

KELLY-0013-A1

63-2063

KELLY-K MINES LIMITED

MAGNETIC-SELF POTENTIAL REPORT

KELLY TOWNSHIP, ONTARIO

DEC 6 1966

123156

KELLY-K MINES LIMITED,  
Suite 305-100 Adelaide St. West,  
Toronto 1, Ontario.

Gentlemen:

Your Company recently conducted a combined magnetic-self potential survey over your Kelly Township holdings located in the Sudbury Area of Ontario.

These surveys were done in order to detect areas of sulphide enrichment in an effort to locate both base and precious metals.

PROPERTY, LOCATION, ACCESS:

Six mining claims form the property and are numbered S.134183-188 incl.

The property is located 25 air miles northeast of the city of Sudbury, in the extreme southwest portion of Kelly Township, Sudbury Mining Division, Ontario.

Access is by aircraft from Sudbury directly on to the property, Kukagami Lake underlying a portion of the claim group. Travel by means of roads offers a secondary choice. From a point 18 miles east of Sudbury from Highway No. 17, a good secondary

gravel road leads directly to Kukagami Lake from whence a short water route affords access to the property.

GEOLOGY:

The property is underlain by conglomerate and quartzite of the Gowganda Formation which has been cut by gabbro intrusives. This gabbro occupies the southwestern quarter of the claim group, and a finger-like mass is located in the east central portion of the property, while another small mass is located in the extreme northwest corner of the holdings.

Associated with the largest gabbro mass immediately north of the gabbro-conglomerate contact in claim No. S.134184, is a substantial quartz-carbonate vein with amounts of lead, copper, gold, and silver.

GEOPHYSICS:

1) MAGNETIC SURVEY:

A sharpe M.F.-1 Fluxgate magnetometer was used to measure the vertical component of the earth's magnetic field in gammas. Base stations for determining magnetic diurnal variations were established on the main baseline at 400 ft. intervals.

Approximately 500 stations were established in the 8.2 mile survey.

A study of the magnetic results shows that relief varies from -60 to 2,625 gammas, with an average background of about

500 gammas.

Results of the magnetic survey indicate that, in general, there is a marked distinction between sedimentary facies and gabbro intrusives, the latter reflecting greater magnetic intensity.

The most important magnetic feature is a 900 ft. long, 100 ft. wide, magnetic anomaly, trending east-west and open for extension in a westward direction, located in the western portion of the property from station 13 on Line 4 East to station 15 on Line 4 West. Maximum magnetic intensity is 2,625 gammas, or greater than five times normal background. At location 15+00 S on Line 0, is a small trench dating back some 20 or 30 years ago, too overgrown to determine the reason for the trench.

## 2) SELF POTENTIAL SURVEY:

Purpose of the Survey: The self potential survey, continuous line method, was conducted in order to measure the natural electromotive force of sulphide bodies in an oxidizing-reducing environment as a means of attempting to locate base and precious metal deposits. A Sharpe V.P.-6 ground Voltmeter was employed.

Method of Operation: From north-south lines used for the magnetic survey, self potential stations were established each 50 ft. All readings were tied into and reduced to the absolute readings of the first phase of the base control line through a three station overlapp. The corrected numerical values are all moisture compensated.

A total of 868 stations were established in the 8.2

mine survey.

Interpretation: A difference of 50 millivolts represents the anomalous threshold. Low intensity anomalies have a relative difference of 50-100 M.V., medium intensity zones are between 100-200 M.V., while high intensity anomalies exist where the relative difference exceeds 200 M.V.

More negative values (more highly anomalous zones) are recorded for the same body near surface than at depth and, similarly, over massive sulphide bodies than the disseminated varieties.

Results: One line only crosses the location of the No. 1 vein, and a -290 millivolt reading was noted at this point. This vein is known to contain lead, copper, gold, and silver. No other anomalous conditions were noted in the surveyed area.

CONCLUSIONS:

A 900 ft. long, east-west trending, magnetic anomaly, open for extension westward, was detected in the west central portion of the claim group. The maximum response, in the location of an old trench, is more than five times normal background.

