



41P14NE0209 2.7570 HALLIDAY

020

KIDD CREEK MINES LTD.

GEOPHYSICAL REPORT

AIRBORNE MAGNETIC AND

ELECTROMAGNETIC SURVEYS

HALLIDAY, HUTT & MONTROSE TWPS.

N.T.S.: 41-P-14

DECEMBER, 1984

E. HONSBERGER

SUMMARY AND RECOMMENDATIONS

Four airborne EM anomalies were detected in the southwest corner of the Hutt-Montrose claim block during an airborne magnetic and electromagnetic survey. The source of these is likely the same graphitic-sulfidic horizon drill tested by both Amax and Essex Minerals. Subsequently, the zone was termed unworthy of further exploration.

Ground to the east of these anomalies has seen little geophysical exploration. If the geology in the area is favourable, it is recommended that a surface Pulse EM survey be conducted to test for any deep-seated conductors invisible to the airborne survey. Unless geological work warrants it, a detailed study of the EM anomaly source is not recommended.



page

SUMMARY AND RECOMMENDATIONS	i
INTRODUCTION	1
PREVIOUS WORK	1
SURVEY DESCRIPTION	3
SURVEY RESULTS	3
REFERENCES	8

APPENDIX A - Essex Minerals Summary Log**APPENDIX B - United Buffadisson Summary Logs**

LIST OF FIGURES

	page
1. Airborne Magnetic and EM Results	6
2. Drill Compilation	7

INTRODUCTION

In May and June of 1984, a combined magnetic and electromagnetic survey was flown for Kidd Creek Mines Ltd. by Questor Surveys Ltd. The survey area covered 62 non-contiguous mining claims unequally divided amongst Halliday, Hutt and Montrose townships within the Sudbury and Temiskaming mining districts. All 62 claims are held by Kidd Creek Mines Ltd. The claims include;

L753348 to L753369 inclusive

L753373 to L753412 inclusive

Fifty-two of the claims occupy the southwest and the southeast corners of Montrose and Hutt townships respectively. The remaining 10 claims are located in the north-central part of Halliday Township. The property is located approximately 64 kilometers south of Timmins.

PREVIOUS WORK

Several companies have conducted base metal or gold exploration programs in Hutt and its surrounding townships.

Companies having diamond drilled on or adjacent to those Kidd Creek claim blocks described in this report include Amax Exploration Incorporated, Essex Minerals and United Buffadisson Gold Mines Ltd.

Both Amax and Essex Minerals drill tested a conductive zone that runs along the south border of Hutt Township from the powerline east to the Grassy River. Amax intersected a lone stringer of chalcopyrite within fractured and altered felsic metavolcanics in one hole, and 78 metres of graphitic tuff containing disseminated and massive pyrite in another. Amax in fact drilled several holes into this zone (Figure 2) although none of this work was submitted to the government for assessment purposes. The information given was taken from a 1984 OGS report by E. G. Bright.

Essex Minerals drilled a hole just east of the powerline (Figure 2) and intersected the same conductor tested by Amax. They describe it to be a pyritic-graphitic type conductor warranting no further exploration. Assay values and a summary log of this hole are given in Appendix A. Essex Minerals may possibly have tested a shorter conductive zone just south of this with a second hole although no record of this was found in government assessment files.

United Buffadisson G. M. L. drilled eight holes (Figure 2) in the southwest corner of Montrose Township. All holes

were drilled as part of a gold-based exploration program. The only mineralization intersected was minor disseminated pyrite and a few specks of chalcopyrite. Summary logs can be found in Appendix B.

SURVEY DESCRIPTION

The electromagnetic survey was conducted with the Barringer/Questor Mark VI INPUT system. A Geometrics Model 803 proton precession magnetometer was used to perform the magnetic survey.

Flight lines were oriented approximately north-south and had an average spacing of 200 metres. Tielines were flown approximately 4 kilometres apart to monitor diurnal drift. The aircraft was kept as close as possible to an altitude of 122 metres with the receiver coil suspended at about 55 metres above surface. A total of 94 kilometers were flown over the 62 claims.

SURVEY RESULTS

Electromagnetic and magnetic results are shown in Figure 1.

Electromagnetic

The several 1-channel EM anomalies detected are likely overburden-type responses and are of little or no significance.

Four bedrock-source anomalies occur in the southwest corner of the Hutt-Montrose claim block on claims L753385 and L753386. They lie on the east edge of an east-west trending package of anomalies that continues west of this claim block to the powerline. The bedrock source is likely the same graphitic-sulfidic horizon previously tested by both Amax and Essex Minerals (see Previous Work section).

Magnetic

Hutt-Montrose Block

The region of high magnetic susceptibility over the west claims terminates along the Grassy River, outlining the Grassy River Fault. A region of similarly high magnetic susceptibility north of this claim block implies faulting with a west-side south lateral displacement. Magnetic evidence suggests these west claims are underlain by an ultramafic flow.

The relatively low magnetic susceptibility measured over the mid-block claims is indicative of underlying rocks which may be predominantly felsic in nature.

The moderately high magnetic response of the eastern claims suggests they may be underlain by mafic rocks. There is evidence of the displacement of a fairly extensive east-west trending conductive zone south of this block. Considering this, it is possible that these eastern claims are flanked on their west side by a north-south striking fault. The apparent displacement of the conductor to the south infers that any possible faulting motion would have involved a west-side north lateral movement.

Halliday Block

The magnetic signature of these claims is similar to that of the mid-block Hutt-Montrose claims. This implies that underlying rocks here may also be predominantly felsic.


ELAINE HONSBERGER

2nd
J. 7092
J.

REFERENCES

Bright, E. G. 1984, "Geology of the Ferrier Lake-Canoeshed Lake Area, District of Sudbury", Ontario Geological Survey Report 231.

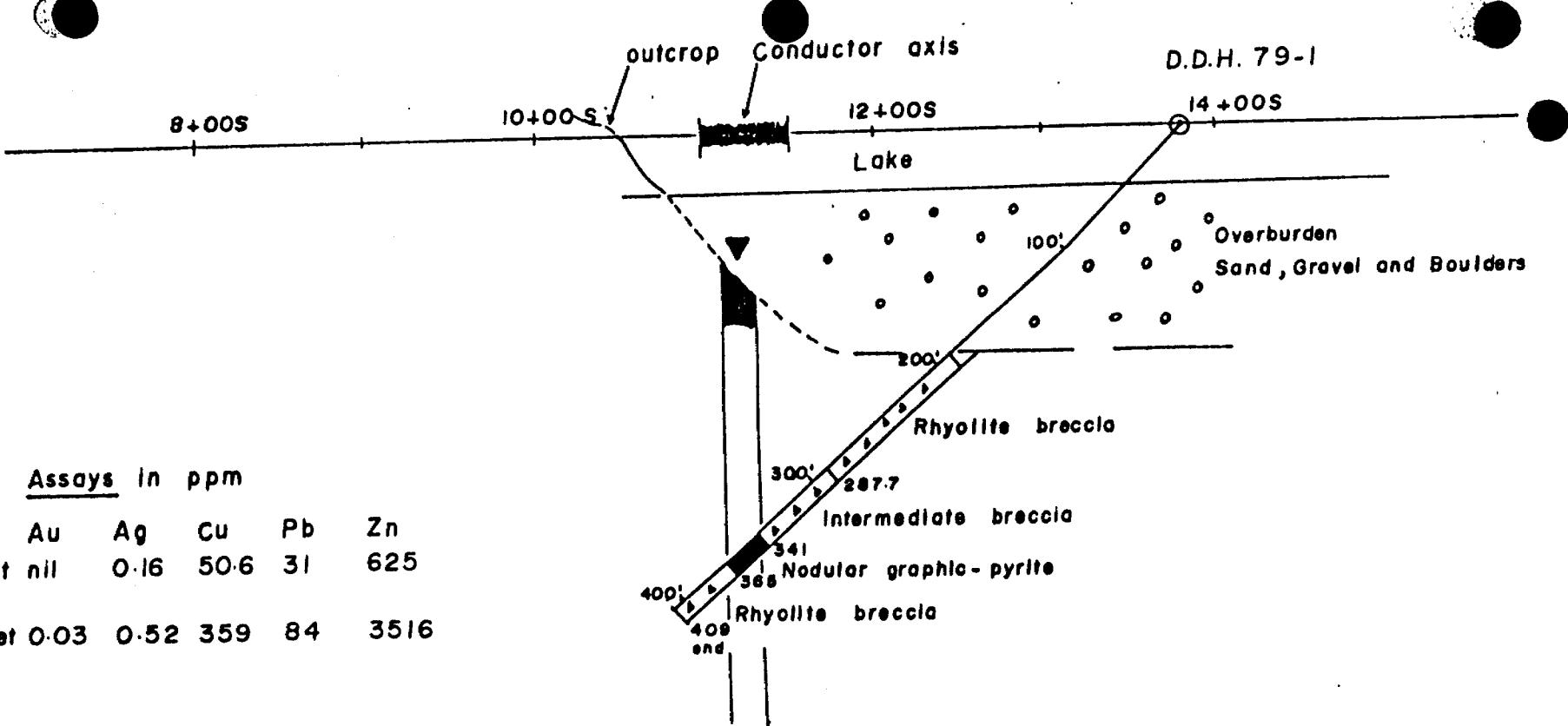
Mullen, D. V. 1984, "Report on the Geology of the Hutt Township Area", Kidd Creek Mines Ltd., Company Report.

