



REPORT ON THE GEOLOGICAL SURVEY
UNPATENTED CLAIMS (S985101 - 104) INCLUSIVE
HUTTON TOWNSHIP
SUDBURY MINING DIVISION

December 12, 1988

RECEIVED

DEC 15 1988

MINING LANDS SECTION

A.R. Durrant

SUDBURY
MINING DIV.
RECEIVED
DEC 13 1988 ✓
A.M. P.M.
7 8 9 10 11 12 1 2 3 4 5 6
⚡

GEOLOGICAL SURVEY ON UNPATENTED CLAIMS S985101 - 104 INCLUSIVE

Introduction:

The claim group consists of four unpatented mining claims (S985101 - 104 inclusive) in the Sudbury mining division. These claims are located in lots 4 and 5 concession 4, Hutton township, Ont., and are approximately 13 kilometers north of Capreol and about 40 kilometers north of Sudbury.

The claims are held by Andrew R. Durrant 390 , 390 Eva Street , Sudbury Ont., P3E 1A7 , 673 - 0689 , who performed all linecutting geological mapping, drafting and report writing.

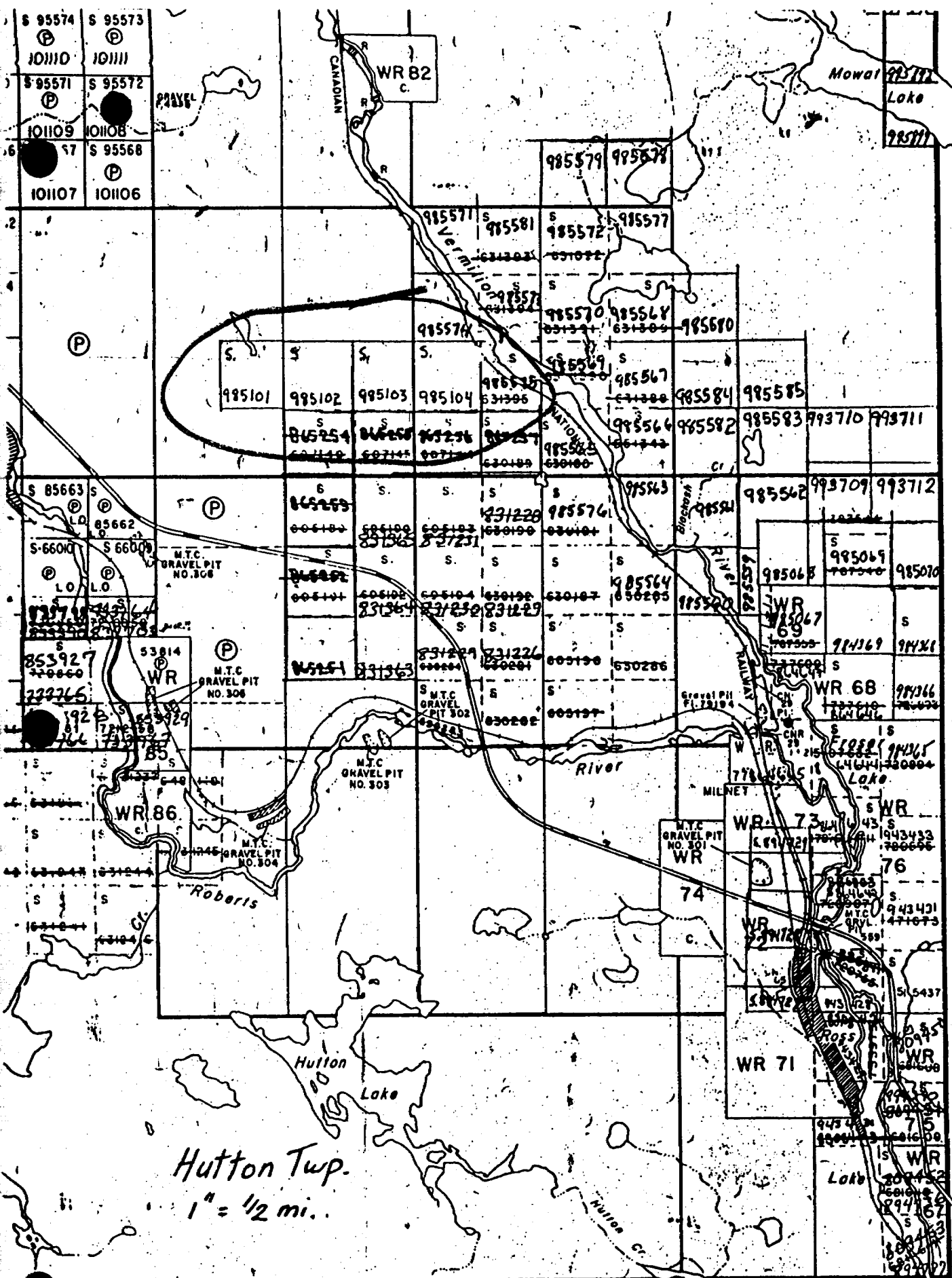
Access and Location

The eastern end of the claim group may be reached by walking 2.8 kilometers north along the C.N.R. line from Milnet.

The western end of the claims may be reached by driving a further 3.2 kilometers northwest along highway 806 from Milnet and to park at the intersection of this road and the (north - south) hydro line. From this point walk 1.0 km north along the hydro corridor until it turns northwest. Follow a blazed line a further 1.0 km north to the #3 post of claim S985101.

Present Geological Survey

Linecutting was initiated on Oct. 2, 1988 and was followed by geological mapping. Drafting and report writing were completed by Dec. 12, 1988. An east - west baseline was cut across the property length with traverse lines every 100 meters and stations were established at 20 meter intervals.



PARKIN TWP. M.1049

Hutton Twp.
1" = 1/2 mi.

WISNER TWP. M.1185

7 6 5 4 3 2 1

Previous Work

