



52E09SE0008 2.9144 CODE

010

ASSESSMENT REPORT, CODE TOWNSHIP  
FORT KNOX RESOURCES, SOUTH BLOCK  
KENORA MINING DIVISION  
GEOLOGICAL AND GEOPHYSICAL SURVEY  
JULY 15 - AUGUST 7, 1985  
NTS: 52E9

RECEIVED

Aug. 10 1986

MINING LANDS SECTION

A. Burton  
Geologist  
Canadian Nickel Co. Ltd.  
Copper Cliff, Ontario  
October, 1985



52E09SE0008 2.9144 CODE

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SUMMARY

During July and August, 1985, geological, magnetometer, VLF and horizontal loop surveys were carried out over the claim group.

The claim group is underlain by steeply dipping volcanic and intrusive rocks belonging to the Dogtooth Lake and Gibi Lake Sequences (Trowel, et al, 1980). The Dogtooth Lake Sequence consists of mafic, massive, locally porphyritic and pillowd flows. Gabbro sills 20 m to 200 m thick are common. The Gibi Lake Sequence stratigraphically overlies the Dogtooth lake Sequence and within the map area, consists of felsic pyroclastics.

A major fault-alteration zone appears to be stratigraphically bound to the transition zone between the two sequences. The zone is characterized by shearing, intense iron carbonate, calcium carbonate, silicic and chlorite alteration.

Grab samples were taken from outcrop exposures of all lithologies. All anomalous gold values obtained were restricted to samples from the fault - alteration zone.

Based on the information obtained during the geological survey, further work on the property is warranted.

## INTRODUCTION

An exploration program, consisting of geological, magnetometer, VLF and horizontal loop surveys, was carried out over the claim block. The geological survey was performed by a 2 member field crew from July 15 to August 7, 1985.

## LOCATION AND ACCESS

The property is located 20 km southeast of Kenora, Ontario, (Figure 1). The property is approximately centered in the northwest 1/4 of Code Township. Access is provided by the Witch Bay Road, off Highway 71, south of Kenora.

## TOPOGRAPHY

The topography of the map area is generally rugged. Numerous five to six metre escarpments are scattered across the property. Low lying areas are usually wet and often contain thick cedar swamps. Balsam, poplar and birch are the main tree types with thick undergrowth common. Water supply is available within claims K825156, K825154 and one hundred metres south of claims K825158-59, (Witch Bay).

## PROPERTY

The property consists of nine contiguous claims, figure 2, held by Fort Knox Gold Resources Incorporated. The geological survey was carried out over eight claims.

<u>Claims</u>	<u>Recorded</u>	<u>Expiry Date</u>
K825152-59 (incl.)	04-22-85	04-22-86

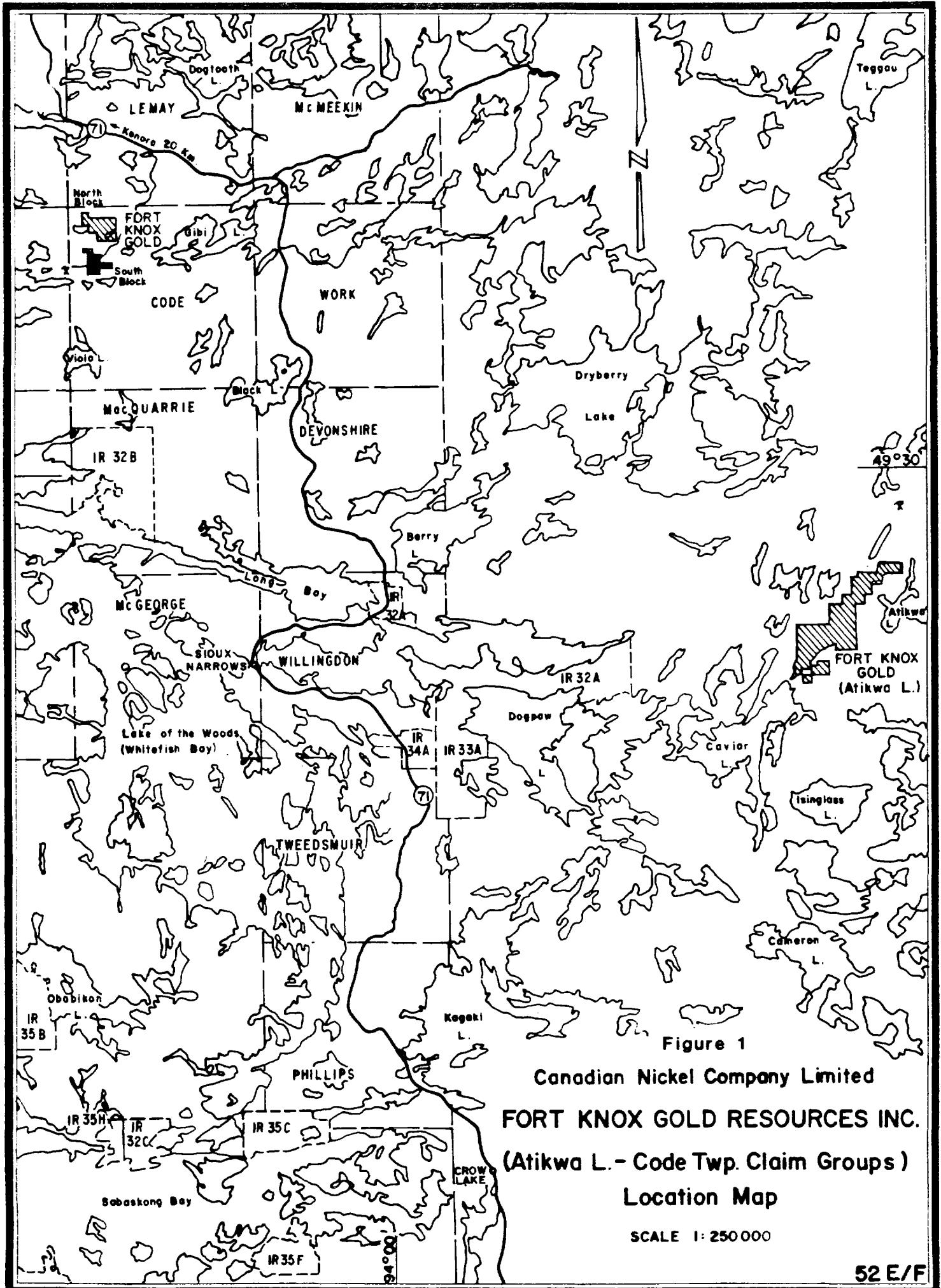
## GRIDDING

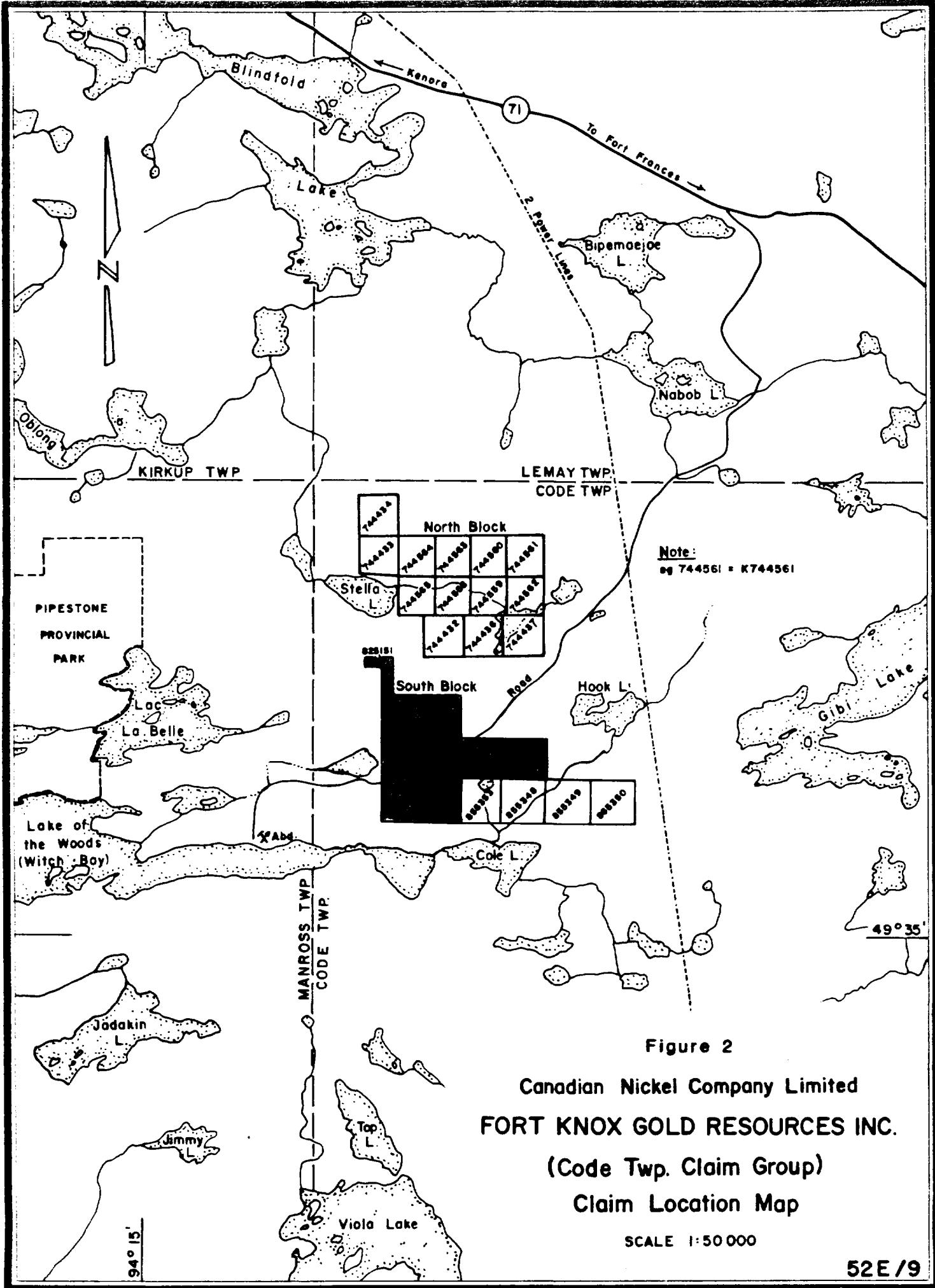
A baseline was established at an azimuth of 090 degrees (Figure 3). The baseline was turned off the 110+00E control line which was extended from the north block. Cross lines were cut and chained at 100 metre intervals with pickets placed every 25 metres.

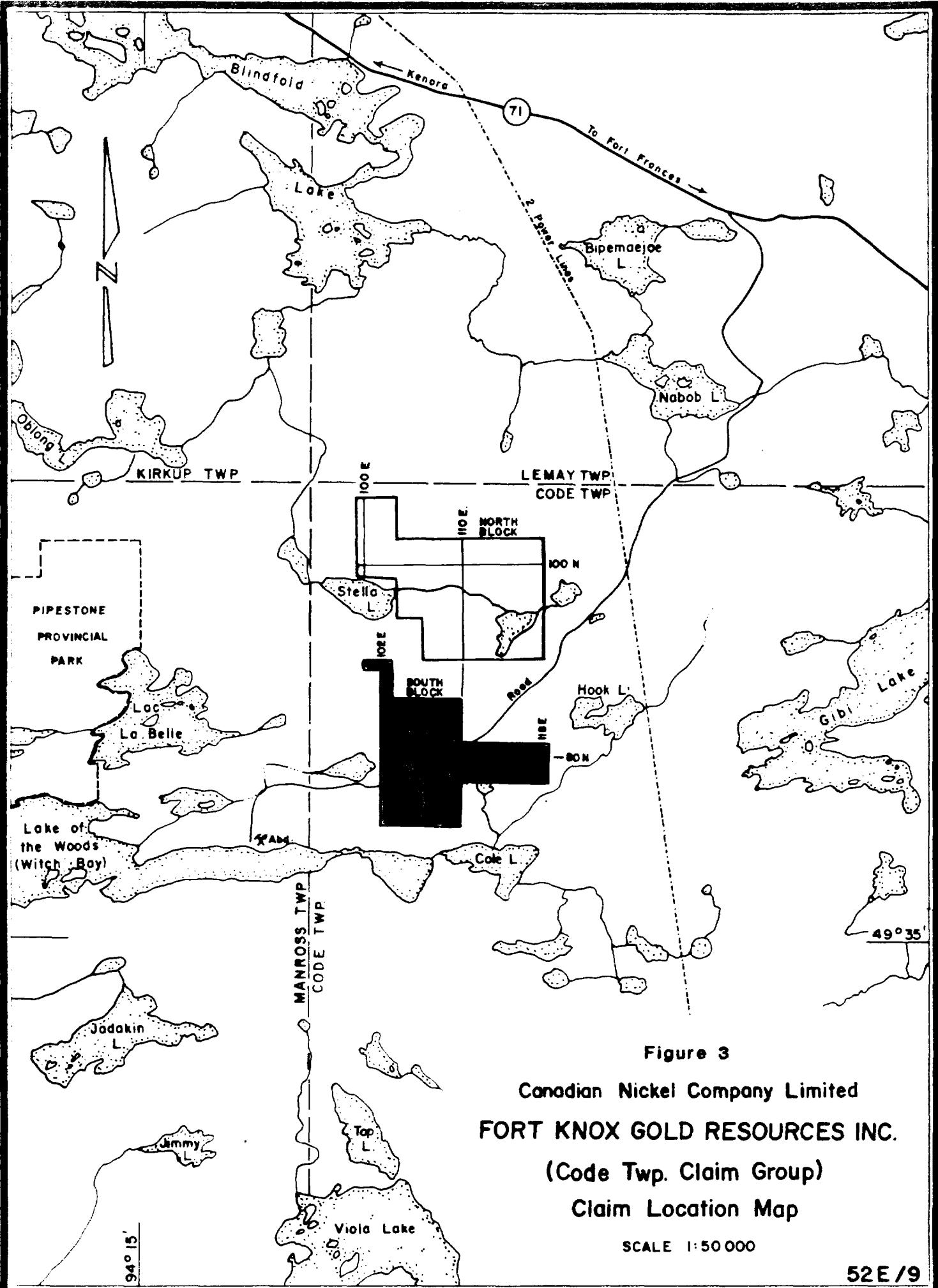
## PREVIOUS WORK

Dome Exploration (Canada) Ltd. drilled one hole into a horizontal loop conductor in the northeast corner of claim K 825155. They intersected andesite and norite with pyrite, pyrrhotite and trace chalcopyrite mineralization. No assays were available.

Three hundred metres south and fifty metres east of post #1, claim K825159, two shafts were found, each approximately 3 m x 3 m x 5 m deep. It was evident they were exploring the depth potential of a 1-2 metre wide quartz vein. The work appeared to have been performed in the early 1900's. Eleven samples were taken of vein and host rock material by Canico, none were anomalous.







## GENERAL GEOLOGY

The property is located within the Wabigoon Subprovince of the Superior Structural Province. Mafic volcanics progress upward into intermediate to felsic pyroclastic sequences. Clastic and chemical sediments are common within the upper more felsic units and mafic to ultramafic intrusives are common within the lower mafic sequences. Large granitic batholiths and stocks intrude all of the above.

The claim group in Code Township encompasses two major sequences; 1) The Dogtooth Lake Sequence consisting of massive, porphyritic or pillowd mafic flows with gabbroic sills. 2) The Gibi Lake Sequence consisting of the overlying felsic lapilli tuffs to agglomerates.

The main area of interest is the contact zone between the Dogtooth Lake and Gibi Lake Sequences. This zone is an extension of the Andrew Bay - Witch Bay Fault zone which is characterized by shearing and calcium carbonatization to the west. Within the claim group it is characterized by shearing, calcium and iron carbonatization, sericitization and pyrite mineralization.

Twelve anomalous gold values were obtained along the zone within the claim group. The most encouraging gold assays are 4.17 ppm over 30 cm and 7.86 ppm from a grab sample.

## LITHOLOGY

Table 1, presents the lithologic legend for the geological survey conducted on the Code Township south grid. Three major lithologic groups are present on the property. Mafic intrusives, intermediate to felsic volcanics and mafic to intermediate volcanics.

## MAFIC TO INTERMEDIATE VOLCANICS

In the map area these rocks belong to the Dogtooth Lake Sequence, (Trowel, et al, 1980) and are comprised of pillowd, porphyritic and massive flows with intercalated tuffs. They are andesitic to basaltic in composition, massive to moderately foliated, aphanitic to fine grained and green to light green in colour. They are generally weakly carbonatized with calcite the predominate form of carbonate. Calcium carbonatization is especially intense within the mafic volcanics, claim K825157.

The tuffs are mainly as thin interbeds within flow units. They are green, moderately foliated and moderately carbonatized. They are best exposed within claim K825157.

## MAFIC INTRUSIVES

A major gabbroic sill, trending at 070 degrees, bifurcates the property. It is commonly porphyritic, sheared and dark green in colour. Large, 5 mm, phenocrysts of pyroxene are set in a mg sericitized matrix with up to 5% fine

TABLE 1

Table of Lithologic Units

Mafic Intrusives - Dogtooth Lake Sequence

Gabbro  
Porphyritic Gabbro  
Chloritized Gabbro

Intermediate to Felsic Volcanics - Gibi Lake Sequence

Lapilli Tuff, Agglomerate  
Tuff  
Quartz - (Fe) Carbonate - Sericite Schist  
Sericite - Chlorite - (Fe) Carbonate - Quartz Schist

Mafic to Intermediate Volcanics - Dogtooth Lake Sequence

Basalt  
Pillowd Basalt  
Porphyritic Basalt  
Andesite  
Tuff  
Chlorite - Carbonate + Quartz Schist

grained leucoxene. The pyroxene phenocrysts are dark green to black and are easily observed on the weathered surface.

From north to south a common progression across the major gabbroic sill involves a chloritized gabbro at the base, medium grained equigranular gabbro within the centre and porphyritic gabbro at the top.

Other smaller gabbroic intrusives, +20 m, parallel the major sill. They are medium grained, dark green and weakly carbonatized. Good chill margins were observed, however, individual smaller sills were difficult to trace, due to poor outcrop exposure in some areas.

#### INTERMEDIATE TO FELSIC VOLCANICS

The Gibi Lake Sequence belongs to the classification and is represented by one unit at the south edge of claims K825158-59. Light green, lapilli tuff to agglomerate sized fragments are set in a dark green chloritic matrix. The fragments are angular, aphanitic, rhyodacitic in composition and have a length to width ratio of 5 to 1. The matrix is dark green, soft and composed of chloritized tuff and represents 80% of the rock.

#### STRUCTURAL GEOLOGY

Foliations across the property dip steeply to the north and trend east-north-east, paralleling the large gabbroic sill.

Deformed pillows and lack of graded bedding within tuffs nullifies top determination on the claim group. Work performed elsewhere in the area suggests that tops are to the south.

The main structure of interest is the Andrew Bay - Witch Bay Fault Zone which can be traced through the south part of claims K825158-59. Within the claim group the fault zone is located along the contact between the Dogtooth Lake and Gibi Lake Sequences. The zone is characterized by shearing, calcium and iron carbonatization, silicification, sericitization and pyrite mineralization. The areas containing pyrite mineralization also have corresponding gold anomalies.