George, P. T. 1977, "Magnetic and HEM Surveys for Essex Minerals Co. By Geoex Ltd.", Government Assessment File.

ESSEX MINERALS COMPANY D.D.H. 79-1

Length: 409 feet Purpose: To test EM conductive zones
Dip: -50° Latitude: 13 + 80N
Dip Tests:
Core Size: BQ Longitude: 8 + 00E
Property: Grassy River Azimuth: Grid South
 Logged By: W. Thompson

<u>FROM</u>	<u>TO</u>	<u>COMMENTS</u>
0	190	<u>Overburden</u>
190	192.5	<u>Rhyolite Tuff Breccia:</u> Dark grey with lighter fragments floating in the dark groundmass. The fragments vary in size from 3 mm to 4 cm and they, too, are brecciated.
192.5	287.7	<u>Rhyolite Breccia:</u> Rhyolitic to rhyodacitic fragmental that has been brecciated with rounded to angular fragments. Dominantly light grey in colour. This unit is cut randomly by carbonate stringers. These stringers have been slightly sheared and cut again by hairline carbonate veins. This unit has small sections or interbedded layers of the above tuff breccia. Minor pyrite beds and disseminated pyrite occur throughout the core. The core is badly broken down to 219 feet. At 262-264 feet is another broken up section with vuggy core. Bedding indicated by possible interlayering contacts that appear to be at 45° CA.
287.5	341.0	<u>Intermediate Breccia:</u> Much like the above section except that it is more pyritiferous and has vuggy, slightly limonitic sections. Particles are about 4 mm across. In this section, blebs of pyrite are more common. Carbonate veins are not as abundant, but do occur and cut the core at about 45° CA.
341.0	365	<u>Graphitic Nodular Pyrite Section:</u> Typical sedimentary pyritic graphitic section. Common to the Abitibi with scattered carbonate and quartz veins. This unit is the conductor to the target zone.
365	409	<u>Rhyolite Breccia:</u> Light grey competent unit with bands and blebs to 3% pyrite.
409		<u>End of Hole</u>



- 22 -

ESSEX MINERALS COMPANY

Allerton Option
Grassy River

Line 8+00E 13+80N

Dip - 45°s

Scale: 1" = 100' at 200' }
 at 400' } dip = 41°

ESSEX MINERALS COMPANY

D.D.H. 79-1

Sample	Footage		Assays in PPM				
	From	To	Au	Ag	Cu	Pb	Zn
9603	295	300	Ni1	Ni1	42	42	225
9604	300	305	Ni1	Ni1	59	27	460
9605	305	310	Ni1	0.3	50	28	670
9606	310	315	Ni1	0.2	43	38	745
9607	315	320	Ni1	0.2	36	40	88
9608	320	325	Ni1	0.2	38	32	72
9609	325	330	Ni1	Ni1	32	26	80
9610	330	335	Ni1	0.2	41	40	74
9611	335	341	Ni1	0.5	90	43	210
9612	341	346	0.03	0.6	940	80	5400
9613	346	355	0.03	0.5	220	92	3900
9614	355	360	0.03	0.5	143	73	1320
9615	360	365	0.03	0.6	89	75	250
9616	365	369	Ni1	Ni1	50	32	68

DIAMOND DRILL RECORD

UNITED BUFFADISIAN GOLD MINES LIMITED
MONTROSE 354 feet 7011 V.S.H.P.

Hole No. 1 Sheet No. Lat. N 81°E from #3 Claim Post Total Depth ft.
 Section Dep. of Claim No. 34378 Elev. Collar
 Date begun October 2, 1962 Bearing S 89° W Elev. Bottom
 Date finished October 4, 1962 Angle -50°

107 feet

NORTHERN MINER PRESS LIMITED, TORONTO : STOCK FROM NO. 1

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUD GOLD.
88					
0' - 2.5'	BLUE QUARTZ				
2.5'-107'	TUFF cream colored 45° to core 57.5' - 67.5' brecciated well mineralized with patches of pyrite				
	END OF HOLE 107 FEET				
	ASSESSMENT WORK Mining Records ELK LAKE Date 3/63 N.H. Resident Geologist				

E. CARON DIAMOND DRILLING CO

G.P. Thoday, F.Eng.

WATER BILL RECORD

UNITED BUFFALO SPRINGS GOLD MINES LIMITED
Hole No. 2 Sheet No. Lat. 35° 8' 0" N from Total Depth 104 feet
Section Dep. DDH #1 Elev. Collar
Date begun Oct 4, 1962 Bearing 889 W Elev. Bottom
Date finished Oct 5, 1962 Angle -50°

NORTHERN MINER PRESS LIMITED, TORONTO : STOCK FORM NO. 1

E. CARON DIAMOND DRILLING

G.P. Thoday, P.Eng.

UNITED BUFFADISON GOLD MINES LIMITED

Hole No. 3 Sheet No. Lat. 35° 2' W from Total Depth 108 feet
 Section Dep. DDH #2 Elev. Collar
 Date begun October 6, 1962 Bearing N87° W Elev. Bottom
 Date finished October 7, 1962 Angle -50°

NORTHERN MINER PRESS LIMITED, TORONTO - STOCK FORM NO. 8

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD.
0' - 17.5'	RHYOLITE cream colored				
11'-14'	Lost Core				
17.5' - 23.6'	QUARTZ hard well mineralized 23'-23.6' Vuggy Section				
23.6' - 29.0'	RHYOLITE brecciated with some fine pyrite mineralized patches.				
29' - 36'	QUARTZ milky white with minor min.				
36' - 108'	TUFF cream colored banded at 45° to core patches of fine pyrite up to 1" scattered through core.				
END OF HOLE 108 FEET					

E. CARON DIAMOND DRILLING CO

G.P. Thoday, P.Eng.

UNITED BUFFADISSE GOLD MINES LIMITED

Hole No. 4 Sheet No. Lat. 20 feet 32 W. from Total Depth 105 feet
 Section Dep. DDH #3 Elev. Collar
 Date begun Bearing Elev. Bottom
 Date finished October 7, 1962 Angle 6 89 W
 October 8, 1962 50

NORTHERN MINER PRESS LIMITED, TORONTO • STOCK FORM NO. 1

E. CARON DIAMOND DRILLING CO.

DIAMOND DRILL RECORD

UNITED STATES GOLD MINE'S LIMITED

Hole No. 5 Sheet No. Lat. 35 feet S. 7 W. of Total Depth 105'
 Section Dep. DDIL 44 Elev. Collar
 Date begun October 9, 1962 Bearing N87 W Elev. Bottom
 Date finished October 10, 1962 Angle -50

NORTHERN MINING PRESS LIMITED, TORONTO - STOCK FORM NO. 1

E. CARON DIAMOND DRILLING CO LTD

G.P.Thoday, P.Eng.

DIAMOND DRILL RECORD

UNITED BUFFALOSON GOLD MINES LIMITED

Hole No. 6 Sheet No. Lat. 50° S 19 W of DDH#5 Total Depth 51 feet
 Section Dep. Elev. Collar
 Date begun October 10, 1962 Bearing Due West Elev. Bottom
 Date finished October 10, 1962 Angle -50

NORTHERN MINER PRESS LIMITED, TORONTO - STOCK FORM NO. 29

G.P.Thoday, P.Eng.

