



31C15NW0085 63.2670 CLARENDON

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The President and Directors,
Consolidated Golden Arrow Mines Limited,
13th Floor,
25 Adelaide Street, West,
Toronto, Ontario

Gentlemen:

After the completion of a program of radiation reconnaissance survey and prospecting on your Coxvale Lake property in Clarendon Township of Eastern Ontario, a program of plugger hole sampling was carried out in October, 1969, to check several uranium showings located on the property. The program of plugger hole sampling was followed by a combined magnetic and radiation survey using north-south picket lines spaced at intervals of 400 feet normal to a base line bearing N 72° E across the centre of an eight-claim group where the uranium showings are located. The eight claims are contiguous and are numbered as follows:

EO-216127 to EO-216130, inclusive,

EO-216142, EO-216143, EO-216150, EO-216151

The magnetic and scintillometer survey data are included on a plan to a scale of 1 inch = 200 feet, dated January, 1970. Location and results of the plugger hole sampling are added to the plan showing the reconnaissance survey results dated July, 1969, and are also tabulated in this report.

ACCESS -

The claims are accessible by Highway 509 to Clarendon Station, then by gravel road to Coxvale Lake.

GENERAL GEOLOGY -

The area of the property as depicted by O. D. M. Geological Map No. 1956-4 shows the property underlain by the Cross Lake granite gneiss and biotite granite gneiss formation which strikes east-westerly to Palmerston Township. An east-west anticlinal axis crosses the central part of the property. Several pegmatite dykes intrude the gneiss in this area.

RESULTS OF ROCK SAMPLING -

The following table lists the samples which are assayed for

U₃O₈:

<u>Sample No.</u>	<u>Location</u>	<u>Field Reading MR/HR</u>	<u>Rock Type</u>	<u>Assay U₃O₈ %</u>
3	EO-216128	.035	Pegmatite	0.22
15	EO-216129	.07	Leucocratic gneiss	0.02
17	Pit #2 EO-216143	.045	Grey pegmatite	0.02
18	Just N. of Pit #2 EO-216143	.065	Leucocratic gneiss with uranium stain	0.02
19	N. of Pit #2 EO-216143	.015	Red & White pegmatite with uranium stain	0.07

<u>Sample No.</u>	<u>Location</u>	<u>Field Reading MR/HR</u>	<u>Rock Type</u>	<u>Assay U₃O₈ %</u>
20	S. of Pit #3 EO-216143	.045	Leucocratic pegmatite with some red & uranium stain, few cubes magnetite	0.08
21	S. of Pit #3 EO-216143	.090	Leucocratic pegmatite with red stain & magnetite. Contact with mica quartz gneiss	0.14
22	Pit #3 EO-216143	.52	Leucocratic pegmatite & biotite granite with red stain & with U ₃ O ₈ stain	0.68
4490	Pit #3 EO-216143	.52	Same as sample #22	0.08
4491	S. of Pit #3 EO-216143	.09	" " " #21	0.08
4492	EO-216129	.07	Leucocratic gneiss	0.09
4493	EO-216128	.035	Pegmatite	0.07
4494	EO-216128	.03-.075	Pegmatite	0.03
4495	EO-216128	.07	Pegmatite	0.07

Note: Samples Nos. 4490 to 4495 were from fresh rock obtained by drilling and blasting plugger holes.

MAGNETIC SURVEY DATA -

The magnetometer survey was carried out along lines spaced at intervals of 400 feet normal to a base line through the centre of the surveyed area bearing N 72° E. Readings were taken at 100 foot intervals. A total of 8.9 miles of line, including base line, was cut and

chained. Readings were taken from 435 stations spaced 100 feet apart using a Fluxgate MF-1 magnetometer with a sensitivity of 20 gammas on the 1,000 gamma range.

SCINTILLOMETER SURVEY DATA -

The scintillometer survey was carried out by taking radiation readings from the same stations used in the magnetometer survey using a McPhar TV-4 scintillometer. Thorium readings in counts per minute were plotted west of the lines and uranium readings in counts per minute to the east of the magnetic readings on the east of the lines.

SURVEY RESULTS -

Isomagnetic lines reach a maximum of little over 650 gammas and confirm a general strike of about N 70° E.