#### MINERALIZATION

Grab samples were collected from all lithologic units, areas of alteration and zones of sulphides. All samples were analysed for gold and those considered anomalous are listed below:

<u>Co-ords</u>		<u>RX Sample Number</u>	<u>Au (ppb)</u>	<u>Pyrite</u>	<u>Rock Type</u>
Easting	Northing				
109+00	73+50	RX 071734	35	Tr	2e
109+10	73+50	RX 071736	20	Tr	2d
105+40	72+45	RX 071763	40	Tr	Quartz Vein
106+05	72+35	RX 071764	75	Tr-1%	1h, 2d
107+45	72+75	RX 071767	3900	15%	1h
107+42	72+60	RX 075067	20	Tr	1h
107+30	72+70	RX 075068	4170	5%	1h, 2d, 30 cm chip
107+30	72+70	RX 075069	7860	5%	2d, 2b
107+30	72+70	RX 075070	945	3%	1h, 2d
107+30	72+70	RX 075071	1470	2-3%	Quartz-py vein
107+50	72+75	RX 075078	70	1-3%	1h, 2d
107+50	72+75	RX 075079	2460	2-3%	2d

#### CONCLUSIONS

Steeply dipping pillowed, porphyritic and massive mafic volcanics are intruded by gabbro sills. The mafic volcanics progress upward to felsic pyroclastic rocks. The contact zone between the two rock types has been sheared and intensely altered. Pyrite mineralization associated with the sheared, altered contact zone is auriferous.

#### RECOMMENDATIONS

Based on the information gathered during the geological survey, further work is warranted on the property.

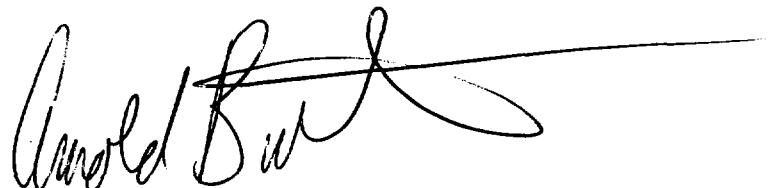
REFERENCES

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p. 17-20.

Certificate to Accompany Report

I, ARNOLD D. BURTON of Sudbury, Ontario certify:

1. That I reside at 92 Brookview Gardens in the City of Sudbury, in the Province of Ontario.
2. That I am a Graduate of Cambrian College of Applied Arts and Technology and hold a Geology Engineering Diploma, received in 1979.
3. That I am a Graduate of Laurentian University and hold a Honours Bachelor of Science Degree received in 1983.
4. That I have practiced my profession since 1983.
5. That I examined the property and conducted the survey.
6. That this report covers claims K825152 to K825159 inclusive.

A handwritten signature in black ink, appearing to read "Arnold Burton". The signature is fluid and cursive, with a long horizontal stroke extending from the end of the last name towards the right edge of the page.

## **APPENDIX**

### **Sample Descriptions with Assay Results**

TRaverse Number		PROJECT		Area		Geologist(s)		DATE	
N.T.S.	52 E 9	Kenora Mining District	Arnold Burton					July August 85	
SAMPLE NUMBER	Field Number	SAMPLE TYPE		SAMPLE LENGTH, WIDTH, AREA		SAMPLE DESCRIPTION		RESULTS (ppm. / % oz. P. ton)	
		Field Stream	Silt, Silt, Soil	Grab, Chip, Channel		Rock type, lithology, character of soil, stream silt, etc.		Au (ppb)	
RX071715	AB-85-01	GRAB		Eastings	Northings	11705 7915	Metalic - Ca-CRBN120 - schist 20	<5	
16	-03			11605	8126	Int. Volcanic - WKL CRBN120 - "		<5	
17	-04			11590	8060	Int. Volcanic - Steady " - "		<5	
18	-05			11350	7855	Ca-Carb - chlorite schist 1		5	
19	-06			11202	7980	Chlted Gabbro		<5	
20	-08			11300	8180	chl - carb schist		<5	
21	-09			11100	8105	" "		<5	
22	-10			11125	8005	bassalt - 2 magnetite pyroxene		<5	
23	-11			11095	7815	Porphyr. t. Gabbro		<5	
24	-12			10900	8380	" "		<5	
25	-14			10900	8320	" "		<5	
26	-16			10895	8200	carbonate chlorite schist		10	
27	-17			10900	8050	met. foliated volcanic, 1-2% py		5	
28	-18			10905	7975	interc - volc - mod carbonite		10	
29	-19			10900	7815	chl - carb - schist -		<5	
30	-20			10900	7530	Qtz vein		<5	
31	-21			10900	7530	chl - carb - schist		5	
32	-22			10890	7530	Qtz vein - and chl - carb schist		<5	
33	-23			10895	7403	chl, tp - carb - sericite schist tr py		5	
34	-24			10900	7350	sericite - qtz - Fe carb - calcite schist tr py		35	
35	-25			10898	7350	Qtz - carb sericite rock - massive tourmaline		10	
36	-26			10916	7350	Qtz - carb rock - 1% py		30	
37	-27			10910	7355	chlorite - sericite - qtz carb schist 2% py		15	
38	-28			10890	7330	chlorite - sericite qtz schist		5	
39	-29			10915	7330	sheared felsite - felsic veins		10	
RX071740	-30			10910	7255	chl, tp - sericite qtz schist		<5	
RX071754	-31			10705	8180	porphy. gabbro		5	
55	-32			10505	7825	Lat. yele - wkl foliated Tr pyro		<5	
56	-33			10540	7685	Qtz vein		10	
57	-34			10800	7860	chl - carb - qtz - sericite schist		<5	
58	-35			10800	7710	Porphy. gabbro		<5	
59	-36			10793	7608	chl - carb - qtz schist		<5	
60	-37			10790	7535	chl, tp carb atz schist		5	

TRAVERSE NUMBER

52 E 9

PROJECT Fort Knox - Code Twp GEOLOGIST(S) Arnould Burton

AREA Kenova Mining Division DATE July-August 85

SAMPLE NUMBER	FIELD Number	SAMPLE TYPE	SAMPLE LENGTH, WIDTH, AREA			U.T.M.	Easting	Northing	SAMPLE DESCRIPTION			RESULTS (ppm. / % / oz. p. ton)		
			ft.	SA	Stream Silt, Soil				GRAB	Rock type, lithology, character of soil, stream silt, etc.	Formation	Au (ppb)		
RX071761	ARC-8538						10300	7235	Q12-Carb-chl-schist			5		
62	-39						10300	7235	"			5		
63	-41						10590	7245	(Q12) unns in above			40		
64	-43						10605	7235	chl-Q12 - C11v schist - locally 3.4% py			75		
65	-44						10500	7405	Poach Gabbro			<5		
66	-46						10505	7185	Banded Qtz-chl-turb schist - relic pyroclastic trile			55		
67	-47						10500	7275	Q12 - sericitic chl-carb-schist - 3.5% Q12			5		
68	-48						10400	7195	Qtz-Fe carb-sericitic chl-schist			<5		
69	-49						10405	7200	As above Relic tuff tetr			<5		
RX073355	-69						10445	7203	85-95% Qtz-5-15% Fe carb TR-1% Py CD			5		
56	-70						1045	7505	"	"	"	10		
57	-71						1045	7505	"	"	"	<5		
58	-72						1045	7505	"	"	"	10		
59	-73					↓	1045	7505	"	"	"	<5		
60	-74	Chip	50cm	11085	7205									
61	-75	Chip	25cm	11085	7205	dark green chlorite cacarb schist						<5		
62	-76	Chip	150cm	11085	7205	Strongly foliated Fe carb chal.?						<5		
63	-77	Chip	120cm	11055	7220	Qtz-chal. TR Py CP						<5		
64	-78	Chip	150cm	11055	7220	highly foliated cacarb chl schist						15		
65	-79	GRAB		11055	7220	"						10		
66	-80			10745	7295	Fissile chl-rock Schist 3cm Q.V.						10		
67	-81			10745	7275	Grey green chlorite-Fe carb schist						3900		
68	-82			10755	7295	Felsic fachs schist - Qtz stockwork						<5		

TRAVERSE NUMBER  
N.T.S. 52 E 9

PROJECT Fort Knox - Code Town GEOLOGIST(S) Arnould Isurton  
AREA Kenora Mining Division DATE July-August 85

SAMPLE NUMBER	SAMPLE TYPE	SAMPLE LENGTH, WIDTH, AREA			Easting	Northing	SAMPLE DESCRIPTION		RESULTS (ppm. / % / oz. p. on)	
		F.M.	SX	Grab, Chip, Channel Soil			Formation Mineralization, etc.	Au (ppb)		
RX075066	GRAB	685-01			109730	7300	chl - Qtz - Fe Calc Schist TR Py	5		
67	GRAB	685-02	V		10742	7360	chl - Qtz - Fe Calc Schist TR Py	20		
68	CHIPS	685-03		30cm	10730	7270	chl - Py - Fe Calc zone 5% Py	4170		
69	GRAB	685-04			10730	7370	Siliceous - sheared fragmental 5-7% Py	7860		
70	GRAB	685-05			10730	7370	Qtz looks cherty Fe carb - chl schistose			
71	GRAB	685-06	GR#13		10730	7370	Limonitic zone - Tk pyrubes - abduct's	945		
72	GRAB	685-01			10973	7275	chl Schist 5% Qtz carb TR Py	1420		
73	CHIPS	685-02		5cm	10975	7365	Qtz rich zone in base TR - 3% Py	10		
74	GRAB	685-03			10718	7260	chl - Fe carb Schist 1% Py sheared	15		
75	GRAB	685-01			11005	7350	Sericite Qtz Fe carb Schist - sheared felsic volc	30		
76	GRAB	685-02	Cn. D	7cm	10975	7265	Qtz vein - Block to grey TR Py	<5		
77	GRAB	685-03			10975	7365	chl - Fe carb schist 2% Py " to feliciton	5		
78	GRAB	685-04			10750	7375	chl - Fe carb Qtz Schist - 1-3% Py	70		
79	GRAB	685-05			10750	7375	Qtz - Fe carb chl schist 2-3cm Qtz bands - 2-3% Py very rusty	3460		

TRAVERSE NUMBER / 52 E 9

PROJECT — Fort Knox - Cade Twp.

GEOLOGIST(S) Bill Singey  
DATE July - August 1955

AREA — Kenai Mining District

SAMPLE NUMBER	SAMPLE TYPE			SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and / or UT.M.	Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. 1% / oz. ion)		
	Field Number	SX Stream Silt, Soil	Grab, Chip, Channel				A <sub>4</sub> (ppb)	A <sub>4</sub> (ppb)	A <sub>4</sub> (ppb)
R0111 41	B5C-B5-04	GRAB		11510 7917	Cals - chl schist	<5			
43	-05			11505 7960	Dense gabbro	<5			
43	-06			11500 8980	" "	<5			
44	-07			11505 8125	Foliated mafic volc mod ca chalnizd	5			
45	-09			11400 7826	As above	<5			
46	-10			11200 8128	As above	5			
47	-11			11206 8090	Chloritic volcanic	<5			
48	-13			11200 7870	Chloritic gabbr	<5			
49	-16			11015 8110	Int volc	<5			
50	-17			10800 8383	Int volc	<5			
51	-18			10805 8276	Mafic volc	<5			
51	-19			10808 8303	Porphy gabbro	<5			
53	-20			10800 8135	Mafic volc	<5			
R0111 770	-21			10600 7850	Calb - chl schist	<5			
71	-22			10598 7880	Int to Mafic volc	<5			
72	-23			10600 7936	Porphy gabbro	5			
73	-24			10605 7948	Int to Mafic volc	<5			
74	-25			10600 7951	Gabbro	<5			
75	-26			10595 7970	"	<5			
76	-28			10600 8315	"	<5			
77	-29			10700 7845	Mafic volcanic	<5			
78	-30			10702 7800	" "	<5			
79	-31			10690 7606	Gabbro	5			
80	-32			10695 7048	Wkly foliated leucogabbro	<5			
81	-33			10702 7627	Chl gabbro	5			
82	-36			10675 7450	Gabbro	<5			
83	-38			10700 7385	Calb - chl schist	<5			
84	-39			115693 7233	" "	<5			
85	-40			10700 7137	Mafic to int volc	15			
86	-41			10737 7145	" "	5			
87	-42			10700 7135	Much foliated int to mafic volc	<5			
88	-43			10400 7640	Calb chl schist to p	<5			
89	-45			10400 7755	Mass bimky foliat id mafic volc	<5			

TRAVERSE NUMBER  
N.T.S. 52 E 9

PROJECT Fair Knob - Code Two  
AREA Kenova Mining District

GEOLOGIST(S) Bill S. Eggy  
DATE July - August 1975

SAMPLE NUMBER	SAMPLE TYPE			SAMPLE LENGTH, WIDTH, AREA	LATITUDE, LONGITUDE and / or U.T.M.	SAMPLE DESCRIPTION Rock type, lithology, character of soil, stream silt, etc. Formation Mineralization, etc.	RESULTS (ppm. / % / oz. ton)	
	Field Number	SX Stream Silt, Soil	Grab, Chip, Channel				Au (ppb)	Ag (ppb)
KY071140	8548		GRAB		10410 N 154	WILLY to strongly foliated met. & volc	<5	
91	-49				104106 8190	met. fol. met. volc	<5	
92	-51				10410 83886	gabbro	<5	
93	-53				10306 82320	WILLY foliated gabbro	<5	
94	-54				10300 8197	porphy. gabbro	<5	
95	-57				10395 7821	met. fol. met. fol. met. volc	<5	
96	-58				10300 7750	" "	<5	
97	-59				10315 7716	" "	<5	
98	-64				10200 7740	" "	<5	

GEOPHYSICAL REPORT

FORT KNOX RESOURCES, SOUTH BLOCK

CODE TOWNSHIP, M-1962, ONTARIO

KENORA MINING DIVISION

NTS: 52-E-9

GENERAL

This report is to accompany the assessment report on the geological survey over the Fort Knox Resources property, South Group in Code Township, Ontario. Except that in addition, claim no. 85151 was included in the magnetic and VLF coverage. The geophysical survey was performed to explore the area for mineral deposits and to help in the interpretation of the geological setting of the area. The magnetic survey will outline rock units according to their magnetic properties that may be specific to certain types. The VLF survey was carried out to find electromagnetic conductors that can be caused by materials of low resistivity such as structural features. The horizontal loop survey was performed to differentiate from those conductors caused by sources such as sulphides and graphite. All pertinent questions such as access, property, grid and location are described in the front of the geological report.

INSTRUMENTS

1. Magnetometers

A G-816 proton precision magnetometer built by Exploranium-Geometrics was used to measure the total field of the earth's magnetic field. The specifications of the instrument are attached to this report.

2. VLF-EM Receiver

A RADEM - VLF receiver built by Crone Geophysics of Toronto was used. This receiver measures different components of the electromagnetic field transmitted by powerful low radio frequency transmitters operated by the U.S. Navy. For this survey the tilt angle and the quadrature component of the VLF field were measured. Specifications are attached to the back of this report.

3. Horizontal Loop System

The MaxMin II horizontal loop electromagnetic system was used manufactured by Apex Parametrics Ltd. of Toronto. This system can operate on five different frequencies and measures the in-phase and the out-of-phase component of the electromagnetic field. Specifications of the instrument are attached.

## SURVEY PROCEDURES

### 1. Magnetic

Magnetic base stations were established along the baseline on the intersections with the cross lines by repeated reading of the magnetic intensity. The field readings taken along the cross lines were tied into these base stations and corrected for diurnal drift. The field readings were taken at 12.5 metre intervals along these cross lines. The results were then plotted on maps of 1:2500 scale and the magnetic values were contoured with an interval of 100 gammas.

### 2. VLF-EM

The tilt angle and quadrature (out-of-phase) readings were taken at 12.5 metre station intervals. The electromagnetic field used was transmitted from station NSS located at Annapolis, Maryland, at a frequency of 21.4 KHz. The readings were taken always by the operator facing in the direction of the transmitter location. The results were plotted on maps at a scale of 1:2500. The tilt angle values were plotted also in profile form using the following standards: a "right dip" was plotted as a positive value on this side of the profile line which is towards the transmitter and the "left dip" on this side of the line which is away from the transmitter.

### 3. Horizontal Loop EM

The in-phase and the out-of-phase components of the electromagnetic field were measured for three frequencies (888, 1777 and 3555 Hz) at 25 metre intervals and with a coil separation of 150 metres. The changes in the topographic slope were measured with a Sunnto clinometer Model PM-5/3PC. This allowed for application of corrections to compensate for the shortening of the distance between receiver and transmitter caused by the cable paralleling the ground surface. All data was entered and stored on computer diskettes. Printouts of the numerical results and a printed profile of all of the measured frequencies are contained in pockets in the back of this report. Also included is a location map showing the extent of the horizontal loop survey.

## RESULTS

The magnetic survey outlines several narrow E-W striking anomalies with amplitudes in the range of 2000 gammas. They are most likely caused by seams of iron formation in volcanics or magnetic basalts. There are numerous VLF conductors on the property. Some of these are from bedrock conductors and some only from superficial or poorly conductive structural features. The horizontal loop survey located three conductors of weak to medium strength. These conductors may indicate the presence of sulfides and should be further investigated by geological mapping or explained by diamond drilling.

The surveys were performed during June and July of 1985.

STATISTICS

Line cutting	13	line km
Base line established	1.6	line km
Magnetometer Readings taken at 12.5 m intervals	1056	
VLF-EM Readings taken at 12.5 m intervals	1056	
HL-EM Readings taken at 25 m intervals	514	

EKB/cb

*J.W. Sorenson*

**geoMetrics**



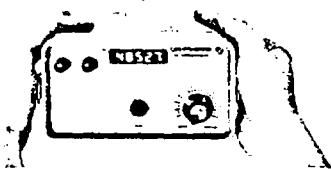
**MODEL G 816  
PORTABLE PROTON MAGNETOMETER**

**914 Industrial Avenue  
Palo Alto, California 94303  
(415) 321-7610**



**"Hands-free" Back Pack Sensor**

Based upon the principle of nuclear precession (proton) the G-816 offers absolute drift-free measurements of the total field directly in gammas. (The proton precession method is the officially recognized standard for measurement of the earth's magnetic field.) Operation is worldwide with one gamma sensitivity and repeatability maintained throughout the range. There is no temperature drift, no set-up or leveling required, and no adjustment for orientation, field polarity, or arbitrary reference levels. Operation is very simple with no prior training required. Only 6 seconds are required to obtain a measurement which is always correct to one gamma, regardless of operator experience. Only the Proton Magnetometer offers such repeatability—an important consideration even for 10 gamma survey resolution.



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The Model G-816 comes complete, ready for portable field operation and consists of:

- 1 Electronics console with internally mounted and easily replaced "D" cell battery pack
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- 3 Adjustable carrying harness
- 4 8 foot collapsible staff
- 5 Instruction manual, complete set of spare batteries, reusable shipping container

All magnetometers and parts are covered by a one year warranty beginning with the date of receipt but not to exceed fifteen months from the shipping date.