The claim group area was initially mapped by L.F. Kindle in 1932. H.D. Meyn remapped this area in 1970. In 1976 the extreme eastern end of the claim group was covered by Amax Minerals Exploration Ltd. who performed geological mapping and a radiometric survey in a search for economic uranium deposits in the Mississauga formation. Results were not encouraging and the claims were allowed to lapse. No other assessment work could be found on file for the claim group area.

GENERAL GEOLOGY

Bedrock formations on the claim group consist of sediments belonging to the Huronian Supergroup. The Huronian sequence is interpreted to be a southward thickening wedge of immature clastic sediments with a total cumulative thickness of about 40,000 feet (Card, 1978). These sediments were derived from weathering of the Archean craton during the early Proterozoic era.

The generally accepted model for Huronian sedimentation is as sedimentation increased (increasing stratigraphic height) the facies boundaries or "paleolimits" of successively younging formations migrated northwards in a lateral fashion, overlapping the Archean basement rocks. In the claim group area this is represented by the unconformity between the Archean granite/greenstone basement rocks and the overlying Mississauga formation. This sequence was subjected to later metamorphism and tectonic activity. Literature on the Huronian sequence is voluminous - see Card (1978) for a thorough review.

CLAIM GROUP GEOLOGY

Rocks on the claim group consist of the Mississauga, Bruce, Espanola and Serpent formations. Lithological descriptions are provided below along with structural observations made during field mapping and prospecting.

Mississagi Formation

The Mississagi formation consists of a fine grained grey quartzite which is composed primarily of quartz and feldspar with a matrix of fine grained sericite and biotite (Meyn, 1970). Bedding ranges from 1 -6 cm. with local conglomeratic and argillic intervals. On claim S985101, near the beaver pond, this formation has been strongly sheared and brecciated. Bedding measurements indicate that this unit has been rotated into an north - south orientation.

