



41P15NW8250 63.2209 BANNOCKBURN

010

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## I. GENERAL STATEMENT

The magnetic survey described herein covers 88 claims in Bannockburn Township, Ontario.

The survey was carried out during two periods, each immediately following a staking period. During the first period of geophysical work, October 1-8, 1966, three (3) contiguous claim groups (3 mining licenses totaling 54 claims) had been staked and portions of these were magnetically surveyed. During the second period of geophysical work, March 2-26, 1967, two (2) more claim groups (2 licenses totaling 34 claims) which had been staked were magnetically surveyed along with additional portions of the claims staked prior to the first period of geophysical work.

The assessment work breakdown has been reported individually for the 5 claim groups in line with the original mining licenses and in keeping with the limitation on assessing drill work over more than 18 claims.

Some variations in the amount of picket and technical work reported for different claim groups has resulted from the fact that the survey was run during two different periods, and that rates of coverage and efficiencies were greater during one period than the other. Also, when total time was distributed to all 5 claim groups, time on first three claim groups was somewhat more than shown on Work Report forms recorded at Elk Lake on September 15th (due to 10 hour work days not being considered in original breakdown).

## II. LOCATION AND ACCESS

The project area (claims and magnetometer survey) as described in this report, is in Bannockburn Township, District of Timiskaming, east-central Ontario, Canada. General location of the project area with respect to points in the northern United States and southern Canada is shown on Map 1 - 1967 (scale 1" = 120 miles).

Access to Bannockburn Township from nearby communities is shown on Map 2 - 1967 (scale 1" = 8 miles). Highways 65, 66 and 11 are paved roads.

Map 3 - 1967 (scale 1" = 2 miles), shows access to project area from Matachewan via highway 566 (gravel surface), running west-erly for approximately 15 miles and then southerly via logging road for about 5 miles. The logging road is owned and maintained by Ed Wilson Lumber, Ltd., of Kirkland Lake, Ontario.

II. Location and Access Cont'd:

Map 4 - 1967 (scale 1" = 400 feet), shows location of claims, magnetometer survey lines, logging roads, and lakes and ponds within the project area.

III. PRESENT OWNER OF CLAIMS

54-36 Incorporated, Mining License T-57  
140 West 51st Street  
New York, New York  
U.S.A.

IV. NAME OF GROUP PERFORMING WORK

James W. Sewall Company  
Consulting Geologists  
147 Center Street  
Old Town, Maine  
U.S.A.

V. GEOLOGICAL DATA

Geologic mapping by Rickaby (1932) shows the southern portion of the claim groups (described herein) to be underlain by a sedimentary section of argillite and graywacke. The central and northern portion of the claim area is shown to be underlain by acid volcanics.

The work by Rickaby shows mafic and ultramafic intrusives occurring within the acid volcanic section.

Immediately north of the northern boundary of the claim group, Rickaby shows serpentine occurring at Rahn Lake. Significant amounts of chrysolite asbestos are present in the serpentine at this location and some physical exploration has been carried out at the property.

VI. MAGNETOMETER SURVEY - RESULTS AND CONCLUSIONS

The magnetic survey was conducted employing a Barringer Nuclear Precession Magnetometer, Model GH-102. The instrument has a sensitivity of 10 gammas, and readings obtained present the total intensity of the earth's field in gammas.

Survey station M-2 was employed as a base station for making diurnal corrections during the survey of October 1-8, 1966. Picket line station 11+60N was used as a base station during survey of March 2-26, 1967. Two readings were taken at each station, which were 100 feet apart, on lines 330 feet apart.

VI. Magnetometer Survey - Results and Conclusions Cont'd:

Results contoured at 100 gamma intervals are shown on an accompanying map, as are values in gammas at each station on a separate map.