UNITED DIAMOND DRILL RECORD

7

50 feet S26 30'W from

101 Feet.

Hole No. Sheet No. Lat. DDH # 6 Total Depth
Section October 11, 1962 Dep. N67 W Elev. Collar
Date begun October 12, 1962 Bearing 50 Elev. Bottom
Date finished Angle

NORTHERN MINER PRESS LIMITED, TORONTO - STOCK FORM NO. 89

E. CARON DIAMOND DELLINA CO.

G.P.Thoday, F.Eng.

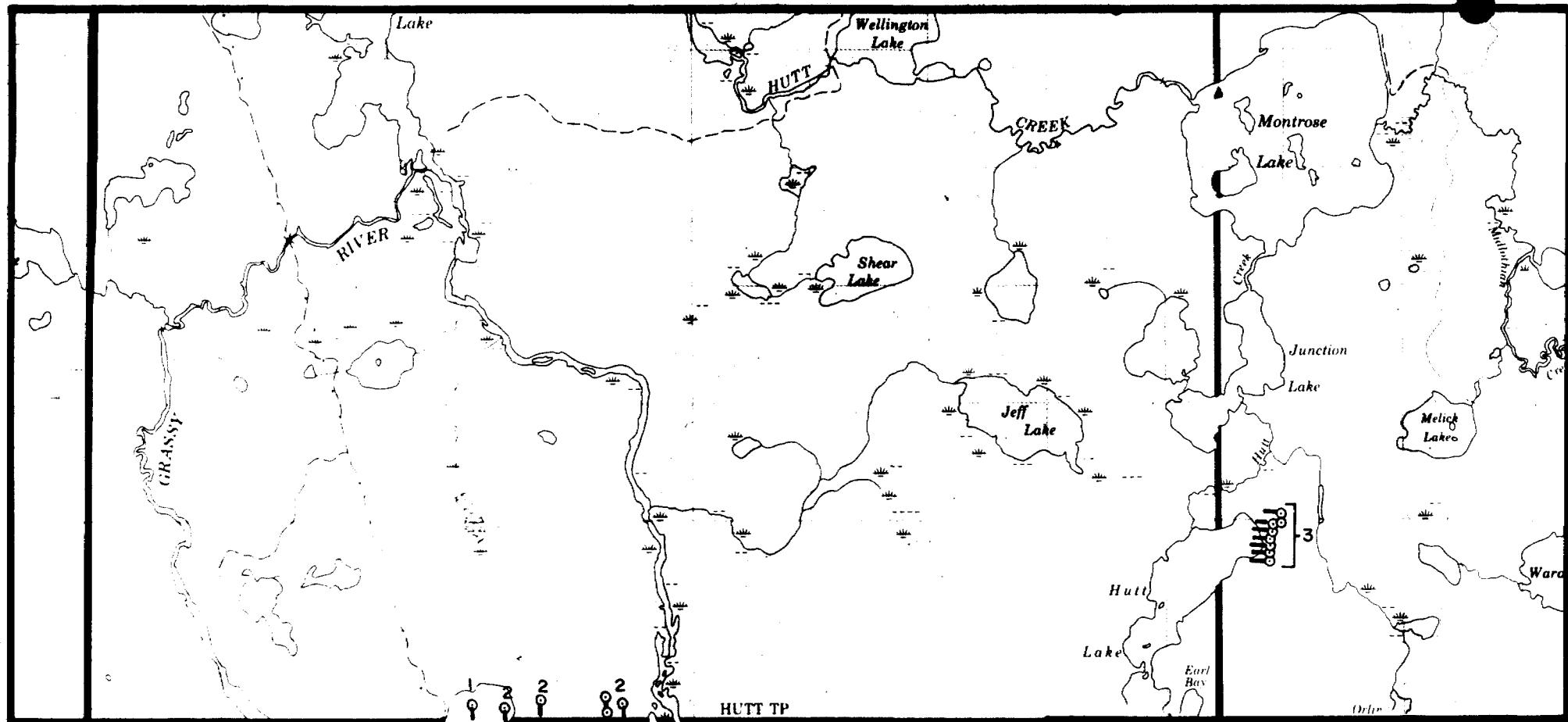
UNITED DIAMOND DRILL RECORD

Hole No.	8	Sheet No.	Lat.	105 feet South	Total Depth	105 feet
Section		Dep.	from DPL #7	Elev. Collar		
Date begun	October 12, 1962	Bearing	1182 W	Elev. Bottom		
Date finished	October 13, 1962	Angle	-50			

NORTHERN MINER PRESS LIMITED, TORONTO - STOCK FORM NO. 501

E. CARON DIAMOND DRILLING CO

G.P.Thodday, P.Eng.



KIDD CREEK MINES LTD.
Exploration Division Timmins, ONTARIO

HALLIDAY, HUTT, MONTROSE TOWNSHIPS
HUTT BASE METALS

DRILL COMPILATION

SCALE : 1 : 50,000	Data : R.M. D.M.
Drawn: Milene	Project N°: 933

Figure 2

MINING CLAIMS TRAVERSED

L753348	L753384
L753349	L753385
L753350	L753386
L753351	L753387
L753352	L753388
L753353	L753389
L753354	L753390
L753355	L753391
L753356	L753392
L753357	L753393
L753358	L753394
L753359	L753395
L753360	L753396
L753361	L753397
L753362	L753398
L753363	L753399
L753364	L753400
L753365	L753401
L753366	L753402
L753367	L753403
L753368	L753404
L753369	L753405
L753373	L753406
L753374	L753407
L753375	L753408
L753376	L753409
L753377	L753410
L753378	L753411
L753379	L753412
L753380	
L753381	
L753382	
L753383	

TOTAL CLAIMS = 62

Kidd Creek Mines Ltd.

Box 1140
571 Moneta Avenue,
Timmins, Ontario P4N 7H9
(705) 267-1188

Exploration Division

December 13, 1984

Mr. Fred Matthews
Director, Land Management Branch
Whitney Block, Room 6450
Queen's Park
TORONTO, Ontario
M7A 1W3

Dear Sir:

Re: HALLIDAY, HUTT & MONTROSE TOWNSHIPS

Enclosed please find duplicate copies of a report and maps covering claims in Halliday, Hutt and Montrose townships. The claims aforementioned are L-753348 to L-753369 inclusive and L-753373 to L-753412 inclusive.

Your prompt attention to this matter would be greatly appreciated.

Yours very truly,


ELAINE HONSBERGER

EH/pp
Encls.

RECEIVED

DEC 14 1984

MINING LANDS SECTION

kidd

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) Electromagnetic, magnetic

Instrument(s) Barringer/Questor Mark VI INPUT System, Geometrics Model 803
(specify for each type of survey)

Accuracy ± 1 PPM Proton Precession Magnetometer
(specify for each type of survey)

Accuracy ± 1 gamma

Aircraft used Short Brothers Skyvan (Canadian Registration C-FQSL)

Sensor altitude 55 metres

Navigation and flight path recovery method Comparison of 35mm black and white film
(exposed during flight) with a photobase mosaic.

Aircraft altitude 122 metres Line Spacing 200 metres

Miles flown over total area 496 km Over claims only 94 km

Mining Lands Section

File No 27570

Control Sheet

TYPE OF SURVEY

GEOPHYSICAL

GEOLOGICAL

GEOCHEMICAL

EXPENDITURE

MINING LANDS COMMENTS:

1.4. (cont.)

L.B. • (g)

S. Henn

Signature of Assessor

84-12-28

Date

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

RESERVES

- (R) S.R.O. RESERVE, MARCH 22/67, FILE 163003
 (R₂) MNR GRAVEL RESERVE 3C25

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
 S.R.O. - SURFACE RIGHTS ONLY
 M.+ S. - MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
(R)	SEC. 36/80	W. 48/84	22/2/84	M.R.O.

