EXTRACTED BY STANDARD METALLURGICAL PROCESSES.

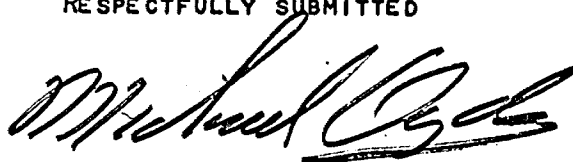
CONCLUSIONS.

1. THE GOLD SEEMS TO OCCUR IN AN ERRATIC MANNER WITHIN VERY SHORT QUARTZ VEINS. THE MOST ECONOMICAL METHOD OF EXPLORATION IS PROBABLY TO BULLDOZE LARGE AREAS OF POSSIBLE MINERALIZATION, CLEAR THEM OF OVERBURDEN, WASH THE ROCK CLEAN, THEN MAP, SAMPLE AND ASSAY THE VEINS.
2. WHEN NICKEL GETS BACK ABOVE \$1.50 PER POUND THE POSSIBILITY OF A LARGE LOW GRADE OPEN PIT NICKEL OPERATION SHOULD BE CONSIDERED. IT APPEARS THAT SOMEWHERE BETWEEN 2 & 3 LBS. OF NICKEL PER TON OF ROCK MAY BE RECOVERABLE.

...3/

3. THERE IS STILL ONE GOOD COMBINED MAGNETIC AND ELECTROMAGNETIC ANOMALY THAT SHOULD BE TESTED. IN CLAIMS S-124782 AND 125292, JUST SOUTH OF THE RIVER NEAR LINE 16 WEST. THIS ZONE OF PROBABLE FAULTING AND POSSIBLE MINERALIZATION COULD BE INVESTGATED WITH A FEW LINES OF GEOCHEMICAL SOIL SAMPLING AT ABOUT 25 FEET INTERVALS. IF AN INDICATION OF MINERALIZATION WERE OBTAINED, THEN THE AREA COULD BE TRENCHED OR DIAMOND DRILLED.