The magnetic survey differentiated between sediments and basic intrusives.

A high intensity, self potential response, was recorded at the location where one line crosses the No. 1 vein. This anomaly is likely caused by sulphide concentrations within the vein.

RECOMMENDATIONS:

1. As noted in my report of March 14th last, test pit and bulk sample vein No. 1, as well as two old test pit locations situated north of this vein. At the same time, test pit and sample the recently found old pit location on a magnetic anomaly at station 15, Line 0. The estimated cost of this program is

\$2,600.00

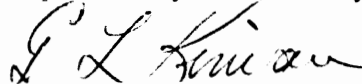
2. As similarly recommended in my report of March 14th last, three diamond drill holes, each 100 ft. in length, would test the depth extensions of No. 1 vein.

Considering that results warrant, a 100 ft. diamond drill hole would investigate that area at station 15, Line 0. The estimated cost of four drill holes, each 100 ft. in length, would be

\$2,600.00  
\$5,200.00

Further work, including more diamond drilling, would be contingent upon the results of this initial program.

Respectfully submitted,



G.L. Kirwan, B.Sc.  
 Consulting Geologist

GLK/lk

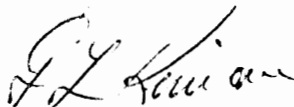
Toronto, Ontario  
 October 5, 1966

CERTIFICATE

I, Gerald L. Kirwan of the city of Toronto in the Province of Ontario, hereby certify as follows:

1. THAT I am a geologist with offices at 160 Bay St., Toronto, and 130 Kingslake Road, Willowdale, Ontario.
2. THAT I am a graduate of Carleton University, B.Sc., 1957, and that I have practised my profession continuously since graduation.
3. THAT I am a Fellow of the Geological Association of Canada.
4. THAT I have no direct or indirect interest, present or expectant, in the claims forming the property of Kelly-K Mines Ltd. or in the shares or securities of this company.
5. THAT the accompanying report has been prepared by myself and is based upon supervision of the programs herein noted.

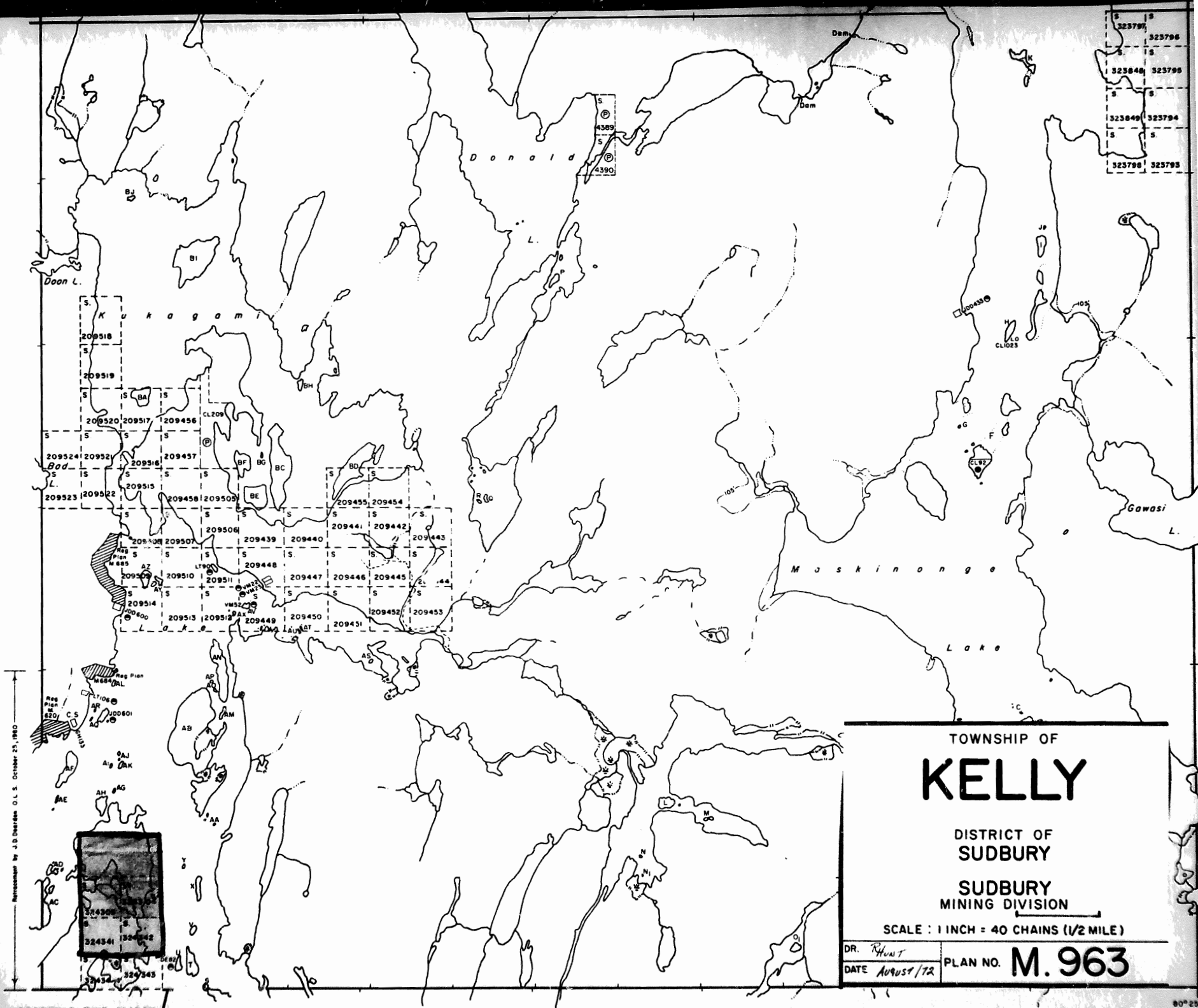
Dated at Toronto, Ontario, this 5th day of October, 1966.



