010

GEOLOGICAL REPORT OF

THE BEARMOUNT AIN CLAIMS

LOUISE TOWNSHIP

SUDBURY MINING DISTRICT

NTS SW1/4 of 41I/6

LONGITUDE 86° 22' N LATITUDE 46° 19'

OWNED BY: Robert Komarechka

2.10828

AUTHOR: Robert Komarechka P.Geol., and
Kai-Ming Kwok
396 Eva Ave. Apt. 1
Sudbury, Ontario
P3C 4N3

OCTOBER 25, 1988

Note: Bluemount claims should read Bearmountain claims

INTRODUCTION

The Bearmountain claims consist of a grouping of four claims numbered 895159, 895160, 895161 and 895162. All these claims were staked on October 17, 1986.

The claims are initially staked for potential high purity quartzite (post depositional quartz veins and the quartzose-feldspathic sandstone) for industrial flux.

This report is the result of a series of prospecting and mapping trips in the area during the field season of 1988. This report shall concentrate on the geology of the area and the economic potential of the high purity quartzite.

LOCATION AND ACCESS

The Bluemount claims are located along the north shore of Georgian Bay about 30Km east of the town of Espanola in the eastern part of Louise township, District of Sudbury (Figure 1). Geographically, the property is located at a latitude of 46° 19' and longitude of 86°22' or in reference to the NYS system, the 1/4 of 41I/6.

Road access to the property is obtained via paved Hwy 17. Then at about 30Km east of Espanola, turn south on the gravel Hwy 549 and travel about 10Km to West Lake. The property lies within Concession 11 and lots 6, 7 and 8 of Louise Township.