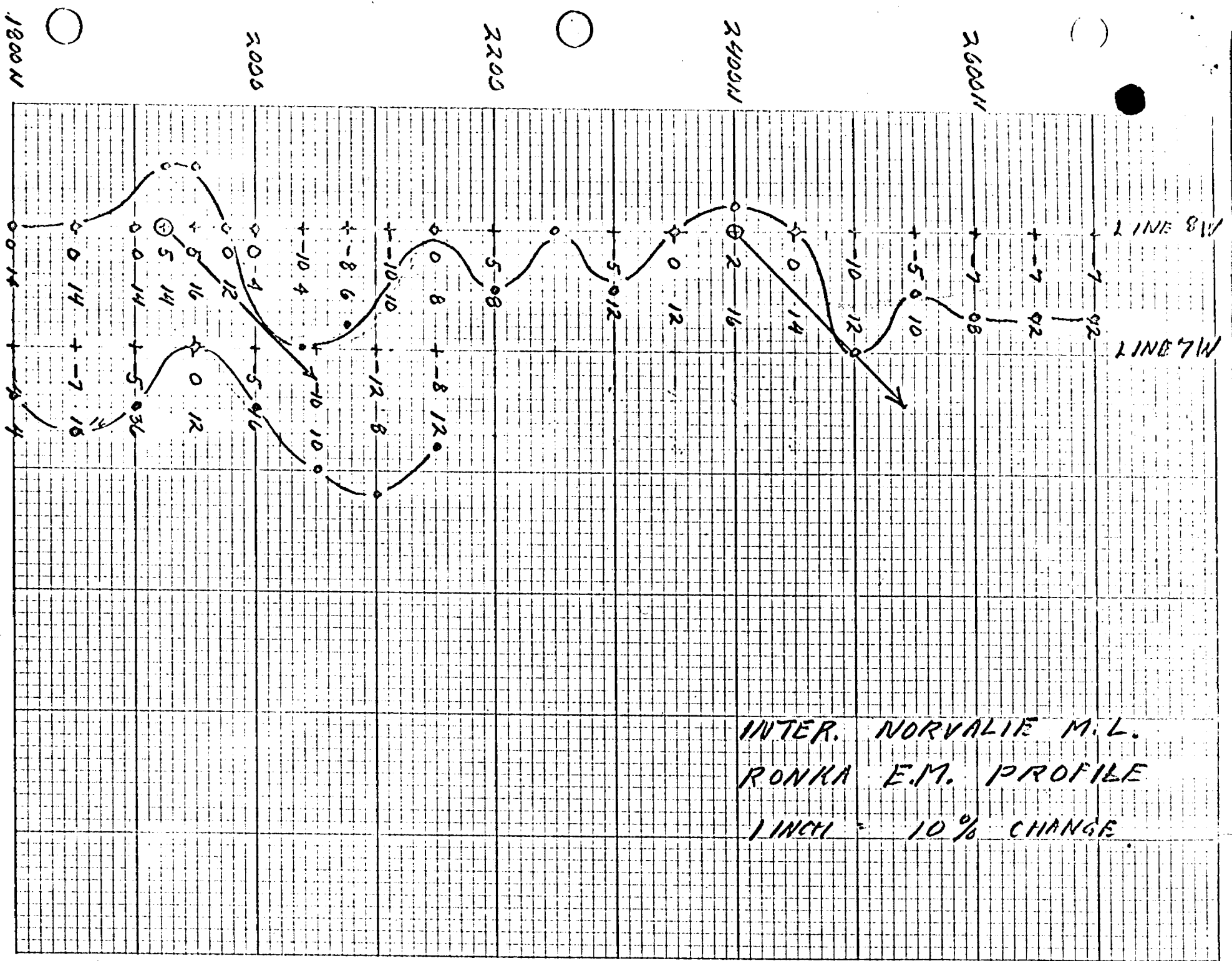
RESPECTFULLY SUBMITTED

A handwritten signature in black ink, appearing to read "Michael Ogden", written in a cursive style.

MICHAEL OGDEN

TORONTO, ONTARIO.

DECEMBER 15, 1971.



INTER. NORVALIE M.L.
 RONKA E.M. PROFILE
 1 INCH = 10% CHANGE

1 IN. = 100 FT

4 1/2 M

SEWELL TWP. 3M

3.2 MI. TO HWY

1/2 M

INTERNATIONAL NORVALIE MINES LTD.

NICKEL-GOLD OPTION IN

KENOGAMING TWP.

DISTRICT OF SUDBURY

NOW IN PORCUPINE MINING DIVISION

SCALE: 1 IN. = 1/2 MI.

