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REPORT ON

GEOLOGICAL AND GROUND SCINTILLOMETER SURVEY

ON PROPERTY OF

HERCULES URANIUM MINES LIMITED

HARROW TOWNSHIP

SUDBURY MINING DIVISION

ONTARIO

Prepared by:

J. D. McCannell, Consulting Geologist for

GEO-TECHNICAL DEVELOPMENT COMPANY LIMITED
24 WELLINGTON STREET WEST
TORONTO, ONTARIO

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PLAN NO. 1-A Scintillometer Survey Data and Geology
(Drawing Ref. 66-8-55)

PLAN NO. 1-B Scintillometer Survey Data and Geology
(Drawing Ref. 68-8-55)

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Hercules Uranium Mines Limited,
85 Richmond Street West,
Toronto, Ontario

Gentlemen:

This report describes the results of a geological and scintillometer survey conducted over your company's group of claims located in Harrow Township, Sudbury Mining Division, Ontario.

This work was carried out by Geo-Technical Development Company Limited during the period from July 4th to August 19th , 1955 and the results are depicted on Plans Nos. 1-A and 1-B accompanying this report. North-south traverse lines were cut at 300 foot intervals and were used as controls for both the geological mapping and the scintillometer survey work.

The topography of the area is extremely rugged and the entire claims group is underlain by Lorrain quartzite. This quartzite is cut by numerous thin lamprophyre sills and dykes.

The readings obtained in the scintillometer survey varied within an extremely narrow range with the background in the range of .012 milli-roentgens. No significant radioactive indications were obtained throughout the entire survey.

PROPERTY, LOCATION AND ACCESS

The property of Hercules Uranium Mines Limited discussed in this report consists of a group of 9 mining claims and comprises the northwest quarter of the North half of Lot 4, Concession A and south half of Lots 3 and 4, Concession 1, Harrow Township, Ontario. These claims are further described as follows:

Claims S-85180, 85182, 85186, 85187, 85188, 85189, 85190, 85191, 85192

This claims group is located one half mile east of the south end of La Cloche Lake. La Cloche Lake is approximately 8 miles south of the town of Massey and can be reached by a good gravel road from that point. This road terminates at Hugh's Tourist Camp on the north side of La Cloche Lake. A boat and motor can be rented at Hugh's Tourist Camp and it is only a matter of about 5 miles by boat to the southeast end of La Cloche Lake and then 1/2 mile walk over a fairly good trail to the property.

TOPOGRAPHY

The topography of the general area is extremely rugged and hills rising 500 to 800 feet above the level of the lake are not uncommon. These hills are almost entirely rock outcrop with good stands of hardwood timber in the valleys and depressions.

The property discussed in this report is traversed by a deep east-west draw with the topography rising abruptly to the north and south. The bottom of this draw provides a water course draining a series of small ponds and beaver marshes. The claims group is approximately 80% outcrop with a dense growth of timber in the bottom of the draw and part way up the slopes of the hills.

GEOLOGY

The area is located within a belt underlain by Lorrain quartzite and high quartzite hills are characteristic of the topography.

The Lorrain quartzite is an Upper member of the Cobalt series and is a massive dense white quartzite only rarely showing good bedding.

On the property of Hercules Uranium Mines Limited the underlying rocks are almost entirely Lorrain quartzite which is exposed in extensive

outcrops on hills rising to 600 or 700 feet above the level of La Cloche Lake. This quartzite strikes east-west and dips vertical to steep south. It is cut by numerous narrow lamprophyre dykes and sills. A strong fault or shear zone follows a deep east-west depression across the central part of the claim group. The quartzite is fairly well sheared for several hundred feet up the slope of the hills on either side of the draw. All the shearing strikes and dips parallel to the bedding in the quartzite.

A north-south fault was observed following a depression through claims 85187 and 85190. Near the north part of claim 85187 this fault is well exposed along the bed of a creek where it offsets a lamprophyre dyke. The fault is very tight and for the most part is marked only by a fracture with about one inch or less of gouge.

Some minor pyrite mineralization was observed associated with the main east-west shear or fault. The best evidence of sulphide mineralization observed on the claims group was in a small pit about 200 feet west and slightly south of the small beaver pond at the east end of the claims group. At this point fairly heavy disseminated pyrite with only a slight trace of chalcopyrite is exposed in sheared quartzizite across a width of two feet. About 75 feet to the west and north pyrite was noted in a highly sheared lamprophyre dyke.