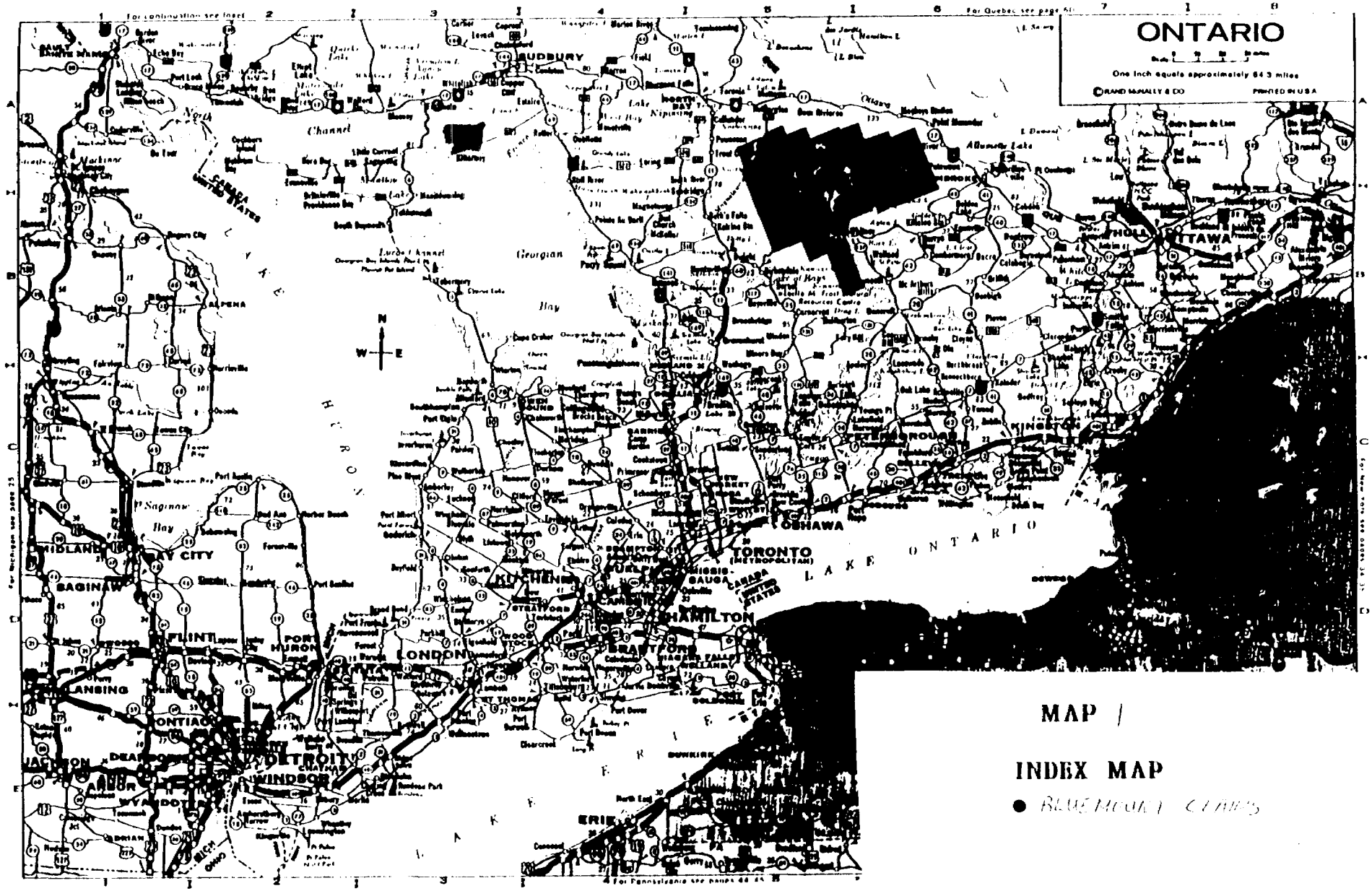
PREVIOUS WORK

Card et. al. (1975) and Card (1978) mapped and studied the geology of the Louise-Eden area, including the area 4Km northwest of the Bluemount claims. From the map provided by the Ontario Division of Mine, it is concluded that the Bluemount claims are located at the middle to upper section of the Mississagi Formation and the lower section of the Bruce Formation (Figure 2). The claims are bounded by the Espanola Fault to the north and two subsidary, northeast trending faults to the east and the west side of the claims.

TOPOGRAPHY, VEGETATION AND CLIMATE

The topography of the Bluemount Claims consists basically of an east-west trending ridge terminated to the north by a swarmpy creek and lake. This ridge is bisected by a by a south-west to north-east trending creek. To the east of the creek, the land rises steeply then maintains a hummocky undulating terrain.

