



52F11NE0260 10 BUCHAN BAY (EAGLE LA

010

### Diamond Drilling

Area of Buchan Bay

Report N<sup>o</sup> 10

Work performed by: Frederick Mg. & Magdalena Red Lake Mines

Claim N <sup>o</sup>	Hole N <sup>o</sup>	Footage	Date	Note
K12233	1	500'	Aug/49	(1)
	4	503.2'	Aug/49	(1)
K12181	5	301'	Aug/49	(1)
	51-1		Sept/51	(2)
	51-2	169'	Sept/51	(2)
	51-3	182'	Sept/51	(2)
	M-1	371'	Sept/51	(2)
K12182	M-1	500'	Feb/72	(2) (3)
	51-4	405'	Sept/51	(2)
	51-5	250'	Sept/51	(2)
	M-2	500'	Feb/72	(2) (3)

3681.2'

#### Notes:

- (1) Frederick Mg.
- (2) Magdalena
- (3) Not filed for assessment credits

FOOTAGE	FORMATION
102.0' - 133.5' p	Basic lavas, intermediate to fine grained, sheared and mineralized with pyrite, pyrrhotite and minor chalcopyrite - approx. 1%
117.9' - 133.5'	Basic dyke, fine grained, sheared and mineralized with approx. 2% pyrrhotite, pyrite and chalcopyrite.
133.5' - 168.8'	Intermediate to basic lavas, moderately sheared, mineralized by 1-2% pyrite, pyrrhotite and minor amounts of chalcopyrite.
	139.8'-141.4' Intermediate-basic lavas, porphyritic.
168.8'-176.7'	Intrusive feldspar Porphyry, no appreciable mineralization.
176.7'-192.6'	Intermediate - basic lavas, slightly altered and mineralized by 2-3% pyrrhotite and pyrite.
192.6'-193.8'	Feldspar-Porphyry as above.
193.8'-219.6'	Intermediate - basic lavas, mineralized by less than 1% pyrite and pyrrhotite.
219.6'-223.4'	Feldspar Porphyry - no appreciable mineralization.
223.4'-267.1'	Intermediate - basic lavas as above, altered and porphyritic in part. Mineralized by less than 1% pyrrhotite and pyrite.
267.1' - 278.5'	Feldspar Porphyry, characterized by well-developed white and pink feldspar phenocrysts.
278.5' - 317.1'	Intermediate - basic lavas, slightly carbonated and silicified. Sparsely mineralized by pyrrhotite and pyrite.

FREDERICK MINING & DEVELOPMENT ( CONTINUED)

Hole No. 1.  
Sheet No. 3.

---

FOOTAGE

FORMATION

---

317.1' - 338.9'

Intermediate - basic lavas, altered and recrystallized. No appreciable mineralization.

338.9' - 407.5'

Intermediate lavas quite massive, containing numerous narrow carbonate stringers. No appreciable mineralization.

407.5' - 500.0'

Intermediate lavas, well silicified and slightly carbonated. Lavas are characteristically light green in color. Alterations and shearing are evident, but lavas are not appreciably mineralized. Lavas are porphyritic in part.

END OF HOLE.

# EAGLE LAKE AREA

PROPERTY: Frederick Mining & Development Co. Ltd.  
Eagle Lake, District of Kenora, Ont.

Hole No. 1.

LOCATION:

700 ft. E 300' N of No. 3 Post  
Claim No. K12233

Date Drilled Aug 29th-Sept 4th, 1949

BEARING: True West.  
DIP : -45°

DIAMOND DRILL RECORD.

FOOTAGE.	FORMATION
0 - 3.0'	Overburden.
3.0' - 47.3'	Basalt - dark colored rock, fine grained and quite massive. Lavas contain occasional very narrow quartz and carbonate veinlets. Mineralized by less than 1% pyrrhotite and pyrite. 30.0' - 47.3' - Well sheared lavas, mineralized by approx. 2% pyrite and pyrrhotite.
47.3' - 49.7'	Quartz-feldspar Porphyry - no visible mineralization. Porphyry is characterized by well formed pink feldspar and white quartz phenocrysts.
49.7' - 62.1'	Basalt lavas as above, slightly mineralized by pyrite and pyrrhotite.
62.1' - 65.2'	Quartz-feldspar Porphyry, mineralized by approx. 1% pyrrhotite, pyrite and very minor amounts of chalcopyrite.
65.2' - 78.3'	Intermediate to basic lavas, well sheared and slightly mineralized by pyrrhotite and pyrite.
78.3' - 81.8'	Feldspar porphyry mineralized by less than 1% pyrrhotite, pyrite and chalcopyrite.
81.8' - 91.8'	Intermediate to basic lavas, sheared and mineralized by less than 1% pyrrhotite.
91.8' - 102.0'	Feldspar porphyry, characterized by well formed white feldspar phenocrysts; no mineralization.

PROPERTY: Magdalena Red Lake Mines Ltd,  
Eagle Lake, District of Kenora, Ont.

Hole No. 4.

DIAMOND DRILL RECORD.

LOCATION: 700 feet W of No.1. Post  
Claim No. K-~~4223~~  
Collared on Small Island.

Date Drilled - Aug.4th - 12th,1949.

BEARING: S 65° W  
DIP : -45 degrees

EAGLE LAKE  
AREA

FOOTAGE	FORMATION
0 - 4.9'	Overburden.
4.9' - 9.5'	Intermediate lavas, quite well altered - no mineralization.
9.5' - 55.0'	Quartz-feldspar porphyry, containing well-defined blue quartz and white feldspar phenocrysts. Some sections contain a high percentage of ferro-magnesian minerals, mostly hornblende. Mineralized by approx. 1% pyrrhotite.
55.0' - 60.0'	Lost core.
60.0' - 86.7'	Quartz-feldspar porphyry as above. Sharp contact at 45° with lavas.
86.7' - 93.7'	Intermediate lavas, well fractured. The narrow fracture planes are filled with quartz and carbonate. Mineralized by less than 1% pyrrhotite.
93.7' - 99.6'	Tuff-well mineralized by 2 - 3% pyrrhotite, pyrite and chalcopyrite. Tuff is well banded at about 45° to core, some layers replaced by siliceous material.
99.6' - 103.1'	Quartz-feldspar porphyry.
103.1' - 109.0'	Sheared and mineralized contact zone - several small quartz stringers up to 4" containing 10-20% pyrite with minor chalcopyrite and pyrrhotite. Zone contains 5-10% sulphides.
109.0' - 135.0'	Andesite - fairly massive - very occasional fractures. Disseminated sulphide mineralization maybe pyrrhotite.
	123.0' - 127.0' Ovoid green patches-maybe amygdals
	127.0' - 135.0' Speckled, green alteration.