In view of (1) the association of asbestos and serpentine-peridotite rocks, (2) the presence of asbestos in serpentine immediately north of the claim group and (3) the flat, drift covered nature of the claim group described herein (which showed only minor amounts of outcrop) it was decided to employ a magnetic survey as a means of detecting serpentine masses which might be hidden beneath the overburden, since the ultramafic masses are normally magnetically responsive.

Ontario Dept. of Mines' Map 287G shows a well defined magnetic anomaly (aeromagnetic) in the Rahn Lake area, and a broad magnetic anomaly in the area of Clarke Lake, which is in the southern portion of the herein described claims.

Magnetic work (this survey) carried out in the Clarke Lake area (see magnetic contour map) showed the maximum gradient across any 1000 ft. section to be about 375 gammas. For comparison, the aeromagnetic data showed a relief of about 280 gammas across the same 1000' section.

Work to the north of Clarke Lake, and south of the Rahn Lake serpentine showed a number of well defined, intense magnetic anomalies not evident from the aeromagnetic data. It is apparent that at least in one case, the elongate north-south shape of the magnetic anomaly prevented its detection in the airborne survey, which employed north-south lines. In other cases, well defined magnetic patterns obtained from ground work were apparently obscured by gross patterns obtained from the airborne survey.

In contrast with the maximum gradient of 375 gammas for a 1000 ft. section (this survey) obtained at Clarke Lake (weak broad anomaly), a number of anomalies in the northern portion of the claim groups surveyed herein showed reliefs of 3500-6300 gammas over 1000 ft. profiles.

In view of the intense magnetic character of the anomalies, and the known presence of serpentine to the north of the area surveyed herein, it was considered highly probable that the magnetic responses (central and northern portions of present claim groups) resulted from serpentine-peridotite masses. In view of the fact that the gradient (ground survey) over the broad Clarke Lake anomaly was not greatly different than the gradient as determined from the aeromagnetic data (Ontario Dept. of Mines) it was felt that the broad magnetic response in the Clarke Lake area probably resulted from a mafic or ultramafic mass occurring at a depth greater than 500 ft.

Magnetometer Survey - Results and Conclusions Cont'd:

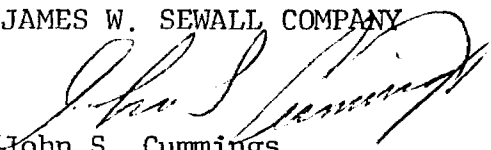
Subsequent drilling of the strong anomalies in the central and northern portion of the claim area corroborated both the approach and the magnetic survey, as all holes except 1 and 2 (Clarke Lake area) encountered serpentine-peridotite.

Of the holes drilled in the strong magnetic anomalies (all holes except 1, 2 and 3) all contained at least 50 percent serpentine-peridotite, except hole 10.

In summary, in an area of flat, drift covered terrain, the magnetic survey distinguished a number of strong coherent magnetic anomalies of significant areal size, and subsequent drilling proved that the anomalies resulted from extensive amount of serpentine-peridotite. Some minor asbestos was found in the serpentine.

