KIDD CREEK MINES LTD.

GEOPHYSICAL REPORT ON CUNNINGHAM 31

RUNNING GHOST LAKE, PETER LAKE, SKUNK CREEK

AND

DUCK POND GRIDS

CUNNINGHAM BASE METALS PROJECT #75

N.T.S.: 41-O-10

JANUARY, 1983

MICHAEL W. ZANG

SUMMARY AND RECOMMENDATIONS

Geophysical surveys consisting of proton precession magnetometer, horizontal loop electromagnetic and very low frequency electromagnetic traverses were conducted over four properties in Cunningham Township.

Extremely strong electromagnetic anomalies were detected in all four properties, three of which contain magnetite and sulphide iron formations.

Based on the geophysical results, four drill holes have been planned to test the conductors on the Skunk Creek and Duck Pond Properties (Figures 2 and 3). Also a follow up horizontal loop survey is recommended to detail the conductors on the Peter Lake Grid and to complete the EM coverage on the remaining three properties.

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INTRODUCTION

Proton precession magnetometer, horizontal loop electromagnetic and very low frequency (VLF) electromagnetic surveys were conducted on four properties in the western and eastern parts of Cunningham Township between September 15 - 29, and October 13 - 21, 1982. The field work completed on approximately 91 kilometres of grid is the subject of this report.

Location and Access:

The properties are located and described as follows (Figure 1):

Running Ghost Lake Grid (southern Cunningham/Greenlaw Township boundary)

- 16 unpatented claims P 641172 to P 641187 (inclusive)

Peter Lake Grid (west-central Cunningham Township)

- 4 leased claims S 116466 to S 116469 (inclusive)
- 14 unpatented claims P 641194 to P 641207 (inclusive)

Skunk Creek Grid (east-central Cunningham Township)

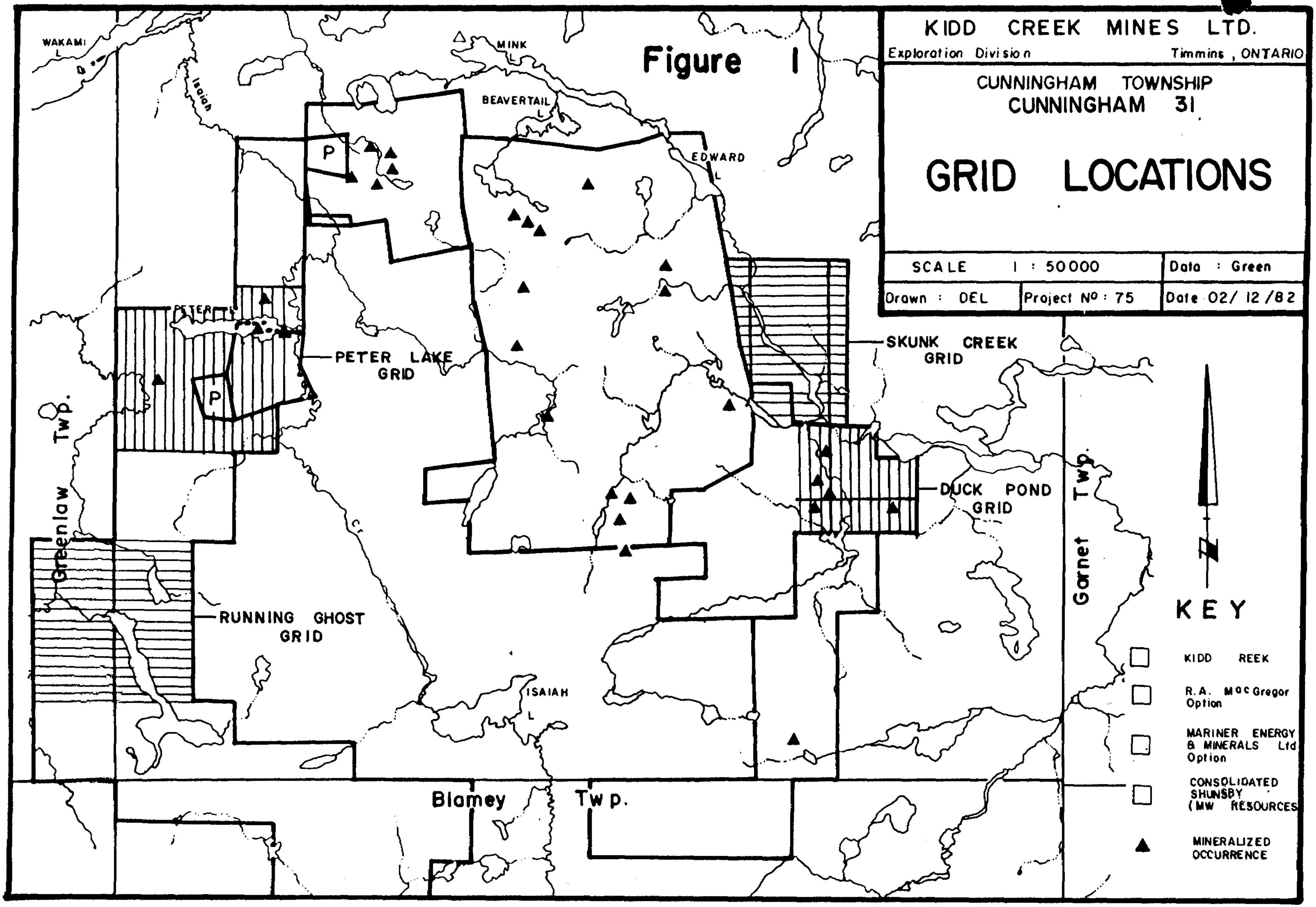


Figure 1
KIDD CREEK MINES LTD.
Exploration Division
Timmins, ONTARIO
CUNNINGHAM TOWNSHIP
CUNNINGHAM 31
GRID LOCATIONS
SCALE 1 : 50000
Data : Green
Drawn : DEL
Project No : 75
Date 02/ 12 /82
WAKAMI L
Isaiah
MINK L
BEAVERTAIL L
EDWARD L
PETER L
P
P
PETER LAKE GRID
SKUNK CREEK GRID
DUCK POND GRID
RUNNING GHOST GRID
ISAIAH L
Greenlaw Twp.
Garnet Twp.
Blamey Twp.
N
KEY
KIDD REEK
R.A. MacGregor Option
MARINER ENERGY & MINERALS Ltd Option
CONSOLIDATED SHUNSBY (MW RESOURCES
MINERALIZED OCCURRENCE

- 15 unpatented claims P 636223 to P 636229 (inclusive)
  P 636232, P 636485, P 636486
  P 641676 to P 641679 (inclusive)
  and P 642065

Duck Pond Grid (adjoins Skunk Creek Grid to the South)
- 8 unpatented claims P 642133 to P 642140 (inclusive)

Access to the westernmost groups is most easily attained by float equipped, fixed-wing aircraft from Ivanhoe Lake, 61 kilometres to the no~th. In addition, the Running Ghost and Peter Lake Grids are connected by an old wagon road which originates approximately 20 kilometres to the south in Sultan.

A 4-wheel drive access road from Garnet Lake, 12 kilometres to the east, to the Shunsby base metals prospect in central Cunningham Township, provides access to the Skunk Creek and Duck Pond Grids.

Previous Work: FRANK R. PLOEGER

Prospecting of the Cunningham Township area in the early 1900's concentrated on the cherty iron formation as possible hosts of iron ore deposits. Emphasis was then switched to gold and finally base metals exploration with the discovery of zinc, lead and copper mineralization in the sedimentary horizons.

The majority of work to date has been conducted on the M.W. Resources Ltd. property, formerly named Shunsby Gold Mines Limited and Consolidated Shunsby Mines Limited, which lies in the central portion of the Township. In addition to approximately 150 diamond drill holes aggregating 55,529 feet (16925 m, Siragusa, 1980) extensive trenching and stripping and geological, geophysical and geochemical surveys have been conducted on the property. This work outlined 3 mineralized zones, the largest of which has been traced for 350 feet (105 m) along strike and 1000 feet (300 m) down dip - dips range between 20° and 30° west - and which averages 30 feet (9 m) in width. The mineralization occurs as bands, stringers and veins of sulphides in a sedimentary unit comprised of brecciated chert-magnetite iron formation, argillite, graphitic phyllite and sericite schist. The largest of these zones contains drill indicated reserves of 310,095 tons (Thurston et al, 1977) grading 1.2 percent copper, 1.3 percent zinc and significant lead, silver and cadmium. Previous work on, and in the vicinity of the Kidd Creek claim groups has shown that they are underlain by sedimentary horizons similar to those occurring on the M.W. Resources property.

In 1959-60, the Anaconda Company (Canada) Limited carried out geological, geophysical and diamond drilling programs on a claim group coincident with the Running Ghost Lake Grid. No assays were reported, however, all drill holes intersected banded magnetite and sulphide iron formation.

Extensive trenching and test-pitting was evident in the area south of Peter Lake. Drilling by R.A. MacGregor in 1965, outlined small continuous sulphide lenses of up to 5% combined zinc/lead over widths of almost 6 m. A self-potential survey by Geophysical Engineering Services Limited in 1958, demonstrated that conductive sediments underly the area immediately south of Peter Lake.

The stratigraphic sequence of the M.W. Resources property appears to strike southeasterly onto the adjoining Skunk Creek and Duck Pond Grids. In 1954, The American Metal Company Limited carried out geological and geophysical surveys and a limited amount of diamond drilling in an area covering the north part of the Duck Pond Grid. Their surveys and drilling located "limited sulphide mineralization" associated with shear zones and the contact between iron formation and greenstone.

Geophysical surveys and diamond drilling by Dome Exploration (Canada) Limited in 1971 and 1973, concentrated on outlining and testing the ultramafics which intrude the sedimentary-volcanic sequence on the south part of the Duck Pond Grid. The sediments intersected by the drilling comprised variably mineralized banded siliceous iron formation, tuff and argillite.

Previous government surveys covering the Cunningham Township area include regional mapping by V.B. Meen (1942), detailed township mapping by G. M. Siragusa (1980) and airborne electromagnetic and magnetic surveys by the Ontario Geological Survey (1982). The airborne surveys showed up numerous conductors on all the claim groups.

GENERAL GEOLOGY

FRANK R. PLOEGER

Cunningham Township is underlain by a thick sequence of mafic to intermediate tuffs, pillowed and massive flows and related intrusive equivalents. Interbedded with this sequence are continuous lenses of siliceous magnetite and subordinate sulphide iron formation with associated tuffaceous and argillaceous sediments and felsic tuff, lapilli tuff and agglomerate. Discontinuous sill-like bodies of peridotite and pyroxenite cut the sequence locally. In the southwest corner of Cunningham Township, a plug of biotite-quartz monzonite and related quartz-feldspar porphyry dikes intrude the volcano-sedimentary pile causing local flattening of dips and changes in the strike of the units. North-South trending diabase dikes which are probably of the Matachewan type, represent the latest phase of intrusive activity in the township.

The Isaiah Creek fault has been shown by G.M. Siragusa to cut the granitic plug with an indicated left lateral displacement of approximately 2000 m.

PROPERTY GEOLOGY

FRANK R. PLOEGER

The Running Ghost Lake Grid is underlain mainly by a succession of mafic to intermediate tuffs and flows which separate, and to a lesser extent are interbedded with, two sedimentary horizons. The lowermost horizon, which outcrops east of the lake, comprises a shallow westward-dipping, north-south-striking sequence of chert, greywacke, argillite and magnetite with subordinate sulphide iron formation. Diamond drill holes into the poorly-exposed, upper sedimentary unit intersected graphitic argillite and impure sediments mineralized with bands and stringers of pyrrhotite.

The volcanic-sedimentary pile is intruded by gabbroic, dioritic and ultramafic sills and by the granitic plug on the east boundary.

Geologically, the Peter Lake Grid may be divided into 3 sections. The northern and southern thirds of the property are underlain by mafic and intermediate tuff, massive and pillowed flows, felsic pyroclastics and mafic intrusive rocks.

Well fractured siliceous iron formation and associated argillite, mafic and felsic tuff and sulphide iron formation constitute the central sedimentary section of the property. Previous work in fractured and quartz-veined chert and mafic volcanics, approximately 150 m south of the east end of Peter Lake, outlined a 200 m long zinc-lead-rich zone which assayed up to 4.2% zinc and 1.0% lead over 5.6 m.

A small tongue of the granitic plug outcrops in the southeast corner of the property.

The Skunk Creek grid is almost entirely underlain by north to northwest-striking mafic to intermediate pillowed and massive flows intruded by concordant to subconcordant gabbroic sills. Many of the sills may in fact be massive flows. Several airborne EM anomalies occur at the contact between a wide gabbroic sill and the intruded mafic flows northeast of Skunk Creek.

The extrusive/intrusive mafic package of the Skunk Creek Grid continues southward onto the adjoining Duck Pond Grid. Overlying this package is a central sedimentary horizon flanked by felsic pyroclastic units. The sediments comprise a northwest-striking, southwest-dipping sequence of fragmented chert, argillite, mafic and felsic tuff and banded magnetitie and sulphide facies of iron formation similar to that at Peter Lake. Mineralization logged in previous drilling and observed in a surface showing includes banded pyrrhotite and pyrite with minor chalcopyrite and sphalerite; pyrite, chalcopyrite, sphalerite and galena also occur in veins and fracture-fillings. East-west-trending mafic and ultramafic sills intrude the volcanic-sedimentary sequence.

SURVEY DETAILS

On all four Cunningham grids, crosslines were cut at 100 metre intervals with stations established every 20 metres.

Magnetic readings were taken with a Geometrics G816 proton precession magnetometer. This instrument measures the earth's total magnetic field to an accuracy of $\pm$ 1 gamma. Base stations were established at the most convenient tie in points due to the number of rivers and lakes on the grids. A total of 3990 readings were taken along 80 kilometres of line.

The horizontal loop survey was carried out with an Apex Parametrics MaxMin II using a coil separation of 80 metres. Readings were taken every 20 metres at frequencies of 444Hz and 1777Hz. A total of 3750 readings were taken along 75 kilometres of line.

Very low frequency (VLF) readings were taken with a Crone Radem EM receiver. This instrument measures the dip angle of the magnetic field component in degrees with an accuracy of ± 1/2 degree. The transmitting stations used in the surveys were:

			Freq.
Duck Pond Grid	-	Seattle, Washington	24.8 KHz
Skunk Creek Grid	-	Cutler, Main	17.8 KHz
Peter Lake Grid	-	Cutler, Main	17.8 KHz
Running Ghost Lake Grid	-	Annapolis, Maryland	21.4 KHz

A total of 3990 readings were taken along 80 kilometres of line.

SURVEY RESULTS

Duck Pond Grid

The Duck Pond Grid adjoins the south end of the Skunk Creek Property in east-central Cunningham Township. The property is geophysically dominated by five major northwest trending horizontal loop anomalies and a number of minor satellite anomalies (Figure 4).

Anomalies A, B, C and D are magnetically and geologically identified as being caused by sedimentary iron formations consisting of banded magnetite and sulphide mineralization. Anomalies E, F, G and H are magnetically and geologically identified as being caused by non magnetic sulphide mineralization and argilliceous sediments. Anomaly I does not appear to have a bedrock source. The data for the horizontal loop anomalies is listed as Table 1.

A northwest trending fault running between Line 17300E at 131 + 10 N and Line 17800 E at 125 + 00 N (Ploeger, 1982) is seen as a major break in the magnetic picture. This discontinuity appears to mark the contact between the western sediments and the eastern volcanic sequences. This fault also offsets a large peridotite mass in the southeast corner of the property which gives a moderate to strong magnetic anomaly.