G.L. Kirwan



RATHBUN TWP. M.1071



SCADDING TWP. M.1092

DAVIS TWP. M.748

TOWNSHIP OF

**KELLY**

DISTRICT OF  
SUDBURY

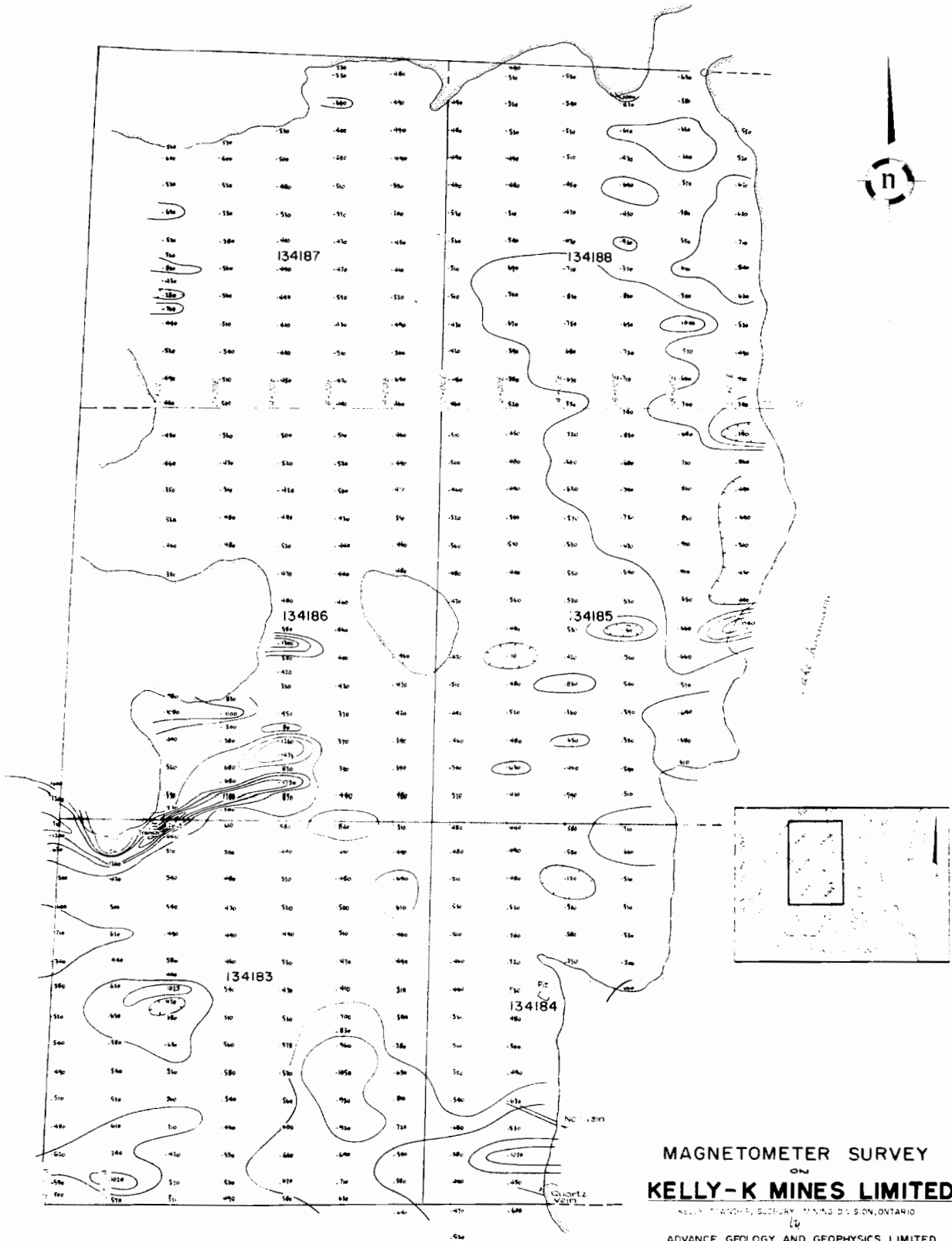
SUDBURY  
MINING DIVISION

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

DR. *RHUNT*

DATE *AUGUST 1972*

PLAN NO. **M.963**



**LEGEND**

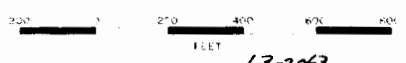
Relative value of magnetic field in gammas (vertical Component)