DEC 20 1984

TITLES ROOM

DISPOSITION OF CROWN LANDS

PATENT, SURFACE AND MINING RIGHTS
 " , SURFACE RIGHTS ONLY
 " , MINING RIGHTS ONLY
 LEASE, SURFACE AND MINING RIGHTS
 " , SURFACE RIGHTS ONLY
 " , MINING RIGHTS ONLY
 LICENCE OF OCCUPATION

HIGHWAY & ROUTE NO.
 ROADS
 TRAILS
 RAILWAYS
 POWER LINES
 MARSH OR MUSKEG
 MINES

* used only with summer resort locations or when space is limited

TOWNSHIP OF

HALLIDAY

DISTRICT OF
SUDBURY

LARDER LAKE
MINING DIVISION

SCALE : 1 INCH 40 CHAINS (1/2 MILE)

DR. R.W.N.	PLAN NO.
DATE FEB. 2, 71.	M-910

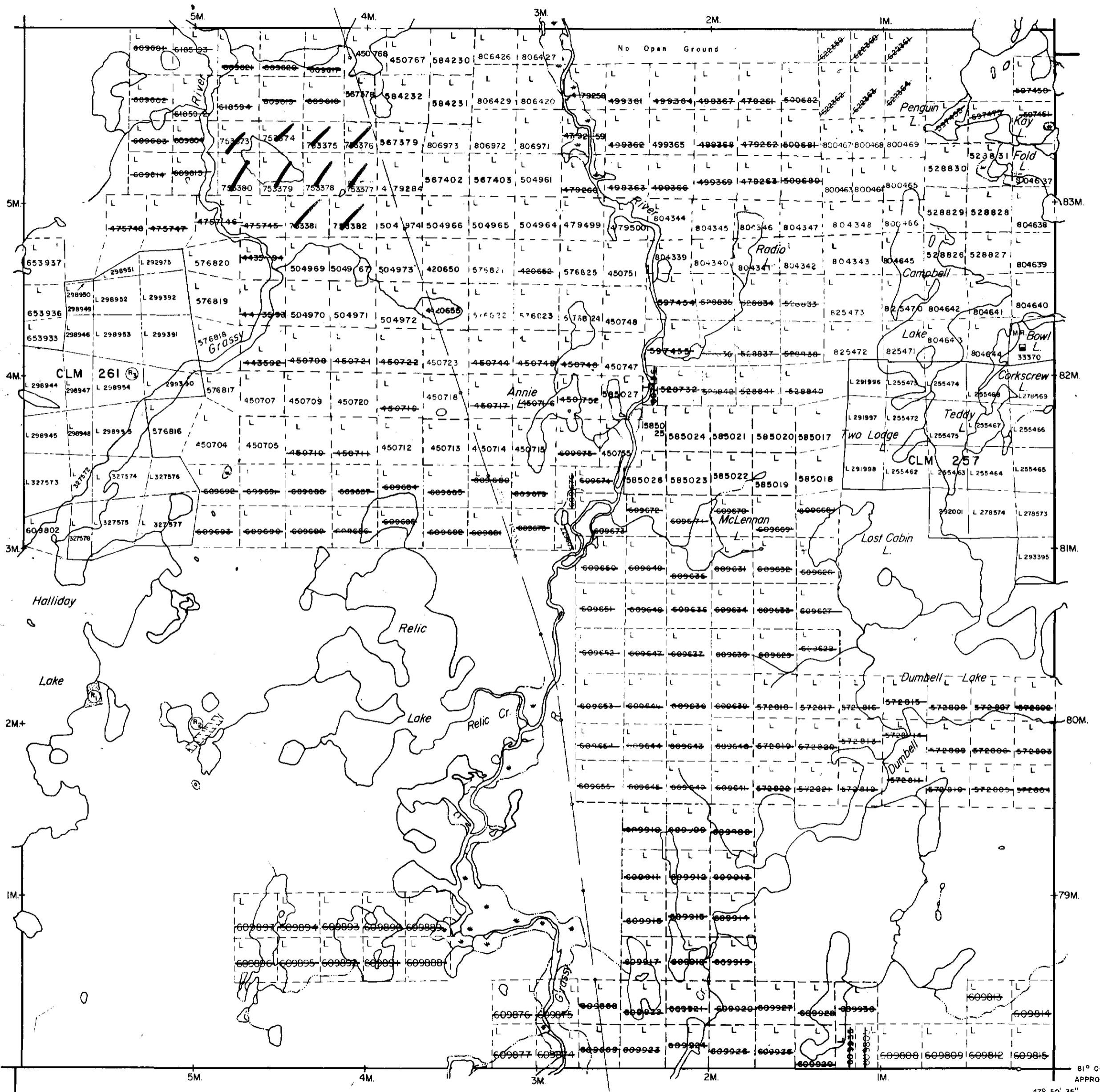
ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH

HUTT Twp. M-943

SOTHMAN Twp. M-1121



MOND Twp. M-870



41P14NE0209 2.7570 HALLIDAY

THE TOWNSHIP
OF
MONROSE'

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

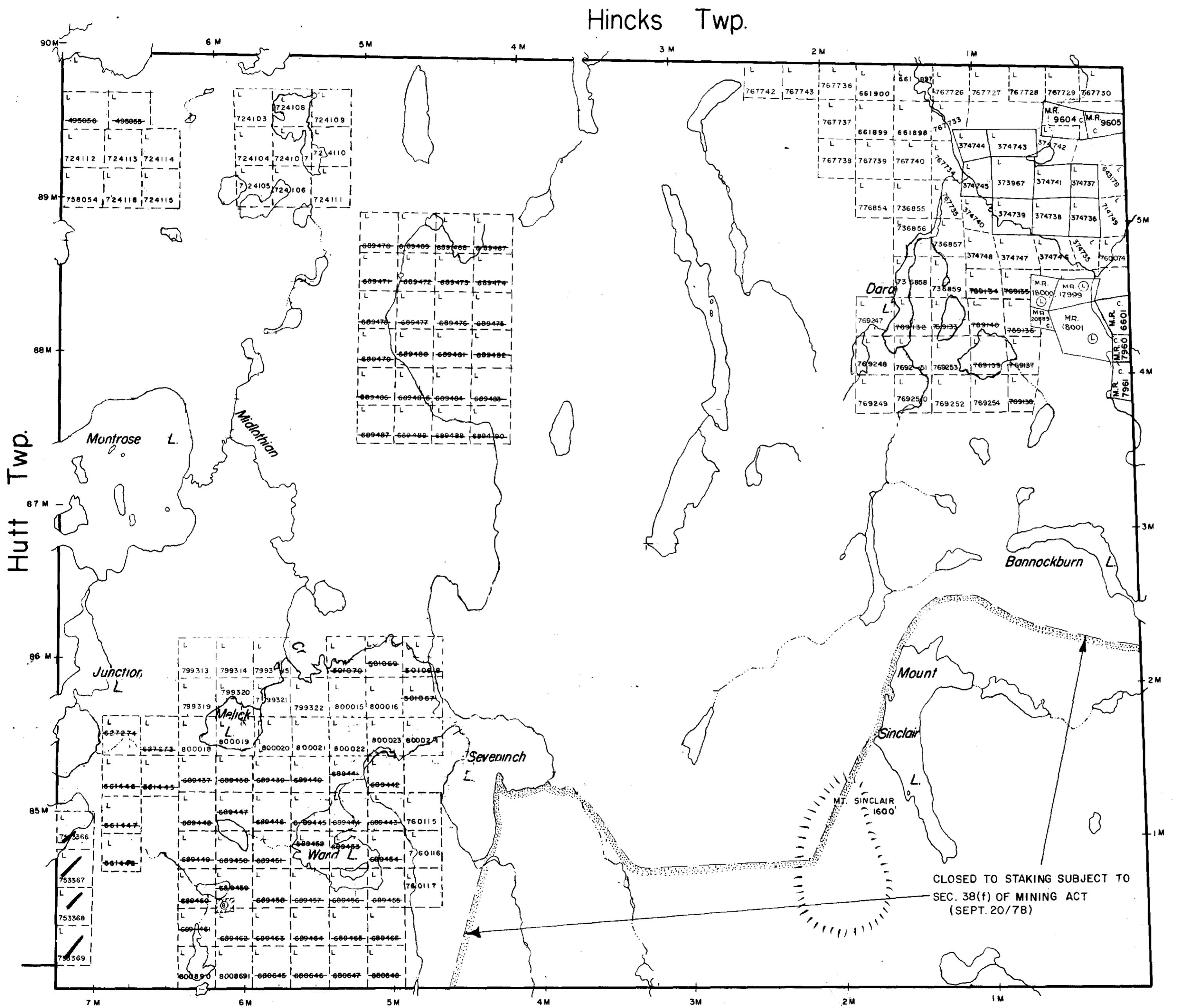
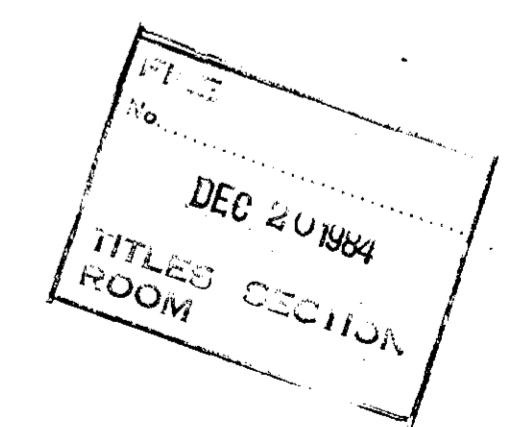
SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	①
CROWN LAND SALE	C.S.
LEASES	L.S.
LOCATED LAND	L.O.
LICENSE OF OCCUPATION	L.O.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	—
QUARRY PERMIT	—

NOTES

400' Surface rights reservation around all lakes and rivers.