Scintillometer readings of 200 c. p. m. to 655 c. p. m. U_3O_8 located along axes striking approximately N 65° E along the assumed location of the anticlinal axis were obtained in the scintillometer survey. These readings were apparently in the same zones indicated by the previous Radiation Reconnaissance Survey where assays of between 0.02% and 0.68% U_3O_8 were obtained. It was not possible to tie in the showings and pits to the new grid lines as there was too much snow cover at the time the lines were cut.

CONCLUSIONS AND RECOMMENDATIONS -

The work to date has disclosed pegmatites assaying from 0.02% to 0.68% U_3O_8 . The pegmatites (carrying the good assays) are located near or along the anticlinal axis which passes through the southwest arm of Coxvale Lake. However, the latest work was not done until after the snow covered the pits so that it was not possible to tie them in to the new grid lines in order to correlate the spectrometric scintillometer survey results with those of the previous radiation reconnaissance survey.

The writer recommends:

- 1) That after breakup the showings be tied in to the grid lines;
- 2) That enough assessment work should be applied for to hold the eight claims covered by the magnetometer and scintillometer surveys in good standing;
- 3) That the other claims of the group be dropped.

Respectfully submitted,

CANA EXPLORATION CONSULTANTS LIMITED

H Parliament

H. Parliament, F. G. A. C., P. Eng.

HP:rk
Encl.

Toronto, Ontario
January 20, 1970

HP

Appendix - Details of Instruments, etc.

(1) Magnetometer Survey -

- a) Instrument used: Fluxgate MF-1 magnetometer, Serial #30536, manufactured by Sharpe Instruments of Canada Limited, Toronto.
- b) Specifications: Fluxgate MF-1 magnetometer maximum sensitivity = 20 gammas on 1,000 gamma range; ranges \pm 1,000, 3,000, 10,000, 30,000, 100,000 gammas; batteries: 12 x 1.5 V flashlight "C" cells.
- c) Survey procedures: For the magnetometer survey, base-check method was used with the base control station established on L 4 W, Main Base Line and control stations at L 16 W, L 28 W and L 40 W, Main Base Line.

(2) Scintillometer Survey -

- a) Instrument used: Model TV-4 scintillometer, No. 468-10, McPhar Geophysics Limited, Toronto.
- b) Specifications: Model TV-4 scintillometer: 4 threshold rate meter, plus three threshold scaler. Scaler at 1.3, 1.6 and 2.5 Mev.; measurement ranges 0-100,000 c. p. m. on rate meter, 0-100,000 total counts on scaler. Counts can be accumulated over a 1, 2 or 5 minute period on scaler. The instrument operates from three "D" size flashlight type alkaline cells. On the threshold 2, the instrument registers approximately 50 counts per minute on an in-site measurement over homogeneous material containing one part per million uranium. The sodium iodide crystal in the probe unit is 1 3/4 inches in diameter and 2 inches thick. The instrument weighs 4 pounds.
- c) Survey procedures: The instrument was calibrated and checked every day. All three scaler readings were taken during survey and the counts were then resolved into net counts for uranium and thorium by simple calculation based on comparison of the counts registered at the different energy levels by the scaler as per instructions given by the manufacturer.

Miller Twp. (M.127)

THE TOWNSHIP
CLAIM OF MAP
CLARENDON

COUNTY OF
FRONTENAC

EASTERN ONTARIO
MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

- PATENTED LAND (P)
- CROWN LAND SALE (C.S.)
- LEASES (L)
- LOCATED LAND (Loc.)
- LICENSE OF OCCUPATION (L.O.)
- MINING RIGHTS ONLY (M.R.O.)
- SURFACE RIGHTS ONLY (S.R.O.)
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED
- TRAILS

NOTES

This Map Is Not To Be Used
FOR SURVEY PURPOSES

Lot And Concession Lines Shown Hereon Are
Projected From The Best Information Available,
But Their True Position Is Not Guaranteed.
For Official Survey Purposes Consult The
Original Survey Plans And Field Notes Of
Records In The Dept. Of Lands & Forests.

400' Surface rights reservation around
Lakes and Rivers.

Flooded Lands Shown Thus:

Flooding Rights Reserved On Cross Lake
And Fawn Lake To Elevation 110.5'.
File: 126113.