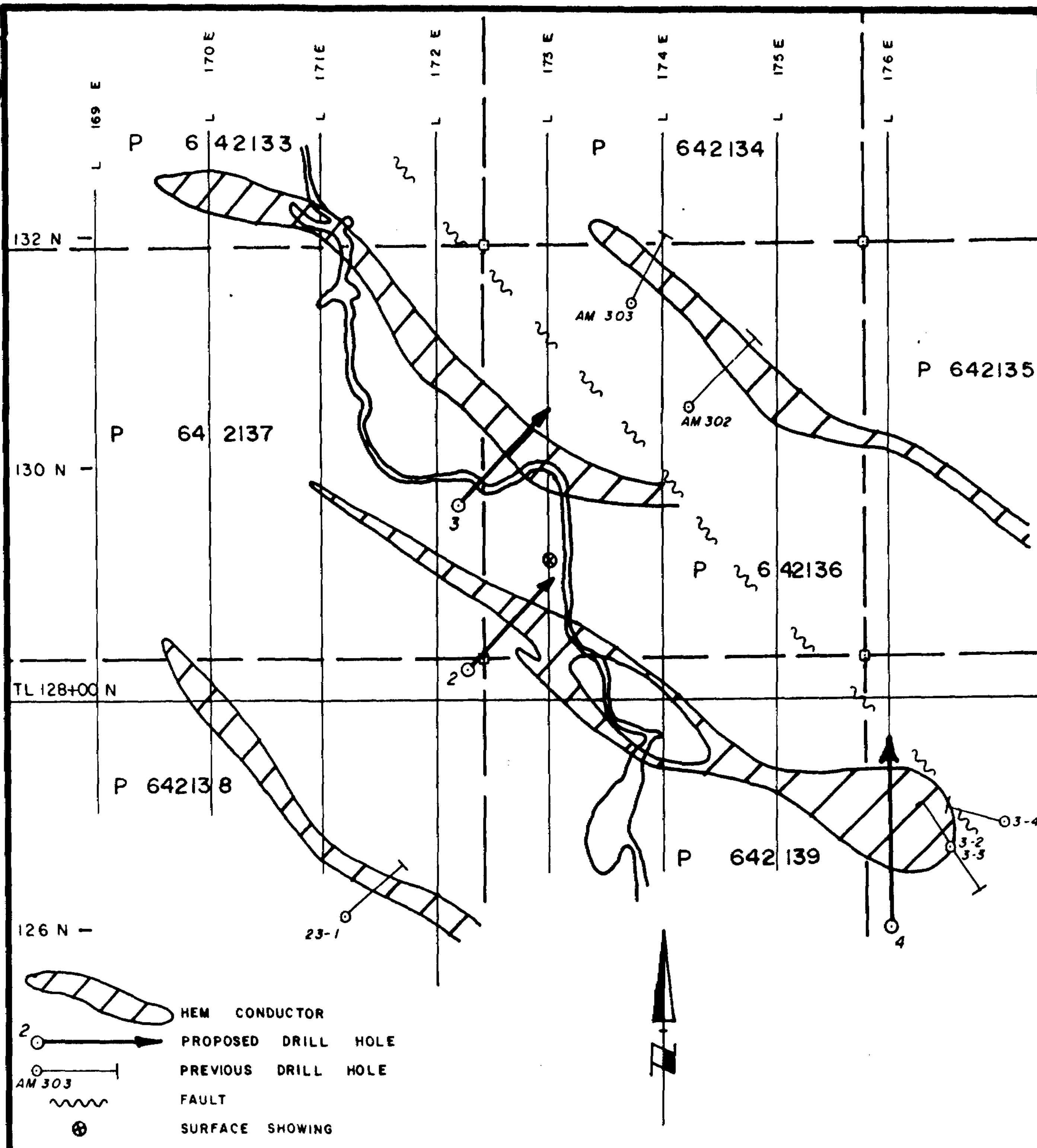
The VLF survey detected most of the EM conductors as well as some of the geologic contacts. An inferred VLF anomaly running under Skunk Creek on Lines 17200 E, 17300 E and 17400 E that was not covered in the horizontal loop survey was tested by a hole drilled in 1954 by American Metal Company Ltd. (AM 304) and intersected "limited sulphide mineralization". This trend continues into the Skunk Creek Property and more will be said about it in the Skunk Creek survey results. Figure 3 depicts the remaining holes previously drilled on the Duck Pond Property as well as the horizontal loop anomalies.

Table 1: Horizontal Loop Anomalies A, B, C, D, E, F, G, H; 1982, Duck Pond Grid, 444 Hz, 80m coil separation

Line	Anomaly Center	Anomaly Width	Indicated Depth	I.P Max.	O.P Max.	Response Parameter	Conductivity Thickness	Remarks
Anomaly A								
17000E	128+00N	32m	10m	-40	-13	45	160 mhos	Assume Dip 60° SW
17100E	126+75N	30m	< 8m	-48	-12	55	200 mhos	"
17200E	126+20N	30m	< 8m	-43	-12	50	180 mhos	"
17400E	126+35N	8m	30m	-10	- 7	13	50 mhos	"
Anomaly B								
17100E	129+80N	thin	24m	-15	- 9	15	50 mhos	Assume Dip 60° SW
17200E	129+25N	7m	28m	-15	- 6	30	100 mhos	"
17300E	128+40N	46m	20m	-23	-11	30	100 mhos	"
17400E	128+10N	2m	26m	-22	- 6	50	180 mhos	"
	129+32N	4m	18m	-12	-13	6	21 mhos	"
17500N	129+30N	12m	14m	-35	-12	45	160 mhos	"
17600N	129+00N	74m	8m	-47	-10	70	250 mhos	Definitely multiple conductors
Anomaly C								
17000E	132+40N	40m	23m	-19	- 9	28	100 mhos	Assume Dip 60° SW
17100E	131+86N	28m	18m	-27	-11	33	120 mhos	"
17200E	130+94N	52m	32m	-13	- 6	40	140 mhos	"
17300E	130+04N	42m	< 8m	-53	-18	45	160 mhos	"
17400E	129+80N	18m	12m	-12	-16	4	14 mhos	'
Amonaly D								
17300E	130+94N	2m	22m	-18	-10	18	65 mhos	Assume Dip 60° SW

Continuation of Table: 1 Duck Pond Grid

Line	Anomaly Center	Anomaly Width	Indicated Depth	I.P Max.	O.P Max.	Response Parameter	Conductivity Thickness	Remarks
Anomaly E								
17200E	132+88N	15m	28m	-13	- 7	20	70 mhos	Assume Dip 90°
Anomaly F								
17400E	131+72N	15m	20m	-17	-11	15	50 mhos	Assume Dip 90°
17500E	130+64N	48m	< 8m	-51	-15	52	180 mhos	"
17600E	130+25N	10m	< 8m	-57	-20	45	160 mhos	"
17700E	129+56N	16m	< 8m	-46	-13	52	180 mhos	"
17800E	129+24N	20m	< 8m	-28	-20	12	43 mhos	"
Anomaly G								
17700E	130+64N	thin	20m	-13	-12	7	25 mhos	Assume Dip 90°
17800E	130+28N	thin	23m	-11	-10	7	25 mhos	"
Anomaly H								
18000E	130+00N	24m	25m	-20	- 7	35	125 mhos	Assume Dip 90°



HOLE 2 : LOCATION 128+25 N , 172 + 25 E
AZM 045° , DIP - 50°
DEPTH 130 m

HOLE 3 : LOCATION 129 + 75 N , 172 + 25 E
AZM 045° , DIP - 50°
DEPTH 130 m

HOLE 4 : LOCATION 126+00 N , 176 +00 E
AZM 000° , DIP - 50°
DEPTH 150 m

FIGURE 3

KIDD CREEK MINES LTD.		
Exploration Division		Timmins, ONTARIO
DUCK POND AREA CUNNINGHAM TOWNSHIP		
PROPOSED DRILLING		
SCALE : 1 : 5000		Data : MZ , DM
Drawn : DEL	Project N° : 75	Date : 13 / 01 / 83

Skunk Creek Grid

The Skunk Creek Grid is situated in east-central Cunningham Township adjoining the east boundary of the M. W. Resources (Shunsby) property. The property is geophysically dominated by one major northwest trending horizontal loop anomaly and two one line anomalies located under Skunk Creek (Figure 8).

Anomaly A is the ground EM representation of an INPUT anomaly east of Skunk Creek. The VLF survey shows this trend continuing south to Line 14500 N and then branching into two VLF anomalies. The magnetometer survey shows conductor A to have a slight magnetic low similar to the eastern conductors in the Duck Pond Property. The VLF anomaly on Line 14600 N at 170 + 60 E is coincident with a north-south trending magnetic high.

The single horizontal loop anomaly called anomaly B is coincident with and inferred west-northwest trending VLF anomaly running under Skunk Creek. This non magnetic trend may represent a fault rather than the non bedrock anomalies that the other creek bottom responses appear to be; thus Anomaly B may be the EM representation of conductive material remobilized into the fault.

Anomlay C appears to mark the northern extent of the VLF anomaly tested in 1954 by American Metals drill hole (AM304). The drill hole results and the VLF anomaly is discussed in the Duck Pond survey results.

Data for the horizontal loop anomalies found on the Skunk Creek Grid is listed as Table 2. Figure 2 depicts the horizontal loop anomaly for conductor A.

Peter Lake Grid

The Peter Lake Grid is situated in west-central Cunningham Township at the Greenlaw Township boundary. The property is geophysically dominated by a wide east-west trending highly magnetic zone containing numerous strong horizontal loop anomalies (Figure 12).

Anomalies A, B, C, D, E, F, G and H are all found in this central zone of erratic magnetic highs. This zone has been geologically identified (Ploeger, 1982) as a sequence of cherty sediments containing magnetite and sulphide mineralization. The highly conductive zones detected in the horizontal loop survey represent numerous, closely spaced conductors that give one large anomaly. The VLF survey has been very helpful in separating the individual zones but with so many anomalies, it is difficult to identify separate conductors.

Anomalies I, J and K are found north of the magnetic sediments in an area underlain by mafic to intermediate metavolcanics and intrusives. Anomaly K is the only zone coincident with a slight magnetic high. The data for the

Table 2: Horizontal Loop Anomalies A, B, C; 1982, Skunk Creek Grid, 444 Hz, 80m coil separation

Line	Anomaly Center	Anomaly Width	Indicated Depth	I.P Max.	O.P Max.	Response Parameter	Conductivity Thickness	Remarks
Anomaly A								
15000N	167+38E	11m	25m	- 8	- 9	2.6	9 mhos	Assume Dip 30^{0} SW
14900E	168+28E	7m	22m	-13	-12	3.5	12 mhos	"
14800N	168+77E	12m	19m	-12	-15	2.5	9 mhos	"
14700N	169+49N	8m	20m	-20	-12	9	32 mhos	"
Anomaly B								
14300N	168+06E	13m	10m	-49	-12	55	200 mhos	Assume Dip 30^{0} SW
Anomaly C								
13600N	171+67E	13m	20m	-12	-11	8	28 mhos	Assume Dip 30^{0} SW

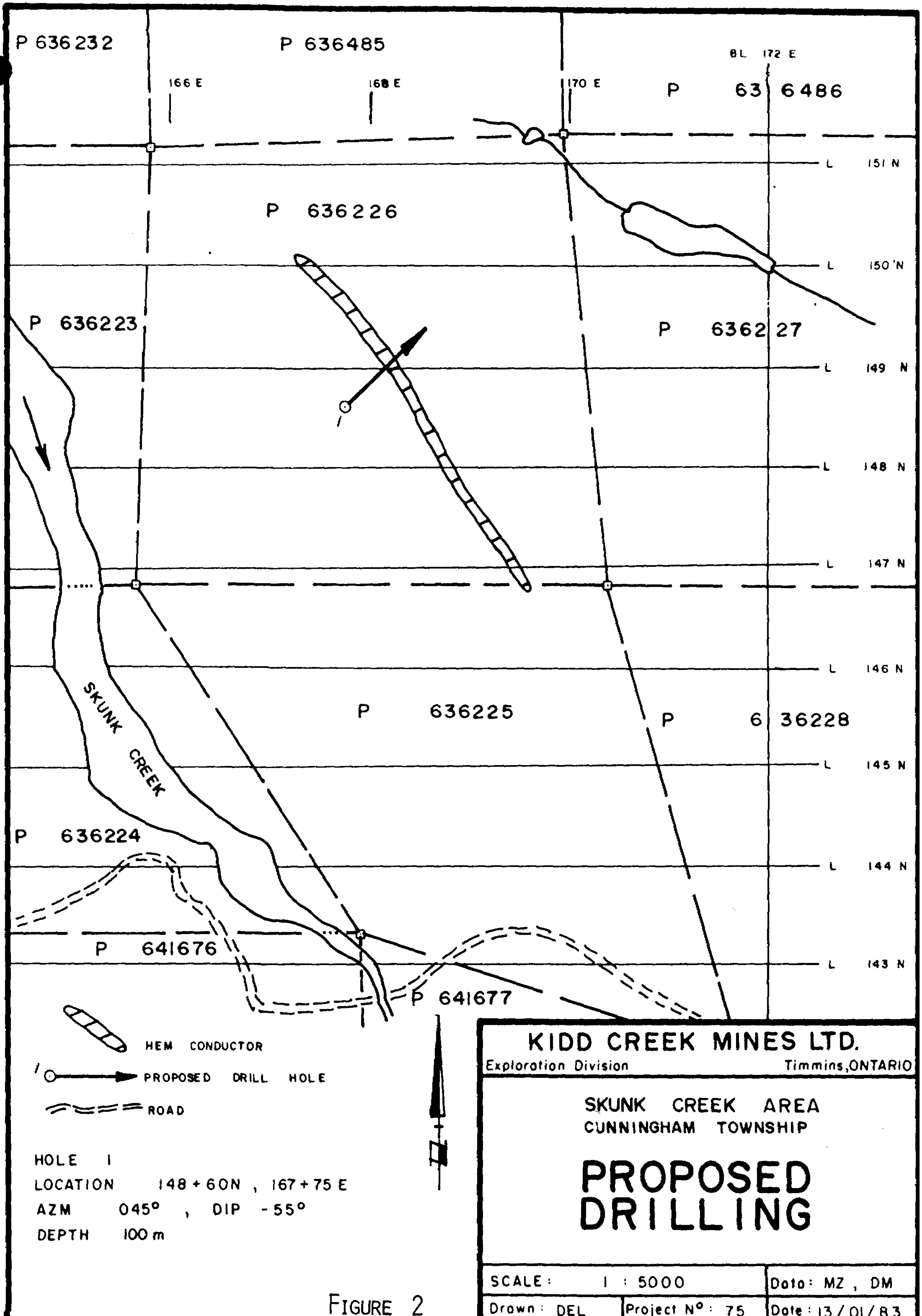

P 636232
P 636485
166 E
168 E
170 E
BL 172 E
P 636486
L 151 N
P 636226
L 150 N
P 636223
P 636227
L 149 N
L 148 N
L 147 N
L 146 N
SKUNK CREEK
P 636225
P 636228
L 145 N
P 636224
L 144 N
P 641676
L 143 N
P 641677
HEM CONDUCTOR
PROPOSED DRILL HOLE
ROAD
HOLE 1
LOCATION 148 + 60N , 167 + 75 E
AZM 045° , DIP -55°
DEPTH 100 m
KIDD CREEK MINES LTD.
Exploration Division
Timmins, ONTARIO
SKUNK CREEK AREA
CUNNINGHAM TOWNSHIP
PROPOSED DRILLING
SCALE : 1 : 5000
Data: MZ , DM
Drawn : DEL
Project N° : 75
Date : 13/01/83

FIGURE 2

horizontal loop anomalies is listed as Table 3.

A minor north-south magnetic trend is found at the west boundary of the grid. This anomaly may represent one of the north-south trending diabase dikes found in the township.

Running Ghost Lake Grid

The Cunningham/Greenlaw Township boundary and Running Ghost Lake roughly divide this grid into two equal halves. The property is geophysically dominated by a wide north-south trending magnetic anomaly just east of Running Ghost Lake. This erratic magnetic zone contains several strong horizontal loop responses (Figure 16).