Bruce Formation

The Bruce formation is a loosely packed paraconglomerate containing 10 -40% white to grey granitic fragments with minor diabase, chert, greywacke and argillite clasts in a matrix of rounded to subangular quartz and feldspar grains. This unit has a generally massive and competent nature.

Espanola Formation

The Espanola formation on the claim group is a moderately to thickly bedded limestone/marble unit which has thin beds and partings of siltstone. Both fine grained and coarser sugary (recrystallized) textures have been observed. The unit is approximately 30 -60 meters in width. Bedding ranges from 1- 8 cm east of the beaver pond on claim S985101 to locally thick, 25 -30 cm wide bedding south of the #1 post of claim S985104.

Serpent Formation

The Serpent formation is a white to yellowish grey quartzite which is composed of subangular to subrounded grains of quartz and feldspar in a fine grained matrix of quartz and mica (Meyn, 1970). Bedding is quite variable, from less than 1 cm to over 3 meters and abundant crossbeds have been observed. This unit also has a competent and massive nature with frequent outcrops.

Structure

With the exception of the Mississagi formation, bedrock formations on the claim group strike in an east - west manner for approximately 1.3 kilometers and are bounded by two large north - south faults.

The eastern strike extension of the Huronian sequence on the claim group is bounded by the Vermillion River fault zone. Strong shearing of the Bruce and Serpent formations was observed along the scarp west of the C.N.R. railway line on claim S985104.

In the western claim group area, a fault zone was mapped along the stream and beaver pond between lines 3 and 4 east. Bedding measurements in the Mississagi and Espanola formations indicate they have been locally rotated into a north to northeast orientation by this tectonic activity.

Economic Geology

Within the claim group, the Espanola formation shows thin to thick bedding and is a relatively pure calcium carbonate limestone/marble unit. If large enough amounts of suitable material could be found it may be of economic interest as an industrial or metallurgical aggregate, lime or possibly as a building stone. Other possible uses include a mineral filler and extender in such products as paints, plastics, rubber and other products (Grant and Owsicki, 1987). Further exploration and evaluation of this unit is required to assess its potential for these applications.



Andrew R. Durrant (H.BSc.)

References

Card, K.D.

1978: Geology of the Sudbury - Manitoulin Area, Districts of Sudbury and Manitoulin; Ontario Geological Survey Report 166, 238p. Accompanied by Map 2360, scale 1 inch to 2 miles (1:126,720), and 4 charts.

Grant, W.T., and Owsiacski, Leo

1987: An Evaluation of the Lake Timiskaming Paleozoic Outlier for Potentially Exploitable Limestone and Dolostone Deposits; Ontario Geological Survey, Open File Report 5661, 153p., 24 figures, 5 tables, and 1 map in back pocket.

Kindle, L.F.

1932: Moose Mountain - Wanapitae area; O.D.M. Vol. 41, pt. 4, p. 29 - 49. Pub. 1933. Accompanied by Map 41e, scale 1" to 3/4 miles.

Meyn, H.D.

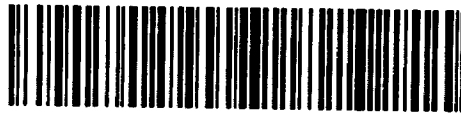
1970: Geology of Hutton and Parkin Townships; O.D.M. Geological Report 80, 78p., 10 figures, 22 tables, accompanied by map 2180, scale 1" to 1/2 mile.

CERTIFICATE OF QUALIFICATION

I, Andrew R. Durrant hereby certify that I graduated from Brock University, St. Catharines Ont., in 1986, with an Honours Bachelor of Science Degree in Geology and have been employed in the mining and mineral exploration industries since 1977.

Andrew R. Durrant

Andrew R. Durrant (H.BSc.)