**geoMetrics**

704 HUNTER  
2115 1/2 Avenue  
75 P.O. Box  
Vancouver  
TEL 266-3840

OIL FIELDS HQ AB  
8179  
8101 1/2 Avenue S.E.  
Calgary, Alberta  
TEL 404-976-2110

814 INDUSTRIAL AVENUE  
PALO ALTO, CALIFORNIA 94303  
U.S.A.  
INDUSTRIAL DIVISION  
CABLE: GEOMETRICS  
TELE: 345525

CONSOLIDATED GEOMETRICS PTY LTD  
B12, 10th Floor, Westpac Plaza  
West Circular Quay, Sydney  
TEL 697-5811

EXPLORANIUM DIVISION • GEOMETRICS SERVICES (CANADA) LTD.  
48 ALNESS STREET, DOWNTOWN (TORONTO), ONTARIO CANADA • TELEPHONE (416) 938-0650  
AIRBORNE GEOPHYSICS DIVISION • GEOMETRICS INTERNATIONAL CORP.  
11A FRED STREET, MILSON'S POINT, SYDNEY NSW 2001 • TELEPHONE 870-0942

INDUSTRIAL ELECTRONICS INC  
814 Industrial Ave  
Palo Alto, Calif. 94303  
Report of U.S. Patent Office  
Report of Canadian Patent Office  
Report of Japanese Patent Office  
TEL 404-976-2110

MARIBOR LTD  
12, 10th Floor, Westpac Plaza  
West Circular Quay, Sydney  
TEL (03) 687-8151

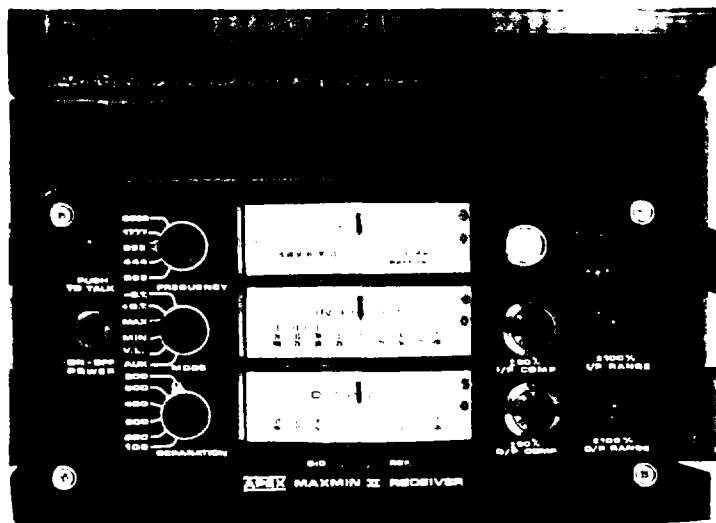
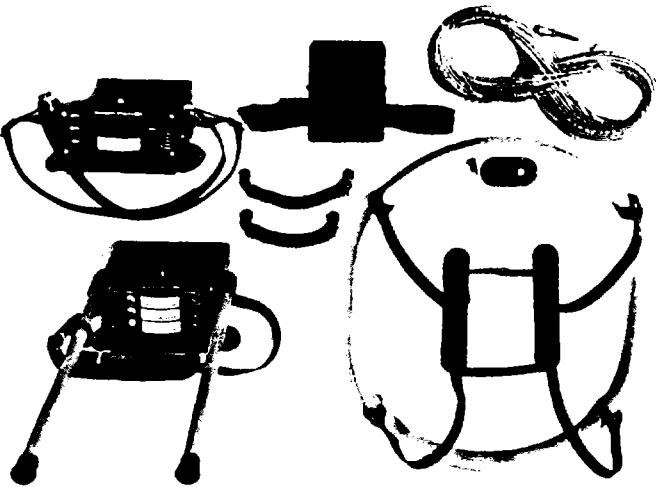
W.W. GEOMETRICS PTY LTD  
PO BOX 724  
SYDNEY NSW 2001  
TEL 870-0942  
FAX 870-0942

# APEX

# MAXMIN II PORTABLE EM

- Five frequencies: 222, 444, 888, 1777 and 3555 Hz.
- Maximum coupled (horizontal-loop) operation with reference cable.
- Minimum coupled operation with reference cable.
- Vertical-loop operation without reference cable.
- Coil separations: 25, 50, 100, 150, 200 and 250 m (with cable) or 100, 200, 300, 400, 600 and 800 ft.
- Reliable data from depths of up to 180m (600 ft).
- Built-in voice communication circuitry with cable.
- Tilt meters to control coil orientation.





## SPECIFICATIONS :

**Frequencies:** 222, 444, 888, 1777 and 3555 Hz.

**Modes of Operation:** MAX: Transmitter coil plane and receiver coil plane horizontal (Max-coupled; Horizontal-loop mode). Used with reference cable.  
MIN: Transmitter coil plane horizontal and receiver coil plane vertical (Min-coupled mode). Used with reference cable.  
V.L.: Transmitter coil plane vertical and receiver coil plane horizontal (Vertical-loop mode). Used without reference cable, in parallel lines.

**Coil Separations:** 25, 50, 100, 150, 200 & 250m (MMII) or 100, 200, 300, 400, 600 and 800 ft. (MMIIF).  
Coil separations in V.L. mode not restricted to fixed values.

**Parameters Read:** - In-Phase and Quadrature components of the secondary field in MAX and MIN modes.  
- Tilt-angle of the total field in V.L. mode.

**Readouts:** - Automatic, direct readout on 90mm (3.5") edgewise meters in MAX and MIN modes. No nulling or compensation necessary.  
- Tilt angle and null in 90mm edgewise meters in V.L. mode.

**Scale Ranges:** In-Phase:  $\pm 20\%$ ,  $\pm 100\%$  by push-button switch.  
Quadrature:  $\pm 20\%$ ,  $\pm 100\%$  by push-button switch.  
Tilt:  $\pm 75\%$  slope.  
Null (V.L.): Sensitivity adjustable by separation switch.

**Readability:** In-Phase and Quadrature: 0.5 %.  
Tilt: 1%.

**Repeatability:**

$\pm 0.5\%$  to  $\pm 1\%$  normally, depending on conditions, frequencies and coil separation used.

**Transmitter Output:**

- 222Hz : 175 Atm<sup>2</sup>
- 444Hz : 160 Atm<sup>2</sup>
- 888Hz : 100 Atm<sup>2</sup>
- 1777Hz : 60 Atm<sup>2</sup>
- 3555Hz : 30 Atm<sup>2</sup>

**Receiver Batteries:** 9V trans radio type batteries (4).  
Life: approx. 35 hrs. continuous duty (alkaline, 0.5 Ah), less in cold weather.

**Transmitter Batteries:**

12V 7.5Ah Gel-Cell rechargeable batteries ( $2 \times 6V$  in series).

**Reference Cable:**

Light weight 2-conductor teflon cable for minimum friction. Unshielded. All reference cables optional at extra cost. Please specify.

**Voice Link:**

Built-in intercom system for voice communication between receiver and transmitter operators in MAX and MIN modes, via reference cable.

**Indicator Lights:**

Built-in signal and reference warning lights to indicate erroneous readings.

**Temperature Range:** -40°C to +60°C (-40°F to +140°F).

**Receiver Weight:** 6kg (13 lbs.)

**Transmitter Weight:** 13kg (29 lbs.)

**Shipping Weight:** Typically 60kg (135 lbs.), depending on quantities of reference cable and batteries included. Shipped in two field/shipping cases.

Specifications subject to change without notification.

# APEX

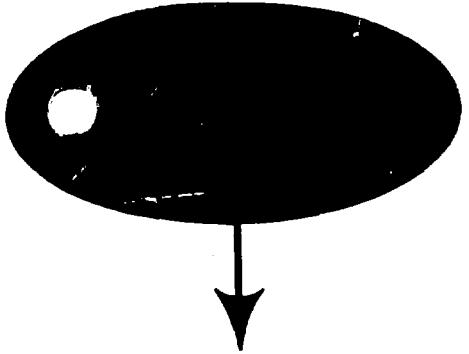
# PARAMETRICS LIMITED

200 STEELCASE RD. E., MARKHAM, ONT., CANADA, L3R 1G2

Phone: (416) 495-4812  
852-5875

Cables: APEXPARA TORONTO

Telex: 06-966773 NORDVIK TOR



# CRONE GEOPHYSICS LIMITED

3607 WOLFEDALE ROAD,  
MISSISSAUGA, ONTARIO,  
CANADA,  
L5C 1V8

Phone: (416) 270-0096

Cable: CRONGEO, TORONTO



This is a rugged, simple to operate, ONE MAN EM unit. It can be used without line cutting and is thus ideally suited for GROUND LOCATION OF AIRBORNE CONDUCTORS and the CHECKING OUT OF MINERAL SHOWINGS. This instrument utilizes higher than normal EM frequencies and is capable of detecting DISSEMINATED SULPHIDE DEPOSITS and SMALL SULPHIDE BODIES. It accurately isolates BANDED CONDUCTORS and operates through areas of HIGH HYDRO NOISE. The method is capable of deep penetration but due to the high frequency used its penetration is limited in areas of clay and conductive overburden.

The DIP ANGLE measurement detects a conductor from a considerable distance and is used primarily for locating conductors. The FIELD STRENGTH measurement is used to define the shape and attitude of the conductor.

# SPECIFICATIONS

**SOURCE OF PRIMARY FIELD:** VLF Communication Stations 12 to 24K hz

**NUMBER OF STATIONS:** 7 switch selectable

**STATIONS AVAILABLE:** The seven stations may be selected from:

Code	Station & Location	Frequency	
CM	Cutler, Maine .....	.17.8 KHz	24.0 KHz
SW	Seattle, Washington .....	.18.6 KHz	24.8 KHz
AM	Annapolis, Maryland .....	.21.4 KHz	
H	Lauualei, Hawaii .....	.23.4 KHz	
BOF	Bordeaux, France .....	.15.1 KHz	
E	Rugby, England .....	.16.0 KHz	
MS	Gorki, Russia .....	.17.1 KHz	
OD	Odessa (Black Sea) .....	.15.6 KHz	
NC	Australia, N.W.C. .....	.22.3 KHz	
YJ	Yosamai, Japan .....	.17.4 KHz	
HN	Hegaland, Norway .....	.17.6 KHz	
TJ	Tokyo, Japan .....	.20.0 KHz	
BA	Buenos Aires .....	.23.6 KHz	

**CHECK THAT STATION IS TRANSMITTING:** Audible signal from speaker.

## PARAMETERS MEASURED:

(1) DIP ANGLE in degrees of the magnetic field component, from the horizontal, of the major axis of the polarization ellipse. Detected by a minimum on the field strength meter and read from an inclinometer with a range of  $\pm 90^\circ$  and an accuracy of  $\pm 1/2^\circ$ .

(2) FIELD STRENGTH (total or horizontal) of the magnetic component of the VLF field, (amplitude of the major axis of the polarization ellipse). Measured as a percent of normal field strength established at a base station. Accuracy  $\pm 2\%$  dependent on signal. Meter has two ranges: 0 — 300% and 0 — 600%.

(3) OUT-OF-PHASE component of the magnetic field, perpendicular in direction to the resultant field, as a percent of normal field strength, (amplitude of the minor axis of the polarization ellipse). This is the minimum reading of the Field Strength meter obtained when measuring the dip angle. Accuracy  $\pm 2\%$ .

**OPERATING TEMPERATURE RANGE:** -30°C (-20°F) to +50°C (120°F)

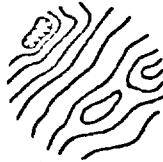
**DIMENSIONS AND WEIGHT:** 9 x 19 x 27cm — 2.7Kg (6 lb)

**SHIPPING:** Instrument with foam lined wooden case,  
shipping wt. — 6.0Kg (13 lb)

**BATTERIES:** 2 of 9 volt — Eveready 216  
Average life expectancy — 20 hours for continuous operation

UNITS AVAILABLE ON A RENTAL OR PURCHASE BASIS.  
CONTRACT SERVICES AVAILABLE FOR FIELD SURVEYS.

**geoMetrics**



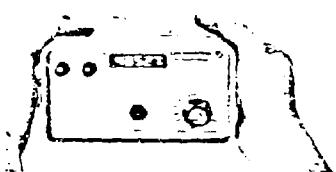
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- 3 Adjustable carrying harness
- 4 6 foot collapsible staff
- 5 Instruction manual, complete set of spare batteries, reusable shipping container

All magnetometers and parts are covered by a one year warranty beginning with the date of receipt but not to exceed fifteen months from the shipping date.

**geoMetrics**

GENERAL  
TELE 2-2000  
FAX 2-2040

GEOMARINE  
TELE 2-2000  
FAX 2-2040

814 INDUSTRIAL AVENUE  
PALO ALTO, CALIFORNIA 94301  
TELE 415/362-0200  
FAX 415/362-0201

EXPLORANIUM DIVISION • GEOMETRICS SERVICES (CANADA) LTD.  
414 NASSAU STREET, DOWNTOWN TORONTO, ONTARIO, CANADA M5J 1A4  
TELEPHONE 416/595-5444  
AIRBORNE GEOPHYSICS DIVISION • GEOMETRICS INTERNATIONAL CORP.  
141 FREDERIC ST., MONTREAL, QUEBEC H3C 1V6 CANADA  
TELEPHONE 514/875-9444

PROTOTYPE FIELD DIVISION  
TELE 2-2000  
FAX 2-2040

MARINE DIVISION  
TELE 2-2000  
FAX 2-2040

MINING DIVISION  
TELE 2-2000  
FAX 2-2040

## SPECIFICATIONS

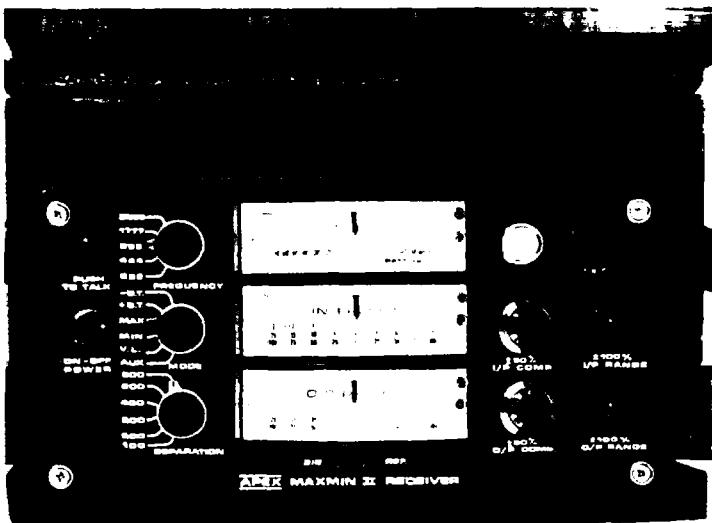
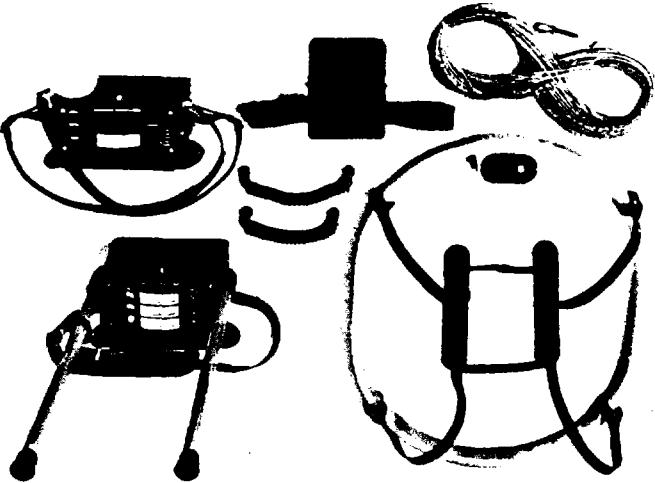
Sensitivity:	±1 gamma throughout range																
Range:	20,000 to 50,000 gammas (worldwide)																
Tuning:	Multi-position switch w/ signal amplitude indicator and display																
Gradient Tolerance:	Exceeds 150 gammas/k																
Sampling Rate:	Manual push-button, one reading each 6 seconds																
Output:	5 digit numeric display with readout directly in gammas																
Power Requirements:	Twelve self-contained 1.5 v "D" cell universal, available flashlight type batteries. Charge state or replacement sign off by flashing indicator light on display																
Battery Type	Number of Readings																
Auxiliary	over	10,000															
Fresh Am Zinc-Zinc	over	4,000															
Standard Flashlight	over	1,500															
NOTE: Battery life decreases with temperature																	
Temperature Range:	Console and Sensor	-40° to +85°C															
	Battery Pack	0° to +50°C (limited use to -15°C, lower temperature operation—optional)															
Accuracy (Total Field):	±1 gamma through 0° to 50°C temperature range																
Sensor:	High signal/noise cancelling, interchangeable mounted on separate staff or attached to carrying harness																
Size:	Console: 9½ x 7 x 10½ inches (24 x 18 x 27 cm) Sensor: 4½ x 5 inches (11 x 13 cm) Staff: 1 inch diameter x 8 ft length (3 cm x 2.44 m)																
Weight:	<table border="0"> <thead> <tr> <th></th> <th>Lbs.</th> <th>Kgs.</th> </tr> </thead> <tbody> <tr> <td>Console (+batteries)</td> <td>5.5</td> <td>2.4</td> </tr> <tr> <td>Sensor &amp; signal cable</td> <td>4</td> <td>1.8</td> </tr> <tr> <td>Aluminum staff</td> <td>2</td> <td>0.9</td> </tr> <tr> <td><hr/></td> <td>11.5</td> <td>5.1</td> </tr> </tbody> </table>			Lbs.	Kgs.	Console (+batteries)	5.5	2.4	Sensor & signal cable	4	1.8	Aluminum staff	2	0.9	<hr/>	11.5	5.1
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# APEX

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**Readouts:**

- Automatic, direct readout on 90mm (3.5") edgewise meters in MAX and MIN modes. No nulling or compensation necessary.
- Tilt angle and null in 90mm edgewise meters in V.L. mode.

**Scale Ranges:**

In-Phase:	±20%, ±100% by push-button switch.
Quadrature:	±20%, ±100% by push-button switch.
Tilt:	±75% slope.
Null (V.L.):	Sensitivity adjustable by separation switch.

**Readability:** In-Phase and Quadrature: 0.5%.  
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**Repeatability:**

± 0.5% to ±1% normally, depending on conditions, frequencies and coil separation used.

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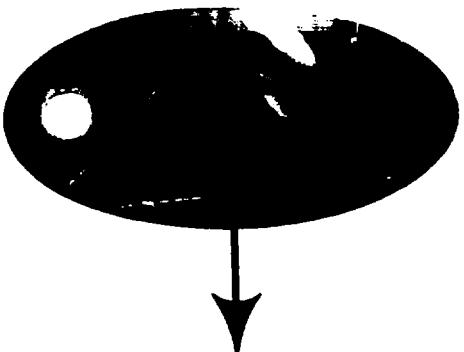
Specifications subject to change without notification.

**APEX PARAMETRICS LIMITED**  
200 STEELCASE RD. E., MARKHAM, ONT., CANADA, L3R 1G2

Phone: (416) 495-4812  
852-5875

Cables: APEX PARA TORONTO

Telex: 06-966773 NORDVIK TOR



# CRONE GEOPHYSICS LIMITED

3607 WOLFEDALE ROAD,  
MISSISSAUGA, ONTARIO,  
CANADA,  
L5C 1V8

Phone: (416) 270-0096

Cable: CRONGEO, TORONTO



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H	Lauulualei, Hawaii .....	23.4 KHz	
BOF	Bordeaux, France .....	15.1 KHz	
E	Rugby, England.....	16.0 KHz	
MS	Gorki, Russia.....	17.1 KHz	
OD	Odessa (Black Sea) .....	15.6 KHz	
NC	Australia, N.W.C. .....	22.3 KHz	
YJ	Yosamai, Japan.....	17.4 KHz	
HN	Hegaland, Norway .....	17.6 KHz	
TJ	Tokyo, Japan .....	20.0 KHz	
BA	Buenos Aires .....	23.6 KHz	

**CHECK THAT STATION IS TRANSMITTING:** Audible signal from speaker.

## PARAMETERS MEASURED:

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(3) OUT-OF-PHASE component of the magnetic field, perpendicular in direction to the resultant field, as a percent of normal field strnegth, (amplitude of the minor axis of the polarization ellipse). This is the minimum reading of the Field Strength meter obtained when measuring the dip angle. Accuracy  $\pm 2\%$ .