Anomalies E, F and I are all found in this central zone of erratic magnetic highs. This zone has been geologically identified (Ploeger, 1982) as containing several sedimentary and felsic tuff horizons occurring within a mafic sequence of tuffs and massive and pillowed flows. The conductive component of the sediments is a series of cherty bands containing magnetite and subordinate sulphide iron formation which outcrop on the eastern side of the lake. The two weak north-south trending magnetic anomalies on either side of the lake reflect Matachewan type diabase dikes.

Anomalies A, B, C, D, G and H are all found outside of the highly magnetic zone with only A and D having even a slight magnetic response. Drilling in 1960 by The Anaconda

Table 3: Horizontal Loop Anomalies A, B, C, D, E, F, G, H, I, J; 1982, Peter Lake Grid, 444 Hz, 80 m coil separation

Line	Anomaly Center	Anomaly Width	Indicated Depth	I.P Max.	O.P Max.	Response Parameter	Conductivity Thickness	Remarks
Anomaly A								
10800E	137+73N	10m	16m	-9	-2	4	14 mhos	Assume Dip 90°
10900E	137+83N	84m	13m	-30	-12	30	107 mhos	Assume Dip 90°
11000E	137+80N	80m	18m	-15	-12	10	36 mhos	Assume Dip 90°
Anomaly B								
10400E	140+05N	52m	8m	-21	-20	8	28 mhos	Assume Dip 90°
10500E	140+20N	80m	<8m	- 2	-18	1	3 mhos	Quadrature Response
Anomaly C								
10600E	142+16N	20m	21m	-24	- 5	70	250 mhos	Assume Dip 90°
10700E	141+94N	42m	18m	-29	- 8	52	185 mhos	Assume Dip 90°
10800E	142+00N	Thin	37m	- 9	- 4	25	90 mhos	Assume Dip 90°
10900E	142+00N	76m	<8m	-50	-16	45	160 mhos	A definite multiple conductor
Anomaly D								
10800E	143+86N	16m	16m	-27	-11	32	114 mhos	Assume Dip 90°
10900E	143+80N	24m	16m	-19	-14	11	39 mhos	Assume Dip 90°
11000E	143+17N	104m	9m	-25	-19	11	39 mhos	A definite multiple conductor
Anomaly E								All responses are of multiple conductors
11200E	141+60N	185m	<8m	-43	-17	32	114 mhos	Assume Dip 90°
11300E	142+18N	140m	<8m	-55	-16	45	160 mhos	Assume Dip 90°
11400E	142+72N	256m	<8m	-51	-17	42	150 mhos	Assume Dip 90°
11500E	142+96N	234m	<8m	-55	-22	30	107 mhos	Assume Dip 90°
11600E	143+96N	104m	<8m	-40	-16	35	124 mhos	Assume Dip 90°
11700E	144+37N	68m	20m	-10	-11	6	21 mhos	Assume Dip 90°
Anomaly F								
11000E	140+44N	28m	21m	-10	-10	7	25 mhos	Assume Dip 90°
11100E	140+40N	98m	<8m	-25	-20	10	36 mhos	A definite multiple conductor

Table 3 Continued.....

Line	Anomaly Center	Anomaly Width	Indicated Depth	I.P Max.	O.P Max.	Response Parameter	Conductivity Thickness	Remarks
Anomaly G								
11300E	140+14N	20m	<8m	-50	-18	40	142 mhos	Assume Dip 90°
11400E	140+09N	50m	<8m	-35	-19	17	60 mhos	A definite multiple conductor
11500E	141+00N	Thin	10m	-30	-16	20	71 mhos	Assume Dip 90°
11600E	141+74N	4m	8m	-25	-20	10	36 mhos	Assume Dip 90°
11700E	142+76N	16m	20m	-19	-10	9	32 mhos	Assume Dip 90°
Anomaly H								
11700E	140+90N	3m	22m	-11	-10	8	28 mhos	Assume Dip 90°
Anomaly I								
10300E	146+70N	8m	26m	-3	-4	3	11 mhos	Assume Dip 90°
10400E	147+08N	6m	16m	-5	-8	3	11 mhos	
Anomaly J								
10400E	145+12N	Thin	28m	-12	-7	15	53 mhos	Assume Dip 90°
10600E	145+28N	8m	23m	-16	-9	15	53 mhos	Assume Dip 90°
Anomaly K								
11300E	150+32N	Thin	30m	-6	-6	7	25 mhos	Assume Dip 90°
11400E	150+70N	Thin	21m	-20	-9	25	89 mhos	Assume Dip 90°
11500E	150+90N	4m	16m	-32	-8	55	196 mhos	Assume Dip 90°
11600E	151+32N	8m	14m	-35	-8	60	213 mhos	Assume Dip 90°

Company Ltd. on conductors A and D intersected graphitic argillite and impure sediments with some stringer pyrrhotite in a sequence of mafic tuffs and flows. The data for the horizontal loop anomalies is listed as Table 4.

The VLF survey detected all of the EM conductors as well as a major discontinuity between Lines 11400 N and 11300 N east of Running Ghost Lake. This anomaly offset may be due to the diabase intrusion in this area of the property.

Michael W. Zang

MICHAEL W. ZANG

Table 4 : Horizontal Loop Anomalies A, B, C, D, E, F, G, H, I: 1982 RUNNING GHOST LAKE GRID, 444Hz, 80 m coil separation

Line	Anomaly Center	Anomaly Width	Indicated Depth	I.P Max.	O.P Max.	Response Parameter	Conductivity Thickness	Remarks
Anomaly A								
12000N	95+30E	14m	21m	-12	-11	8	28 mhos	Assume Dip 90°
11900N	95+60E	Thin	24m	- 2	- 3	2	7 mhos	Assume Dip 90°
11800N	96+08E	12m	<8m	-35	-18	20	71 mhos	Assume Dip 90°
11700N	96+23E	9m	14m	-23	-14	14	50 mhos	Assume Dip 90°
11600N	96+40E	34m	8m	-36	-16	25	89 mhos	Assume Dip 90°
11500N	96+62E	20m	9m	-36	-15	29	103 mhos	Assume Dip 90°
Anomaly B								Quadrature Respnse
11700N	94+80E	Thin	Shallow	-	- 6	-	Low	Assume Dip 90°
11600N	95+00E	Thin	Shallow	-	- 8	-	Low	Assume Dip 90°
Anomaly C								
11400N	96+12E	Thin	20m	-10	-11	6	21 mhos	Assume Dip 90°
11300N	96+20E	Thin	13m	- 9	-13	4	14 mhos	Assume Dip 90°
11200N	96+60E	Thin	15m	- 4	- 7	2.5	9 mhos	Assume Dip 90°
Anomaly D								
11100N	95+90E	Thin	27m	- 7	- 7	7	25 mhos	Assume Dip 90°
11000N	97+10E	13m	22m	-13	-10	10	36 mhos	Assume Dip 90°
Anomaly E								
11900N	103+78N	Thin	33m	- 6	- 5	9	32 mhos	Assume Dip 90°
11800N	104+08E	2m	16m	-36	- 5	90	320 mhos	Assume Dip 90°
Anomaly F								
11900N	102+85E	Thin	38m	-10	- 3	45	160 mhos	Assume Dip 90°
11800N	102+86E	50m	12m	-38	- 8	70	250 mhos	A definite multiple conductor
11700N	103+20E	150m	22m	-12	-10	9	32 mhos	A definite multiple conductor
11600N	103+43E	Thin	12m	-27	-16	15	53 mhos	
	102+52E	Thin?	-	-18	-	-	High	
11500N	102+80E	Thin?	17m	-18	-13	11	39 mhos	
11400N	102+70E	Thin.?	17m	-18	-13	11	39 mhos	

Table 4 Continued......

Line	Anomaly Center	Anomaly Width	Indicated Depth	I.P Max.	O.P Max.	Response Parameter	Conductivity Thickness	Remarks
Anomaly G								
12100N	107+05E	Thin	8m	- 4	-10	1.6	6 mhos	Assume Dip 90°
12000N	106+76E	7m	19m	-14	-12	9	32 mhos	Assume Dip 90°
Anomaly H								
11700N	105+20E	2m	17m	-10	-12	5	18 mhos	Assume DIp 90°
Anomaly I								
10900N	106+00E	Thin	14m	-20	-15	11	39 mhos	Assume Dip 90°
10800N	106+72E	4m	<8m	-22	-21	7	25 mhos	Assum Dip 90°

REFERENCES:

Meen, V. B.

1942: Cunningham Garnet Area, District of Sudbury, Ontario; Map No. 51f (to accompany Ont. Dept. of Mines Annual Report Vol. LI, Part 7, 1942), Scale 1:63,360 or 1 inch to 1 mile.

OGS,

1982:Airborne Electromagnetic and Total Intensity Magnetic Survey, Swayze Area, Isaiah Lake Sheet, District of Sudbury: by Questor Surveys Limited for the Ontario Geological Survey, Map 80 546 Geophysical/Geochemical Series, Scale 1:20 000. Survey and Compilation December, 1980, to February 1981.

Ploeger, F.R.

1982: Kidd Creek Mines Ltd. Geological Report on Cunningham 31, Running Ghost Lake, Peter Lake, Skunk Creek and Duck Pond Grids, Cunningham Base Metals Project #75, (N.T.S.: 41-O-10), November.

Siragusa, G. M.

1980: Cunningham Township Area, District of Sudbury; Ontario Geological Survey Prelim. Map P. 2339 Geological Ser., Scale 1:15 840 or 1 inch to 1/4 mile. Geology 1978.

Thurston, P.C., Siragusa, G.M., and Sage, R.P.

1977: Geology of the Chapleau Area, Districts of Algoma, Sudbury, and Cochrane; Ontario Div. Mines, GR157, 293p. Accompanied by Maps 2351 and 2352, scale 1:250,000, and Map 2221, Scale 1 inch to 4 miles (1:253,440).

Cunningham Twp.

Ministry of Natural Resources Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

#27

The Mining Act

41010NE0034 2.5403 CUNNINGHAM

900

Type of Survey(s): Geophysical	Township or Area: Cunningham
Claim Holder(s): Kidd Creek Mines Limited	Prospector's Licence No.: T-1
Survey Company: Kidd Creek Mines Limited	Survey Dates (linecutting to office): 10 Day / 08 Mo. / 82 Yr. – 08 Day / 02 Mo. / 83 Yr. — Total Miles of line Cut: 91 km

Name and Address of Author (of Geo-Technical report): M.W. Zang, Kidd Creek Mines Limited, 571 Moneta Ave., Timmins, Ontario P4N 7H9

Special Provisions Credits Requested

Instructions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	40
	- Magnetometer	40
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Man Days

Instructions	Geophysical	Days per Claim
Complete reverse side and enter total(s) here	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits

Note		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Expenditures (excludes power stripping)

RECEIVED

Type of Work Performed:

Performed on Claim(s):

FEB 18 1983

MINING LANDS SECTION

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
p	641172		P	641203	
P-	641173			641204	
	641174			641205	
	641175			641206	
	641176			641207	
	641177			641676	
	641178			641677	
	641179			641678	
	641180			641679	
	641181			642065	
	641182			642133	
	641183			642134	
	641184			642135	
	641185			642136	
	641186			642137	
	641187			642138	
	641194			642139	
	641195			642140	
	641196			636223	
	641197			636224 ~~636225~~	
	641198			636226	
	641199			636227 636228	
	641200			636229 ~~636232~~	
	641201			636485	
	641202			636486	

See revised Statement (notice of Intent)

RECORDED FEB 15 1983 Receipt No ....

Total number of mining claims covered by this report of work: 53

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
4240	Feb. 15/83	
	Date Approved as Recorded	Regional/Branch Director — Regional Mining Recorder

Report Completed

Date of Report	Recorded Holder or Agent (Signature)
Feb. 7, 1983	Michael W. Zang

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Micheal W. Zang, P.O. Box 1140, 571 Moneta Ave., Timmins, Ontario P4N 7H9

Date Certified	Certified by (Signature)

2.5403

27

1983 09 26 2.5403

Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

RE: Geophysical (Electromagnetic & Magnetometer) Survey on Mining Claims P 641172 et al in the Cunningham Township

---

The Geophysical (Electromagnetic & Magnetometer) Survey assessment work credits as listed with my Notice of Intent dated August 25, 1983 have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

R. Pichette:sc

cc: Kidd Creek Mines Ltd
Timmins, Ontario

cc: Resident Geologist
Timmins, Ontario

Ontario

Ministry of Natural Resources

Technical Assessment Work Credits

File	
Date: 1983 08 25	File: 2.5403
	Mining Recorder's Report of Work No. 27

Recorded Holder
KIDD CREEK MINES LIMITED

Township or Area
CUNNINGHAM TOWNSHIP

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	P 641176 to 87 inclusive
Electromagnetic 40 days	641194 to 204 inclusive
Magnetometer 40 days	641206
Radiometric ____ days	641676 to 79 inclusive
Induced polarization ____ days	642065
Other ____ days	642133 to 140 inclusive
Section 77 (19) See "Mining Claims Assessed" column	636224 to 28 inclusive
Geological ____ days	636232
Geochemical ____ days	636485-86
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

30 DAYS CREDIT, ELECTROMAGNETIC

P 636223

20 DAYS CREDIT, ELECTROMAGNETIC

P 641172 to 75 inclusive
636229

P 641205
641207

20 DAYS CREDIT, MAGNETOMETER

P 641172 to 75
641205
641207
636223
636229

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ Insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical — 80; Geological — 40; Geochemical — 40; Section 77(19) — 60;

828 (83/6)

Ministry of
Natural
Resources
Ontario

Sept 16/83

Your file: #27

Our file: 2.5403

1983 08 25

Mr. William L. Good
Mining Recorder
Ministry of Natural Resources
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

Enclosed are two copies of a Notice of Intent with statements listing a reduced rate of assessment work credits to be allowed for a technical survey. Please forward one copy to the recorded holder of the claims and retain the other. In approximately fifteen days from the above date, a final letter of approval of these credits will be sent to you. On receipt of the approval letter, you may then change the work entries on the claim record sheets.

For further information, if required, please contact Mr. F.W. Matthews at 416/965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1316

R. Pichette:mc

Encls:

cc: Kidd Creek Mines Ltd
Box 1140
571 Moneta Avenue
Timmins, Ontario
P4N 7H9

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

845

Ministry of
Natural
Resources
Ontario

Notice of Intent
for Technical Reports

1983 08 25

2.5403/27

An examination of your survey report indicates that the requirements of The Ontario Mining Act have not been fully met to warrant maximum assessment work credits. This notice is merely a warning that you will not be allowed the number of assessment work days credits that you expected and also that in approximately 15 days from the above date, the mining recorder will be authorized to change the entries on his record sheets to agree with the enclosed statement. Please note that until such time as the recorder actually changes the entry on the record sheet, the status of the claim remains unchanged.

If you are of the opinion that these changes by the mining recorder will jeopardize your claims, you may during the next fifteen days apply to the Mining and Lands Commissioner for an extension of time. Abstracts should be sent with your application.

If the reduced rate of credits does not jeopardize the status of the claims then you need not seek relief from the Mining and Lands Commissioner and this Notice of Intent may be disregarded.

If your survey was submitted and assessed under the "Special Provision-Performance and Coverage" method and you are of the opinion that a re-appraisal under the "Man-days" method would result in the approval of a greater number of days credit per claim, you may, within the said fifteen day period, submit assessment work breakdowns listing the employees names, addresses and the dates and hours they worked. The new work breakdowns should be submitted direct to the Lands Management Branch, Toronto. The report will be re-assessed and a new statement of credits based on actual days worked will be issued.

2.5403

Kidd Creek Mines Ltd.
Box 1140
571 Moneta Avenue,
Timmins, Ontario P4N 7H9
(705) 267-1188

Exploration Division

August 15, 1983

RECEIVED
AUG 1 8 1983
MINING LANDS SECTION

Mr. E. F. Anderson, Director
Land Management Branch
Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3

Dear Sir:

RE: Geophysical (Electromagnetic and Magnetometer) Survey on Mining Claims P 641172 et al in the Cunningham Township

---

Herein are three plans for the above-described survey. Each copy has been signed quoting file 2.5403.