FOOTAGE	FORMATION
135.0' - 144.5'	Buff colored quartz-feldspar porphyry. Very silicious, dense, massive rock.
144.5' - 200.7'	Fairly massive andesite. Roughly 1% disseminated sulphides - some sections of patchy alterations.
200.7' - 213.2'	Banded iron formation - irregular bands up to 1". Alterations light and dark in color. Well mineralized with pyrite, pyrrhotite and chalcopyrite up to 5-10%. Banding well disturbed in spots - where undisturbed 45° to core.
213.2' @ 250.0'	Altered andesite, irregular patches of massive sulphides and also disseminated sulphides, associated with a green chlorite or epidote alteration. Sulphides mainly pyrrhotite with minor amounts of pyrite and chalcopyrite the whole averaging up to 10% of the core. Faint suggestion of brecciation.
250.0' - 276.8'	Massive, less altered andesite, patches of massive sulphide, mainly pyrrhotite with minor chalcopyrite.
	272.7' - 276.8' Contact zone with some brecciation and increase in sulphides to roughly 5% (pyrrhotite, pyrite and minor chalcopyrite.).
276.8' - 285.1'	Quartz-feldspar porphyry with inclusions of country rock.
285.1' - 294.0'	Fairly massive andesite with scattered sulphides making up roughly 1%.
294.0' - 344.6'	Well altered andesite, some sections of brecciation. Sulphides mainly pyrrhotite with minor pyrite and chalcopyrite associated with greenish alteration.
344.6' - 352.6'	Quartz-feldspar porphyry.
352.6' - 477.0'	Altered andesite as above. Patchy pyrrhotite mineralization, generally less alteration and sulphides. (Up to 3% of rock)

---

FOOTAGE

FORMATION

---

477.0' - 500.8'

Quartz-feldspar porphyry.

500.8' - 503.2'

Altered and recrystallized medium-grained rock.

END OF HOLE.

PROPERTY: Magdalena Red Lake Mines Limited,  
Eagle Lake, District of Kenora, Ont.

Hole No. 5.

DIAMOND DRILL RECORD

LOCATION: 1580 feet. S 60° W of No. 1 Post  
Claim No. K-12181  
Collared on small island.

Dated Drilled - Aug 23rd to 27th 1949.

BEARING: North-South. ?  
DIP : -35°



FOOTAGE

FORMATION

0 - 3.5'	Overburden.
3.5' - 51.0'	Mineralized andesite. 3.5' - 17.0' Medium grained lava with disseminated pyrrhotite and minor chalcopyrite up to 10% of core. Mineralization evenly distributed. No shearing or fracturing evident. 17.0' - 51.0' Fine grained andesite with occasional quartz-carbonate stringers at varying angles to core. Sulphides, mainly pyrrhotite, minor chalcopyrite and pyrites making up 10-20% of core. Mineralization occurs as fine-grained disseminations and in patches.
51.0' - 133.7'	51.0'-80.0' Heavily mineralized section - up to 25% of core. Some sections contain massive pyrrhotite with minor chalcopyrite. 80.0' - 133.7' Fine grained andesite as above containing 10-20% sulphides- pyrrhotite and subordinate amounts of chalcopyrite.
133.7'-151.1'	Fine grained andesite, moderately silicified and containing numerous quartz-carbonate stringers at various angles to core. Mineralized by 1-2% pyrrhotite, chalcopyrite and pyrite.
151.1'-260.8'	Quartz-feldspar porphyry.
260.8'-276.8'	Contact zone, highly altered and recrystallized. This section is mottled grey-green and porphyritic in part. Mineralized by approximately 1% pyrrhotite and chalcopyrite.



Ydalena Red Lake Mines Limited. (Continuation)

Hole No. 5.

Sheet No. 2.

---

FOOTAGE

FORMATION

---

276.8' - 301.0'

Andesite, altered, silicified, sheared and carbonated.  
quite well sheared and mineralized by approx. 1% pyrrhotite  
and chalcopyrite.

END OF HOLE.



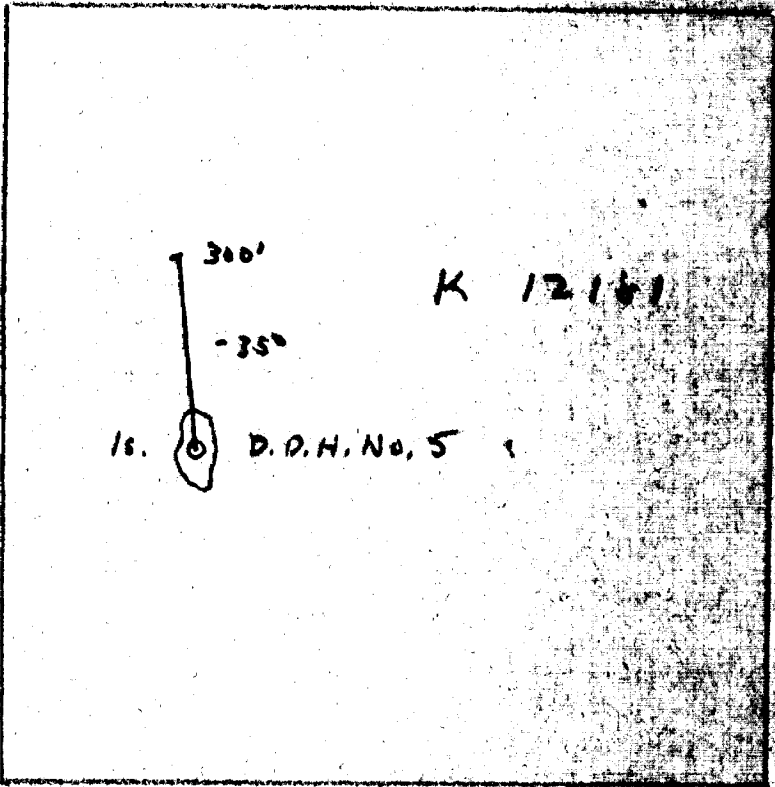






No. 4

No. 18557



ENGINEER  
D. D. H. NO. 5

No. 3

No. 2

LOCATION - 265'E, S 23' W of No. 3

Magdalena Red Lake Mines Ltd.  
Scale 1" = 200'

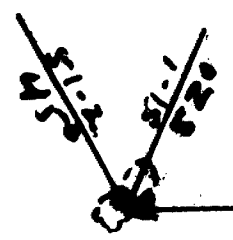
NA

EAGLE LAKE  
AREA

K. 12181.

Lake

825'  
900'



1300'

870'

Lake

D. J. Heyden Sept 29 - 51





RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

HOLE NO  
M-1

LOCATION: 12+00W, 2+70N

AZIMUTH: 160°

PROPERTY: Magdalena Red Lake Mines  
Eagle Lake Property

DIP: -55° at collar

LENGTH: 500 feet

ELEVATION: lake

CLAIM NO: 12181

STARTED: February 12, 1972

CORE SIZE: AXT

DATE LOGGED: February 15, 1972 SECTION: 12+00W

COMPLETED: February 16, 1972

DIP TESTS: 52° at 150 feet

LOGGED BY: U. Paltser

50° at 350 feet

PURPOSE: To test geophysical anomaly

FOOTAGE		DESCRIPTION	SAMPLE NO	FOOTAGE		LENGTH						
from	to			from	to							
0	68	Casing										
		0 - 22 water										
		22 - 68 overburden of sand and clay but no boulders										
68	123.0	Diorite										
		Moderately hard, grey-green, fine to medium grained, massive diorite. Some sections contain phenocrysts and irregular shaped clots of green-black hornblende in varying amounts. Generally featureless with intrusive texture, weakly fractured and little sulphides.										
		68.0 - 74.6 Medium grained diorite composed of 20% hornblende phenocrysts to 5 mm. in groundmass of fine, creamy coloured feldspar. Minor (1%) pyrrhotite pyrite and chalcopyrite in quartz-carbonate filled fractures and fine disseminations. Arbitrary change at 74.6.										
		74.6 - 97.8 Dark green, mottled, non-fractured diorite or amygduloidal andesite. Amphibole content increases to 50% as irregular clots. At 88.8 a 3 in. wide fracture zone with numerous quartz-carbonate fractures.										

RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

HOLE No: M-1

PAGE No: 2

FOOTAGE		DESCRIPTION	SAMPLE No	FOOTAGE		LENGTH									
from	to			from	to										
		97.8 - 99.1 Shear zone, sharp contacts and shearing 45° to core angle. Fine grained, weakly chloritic but increasing along shear surfaces. 1 mm. carbonate filled gashes parallel to shearing.													
		99.1 - 123.0 As 74.6 - 97.8 but amphibole is less prominent resulting in loss of mottled appearance. Uniformly fine grained, and basic in composition. Generally, very little sulphides as pyrite disseminations and blebs of chalcopryrite.													
123.0	127.7	Feldspar Porphyry Intrusive Upper contact on quartz-carbonate filled fracture. Hard, grey, very fine grained intrusive with bleached feldspar phenocrysts 3mm. in size constitute 20% of section. Blebs, smears, and disseminations of pyrrhotite and chalcopryrite total 1%. Lower contact at 60° is sheared, biotitic.													
127.7	236.9	Diorite Massive, fine-medium grained, basic, dark grey-greenish diorite. Local coarser sections are gradational and have good development of hornblende and feldspar crystals. Occasional fractures filled by quartz-carbonate. 213 - 224.7 Arbitrary change to medium-coarse grained equigranular section of feldspar and amphibole. Much more fracturing from 220 - 224.7 often carrying smears and blebs of pyrrhotite along fracture planes.													

RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

HOLE No:

M-1

PAGE No:

3

FOOTAGE		DESCRIPTION	SAMPLE No	FOOTAGE		LENGTH	Cu %	Zn %	Pb %	Ni %	Ag oz	Au oz
from	to			from	to							
		224.7 - 231.8 As 220 - 224.7 and remaining coarse grained. Frequency of fractures decreases toward 231.8.										
		231.8 - 236.9 Fine grained chill zone. Lower contact very abrupt at banded iron formation.										
236.9	246.6	Iron Formation										
		Well banded 60°-70° to core, magnetite iron formation consisting of alternating bands (up to 1 in. wide) of dark green fine grained amphibole, fine grained black magnetite and white quartz carbonate. Core is relatively unfractured with very localized pyrrhotite in seams along banding. Sharp bleached contact 60° to core.		238.2	243.2	5.0	0.024	0.0064	0.0024	0.0036	0.005	0.005
246.6	249.3	Minor Intrusive										
		Very hard, dark almost black, fine grained siliceous intrusive. Faint indications of banding along elongated blobs of amphibole ½ in. long. Fine sulphides mainly pyrite but some pyrrhotite and chalcopyrite are contained within the amphibole. Amphibole blobs comprise 15-20% of section and sulphides less than 5%. Brown (biotite?) alteration over last 6 in.										
249.3	251.6	Iron Formation										
		As 236.9 - 246.6 but with thin cherty grey sections especially near 249.3. Isolated seams of pyrrhotite along banding. Sharp contacts parallel to banding.										

RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

HOLE No: M-1  
PAGE No: 4

FOOTAGE		DESCRIPTION	SAMPLE No	FOOTAGE		LENGTH							
from	to			from	to								
251.6	254.2	Minor Intrusive As 246.6 - 249.3 beginning as a massive, uniform section but increasing amphibole blotches appear from 253.0 onwards. Pyrite and pyrrhotite in the amphibole remains at less than 5% within the section. Sharp contact parallel to banded I.F.											
254.2	258.5	Iron Formation As 236.9 - 246.6 with splashes of chalcopryrite and pyrrhotite on amphibole carbonate contacts. Well banded but magnetite is conspicuously absent. Contact at 258.5 is lost.											
258.5	261.5	Minor Intrusive Highly feldspathized massive intrusive. Feldspathization appears very abruptly at 258.5 masking original texture and composition by salmon-pink colouration. Occasional splotches of pyrrhotite, lower contact is sharp but broken.											
261.5	266.6	Iron Formation Well banded with green amphibole and white quartz-carbonate segregated in distinct bands. Similar to 254.2 - 258.5 with magnetite being absent. Probably the silicate phase of iron formation found first at 236.6. Some feldspathization exists until 263.0. Seams and splashes of pyrrhotite and minor chalcopryrite are less than 5%. Distinct change at 266.6 but contact lost.											

RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

HOLE NO:

M-1

PAGE NO:

5

FOOTAGE		DESCRIPTION	SAMPLE NO	FOOTAGE		LENGTH								
from	to			from	to									
266.6	297.6	Diorite Fine grained, uniform, massive, grey-green diorite. No amphibole phenocrysts are present as found elsewhere in the hole. Sulphides are virtually non-existent. 280.3 - 297.6 A weak to moderately fractured section ending at a fine chill zone from 296 - 297.6.												
297.6	304.7	Iron Formation As 261.5 - 266.6 banded at 70° to core. Thin (1/4 - 1/2 in. wide) creamy white cherty bands are locally abundant however amphibolitic and quartz-carbonate bands are predominant. Pyrrhotite seams and fracture fillings are mainly found between 298.0 - 299.0. Amphibole bands are generally well to moderately epidotized and weakly biotitic. Irregular but distinct change at 304.7.												
304.7	306.5	Gabbro Dark green-black, medium grained, massive gabbro composed of equigranular amphibole and minor feldspar. Honey coloured, hard, 2mm garnet? Crystals are localized in irregular concentrations. Less than 1% fine pyrite is present. Gradational contact at 306.5.												
306.5	308.9	Shear Zone Highly altered shear zone, remains vaguely banded. Amphibole has largely been altered to chlorite with quartz-carbonate and pyrrhotite blobs. Filling 1/2 in. wide gashes. Lower contact is well defined 25° to core.												

RIO TINTO CANADIAN EXPLORATION LIMITED  
DIAMOND DRILL RECORD

HOLE No: M-1
PAGE No: 6

FOOTAGE		DESCRIPTION	SAMPLE No	FOOTAGE		LENGTH	Cu %	Zn %	Pb %	Ni %	Ag oz	Au oz
from	to			from	to							
308.9	320.3	Gabbro										
		As 304.7 - 306.5 but containing more sulphides especially in strongly epidotized sections. Fine disseminated pyrrhotite and chalcopyrite total 5% to 311.5 where large blobs of pyrrhotite 20% and chalcopyrite 1% as fracture fills, seams and intergranular material begin. A 2 in. wide barren quartz vein begins at 312.2. The best section of sulphides from 311.5 - 316.5 does not approach massive concentration. At 316.5 epidotization becomes sporadic and sulphides diminish.		311.5	316.5	5.0	0.13	0.0019	0.0012	0.051	0.04	0.005
320.3	332.6	Shear Zone										
		Upper contact is ill defined and arbitrarily placed at 320.3 where a soft chloritic sheared section develops. Much more fracture filled by quartz carbonate . . . Occasional specks and blebs of pyrrhotite and chalcopyrite occur. Very well fractured from 331.7 - 332.6. Arbitrary change at 332.6.										
332.6	END	Andesite										
		Fine grained dark green andesite altered by swirls of epidote and carbonate occasionally with associated blebs of pyrrhotite and chalcopyrite as at 348.7. The form and geometry of alteration strongly suggests pillow rims. Generally alteration is confined to 1-2 in. wide sections and occasionally a 1 ft. section is intersected parallel to the core angle having a pronounced curvature. Elsewhere interpillow										



RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

LOCATION: 4+00W, 2+50N

HOLE NO

M-2

AZIMUTH: 160°

PROPERTY: Magdalena Red Lake Mines  
Eagle Lake Property

DIP: -55° at collar

LENGTH: 500 feet

ELEVATION: lake

CLAIM NO: 12182

STARTED: February 16, 1972

CORE SIZE: AXT

DATE LOGGED: February 18, 19 SECTION: 4+00W

COMPLETED: February 19, 1972

DIP TESTS: 53° at 300 feet

LOGGED BY: U. Paltser

PURPOSE: To test geophysical anomaly.

