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43K07NE0001 63A.561 SUTTON NARROWS

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GEOPHYSICAL ENGINEERING & SURVEYS LTD.,

NORTH BAY, ONTARIO

SUTTON NARROWS

NORTHERN PATRICIA PORTION

DISTRICT OF KENORA, ONTARIO

JOB 919

ASSESSMENT REPORT

1969 GEOLOGICAL MAPPING & TRENCH SAMPLING

FOR

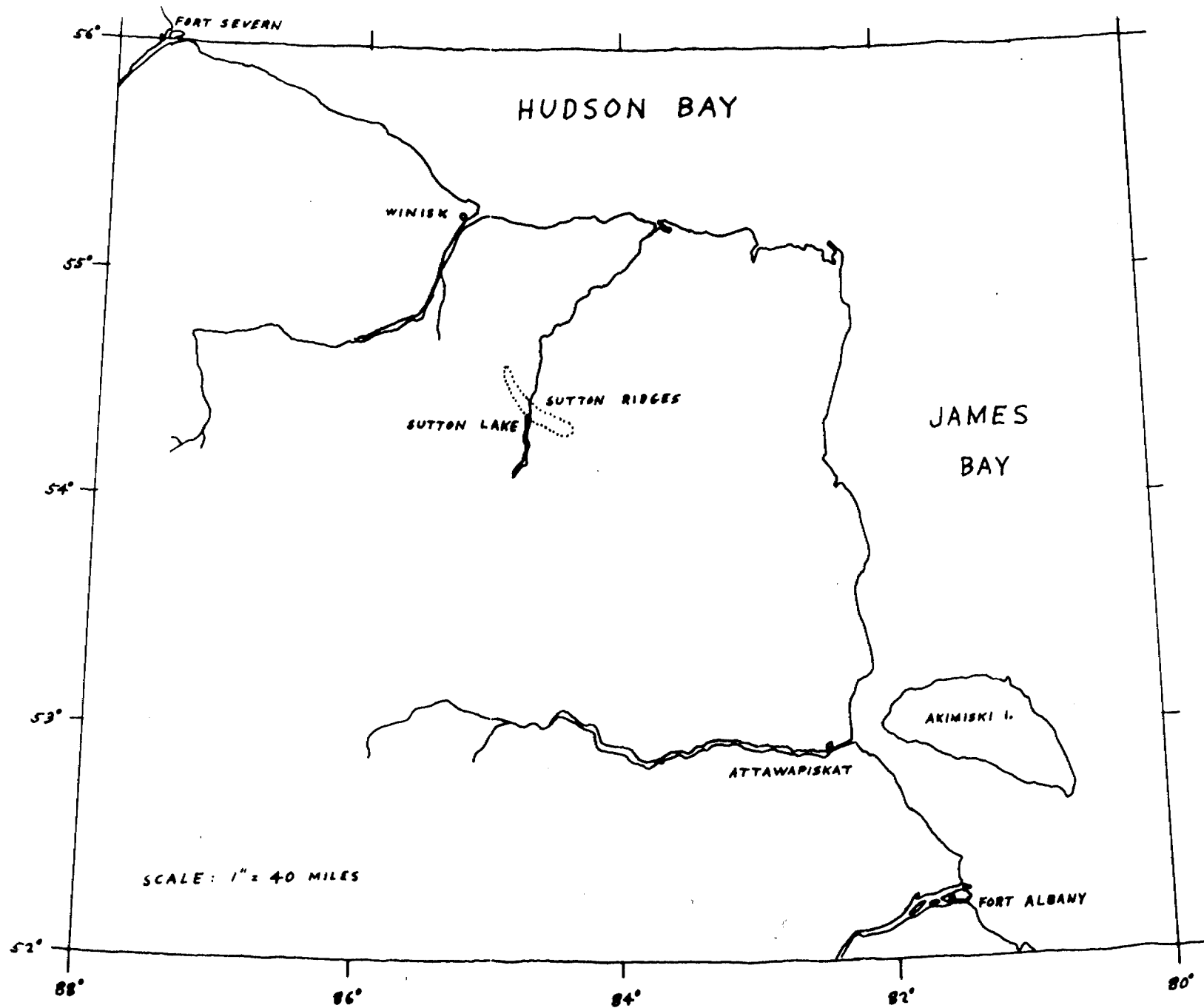
KEEVIL MINING GROUP

REPORT NO. 385 N.B

N.T.S 43 K/7

December 29th, 1969.

Edward D. Frey
Edward D. Frey.



The claim block is located 60 miles southeast of Winisk, in the northern Patricia Portion, District of Kenora, Ontario and is intersected by the northern end of Sutton Lake. Access to the property is by float aircraft to Sutton Lake or Hawley Lake. The lakes are separated by approximately 600 feet of rapids and small falls (the Sutton Narrows), bypassed by a portage around cliffs on the eastern side. Except water covered areas, the claims are traversable on foot.