Yours very truly,

Michael W. Zang

Mike Zang

MZ/srw
Encl.

kidd

August 5, 1983 2.5403

Kidd Creek Mines Ltd
Box 1140
571 Moneta Avenue
Timmins, Ontario
P4N 7H9

Attention: M.W. Zang

Dear Sir:

RE: Geophysical (Electromagnetic and Magnetometer) Survey on Mining Claims P 641172 et al in the Cunningham Township

---

Returned herein are three plans for the above-described survey. Please sign each copy and return them quoting file 2.5403.

For further information, please contact Mr. F.W. Matthews at (416)965-1380.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Block
Toronto, Ontario
M7A 1W3
Phone:(416)965-1380

S. Hurst:mc

Encl.

cc: Mining Recorder
Timmins, Ontario

Ministry of Natural Resources
Ontario

Geotechnical Report Approval

May 24/83

File 2.5403

Mining Lands Comments

✓

2

O.K.

☑ To: Geophysics Mr. Barlow.

Comments
Need signature on one magnetic map

☐ Approved ☑ Wish to see again with corrections

Date July 26/83

Signature Douglas H. Pitcher

☐ To: Geology - Expenditures

Comments

☐ Approved ☐ Wish to see again with corrections

Date

Signature

☐ To: Geochemistry

Comments

LD

☐ Approved ☐ Wish to see again with corrections

Date

Signature

☐ To: Mining Lands Section, Room 6462, Whitney Block. (Tel: 5-1380)

1593 (81/10)

1983 03 10 2.5403

Mining Recorder
Ministry of Nat ral
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

We have received reports and maps for a Geophysical (Electromagnetic and Magnetometer) Survey submitted under Special Provisions (credit for Performance and Coverage) on Mining Claims P 641172 et al in the Township of Cunningham.

This material will be examined and assessed and a statement of assessment work credits will be issued.

Yours very truly,

E.F. Anderson
Director
Land Management Branch

Whitney Block, Room 6450
Queen's Park
Toronto, Ontario
M7A 1W3
Phone: 416/965-1380

A. Barr:sc

cc: Kidd Creek Mines Limited
Timmins, Ontario
Attn: Mr. M.W. Zang.

Kidd Creek Mines Ltd.
Box 1140
571 Moneta Avenue,
Timmins, Ontario P4N 7H9
(705) 267-1188

Exploration Division

February 25, 1983

Mr. E. F. Anderson,
Director, Land Management Branch,
Whitney Block, Room 6450,
Queen's Park,
Toronto, Ontario.
M7A 1W3.

Dear Sir:

Re: Cunningham Township

Enclosed please find duplicate copies of a report and maps covering claims in Cunningham Township.

Your prompt attention to this matter would be greatly appreciated.

Yours truly,

KIDD CREEK MINES LTD. EXPLORATION

AH Green for M.W. Zang
M. W. ZANG

MWZ/mg
Encl.

kidd

File

Ontario

Ministry of Natural Resources

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey(s) Geophysical

Township or Area Cunningham

Claim Holder(s) Kidd Creek Mines Ltd.
P.O. Box 1140, 571 Moneta Ave., Timmins, Ont.

Survey Company Kidd Creek Mines Limited

Author of Report M.W. Zang, Kidd Creek Mines Ltd.

Address of Author 571 Moneta Avenue, Timmins, Ontario

Covering Dates of Survey August 1982 - Feb 1983 (linecutting to office)

Total Miles of Line Cut 91 Km

SPECIAL PROVISIONS CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
–Electromagnetic	40
–Magnetometer	40
–Radiometric	
–Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer ______ Electromagnetic ______ Radiometric ______
(enter days per claim)

DATE: Feb. 7, 1983 SIGNATURE: Michael W. Zang
(Author of Report or Agent)

MINING CLAIMS TRAVERSED
List numerically

(See Attached Schedule)

(prefix) (number)

If space insufficient, attach list

TOTAL CLAIMS ~~10~~ 53

OFFICE USE ONLY

Res. Geol. ______ Qualifications ______

Previous Surveys

File No.	Type	Date	Claim Holder

637 (5/79)

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS -- If more than one survey, specify data for each type of survey

Number of Stations: Mag: 3990; HL: 3750; VLF: 3990

Number of Readings: Mag: 3990; HL: 7500; VLF: 3990

Station interval: 20m

Line spacing: 100m

Profile scale: Horizontal Loop, 1cm = 20%; VLF, 1cm = 20m

Contour interval: Variable, depending on magnetic relief

MAGNETIC

Instrument: Geometrics G816

Accuracy — Scale constant: ± 1 n.t. (gamma)

Diurnal correction method: A number of base stations were set up on each grid and

Base Station check-in interval (hours): checked every 3-4 hours. Water obstacles made it

Base Station location and value: impossible to either systematically loop the base lines or to tiw together the various base stations.

ELECTROMAGNETIC

Instrument: Apex Parametrics MaxMin II

Coil configuration: Horizontal Loop

Coil separation: 80 metres

Accuracy: ± 1%

Method: ☐ Fixed transmitter ☐ Shoot back ☒ In line ☐ Parallel line

Frequency: 444 Hz and 1777 Hz
(specify V.L.F. station)

Parameters measured: In-Phase and Quadrature components of secondary field as percent of transmitted field.

GRAVITY

Instrument:

Scale constant:

Corrections made:

Base station value and location:

Elevation accuracy:

INDUCED POLARIZATION / RESISTIVITY

Instrument:

Method ☐ Time Domain ☐ Frequency Domain

Parameters – On time:

Frequency:

– Off time:

Range:

– Delay time:

– Integration time:

Power:

Electrode array:

Electrode spacing:

Type of electrode:

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 VLF Station

Instrument Crone Geophysics Radem

Accuracy $\pm 1^{\circ}$

Parameters measured Dip of E.M. field

VLF Stations used N-S Lines: Seattle, Wash. E-W Lines Annapolis Maryland

Additional information (for understanding results) ______

AIRBORNE SURVEYS

Type of survey(s) ______

Instrument(s) ______
(specify for each type of survey)

Accuracy ______
(specify for each type of survey)

Aircraft used ______

Sensor altitude ______

Navigation and flight path recovery method ______

Aircraft altitude ______ Line Spacing ______

Miles flown over total area ______ Over claims only ______

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken ____________________

____

____

Total Number of Samples ____________________

Type of Sample ____________________
(Nature of Material)

Average Sample Weight ____________________

Method of Collection ____________________

____

Soil Horizon Sampled ____________________

Horizon Development ____________________

Sample Depth ____________________

Terrain ____________________

____

Drainage Development ____________________

Estimated Range of Overburden Thickness ____________________

____

____

SAMPLE PREPARATION

(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis ____________________

____

____

____

General ____________________

____

____

____

____

____

____

____

____

____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others ____________________

Field Analysis (____________________ tests)

Extraction Method ____________________

Analytical Method ____________________

Reagents Used ____________________

Field Laboratory Analysis

No. (____________________ tests)

Extraction Method ____________________

Analytical Method ____________________

Reagents Used ____________________

Commercial Laboratory (____________________ tests)

Name of Laboratory ____________________

Extraction Method ____________________

Analytical Method ____________________

Reagents Used ____________________

General ____________________

____

____

____

____

____

____

____

____

____

Kidd Creek Mines Ltd.
Box 1140
571 Moneta Avenue,
Timmins, Ontario P4N 7H9
(705) 267-1188

Exploration Division

SCHEDULE OF MINING CLAIMS FOR WHICH
WORK CREDITS ARE REPORTED

P - 636223
P - 636224
P - 636225
P - 636226
P - 636227
P - 636228
P - 636229

P - 636232

P - 636485
P - 636486

P - 641172
P - 641173
P - 641174
P - 641175
P - 641176
P - 641177
P - 641178
P - 641179
P - 641180
P - 641181
P - 641182
P - 641183
P - 641184

P - 641185
P - 641186
P - 641187

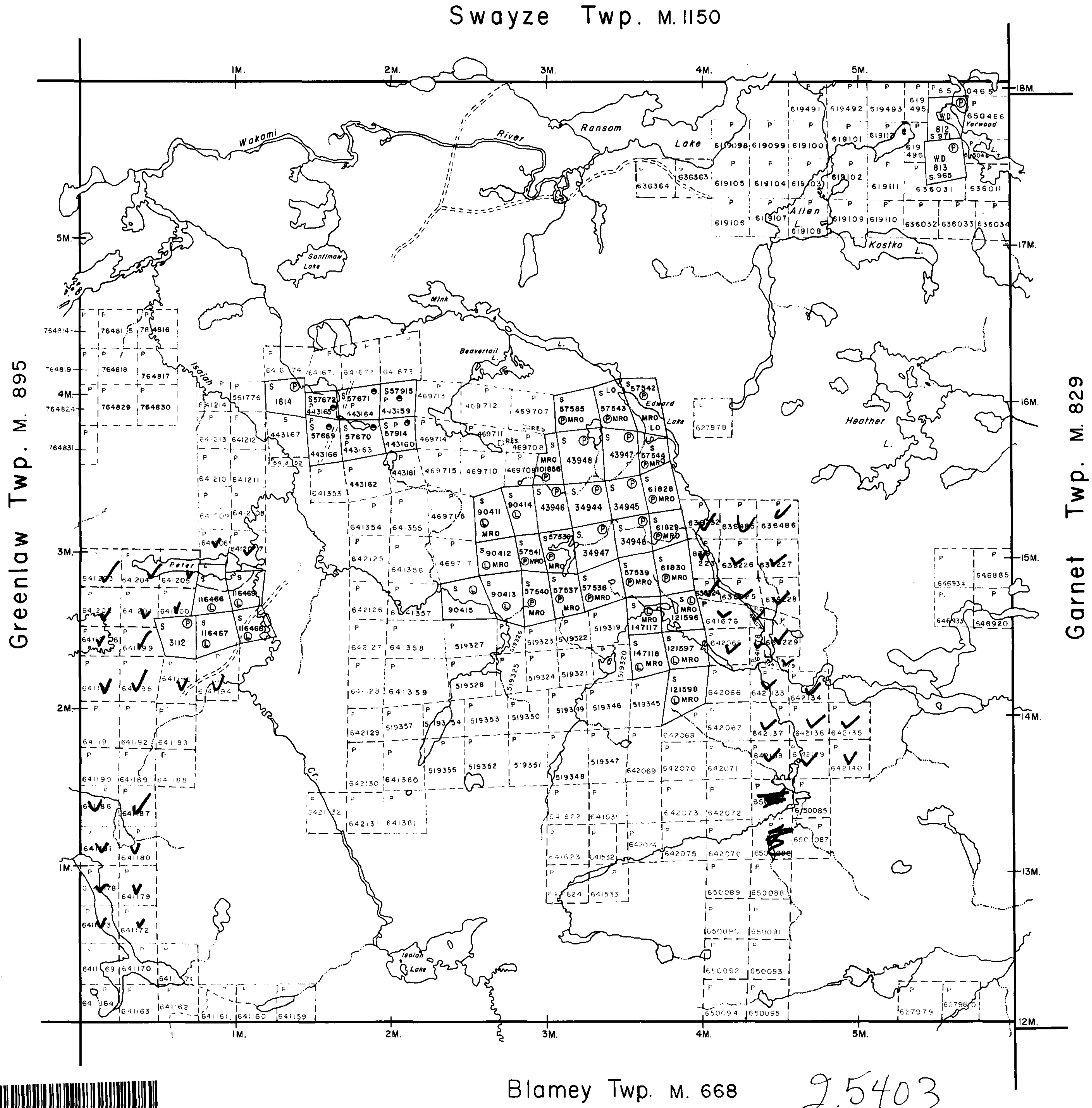
P - 641194
P - 641195
P - 641196
P - 641197
P - 641198
P - 641199
P - 641200
P - 641201
P - 641202
P - 641203
P - 641204
P - 641205
P - 641206
P - 641207

P - 641676
P - 641677
P - 641678
P - 641679

P - 642065

P - 642133
P - 642134
P - 642135
P - 642136
P - 642137
P - 642138
P - 642139
P - 642140

kidd



THE TOWNSHIP OF CUNNINGHAM

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	
PATENTED FOR SURFACE RIGHTS ONLY	

NOTES

400' Surface Rights Reservation along the shores of all lakes & rivers

DATE OF ISSUE
AUG 1 9 1983
Ministry of Natural Resources
TORONTO

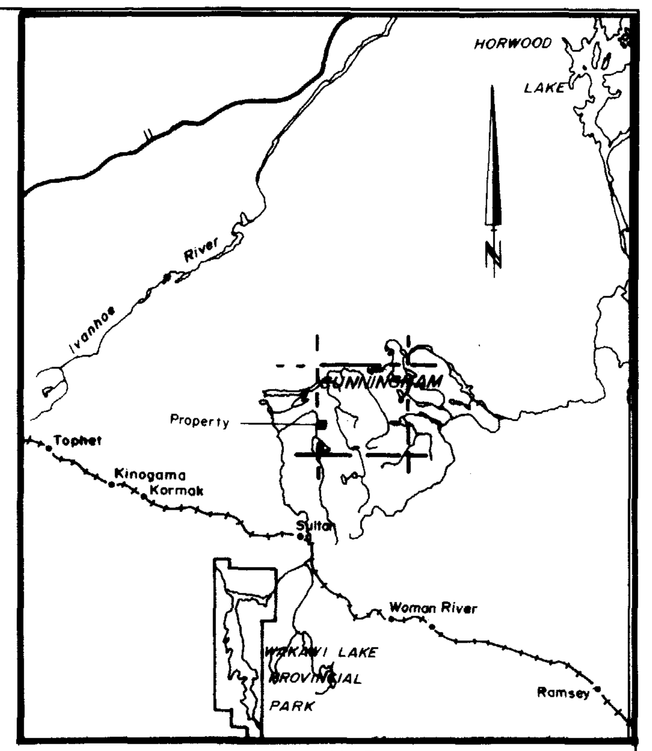
PLAN NO.- M.744

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

2.5403

41O10NE0034 2.5403 CUNNINGHAM

200



KEY MAP SCALE : 1" = 8 miles

LEGEND

INSTRUMENT : GEOMETRICS G816
TYPE : PROTON PRECESSION, TOTAL FIELD
READINGS IN GAMMAS
▲ MAGNETIC BASE STATION

0 40 80 120 160 200
METRES (1:2000)

KIDD CREEK MINES LTD.

MAGNETIC SURVEY
CUNNINGHAM 31
PETER LAKE GRID

NTS: 41-O-10 25403 PROJ.#75

WORK BY	DATE
M. W. Z.	1982

210

KEY MAP
SCALE : 1" = 8 miles
LEGEND
INSTRUMENT : GEOMETRICS G816
TYPE : PROTON PRECESSION, TOTAL FIELD
READINGS IN GAMMAS
▲ MAGNETIC BASE STATION
METRES (1:2000)
0
40
80
120
160
200
KIDD CREEK MINES LTD.
MAGNETIC SURVEY
CUNNINGHAM 31
PETER LAKE GRID
NTS:41-0-10
PROJ.#75
WORK BY
DATE
1982
ASTRO
N
140 N
138 N
136 N
134 N
LINE 10000 E
LINE 10100 E
LINE 10200 E
LINE 10300 E
LINE 10400 E
LINE 10500 E
LINE 10700 E
LINE 10800 E
LINE 10900 E
LINE 11000 E
LINE 11100 E
LINE 11200 E
LINE 11400 E
LINE 11500 E
LINE 11600 E
LINE 11700 E
P 641202
P 641200
S 116466 L
P 641199
S 3112 P
S 116467 L
S 116468 L
P 641198
P 641197
P 641196
P 641195
P 641194
P 641191
P 641192
P 641193
220


KIDD CREEK MINES LTD.
V L F SURVEY
CUNNINGHAM 31
PETER LAKE GRID
NTS:41-O-10
PROJ.#75
WORK BY
M.W.
DATE
1982
METRES (1:2000)
0 40 80 120 160 200
S DIPS
N DIPS
INSTRUMENT : CRONE RADEM
STATION : CUTLER, 17.8 KHz
PROFILE SCALE : DIP ANGLE 1 CM= 20°
LEGEND
DIP ANGLE (DEGREES)
STRONG VLF ANOMALY
MODERATE VLF ANOMALY
WEAK VLF ANOMALY
INFERRED VLF ANOMALY
N
ASTRO
KEY MAP
HORWOOD LAKE
Property
CUNNINGHAM
Woman River
WAKAMI LAKE PROVINCIAL PARK
Ramsey
Tophet
Kinogama
Kormak
LINE 10000 E
LINE 10100 E
LINE 10200 E
LINE 10300 E
LINE 10400 E
LINE 10500 E
LINE 10600 E
LINE 10700 E
LINE 10800 E
LINE 10900 E
LINE 11000 E
LINE 11100 E
LINE 11200 E
LINE 11300 E
LINE 11400 E
LINE 11500 E
LINE 11600 E
LINE 11700 E
140 N
138 N
136 N
134 N
P 641202
P 641200
S 116466 L
P 641199
S 3112 P
S 116467 L
S 116468 L
P 641198
P 6411 97
P 641196
P 641195
P 641194
P 641191
P 641192
P 641193
230

KIDD CREEK MINES LTD.