**OPERATING TEMPERATURE RANGE:** -30°C (-20°F) to +50°C (120°F)

**DIMENSIONS AND WEIGHT:** 9 x 19 x 27cm — 2.7Kg (6 lb)

**SHIPPING:** Instrument with foam lined wooden case,  
shipping wt. — 6.0Kg (13 lb)

**BATTERIES:** 2 of 9 volt — Eveready 216  
Average life expectancy — 20 hours for continuous operation

UNITS AVAILABLE ON A RENTAL OR PURCHASE BASIS.  
CONTRACT SERVICES AVAILABLE FOR FIELD SURVEYS.

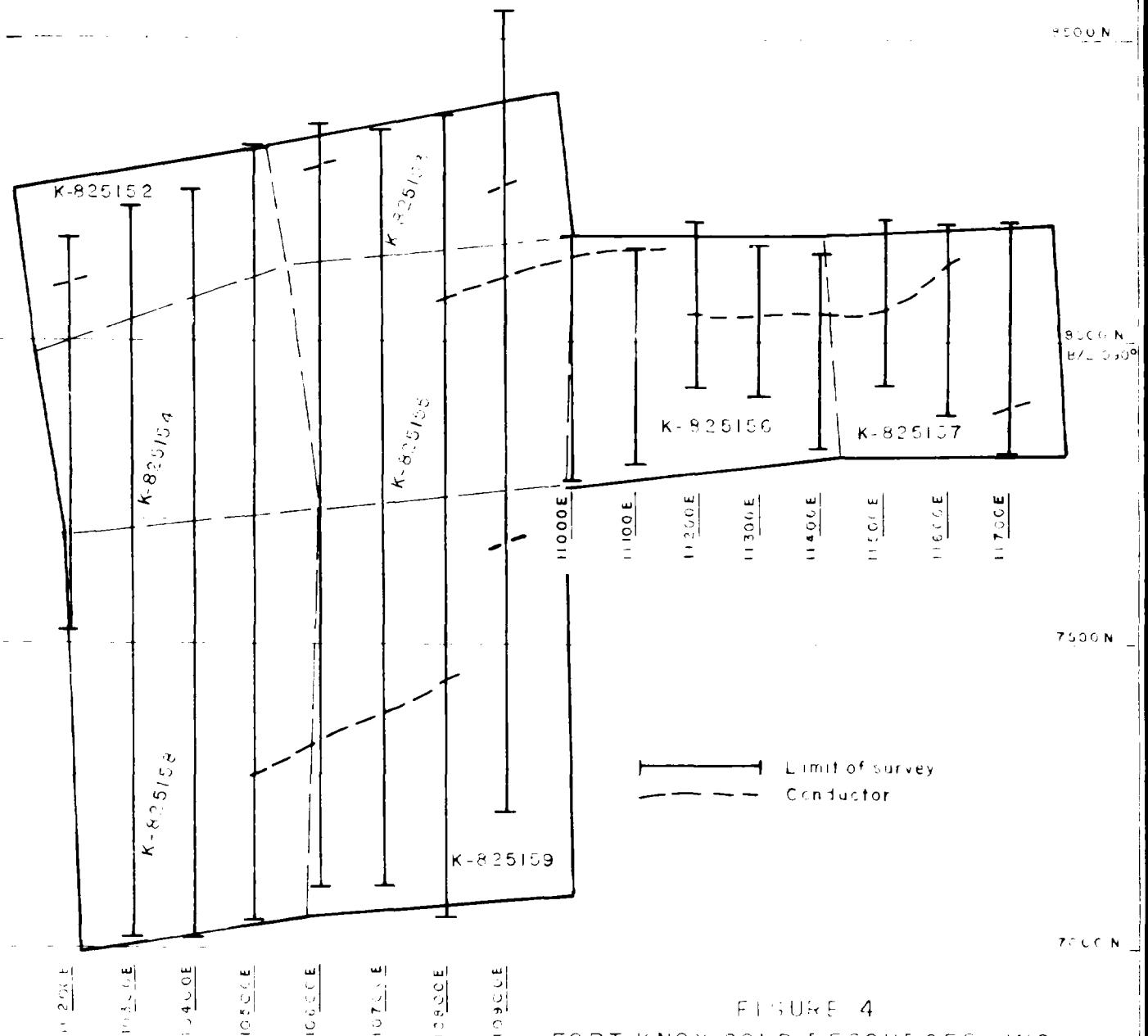


FIGURE 4  
FORT KNOX GOLD RESOURCES, INC.  
HORIZONTAL LOOP E.M. SURVEY  
CODE TOWNSHIP  
ONTARIO

1000 ft      500 m  
1000

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

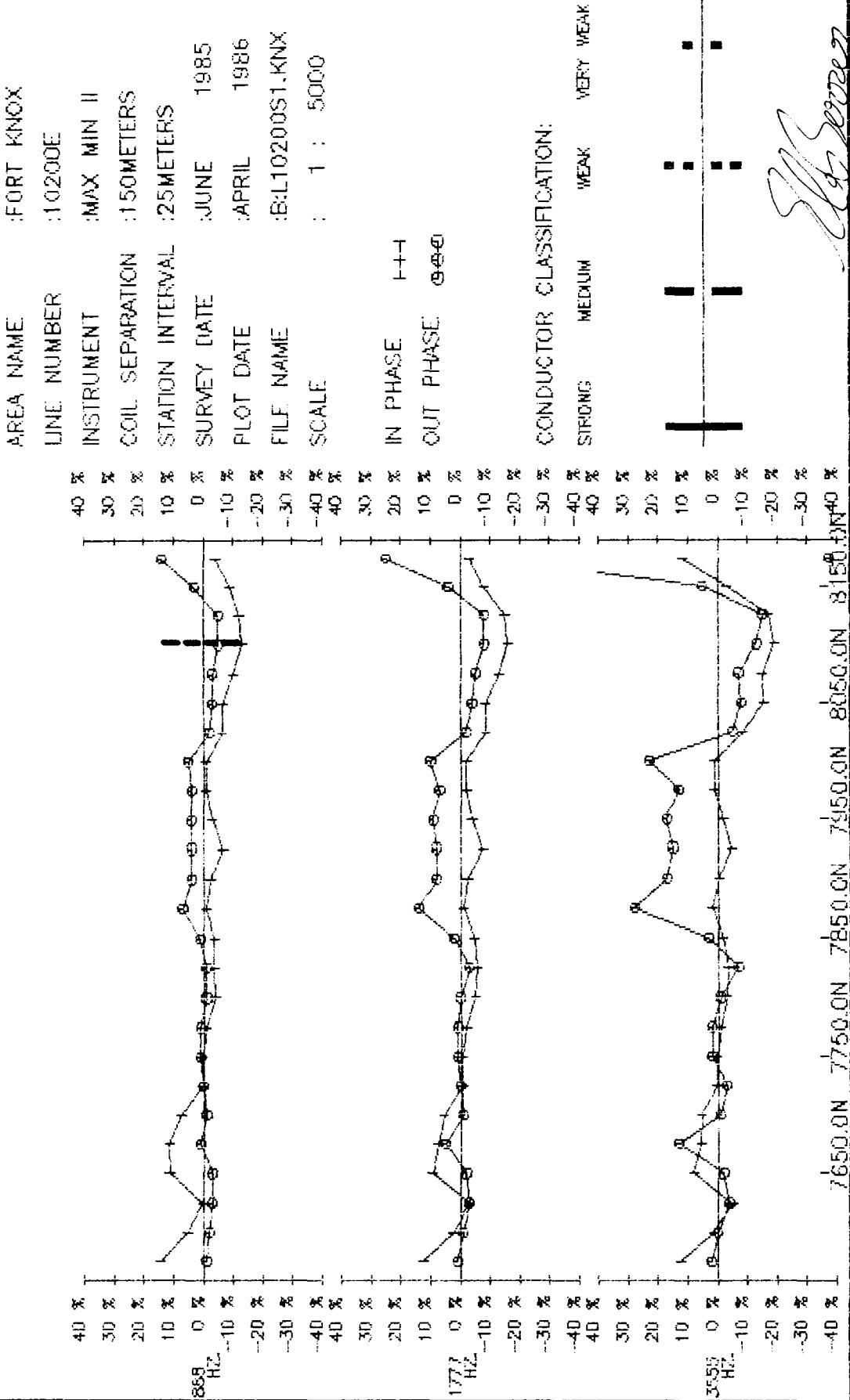
AREA NAME : FORT KNOX  
 LINE NUMBER : 10200E  
 INSTRUMENT : MAX MIN II  
 COIL SEPARATION : 150. METERS  
 STATION INTERVAL : 25. METERS  
 SURVEY DATE : JUNE 1985  
 PLOT DATE : APRIL 1986  
 FILE NAME : B:L10200S1.KNX  
 SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 888. HZ.

TX	RX	PLOT	COR IN	COR IN			COR IN			COR IN			COR	AV.
STATION	STATION	POINT	PHASE	OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	APP	GR.	
7500N	7650N	7575N	12.29	2.	11.	12.29	1.	11.	14.29	-1.	13.	1.29	9.33	
7525N	7675N	7600N	1.33	0.	1.	2.33	-1.	2.	5.33	-2.	5.	.33	4.67	
7550N	7700N	7625N	-4.97	-4.	-5.	-2.97	-3.	-3.	.03	-3.	0.	.03	1.33	
7575N	7725N	7650N	8.20	-2.	8.	9.20	-2.	9.	11.20	-3.	11.	.20	-3.67	
7600N	7750N	7675N	5.54	13.	5.	7.54	5.	7.	11.54	1.	11.	.54	-6.00	
7625N	7775N	7700N	5.43	-1.	4.	5.43	-1.	4.	7.43	-1.	6.	1.43	-9.83	
7650N	7800N	7725N	.36	-3.	-2.	-.64	0.	-3.	.36	0.	-2.	2.36	-12.67	
7675N	7825N	7750N	.37	2.	0.	-.63	1.	-1.	.37	1.	0.	.37	-5.00	
7700N	7850N	7775N	-.91	2.	-1.	-1.91	1.	-8.	-.91	1.	-1.	.09	-2.50	
7725N	7875N	7800N	-2.96	-1.	-3.	-4.96	0.	-5.	-3.96	-1.	-4.	.04	1.67	
7750N	7900N	7825N	-3.63	-7.	-4.	-5.63	-3.	-6.	-3.63	-1.	-4.	.37	5.00	
7775N	7925N	7850N	-1.70	3.	-2.	-4.70	2.	-5.	-3.70	1.	-4.	.30	4.50	
7800N	7950N	7875N	2.03	28.	1.	-.97	14.	-2.	-.97	7.	-2.	1.03	8.33	
7825N	7975N	7900N	-.30	17.	-1.	-2.30	8.	-3.	-2.30	4.	-3.	.70	6.83	
7850N	8000N	7925N	-4.57	15.	-5.	-7.57	8.	-8.	-6.57	4.	-7.	.43	5.33	
7875N	8025N	7950N	-2.00	17.	-2.	-4.00	9.	-4.	-3.00	4.	-3.	.00	-.50	
7900N	8050N	7975N	1.12	13.	1.	-1.88	7.	-2.	-.88	4.	-1.	.12	-2.83	
7925N	8075N	8000N	1.06	23.	1.	-1.94	10.	-2.	-.94	5.	-1.	.06	-2.00	
7950N	8100N	8025N	-8.49	-5.	-9.	-8.49	-2.	-9.	-6.49	-2.	-7.	.51	-5.83	
7975N	8125N	8050N	-15.57	-8.	-17.	-8.57	-4.	-10.	-6.57	-3.	-8.	1.43	-9.83	
8000N	8150N	8075N	-14.97	-7.	-16.	-12.97	-5.	-14.	-9.97	-3.	-11.	1.03	-8.33	
8025N	8175N	8100N	-18.96	-13.	-19.	-15.96	-8.	-16.	-12.96	-5.	-13.	.04	-1.67	
8050N	8200N	8125N	-17.00	-15.	-17.	-15.00	-8.	-15.	-12.00	-5.	-12.	.00	.00	
8075N	8225N	8150N	-3.00	5.	-3.	-8.00	4.	-8.	-9.00	3.	-9.	.00	.00	
8100N	8250N	8175N	12.00	43.	12.	-3.00	25.	-3.	-4.00	14.	-4.	.00	.50	

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

7/16/82



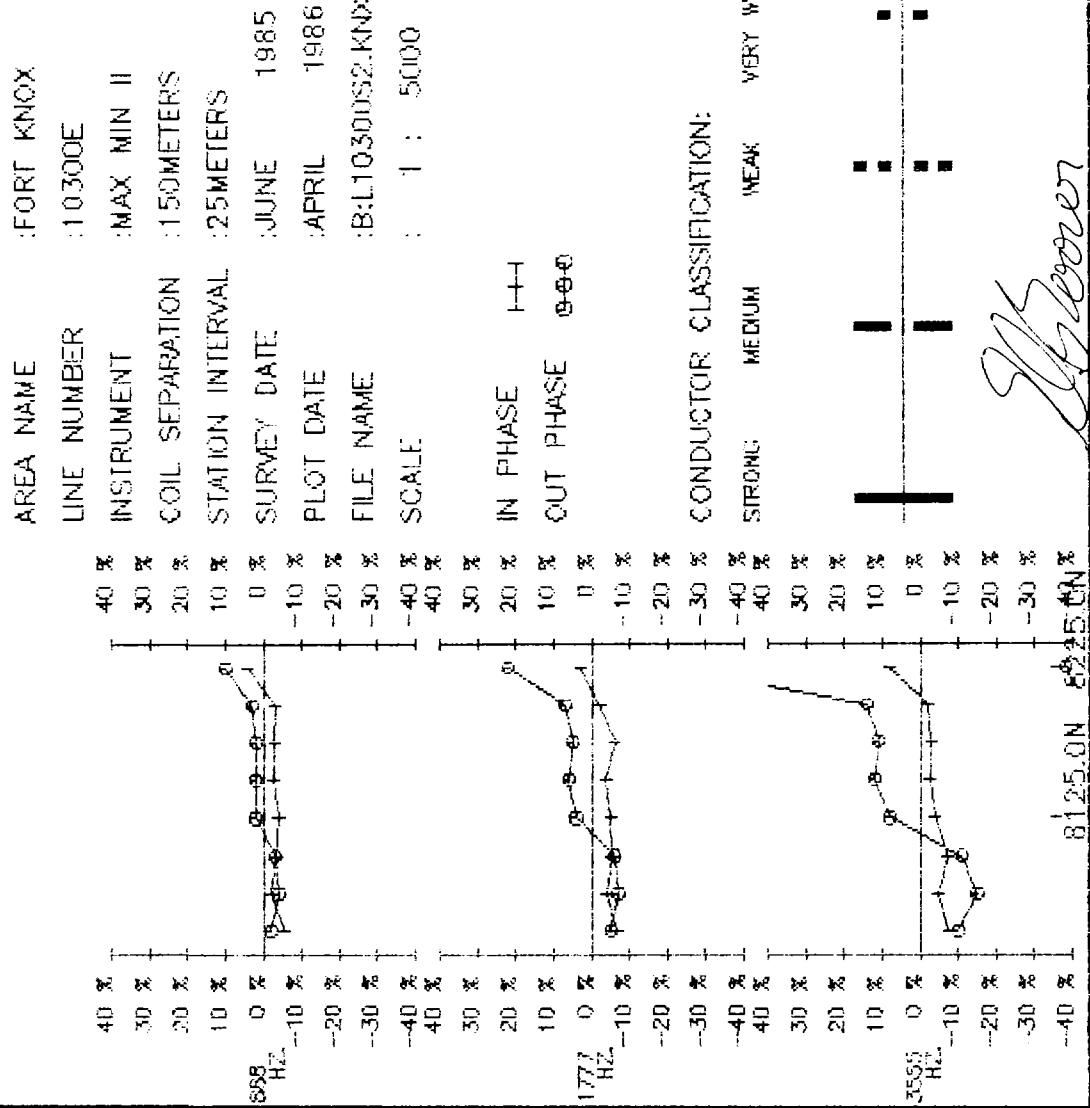
HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
LINE NUMBER : 10300E  
INSTRUMENT : MAX MIN II  
COIL SEPARATION : 150. METERS  
STATION INTERVAL : 25. METERS  
SURVEY DATE : JUNE 1985  
PLOT DATE : APRIL 1986  
FILE NAME : B:L10300S2.KNX  
SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 888. HZ.