by
MICHAEL ORDEN OCT. 2, 1970

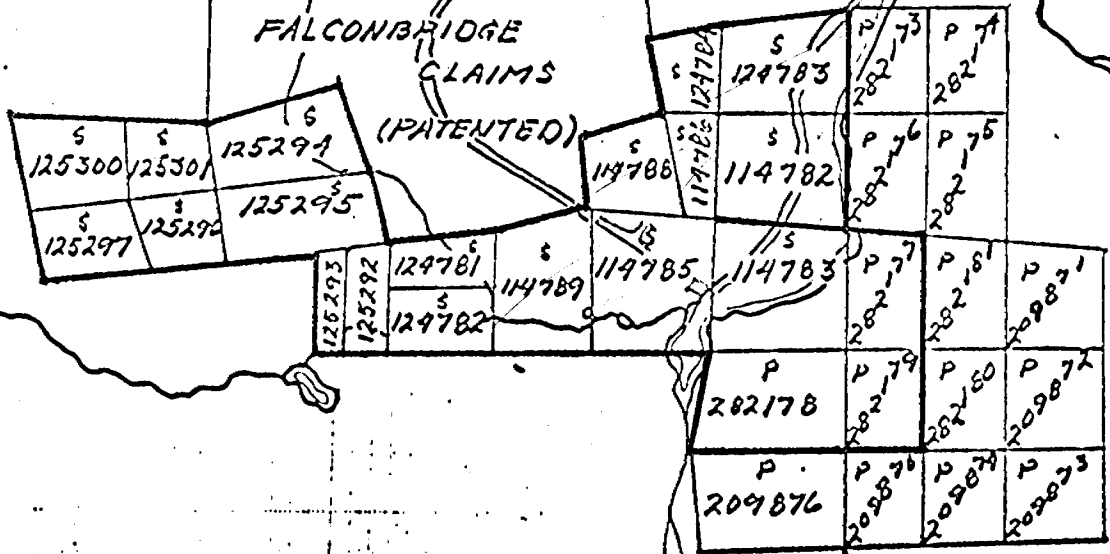
REVISED WITH TRACTOR
ROAD OCT. 20 / 71

7 MILES TO
HIGHWAY

AKWESKWA
LAKE

FALCONBRIDGE
CLAIMS

(PATENTED)



MO.

25/172
Glenragan
Dorset N.S.W.

2000 N

D-4 at 45° to 236

D-6 at 45° to 236

FALK #3 @ 50° to 30

STEATIZED &
TALCOS PERIDOTITE
± PY + PENT.

FALK. N-16 @
VARIOUS GRIT
V.I.P.

No 1

BANDED TUFF @ 45° SHEARING AT 35°
3.0' OF PY & QT @ 38' = 0.07 oz Au.

65' @ -50 to 103'

No 2

No 4

No 5

65' @ -50 to 101'

BANDED TUFF SOME PY & GTZ.

DIABASE TO TL THEN BANDED TUFF
@ 65' = 5' PY + CP @ Pb = 0.92 Au.
@ 70' = 5' SEVERAL 2" MASS. PY
SEAMS = 0.16 oz Au.