V L F SURVEY

CUNNINGHAM 31

PETER LAKE GRID

NTS:41-O-10 PROJ.#75

WORK BY	DATE
M. W.	1982


P 641202
P 641200
S 116466 (L)
P 641199
S 3112 (P)
S 116467 (L)
S 116468 (L)
P 641198
P 641197
P 641196
P 641195
P 641194
P 641191
P 641192
P 641193
LINE 10000 E
LINE 10100 E
LINE 10200 E
LINE 10300 E
LINE 10400 E
LINE 10500 E
LINE 10600 E
LINE 10700 E
LINE 10800 E
LINE 10900 E
LINE 11000 E
LINE 11100 E
LINE 11200 E
LINE 11300 E
LINE 11400 E
LINE 11500 E
LINE 11600 E
LINE 11700 E
140 N
138 N
136 N
134 N
A
B
F
G
HORWOOD LAKE
CUNNINGHAM
Property
Tophet
Kinogama
Kormak
Woman River
Romsey
WAKAMI LAKE PROVINCIAL PARK
KEY MAP SCALE : 1" = 8 miles
N
ASTRO
HEM ANOMALY
LEGEND
444 Hz
IN-PHASE READINGS
QUADRATURE READINGS
INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 444 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%
+ READINGS - READINGS
0 40 80 120 160 200
METRES (1:2000)
KIDD CREEK MINES LTD.
HORIZONTAL LOOP SURVEY
CUNNINGHAM 31
PETER LAKE
NTS:42-0-10
PROJ#75
DRN BY
DATE
1982
250


KIDD CREEK MINES LTD.
HORIZONTAL LOOP SURVEY
CUNNINGHAM 31
PETER LAKE
NTS:42-0-10
PROJ#75
DRN BY
DATE
1982
INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 444 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%
+ READINGS
- READINGS
METRES (1:2000)
0
40
80
120
160
200
LEGEND
HEM ANOMALY
444 Hz
IN-PHASE READINGS
QUADRATURE READINGS
N
ASTRO
KEY MAP
SCALE : 1" = 8 miles
PETER
LAKE
LINE 10000 E
LINE 10100 E
LINE 10200 E
LINE 10300 E
LINE 10400 E
LINE 10500 E
LINE 10600 E
LINE 10700 E
LINE 10800 E
LINE 10900 E
LINE 11000 E
LINE 11100 E
LINE 11200 E
LINE 11300 E
LINE 11400 E
LINE 11500 E
LINE 11600 E
LINE 11700 E
150 N
148 N
146 N
144 N
142 N
140 N
641198
641199
641200
641201
641202
641203
641204
641205
641206
641207
641208
641209
116466
116467
116468
116469
3112
260

KIDD CREEK MINES LTD.
HORIZONTAL LOOP SURVEY
CUNNINGHAM 31
PETER LAKE
NTS:42-0-10
PROJ#75
DRN BY.
DATE
1982
LEGEND
1777 Hz
IN-PHASE READINGS
QUADRATURE READINGS
INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 1777 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%
+ READINGS
- READINGS
0
40
80
120
160
200
METRES (1:2000)
KEY MAP
SCALE : 1" = 8 miles
HORWOOD LAKE
Ivanhoe River
Property
CUNNINGHAM
Tophet
Kinogama
Kormak
Woman River
WAKAMI LAKE PROVINCIAL PARK
Ramsey
ASTRO
N
PETER LAKE
LINE 10000 E
LINE 10100 E
LINE 10200 E
LINE 10300 E
LINE 10400 E
LINE 10500 E
LINE 10600 E
LINE 10700 E
LINE 10800 E
LINE 10900 E
LINE 11000 E
LINE 11100 E
LINE 11200 E
LINE 11300 E
LINE 11400 E
LINE 11500 E
LINE 11600 E
LINE 11700 E
150 N
148 N
146 N
144 N
142 N
140 N
P 641209
P 641208
P 641206
P 641207
P 641205
P 641203
P 641204
P 641201
P 6412 00
P 641202
P 641198
P 641199
S 116469 L
S 116466 L
S 116467 L
S 116468 L
S 3112 P
270

KIDD CREEK MINES LTD.
HORIZONTAL LOOP SURVEY
CUNNINGHAM 31
PETER LAKE
NTS:42-0-10
PROJ#75
WORK BY
DATE
1982
LEGEND
1777 Hz
IN-PHASE READINGS
QUADRATURE READINGS
INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 1777 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%
+ READINGS
- READINGS
0 40 80 120 160 200
METRES (1:2000)
ASTRO
N
KEY MAP
SCALE 1" = 8 miles
HORWOOD LAKE
Property
Woman River
Ramsey
PROVINCIAL PARK
LINE 10000 E
LINE 10100 E
LINE 10200 E
LINE 10300 E
LINE 10400 E
LINE 10500 E
LINE 10600 E
LINE 10700 E
LINE 10800 E
LINE 10900 E
LINE 11000 E
LINE 11100 E
LINE 11200 E
LINE 11300 E
LINE 11400 E
LINE 11500 E
LINE 11600 E
LINE 11700 E
140 N
138 N
136 N
134 N
P 641202
P 641200
S 116466 L
P 641199
S 3112 P
S 116467 L
S 116468 L
P 641198
P 641197
P 641196
P 641195
P 641194
P 641191
P 641192
P 641193
280

LEGEND

1777 Hz

IN-PHASE READINGS

QUADRATURE READINGS

INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 1777 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%

+ READINGS - READINGS

0 40 80 120 160 200
METRES (1:2000)

KIDD CREEK MINES LTD.

HORIZONTAL LOOP SURVEY

CUNNINGHAM 3)

RUNNING GHOST LAKE

NTS:42-0-10 PROJ#75

DRN BY M.W. DATE 1982

290

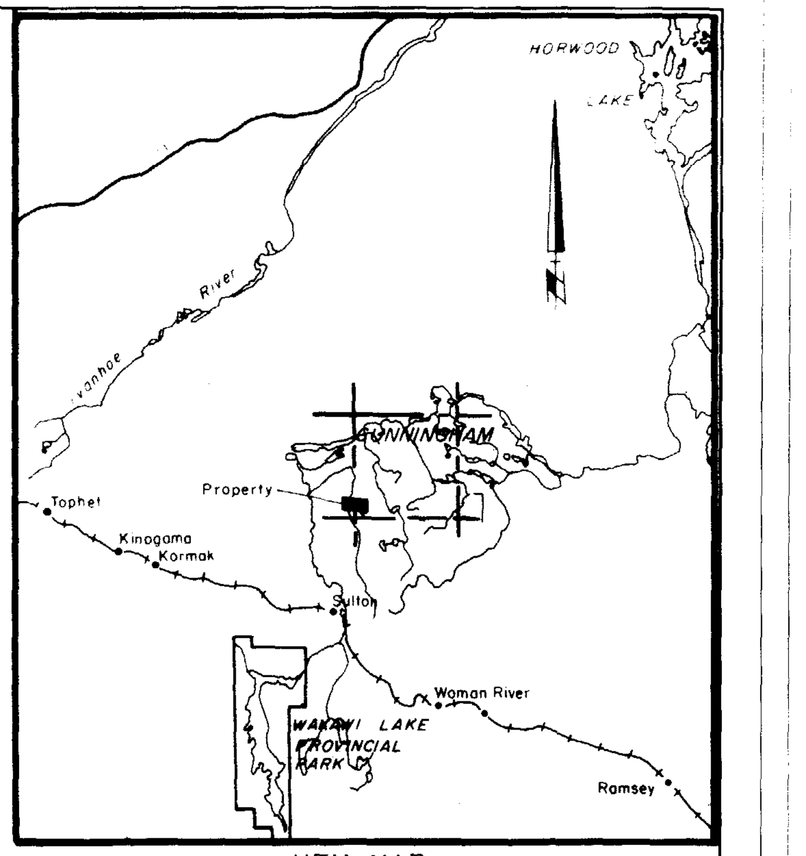
41O10NE0034 2.5403 CUNNINGHAM


KIDD CREEK MINES LTD.
HORIZONTAL LOOP SURVEY
CUNNINGHAM 31
RJNNING GHOST LAKE
NTS:42-0-10
PROJ#75
DRN BY
DATE
1982
LEGEND
1777 Hz
IN-PHASE READINGS
QUADRATURE READINGS
INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 1777 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%
+ READINGS
- READINGS
0 40 80 120 160 200
METRES (1:2000)
KEY MAP
SCALE : 1" = 8 miles
CUNNINGHAM
Property
Kinogama
Kormak
Tophet
Woman River
WAKAMI LAKE PROVINCIAL PARK
Ramsey
ASTRO
LINE 12400 N
LINE 12300 N
LINE 12200 N
LINE 12100 N
LINE 12000 N
LINE 11900 N
LINE 11800 N
LINE 11700 N
LINE 11600 N
LINE 11500 N
LINE 11400 N
LINE 11300 N
LINE 11200 N
LINE 11100 N
LINE 11000 N
LINE 10900 N
LINE 10800 N
106 E
104 E
102 E
100 E
P 641187
P 641186
P 641180
P 641181
P 641179
P 641178
P 641172
P 641173
POND
RUNNING GHOST LAKE
CUNNINGHAM TWP
GREENLAW TWP

300

KIDD CREEK MINES LTD.
V L F SURVEY
CUNNINGHAM 31
RUNNING GHOST LAKE GRID
NTS:41-O-10
PROJ.#75
WORK BY
M.W.
DATE
1982
INSTRUMENT : CRONE RADEM
STATION : ANNAPOLIS, 21.4 KHz
PROFILE SCALE : DIP ANGLE 1 CM= 20°
W DIPS
E DIPS
0 40 80 120 160 200
METRES (1:2000)
LEGEND
STRONG VLF ANOMALY
MODERATE VLF ANOMALY
WEAK VLF ANOMALY
INFERRED VLF ANOMALY
DIP ANGLE (DEGREES)
ASTRO
KEY MAP SCALE : 1"= 8 miles
HORWOOD LAKE
CUNNINGHAM
Property
Kormak
Woman River
WAKAMI LAKE PROVINCIAL PARK
Ramsey
GREENLAW Twp.
CUNNINGHAM Twp.
RUNNING GHOST LAKE
LINE 12400 N
LINE 12300 N
LINE 12200 N
LINE 12100 N
LINE 12000 N
LINE 11900 N
LINE 11800 N
LINE 11700 N
LINE 11600 N
LINE 11500 N
LINE 11400 N
LINE 11300 N
LINE 11200 N
LINE 11100 N
LINE 11000 N
LINE 10900 N
LINE 10800 N
100 E
98 E
96 E
94 E
92 E
P 641186
P 641185
P 641184
P 641181
P 641182
P 641183
P 641178
P 641177
P 641176
P 641173
P 641174
P 641175
310


KEY MAP SCALE : 1" = 8 miles
HORWOOD LAKE
CUNNINGHAM
Property
Foleyet
Kinogama
Kormak
Woman River
WAKAMI LAKE PROVINCIAL PARK
Ramsey
ASTRO
STRONG VLF ANOMALY
MODERATE VLF ANOMALY
WEAK VLF ANOMALY
INFERRED VLF ANOMALY
LEGEND
DIP ANGLE (DEGREES)
INSTRUMENT : CRONE RADEM
STATION : ANNAPOLIS, 21.4 KHz
PROFILE SCALE : DIP ANGLE 1 CM= 20°
W DIPS
E DIPS
0 40 80 120 160 200
METRES (1:2000)
KIDD CREEK MINES LTD.
V L F SURVEY
CUNNINGHAM 31
RUNNING GHOST LAKE GRID
NTS:41-O-10
PROJ.#75
WORK BY
DATE
1982
P 641187
P 641186
P 641180
P 641181
P 641179
P 641178
P 641172
P 641173
POND
RUNNING GHOST LAKE
GREENLAW TWP
CUNNINGHAM TWP
108 E
106 E
104 E
102 E
LINE 12400 N
LINE 12300 N
LINE 12200 N
LINE 12100 N
LINE 12000 N
LINE 11900 N
LINE 11800 N
LINE 11700 N
LINE 11600 N
LINE 11500 N
LINE 11400 N
LINE 11300 N
LINE 11200 N
LINE 11100 N
LINE 11000 N
LINE 10900 N
LINE 10800 N
320



KEY MAP SCALE : 1" = 8 miles

ASTRO

HEM ANOMALY

LEGEND

444 Hz

IN-PHASE READINGS

QUADRATURE READINGS

INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 444 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%

+ READINGS - READINGS

0 40 80 120 160 200

METRES (1:2000)

KIDD CREEK MINES LTD.