TX STATION	RX STATION	PLOT POINT	COR IN PHASE	OUT	IN	COR IN PHASE	OUT	IN	COR IN PHASE	OUT	IN	COR APP	AV. GR.
8125N	7975N	8050N	-7.55	-10.	-8.	-6.55	-5.	-7.	-5.55	-2.	-6.	.45	-5.50
8150N	8000N	8075N	-4.80	-15.	-6.	-3.80	-7.	-5.	-1.80	-4.	-3.	1.20	-9.00
8175N	8025N	8100N	-7.27	-11.	-9.	-5.27	-6.	-7.	-3.27	-3.	-5.	1.73	-10.83
8200N	8050N	8125N	-3.97	8.	-5.	-4.97	4.	-6.	-3.97	2.	-5.	1.03	-8.33
8225N	8075N	8150N	-2.67	12.	-3.	-3.67	6.	-4.	-2.67	2.	-3.	.33	-4.67
8250N	8100N	8175N	-2.93	11.	-3.	-5.93	5.	-6.	-2.93	2.	-3.	.07	-2.17
8275N	8125N	8200N	-2.00	14.	-2.	-2.00	7.	-2.	-3.00	3.	-3.	.00	.17
8300N	8150N	8225N	8.12	42.	7.	3.12	22.	2.	4.12	10.	3.	1.12	8.67

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY



HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
 LINE NUMBER : 10300E  
 INSTRUMENT : MAX MIN II  
 COIL SEPARATION : 150. METERS  
 STATION INTERVAL : 25. METERS  
 SURVEY DATE : JUNE 1985  
 PLOT DATE : APRIL 1986  
 FILE NAME : B:L10300S1.KNX  
 SCALE 1 : 5000.0

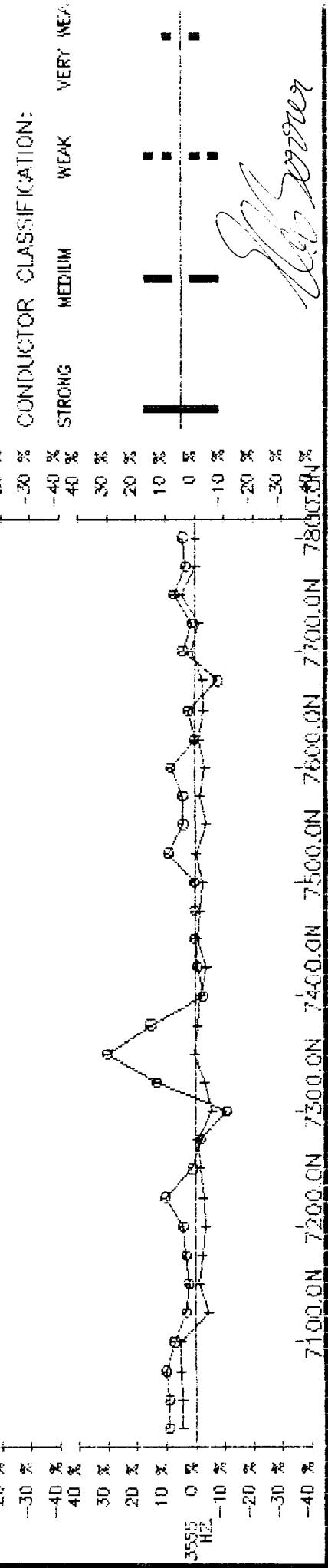
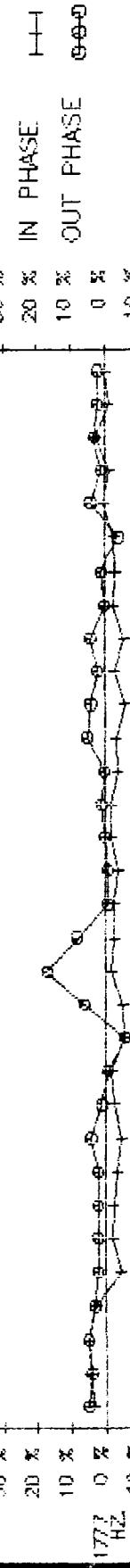
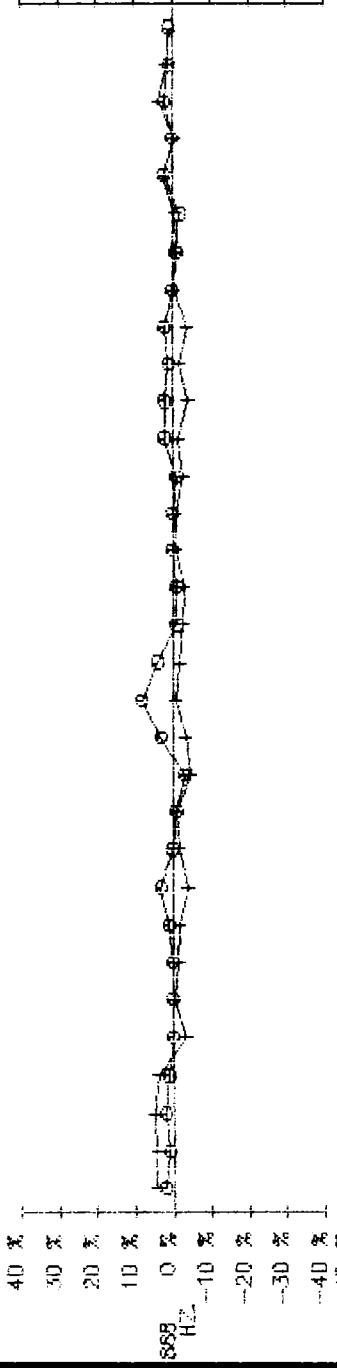
3555. HZ. 1777. HZ. 888. HZ.

TX	RX	PLOT	COR	IN	COR	IN	COR	IN	COR	AV.			
STATION	STATION	POINT	PHASE	OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	APP	GR.
7100N	6950N	7025N	4.36	9.	-2.	3.36	5.	-3.	4.36	2.	-2.	6.36	-21.17
7125N	6975N	7050N	4.42	9.	0.	4.42	4.	0.	4.42	1.	0.	4.42	-17.50
7150N	7000N	7075N	5.06	10.	3.	5.06	5.	3.	5.06	2.	3.	2.06	-11.83
7175N	7025N	7100N	4.70	7.	4.	2.70	3.	2.	3.70	1.	3.	.70	-6.83
7200N	7050N	7125N	-4.72	3.	-5.	-4.72	2.	-5.	-3.72	0.	-4.	.28	4.33
7225N	7075N	7150N	-1.52	2.	-2.	-2.52	2.	-3.	-.52	0.	-1.	.48	5.67
7250N	7100N	7175N	-2.63	3.	-3.	-2.53	2.	-3.	-1.63	0.	-2.	.37	5.00
7275N	7125N	7200N	-3.76	4.	-4.	-3.76	2.	-4.	-1.76	1.	-2.	.24	4.00
7300N	7150N	7225N	-2.99	10.	-3.	-4.99	4.	-5.	-3.99	3.	-4.	.01	.83
7325N	7175N	7250N	-1.76	1.	-3.	-2.76	1.	-3.	-1.76	0.	-2.	.24	-4.00
7350N	7200N	7275N	-.97	-2.	-1.	-1.97	-1.	-2.	-.97	-1.	-1.	.03	-1.50
7375N	7225N	7300N	-5.76	-11.	-6.	-5.76	-6.	-6.	-4.76	-3.	-5.	.24	-4.00
7400N	7250N	7325N	-3.43	13.	-4.	-5.43	5.	-5.	-3.43	3.	-4.	.57	-6.17
7425N	7275N	7350N	.07	30.	0.	-1.93	17.	-8.	-.93	8.	-1.	.07	-2.17
7450N	7300N	7375N	-.88	15.	-1.	-2.88	8.	-3.	-1.88	4.	-2.	.12	2.83
7475N	7325N	7400N	-1.92	-3.	-2.	-2.92	-1.	-3.	-2.92	-1.	-3.	.08	2.33
7500N	7350N	7425N	-3.98	-1.	-4.	-3.98	-1.	-4.	-2.98	-1.	-3.	.02	-1.17
7525N	7375N	7450N	-.96	0.	-1.	-1.96	0.	-2.	-.96	0.	-1.	.04	1.67
7550N	7400N	7475N	-1.96	0.	-2.	-1.96	1.	-2.	-.96	0.	-1.	.04	1.67
7575N	7425N	7500N	-2.89	0.	-3.	-3.89	0.	-4.	-2.89	-1.	-3.	.11	-2.67
7600N	7450N	7525N	-.46	9.	-1.	-3.46	5.	-4.	-1.46	2.	-2.	.54	-6.00
7625N	7475N	7550N	-3.97	4.	-4.	-5.97	4.	-6.	-3.97	2.	-4.	.03	-1.50
7650N	7500N	7575N	-1.99	4.	-2.	-2.99	2.	-3.	-1.99	1.	-2.	.01	-.67
7675N	7525N	7600N	-3.80	8.	-4.	-5.80	4.	-6.	-3.80	2.	-4.	.20	-3.67
7700N	7550N	7625N	-1.57	0.	-3.	-2.57	0.	-4.	-.57	0.	-2.	1.43	-9.83
7725N	7575N	7650N	-3.16	2.	-4.	-3.16	1.	-4.	-1.16	-1.	-2.	.84	-7.50
7750N	7600N	7675N	-2.82	-8.	-3.	-2.82	-4.	-3.	-.82	-2.	-1.	.18	-3.50
7775N	7625N	7700N	1.17	4.	1.	.17	4.	0.	2.17	2.	2.	.17	3.33
7800N	7650N	7725N	-1.67	1.	-2.	-1.67	1.	-2.	-.67	0.	-1.	.33	4.67
7825N	7675N	7750N	4.57	7.	4.	2.57	3.	2.	3.57	2.	3.	.57	6.17
7850N	7700N	7775N	-.33	3.	-3.	-1.33	2.	-4.	1.67	1.	-1.	2.67	13.50
7875N	7725N	7800N	-.27	4.	-2.	-.27	2.	-2.	.73	1.	-1.	1.73	10.83

J.9144

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME :FORT KNOX  
LINE NUMBER :10300E  
INSTRUMENT :MAX MIN II  
COIL SEPARATION :150METERS  
STATION INTERVAL :25METERS  
SURVEY DATE :JUNE 1985  
PLOT DATE :APRIL 1985  
FILE NAME :B:L10300CS1.KNX  
SCALE : 1 : 5000



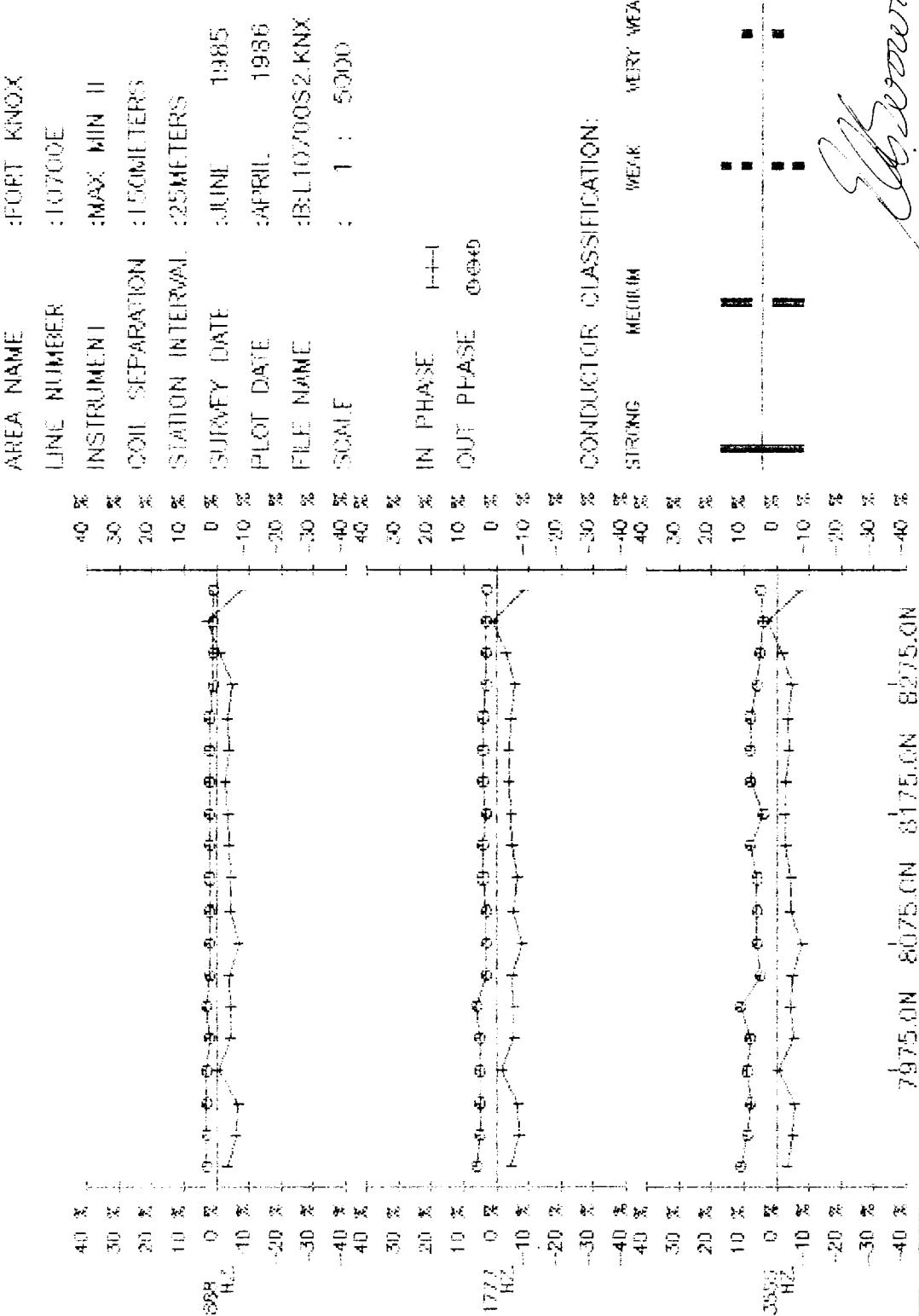
CONDUCTOR CLASSIFICATION:

STRONG MEDIUM WEAK VERY WEAK

*John Somer*

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

THURS



HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
LINE NUMBER : 10800E  
INSTRUMENT : MAG MIN II  
COIL SEPARATION : 150. METERS  
STATION INTERVAL : 25. METERS  
SURVEY DATE : JUNE 1985  
PLOT DATE : APRIL 1986  
FILE NAME : BIL10800S1.KNX  
SCALE 1 : 5000.0

3555. Hz. 1777. Hz. 388. Hz.

TX STATION	RX STATION	PLOT POINT	COR IN			COR IN			COR IN			COR IN		
			OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	APP
6975N	7125N	7050N	-7.30	3.	-9.	-8.30	3.	-9.	-7.20	1.	-8.	.80	7.33	
7000N	7150N	7075N	-8.01	3.	-9.	-9.01	3.	-10.	-7.01	1.	-8.	.39	8.17	
7025N	7175N	7100N	-10.34	7.	-11.	-11.34	4.	-12.	-9.34	2.	-10.	.56	6.67	
7050N	7200N	7125N	-8.34	7.	-9.	-9.34	4.	-10.	-8.34	2.	-9.	.66	6.67	
7075N	7225N	7150N	-8.55	6.	-9.	-9.65	3.	-10.	-7.65	2.	-8.	.35	4.83	
7100N	7250N	7175N	-8.72	9.	-9.	-8.72	5.	-9.	-7.72	3.	-8.	.08	4.73	
7125N	7275N	7200N	-8.83	9.	-9.	-9.83	5.	-10.	-7.83	3.	-8.	.17	3.33	
7150N	7300N	7225N	-7.98	6.	-8.	-8.88	4.	-9.	-7.88	2.	-8.	.12	2.83	
7175N	7325N	7250N	-6.74	3.	-7.	-7.74	2.	-8.	-7.74	2.	-8.	.26	4.17	
7200N	7350N	7275N	-4.34	3.	-5.	-5.34	3.	-6.	-5.34	2.	-6.	.66	6.67	
7225N	7375N	7300N	.07	7.	-8.	-1.93	5.	-5.	-1.93	3.	-5.	3.07	14.50	
7250N	7400N	7325N	1.48	5.	-1.	-.52	5.	-3.	-.52	3.	-3.	2.48	13.00	
7275N	7425N	7350N	4.06	5.	-2.	.06	4.	-3.	.06	2.	-2.	2.06	11.83	
7300N	7450N	7375N	-7.39	-3.	-10.	-5.99	-3.	-8.	-3.99	-3.	-5.	2.01	11.67	
7325N	7475N	7400N	-13.98	-2.	-15.	-10.98	-4.	-12.	-5.98	-4.	-7.	1.12	9.67	
7350N	7500N	7425N	-19.67	-3.	-20.	-15.67	-5.	-16.	-11.67	-5.	-12.	.33	4.67	
7375N	7525N	7450N	-21.87	-2.	-22.	-18.87	-3.	-18.	-13.87	-4.	-14.	.13	-3.00	
7400N	7550N	7475N	-19.98	-1.	-20.	-16.98	-3.	-17.	-12.98	-3.	-13.	.08	-1.00	
7425N	7575N	7500N	-16.96	2.	-17.	-15.96	0.	-15.	-12.96	-1.	-13.	.04	1.67	
7450N	7500N	7525N	-7.00	12.	-7.	-8.00	7.	-8.	-7.00	4.	-7.	.00	.00	
7475N	7625N	7550N	-5.98	13.	-6.	-6.98	8.	-7.	-5.98	4.	-6.	.02	1.00	
7500N	7650N	7575N	-6.00	17.	-6.	-7.00	9.	-7.	-7.00	5.	-7.	.00	.50	
7525N	7675N	7600N	-5.00	9.	-5.	-5.00	5.	-5.	-5.00	3.	-5.	.00	.33	
7550N	7700N	7625N	-6.00	5.	-6.	-5.00	3.	-5.	-5.00	2.	-5.	.00	.33	
7575N	7725N	7650N	-4.98	5.	-5.	-5.98	3.	-6.	-3.98	2.	-4.	.02	-1.00	
7600N	7750N	7675N	-5.99	4.	-6.	-6.99	3.	-7.	-5.99	1.	-6.	.01	.83	
7625N	7775N	7700N	-8.89	4.	-9.	-9.89	2.	-10.	-9.89	1.	-9.	.11	-2.67	
7650N	7800N	7725N	-9.80	2.	-10.	-9.80	2.	-10.	-8.80	1.	-9.	.20	-3.67	
7675N	7825N	7750N	-7.40	8.	-8.	-9.40	5.	-10.	-8.40	2.	-9.	.50	-6.33	
7700N	7850N	7775N	-9.93	5.	-10.	-8.93	4.	-9.	-8.93	2.	-9.	.07	-2.17	
7725N	7975N	7800N	-8.98	3.	-3.	-7.98	2.	-8.	-6.98	1.	-7.	.32	1.17	
7750N	7900N	7825N	-1.97	4.	-8.	-.57	3.	-1.	.03	1.	0.	.02	-1.50	
7775N	7925N	7850N	-1.97	3.	-3.	-2.97	1.	-3.	-.97	1.	-4.	.03	1.50	
7800N	7950N	7875N	-3.82	3.	-4.	-3.82	6.	-4.	-1.82	0.	-2.	.19	3.50	
7825N	7975N	7900N	-5.27	3.	-5.	-5.27	3.	-6.	-3.27	1.	-4.	.73	7.00	
7850N	8000N	7925N	-4.98	7.	-5.	-4.98	4.	-5.	-3.98	2.	-4.	.02	1.17	
7875N	8025N	7950N	-3.72	10.	-4.	-3.72	5.	-4.	-4.72	3.	-5.	.28	-4.23	
7900N	8050N	7975N	-2.52	13.	-3.	-4.52	7.	-5.	-4.52	4.	-5.	.48	-5.67	
7925N	8075N	8000N	-5.43	6.	-6.	-6.43	4.	-7.	-5.43	2.	-6.	.57	-6.17	
7950N	8100N	8125N	-13.37	9.	-14.	-11.37	-1.	-13.	-9.37	-2.	-10.	.53	-6.50	
7975N	8125N	8050N	-18.71	-2.	-20.	-15.71	-5.	-17.	-12.71	-4.	-14.	1.39	-9.33	
8000N	8150N	8075N	-23.33	-1.	-15.	-20.33	-3.	-22.	-15.33	-4.	-19.	1.07	-8.50	
8025N	8175N	8100N	-17.37	-4.	-19.	-14.37	-5.	-15.	-10.37	-4.	-11.	.53	-6.50	
8050N	8200N	8125N	-9.93	-2.	-10.	-9.93	-3.	-9.	-5.93	-3.	-6.	.17	3.33	
8075N	8225N	8150N	5.29	8.	4.	4.29	4.	5.	4.29	2.	3.	1.39	9.33	
8100N	8250N	8175N	13.73	10.	12.	10.73	7.	9.	9.73	4.	6.	1.73	10.67	
8125N	8275N	8200N	11.55	8.	9.	7.55	6.	5.	7.55	4.	5.	2.55	13.17	