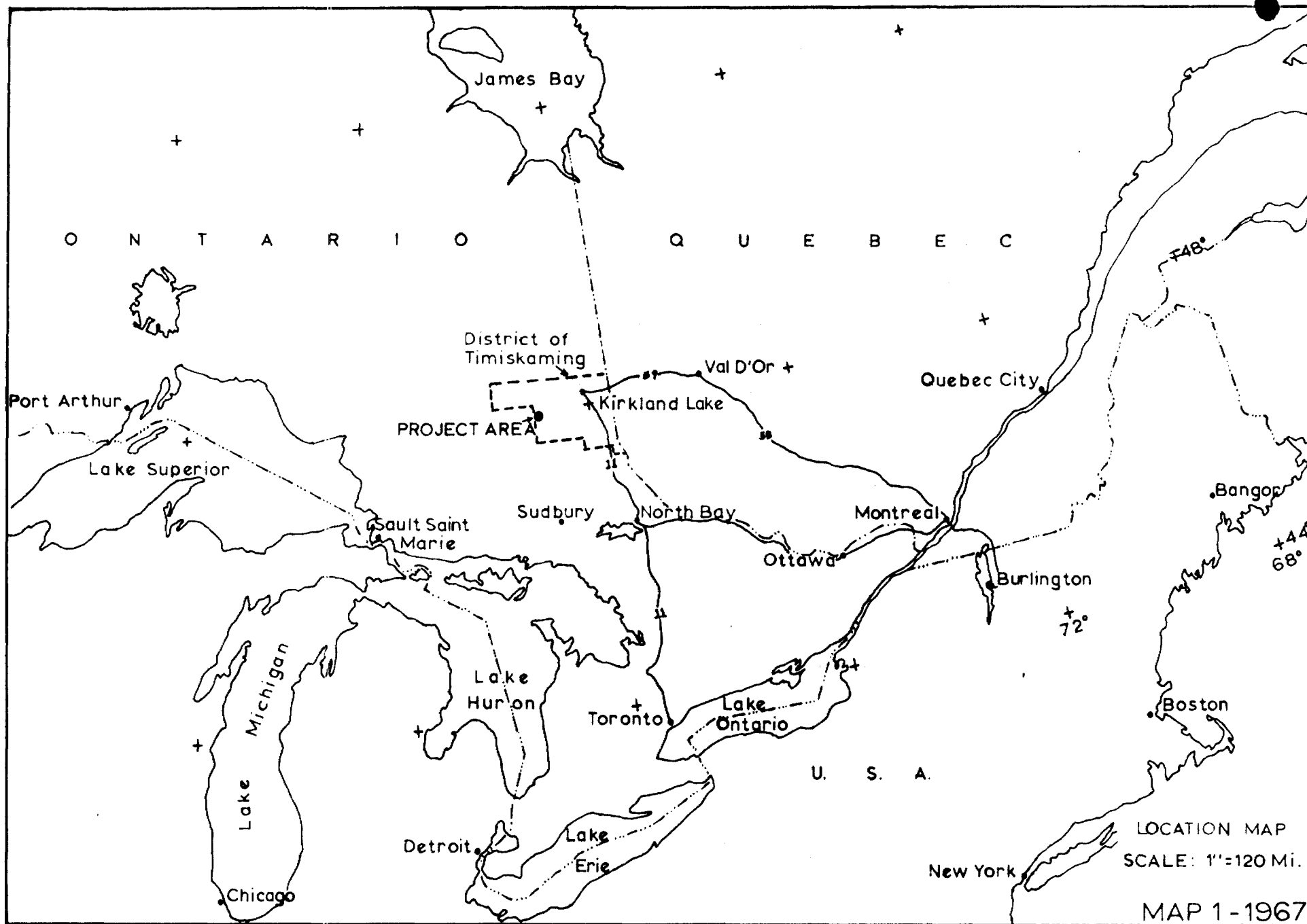
Respectfully submitted,

JAMES W. SEWALL COMPANY



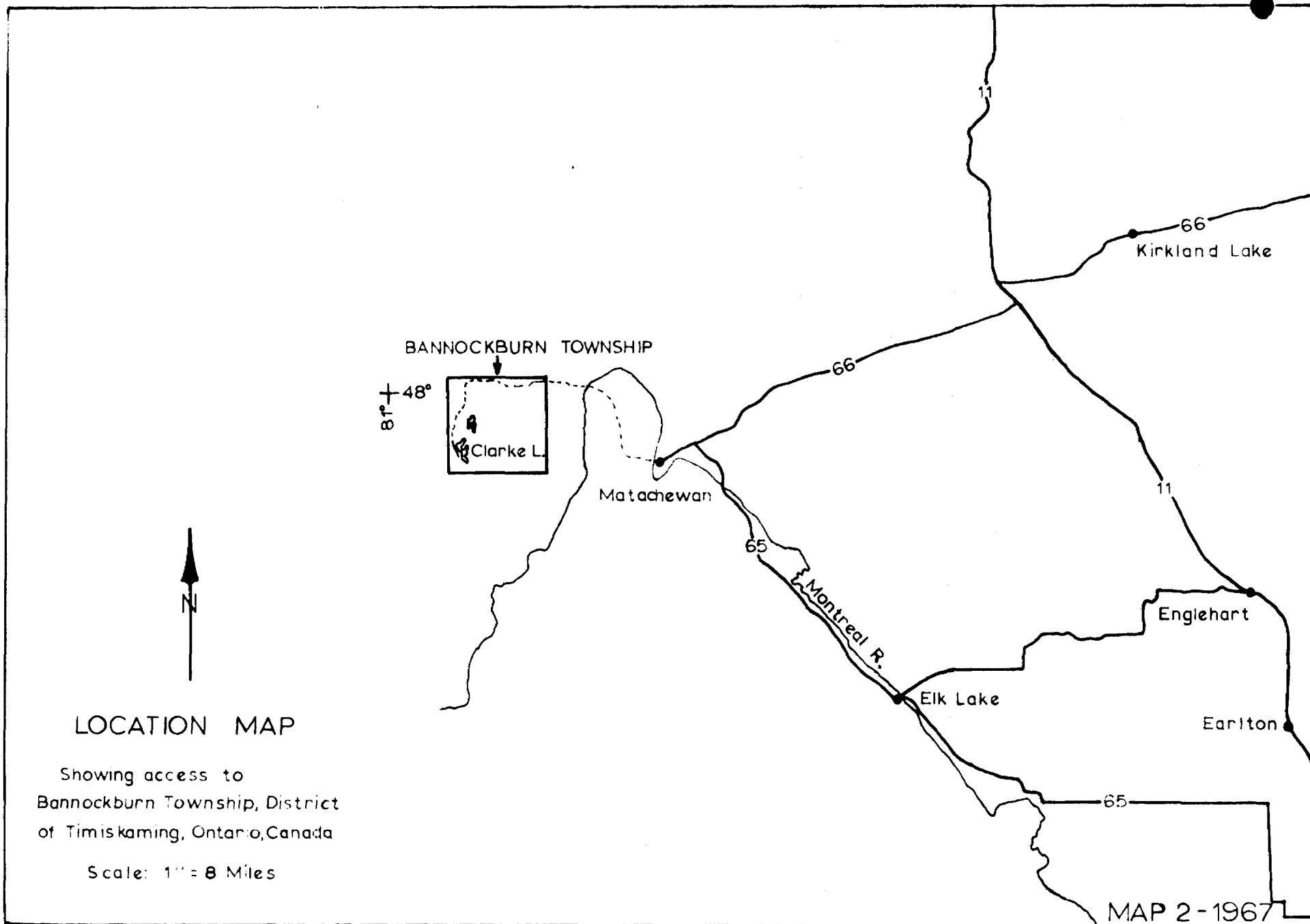