HORIZONTAL LOOP SURVEY

CUNNINGHAM 31

RUNNING GHOST LAKE

NTS: 42-0-10 PROJ#75

DATE

1982

M. W.


KIDD CREEK MINES LTD.
HORIZONTAL LOOP SURVEY
CUNNINGHAM 31
RUNNING GHOST LAKE
NTS:42-0-10
PROJ#75
DRN BY
M. W.
DATE
1982
KEY MAP SCALE : 1" = 8 miles
LEGEND
HEM ANOMALY
444 Hz
IN-PHASE READINGS
QUADRATURE READINGS
INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 444 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%
+ READINGS
- READINGS
0 40 80 120 160 200
METRES (1:2000)
ASTRO
GREENLAW Twp.
CUNNINGHAM Twp.
RUNNING GHOST LAKE
LINE 10800 N
LINE 10900 N
LINE 11000 N
LINE 11100 N
LINE 11200 N
LINE 11300 N
LINE 11400 N
LINE 11500 N
LINE 11600 N
LINE 11700 N
LINE 11800 N
LINE 11900 N
LINE 12000 N
LINE 12100 N
LINE 12200 N
LINE 12300 N
LINE 12400 N
100 E
98 E
96 E
94 E
P 641173
P 641174
P 641175
P 641176
P 641177
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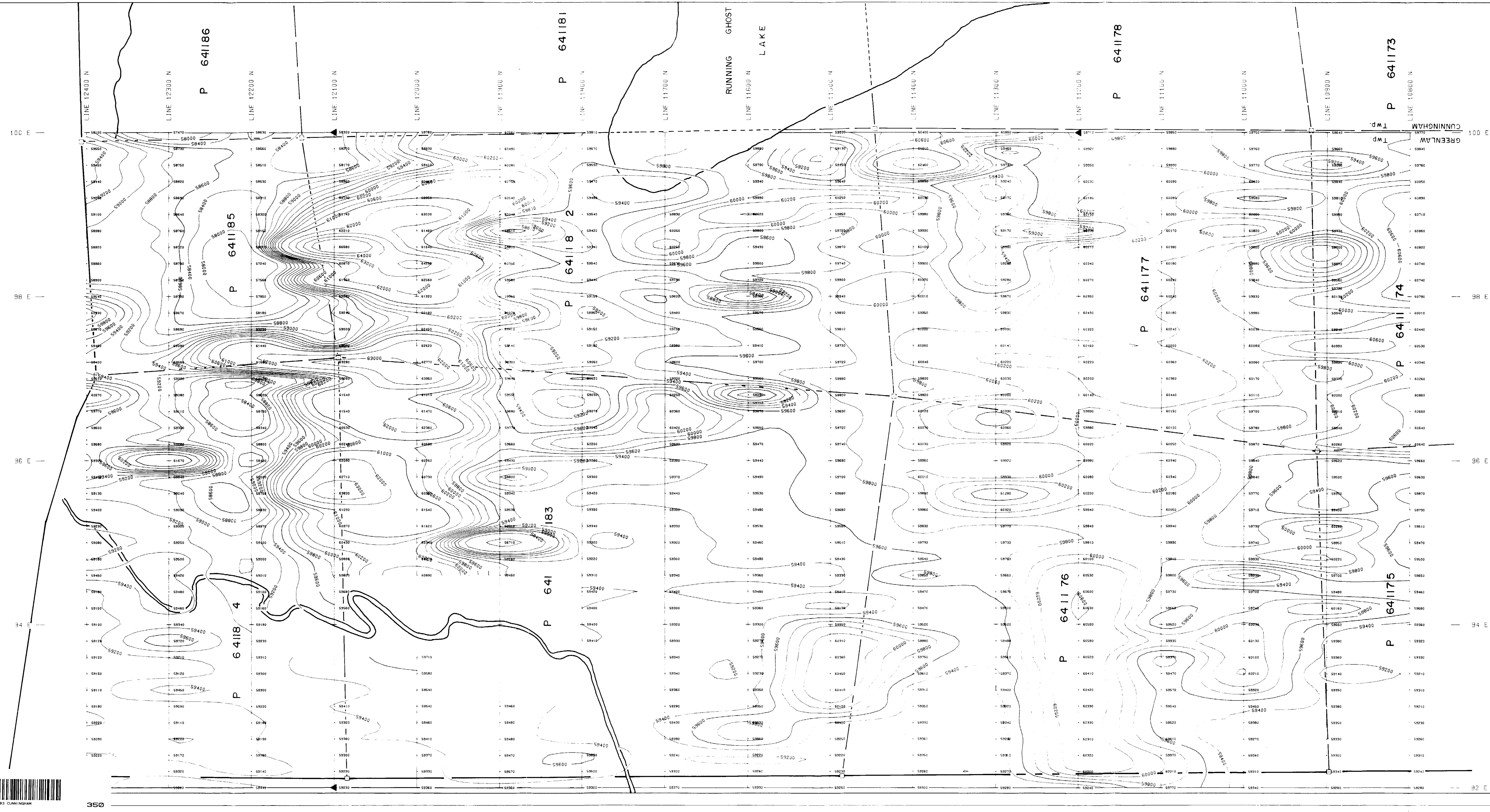
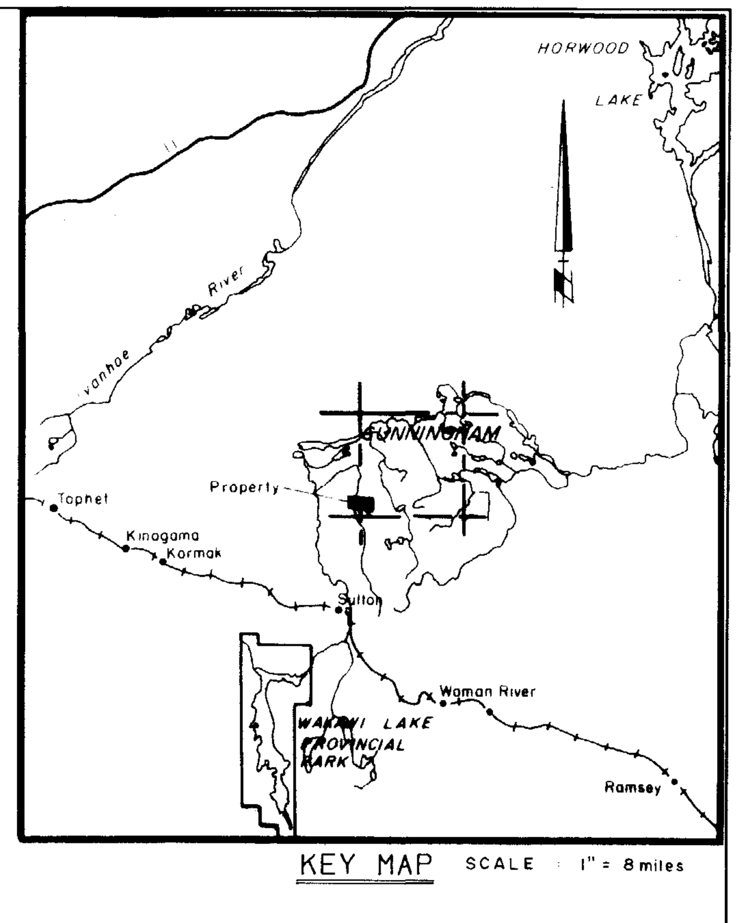
P 641183
P 641184
P 641185
P 641186
A
B
C
D

340





KEY MAP SCALE 1" = 8 miles

LEGEND

INSTRUMENT : GEOMETRICS G816
TYPE : PROTON PRECESSION, TOTAL FIELD
READINGS IN GAMMAS
▲ MAGNETIC BASE STATION

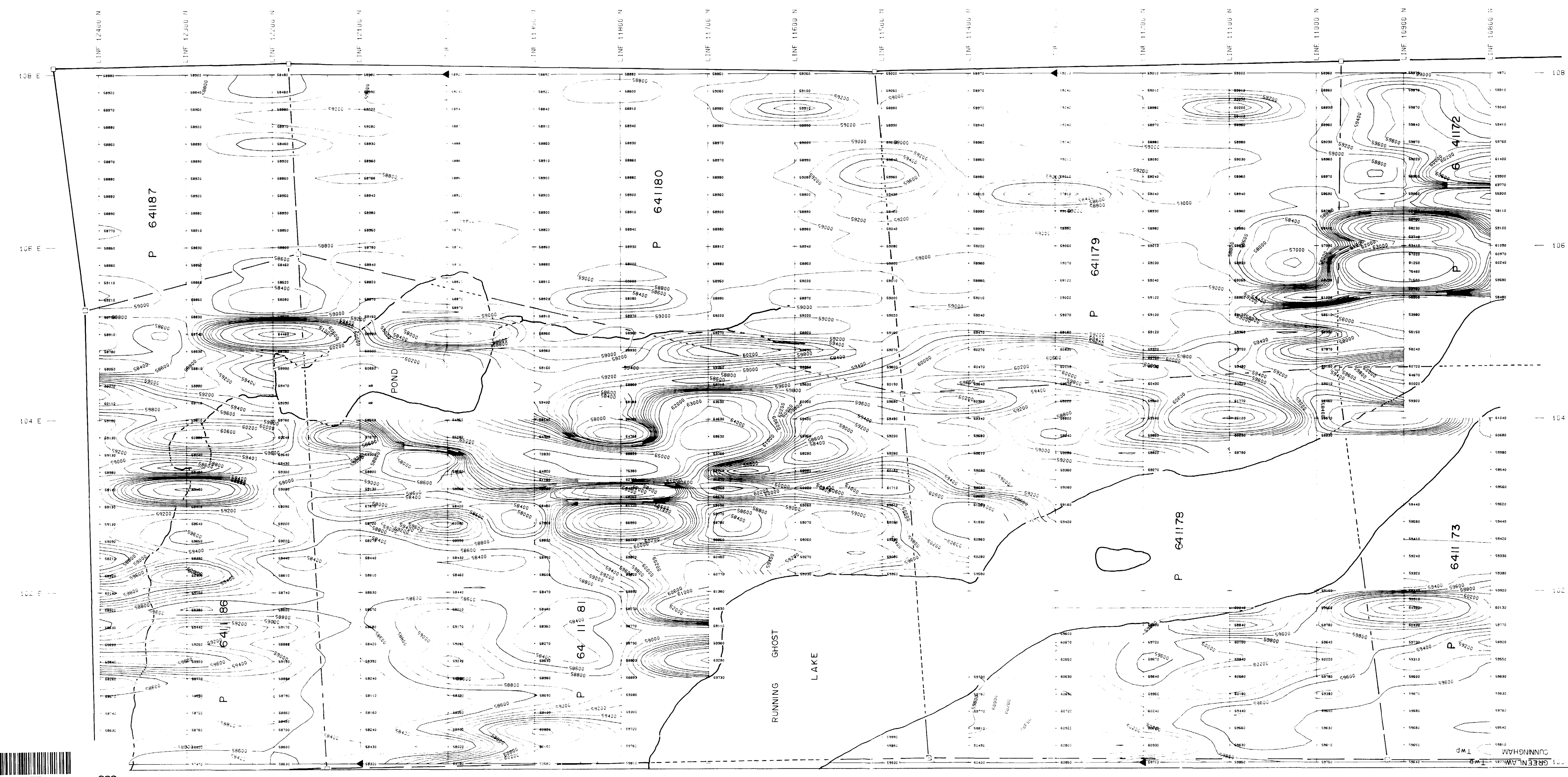
0 40 80 120 160 200
METRES (1:2000)

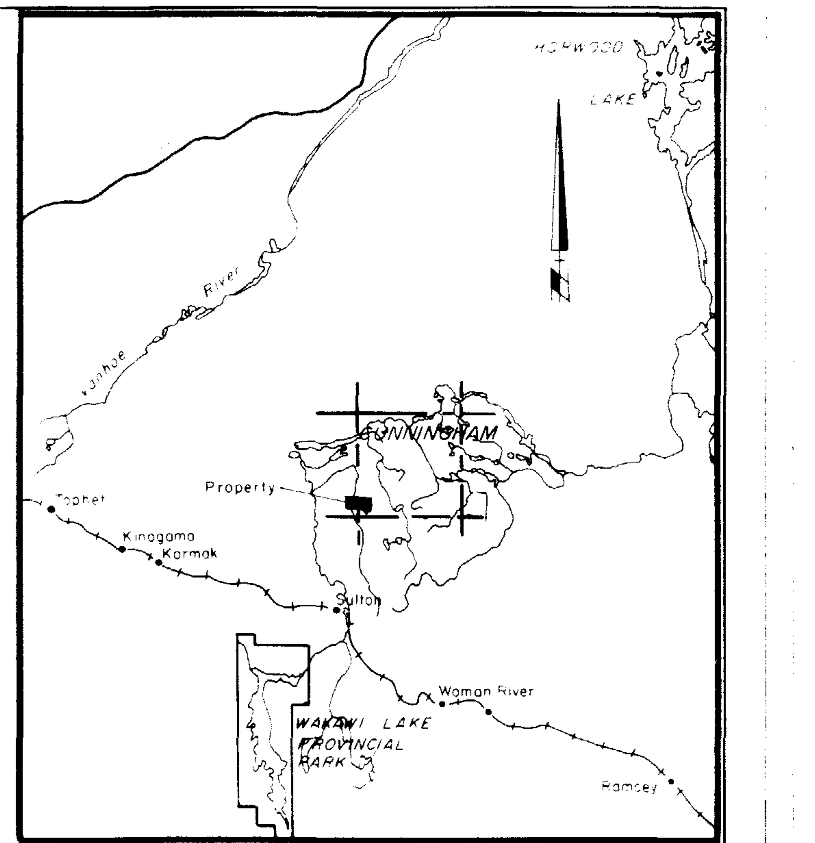
KIDD CREEK MINES LTD.

MAGNETIC SURVEY
CUNNINGHAM 31
RUNNING GHOST LAKE GRID

NTS:41-O-10 PROJ.#75

WORK BY	DATE
M.W.	1982





KEY MAP SCALE 1" = 8 miles

LEGEND

INSTRUMENT : GEOMETRICS G816
TYPE : PROTON PRECESSION, TOTAL FIELD
READINGS IN GAMMAS
▲ MAGNETIC BASE STATION

0 40 80 120 160 200
METRES (1:2000)

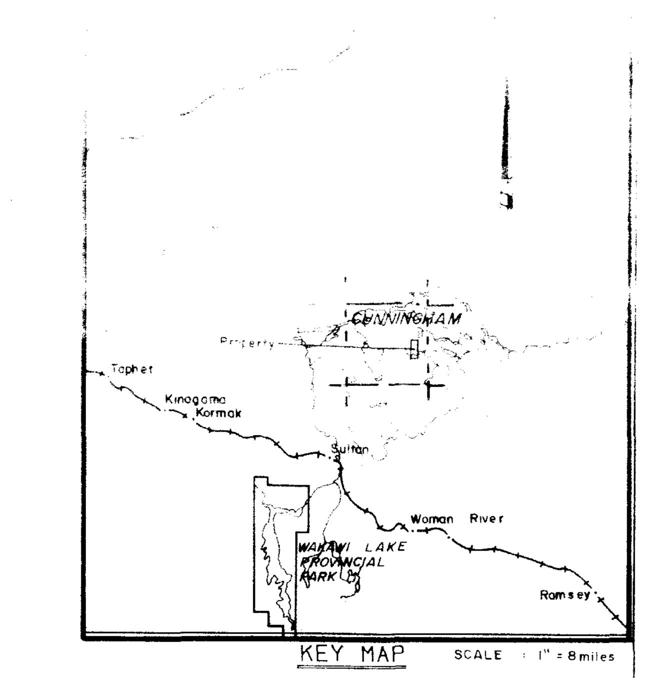
KIDD CREEK MINES LTD.

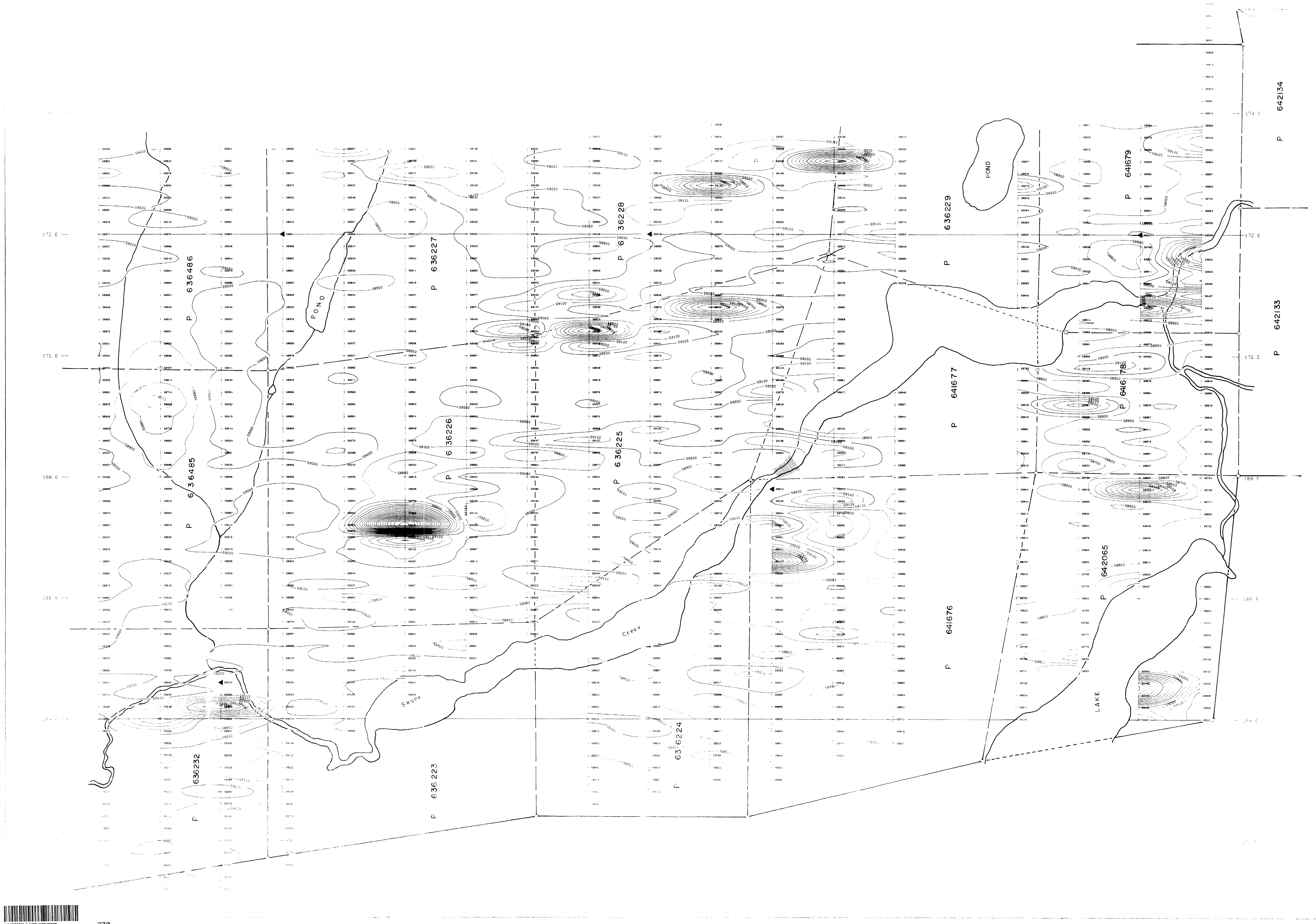
MAGNETIC SURVEY
CUNNINGHAM 31
RUNNING GHOST LAKE GRID

NTS:41-O-10 PROJ.#75

WORK BY M. W.
DATE 1982

360





LEGEND

INSTRUMENT : GEOMETRICS G816
TYPE : PROTON PRECESSION, TOTAL FIELD
READINGS IN GAMMAS
▲ MAGNETIC BASE STATION

0 40 80 120 160 200
METRES (1:2000)