8807-233

Type of Work: Geological Township or Area: Hutton Twp
 Claim Holder(s): Andrew R Durrant **2.11936** Prospector's Licence No.: P12780
 Address: 390 Eva St. Sudbury Ont. P3C 4N3
 Survey Company: _____ Date of Survey (from & to): 2 10 88 to 12 12 88 Total Miles of line Cut: 4.6
 Name and Address of Author (of Geo-Technical report): Andrew R Durrant 390 Eva St. Sudbury Ont. P3C 4N3

Credits Requested per Each Claim in Columns at right

Mining Claims Traversed (List in numerical sequence)

Special Provisions	Geophysical	Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	40
	Geochemical	

Mining Claim			Mining Claim		
Prefix	Number	Expend. Days Cr.	Prefix	Number	Expend. Days Cr.
S	985101	40			
S	985102	40			
S	985103	40			
S	985104	40			

Airborne Credits
 Note: Special provisions credits do not apply to Airborne Surveys.
RECEIVED
 Electromagnetic
 Magnetometer
 DEC 15 1988

SUDBURY MINING DIV.
RECEIVED
 DEC 13 1988
 A.M. P.M.
 7 8 9 10 11 12 1 2 3 4 5 6
 6:37 pm

ONTARIO GEOLOGICAL SURVEY
 RADIO METRIC
 ASSIGNMENT FILES

Expenditures (excluding power and equipment files)
 Type of Work Performed: OFFICE
 Performed on Claim(s): JAN 6 1989
RECEIVED

Calculation of Expenditures Days Credits
 Total Expenditures \$ _____ ÷ 15 = Total Days Credits _____

Instructions
 Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work. **4**

For Office Use Only
 Total Days Cr. Recorded: 160 Date Recorded: Dec. 13/88 Mining Recorder: [Signature]
 Date Approved as Recorded: 5 Jan 89 Branch Director: [Signature]

Date: Dec 13, 1988 Recorded Holder or Agent (Signature): Andrew R Durrant

Certification Verifying Report of Work
 I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Andrew R Durrant 390 Eva St. Sudbury Ont. P3C 4N3
 Date Certified: Dec 13, 1988 Certified by (Signature): Andrew R Durrant

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations _____ Number of Readings _____
Station interval _____ Line spacing _____
Profile scale _____
Contour interval _____

MAGNETIC

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

ELECTROMAGNETIC

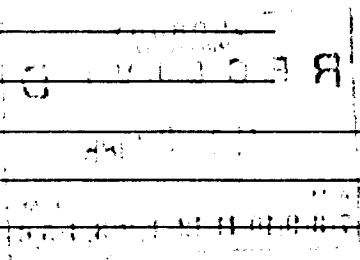
Instrument _____
Coil configuration _____
Coil separation _____
Accuracy _____
Method: [] Fixed transmitter [] Shoot back [] In line [] Parallel line
Frequency _____ (specify V.L.F. station)
Parameters measured _____

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 _____



SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

Corrections made _____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth - include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

Additional information (for understanding results) _____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