John S. Cummings  
Chief Geologist

JSC:fg

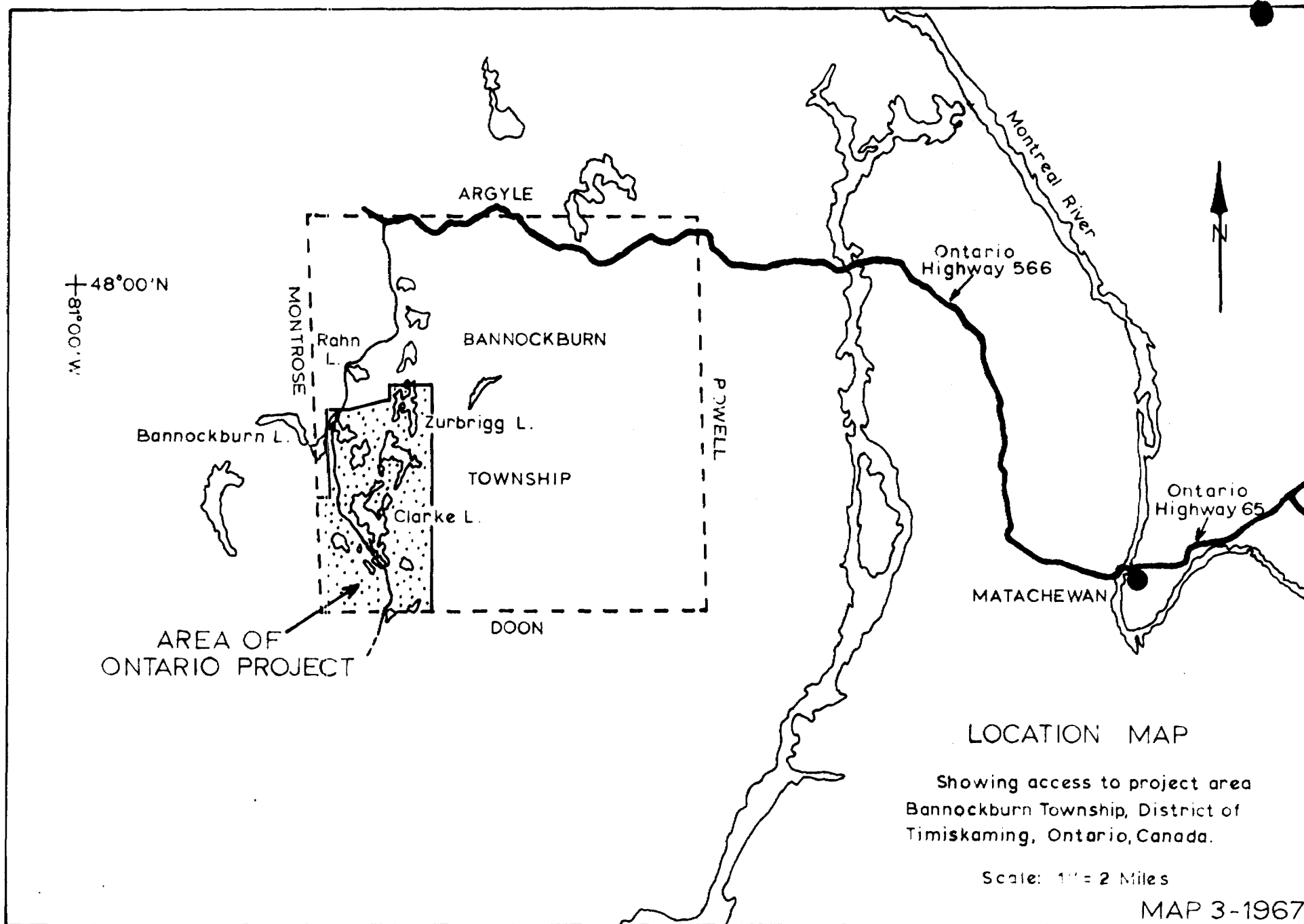


LOCATION MAP  
SCALE: 1"=120 Mi.

MAP 1-1967







**MAGNETIC PROFILES**  
Barnockburn Township,  
Ontario

Horizontal Scale: 1" = 400'