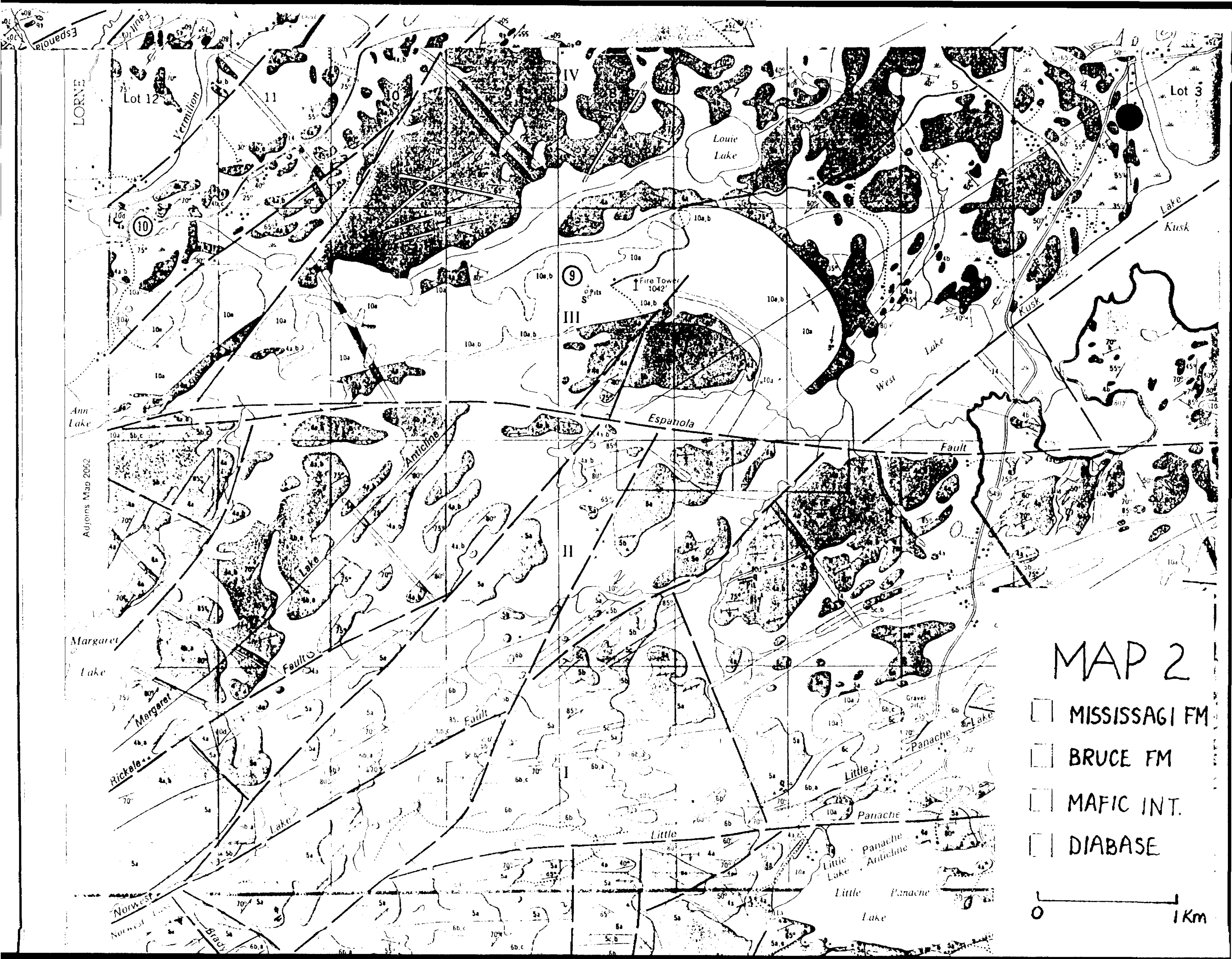
To the west of the bisecting creek, the terrain adjacent to the north bordering swarmpy creek rises abruptly along quartz rich cliffs to a high east-west ridge then slope down toward the south.



MAP 1

INDEX MAP

● BOUNDARY CHANGES


MAP 2
MISSISSAGI FM
BRUCE FM
MAFIC INT.
DIABASE
0
1 Km
LORNE
Lot 12
Lot 3
Vermilion
Louie Lake
Fire Tower 1042'
Pits
West Lake
Kusk Lake
Ann Lake
Espanola Fault
Anticline
Lake
Margaret Lake
Margaret
Rickaby
Fault
Little Panache Lake
Panache
Little Panache Anticline
Little Lake
Little Panache Lake
Norwest
Brady
Gravel Pits
IV
III
II
I
Aufrons Map 2052

Vegetation in the area consists of mixed growth of birch, maple, spruce and occasional pine. The lower area have thicker growth and the higher ridge areas have sparse growth. Outcrops were numerous in the higher ridge areas. Climate is moderate with snow begining in late November and melting in late April.

GENERAL GEOLOGY

Initial geological work consisted of mapping of the perimeter of the four claims. It is followed by mapping along the boundaries of the interal adjacent claims. Afterward, mapping was done along the North-South traverses that were set at 100 meters interval in claims# 895159 and 895160 and at 200 meters interval in claims# 895161 and 895162. All mapping distances were measured with the use of hip chain. Five rock type were identified and they were described as follows:

A) Protoquartzite

This is the most abundant rock type in the area. It is a sandstone which composed of mostly quartz and feldspar with 10% to 20% matrix (Card, 1978, p.28). Individual grain size ranges from <0.5mm to about 1mm and graded beddings are common. This rock unit is grey or pink (hematitic cement?) in color. It strikes northeasterly and dips steeply to the southeast. The protoquartzite is generally massive (thick unit) without any trough or planar crossbedding. Post deposition milky white quartz veins are sometimes present in the protoquartzite. Large quartz veins are quite abundant in the northern part of claims# 895159 and 895160. In places, the quartz veins occur with folded sulphide bands within the fractures of the protoquartzite see Map 3).