GROUND SCINTILLOMETER SURVEY

Scintillometer readings were taken at 50 foot intervals along the north-south traverse lines and the east-west base lines. These readings are shown on Plans Nos. 1-A and 1-B along with the results of the geological survey. The readings, expressed in milliroentgens, are shown to the east of the traverse lines.

The background for the entire survey was .012 to .013 milliroentgens and the highest readings observed were .017 mr/hr. These latter readings occur along the base line on claim 85187. Readings in this low range do not indicate the presence of significant radioactivity.

Particular attention was paid during the course of the geological survey to note any signs of radioactive mineralization but no indications of this type of mineralization were observed.

INSTRUMENT DATA

The instrument used for recording radioactivity was a "Portable Scintillator Counter" Model III with ranges of .025, .05, .25, .5, 2.5 and 5.0 milliroentgens per hour. The instrument has an accuracy of 5% of three-quarters full scale. Standard procedure was to calibrate the instrument with a standard radioactive chip of 0.19 milliroentgens per hour. Check readings were made several times each day to determine possible changes in the instrument during the traverse run. This check also served to establish a background count for the area being surveyed.

CONCLUSIONS AND RECOMMENDATIONS

The geological and scintillometer surveys conducted over the Hercules Uranium Mines Limited group of claims located in Harrow Township and discussed in this report did not disclose the presence of radioactivity or other economic mineralization on the property.

The scintillometer survey showed a very low background and the readings varied within an extremely narrow range indicating that no radioactivity of economic consequence exists on the surface within the claims group.

The geological survey showed the ground to be underlain almost entirely by Lorrain quartzite intruded by minor lamprophyre sills and dykes. A strong regional shear or fault extends in an east-west direction through the central portion of the claims group but only minor pyrite mineralization was observed associated with this structure.

On the basis of the foregoing conclusions, no further exploration work is recommended on this claims group.

SURVEY DATA

A geological and ground scintillometer survey was conducted over the nine claim group property of Hercules Uranium Mines Limited located in Harrow Township, Sudbury Mining Division, Ontario.

The survey was conducted by Geo-Technical Development Company Limited during the period from July 4th to August 19th, 1955 and the results are shown on Plans Nos. 1-A and 1-B accompanying this report.

An east-west base line was established across the property and north-south picket lines were turned off at right angles to this base line at 300 foot intervals. A total of 9.14 miles of line was cut and chained to lay out the picket line grid over the property.

Scintillometer readings were taken at 50 foot intervals along the picket lines and the results are plotted on the accompanying plans to

the east of the traverse lines expressed in milliroentgens and shown by contour lines. A total of 9.14 miles of line was surveyed by the scintillometer requiring 990 station readings.

Geological traverses were conducted over the same line grid and a total of 9.14 miles of line was mapped.

The number of eight-hour man days required to complete this work is as follows:

	(8 hour) Man Days	Attributable to Assessment Work
Line cutting and chaining	38 x 4	152
Geological mapping	10 x 4	40
Scintillometer surveying	9 x 4	36
Calculation and Interpretation	13 x 4	52
Drafting	12 x 4	48
Office typing and supervision	8 x 4	32
Totals	90	360