Vertical Scale: 1" = 2500 gammas

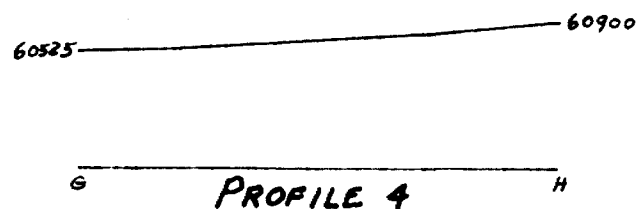
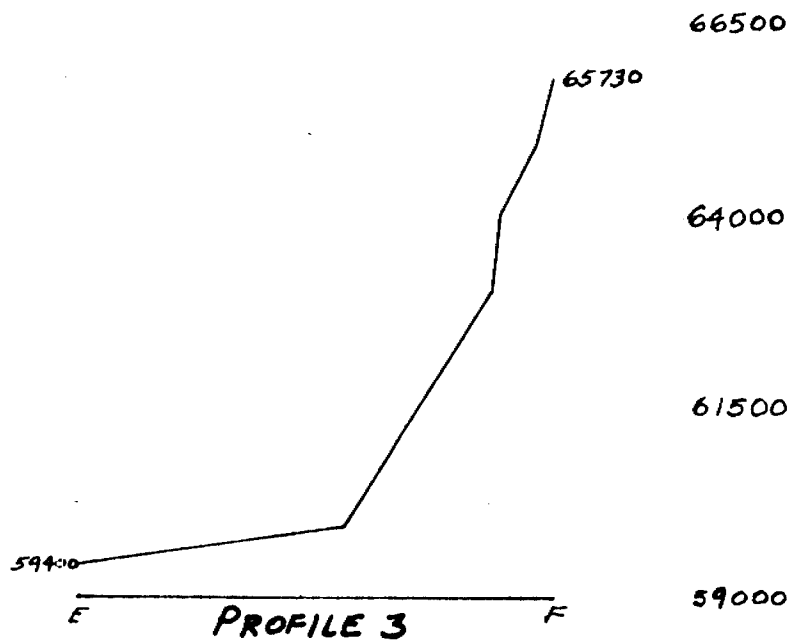
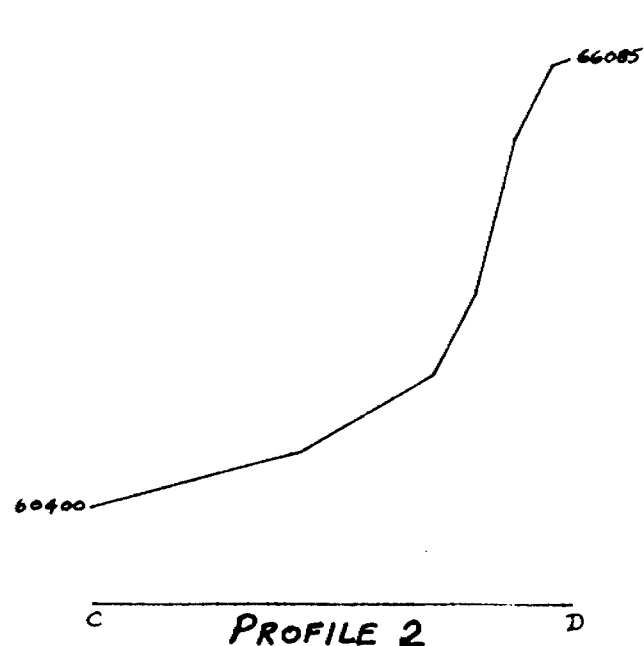
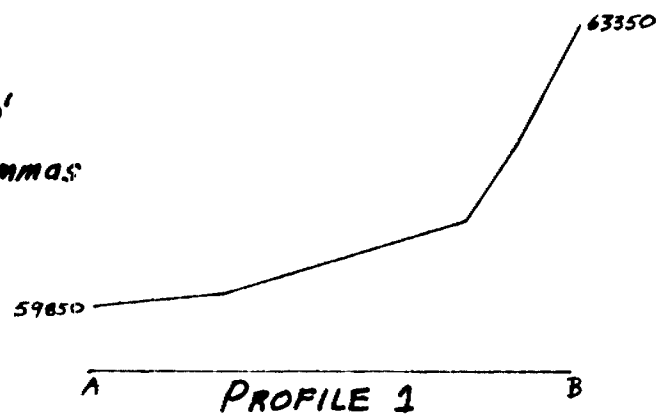


Figure 1



CLAIM GROUP MR46923-46940 (HOLMES J6665)