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

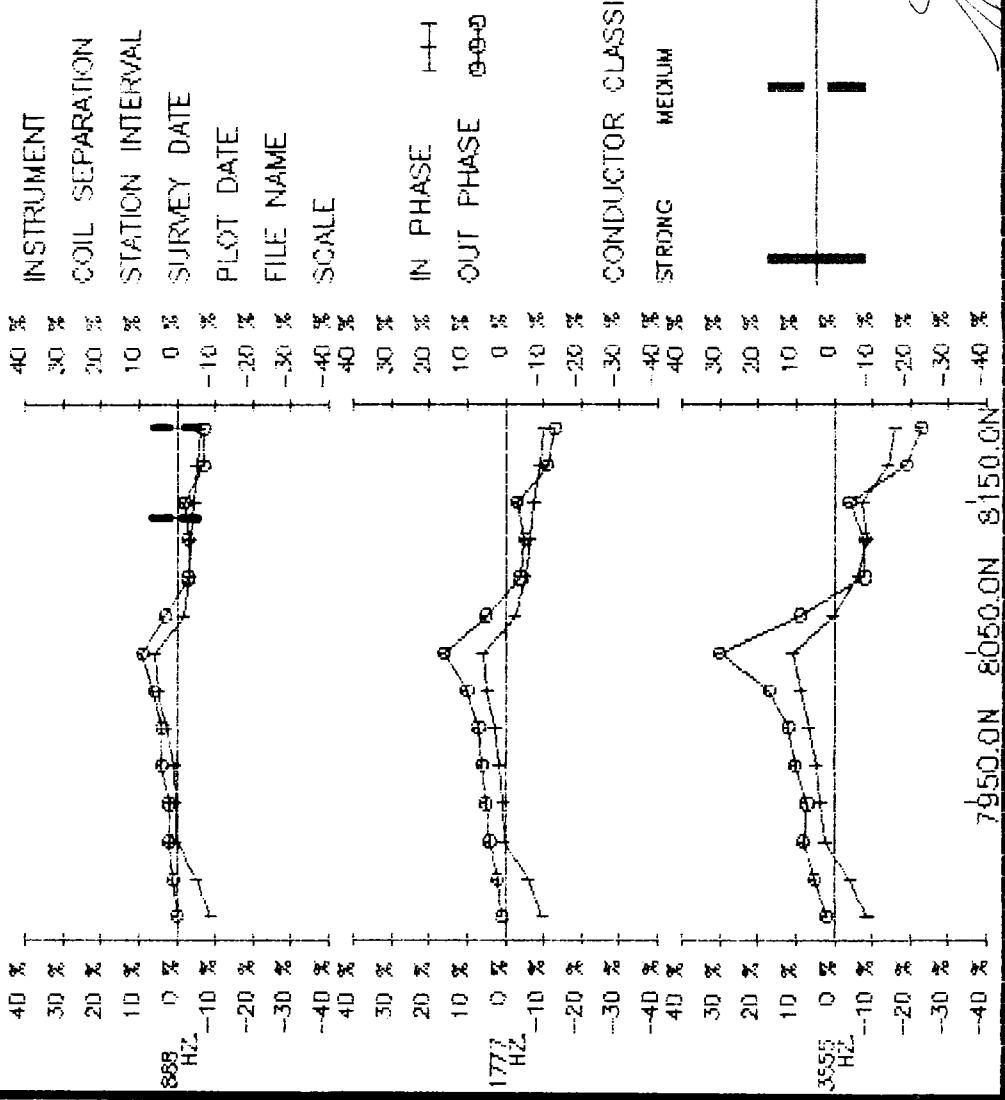
AREA NAME : FORT KNOX  
 LINE NUMBER : 11600E  
 INSTRUMENT : MAX MIN II  
 COIL SEPARATION : 150. METERS  
 STATION INTERVAL : 25. METERS  
 SURVEY DATE : JUNE 1985  
 PLOT DATE : APRIL 1986  
 FILE NAME : B:L11600S1.KNX  
 SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 888. HZ.

TX	RX	PLOT	COR IN	COR IN			COR IN			COR AV.			
STATION	STATION	POINT	PHASE	OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	APP	GR.
7950N	7800N	7875N	-8.70	2.	-8.	-9.70	1.	-9.	-8.70	0.	-8.	-.70	-7.50
7975N	7825N	7900N	-4.08	5.	-3.	-6.08	2.	-5.	-5.08	1.	-4.	-1.08	-8.83
8000N	7850N	7925N	2.31	8.	4.	.31	4.	2.	.31	2.	2.	-1.69	-7.33
8025N	7875N	7950N	3.44	7.	6.	.44	5.	3.	.44	2.	3.	-2.56	-5.33
8050N	7900N	7975N	4.65	10.	8.	1.65	6.	5.	.65	4.	4.	-3.35	-.50
8075N	7925N	8000N	6.75	12.	11.	2.75	7.	7.	2.75	4.	7.	-4.25	7.00
8100N	7950N	8025N	8.75	17.	13.	4.75	10.	9.	4.75	6.	9.	-4.25	7.00
8125N	7975N	8050N	10.89	30.	14.	5.89	16.	9.	5.89	9.	9.	-3.11	17.33
8150N	8000N	8075N	.31	9.	4.	-2.69	5.	1.	-1.69	3.	2.	-3.69	15.67
8175N	8025N	8100N	-6.20	-8.	-2.	-5.20	-4.	-1.	-3.20	-3.	1.	-4.20	13.33
8200N	8050N	8125N	-8.47	-8.	-4.	-6.47	-5.	-2.	-3.47	-3.	1.	-4.47	10.50
8225N	8075N	8150N	-7.39	-4.	-4.	-7.39	-3.	-4.	-4.39	-2.	-1.	-3.39	5.50
8250N	8100N	8175N	-14.06	-19.	-11.	-9.06	-11.	-6.	-5.06	-7.	-2.	-3.06	6.67
8275N	8125N	8200N	-16.00	-23.	-16.	-10.00	-13.	-10.	-6.00	-7.	-6.	.00	.00

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA, NAME	:FORT KNOX
LINE NUMBER	:11600E
INSTRUMENT	:MAX MIN II
COIL SEPARATION	:150METERS
STATION INTERVAL	:25METERS
SURVEY DATE	:JUNE 1985
PLOT DATE	:APRIL 1986
FILE NAME	:B:11600S1.KNX
SCALE	: 1 : 5000



*THT*  
*John Stender*

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
LINE NUMBER : 11200E  
INSTRUMENT : MAX MIN II  
COIL SEPARATION : 150. METERS  
STATION INTERVAL : 25. METERS  
SURVEY DATE : JUNE 1985  
PLOT DATE : APRIL 1986  
FILE NAME : B:L11200S1.KNX  
SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 888. HZ.

TX	RX	PLOT	COR IN	COR IN			COR IN			COR	AV.		
STATION	STATION	POINT	PHASE	OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	APP	GR.
8000N	7850N	7925N	-5.65	12.	-4.	-7.65	7.	-6.	-7.65	4.	-6.	-1.65	4.00
8025N	7875N	7950N	3.53	12.	4.	1.53	6.	2.	2.53	3.	3.	-.47	6.83
8050N	7900N	7975N	-.60	-3.	0.	-.60	-2.	0.	1.40	-2.	2.	-.60	5.50
8075N	7925N	8000N	-5.54	-2.	1.	-5.54	-1.	1.	-3.54	-1.	3.	-6.54	-2.67
8100N	7950N	8025N	-9.01	-2.	-2.	-9.01	-1.	-2.	-8.01	-1.	-1.	-7.01	-8.17
8125N	7975N	8050N	-12.56	-3.	-7.	-12.56	-2.	-7.	-10.56	-1.	-5.	-5.56	-12.00
8150N	8000N	8075N	-8.99	-2.	-5.	-9.99	-1.	-6.	-8.99	0.	-5.	-3.99	-15.33
8175N	8025N	8100N	-.78	3.	3.	-2.78	4.	1.	-3.78	3.	0.	-3.78	-15.83
8200N	8050N	8125N	5.42	19.	9.	1.42	12.	5.	.42	8.	4.	-3.58	-16.33
8225N	8075N	8150N	9.93	17.	11.	4.93	11.	6.	3.93	8.	5.	-1.07	-7.33
8250N	8100N	8175N	8.14	15.	9.	3.14	10.	4.	3.14	8.	4.	-.86	-1.17
8275N	8125N	8200N	-2.72	-9.	-2.	1.28	-6.	2.	4.28	-4.	5.	-.72	-.33

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME :FORT KNOX

LINE NUMBER :11200E

INSTRUMENT :MAX MIN II

COIL SEPARATION :150 METERS

STATION INTERVAL :25 METERS

SURVEY DATE :JUNE 1985

PLOT DATE :APRIL 1986

FILE NAME :BL11200S1.KNX

SCALE : 1 : 5000

IN PHASE :+-+

OUT PHASE :@@@

177.7 Hz

-10 %

355.5 Hz

-10 %

CONDUCTOR CLASSIFICATION:

STRONG MEDIUM WEAK VERY WEAK

30 %

40 %

30 %

40 %

30 %

40 %

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30 %

40 %

8000.0N 8100.0N 8200.0N

2.914H

*G. J. Horner*

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
LINE NUMBER : 11300E  
INSTRUMENT : MAX MIN II  
COIL SEPARATION : 150. METERS  
STATION INTERVAL : 25. METERS  
SURVEY DATE : JUNE 1985  
PLOT DATE : APRIL 1986  
FILE NAME : B:L11300S1.KNX  
SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 888. HZ.

TX	RX	PLOT	COR IN	COR IN			COR IN			COR	AV.		
STATION	STATION	POINT	PHASE	OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	APP	GR.
7825N	7975N	7900N	10.12	12.	12.	7.12	6.	9.	8.12	3.	10.	-1.88	-9.83
7850N	8000N	7925N	7.60	9.	10.	5.60	5.	8.	6.60	3.	9.	-2.40	-8.83
7875N	8025N	7950N	1.76	7.	6.	-.24	4.	4.	.76	2.	5.	-4.24	-2.50
7900N	8050N	7975N	-3.61	2.	0.	-5.61	2.	-2.	-4.61	1.	-1.	-3.61	3.00
7925N	8075N	8000N	-6.51	23.	-2.	-7.51	11.	-3.	-8.51	4.	-4.	-4.51	1.50
7950N	8100N	8025N	-11.98	-1.	-7.	-10.98	-1.	-6.	-9.98	-2.	-5.	-4.98	-2.00
7975N	8125N	8050N	-12.12	1.	-4.	-11.12	-1.	-3.	-10.12	-1.	-2.	-8.12	10.00
8000N	8150N	8075N	-13.15	1.	-5.	-13.15	0.	-5.	-11.15	-1.	-3.	-8.15	10.33
8025N	8175N	8100N	-10.60	2.	-3.	-11.60	1.	-4.	-10.60	0.	-3.	-7.60	7.83
8050N	8200N	8125N	-6.50	5.	1.	-9.50	3.	-1.	-6.50	2.	1.	-7.50	6.33
8075N	8225N	8150N	-2.08	3.	3.	-4.08	3.	1.	-4.08	2.	1.	-5.08	11.67
8100N	8250N	8175N	1.45	10.	5.	-1.55	7.	2.	-2.55	5.	1.	-3.55	14.17

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME :FORT KNOX

LINE NUMBER :11300E

INSTRUMENT :MAX MIN II

COIL SEPARATION :150METERS

STATION INTERVAL :25METERS

SURVEY DATE :JUNE 1985

PLOT DATE :APRIL 1986

FILE NAME :BL11300S1.KNX

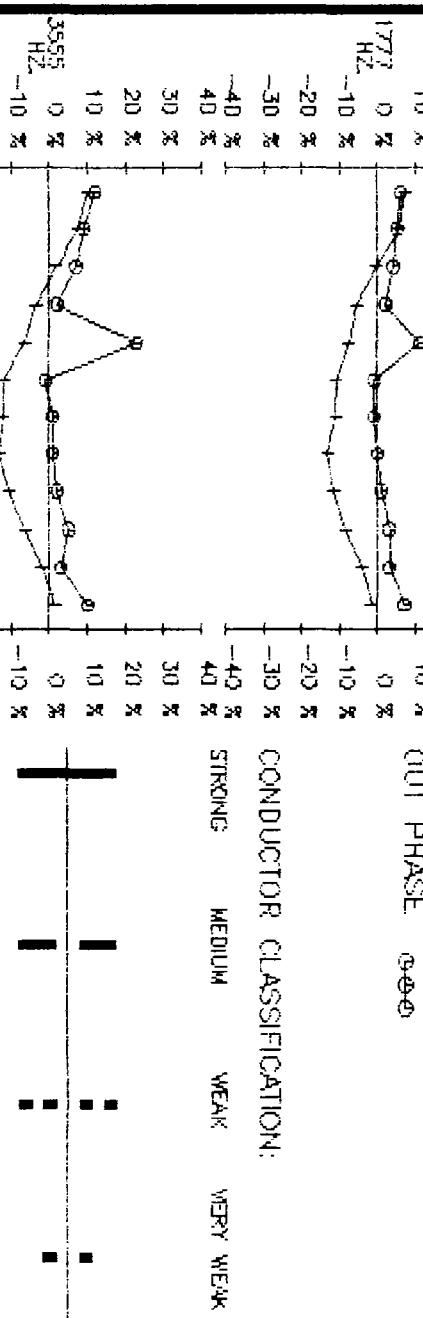
SCALE : 1 : 5000

IN PHASE +/-

CUT PHASE 0EE

CONDUCTOR CLASSIFICATION:

STRONG MEDIUM WEAK VERY WEAK



7975.0N 8075.0N 8175.0N

*J. A. H. M.*

*J. A. H. M.*

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
LINE NUMBER : 11400E  
INSTRUMENT : MAX MIN II  
COIL SEPARATION : 150. METERS  
STATION INTERVAL : 25. METERS  
SURVEY DATE : JUNE 1985  
PLOT DATE : APRIL 1986  
FILE NAME : B:L11400S1.KNX  
SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 888. HZ.

TX	RX	PLOT	COR IN	COR IN			COR IN			COR	AV.		
STATION	STATION	POINT	PHASE	OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	APP	GR.
7900N	7750N	7825N	-4.94	8.	-1.	-7.94	5.	-4.	-6.94	3.	-3.	-3.94	.33
7925N	7775N	7850N	-4.47	7.	2.	-7.47	5.	-1.	-6.47	3.	0.	-6.47	5.33
7950N	7800N	7875N	2.39	14.	7.	-.61	8.	4.	-.61	4.	4.	-4.61	15.50
7975N	7825N	7900N	1.06	18.	4.	-1.94	9.	1.	-1.94	5.	1.	-2.94	18.33
8000N	7850N	7925N	-.63	-1.	2.	-2.63	1.	0.	-1.63	1.	1.	-2.63	18.83
8025N	7875N	7950N	-1.53	2.	3.	-3.53	1.	1.	-1.53	1.	3.	-4.53	15.00
8050N	7900N	7975N	-2.24	1.	2.	-3.24	1.	1.	-2.24	0.	2.	-4.24	13.50
8075N	7925N	8000N	-10.07	-7.	-7.	-8.07	-5.	-5.	-6.07	-3.	-3.	-3.07	7.67
8100N	7950N	8025N	-15.18	-11.	-14.	-12.18	-7.	-11.	-9.18	-6.	-8.	-1.18	.50
8125N	7975N	8050N	-11.10	8.	-4.	-11.10	5.	-4.	-8.10	4.	-1.	-7.10	-10.33
8150N	8000N	8075N	-3.17	5.	5.	-5.17	2.	3.	-3.17	0.	5.	-8.17	-16.50
8175N	8025N	8100N	-5.39	2.	3.	-6.39	1.	2.	-5.39	0.	3.	-8.39	-15.50
8200N	8050N	8125N	3.22	3.	11.	.22	3.	8.	1.22	1.	9.	-7.78	-16.17
8225N	8075N	8150N	11.22	17.	19.	6.22	10.	14.	6.22	7.	14.	-7.78	-16.17

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME :FORT KNOX  
LINE NUMBER :11400E

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-30 %  
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888 Hz  
STATION INTERVAL :25METERS  
PLOT DATE :JUNE 1985  
FILE NAME :B:L11400S1.KNX  
SCALE : 1 : 5000

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0 %  
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-30 %  
-40 %

IN PHASE :+1  
OUT PHASE :0.930

CONDUCTOR CLASSIFICATION:

-40 %  
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20 %  
10 %  
0 %

7900.0N 8000.0N 8100.0N

*John D. Johnson*

*8.9144*

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
LINE NUMBER : 11500E  
INSTRUMENT : MAX MIN II  
COIL SEPARATION : 150. METERS  
STATION INTERVAL : 25. METERS  
SURVEY DATE : JUNE 1985  
PLOT DATE : APRIL 1986  
FILE NAME : B:L1150051.KNX  
SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 888. HZ.

TX STATION	RX STATION	PLOT POINT	COR IN PHASE	COR OUT PHASE	COR IN PHASE	COR OUT PHASE	COR APP	AV. GR.
7850N	8000N	7925N	1.83 13.	6. -1.17	8. 3.	-1.17 4.	4.	-4.17 -2.17
7875N	8025N	7950N	8.98 18.	14. 3.98	11. 9.	3.98 6.	9.	-5.02-10.50
7900N	8050N	7975N	-6.41 5.	-4. -6.41	3. -4.	-4.41 1.	-2.	-2.41-16.17
7925N	8075N	8000N	-11.41 -5.	-9. -9.41	-4. -7.	-7.41 -3.	-5.	-2.41-16.17
7950N	8100N	8025N	-8.95 -4.	-5. -7.95	-3. -4.	-5.95 -3.	-2.	-3.95 -7.50
7975N	8125N	8050N	-5.96 -3.	-1. -4.96	-3. 0.	-1.96 -3.	3.	-4.96 -3.33
8000N	8150N	8075N	-12.50 -5.	-6. -10.50	-4. -4.	-7.50 -3.	-1.	-6.50 -7.50
8025N	8175N	8100N	-16.97 -17.	-12. -12.97	-12. -8.	-7.97 -8.	-3.	-4.97 -5.00
8050N	8200N	8125N	-4.66 -15.	0. -3.66	-7. 1.	-1.66 -4.	3.	-4.66 -2.50
8075N	8225N	8150N	2.97 3.	14. -1.03	3. 10.	-1.03 1.	10.	-11.03 6.67
8100N	8250N	8175N	-2.43 -1.	8. -4.43	1. 6.	-3.43 0.	7.	-10.43 4.67
8125N	8275N	8200N	5.88 3.	16. 2.88	3. 13.	3.88 2.	14.	-10.12 1.33

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME :FORT KNOX  
LINE NUMBER :11500E

INSTRUMENT :MAX MIN II  
COIL SEPARATION :150METERS  
STATION INTERVAL :25METERS

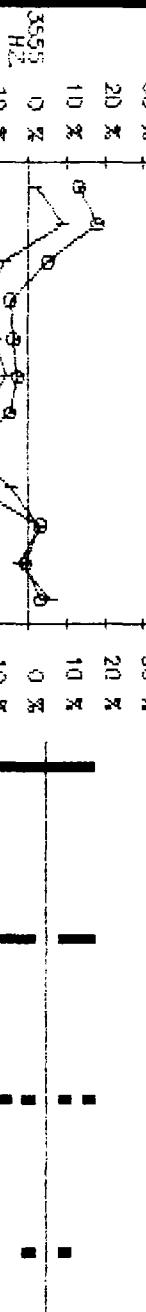
SURVEY DATE :JUNE 1985  
PLOT DATE :APRIL 1986

FILE NAME :BL11500S1.KNX  
SCALE : 1 : 5000

IN PHASE :+1  
OUT PHASE :0.00

CONDUCTOR CLASSIFICATION:

STRONG MEDIUM WEAK VERY WEAK



4/16/86

8600.0N 8100.0N 8200.0N

*J. B. Jones*

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
 LINE NUMBER : 11100E  
 INSTRUMENT : MAX MIN II  
 COIL SEPARATION : 150. METERS  
 STATION INTERVAL : 25. METERS  
 SURVEY DATE : JUNE 1985  
 PLOT DATE : APRIL 1986  
 FILE NAME : B:L11100S1.KNX  
 SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 888. HZ.