B) Subgreywacke

This is a muddy-sandy unit which stratigraphically overlies(?) the protoquartzite. Generally, the average grain size of this unit is finer (fine sand to silt size) than the grey/pink protoquartzite and the subgreywacke appears to be more siliceous. Quartz veinlets are rarely seen in this rock type.

C) Polymictic quartzite

The polymictic quartzite is only seen in the southern part of claim# 895162. No sample was collected from this unit but it is assumed that this polymictric quartzite represents the lower section of the Bruce Formation. (Figure 2). Post depositional quartz veins are absent within this mapped unit.

D) Diabase dyke

A northwest trending diabase dyke was mapped in the area in claim# 895160. The sample collected indicate that the dyke had been sheared, altered and weakly mineralized. It is composited of mainly chlorite, epidote, carbonate, altered plagioclase, pyrite and magnetite. In places, post emplacement quartz veins are very abundant and wide spread. In general, the quartz veins

orientated subparallel to the dyke and the veins can be as widw as 25 meters (see map 3).

E) Granite

Two small granite outcrops were seen in claim# 895159. No detail description or sample was collected.

STRUCTURE

Generally the protoquartzite, subgreywacke and the polymictic quartzite strikes east-westerly and dips about 80° to the southeast. These Huronian sedimentary rocks were intruded by a northwest trending diabase dyke, which is now sheared and crosscut by abundant quartz veins. In addition, sedimentary rocks around the diabase appear to contain two generations of quartz veins/veinlets (orientated at 090° and 335°). In places, folded sulphides bands are associated with it. These high purity quartz occurs exclusively along the northern part of claim#895159 and 895160 (see map 3). This suggests the area where the quartz veins are abundant may represent the nose of a syncline or an anticline. The rock were fractured upon folding, and is now filled with quartz veins and sulphides. The completely different lithology in Claim# 895161 and 895162 probably represents a fault present near the claim boundary.

ECONOMIC GEOLOGY

The Bluemount claims consist of mostly Mississagi protoquartzite and subgreywacke with some polymictic quartzite and an altered diabase dyke. The major high purity quartz vein system occurs in the northern part of claim 895159 and 895160, which may represent the nose of a fold. No major quartz veins/veinlets were located in claim# 895162.

Chemical analysis of the Mississagi quartzite by Dupuis (1979) indicates that the SiO2 content is between 85% to 90%, with an average of 87.6% SiO2. Though the silica content in the quartzite is not as high as that in the veins, it may also be used as a potential industrial mineral.

CONCLUSION AND RECOMMENDATIONS

The avaliability of high quality quartz (>95%) from the mapped area is confined only to the large quartz vein of Claim# 895160. Optimistically, tonnage of this body is only about 18,000 tonnes. Further tonnages of >90% quartz is found along the northern cliff along Claims# 895160 and 895161. Quality of quartz is errotic here and care is required to avoid excessive feldspar contamination while mining. Overall tonnage of this material is estimated at 220,000 tonnes.

Although excessive, the white quartzite in the mapped area contains only 87% SiO2 and should not be considered suitable for any industrial applications.