FOOTAGE		DESCRIPTION	SAMPLE NO	FOOTAGE		LENGTH						
from	to			from	to							
0	86	Casing 0 - 20 water 20 - 86 overburden of sand, clay and boulders near bedrock.										
86	103.5	Diorite Grey-green, massive diorite containing up to 35% greenish black amphibole phenocrysts averaging 3mm. in size. The matrix is fine grained grey-green mixture of feldspar and amphibole. Generally, the section is weakly fractured and uniform in appearance. No sulphides are present. Lower contact on quartz vein 102.2 - 103.5.										
103.5	106.8	Feldspar Porphyry Intrusive Hard, fine grained, well fractured dike contains up to 15% white feldspar phenocrysts 5mm. in size. Sharp but irregular lower contact about 90° to core.										
106.8	207.3	Diorite As 86 - 103.5 but the intensity of fracturing is greater. Occasional 2 in. wide quartz filled fractures often with coarser grained diorite along margins as at 135.0-138.0. No sulphides are present.										



RIO TINTO CANADIAN EXPLORATION LIMITED  
DIAMOND DRILL RECORD

HOLE No:	M-2
PAGE No:	2

FOOTAGE		DESCRIPTION	SAMPLE No	FOOTAGE		LENGTH	Cu %	Zn %	Pb %	Ni %	Ag <sup>oz</sup> / <sub>T</sub>	Au <sup>oz</sup> / <sub>T</sub>
from	to			from	to							
207.3	209.8	Feldspar Porphyry Intrusive Sharp upper contact 45° to core, lower contact on shear and fracture zone. As 103.5 to 106.8 however feldspar phenocrysts are fewer, smaller and diffuse in outline. Some scattered blebs of pyrite.										
209.8	339.9	Diorite Similar to previous sections of diorite. Uniform, massive appearance except coarser grained near the occasional fracture. Short feldspar porphyry dikes with sharp contacts 65° to core occur at: 235.6-236.1, 253.6-255.4, 277.8-278.3. They resemble the feldspar porphyry intersected from 103.5-106.8. 330.0-339.9 Fine grained chill zone some biotite alteration after 338.0.										
339.9	340.3	Iron Formation Sharp contacts 70° to core. Well banded at 60° consisting of alternating bands of magnetite, chlorite and quartz carbonate as in D.D.H. M-1										
340.3	343.1	Minor Intrusive Dark grey, fine grained, massive section except for elongated blobs of green amphibole containing fine grained sulphides. About 10% of the section is made up of amphibole. Contact irregular along bleached fracture.		340.9	343.0	2.1	0.012	0.0108	0.0012	0.0071	0.015	tr

RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

HOLE No: M-2

PAGE No: 3

FOOTAGE		DESCRIPTION	SAMPLE No	FOOTAGE		LENGTH	Cu %	Zn %	Pb %	Ni %	Ag $\frac{OZ}{T}$	Au $\frac{OZ}{T}$
from	to			from	to							
343.1	344.0	Iron Formation As 339.9 - 340.3 but banding is less distinct, minor slips along fractures. Sharp contact - lost.										
344.0	346.2	Feldspar Porphyry Intrusive Fine grained, hard siliceous matrix containing 2-3 mm. feldspar phenocrysts and occasional amphibole elongated blobs. Outlines of the phenocrysts are usually faint. Sharp contact 65° to core at 346.2.										
346.2	355.2	Iron Formation As 339.9 - 340.3. Well banded appearance with minor sulphides along fractures. A short 3 inch section starting at 352.4 contains occasional seams and fracture fillings of pyrrhotite and chalcopyrite.		351	355	4.0	0.017	0.015	0.0008	0.0051	0.02	tr
355.2	358.8	Feldspar Porphyry Intrusive Sharp upper and lower contacts at 60° parallel to banding. Massive, dark grey, fine grained intrusive contains 2 mm. feldspar phenocrysts.										
358.8	360.2	Iron Formation Cherty, banded iron formation. Magnetite is scarce, however the section resembles high magnetite bearing iron formation. Seams of pyrrhotite and pyrite along banding composed of grey-bluish, very fine grained siliceous chert and dark green amphibolite - weakly chloritic. Lower contact fractured, not distinct.										

RIO TINTO CANADIAN EXPLORATION LIMITED

DIAMOND DRILL RECORD

HOLE No: M-2  
PAGE No: 4

FOOTAGE		DESCRIPTION	SAMPLE No	FOOTAGE		LENGTH	Cu %	Zn %	Pb %	Ni %	Ag	OZ T Au	OZ T
from	to			from	to								
360.2	364.2	Feldspar Porphyry Intrusive As 355.2 - 358.8 generally well fractured especially near 360.2. Massive but blotchy in appearance. Sharp lower contact at 40°.											
364.2	364.7	Iron Formation As 358.8 - 360.2 with isolated seams of chalcopyrite along carbonate filled fractures. Lower contact well defined at 45° to core angle.											
364.7	402.6	Diorite Fine to medium grained, grey-green, massive non-fractured, none-sheared diorite. Slight variation is development of 1 mm. amphibole crystals. Fine chill with biotite alteration near 402.6.											
402.6	405.3	Iron Formation As 358.8 - 360.2 remaining well banded (60°). Seams and fracture filling by carbonate, pyrrhotite and chlorite. Abrupt change at 405.3.											
405.3	426.5	Shear Zone Well sheared and fractured, strongly chloritic zone. Numerous quartz-carbonate filled gashes parallel shears. Very little sulphides in the section. Becoming progressively more massive and less sheared after 417.0		410.0	411.9	1.9	0.018	0.007	0.002	0.0043	tr		tr



RECEIVED

APR 25 1972

PROJECTS  
SECTION



52F11NE0260 10 BUCHAN BAY (EAGLE LA

020

EAGLE LAKE PROPERTY  
MAGDALENA RED LAKE MINES LIMITED  
DIAMOND DRILLING 1972  
52-F-11

Toronto, Ontario  
March, 1972

U. Paltser

EAGLE LAKE PROPERTY  
MAGDALENA RED LAKE MINES LIMITED  
DIAMOND DRILLING 1972  
52-F-11

TABLE OF CONTENTS

SUMMARY



INTRODUCTION . . .	020C . 1
LOCATION AND ACCESS . . . . .	1
DIAMOND DRILL PROGRAM	
(1) General . . . . .	1
(11) Description of Rock types . . . . .	22
(111) Mineralization . . . . .	3
DISCUSSION OF GEOLOGY AND GEOPHYSICS . . . . .	3
CONCLUSIONS . . . . .	4
RECOMMENDATIONS . . . . .	4
REFERENCES	

LIST OF ILLUSTRATIONS

Location Map DWG L-2576	1" = 2640'	In Pocket
Section for D.D.H. M-1 DWG D-2574	1" = 40'	In Pocket
Section for D.D.H. M-2 DWG D-2575	1" = 40'	In Pocket
Diamond Drill Logs for M-1 and M-2		In Pocket

EAGLE LAKE PROPERTY  
MAGDALENA RED LAKE MINES LIMITED  
DIAMOND DRILLING 1972  
52-F-11

SUMMARY

A 1000 foot diamond drill program in February 1972 tested the Zone 2 conductor on the Eagle Lake property of Magdalena Red Lake Mines near Dryden, Ontario.