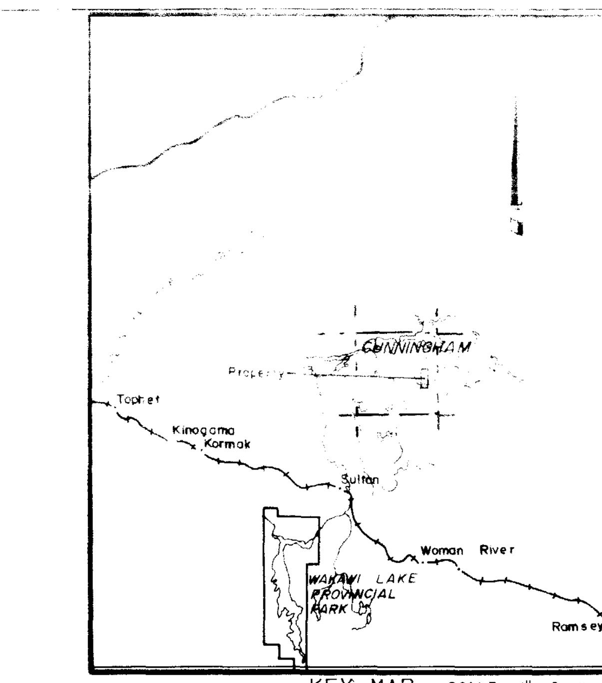
KIDD CREEK MINES LTD.

MAGNETIC SURVEY
CUNNINGHAM 31
SKUNK CREEK GRID

NTS:41-O-10 PROJ.#75

WORK BY DATE

M. W. [signature]



KEY MAP SCALE : 1" = 8 miles

N ASTRO

HEM ANOMALY

LEGEND

444 Hz

IN-PHASE READINGS

QUADRATURE READINGS

INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 444 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%

+ READINGS — READINGS

0 40 80 120 160 200

METRES (1:2000)

KIDD CREEK MINES LTD.

HORIZONTAL LOOP SURVEY

CUNNINGHAM 31

SKUNK GRID

NTS:41-0-10 PROJ.#75

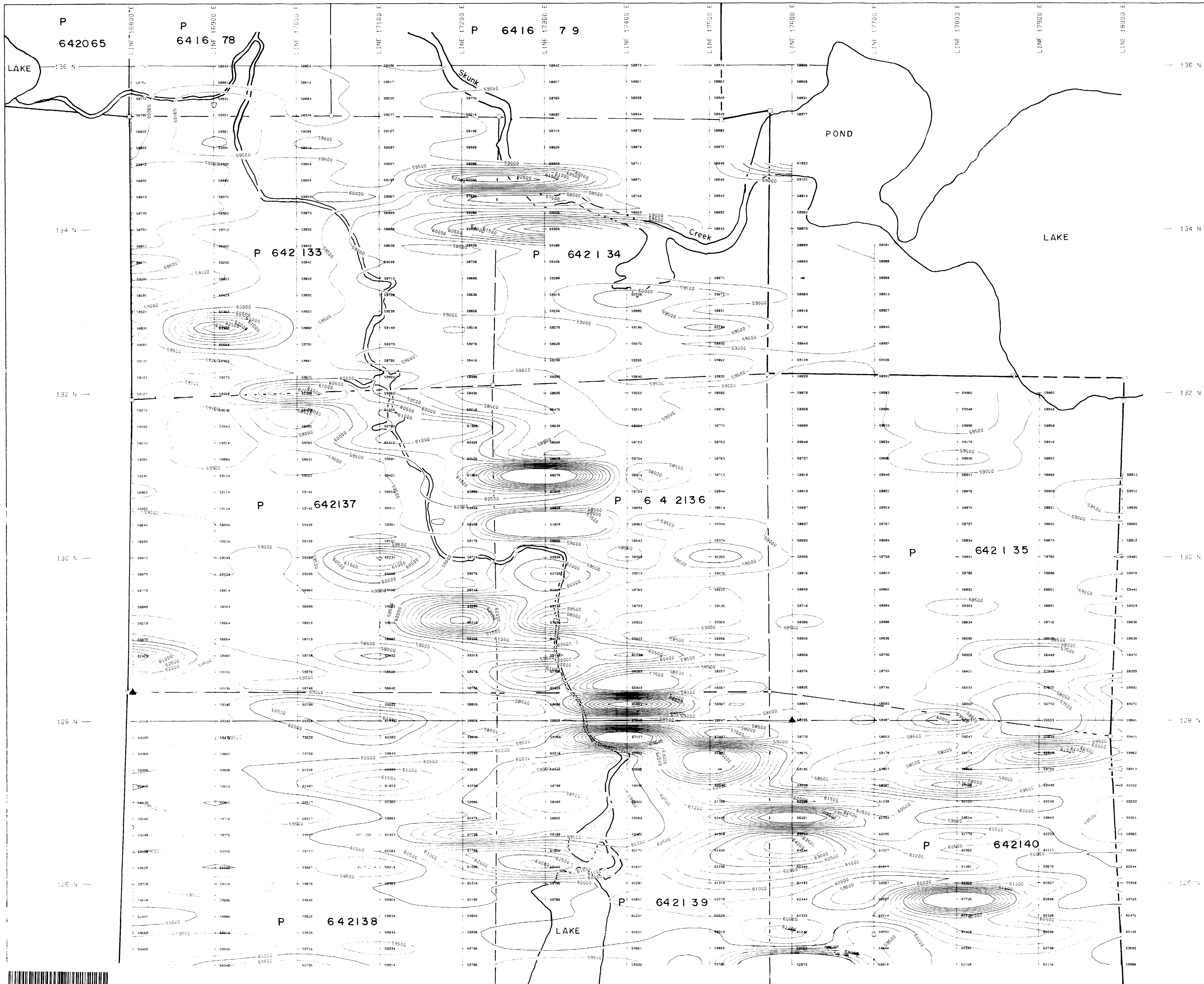
? 5463

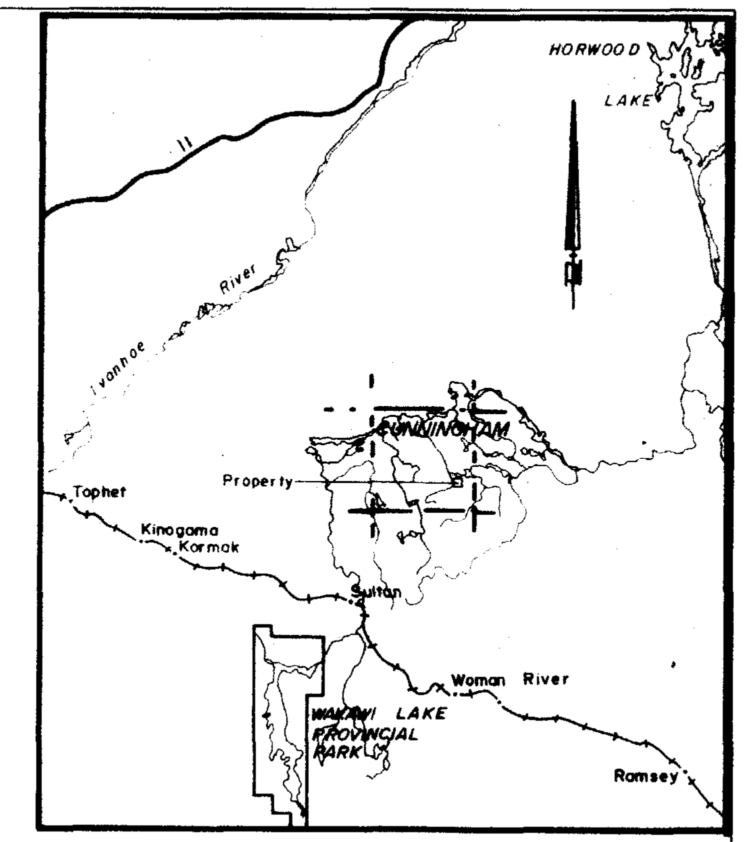
WORK BY	DATE
M. W. [signature]	1982

380


KEY MAP
SCALE : 1" = 8 miles
Property
Timmins
Tophet
Kinogama
Kamisk
Woman River
Ramsey
LAKE
PROVINCIAL PARK
P 642134
P 642133
P 641679
P 641678
P 641677
P 641676
P 642065
P 636229
P 636228
P 636227
P 636226
P 636225
P 636224
P 636223
P 636232
P 636485
P 636486
POND
POND
LAKE
Skunk
Creek
174 E
172 E
170 E
168 E
166 E
164 E
162 E
ASTRO
STRONG VLF ANOMALY
MODERATE VLF ANOMALY
WEAK VLF ANOMALY
INFERRED VLF ANOMALY
LEGEND
DIP ANGLE (DEGREES)
12 E
INSTRUMENT : CRONE RADEM
STATION : CUTLER, 17.8 KHz
PROFILE SCALE : DIP ANGLE 1 CM= 20°
W DIPS
E DIPS
0 40 80 120 160 200
METRES (1:2000)
KIDD CREEK MINES LTD.
V L F SURVEY
CUNNINGHAM 31
SKUNK CREEK
NTS:41-O-10
PROJ#75
WORK BY
M. W. Z
DATE
1982
390


KEY MAP SCALE: 1" = 8 miles
ASTRO
LEGEND
1777 Hz
IN-PHASE READINGS
QUADRATURE READINGS
INSTRUMENT: APEX PARAMETRICS MAXMIN II
FREQUENCY: 1777 Hz
COIL SPACING: 80 METRES
PROFILE SCALE: 1 CM= 20%
+ READINGS
- READINGS
0 40 80 120 160 200
METRES (1:2000)
KIDD CREEK MINES LTD.
HORIZONTAL LOOP SURVEY
CUNNINGHAM 31
SKUNK GRID
NTS:42-0-10
PROJ.#75
WORK BY
DATE
1982
174 E
172 E
170 E
168 E
166 E
164 E
162 E
P 642134
P 642133
P 641679
P 641678
P 642065
P 636229
P 641677
P 641676
P 636228
P 636225
P 636224
P 636227
P 636226
P 636223
P 636486
P 636485
P 636232
POND
LAKE
Creek
Skunk
400





KEY MAP SCALE : 1" = 8 miles

LEGEND

INSTRUMENT : GEOMETRICS G816
TYPE : PROTON PRECESSION, TOTAL FIELD
READINGS IN GAMMAS
▲ MAGNETIC BASE STATION

0 40 80 120 160 200
METRES (1:2000)

KIDD CREEK MINES LTD.

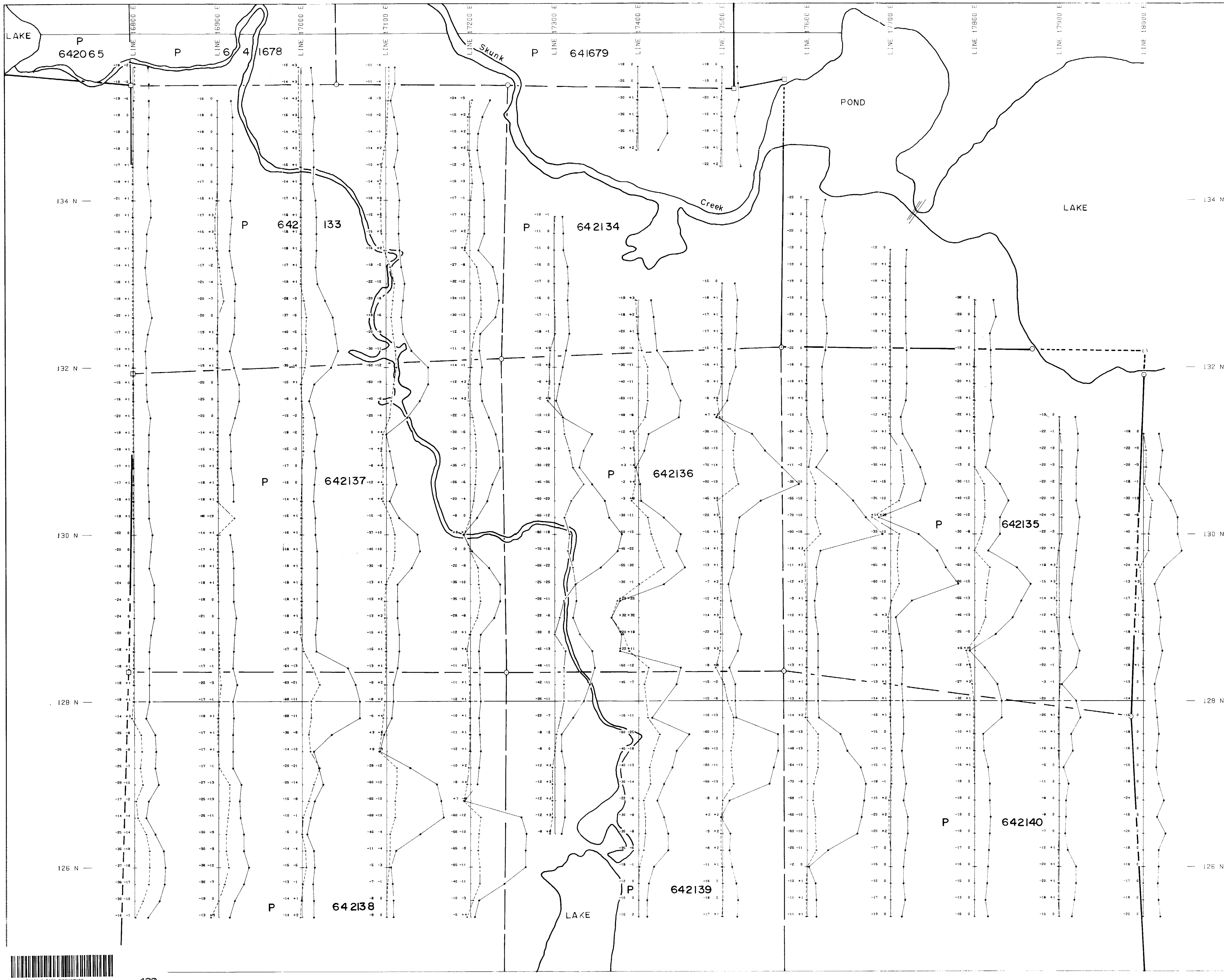
MAGNETIC SURVEY
CUNNINGHAM 31
DUCK POND GRID