SAMPLE DESCRIPTIONS

Sample no.	Description
S1	Poorly sorted, massive quartzose feldspathic sandstone with some milky white quartz veinlets (0.5cm wide).
S2	Poorly sorted, massive quartzose feldspathic sandstone with abundant milky white/glassy quartz veinlets (0.5cm to 0.2cm wide).
S3	Sheared, altered and mineralized metavolcanic (mapped as diabase dyke). The speciman contains about 15% pyrite. Some milky white quartz veinlets present (<0.1cm wide).
S4	Mineralized metavolcanic similar to S3. This speciman contains abundant milky white quartz veins/veinlets (up to 8cm wide). The quartz appears to be interbanded with the metavolcanic.
S5	Massive quartz collected from the vein that crosscut the metavolcanic.
S6	Silicified metavolcanic rock. The sample contains abundant quartz veinlets (up to 2cm wide), which crosscut the matrix.
Sa1	Pinkish, poorly sorted quartzose feldspathic sandstone with some white quartz veinlets present (2cm wide). Graded beddings?
Sa 2	Very fine-grained (fine sand to silt size) green silicious quartzite. Quartz veinlets present crosscut the matrix (1cm wide).
Sa 3	Sample not found.
Sa 4	Poorly sorted, pinkish quartzite feldspathic sandstone with some small quartz veinlets (up to 1cm wide). Very similar to sample S 1.

Sa 5	Poorly sorted, massive white quartzite. Subrounded quartz granules present encloses by muddy matrix. Milky white quartz veinlets present.
Sa 6	Massive, quartzose feldspathic sandstone showing graded beddings. Quartz veinlets present (0.5cm wide).
Sa 7	Massive, very fine-grained silicious quartzite with no appearent quartz vein/veinlets.
Sa 8	Sample not found.
Sa 9, 10, 11, 13, 14	Greyish, silicious protoquartzite. Massive, no quartz veinlets present. The samples look very similar to the rocks near Laurentian University.
B 2	Quartzose feldspathic sandstone with no apparent quartz veinlets.
B 3	Well sorted sandstone with some rock frsgments, quartz and feldspar. Massive with no quartz veinlets.
B 4	Massive fine sandstone; no veinlets.

REFERENCES

Card, K. D., Palonea, P. A. and Siemiatkowska, K. M. (1975)
"Geology of the Louise-Eden area, District of Sudbury."
ODM Geological report 124

Card, K. D., Innes, D. G. and Debicki, R. L. (1977)
"Stratigraphy, sedimentology and petrology of the Huronian Supergroup in the Sudburt-Espanola area."
ODM Geoscience study 16

Card, K. D. (1978)
"Geology of the Sudbury-Manitoulin area, District of Sudbury and Manitoulin."
OGS Report 166.

Dupuis, L. (1979)
"The nature and origin of Sudbury Breccia near Lake Laurentian."
Unpublished MSc thesis, Laurentian University.

APPENDIX 1

AFFIDAVIT

I, Robert G. Komarechka P.Geol., hereby declare that I, with the assistance of Joe Kowal and Kai-Ming Kwok carried out the work described in this report which was undertaken between October,1986 and November, 1988.

Robert G. Komarechka P.Geol.

Dated at Sudbury, Ontario, this 1st day of November 1988.

APPENDIX 2

CERTIFICATE

I, Robert G. Komarechka, of the City of Sudbury, in the Province of Ontario hereby certify as follows:

1. That I am a consulting geologist residing in Sudbury.

2. That I am a graduate, BSc. Geology major of Laurentian University of Sudbury, Ontario, a registered professional geologist in the Province of Alberta afiliated with the Canadian Council of Professional Engineers, and that I have been practising my profession for eight years.

3. That I am familiar with the geology of this area, having lived in the Sudbury area most of my life and prospected here for the past 18 years.

Robert G. Komarechka P.Geol.

Dated at Sudbury, Ontario, this 1st day of November, 1988.

Ontario

41106SW0001 2.11791 LOUISE

900

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

November 21, 1988

Your file: W8807-181
Our file: 2.11791

Mining Recorder
Ministry of Northern Development and Mines
Bag 3000
200 Brady Street, 6th floor
Sudbury, Ontario
P3A 5W2

Dear Sir:

Re: Geological Survey submitted under Section 77(19) of the Mining Act
R.S.O. 1980 on Mining Claims S 895159 to 161 inclusive in Louise Township

The enclosed statement of assessment work credits for Geological Survey has been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

W.R. Cowan
Provincial Manager, Mining Lands
Mines & Minerals Division
RM

RM:pl
Enclosure (2)