Midlothian Twp.



41P14NE0209 2.7570 HALLIDAY

210

PLAN NO.- M. 237

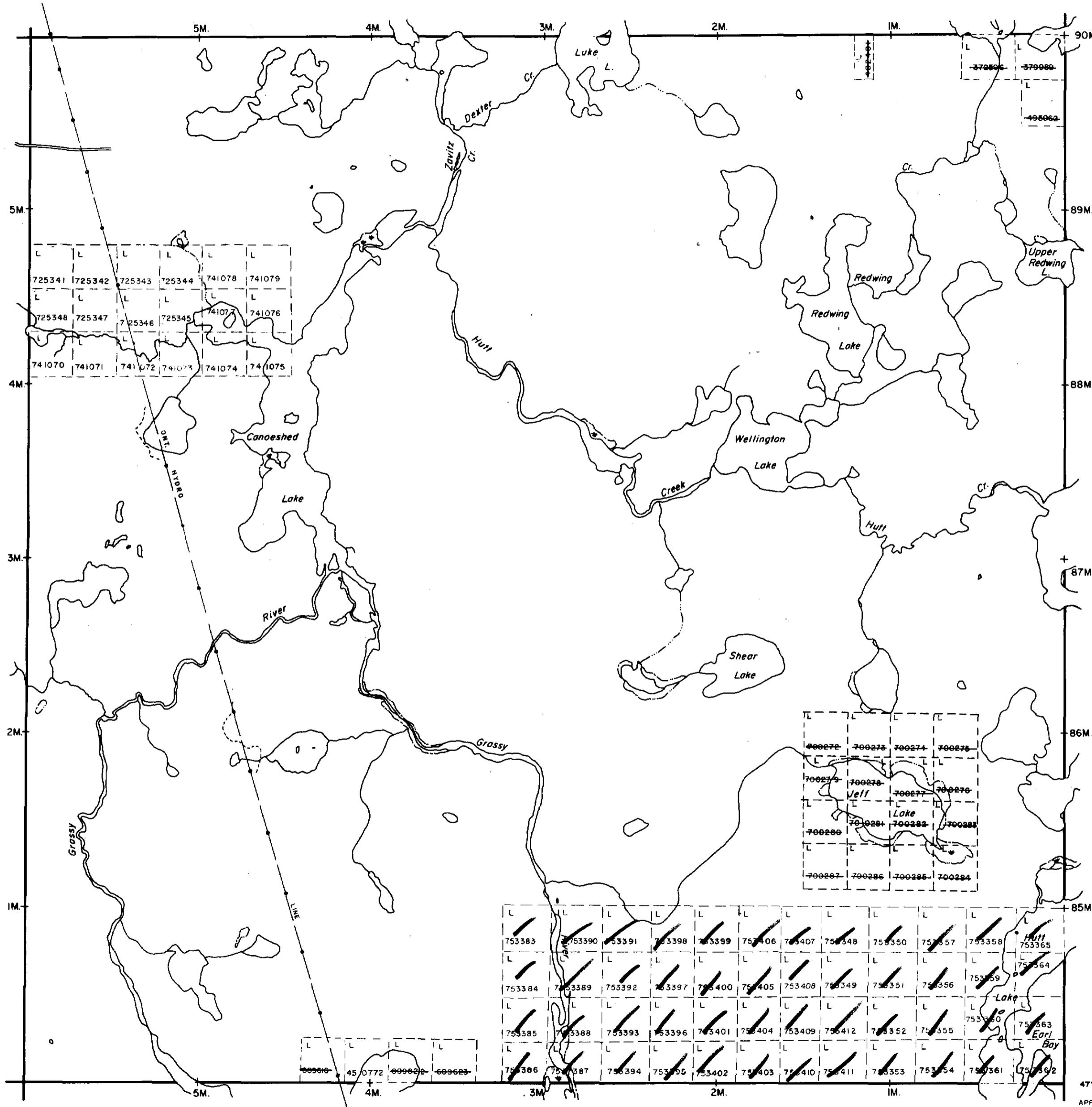
ONTARIO

MINISTRY OF NATURAL RESOURCES

SURVEY AND MAPPING BRANCH

ZAVITZ TWP. M-1189

SEMPLÉ TWP. M-1100



HALLIDAY TWP. M-910

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

DEC 20 1988

MONTBOSSE TWP M-237

LEGEND

PATENTED LAND	(P) or *
PATENTED FOR SURFACE RIGHTS ONLY	
LEASE	(L)
LICENSE OF OCCUPATION	L.O.
CROWN LAND SALES	C.S.
LOCATED LAND	Loc.
CANCELLED	C.
MINING RIGHTS ONLY	M.R.O.
SURFACE RIGHTS ONLY	S.R.O.
HIGHWAY & ROUTE NO.	
ROADS	
TRAILS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	

*used only with summer resort locations or when space is limited

TOWNSHIP OF

HUTT

DISTRICT OF
SUDBURY

LARDER LAKE MINING DIVISION

SCALE : 1 INCH = 40 CHAINS (1/2 MILE)

R. R. NOBLE

PLAN NO.

M-943

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH



020

KIDD CREEK MINES LTD.

GEOPHYSICAL REPORT

AIRBORNE MAGNETIC AND
ELECTROMAGNETIC SURVEYS

HALLIDAY, HUTT & MONTROSE TWPS.

N.T.S.: 41-P-14

DECEMBER, 1984

E. HONSBERGER

SUMMARY AND RECOMMENDATIONS

Four airborne EM anomalies were detected in the southwest corner of the Hutt-Montrose claim block during an airborne magnetic and electromagnetic survey. The source of these is likely the same graphitic-sulfidic horizon drill tested by both Amax and Essex Minerals. Subsequently, the zone was termed unworthy of further exploration.

Ground to the east of these anomalies has seen little geophysical exploration. If the geology in the area is favourable, it is recommended that a surface Pulse EM survey be conducted to test for any deep-seated conductors invisible to the airborne survey. Unless geological work warrants it, a detailed study of the EM anomaly source is not recommended.

TABLE



020C

page

SUMMARY AND RECOMMENDATIONS	i
INTRODUCTION	1
PREVIOUS WORK	1
SURVEY DESCRIPTION	3
SURVEY RESULTS	3
REFERENCES	8

APPENDIX A - Essex Minerals Summary Log

APPENDIX B - United Buffadisson Summary Logs

LIST OF FIGURES

	page
1. Airborne Magnetic and EM Results	6
2. Drill Compilation	7

INTRODUCTION

In May and June of 1984, a combined magnetic and electromagnetic survey was flown for Kidd Creek Mines Ltd. by Questor Surveys Ltd. The survey area covered 62 non-contiguous mining claims unequally divided amongst Halliday, Hutt and Montrose townships within the Sudbury and Temiskaming mining districts. All 62 claims are held by Kidd Creek Mines Ltd. The claims include;

L753348 to L753369 inclusive

L753373 to L753412 inclusive

Fifty-two of the claims occupy the southwest and the southeast corners of Montrose and Hutt townships respectively. The remaining 10 claims are located in the north-central part of Halliday Township. The property is located approximately 64 kilometers south of Timmins.

PREVIOUS WORK

Several companies have conducted base metal or gold exploration programs in Hutt and its surrounding townships.

Companies having diamond drilled on or adjacent to those Kidd Creek claim blocks described in this report include Amax Exploration Incorporated, Essex Minerals and United Buffadisson Gold Mines Ltd.