Magnetic contour - contour interval 300 gammas

Magnetic depression

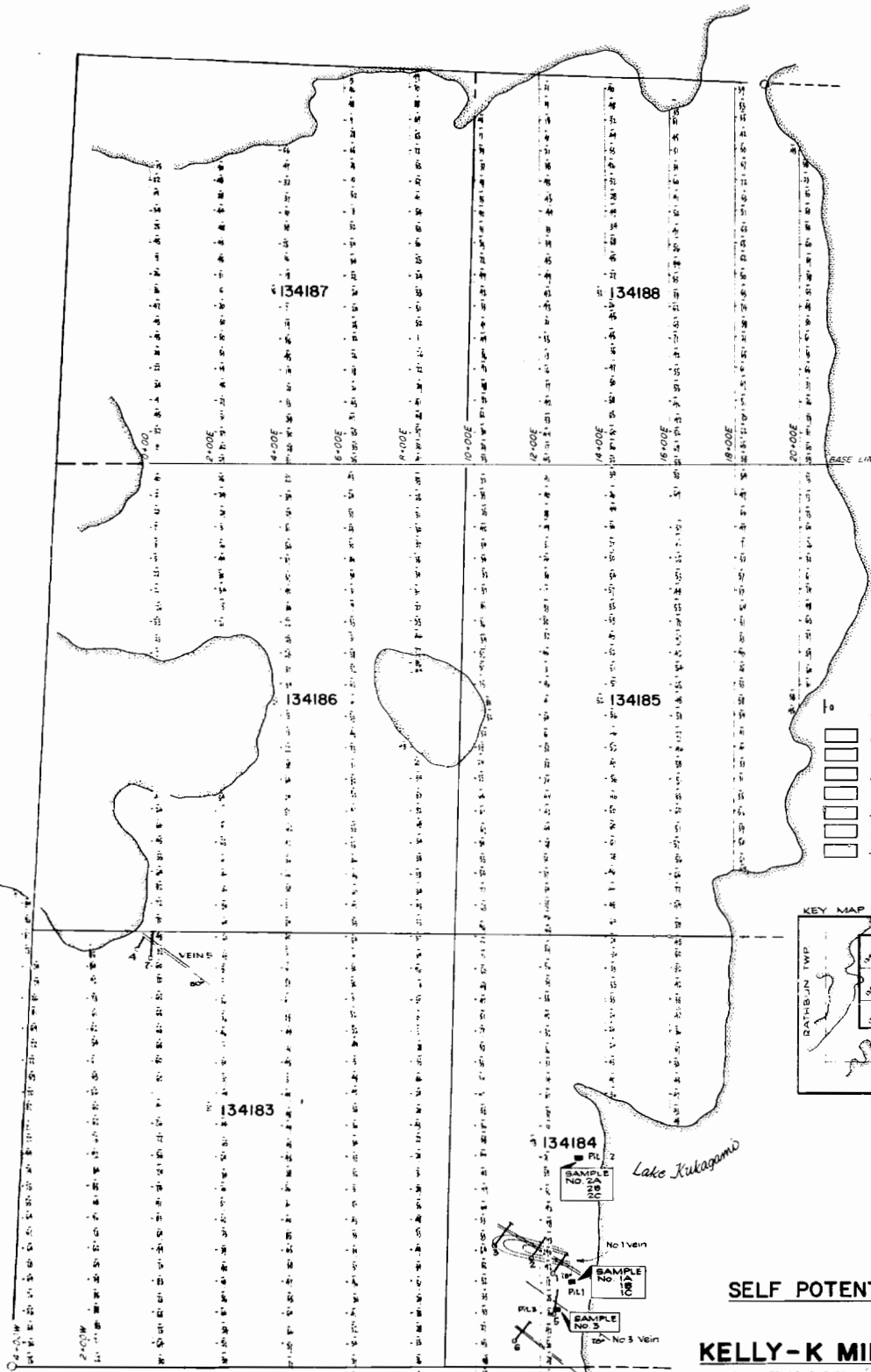
**MAGNETOMETER SURVEY**  
**ON**  
**KELLY-K MINES LIMITED**

NEELY TRENCH, SUDBURY, MINING DIVISION, ONTARIO  
 ADVANCE GEOLOGY AND GEOPHYSICS LIMITED  
 TORONTO, CANADA

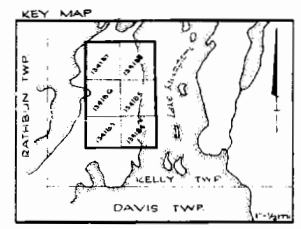
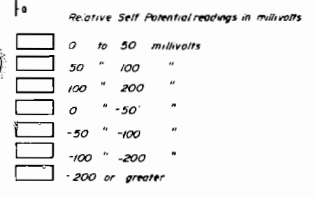


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**LEGEND**



**SELF POTENTIAL SURVEY**

**KELLY-K MINES LIMITED**

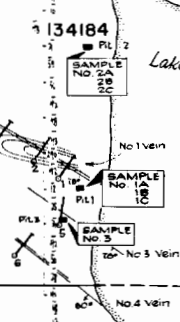
KELLY TOWNSHIP, SUDBURY MINING DIVISION, ONTARIO

by  
ADVANCE GEOLOGY AND GEOPHYSICS LIMITED  
TORONTO, CANADA



**BULK SAMPLING RESULTS**

SAMPLE NO.	Au oz./ton	Ag oz./ton	Cu.%	Pb%
1A	26	50	.71	1.10
1B	ni	64	.48	1.50
1C	ni	ni	.48	2.08
2A	ni	-	.08	.06
2B	ni	-	.08	.06
2C	ni	-	.02	.06
3	O2	8.30	.48	20.50



KELLY-0013-A1, 63-2063 #2

G.H.K. 1966