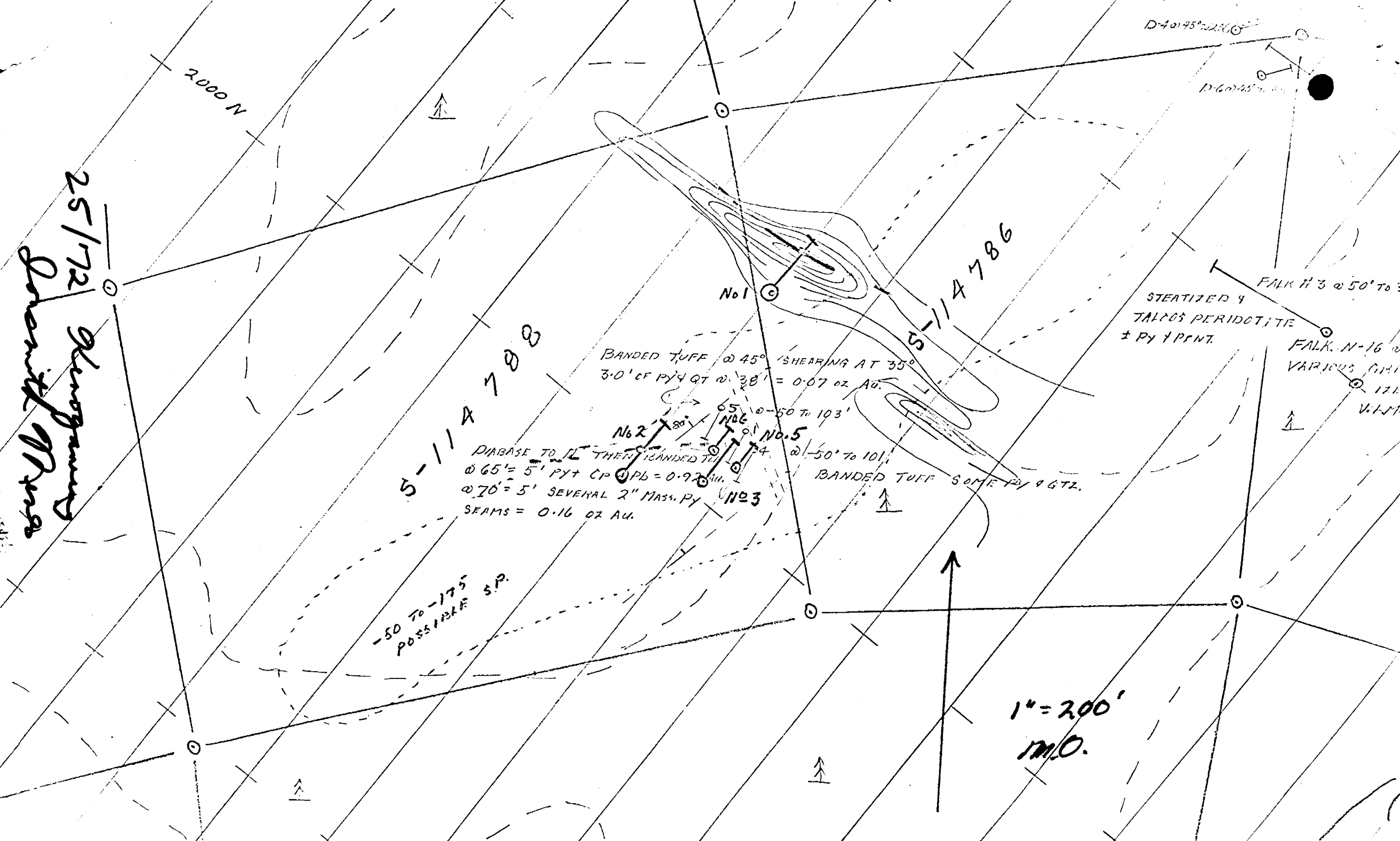
No 3

-50 to -175
POSSIBLE SP.

1" = 200'
M.O.

5-11-A-788

5-11-A-786



APPROX. LOC. OF
DDH-7 DRILLED FEB
1957 TO 1060 FT AT
75° RETURNED 1020'
OF 0.26% NICKEL.

SOUTH BAY OF AKWESKWA
IN THE NORTHEAST CORNER
OF KENOGAMING TOWNSHIP,
ONTARIO, CAN.

LAKE,

S-114783

N24

(AVAILABLE)