Both Amax and Essex Minerals drill tested a conductive zone that runs along the south border of Hutt Township from the powerline east to the Grassy River. Amax intersected a lone stringer of chalcopyrite within fractured and altered felsic metavolcanics in one hole, and 78 metres of graphitic tuff containing disseminated and massive pyrite in another. Amax in fact drilled several holes into this zone (Figure 2) although none of this work was submitted to the government for assessment purposes. The information given was taken from a 1984 OGS report by E. G. Bright.

Essex Minerals drilled a hole just east of the powerline (Figure 2) and intersected the same conductor tested by Amax. They describe it to be a pyritic-graphitic type conductor warranting no further exploration. Assay values and a summary log of this hole are given in Appendix A. Essex Minerals may possibly have tested a shorter conductive zone just south of this with a second hole although no record of this was found in government assessment files.

United Buffadisson G. M. L. drilled eight holes (Figure 2) in the southwest corner of Montrose Township. All holes

were drilled as part of a gold-based exploration program. The only mineralization intersected was minor disseminated pyrite and a few specks of chalcopyrite. Summary logs can be found in Appendix B.

SURVEY DESCRIPTION

The electromagnetic survey was conducted with the Barringer/Questor Mark VI INPUT system. A Geometrics Model 803 proton precession magnetometer was used to perform the magnetic survey.

Flight lines were oriented approximately north-south and had an average spacing of 200 metres. Tielines were flown approximately 4 kilometres apart to monitor diurnal drift. The aircraft was kept as close as possible to an altitude of 122 metres with the receiver coil suspended at about 55 metres above surface. A total of 94 kilometers were flown over the 62 claims.

SURVEY RESULTS

Electromagnetic and magnetic results are shown in Figure 1.

Electromagnetic

The several 1-channel EM anomalies detected are likely overburden-type responses and are of little or no significance.

Four bedrock-source anomalies occur in the southwest corner of the Hutt-Montrose claim block on claims L753385 and L753386. They lie on the east edge of an east-west trending package of anomalies that continues west of this claim block to the powerline. The bedrock source is likely the same graphitic-sulfidic horizon previously tested by both Amax and Essex Minerals (see Previous Work section).

Magnetic

Hutt-Montrose Block

The region of high magnetic susceptibility over the west claims terminates along the Grassy River, outlining the Grassy River Fault. A region of similarly high magnetic susceptibility north of this claim block implies faulting with a west-side south lateral displacement. Magnetic evidence suggests these west claims are underlain by an ultramafic flow.

The relatively low magnetic susceptibility measured over the mid-block claims is indicative of underlying rocks which may be predominantly felsic in nature.

The moderately high magnetic response of the eastern claims suggests they may be underlain by mafic rocks. There is evidence of the displacement of a fairly extensive east-west trending conductive zone south of this block. Considering this, it is possible that these eastern claims are flanked on their west side by a north-south striking fault. The apparent displacement of the conductor to the south infers that any possible faulting motion would have involved a west-side north lateral movement.

Halliday Block

The magnetic signature of these claims is similar to that of the mid-block Hutt-Montrose claims. This implies that underlaying rocks here may also be predominantly felsic.


Elaine Honberger
ELAINE HONBERGER

REFERENCES

Bright, E. G. 1984, "Geology of the Ferrier Lake-Canoeshed Lake Area, District of Sudbury", Ontario Geological Survey Report 231.

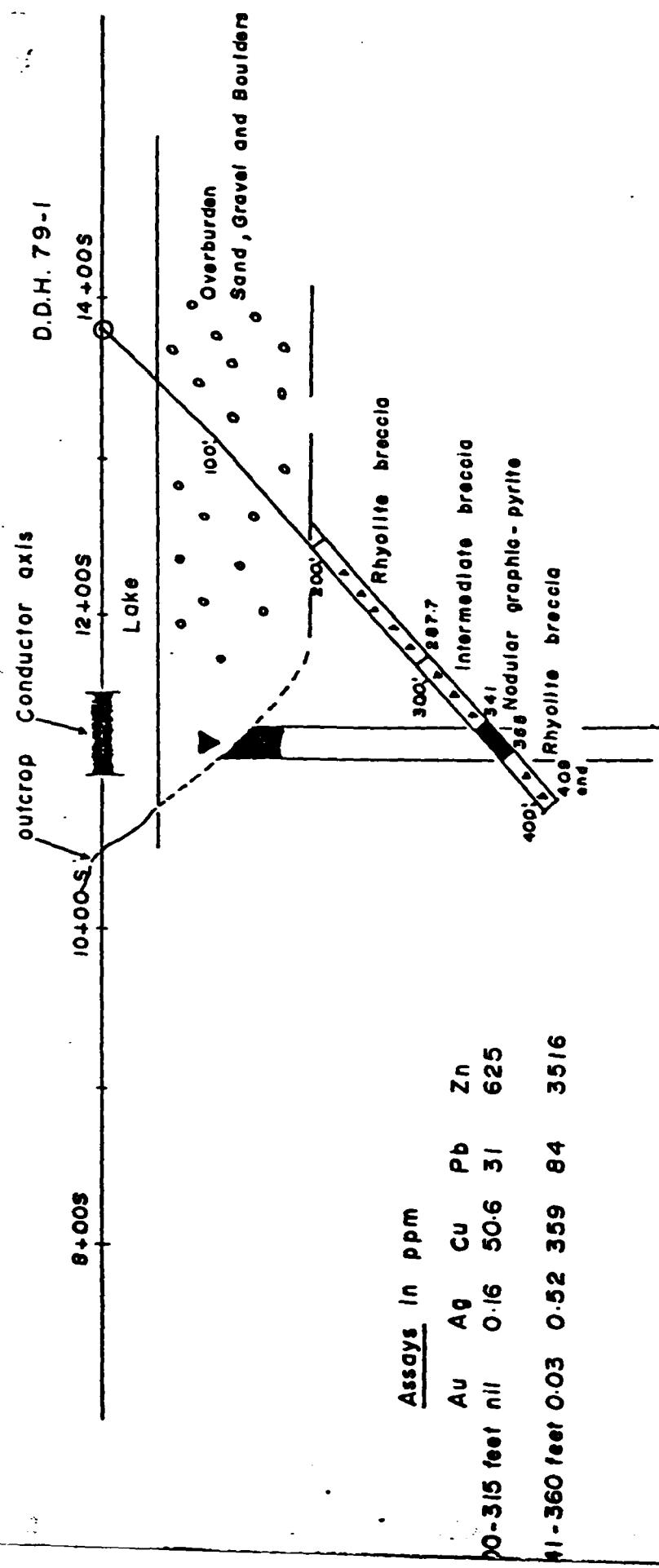
Mullen, D. V. 1984, "Report on the Geology of the Hutt Township Area", Kidd Creek Mines Ltd., Company Report.

George, P. T. 1977, "Magnetic and HEM Surveys for Essex Minerals Co. By Geoex Ltd.", Government Assessment File.

ESSEX MINERALS COMPANY D.D.H. 79-1

Length: 409 feet Purpose: To test EM conductive zones
Dip: -50° Latitude: 13 + 80N
Dip Tests:
Core Size: BQ Longitude: 8 + 00E
Property: Grassy River Azimuth: Grid South
 Logged By: W. Thompson

<u>FROM</u>	<u>TO</u>	<u>COMMENTS</u>
0	190	<u>Overburden</u>
190	192.5	<u>Rhyolite Tuff Breccia:</u> Dark grey with lighter fragments floating in the dark groundmass. The fragments vary in size from 3 mm to 4 cm and they, too, are brecciated.
192.5	287.7	<u>Rhyolite Breccia:</u> Rhyolitic to rhyodacitic fragmental that has been brecciated with rounded to angular fragments. Dominantly light grey in colour. This unit is cut randomly by carbonate stringers. These stringers have been slightly sheared and cut again by hairline carbonate veins. This unit has small sections or interbedded layers of the above tuff breccia. Minor pyrite beds and disseminated pyrite occur throughout the core. The core is badly broken down to 219 feet. At 262-264 feet is another broken up section with vuggy core. Bedding indicated by possible interlayering contacts that appear to be at 45° CA.
287.5	341.0	<u>Intermediate Breccia:</u> Much like the above section except that it is more pyritiferous and has vuggy, slightly limonitic sections. Particles are about 4 mm across. In this section, blebs of pyrite are more common. Carbonate veins are not as abundant, but do occur and cut the core at about 45° CA.
341.0	365	<u>Graphitic Nodular Pyrite Section:</u> Typical sedimentary pyritic graphitic section. Common to the Abitibi with scattered carbonate and quartz veins. This unit is the conductor to the target zone.
365	409	<u>Rhyolite Breccia:</u> Light grey competent unit with bands and blebs to 3% pyrite.
409		<u>End of Hole</u>