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES
OFFICE
NOV 25 1988
RECEIVED

cc: Resident Geologist
Sudbury, Ontario

Mr. Carman Fielding
R.R. 2
Lively Ontario
POM 2EO

Mr. Robert Komarechka
Suite #1
346 Eva Ave.
Sudbury, Ontario
P3C 4N3

Ministry of Northern Development and Mines
Ontario

Technical Assessment Work Credits

File: 2.11791

Date: November 21, 1988

Mining Recorder's Report of Work No.: W8807-181

Recorded Holder: Mr. Carman Fielding

Township or Area: Louise

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	S 895159 to 161 inclusive
Electromagnetic _____ days	
Magnetometer _____ days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological 40 days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

No credits have been allowed for the following mining claims

☐ *not sufficiently covered by the survey* ☐ *insufficient technical data filed*

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

Oct-29 [illegible]

Ministry of Northern Development and Mines
Ontario

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

DOCUMENT No. W8807·181

Mining Act

Instructions: — Please type or print.
— If number of mining claims traversed exceeds space on this form, attach a list.
Note: — Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
— Do not use shaded areas below.

Type of Survey(s): GEOLOGICAL

Township or Area: LOUISE

Claim Holder(s): [illegible] Fielding

Prospector's Licence No.: B 19716

Address: R.R. 2 Lively [illegible] P0M 2E0 682-4[illegible]

Survey Company: BEDROCK CONSULTING

Date of Survey (from & to): 14 5 88 (Day Mo. Yr.) 27 8 88 (Day Mo. Yr.)

Total Miles of line Cut: 5 1/4

Name and Address of Author (of Geo-Technical report): Robert Komarechka Suite #1, 396 EVA AVE, SUDBURY ONTARIO

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	- Electromagnetic	
	- Magnetometer	
For each additional survey: using the same grid: Enter 20 days (for each)	- Radiometric	
	- Other	
	Geological	30
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	12
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Prefix	Number	Expend. Days Cr.
S	895159	42
S	895160	42
S	895161	42
~~S~~	~~895162~~	[illegible]

SUDBURY MINING DIV.
RECEIVED
AUG 29 1988
A.M. 7|8|9|10|11|12|1|2|3|4|5|6 P.M.

K.D. 4:00

RECEIVED
SEP 1[illegible] 1988
MINING LANDS SECTION

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure 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~~ 3

Date	Recorded Holder or Agent (Signature)

For Office Use Only

Total Days Cr. Recorded: 126

Date Recorded: SEPT. 9/88.

Mining Recorder: [signature]

Date Approved as Recorded:

Branch Director:

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: Robert Komarechka suite #1, 396 EVA AVE, SUDBURY ONTARIO P3C 4N3

Date Certified: AUG 28 1988

Certified by (Signature): [signature]

Assessment Work Breakdown

Man Days are based on eight (8) hour Technical or Line-cutting days. Technical days include work performed by consultants, draftsmen, etc..

Type of Survey	Technical Days		Technical Days Credits		Line-cutting Days		Total Credits		No. of Claims		Days per Claim
~~GEOLOGICAL~~ OMIT	~~12~~	X ~~7~~	~~84~~	+		=		÷		=	
GEOLOGICAL	6	X 7	42	+	6	=	48	÷	4	=	12
		X 7		+		=		÷		=	
		X 7		+		=		÷		=	