14E

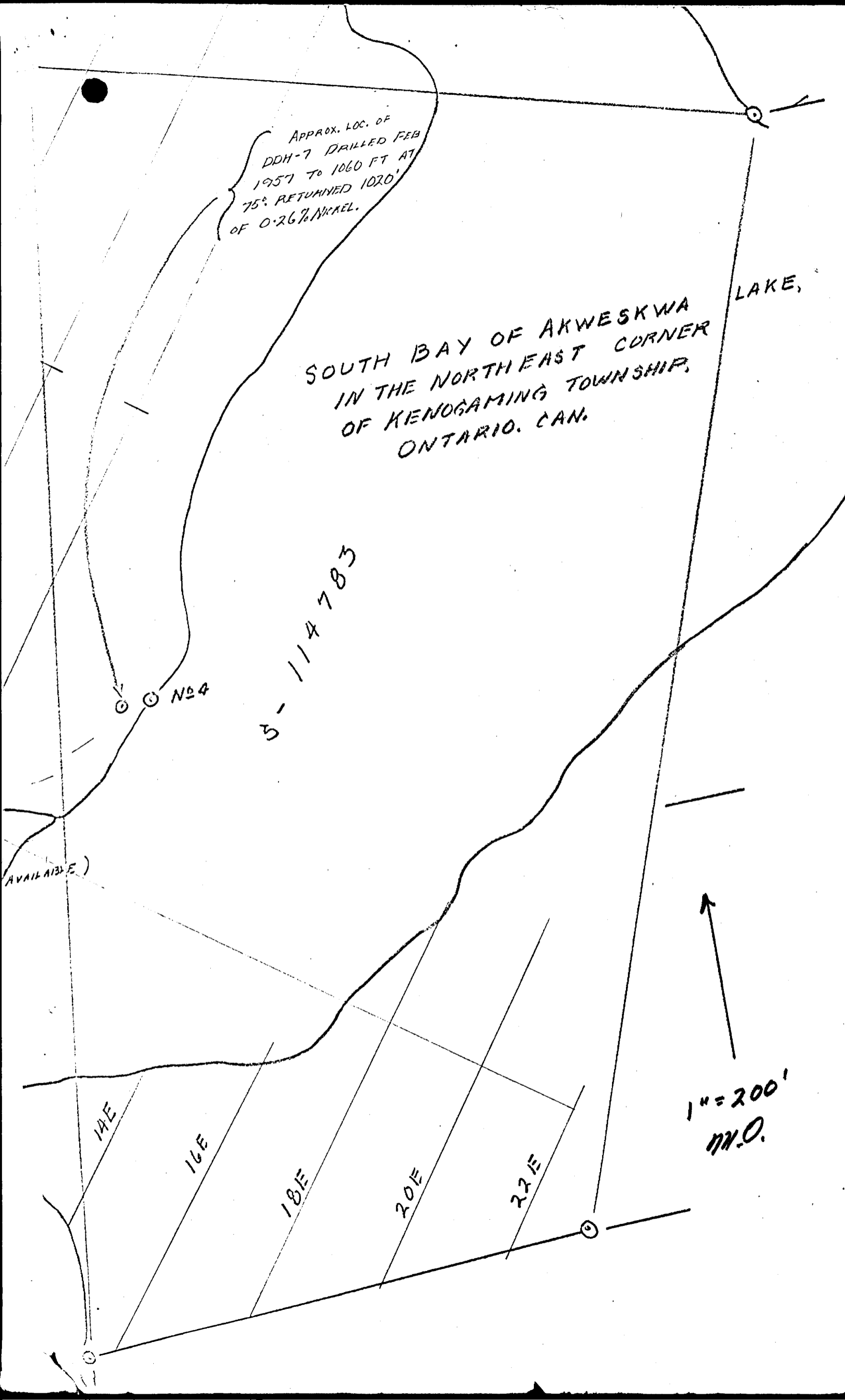
16E

18E

20E

22E

1" = 200'
N.O.



DIAMOND DRILL LOG

COMPANY: *INTERNATIONAL NORVALIE MINES LTD.* HOLE NUMBER: *1.*
 LOCATION: *CLAIM S-114786, MENOGAMING TWP. ONT.* DIP TESTS: *NIL*
 Latitude: *2460 NORTH* Dip: *45°* Footage Reading Corrected
 Departure: *LINES 8 WEST* Depth: *175 FT.*
 Elevation: *GROUND* Commenced: *OCT 27/91*
 Azimuth: *GRIP NORTH 37°* Finished: *OCT. 28* Logged by: *M. Ogden*

SAMPLE NUMBER	DESCRIPTION	Au.	Cu.
	<i>0-13 : CASING</i>		
	<i>13-107: BANDED GREENSTONE TUFF. A DARK GREEN TO BLACK ROCK WITH DISTINCT LIGHT GREY BANDS OF 1/2 TO 4 INCHES IN WIDTH AT 70° ± 10° TO CORE 87 = 1/4" QTZ VEIN AT 90° + PYRITE FOR 1 INCH</i>		
<i>#1</i>	<i>107-115 : GREEN SHEAR ZONE. FINE GRAINED, WELL SHEARED. 107.0-107.5 = 1/2 FOOT OF 4% PYRITE IN FINE BANDS =</i>	<i>NIL</i>	<i>0.1%</i>
<i>#2</i>	<i>115-175 : GREY BANDED TUFF 128-129 = 1 FOOT OF SILICEOUS SHEARING AT 80° + 2% PYRITE AND A 1 INCH QTZ VEIN.</i>	<i>NIL</i>	<i>0.035%</i>
<i>#3</i>	<i>156-157 = 1 FOOT WITH A 1". SHEAR AT 80° CONTAINING 1/8" BAND OF CHALCOPYRITE AND ANOTHER 1"</i>	<i>NIL</i>	<i>0.32%</i>

SAMPLE NUMBER	DESCRIPTION	GOLD	COPPER
173	156-157 CONTINUED SHEAR WITH A GOB OF CHALCO. 175 END OF HOLE.	NIL	0.32%

DIAMOND DRILL LOG

COMPANY: INTERNATIONAL NORVALIS MINES LTD. HOLE NUMBER: 2
 LOCATION: CLAIM: S-114788, MENDHAMING TWP. ONT. DIP TESTS NIL
 Latitude: 1925 NORTH Dip: 45° Footage Reading Corrected
 Departure: 805 WEST Depth: 152 FT.
 Elevation: GROUND Commenced: 29 OCT. /71
 Azimuth: 37° TRUE Finished: 30 " Logged by: M. Ogden