TX	RX	PLOT	COR	IN	COR	IN	COR	IN	COR	AV.			
STATION	STATION	POINT	PHASE	OUT	IN	PHASE	OUT	IN	PHASE	OUT	IN	APP	GR.
7725N	7875N	7800N	-2.97	6.	1.	-4.97	4.	-1.	-2.97	2.	1.	-3.97	1.50
7750N	7900N	7825N	-3.28	6.	1.	-5.28	4.	-1.	-4.28	2.	0.	-4.28	1.00
7775N	7925N	7850N	-.06	8.	4.	-2.06	4.	2.	-1.06	2.	3.	-4.06	-8.33
7800N	7950N	7875N	-7.66	9.	-4.	-9.66	5.	-6.	1.34	3.	5.	-3.66	-5.33
7825N	7975N	7900N	-9.60	10.	-6.	-10.60	5.	-7.	-10.60	3.	-7.	-3.60	-5.83
7850N	8000N	7925N	-10.25	2.	-5.	-11.25	1.	-6.	-10.25	1.	-5.	-5.25	-3.17
7875N	8025N	7950N	-.74	0.	5.	-1.74	0.	4.	.26	0.	6.	-5.74	-2.33
7900N	8050N	7975N	-3.71	-2.	1.	-3.71	-1.	1.	-2.71	-1.	2.	-4.71	.50
7925N	8075N	8000N	-3.83	-3.	-2.	-2.83	-1.	-1.	-1.83	-1.	0.	-1.83	6.17
7950N	8100N	8025N	-3.73	-4.	-2.	-2.73	-2.	-1.	-1.73	-1.	0.	-1.73	6.67
7975N	8125N	8050N	2.53	5.	4.	-.47	3.	1.	.53	2.	2.	-1.47	8.00
8000N	8150N	8075N	6.26	14.	7.	2.26	9.	3.	2.26	6.	3.	-.74	4.50
8025N	8175N	8100N	-17.39	-6.	-17.	-13.39	-5.	-13.	-10.39	-4.	-10.	-.39	3.50
8050N	8200N	8125N	-23.22	-7.	-23.	-17.22	-6.	-17.	-14.22	-5.	-14.	-.22	5.00
8075N	8225N	8150N	-17.22	-12.	-17.	-11.22	-11.	-11.	-6.22	-9.	-6.	-.22	5.00

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME :FORT KNOX  
LINE NUMBER :11100E

INSTRUMENT :MAX. MIN II  
COIL SEPARATION :150METERS  
STATION INTERVAL :25METERS

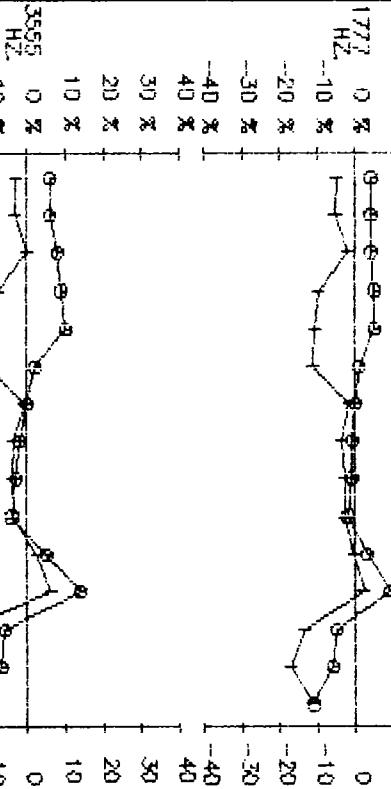
SURVEY DATE :JUNE 1985  
PLOT DATE :APRIL 1986  
FILE NAME :BL11100S1.KNX

SCALE : 1 : 5000

IN PHASE :+ +  
OUT PHASE :0 - 0

CONDUCTOR CLASSIFICATION:

STRONG MEDIUM WEAK VERY WEAK



7875.0N 7975.0N 8075.0N

*M. J. Sorensen*

*2.91444*

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME : FORT KNOX  
 LINE NUMBER : 11000E  
 INSTRUMENT : MAX MIN II  
 COIL SEPARATION : 130. METERS  
 STATION INTERVAL : 25. METERS  
 SURVEY DATE : JUNE 1986  
 PLOT DATE : APRIL 1986  
 FILE NAME : 5V11000E2.FNX  
 SCALE : 1 : 5000.0

3555. HZ. 1777. HZ. 898. HZ.

STATION	STATION	POINT	PHASE	COR IN	COR IN		COR IN		COR IN		COR	PV.	
					CUT	IN	PHASE	CUT	IN	PHASE	CUT		
7850N	7700N	7775N	.30	6.	-1.	-1.80	4.	-2.	-1.80	3.	-2.	1.30	9.00
7875N	7725N	7800N	1.49	7.	0.	-1.52	4.	-2.	.48	2.	-1.	1.48	10.00
7900N	7750N	7825N	-.85	4.	-1.	-1.85	3.	-1.	.15	1.	0.	.15	3.17
7925N	7775N	7850N	-1.67	6.	-2.	-3.67	4.	-4.	-3.67	8.	-3.	.33	4.67
7950N	7800N	7975N	.00	7.	0.	-1.00	4.	-1.	.00	3.	0.	.00	-1.17
7975N	7825N	7900N	.00	4.	2.	1.00	2.	1.	2.00	1.	2.	.00	.00
8000N	7850N	7925N	1.30	2.	1.	.30	1.	0.	1.30	0.	1.	.30	-4.50
8025N	7875N	7950N	1.77	-1.	7.	6.77	3.	5.	6.77	-1.	8.	.77	-7.17
8050N	7900N	7975N	9.22	1.	9.	8.22	1.	8.	10.22	0.	10.	.22	-3.83
8075N	7925N	8000N	10.01	3.	10.	9.01	2.	9.	9.01	1.	9.	.01	-.67
8100N	7950N	8025N	13.35	3.	13.	11.35	5.	11.	13.35	3.	11.	.35	4.83
8125N	7975N	8050N	15.26	10.	15.	12.26	6.	12.	13.26	4.	13.	.26	4.17
8150N	8000N	8075N	-9.23	4.	-10.	-8.23	1.	-9.	-7.23	1.	-8.	.77	7.17
8175N	8025N	8100N	-19.65	-7.	-20.	-17.65	-6.	-18.	-13.65	-4.	-14.	.35	4.83
8200N	8050N	8125N	-28.93	-9.	-27.	-21.93	-7.	-22.	-18.93	-7.	-17.	.07	2.17
8225N	8075N	8150N	-32.91	-9.	-23.	-26.91	-6.	-27.	-22.91	-8.	-23.	.06	-1.50
8250N	8100N	8175N	-31.97	-8.	-22.	-24.97	-8.	-25.	-21.97	-7.	-22.	.13	-3.00

HORIZONTAL LINE  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

AREA NAME: HORI KNOX  
LINE NUMBER: 113001

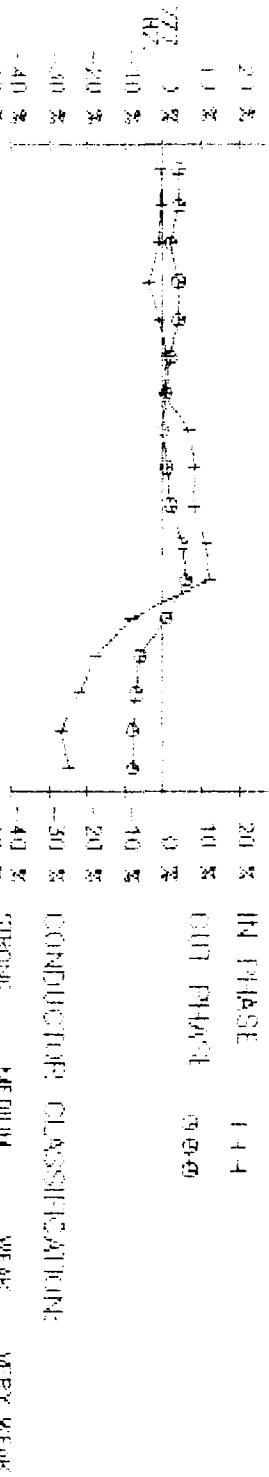
INSTRUMENT: MAX MN II  
COIL SEPARATION: 15 METERS

STATION INTERVAL: 25 METERS

SURVEY DATE: JUNE 1985

FILE NAME: 0414500152.KNX  
SCALE: 1:50000

100' BASE: 144  
0' BASE: 996



2.9144



18500N 7500W 81500E 40S

100' 10' 1'

100' 10' 1'

100' 10' 1'

100' 10' 1'

100' 10' 1'

100' 10' 1'

100' 10' 1'

100' 10' 1'

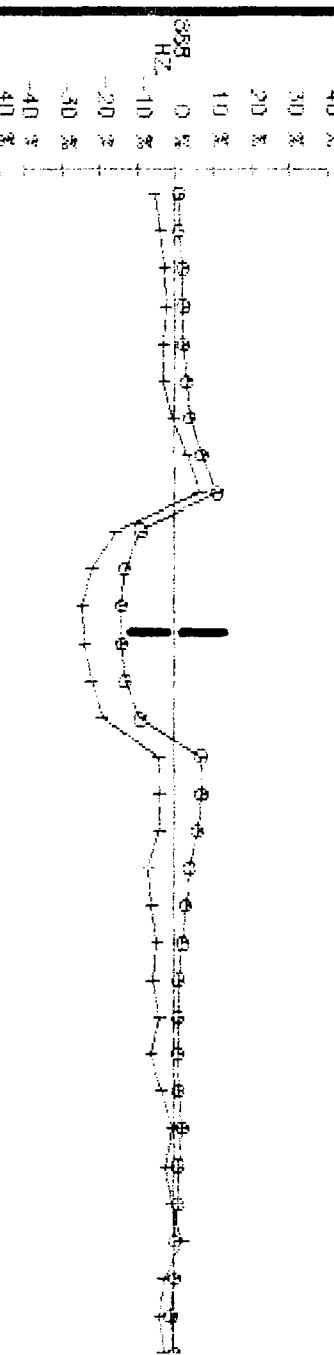
100' 10' 1'

100' 10' 1'

100' 10' 1'

*J. Gandy*

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY



AREA NAME	FORT KNOX	
LINE NUMBER	:10700E	
INSTRUMENT	:MAX MIN II	
COIL SEPARATION	:150 METERS	
STATION INTERVAL	:25 METERS	
SURVEY DATE	JUNE 1936	
PLOT DATE	APRIL 1936	
FILE NAME	:BL10700S1.KNX	
SCALE	: 1 : 5000	



N PHASE      + + +  
OUT PHASE      0+0+0

-30 % CONDUCTOR CLASSIFICATION:

-40 % STRONG    MEDIUM    WEAK    VERY WEAK



-40 %  
-30 %  
-20 %  
-10 %  
0 %  
10 %  
20 %  
30 %  
40 %



-40 %

175.0N 7275.0N 7475.0N 7575.0N 7775.0N 7875.0N

HORIZONTAL LOOP  
ELECTROMAGNETIC SURVEY  
CANADIAN NICKEL COMPANY

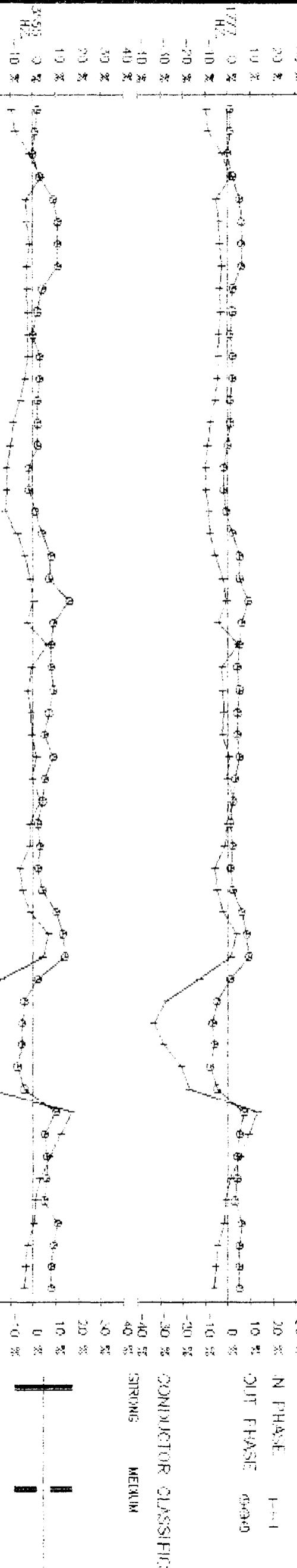
AREA NAME : FORT KNOX  
LINE NUMBER : 10900E  
INSTRUMENT : M99 MIN II  
COIL SEPARATION : 150. METERS  
STATION INTERVAL : 25. METERS  
SURVEY DATE : JUNE 1985  
PLOT DATE : APRIL 1986  
FILE NAME : B:L10900E1.KNX  
SCALE 1 : 5000.0

3555. HZ. 1777. HZ. 988. HZ.

TX STATION	RX STATION	PLOT POINT	CDR IN			CDR IN			CDR IN			CDR APP	AV. SP.
			PHASE	CUT	IN	PHASE	CUT	IN	PHASE	CUT	IN		
7150N	7300N	7225N	-9.52	2.	-10.	-9.52	1.	-10.	-9.52	0.	-10.	.48	-5.67
7175N	7325N	7250N	-7.80	1.	-8.	-8.80	1.	-10.	-8.80	0.	-8.	1.20	-9.00
7200N	7350N	7275N	-1.61	0.	-3.	-8.51	0.	-4.	-1.61	0.	-3.	1.39	-9.67
7225N	7375N	7300N	3.66	3.	3.	1.66	2.	1.	2.66	1.	3.	.66	-6.67
7250N	7400N	7325N	-3.23	9.	-4.	-5.23	5.	-6.	-4.23	2.	-5.	.77	-7.17
7275N	7425N	7350N	-2.93	11.	-4.	-3.93	6.	-5.	-2.93	3.	-4.	1.07	-8.50
7300N	7450N	7375N	-1.57	11.	-3.	-3.57	6.	-5.	-2.57	3.	-4.	1.43	-8.83
7325N	7475N	7400N	-2.71	11.	-4.	-2.71	5.	-4.	-1.71	3.	-3.	1.29	-8.33
7350N	7500N	7425N	-2.66	4.	-4.	-3.66	2.	-5.	-2.66	1.	-4.	1.34	-9.50
7375N	7525N	7450N	-2.12	2.	-3.	-3.12	2.	-4.	-2.12	1.	-3.	.98	-7.67
7400N	7550N	7475N	-3.12	0.	-3.	-4.12	1.	-5.	-3.12	1.	-4.	.88	-7.67
7425N	7575N	7500N	-2.27	3.	-3.	-4.27	6.	-5.	-3.27	1.	-4.	.73	-7.00
7450N	7600N	7525N	-3.55	3.	-4.	-4.55	2.	-5.	-3.55	1.	-4.	.45	-5.50
7475N	7625N	7550N	-5.55	2.	-6.	-5.55	1.	-6.	-4.55	0.	-5.	.45	-5.50
7500N	7650N	7575N	-8.82	2.	-9.	-7.82	1.	-8.	-4.82	0.	-5.	.18	-3.50
7525N	7675N	7600N	-10.05	2.	-11.	-9.05	0.	-10.	-5.05	-1.	-6.	.95	-8.00
7550N	7700N	7625N	-11.75	-2.	-13.	-9.75	-2.	-11.	-6.75	-3.	-8.	1.25	-9.17
7575N	7725N	7650N	-11.75	-2.	-13.	-9.75	-2.	-11.	-6.75	-3.	-8.	1.25	-9.17
7600N	7750N	7675N	-12.57	1.	-14.	-8.57	-1.	-10.	-6.57	-1.	-8.	1.43	-8.83
7625N	7775N	7700N	-6.97	4.	-8.	-7.97	1.	-5.	-5.97	1.	-7.	1.03	-8.33
7650N	7800N	7725N	-3.75	9.	-8.	-5.75	5.	-7.	-6.75	3.	-6.	1.25	-9.17
7675N	7825N	7750N	-1.30	7.	-2.	-2.30	5.	-3.	-2.30	3.	-2.	.70	-6.83
7700N	7850N	7775N	.34	16.	-1.	-1.66	8.	-2.	-1.66	5.	-2.	1.34	-9.50
7725N	7875N	7800N	-3.61	9.	-4.	-4.61	6.	-5.	-3.61	3.	-5.	1.39	-9.67
7750N	7900N	7825N	6.29	9.	5.	4.29	5.	3.	5.29	3.	4.	1.29	-9.33
7775N	7925N	7850N	-1.66	8.	-2.	-2.66	4.	-4.	-1.66	2.	-3.	1.34	-9.50
7800N	7950N	7875N	-2.52	8.	-3.	-3.52	5.	-3.	-2.52	2.	-1.	.46	-5.67
7825N	7975N	7900N	-9.98	7.	-11.	-1.98	4.	-6.	-9.98	2.	-1.	.08	-1.00
7850N	8000N	7925N	-9.93	5.	-1.	-2.53	4.	-3.	-1.62	2.	-2.	.37	5.00
7875N	8025N	7950N	1.57	9.	1.	.57	5.	0.	1.57	3.	1.	.57	6.17
7900N	8050N	7975N	-1.43	5.	-1.	-1.43	3.	-1.	1.57	1.	1.	.57	5.17
7925N	8075N	8000N	3.29	4.	2.	2.29	2.	1.	4.29	1.	3.	1.29	3.33
7950N	8100N	8025N	-1.46	2.	-2.	-1.46	1.	-1.	.54	1.	0.	.54	6.00
7975N	8125N	8050N	-1.63	3.	-2.	-1.63	2.	-2.	.37	1.	0.	.37	5.00
8000N	8150N	8075N	-5.98	3.	-6.	-5.98	1.	-5.	-4.98	0.	-5.	.06	1.00
8025N	8175N	8100N	-4.92	4.	-5.	-4.92	2.	-5.	-3.92	1.	-4.	.18	-3.50
8050N	8200N	8125N	-1.37	10.	-8.	-2.37	5.	-3.	-1.37	3.	-2.	.63	-6.50
8075N	8225N	8150N	5.73	13.	5.	3.73	8.	2.	3.73	5.	2.	1.73	-10.83
8100N	8250N	8175N	4.25	14.	3.	1.25	9.	0.	.25	5.	-1.	1.25	-9.17
8125N	8275N	8200N	-13.80	2.	-15.	-12.80	1.	-14.	-11.80	-1.	-13.	1.20	-9.00
8150N	8300N	8225N	-32.85	-4.	-33.	-27.85	-5.	-29.	-23.85	-6.	-24.	.13	-3.17
8175N	8325N	8250N	-36.87	-5.	-37.	-32.87	-7.	-33.	-27.87	-7.	-28.	.13	2.00
8200N	8350N	8275N	-33.71	-5.	-35.	-28.71	-5.	-30.	-25.71	-7.	-27.	1.28	9.33
8225N	8375N	8300N	-26.78	-7.	-29.	-20.76	-8.	-23.	-16.78	-9.	-19.	6.94	12.33
8250N	8400N	8325N	-20.20	-4.	-23.	-17.20	-5.	-20.	-12.20	-5.	-16.	2.80	13.83
8275N	8425N	8350N	16.95	10.	15.	18.95	7.	11.	12.95	5.	11.	1.95	11.50
8300N	8450N	8375N	13.12	5.	11.	9.12	5.	9.	9.12	4.	9.	1.12	8.67
8325N	8475N	8400N	7.33	6.	7.	5.33	4.	5.	6.33	3.	6.	.33	4.67
8350N	8425N	8450N	3.12	6.	3.	1.12	4.	1.	2.12	2.	2.	.12	2.83
8375N	8525N	8450N	1.03	5.	1.	.97	2.	-1.	.03	2.	0.	.03	1.33
8400N	8550N	8475N	.54	11.	0.	-1.46	5.	-8.	-1.46	4.	-1.	.54	-6.00
8425N	8575N	8500N	-2.61	9.	-4.	-4.61	5.	-5.	-3.61	3.	-5.	1.39	-5.67
8450N	8600N	8525N	-2.37	9.	-5.	-5.37	5.	-7.	-4.37	3.	-5.	1.63	-10.50
8475N	8625N	8550N	-4.05	8.	5.	-6.05	5.	-7.	-5.05	4.	-6.	.95	-9.00