No previous development work is known on the property.

This survey consisted of 1:12000 scale geological mapping with trenching at selected locations. Information outside the claim boundary on the accompanying geological map is part of a larger survey and no assessment work credits are claimed for it. Enlargements of Department of Energy, Mines, and Resources aerial photographs were used as a mapping base.

Bedrock exposure is slightly less than 50% of the claim area. It consists of a metasedimentary iron formation underlying a differentiated diabase sill. The diabase is a resistant cliff former, composing over 95% of the outcrop area, and its lower contact is conformable with the uppermost layering of the iron formation. The contact is sharp and lacks mesoscopic evidence of thermal alteration or incorporation of fragments of iron formation into the diabase. This contact is the most widespread stratigraphic marker of the region,

providing a goal in locating iron formation outcrops and a probably valid datum for structural interpretations.

The iron formation is exposed on cliff faces, irregularly eroded "pedestals", and nearly flatlying benches with steps one to two feet high facing opposite the direction of dip. Its lower contact is not exposed within the claim area.

Both units are believed to be of Precambrian age.

TABLE OF FORMATION

Diabase dark grey-black on fresh surface, weathered surface smooth, orange-brown, differentiated, fine grained, almost aphanitic, to medium grained (2mm maximum size); calcium plagioclase, pyroxene, hornblende, chloritic alteration (?) in some areas;

Iron Formation dull red-grey-black; laminated to bedded slaty magnetite and jaspilite consisting of: metallic magnetite, extremely fine grained in lenses from 1/8" to 1/2" thick; slaty magnetite in brittle plates < 1/8" thickness, ex. fine grained magnetite, forms bedding units 6" to 12" thick or the plates are individually separated by 2" to 6" of jasper (non-magnetic or containing traces of disseminated magnetite); dense, granular magnetite, fine grained in lenses to 1/2" thick, these lenses are not readily cleavable from over-and underlying units of one to several inches of red jasper or black, non-magnetic,

argillaceous (?) argillite, jasper segments occasionally composed of internally concentric silicious oolites of 1/16" maximum diameter.

STRUCTURE

Regional dip (measured on the iron formation) is uniformly to the northeast at five to eight degrees. At least one and possibly two vertical (?) faults are subparallel (16°) to the fault expressed by the steep sided gorge of the Sutton Narrows. Resultant displacements have exposed over 50 feet of iron formation east of the Narrows. Total displacement is approximately 100 feet. Upward (relative to adjacent block) movement east of the Narrows is further indicated by a monoclinial drag (flexure) exposed along the iron-formation-diabase contact. The apparent uniformity of the iron-formation surface is also interrupted by a small, open anticline exposed on the east shore of Sutton Lake.

MINERALIZATION

Bulk assays of five trenches within the iron formation indicate an average soluble iron content of 31.6%. Iron formation thickness is indeterminate within the claim area and its areal extent to the northeast is obscured by the diabase capping. Trench dimensions and assays are included on the following table and the accompanying geological map.

TABLE 1: TRENCH LOCATION, DIMENSIONS, AND ASSAYS

<u>TRENCH</u>	<u>LOCATION</u>	<u>ESTIMATED DIMENSIONS(HEIGHT MEASURED: H,L,W; Height is stratigraphic thickness</u>	<u>ASSAY: % Soluble Iron</u>
1	150'E, 450'S, # 4-44193	30' x 20' x 2' = 1200 cu. ft.	33.5
2	100'E, 500'S, # 4-44193	30' x 20' x 2' = 1200 cu. ft.	31.6
3	750'E, # 3-44192	18' x 150' x 2' = 5400 cu. ft.	31.7
4	300'E, 150'N, #3-44176	55' x 10' x 2' = 1100 cu. ft.	{ 29.3 (upper 24') 32.8 (-24'to-55')
5	600'E, 900'S, #4-44186	30' x 20' x 2' = 1200 cu. ft.	30.8

SE4S.M

SWORFAN NOTTUS

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SE4S.M

SUTTON NARROWS

SE4S.M

AREA OF

SUTTON NARROWS

DISTRICT OF
KENORA
(PATRICIA PORTION)

PORCUPINE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

PATENTED LAND	Ⓢ
CROWN LAND SALE	C.S.
LEASES	Ⓛ
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	C.

NOTES

400' Reserve around all Lakes & Rivers to Dept. of Lands & Forests:

This area lies within Polar Bear Provincial Park.