SAMPLE NUMBER	DESCRIPTION		
	0-10 : CASING		
	10-43 : BANDED GREY TUFF AT 45°, FEW SPECKS OF PYRITIC		
	43-63 : WHITE SHEARED SERPENTINE WITH CALCITE STRINGERS. BANDING AT 90° TO CORE.		
	63-75 : DARK SERPENTINE WITH CALCITE STRINGERS AT VARIOUS ANGLES.		
	75-90 : GRAY TUFF		
	90-152 : DIABASE WITH GREEN ISLANDS OF EPIDOTE?. TRACE OF PY. & CP.		
	152 END OF HOLE		

DIAMOND DRILL LOG

PROPERTY: *INTERNATIONAL NORVALINE MINES LTD.* HOLE NUMBER: *3*
 LOCATION: *CLAIM: 6-114788, HENDEMINING TWP. ONT.* DIP TESTS *NIL*
 Latitude: *2025 NORTH* Dip: *45°* Footage Reading Corrected
 Departure: *650 WEST* Depth: *150 FEET*
 Elevation: *GROUND* Commenced: *OCT. 31, 1971*
 Azimuth: *37°T (GRID NORTH)* Finished: *NOV. 1.* Logged by: *M. Ogden*

SAMPLE NUMBER	DESCRIPTION	GOLD	COPPER
	0-22 CASING		
	22-25 GRANITE		
9477	22.0-22.5: BROKEN RUSTY QTZ. 1/2 FT.	NIL	-
	25-42: GREY, EVEN, TUFF		
9478	25.5-26.0: BROKEN RUSTY QTZ. 1/2 FT.	NIL	-
9479	27: 3 INCHES QTZ + PYRITE = 0.2 FT.	NIL	-
9480	31.0-31.6: QTZ + PY = 0.6 FT.	NIL	-
	42-70: GREY-GREEN, FINE PINK LINED TUFF @ 60° TO CORE		
	70-139: GREY BANDED TUFF AT 60° TO CORE		
9481	90.0-90.2: 2 INCH QTZ VEIN = 0.2	NIL	-
9496	- OR - 90.0-90.5 = BROKEN ROCK = 0.5	TRACE	-
9487 9497 =	90.0 = 2 INCH BANDED QTZ + PY. = 0.2	TRACE	-
	93: 6 INCHES OF VERY BLACK BANDING		
	91: 1 1/2 INCH QTZ VEIN		
	91-115 MANY QTZ STRINGERS		
9482	133-135: 2 IN QTZ VEIN + PY 2.0	NIL	-
9483	135-138.5: QTZ STRINGERS + PY = 3.5	NIL	-
	139-150: HEAVILY BANDED TUFF @ 70° MANY WHITE QTZ VEINS.		
9484	139.5-141.0: QTZ + CHALC + PY = 1.5 FT.	NIL	-

DIAMOND DRILL LOG

Company: INTERNATIONAL NORVALIE MINES LTD.

HOLE NUMBER: 4

Location: CLAIM S-114783, MENOGAMING TWP. ONT.

DIP TESTS NIL

Latitude: 1500 NORTH

Dip: VERTICAL

Footage

Reading

Corrected

Departure: 1100 EAST

Depth: 88 FEET

Elevation: LAKE SHORE

Commenced: NOV. 10, 1971

Azimuth: NIL

Finished: " 10 "

Logged by:

M. Ogden

SAMPLE NUMBER	DESCRIPTION	TOTAL	SULPHIDES
		NICKEL	NICKEL
	0-37: CASING, MOSTLY SAND WITH GRAVEL IN THE LAST FEW FEET.	90	90
9490	37-39: GREY SERPENTINE, VERY SOFT, VERY LITTLE SULPHIDES VISIBLE	0.21	0.15
	39-48: GREEN SERPENTINE WITH 1% 2% FINE PYRRHOTITE & PYRITE IN FRACTURES & DISSEMINATED.		
9491	39-49: FINE SULPHIDES = 10.0 FT	0.25	0.14
9492	49-59: MORE SULPHIDES = 10.0	0.24	0.14
9493	59-69: AS IN 39-49 = 10.0	0.26	0.18
9494	69-79: AS ABOVE = 10.0	0.23	0.12
9495	79-88: " " = 9.0	0.20	0.13
	88: END OF HOLE		

DIAMOND DRILL LOG

COMPANY: INTERNATIONAL NORVALIE MINES LTD. HOLE NUMBER: 5
 LOCATION: CLAIM: S-114788, KENOGAMING TWP. ONT. DIP TESTS: NIL
 Latitude: 2095 NORTH Dip: 45° Footage Reading Corrected
 Departure: 620 WEST Depth: 80 FEET
 Elevation: GROUND: Commenced: Nov. 6, 1971
 Azimuth: 37°T (GRID N) Finished: " 6. " Logged by: M. O. Oden

SAMPLE NUMBER	DESCRIPTION	GOLD	COPPER
	0-24: CASING		
9105	24-44: GREY BANDED TUFF @ 50°		
9106	24 = 3" GRANITE, - BOULDER?		
	25.5-26.0: 1/2 FOOT PORPHYRY	NIL	
	42.0-42.2: 3 IN. PORPHYRY	NIL	
9107	44-51: LIGHT GREY CLOSELY BANDED TUFF AT 70° TO CORE		
	50.9-51.0: 1 INCH RUSTY QTZ. + PY	NIL	
9108	51-66: GREY TUFF AT 60°		
	61.0-61.3: 4 INCH OF QTZ + CHALCO ON BOTH WALLS	NIL	
	66-72: PINK TUFF @ 65°		
	72-80: GREY TUFF		

DIAMOND DRILL LOG

INTERNATIONAL NORVALIE MINES LTD.

HOLE NUMBER: **6**

LOCATION: CLAIM: **S-114788, MENOGAMING TWP. ONT.**

DIP TESTS **NIL**

Location: **2095 NORTH** Dip: **45°**

Footage Reading Corrected

Depth: **680 WEST** Depth: **81 FEET**

Elevation: **GROUND.** Commenced: **NOV. 7, 1971**

Azimuth: **37° True (GRID N)** Finished: **NOV. 8 "** Logged by: **M. Ogden**

SAMPLE NUMBER	DESCRIPTION	GOLD	COPPER
	0 - 8 : CASING		
	8 - 96 : GREY TUFF @ 65° TO CORE		
	13° 1 IN. QTZ VEIN		
	15° : SOME VERY BLACK BANDS		
	LIKE AT 92 FT. IN HOLE 3.		
	19½° : 1 INCH QTZ.		
9409	33.0 - 34.0 : QTZ BANDS IN FRACTURES	NIL	
	WITH PYRITE IN FRACTURES		
	47° : 1 INCH QTZ		
	57° : OPEN CRACK, SAND IN IT.		
	73° : 3 INCH QTZ.		
	76° : TWO ½ INCH QTZ STRINGERS		
	76 - 81 : LIGHT GREY TUFF @ 65° WITH		
	SOME QTZ STRINGERS.		
	81 END OF HOLE		