9 x 4

36 man

Respectfully submitted,

GEO-TECHNICAL DEVELOPMENT COMPANY LIMITED

Line - 152
Geol. 120
Scint 36
308

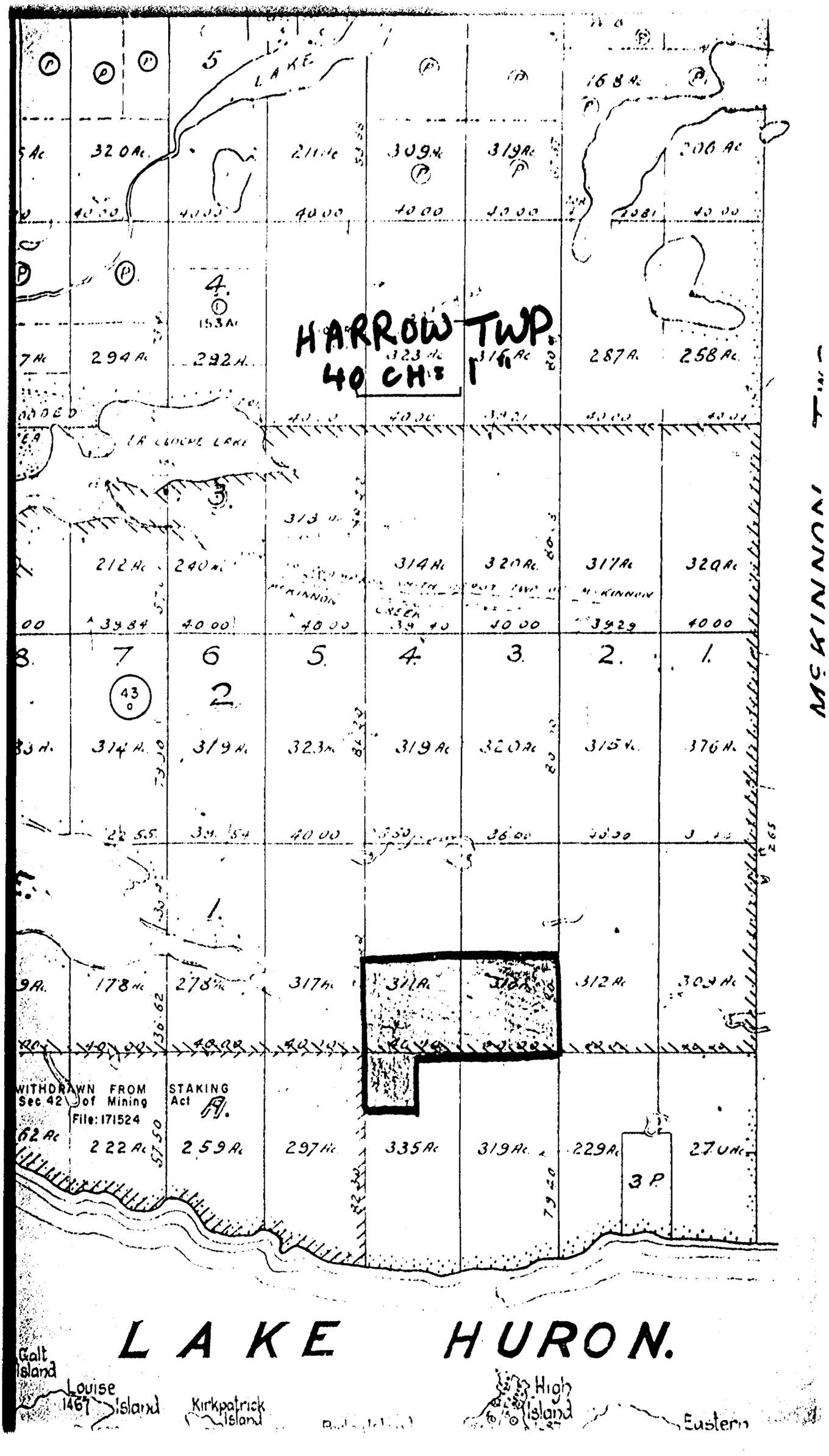
34
9 | 308
27
38
36
2

J. D. McCannell,
Consulting Geologist

Toronto, Ontario

August 31st, 1955

JDMcC/hfp

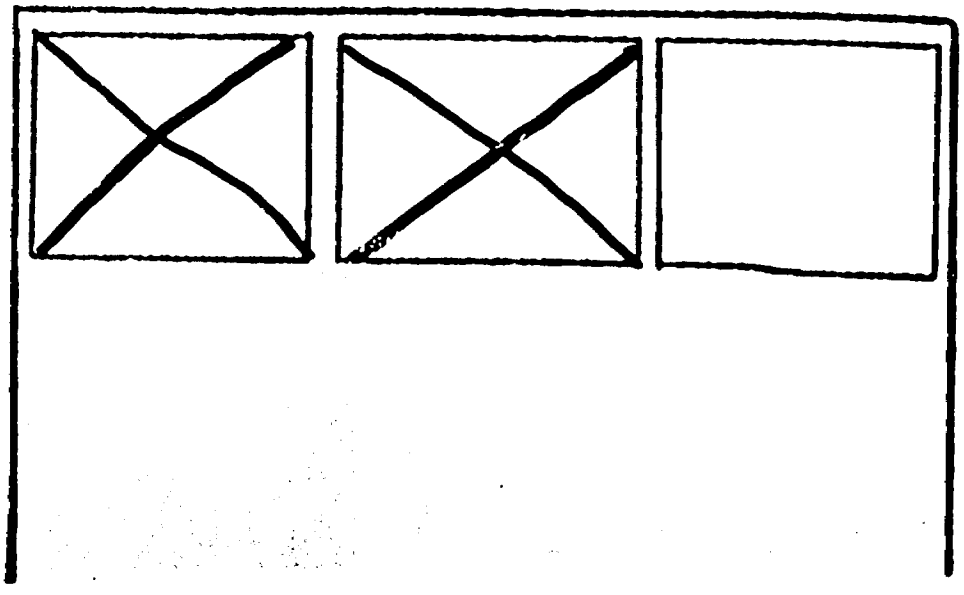

HARROW TWP.
40 CH:
LAKE
LAKE HURON.
McKINNON TWP.
WITHDRAWN FROM STAKING
Sec 42 of Mining Act
File: 171524
Galt Island
Louise Island
1467
Kirkpatrick Island
High Island
Eastern

SEE ACCOMPANYING MAP(S) IDENTIFIED AS

HARROW-0012-A1-#1

HARROW-0012-A1-#2

LOCATED IN THE MAP CHANNEL IN THE FOLLOWING SEQUENCE (X)



NORTH ASTRONOMIC

WOODED AREA

GLACIAL DEBRIS

BIRCH MAPLE OAK

OUTCROP AREA

85192

Sheared Impure White Quartzite

Old Bush Road

BIRCH OAK MAPLE POPLAR

85191

OAK, MAPLE, BIRCH

PRECIPICE

8519

BIRCH POPLAR OA

3 E 6 E 9 E 12 E 15 E 18 E 21 E 24 E 27 E 30 E

BASE LINE

WOODED AREA

GLACIAL DEBRIS

OAK BIRCH MAPLE

85180

BIRCH, OAK, MAPLE, POPLAR

85188

85182

NOTE :

SURVEY DATA OF CLAIM 85182 ON PLAN 1-B 68-8-55

LEGEND

- LINES CUT AND CHAINED, SCINTILLATOR READINGS OBSERVED
- OUTLINE OF HIGHER GROUND
- SWAMP AND AREA OF LOWER GROUND
- BOUNDARY BETWEEN OUTCROP AREA AND DRIFT AREA
- SHEARING
- LAMPROPHYRE DYKES
- FAULT OR SHEAR
- ATTITUDE OF SHEARS (60°)
- VERTICAL BEDDING

NOTE :