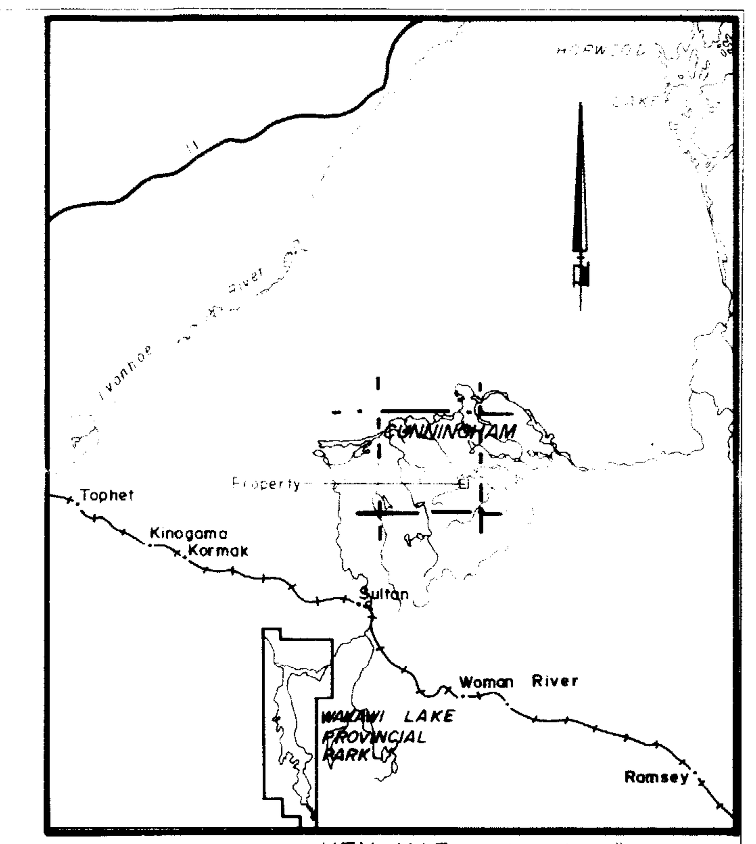
NTS:41-O-10 2.5403 PROJ.#75

WORK BY	DATE
M. W. Zang	198[illegible]

410

4.0





KEY MAP SCALE 1" = 8 miles

LEGEND

1777 Hz
IN-PHASE READINGS
QUADRATURE READINGS

INSTRUMENT : APEX PARAMETRICS MAXMIN II
FREQUENCY : 1777 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%

+ READINGS - READINGS

0 40 80 120 160 200
METRES (1:2000)

KIDD CREEK MINES LTD.

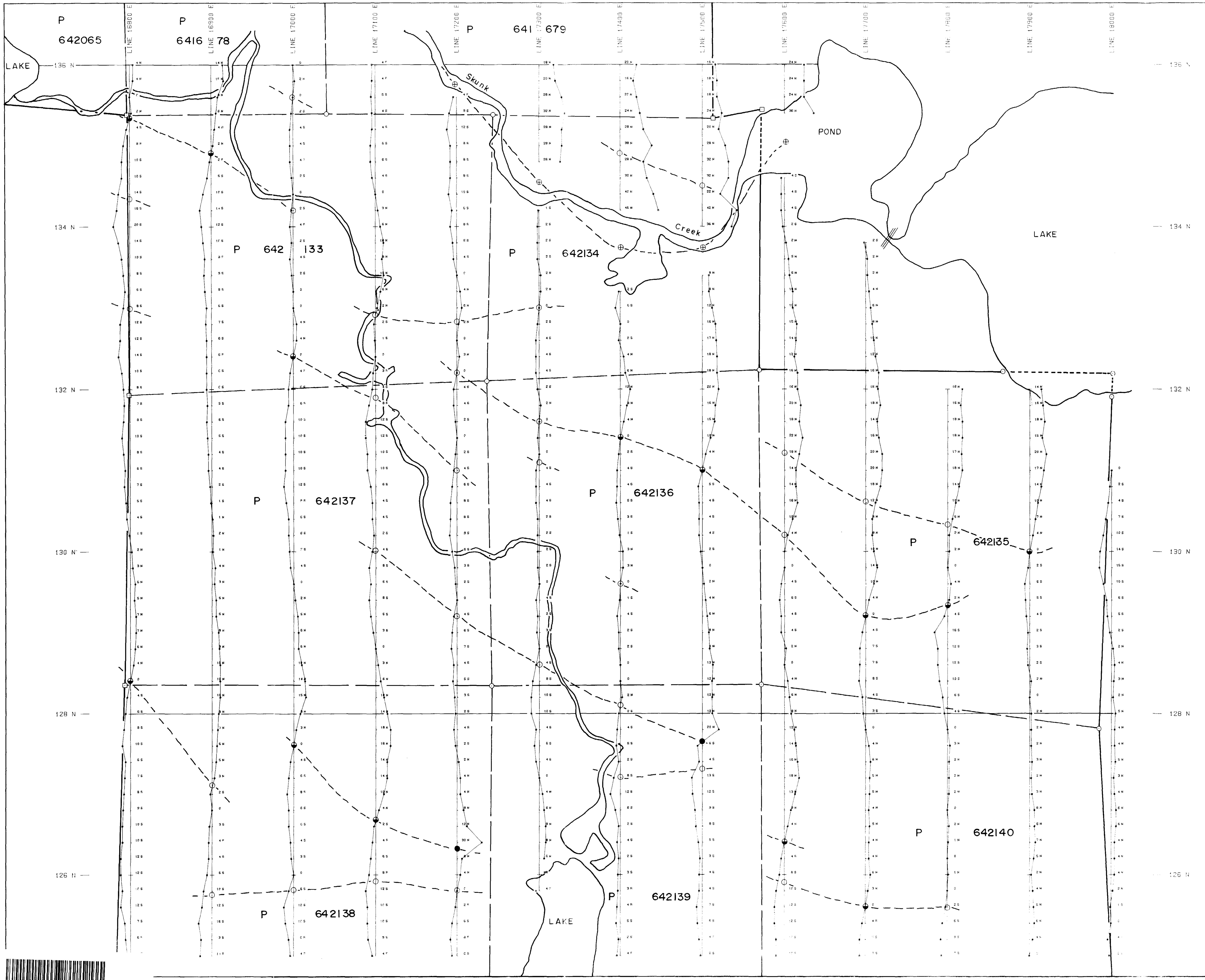
HORIZONTAL LOOP SURVEY

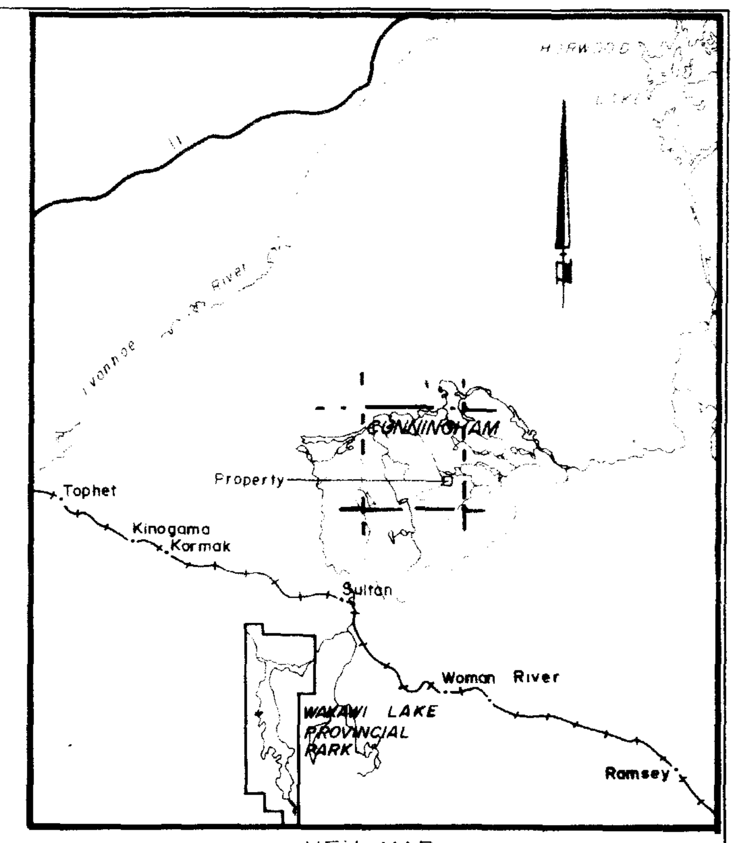
CUNNINGHAM 31

CUCK POND GRID

NTS:42-0-10 PROJ.#75

DRN BY M.W. DATE 1982





KEY MAP

STRONG VLF ANOMALY

MODERATE VLF ANOMALY

WEAK VLF ANOMALY

INFERRED VLF ANOMALY

N

ASTRO

LEGEND

CIP ANGLE (DEGREES)

13 N

INSTRUMENT : CRONE RADEM
STATION : SEATTLE, 24.8 KHz
PROFILE SCALE : CIP ANGLE 1 CM= 20°

S DIPS N DIPS

0 40 80 120 160 200

METRES (1:2000)

KIDD CREEK MINES LTD.

V L F SURVEY

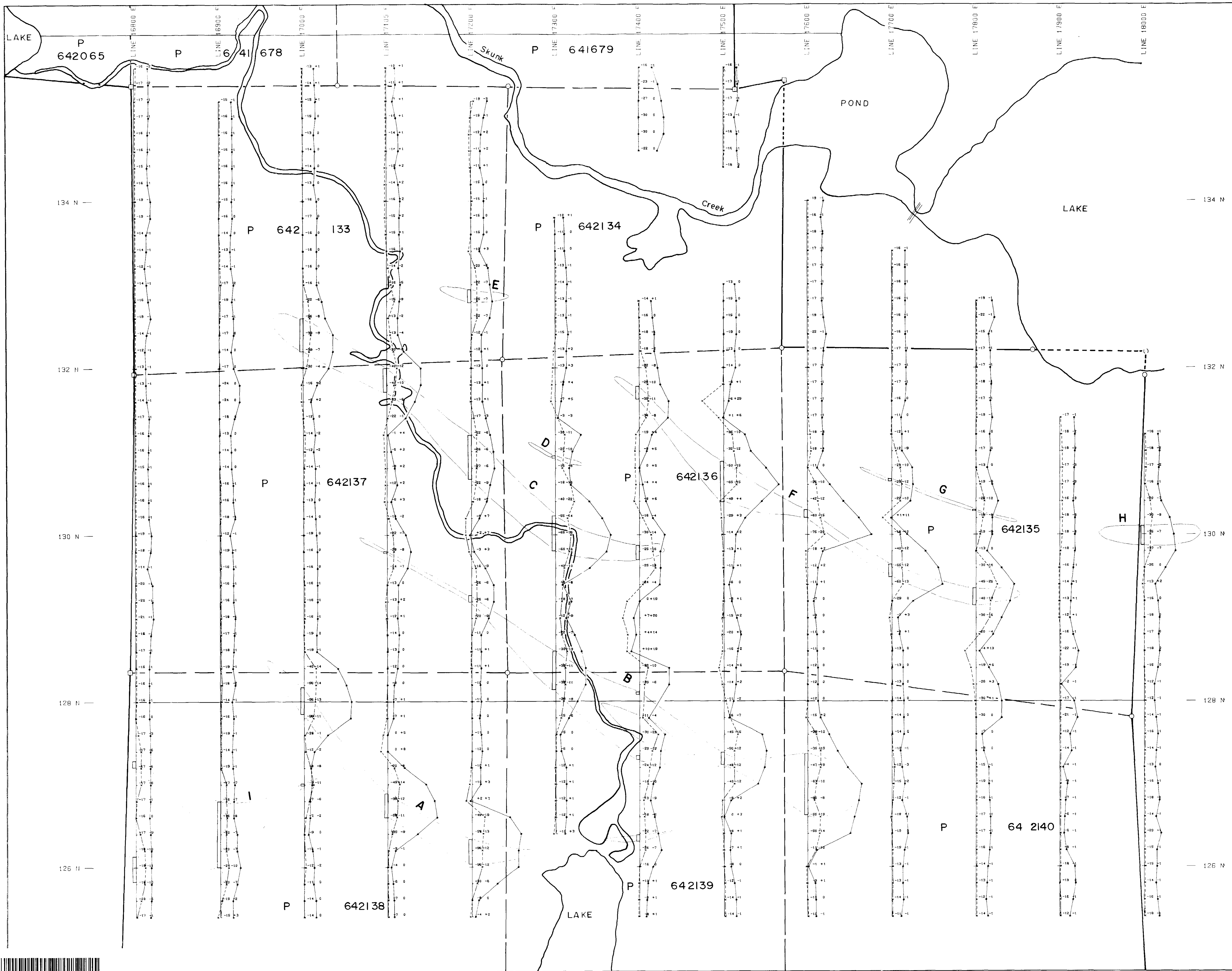
CUNNINGHAM 31

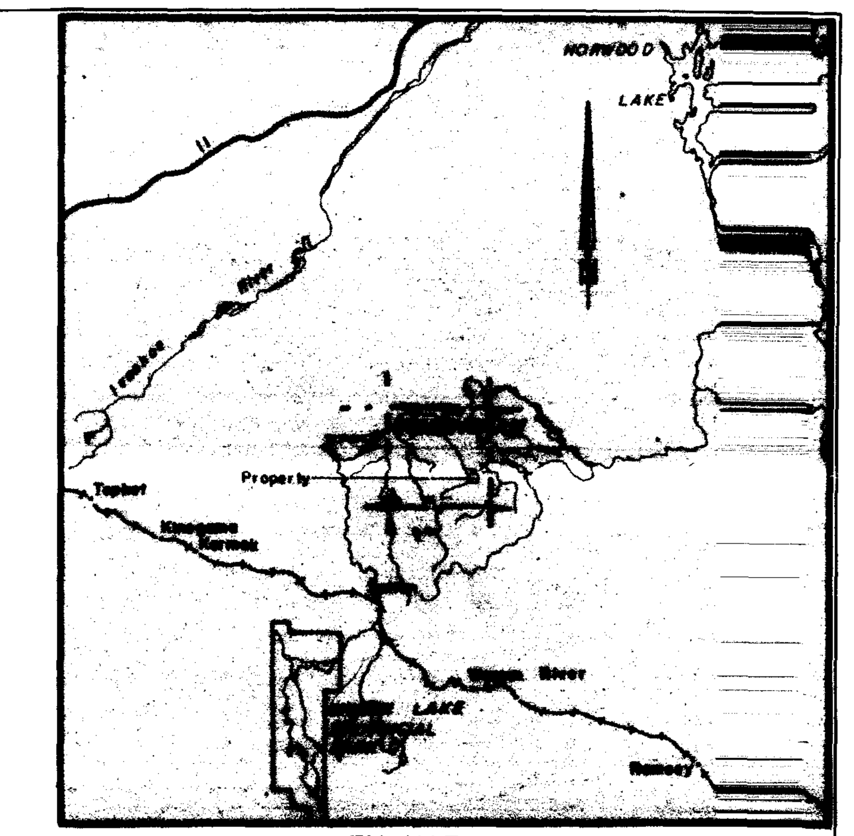
DUCK POND GRID

NTS: 42-0-1 PROJ. #75

WORK BY: M.W. DATE: 1982

430





KEY MAP SCALE : 1" = 8 miles

N
ASTRO

HEM ANOMALY

LEGEND

444 Hz
IN-PHASE READINGS
QUADRATURE READING

INSTRUMENT : APEX PARAMETRICS MAXMIN I
FREQUENCY : 444 Hz
COIL SPACING : 80 METRES
PROFILE SCALE : 1 CM= 20%

<— + READINGS — READINGS —>

0 40 80 120 160 200
METRES (1:2000)

KIDD CREEK MINES LTD.

HORIZONTAL LOOP SURVEY

CUNNINGHAM 31

DUCK POND GRID

NTS:41-0-10 PROJ.#7

WORK BY: M. W. [illegible]

DATE: 1982

440

41O14NE0034 2.5483 CUNNINGHAM