The quality of the conductor, strongest on 12W, diminished eastward along strike. Geophysical surveys suggest individual sources for conductivity and magnetics at 12W which merge at 8W into a more magnetic, less conductive zone.

Diamond drilling results confirmed that barren magnetite iron formation coincides favourably with the magnetic anomaly and a narrow section of coarse pyrrhotite with minor chalcopyrite is responsible for better conduction on 12W.

No economic mineralization of base (Cu, Zn, Pb, Ni) or precious (Ag, Au) metals occurred in the drill core and assays were generally near trace amounts. The uniformity of structure, basic rock types and poor mineralization indicate the property holds little promise for future exploration.

EAGLE LAKE PROPERTY  
MAGDALENA RED LAKE MINES LIMITED  
DIAMOND DRILLING 1972  
52-F-11

INTRODUCTION

The Eagle Lake property, wholly owned by Rio Algom Mines through Magdalena Red Lake Mines has received attention since the 1930's when known as the W. W. Smith gold prospect.

In 1948, the ground was extensively explored by Young, Young and Gross with geophysics, geology and follow-up drilling. Gold and copper mineralization discovered at Rock Island coincided geophysically with the Zone 1 conductor. The survey also outlined a parallel zone 900 feet south in Hardrock Bay (Zone 2 conductor). Available information indicated that Zone 1 was drilled and returned assays of 0.14 oz gold, 0.19%-0.125% copper over widths of 30 and 35 feet. However, Zone 2 remained unexplained and untested.

Therefore, in 1971, when the property was re-evaluated, Zone 2 conductor offered a potential target for copper-gold mineralization.

LOCATION AND ACCESS

The property consists of 9 patented claims at Eagle Lake about 17 miles west-southwest of Dryden, Ontario. In summer, access is possible to the northern shore of Eagle Lake by road but an additional 5 miles to the property must be travelled by boat. Good ice conditions permit tracked vehicles to follow a similar route in winter.

Aircraft available from Swanair in Dryden, equipped with skis or floats can land on Eagle Lake almost year round.

DIAMOND DRILL PROGRAM

(1) General

A total of 1000 feet AXT core size was drilled by Midwest Diamond Drilling, Winnipeg. Men and material were used judiciously and drilling was carried out with speed and efficiency.



Two holes of 500 feet each were spotted with the aid of geophysics and geology to intersect the conductor at a planned depth of from 300-350 feet. The combined depth of water and overburden was unknown, but estimated at 50 feet. Although the estimate was inaccurate, penetration to bedrock progressed unimpeded.

Drilling commenced February 12, 1972 and finished February 19, 1972.

(11) Description of Rock Types

(a) Feldspar porphyry

Feldspar porphyry intrusions represent the youngest rock type, being discordant with older volcanics. They consist of narrow (3-5 feet) hard, grey coloured dykes, typically fine grained and moderately siliceous. A diagnostic feature is subhedral, light grey to white feldspar phenocrysts rarely exceeding 5 mm in size and 20% of the core. Sulphide mineralization is generally less than 1% as blebs and disseminations of pyrrhotite, pyrite and chalcopyrite.

(b) Diorite

The diorite occurs towards the top of both holes and appears to be conformable with the iron formation and underlying andesite. It is massive and uniform in appearance, basic in composition, grey-green in colour. Some sections display an abundance of amphibole as phenocrysts or vague amygdules.

Rather than being emplaced by intrusion, an extrusive origin of basic, partially crystallized magma is suggested.

(c) Iron Formation

Iron formation has been used to describe well banded units with a maximum thickness of 10 feet. Essentially they may be subdivided into two types: (1) magnetite, (2) cherty.

Magnetite iron formation is predominantly composed of alternating bands of magnetite, amphibole and quartz carbonate and situated stratigraphically above the cherty variety.

Cherty iron formation is also well banded but much more siliceous in composition. Seams of sulphides (pyrrhotite, chalcopyrite) are locally abundant along the chert bands.

Continuity between drill holes M-1 and M-2 indicates the iron formation remains in the same stratigraphic position within the volcanic sequence. From the attitude of banding in the core, the formational dip is 70° to the north.

(d) Andesites

Both drill holes ended in fine grained, basic andesite which display some variation between holes. In D.D.H. M-1, the rock is moderately well epidotized along fine grained structures resembling pillow rims and interpillow breccia. The development of pillow rims and epidote alteration does not appear in M-2 800 feet along strike.

(111) Mineralization

The most intense sulphide mineralization visually estimated at 20% pyrrhotite and 1% chalcopyrite occurs in a 5 foot section in M-1. Assays for zinc, lead, nickel, gold and silver were at trace levels and copper at only 0.13%. The host rock is a coarse grained massive, amphibolitic, well epidotized gabbro. No similar mineralization or host rock occurred in hole M-2.

Samples of iron formation, porphyry, and carbonate shear zone returned negligible base and precious metal values.

DISCUSSION OF GEOLOGY AND GEOPHYSICS

The original geophysical surveys in 1956 by Technical Mine Consultants and Younge, Young and Gross in 1948 detected a moderate strength conductor with a coincident and flanking magnetic anomaly of 600 gammas. The conductor (Zone 2) strikes east-west for 1400 feet and is cut off in the west by a north trending fault or dyke reflected by a magnetic low.

On surface a quartz porphyry intrusion correlates well with the magnetic disruption. Tracing the porphyry southward the massive sulphides at Rock Island appear to be closely associated with the intrusive. Although the porphyry itself carries some sulphides, its prime relationship to mineralization is the ability to mobilize and concentrate sulphides when passing through sulphide bearing cherty iron formation.

The weak, often difficult to trace Zone 2 conductor described as "lensy" in character is caused by iron formation which remains weak in sulphide mineralization unless disrupted by later intrusives. Hence, sulphide concentrations on the property can be expected to form small lens at the junction of the porphyry and cherty sulphide iron formation. Conductivity will be stronger near the margin of the dyke, but attenuate along the strike of the iron formation. Therefore, the weak east-west trending E.M. anomalies caused by barren iron formation are unfavourable drill targets.

CONCLUSIONS

Drill holes M-1 and M-2 adequately tested the Zone 2 conductor which may be attributed to magnetite and sulphide bearing cherty iron formation. This horizon is not economically significant except at the contacts of large cross-cutting intrusives which have the ability to localize sulphides but only in minor amounts.

RECOMMENDATIONS

The gold-copper showings have been investigated by geological mapping, geophysical surveys and diamond drilling without success. Exploration targets on the property have been exhausted and no recommendations can be made for maintaining the claims.