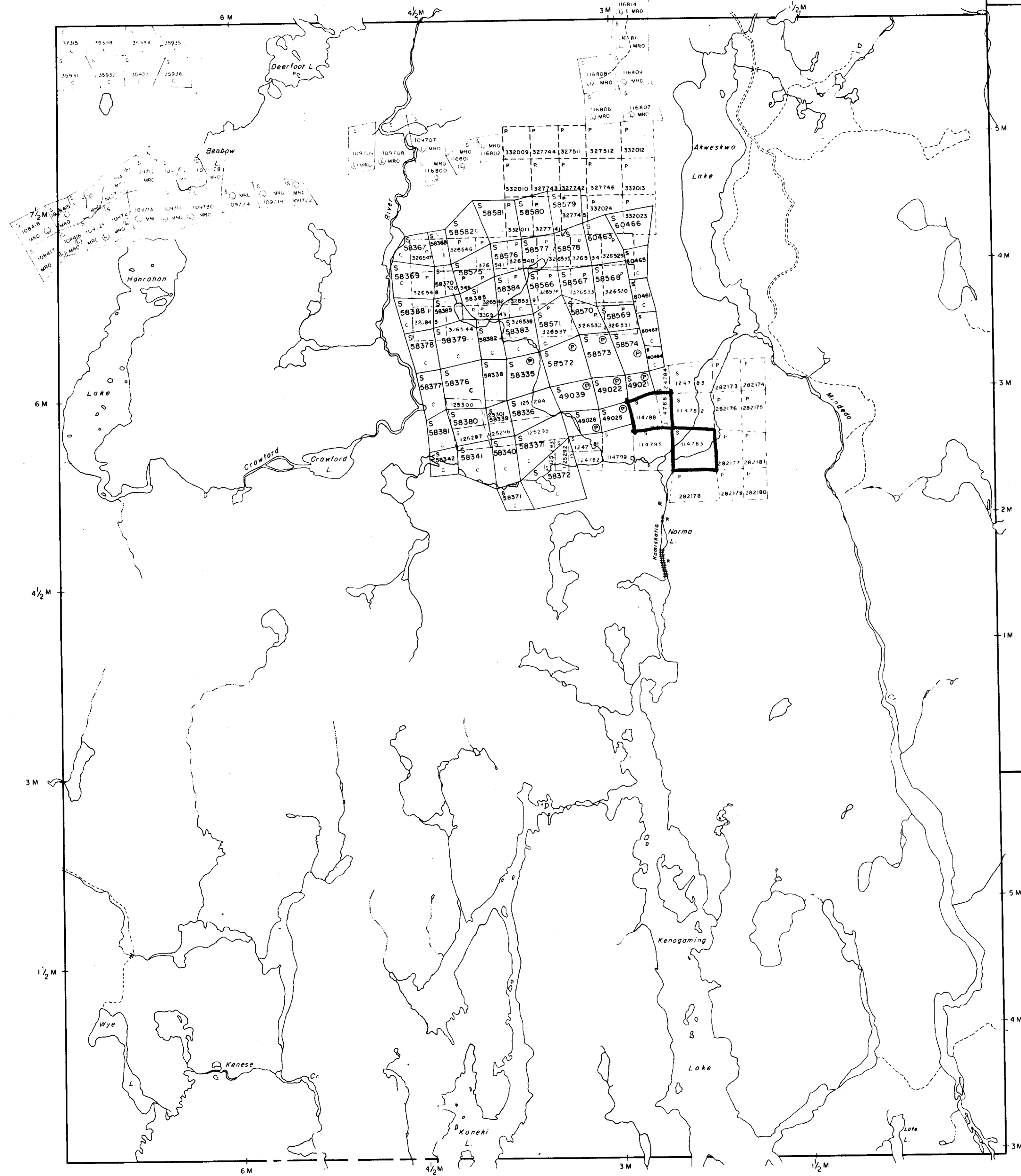
Penhorwood Twp. M. 1055

Sewell Twp. M. 1102

Pharand Twp. M. 306

Crothers Twp. M. 742

Regan Twp. M. 1075



THE TOWNSHIP
Claim OF Map
KENOGAMING

DISTRICT OF
 SUDBURY

PORCUPINE
 MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	Ⓟ
CROWN LAND SALE	C.S.
LEASES	Ⓛ
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
ROADS	—
IMPROVED ROADS	—
KING'S HIGHWAYS	—
RAILWAYS	—
POWER LINES	—
MARSH OR MUSKEG	—
MINES	Ⓜ
CANCELLED	C.

NOTES

400' Surface Rights reservation around all
 Lakes & Rivers.

DATE OF ISSUE

FEB 20 1972

ONT. DEPT. OF MINES
 AND NORTHERN AFFAIRS

PLAN NO.- **M. 967**

**ONTARIO
 DEPARTMENT OF MINES
 AND NORTHERN AFFAIRS**



2.765