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

This Township lies within the Town of WALDEN

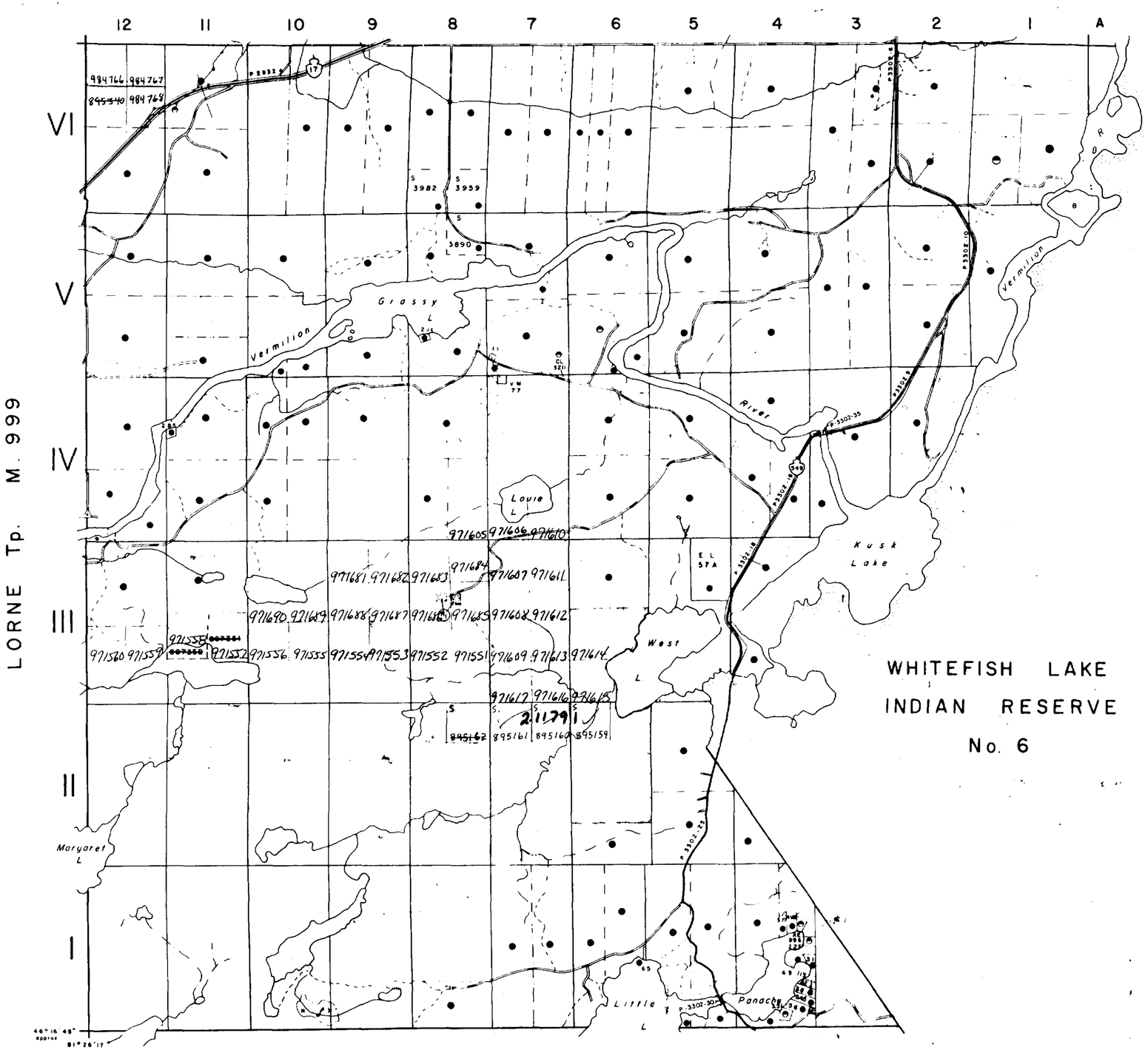
SAND & GRAVEL

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File
SEC. 36/80	W.6/83	7/4/83	M.&S.	188539

DENISON Tp. M. 756



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT LINES
  - PARCEL BOUNDARY
  - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT SURFACE & MINING RIGHTS	●
SURFACE RIGHTS ONLY	◓
MINING RIGHTS ONLY	◒
LEASE SURFACE & MINING RIGHTS	■
SURFACE RIGHTS ONLY	◨
MINING RIGHTS ONLY	◪
LICENCE OF OCCUPATION	▼
CROWN LAND SALE	C.S.
ORDER-IN-COUNCIL	OC
RESERVATION	⊕
CANCELLED	⊗
SAND & GRAVEL	Ⓢ