ESSEX MINERALS COMPANY

Allerton Option
Grassy River

Line 8+00E 13+80N

Dip - 45°
Scale: 1" = 100' 0' 200'
 0' 400' } dip = 41°

ESSEX MINERALS COMPANY

D.D.H. 79-1

Sample	Footage		Assays in PPM				
	From	To	Au	Ag	Cu	Pb	Zn
9603	295	300	Nil	Nil	42	42	225
9604	300	305	Nil	Nil	59	27	460
9605	305	310	Nil	0.3	50	28	670
9606	310	315	Nil	0.2	43	38	745
9607	315	320	Nil	0.2	36	40	88
9608	320	325	Nil	0.2	38	32	72
9609	325	330	Nil	Nil	32	26	80
9610	330	335	Nil	0.2	41	40	74
9611	335	341	Nil	0.5	90	43	210
9612	341	346	0.03	0.6	940	80	5400
9613	346	355	0.03	0.5	220	92	3900
9614	355	360	0.03	0.5	143	73	1320
9615	360	365	0.03	0.6	89	75	250
9616	365	369	Nil	Nil	50	32	68

DIAMOND DRILLING RECORD

UNITED BUFFALO MOUNTAINS LTD.

Hole No. 1 Sheet No. 107 feet
 Section N 81° E from #3 - 011m Post Total Depth
 Dep. of Class No 34278 Elev. Collar
 Date begun October 2, 1962 Bearing
 Date finished October 4, 1962 Angle -50°

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	BLUD GOLD	NORTHERN MINERALS LTD., TORONTO - STOCK FORM NO. 1	
						BLUD	GOLD
0'							
0' - 2.5'	BLUE QUARTZ						
2.5' - 107'	TUFF cream colored 45° to core						
57.5' - 67.5'	brecciated well mineralized with patches of pyrite						
END OF HOLE 107 FEET							
RECORDS BY E. CARON DRILLING CO.							
E.P. Thoday, P. Eng.							
Date: 10/3/62							
Benton Geologist							

E. CARON DIAMOND DRILLING CO

תְּלִימָדָה
בְּרִיתָמָה
בְּרִיתָמָה

Hole No.	2	U.S.G.S. Section	2	Sheet No.	35	Lat.	35° 30' 44" N	Long.	115° 35' 44" W
Section		Dep.	1	Dist.	1	Bearing	889.4	Angle	50°
Date begun	Oct. 4, 1962								
Date finished	Oct. 5, 1962								

Total Depth 104 feet.

Elev. Bottom

卷之三

NAME OF FARMER	WIDTH OF GATE
NORTHERN MINING FRIES LIMITED. FOR	

SELECTED

四庫全書

卷之三

卷之三

卷之三

卷之三

三

167

卷之三

四庫全書

卷之三

卷之三

卷之三

卷之三

100

卷之三

卷之三

四庫全書

卷之三

NORTHERN MINER PRESS LIMITED, TORONTO. STOCK FORM NO. 1

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	DEPTH	SLUDGE GOLD
0-100'	PURP. ORANGE-OLIVE-BROWN				
100'-235'	CONSIDERABLE MUDSTREAKS				
235'-371'	34.4-37.1' patches of fine pyrite				
37.1'-40.6'	70% white-quartz and fine dark-pyrite				
40.6'-104'	some scattered fine pyrite				
END OF TIDE 104 FEET					

E. CARON LYRA AND PIRILLI

U.S.R. Today, p. Engr.

NORTHERN MINER PRESS LIMITED TORONTO STOCK FORM NO. 6

Hole No. 3 Sheet No. Lat. ... 35° 12' W from Total Depth ... 108 feet
 Section Dep. DDM #2 Elev. Collar
 Date begun October 6, 1962 Bearing N87°W
 Date finished October 7, 1962 Angle 50°
 Elevation Bottom

DEPTH FEET	FORMATION	SAMPLE NO. OF SAMPLE	WIDTH OF SAMPLE	GOLD g.	SLUDGES GOLD.
0' - 17.5'	RHYOLITE cream colored				
	11'-14' Lost Core.				
17.5'-23.6'	QUARTZ hard well mineralized				
	23'-23.6' Vuggy Section				
23.6'-29.0'	RHYOLITE brecciated with some fine pyrite mineralized patches.				
29'-36'	QUARTZ milky white with minor min.				
36'-108'	TUFF cream colored banded? 45° to core patches of fine pyrite up to 1" scattered through core.				
	END OF HOLE 108 FEET				

E. CARON DIAMOND DRILLING CO.

G.P. Thodsey, P.Eng.

દેશી વિત્તન સર્વોચ્ચ કાર્યક્રમ

WILHELM BUDDEWEISER UND ERNST LIMMER

I-Hole No. 4 Sheet No. Lat. 20 feet Total Depth 105 feet
 Section Dep. 10H + 3 Elev. Collar
 Date begun Bearing Elev. Bottom

Date finished October 7, 1962 Angle 689 1/4 Date issued October 8, 1962 No. 50
NORTHERN MINER PRESS LIMITED, TORONTO - STOCK FORM NO.

FORMATION	DEPTH IN FEET	SAMPLE NO.	WIDTH OF SAMPLE	GOLD	SLUG GOLD
—	—	—	—	—	—

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD	BLUE GOLD	
					g	oz
0.-14'	RIVOLITE light buff colored					
14'-21'	QUARTZ white well mineralized with stns. of pyrite, a few specks of chalcopyrite.					
21'-44'	QUARTZ crenulated 45 to core, 24.2' - 25.5' quartz minor py					
105'	Pine pyrite " 59' , 78' , 84' , Quartz barren 93.7' - 94.7'					
					FIND OF HOLE: 105 FEET	

E. CROWN INFORMATION

DIAMOND DRILL RECORD

UNIVERSITY PARK MINES LTD.

Hole No. 5 Sheet No. Lat. 35° Feet 27 M. at Total Depth 105'
 Section Dep. DD. 44' Elev. Collar
 Date begun October 2, 1962 Bearing N. 87° W.
 Date finished October 10, 1962 Angle 50'

DEPTH FEET	FORMATION	SAMPLE NO.	WIDTH OF SAMPLE	GOLD \$	SLUDGE GOLD.	
					SLUDGE	GOLD
0'-20'	TUFF shingled 45° to core					
	16' - 18' fine bits of Lyrite					
20'-105'	TUFF cream colored					
	45° to core with some scattered seams of "y."					
	26'-31.5' lost core					
	31.5' - 32' Quartz					
	32.7'-24.7' lost core					
	H.D. OF HOLE 105' F.M.T.					

E. CANNON DIAMOND DRILLING CO LTD

A. J. Thoday, P. King.

UNITED DIAMOND DRILL RECORD

1

Hole No.	Sheet No.	Lat.	Total Depth
Section	DDII-4-6		
Date begun	October 11, 1962	Dep. N67 W	Elev. Collar
Date finished	October 12, 1962	Bearing 50	Elev. Bottom
		Angle	

NORTHERN MINER PRESS LIMITED, TORONTO - STOCK FORM NO. 90					
DEPTH FEET.	TYPE	FORMATION	WIDTH OF SAMPLE	gold g.	SLUDGE GOLD.
SAMPLE NO.					
11'-13'-7'	gneiss	metabiotite - plagioclase			
13'-7'-7'	gneiss	55'-65' quartz stringers - some pyrite vein			
74-#01	gneiss	annite chloritized			
		98.5 to 101' numerous quartz stringers			
		END OF HOLE 101 FEET			

卷之三

F. CANONICA

UNIVERSITY MINE RECORD

Hole No. 8 Sheet No. 103 feet South Total Depth 105 feet
 Section from Drill #7 Elev. Collar
 Date begin October 12, 1962 Bearing 1182 W
 Date finished October 13, 1962 Angle -50

DEPTH FEET	FORMATION	NORTHERN MINER PRESS LIMITED, TORONTO - STOCK FORM NO. 801		
		SAMPLE NO.	WIDTH OF SAMPLE	GOLD & SLUDGE GOLD.
0-100'	TUFF with the odd bands of light sulphide min. py			
100-105	Quartz stringers with some pyrite min.			
END OF HOLE 105 FEET				

E. CARON DIAMOND DRILLING CO

G.P. Thodday, P. Eng.