Toronto, Ontario  
March, 1972

*Ulo Paltser*

Ulo Paltser

REFERENCES

Moorhouse, W. W.:

1939: Geology of the Eagle Lake area,  
O.D.M., Vol. XLVIII, Pt. IV

Sander, G. W.:

1956: Electromagnetic Survey on the Eagle Lake  
Property of Paradee Amalgamated Mines Ltd.,  
Riocanex Bound Report, Ontario #9

Shewman, R. W.:

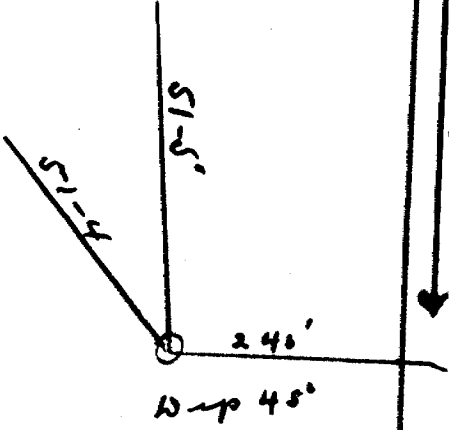
1971: Geological Investigation of the Eagle Lake  
Property of Magdalena Red Lake Mines Ltd.,  
Riocanex Bound Report, Ontario #297

Post 4

Post 1



710'



51° 5'

51° 4'

24° 0'

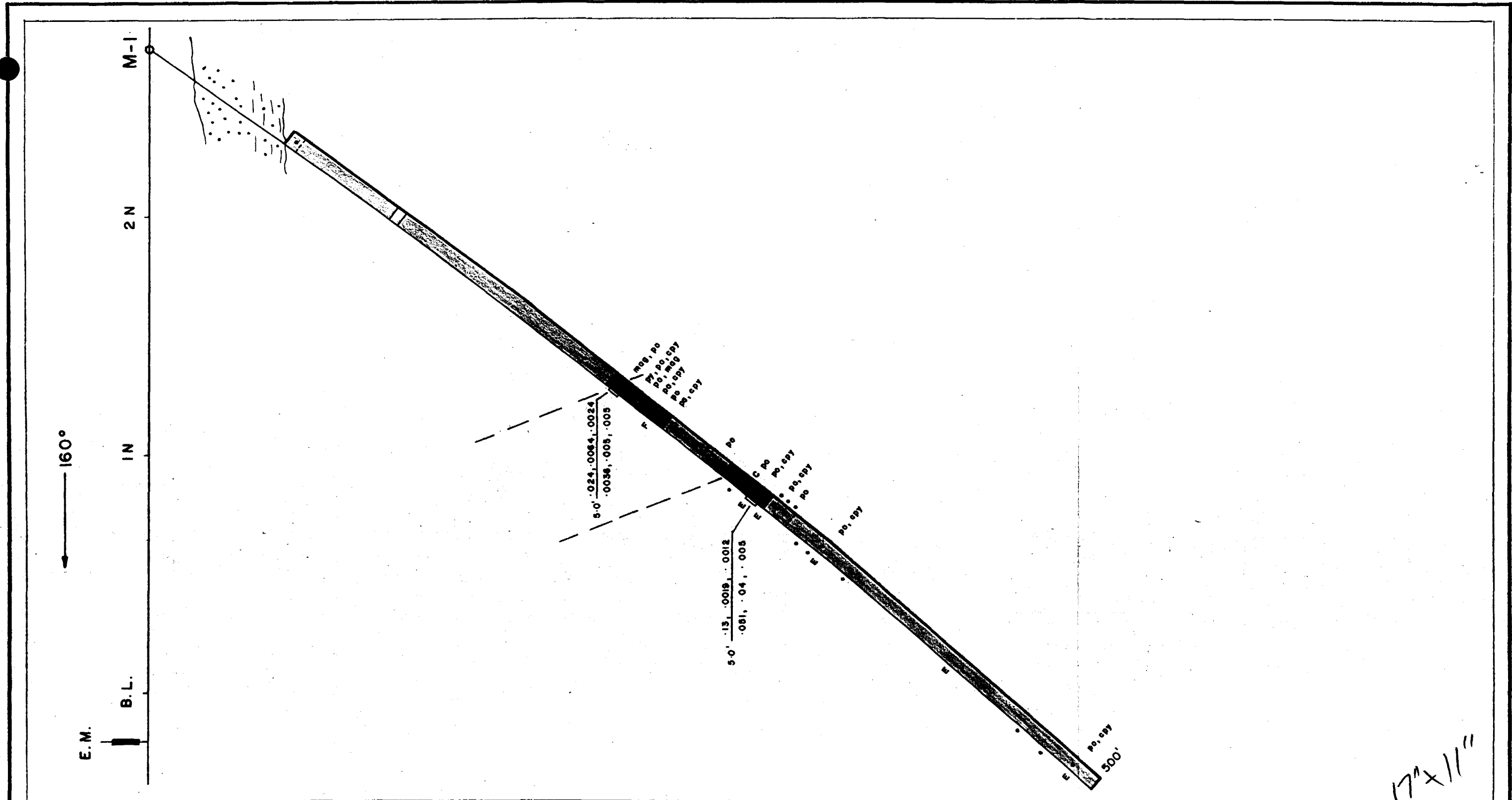
W-p 45°

R-12182

Magdalena Rel Cks

Scale 1" = 200'

Post 3



**LEGEND**

- 6 Feldspar Porphyry Intrusive
- Diorite
- Gabbro
- Minor Intrusive
- Iron Formation
- Andesite

**MINERALIZATION**

- less than 5%
- 5 - 20 %
- Massive
- mag - magnetite
- py - pyrite
- po - pyrrhotite
- cp - chalcopyrite

**ALTERATION**

- F Feldspathization
- C Chloritization strong
- weak
- E Epidotization strong
- weak
- b Biotite
- Banding

**ASSAYS**

Width (ft.)    % Cu, % Zn, % Pb    N.T.S.

                  % Ni, Ag<sup>oz/T</sup>, Au<sup>oz/T</sup>    52 - F-II

SCALE

40    0    40    80    120

One Inch = 40 FEET

RIO TINTO CANADIAN EXPLORATION LTD.

MAGDALENA CLAIMS - EAGLE LAKE - ONT.