Assessment Work Breakdown

1. Technical

<u>Type of Work</u>	<u>Name &amp; Address</u>	<u>Period on Geophysical Project</u>	<u>Days on Claim Group</u>
Magnetometer Operation	Sewell Millett RFD #1, Newport, Maine	Oct. 1-8, 1966	-
Magnetometer Operation	Lloyd Billings Blue Hill, Maine	Oct. 1-8, 1966	-
Magnetometer Operation	Willard Bodwell 40 Jefferson St., Old Town, Maine	Mar. 2-26, 1967	5.1 ✓

Totals 5.1 ✓

<u>Consultants</u>	<u>Dates Worked (specify in field/office)</u>	<u>Days on Claim Group</u>
<u>Name &amp; Address</u>		
Lawrence Wing - 362 Stillwater Ave., Old Town, Me.	Oct. 17-19, 1966	-
John Cummings - 355 Maple St., Bangor, Maine	Apr. 19-20, 1967	0.8 ✓
	Totals	<u>0.8</u> ✓

<u>Draughtsman, Typing, others (specify)</u>		<u>Period on Geophysical Project</u>	<u>Days on Claim Group</u>
<u>Name &amp; Address</u>	<u>Type of Work</u>		
Wayne Chappelle 12 Prentiss St. Old Town, Maine	Drafting	April 24-28, 1967	1.3 ✓
		Totals	<u>1.3</u> ✓

2. Line-Cutting

<u>Name</u>	<u>Address</u>	<u>Period on Geophysical Project</u>	<u>Days on Claim Group</u>
Sewell Millett	RFD #1, Newport, Maine	Oct. 1-8, 1966	-
Joseph Sapeo	RFD #1, Old Town, Maine	Oct. 1-8, 1966	-
Lloyd Billings	Blue Hill, Maine	Oct. 1-8, 1966	-
Raymond Peters	Great Works, Old Town, Me.	Oct. 1-8, 1966	-
Bruce Bragg	Bradley, Maine	Oct. 1-8, 1966	-
Willard Bodwell	40 Jefferson St., Old Town, Maine	Mar. 2-26, 1967	3.7 ✓
Raynold Holmes	Union, Maine	Mar. 2-26, 1967	8.8 ✓
Charles Sherwood	College Rd., Old Town, Maine	Mar. 2-26, 1967	8.8 ✓

Totals 21.3 ✓

CLAIM GROUP MR46923-46940 (HOLMES J6665)

Assessment Work Breakdown

1. Type of Survey - Geophysical (Magnetometer)
2. Township or Area - Bannockburn
3. Mining claim numbers - MR 46923, 46924, 46925, 46926, 46927, 46928,  
46929, 46930, 46931, 46932, 46933, 46934, 46935, 46936, 46939,  
46940.

4. Number of miles of line cut 13.5
5. Type of instrument used - Barringer GM102A (Precession type)
6. Scale constant or sensitivity - 10 Gammas
7. Number of stations established 711
8. Summary of days worked (details on other page)