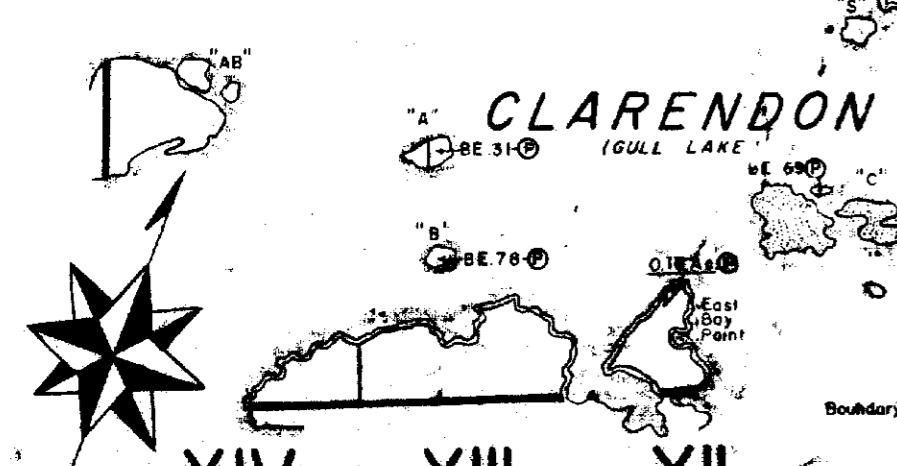
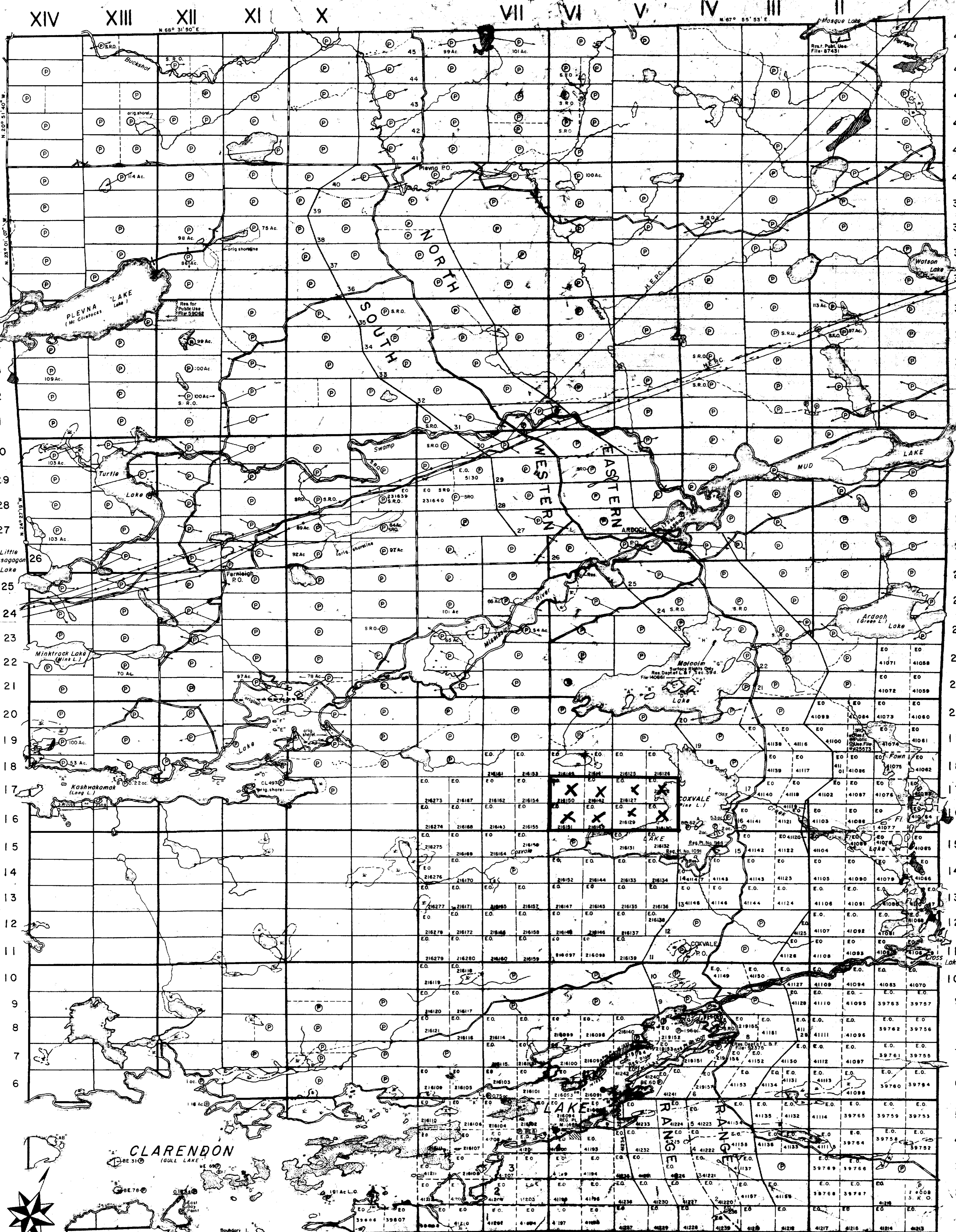
Original Survey Line Of Frontenac Road
Thus:

ISLANDS IN CLARENDON LAKE SHOWN THUS:

SURFACE RIGHTS ONLY WITHDRAWN FROM STAKING.
FILE: 160708

Barrie Twp. (M.50)

Palmerston Twp. (M.139)

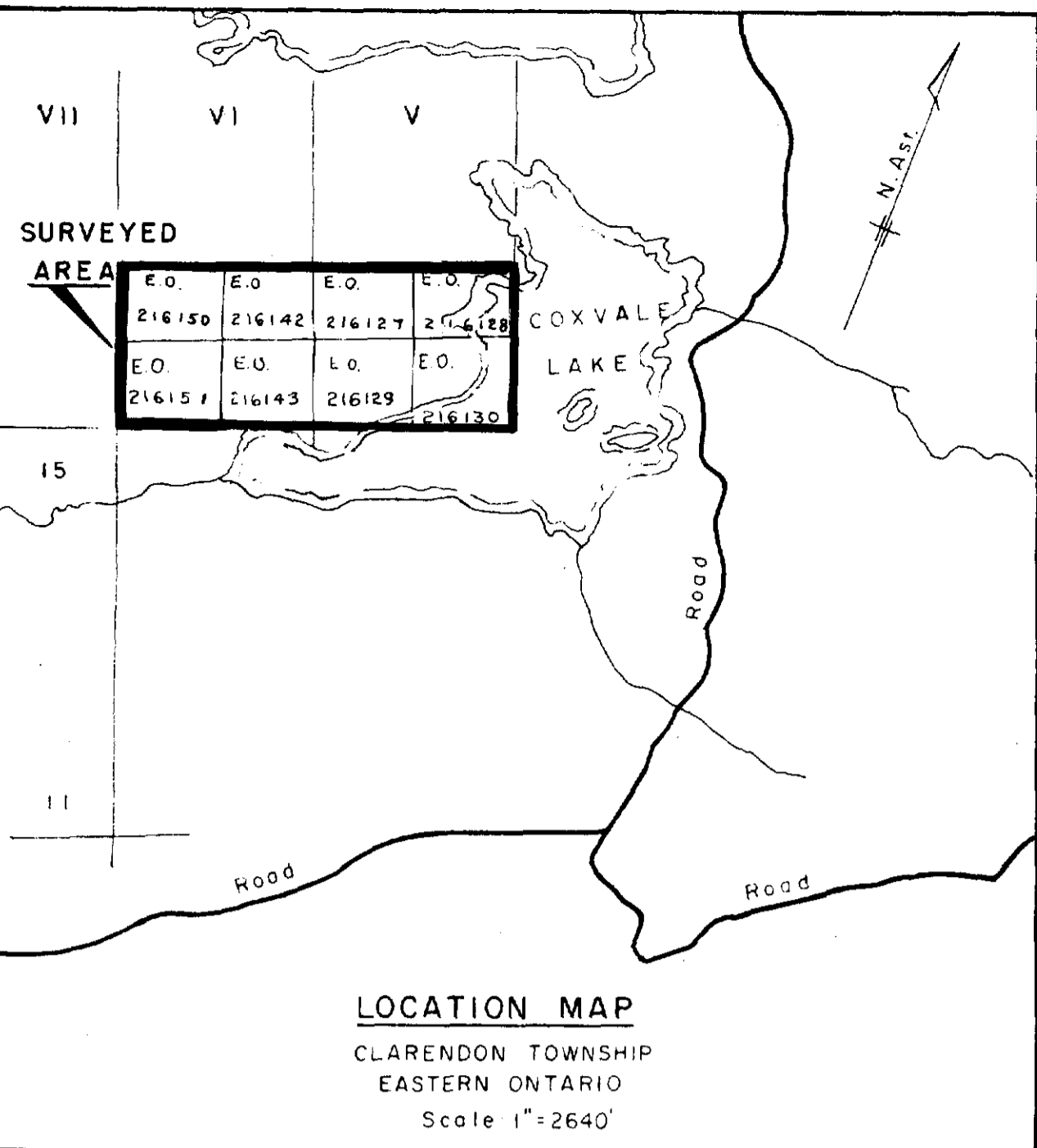


Twp. (M.109)

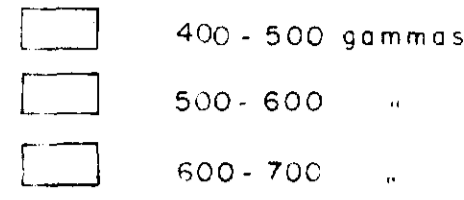
Owen Twp. (M.136)

PLAN NO.-M.77

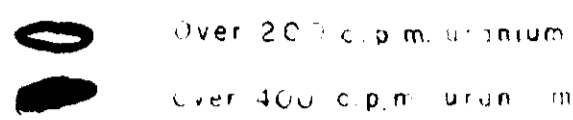
DEPARTMENT OF MINES