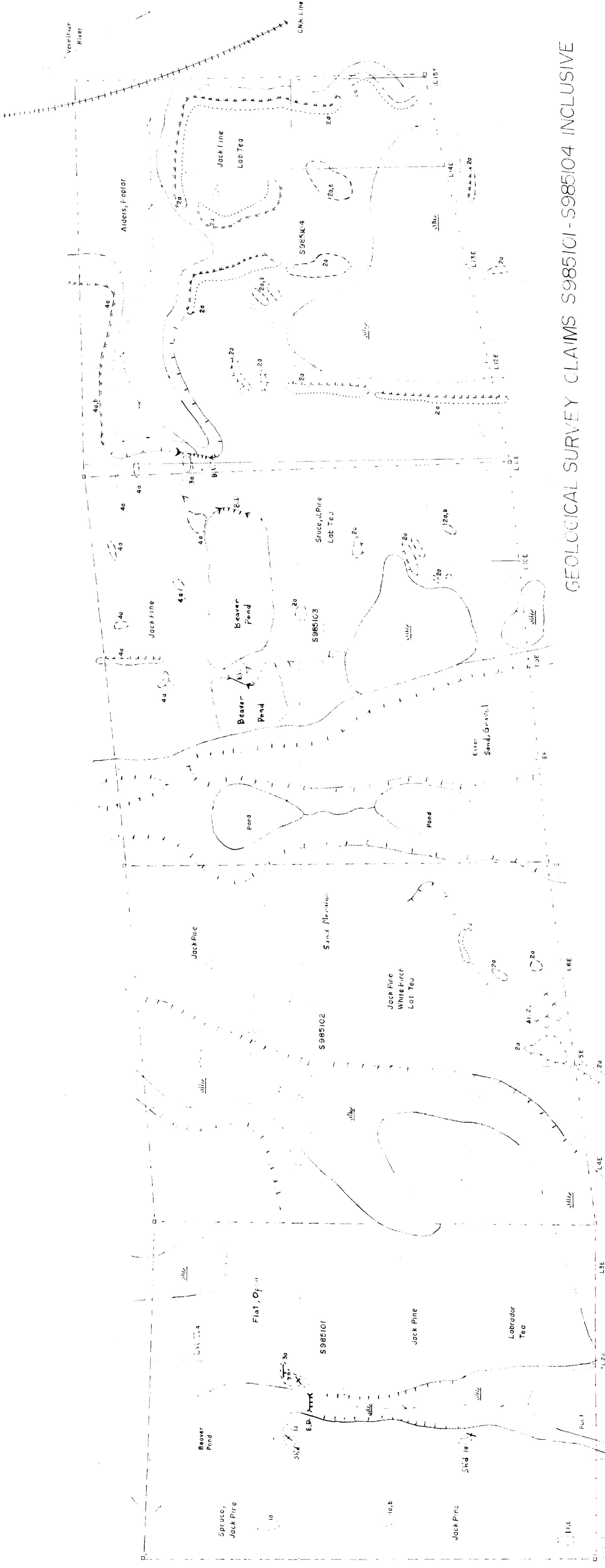
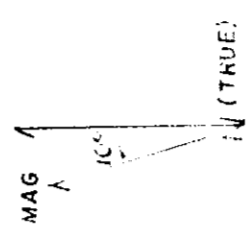
Navigation and flight path recovery method _____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

LEGEND

- Mississagi Formation
- 1a Quartzite
- b Argillite
- c Conglomerate
- Bruce Formation
- 2a Conglomerate
- t Quartzite
- Espargia Formation
- 3a Limestone
- Serpent Formation
- 4a Quartzite
- b Conglomerate
- 7a Bedding Indicated
- Outcrop Margin
- Scarp Face
- X Small Outcrop, S.M.I. Shear
- Slope
- Swamp
- Stream with Flow Direction
- Scale 1:20,000
- 1 cm = 200 m



GEOLOGICAL SURVEY CLAIMS S985101-S985104 INCLUSIVE



CREELMAN TWP. M. 737

THE TOWNSHIP OF

HUTTON

DISTRICT OF SUDBURY

SUDBURY MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

- PATENTED LAND ● or ⊕
- CROWN LAND SALE C.S.
- LEASES ⊙
- LOCATED LAND Loc.
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.Q.
- SURFACE RIGHTS ONLY S.R.Q.
- ROADS
- IMPROVED ROADS
- KING'S HIGHWAYS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKEG
- MINES
- CANCELLED

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.

Lots 1 to 6, concessions 1 to 6 may be staked in the same manner as mining claims in unsurveyed territory. May 16, 1946 - File 83.5 - Mining Act Sec. 53 (52 A 1946). R. 50/180

Land required for railway purposes shown thus: Files 4826 & 4841.

Part 87 Con. 1, 2, 4, 5 & 6: Subdivision Amended

DATE OF
OCT 17
SUDBURY
MINING RECORDER

SAND AND GRAVEL
QUARRY PERMIT

PLAN NO.- M-944

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

VI

V

IV

III

II

I

KITCHENER TWP. M. 973

PARKIN TWP. M. 1049

WISNER TWP. M. 1185