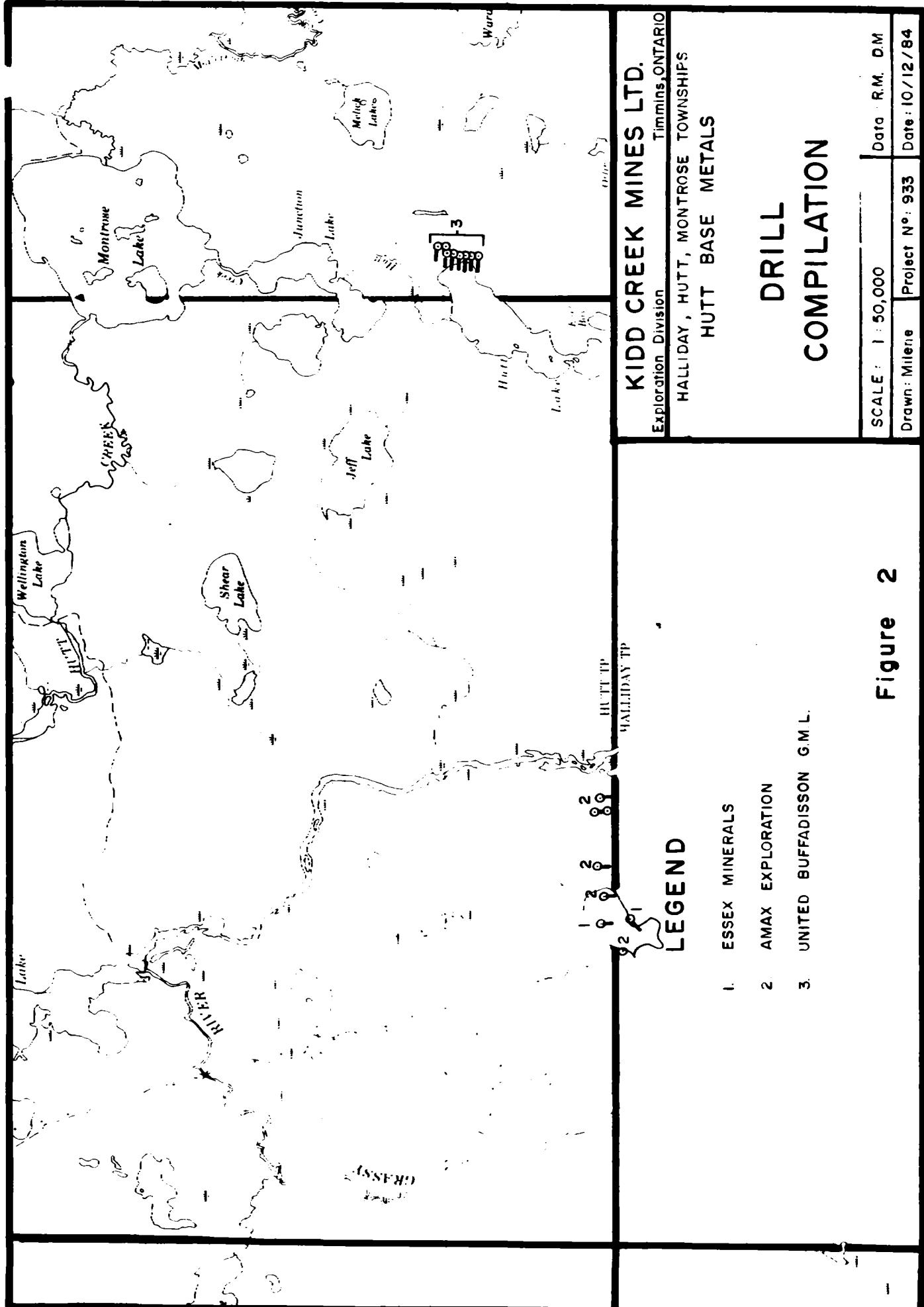
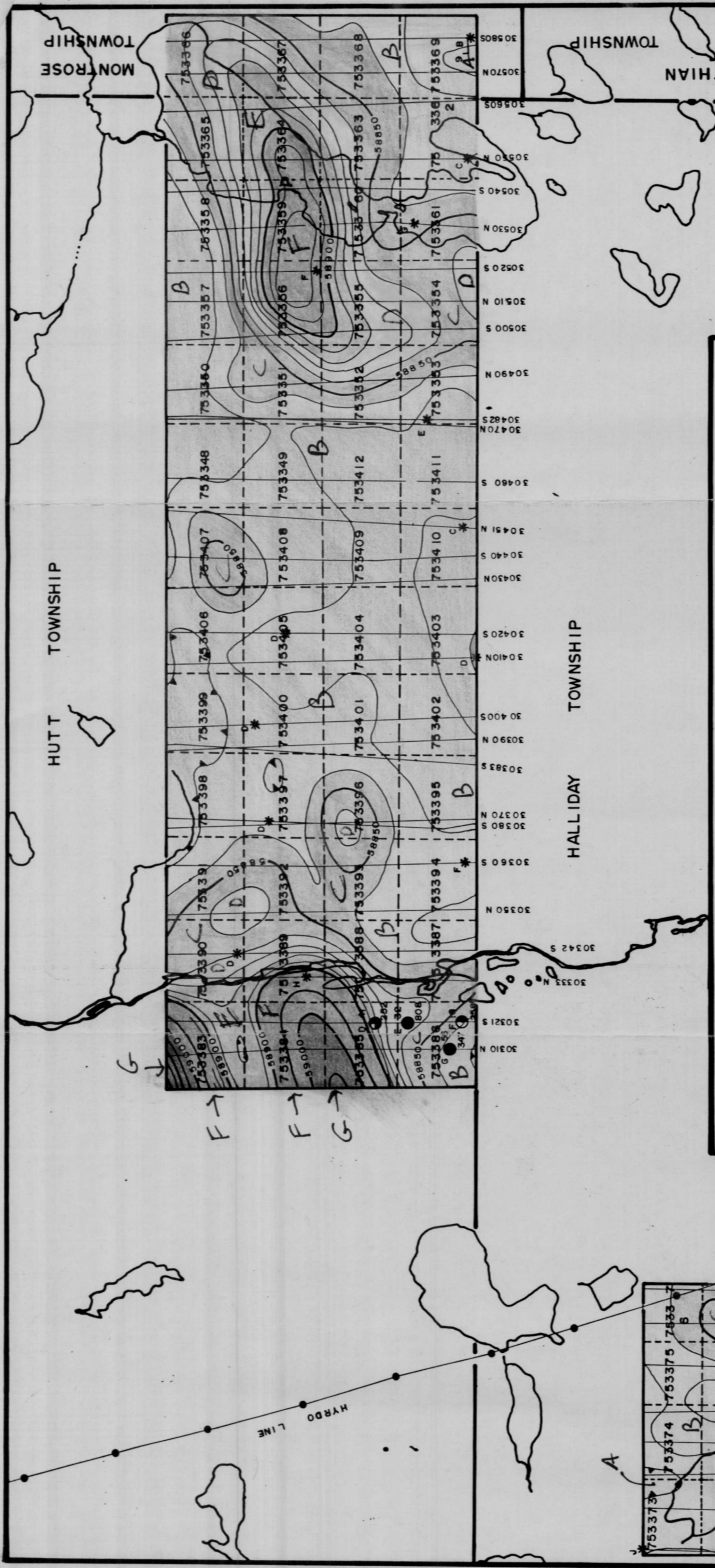


Figure 2



Figure

KIDD CREEK MINES LTD.
Exploration Division Timmins, ONTARIO
HALLIDAY HUTT & MONTROSE TWPS.

AIRBORNE MAGNETIC & ELECTROMAGNETIC

SCALE	1 : 20,000	Data : QUESTOR
Drawn : D E L	Project No: 933	Date : 10/09/84

NORTH - SOUTH FLYING

— 50 Associated magnetic response

230

A standard linear barcode is positioned vertically on the right side of the page.