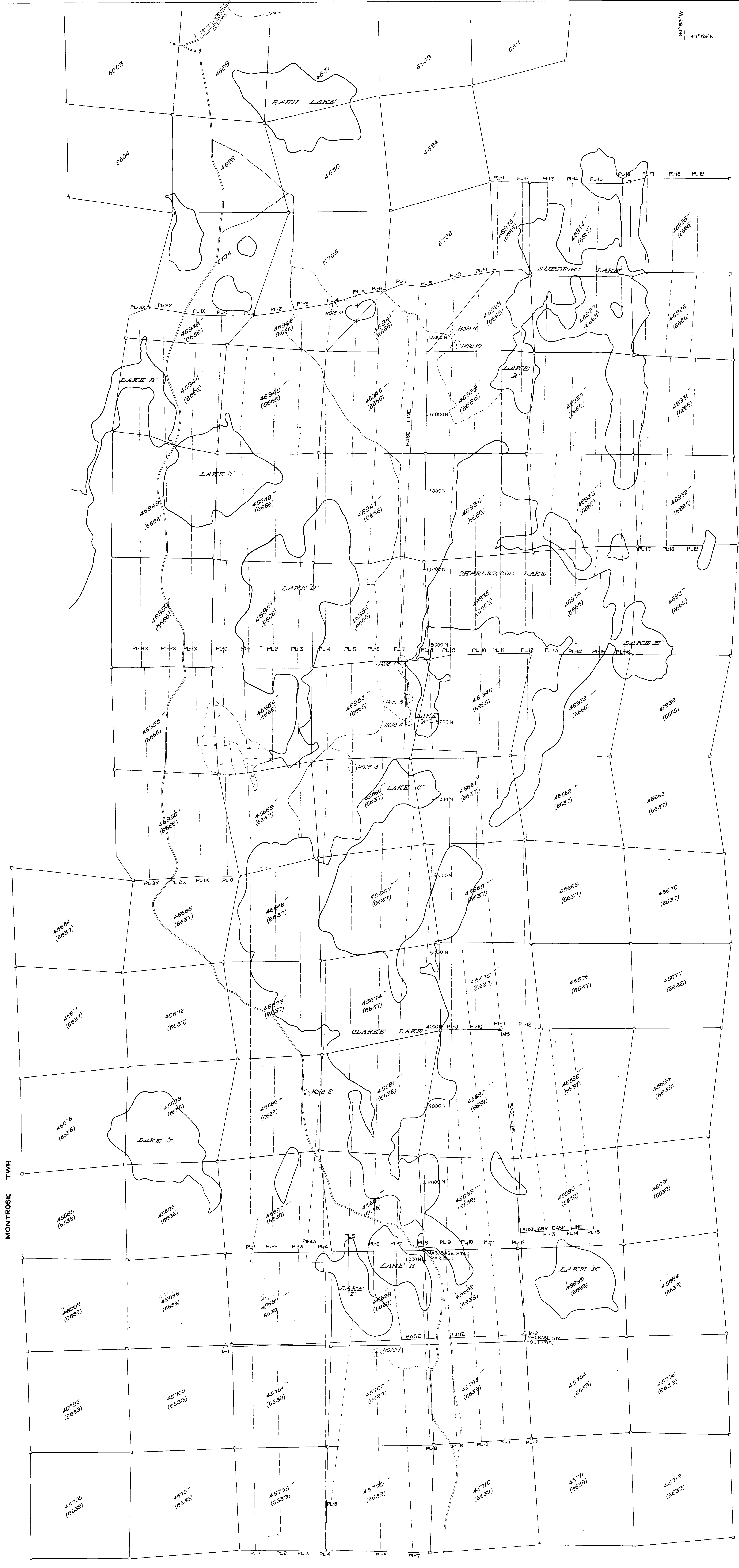
Total technical (include consultants, draughting, etc.) 7.2 x 7 = 50.4 ✓

Total line-cutting 21.3 ✓

Total man-days (technical plus line-cutting) 71.7 ✓

Assessment days credit per claim 4.5 ✓

9. Dated Sept 28, 1967 Signed Swell Millett



LEGEND

- Main log haul road (gravel surface)
- Other logging roads
- Location of claim corner
- Claim line
- Magnetometer survey control line
- 4691 (6639) Claim number below in parentheses indicates number of Miner's Liscense
- Base line
- △M-2 Location of iron pin
- Boundary of Miner's Liscenses outlined in green

SCALE: 1 INCH = 400 FEET

JAMES W. SEWALL COMPANY, OLD TOWN, MAINE

*James W. Sewall*

54-36 INC.

ONTARIO PROJECT  
BANKSWORTH, TOWNSHIP, DISTRICT OF TIMSKAMING  
PROVINCE OF ONTARIO, CANADA

CLAIM AND CONTROL MAP

(BASE SHEET FOR MAGNETOMETER SURVEY MAP)