HORIZONTAL LOOP  
ELECTROMAGNETIC  
CANADIAN NICKEL

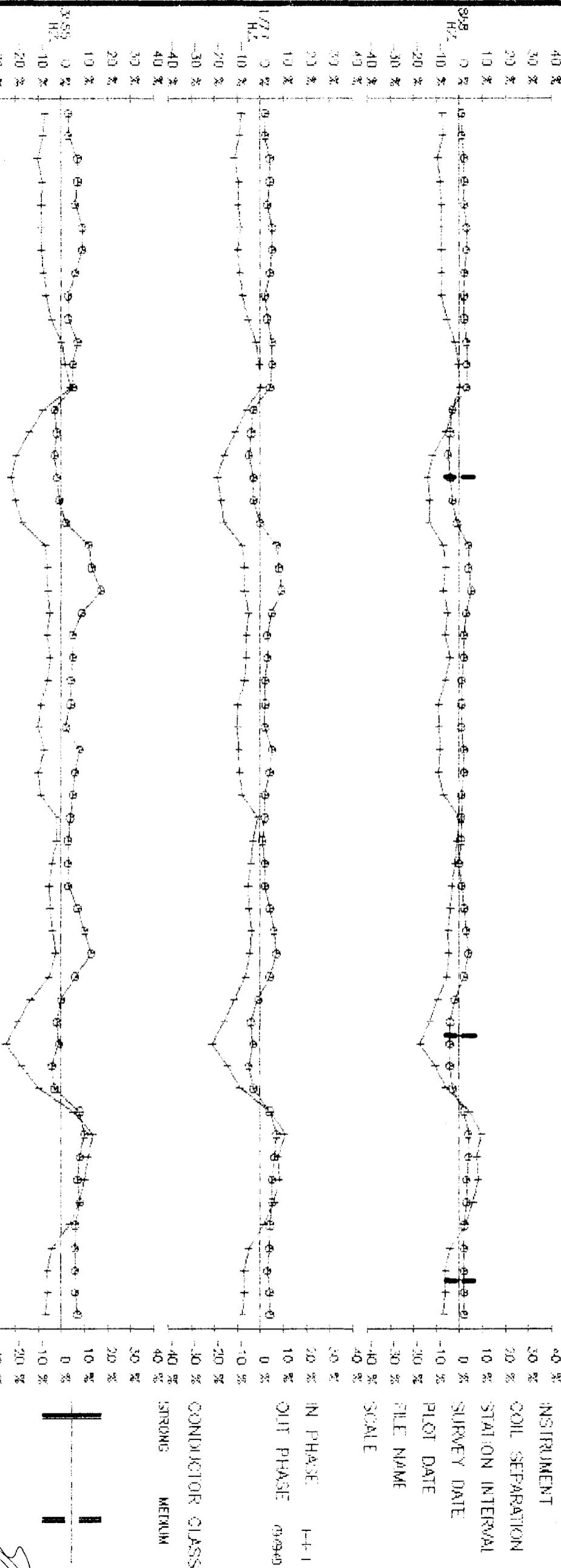
AREA NAME	:FO
LINE NUMBER	:10
INSTRUMENT	:MA
COIL SEPARATION	:15
STATION INTERVAL	:25
PLOT DATE	:MAY
FILE NAME	:B1
SCALE	:



300.0N 3400.0N 7500.0N 7900.0N 8000.0N 8100.0N 8200.0N 8300.0N 8400.0N 8500.0N

*J. E. H.*

HORIZONTAL LOOP  
ELECTROMAGNETIC  
CANADIAN NICKEL



7125.ON 7225.ON 7325.ON 7425.ON 7525.ON 7725.ON 7825.ON 7925.ON 8025.ON 8125.ON 8225.ON 8325.ON

*[Handwritten signature]*



52E09SE0008 2.9144 CODE

900

Mining Lands Section

File No 29144

Control Sheet

TYPE OF SURVEY

GEOPHYSICAL

GEOLOGICAL

GEOCHEMICAL

EXPENDITURE

MINING LANDS COMMENTS:

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J. Shurst

Signature of Assessor

June 5/86

Date

*top J*





# Canadian Nickel Company Limited

Copper Cliff • Ontario P0M 1N0

May 27, 1986

Ministry of Northern Development  
and Mines  
Land Management Branch  
Whitney Block, 6th. Floor  
Queen's Park  
Toronto, Ontario  
M7A 1W3

Attention: J.C. Smith, Supervisor, Mining Lands Section

Dear Sir:

Re: Fort Knox Gold Resources Inc., N.T.S. 52-F-Gen.1.4.3

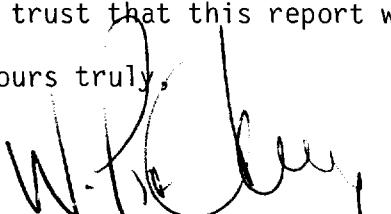
Enclosed in duplicate are geological and geophysical survey reports being submitted under the Special Provisions Section as assessment work on the following claims located in Code Township (M-1962).

K 825151-159 incl.

The report of work covering this submission was forwarded to Mr. Mark Hall in Kenora and subsequently recorded on April 22, 1986.

I trust that this report will be considered satisfactory.

Yours truly,

  
W.V. Rodney  
Exploration Department

IM/cb

Enclosures: 



# GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1056 Number of Readings mag=1056; EM=1056  
Station interval 12.5 metre Line spacing 100 metre  
Profile scale 1 cm = 10<sup>6</sup>  
Contour interval 100 gammas

MAGNETIC

Instrument Geometrics G-816 Proton  
Accuracy - Scale constant + 1 gamma  
Diurnal correction method Base line tie-ins  
Base Station check-in interval (hours) 1 hour  
Base Station location and value Base line stations at each cross line

ELECTROMAGNETIC

Instrument Crone Radem V.L.F.  
Coil configuration Vertical Loop  
Coil separation Variable  
Accuracy ± 1/2 degree  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency NSS Anapolis, Maryland 21.4 KHz  
(specify V.L.F. station)  
Parameters measured \_\_\_\_\_

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 \_\_\_\_\_

# 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 \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_

# GEOPHYSICAL TECHNICAL DATA

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

Number of Stations \_\_\_\_\_ 514 Number of Readings \_\_\_\_\_ 514  
Station interval \_\_\_\_\_ 25 metre Line spacing \_\_\_\_\_  
Profile scale \_\_\_\_\_ 1 cm = 20%  
Contour interval \_\_\_\_\_

MAGNETIC

Instrument \_\_\_\_\_  
Accuracy – Scale constant \_\_\_\_\_  
Diurnal correction method \_\_\_\_\_  
Base Station check-in interval (hours) \_\_\_\_\_  
Base Station location and value \_\_\_\_\_  
\_\_\_\_\_

ELECTROMAGNETIC

Instrument \_\_\_\_\_ Apex MaxMin II  
Coil configuration \_\_\_\_\_ Horizontal Loop  
Coil separation \_\_\_\_\_ 150 metres  
Accuracy \_\_\_\_\_  $\pm 1\%$   
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency \_\_\_\_\_ 888, 1777, 3555 Hz  
(specify V.L.F. station)  
Parameters measured \_\_\_\_\_ In phase and quadrature components of the secondary field  
in MAX mode.

GRAVITY

Instrument \_\_\_\_\_  
Scale constant \_\_\_\_\_  
Corrections made \_\_\_\_\_  
\_\_\_\_\_  
Base station value and location \_\_\_\_\_  
\_\_\_\_\_

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 \_\_\_\_\_

# 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 \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_

# GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1056 Number of Readings mag=1056; EM=1056  
Station interval 12.5 metre Line spacing 100 metre  
Profile scale 1 cm = 10<sup>0</sup>  
Contour interval 100 gammas

MAGNETIC

Instrument Geometrics G-816 Proton  
Accuracy — Scale constant + 1 gamma  
Diurnal correction method Base line tie-ins  
Base Station check-in interval (hours) 1 hour  
Base Station location and value Base line stations at each cross line

ELECTROMAGNETIC

Instrument Crone Radem V.L.F.  
Coil configuration Vertical Loop  
Coil separation Variable  
Accuracy ± 1/2 degree  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency NSS Anapolis, Maryland 21.4 Khz  
(specify V.L.F. station)  
Parameters measured \_\_\_\_\_

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 \_\_\_\_\_

# 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 \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

# GEOPHYSICAL TECHNICAL DATA

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

Number of Stations \_\_\_\_\_ 514 Number of Readings \_\_\_\_\_ 514  
 Station interval \_\_\_\_\_ 25 metre Line spacing \_\_\_\_\_  
 Profile scale \_\_\_\_\_ 1 cm = 20%  
 Contour interval \_\_\_\_\_

**MAGNETIC**

Instrument \_\_\_\_\_  
 Accuracy – Scale constant \_\_\_\_\_  
 Diurnal correction method \_\_\_\_\_  
 Base Station check-in interval (hours) \_\_\_\_\_  
 Base Station location and value \_\_\_\_\_  
 \_\_\_\_\_

**ELECTROMAGNETIC**

Instrument \_\_\_\_\_ Apex MaxMin II  
 Coil configuration \_\_\_\_\_ Horizontal Loop  
 Coil separation \_\_\_\_\_ 150 metres  
 Accuracy \_\_\_\_\_  $\pm 1\%$   
 Method:  Fixed transmitter  Shoot back  In line  Parallel line  
 Frequency \_\_\_\_\_ 888, 1777, 3555 Hz  
(specify V.L.F. station)  
 Parameters measured \_\_\_\_\_ In phase and quadrature components of the secondary field  
 in MAX mode.

**GRAVITY**

Instrument \_\_\_\_\_  
 Scale constant \_\_\_\_\_  
 Corrections made \_\_\_\_\_  
 \_\_\_\_\_  
 Base station value and location \_\_\_\_\_  
 \_\_\_\_\_

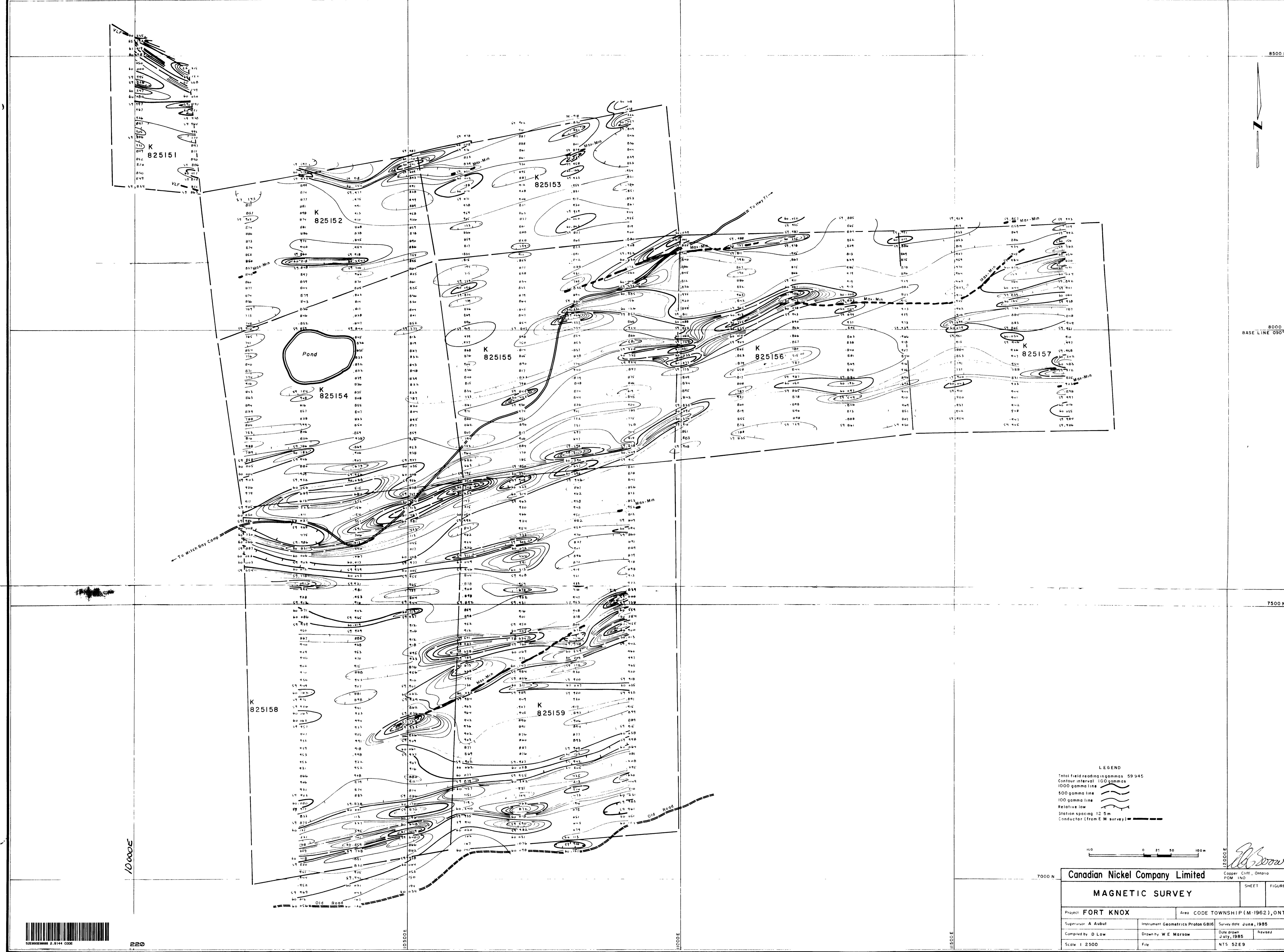
**INDUCED POLARIZATION**

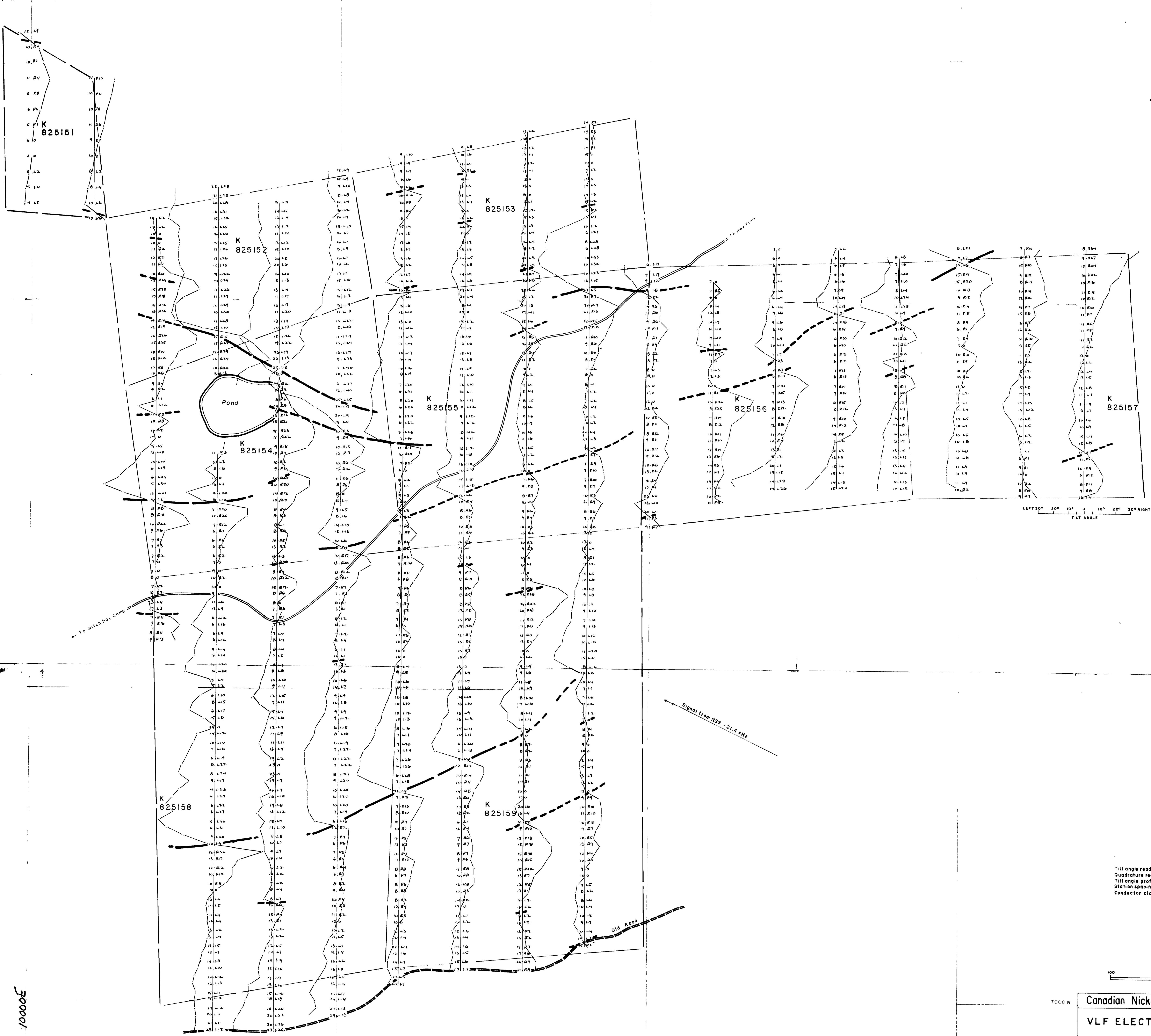
Instrument \_\_\_\_\_  
Method  Time Domain  Frequency Domain  
 Parameters – On time \_\_\_\_\_ Frequency \_\_\_\_\_  
 – Off time \_\_\_\_\_ Range \_\_\_\_\_  
 – Delay time \_\_\_\_\_  
 – Integration time \_\_\_\_\_  
 Power \_\_\_\_\_  
 Electrode array \_\_\_\_\_  
 Electrode spacing \_\_\_\_\_  
 Type of electrode \_\_\_\_\_

**RESISTIVITY**









**LEGEND**

Tilt angle readings in degrees right, left: 85.86.42.41  
Quadrature readings in per cent (not profiled): 10.9.7.4  
Tilt angle profile scale: 1cm =  $10^{\circ}$   
Station spacing: 12.5m  
Conductor classification

STRONG	[Solid line]
MEDIUM	[Line with gaps]
WEAK	[Dashed line]

A horizontal scale bar with numerical markings at 0, 25, 50, and 100 meters. The bar is labeled "100 m" at its left end.

Canadian Nickel Company Limited

ELECTRONICAS S.A.

# ELECTROMAGNETIC SURVEY

**FORT KNOX** Area CODE TOWNS

By T Lang Drawn by W E Marsaw Date drawn

2500 ← End NTS