-ONTARIO-



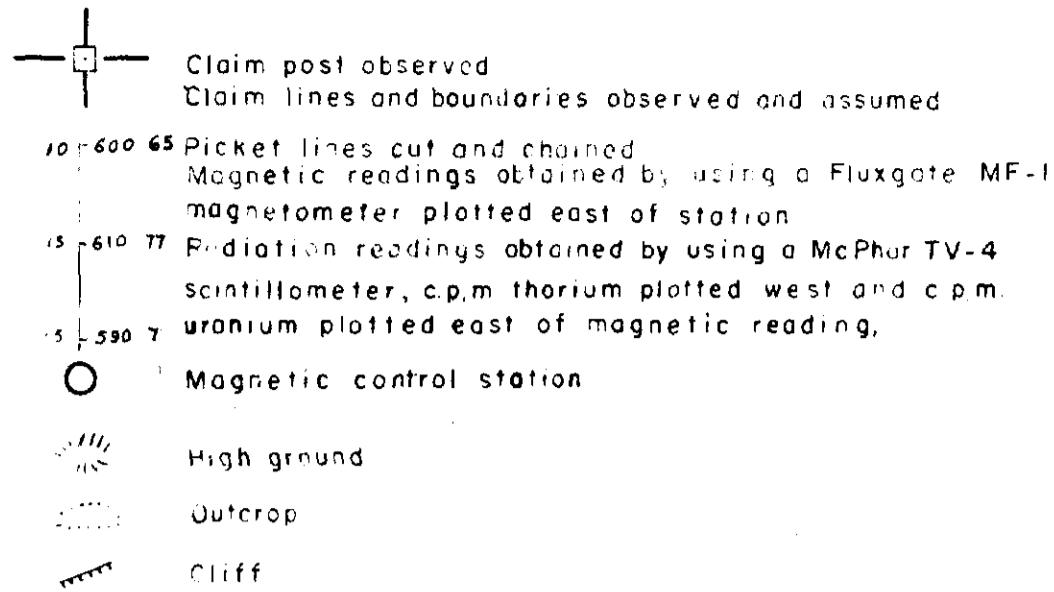
MAGNETIC CONTOURS



RADIATION CONTOURS



LEGEND



MAGNETIC AND SCINTILLOMETER SURVEY DATA

CONSOLIDATED GOLDEN ARROW MINES LTD.

8 CLAIMS

COXVALE LAKE PROPERTY

CLARENDON TOWNSHIP

EASTERN ONTARIO

SCALE: 1" = 200'

JANUARY 1970

CANA EXPLORATION CONSULTANTS LTD.

A. Parliment