SCALE : 1 INCH 40 CHAINS

FEET 0 500 1000 2000 4000 6000 8000
METRES 0 200 400 600 800 1KM 2KM

ACRES	HECTARES
40	16

TOWNSHIP

LOUISE

DISTRICT SUDBURY

MINING DIVISION SUDBURY

DATE OF ISSUE
SEP 21 1988
SUDBURY
MINING RECORDER'S OFFICE

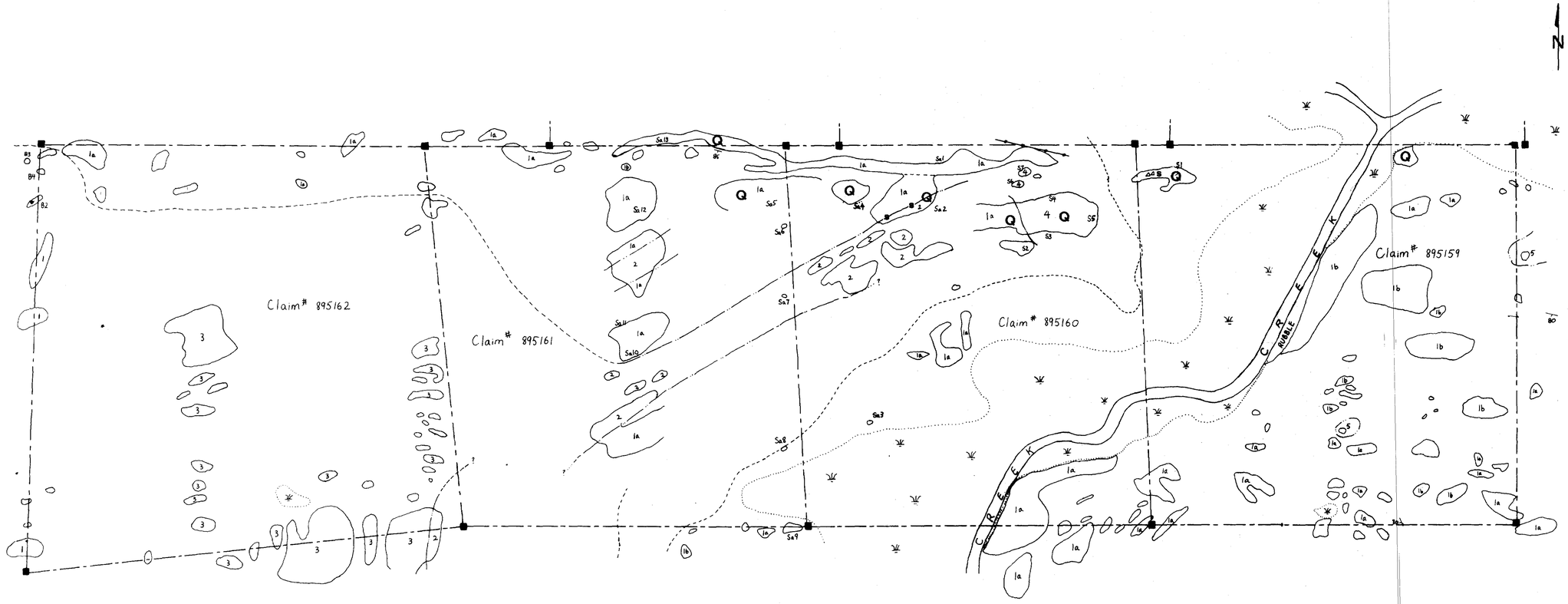
Ministry of Natural Resources
Ontario Surveys and Mapping Branch

Date 9 7 5

Whitney Block
Queen's Park, Toronto

Plan No. M.998

41106SW0001 2.11791 LOUISE



Map 3 Geology of the BEAR MOUNTAIN 2.11791 Claims

LEGEND

- 1 1a Greyish Protoquartzite
  1b Pinkish Protoquartzite
- 2 Subgreywacke
- 3 Polymictic Quartzite
- 4 Diabase
- 5 Granite
- Q Quartz veins
- Δ Breccia
- S Sulphide bands
- Sa6 Sample location
- Geological Boundary (defined, assumed)
- Swamp Boundary
- Claim Boundary
- Electrical line
- Trails

0 100m 200m