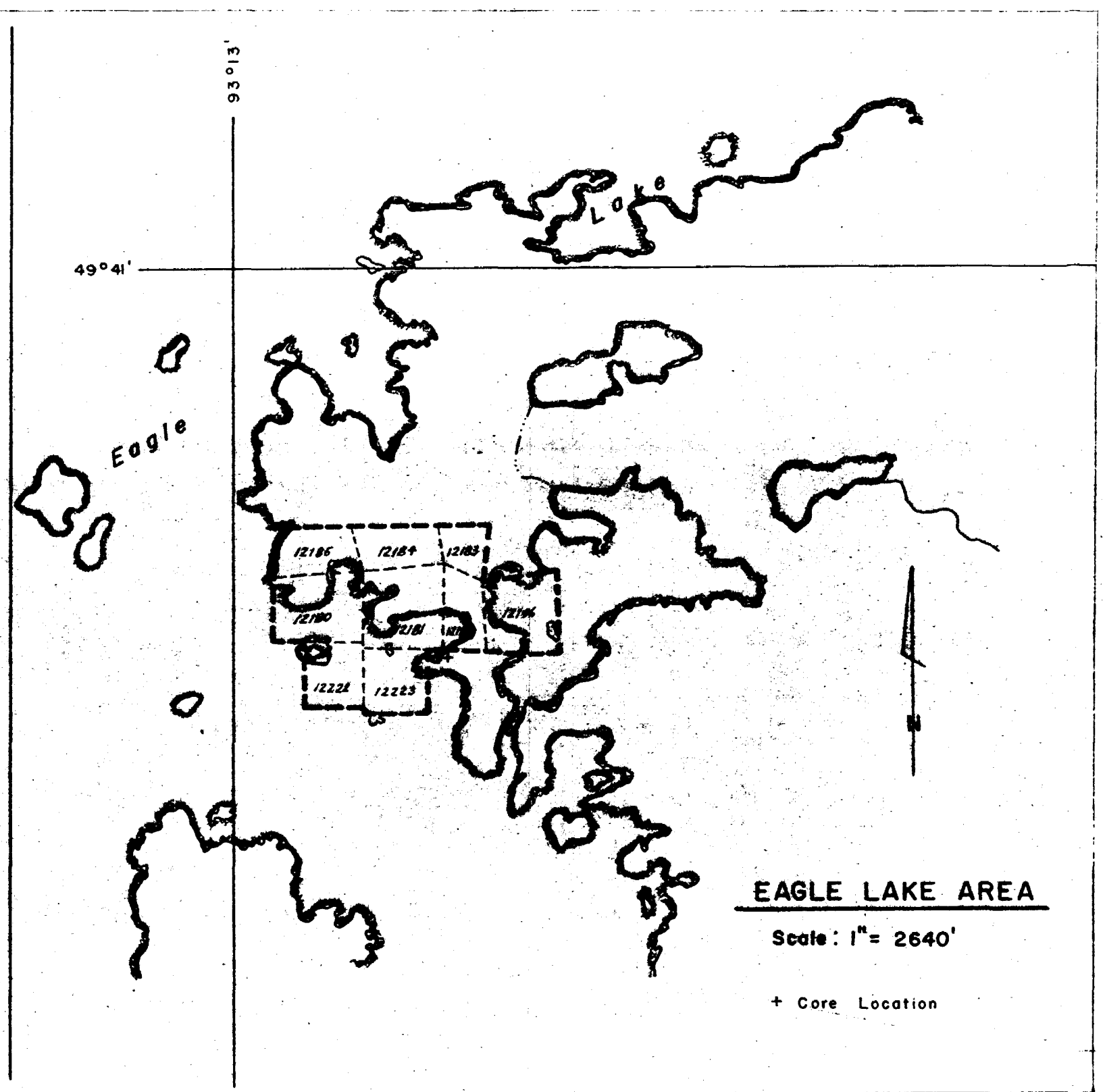
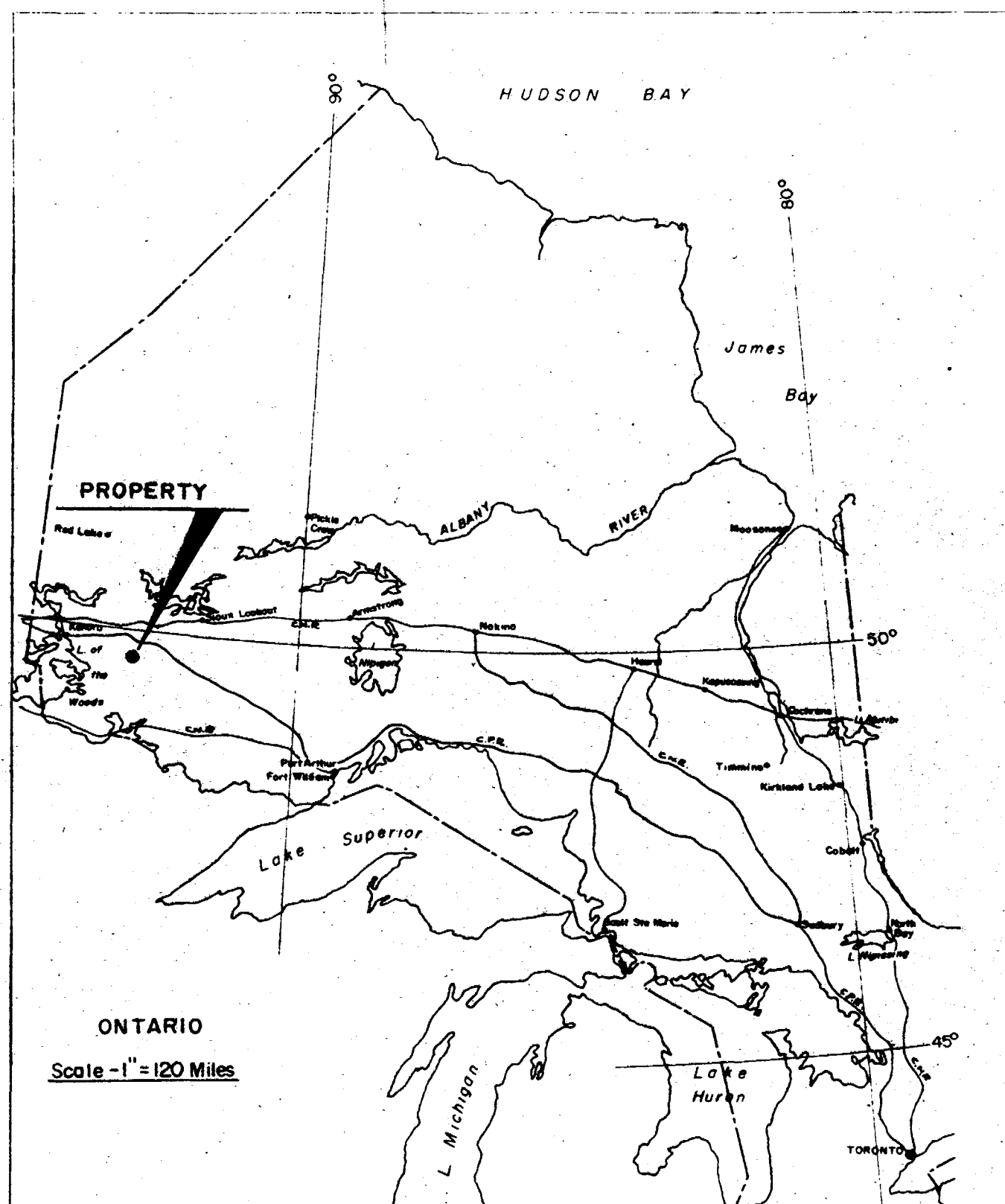
D.D.H. M-1