ALL OUTCROP EXCEPT THAT SHOWN AS LAMPROPHYRE DYKES, IS WHITE LORRAINE QUARTZITE

HERCULES URANIUM MINES LIMITED

SCINTILLATOR SURVEY DATA

AND

GEOLOGY

HARROW TOWNSHIP

DISTRICT OF SUDBURY

ONTARIO

SURVEY BY

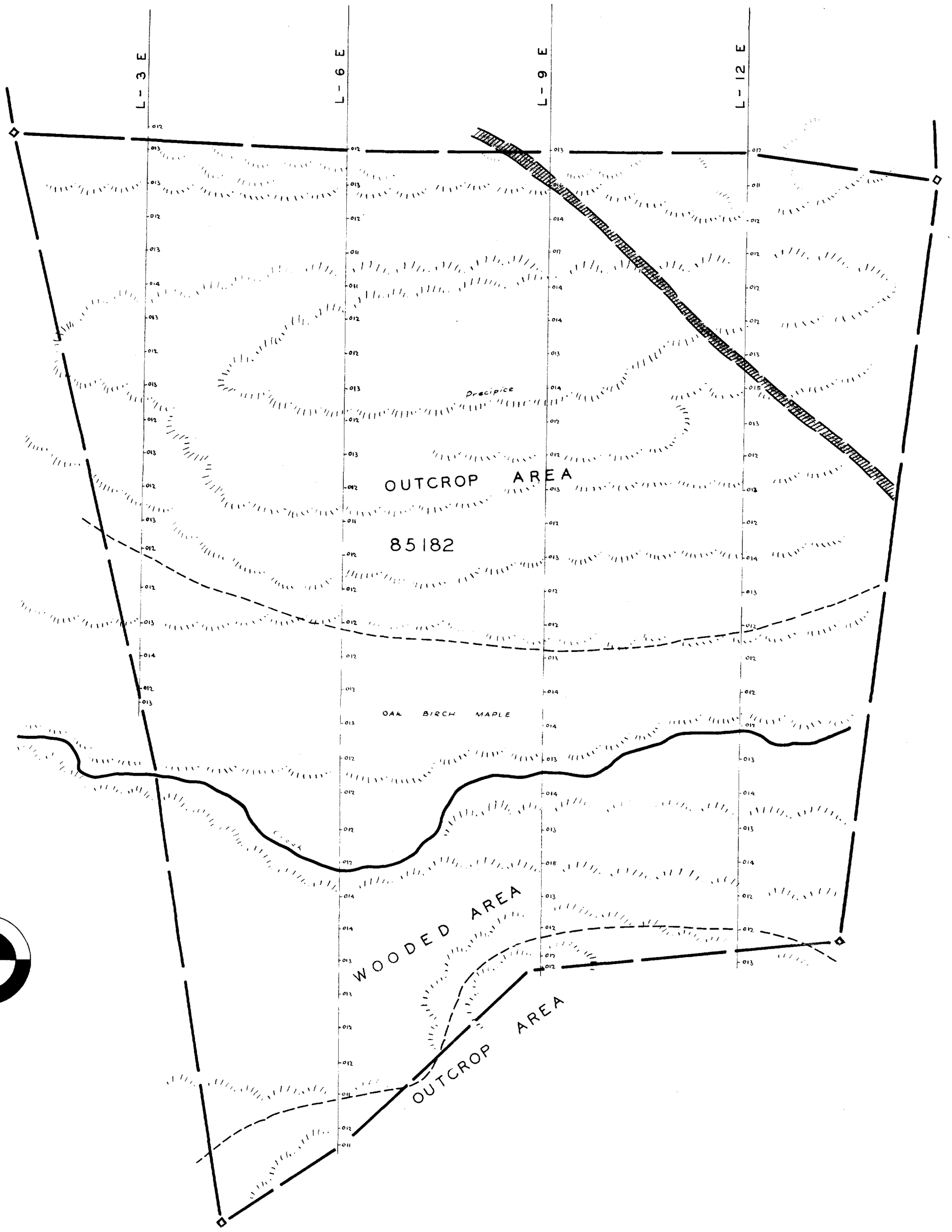
GEO-TECHNICAL DEVELOPMENT COMPANY LIMITED

PLAN NO-1-A

AUGUST 1955

SCALE: 1" = 100'

100 50 0 100 200 300 400 500



FOR LEGEND SEE PLAN NO. 1-A 66-8-55

HERCULES URANIUM MINES LIMITED

SCINTILLATOR SURVEY DATA

AND

G E O L O G Y

HARROW TOWNSHIP

DISTRICT OF SUDBURY

ONTARIO

SURVEY BY

GEO-TECHNICAL DEVELOPMENT COMPANY LIMITED

PLAN NO. 1-B

AUGUST 1955

SCALE 1" = 200'

200 100 0 200 400 600 800 1000

AUX. BASE- LINE

85190

85189

85191

DRIFT FILLED DRAW

AREA OF BEST SULPHIDE SHOWING

LAKE

OAK, MAPLE, BIRCH

PRECIPICE

Old Pit in Sheared Quartzite with Scant Pyrite

BIRCH POPLAR OAK

85187

BIRCH OAK MAPLE

OUTCROP AREA

85186

21 E 24 E 27 E 30 E 33 E 36 E 40 E 43 E 46 E 49 E

E-W LINE

BIRCH, OAK, MAPLE, POPLAR

85188

PRECIPICE

WOODED AREA

GLACIAL DEBRIS

BIRCH OAK MAPLE

OUTCROP AREA

URANIUM MINES LIMITED

SCINTILLATOR SURVEY DATA
AND
GEOLOGY

HARROW TOWNSHIP
DISTRICT OF SUDBURY
ONTARIO

SURVEY BY

AL DEVELOPMENT COMPANY LIMITED

AUGUST 1955

SCALE 1"= 100'

100' 50' 0 100' 200' 300' 400' 500'

LOCATION MAP
SCALE: 1" = 1/2 MILE

JACK HUGHES TOURIST CAMP

LA CLOCHE LAKE

CAMP

85192 85191 85190 85189
85160 85168 85187 85186
85162

AREA SURVEYED PLAN NO 1A 66-8-55

AREA SURVEYED PLAN 1-B 66-8-55

LAKE HURON

HARROW TOWNSHIP
Mc KINNON TOWNSHIP

HARROW-0012-AI-#1

A 66-8-55