SECTION ON 12+00 W

AZM 160° LOOKING WEST

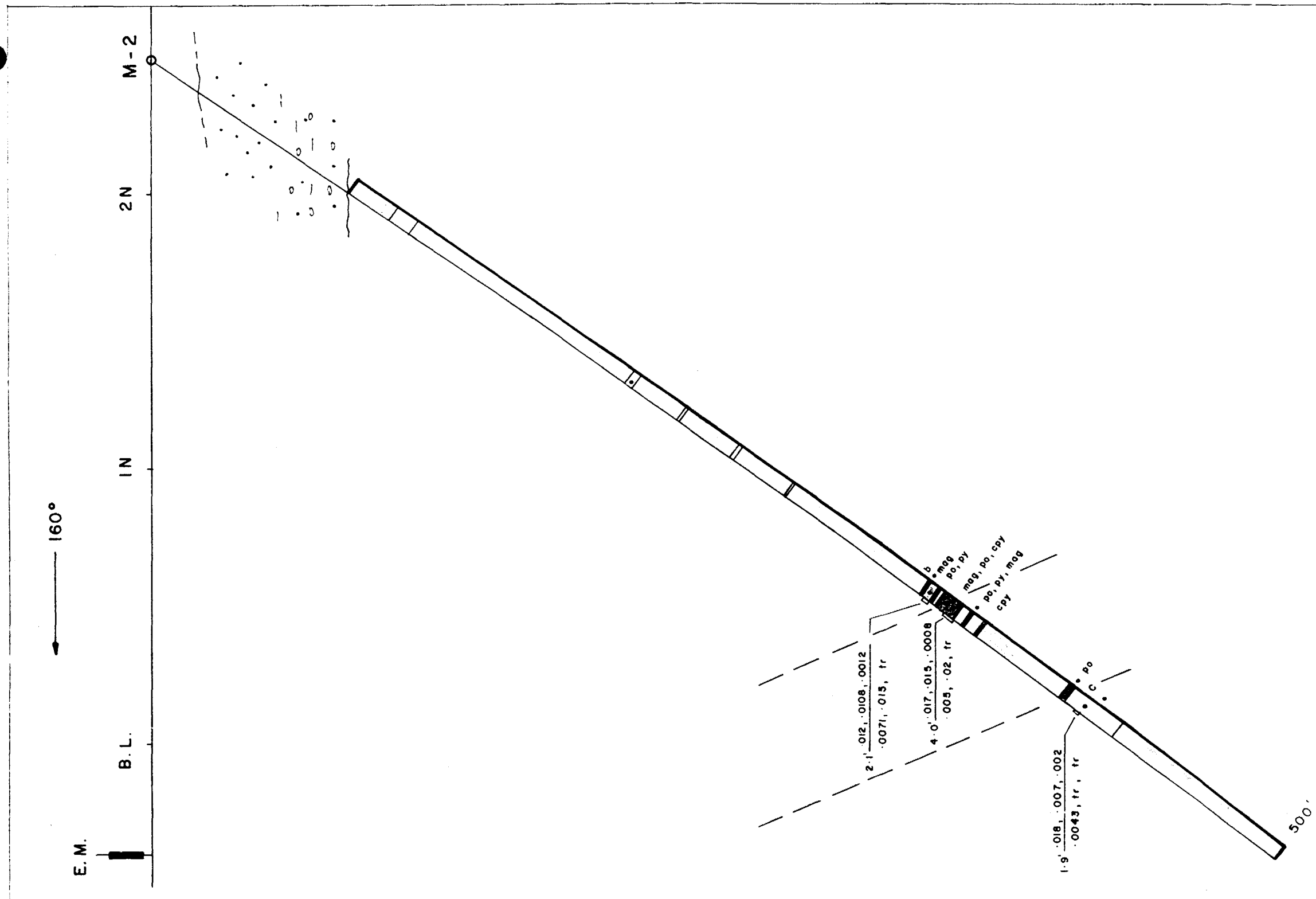
March - 1972    U.P. / e.k.    DWG. D-2574

17" x 11"



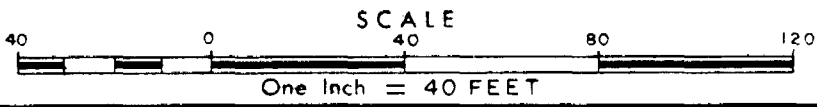
N. T. S.  
52 - F - II

RIO TINTO CANADIAN EXPLORATION LTD.	
MAGDALENA CLAIMS - EAGLE LAKE - ONT.	
LOCATION MAP	
March - 1972	U. P. / e. k. DWG. L - 2576



NOTE: For Legend See Map No. D-2574

N.T.S.  
52-F-11



RIO TINTO CANADIAN EXPLORATION LTD.		
MAGDALENA CLAIMS - EAGLE LAKE - ONT.		
D.D.H. M-2		
SECTION ON 4+00 W		
AZM 160°		LOOKING WEST
March - 1972	U.P. / e.k.	DWG. D-2575





52F11NE0260 10 BUCHAN BAY (EAGLE LA

900

Room W 1617, Parliament Buildings  
Queen's Park, Toronto 182

April 26, 1972

Dear Sir:

Re: Magdalena Red Lakes Mines Ltd. 52-F-11

Your diamond drill report for the above property in the Eagle Lake Area has been placed in our Research Library.

Your co-operation in submitting this data without a return of assessment credits is most welcome.

Yours very truly,

Fred W. Matthews  
Supervisor  
Projects Section

FWM/mw

416:965-6918

Rio Tinto Canadian Exploration Limited  
120 Adelaide Street West  
Toronto 1, Ontario

Attn: Mr. D.J. Gervais

**Rio Algom**  
**Rio Tinto**

RECEIVED

APR 25 1972

MINING LANDS  
BRANCH

April 17, 1972.

RECEIVED

APR 25 1972

PROJECTS  
SECTION

Mr. F. W. Matthews,  
Supervisor-Projects Section,  
Department of Mines & Northern Affairs,  
Whitney Block,  
Queen's Park,  
Toronto, Ontario.

Re: Magdalena Red Lakes Mines Ltd. 52-F-11


Dear Mr. Matthews:

Enclosed please find a diamond drill report on the above mentioned property in the Eagle Lake Area of Ontario.

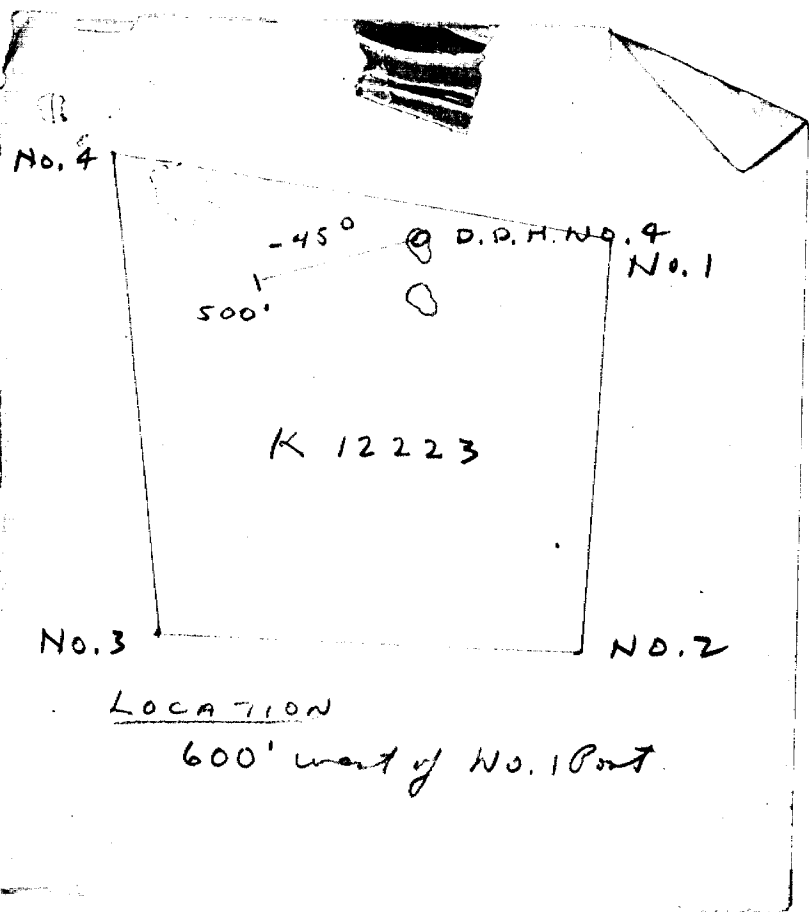
May we bring to your attention that this report is for your records only and not submitted as assessment credit.

Yours very truly,

RIO TINTO CANADIAN EXPLORATION LIMITED

  
D. J. Gervais

:kw



LOCATION

600' west of No. 1 Post.