DATE OF ISSUE

FEB 9 1970

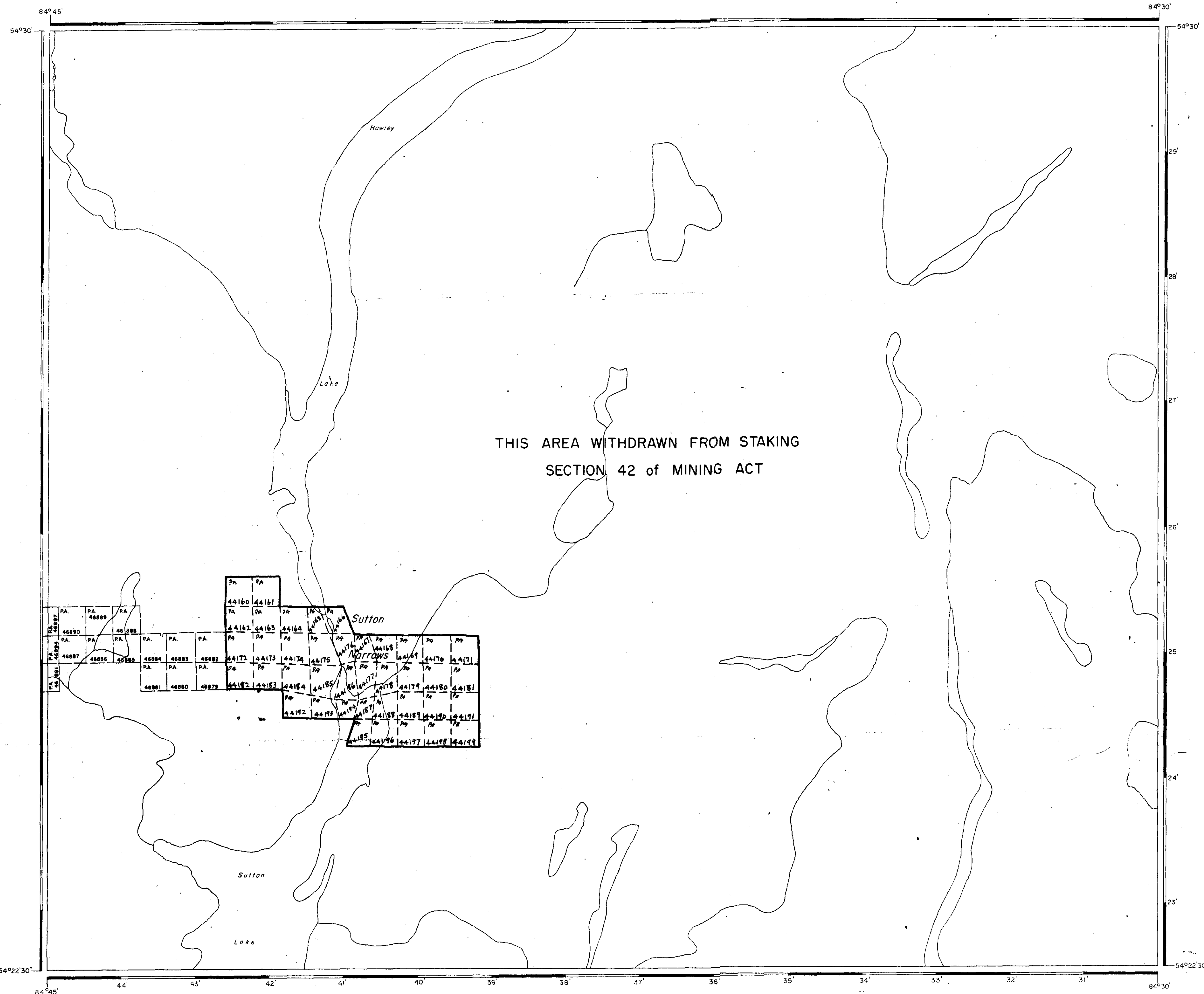
ONTARIO DEPT. OF MINES



PLAN NO. M.2492

DEPARTMENT OF MINES

— ONTARIO —

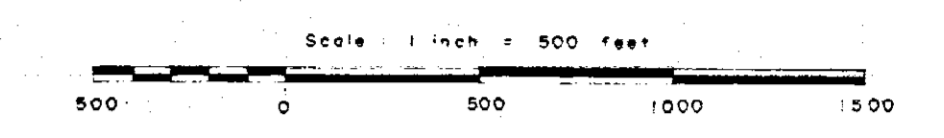


THIS AREA WITHDRAWN FROM STAKING
SECTION 42 of MINING ACT

TRIM LINE

GEOLOGICAL MAP
OF THE
SUTTON NARROWS
(CAMPBELL CLAIM AREA)
IN THE
NORTHERN PATRICIA PORTION
DISTRICT OF KENORA
PROVINCE OF ONTARIO

FOR
KEEVIL MINING GROUP
BY
GEOPHYSICAL ENGINEERING AND SURVEYS LTD.



JOB 919 N.T.S. 43-K/7 DEC 1969

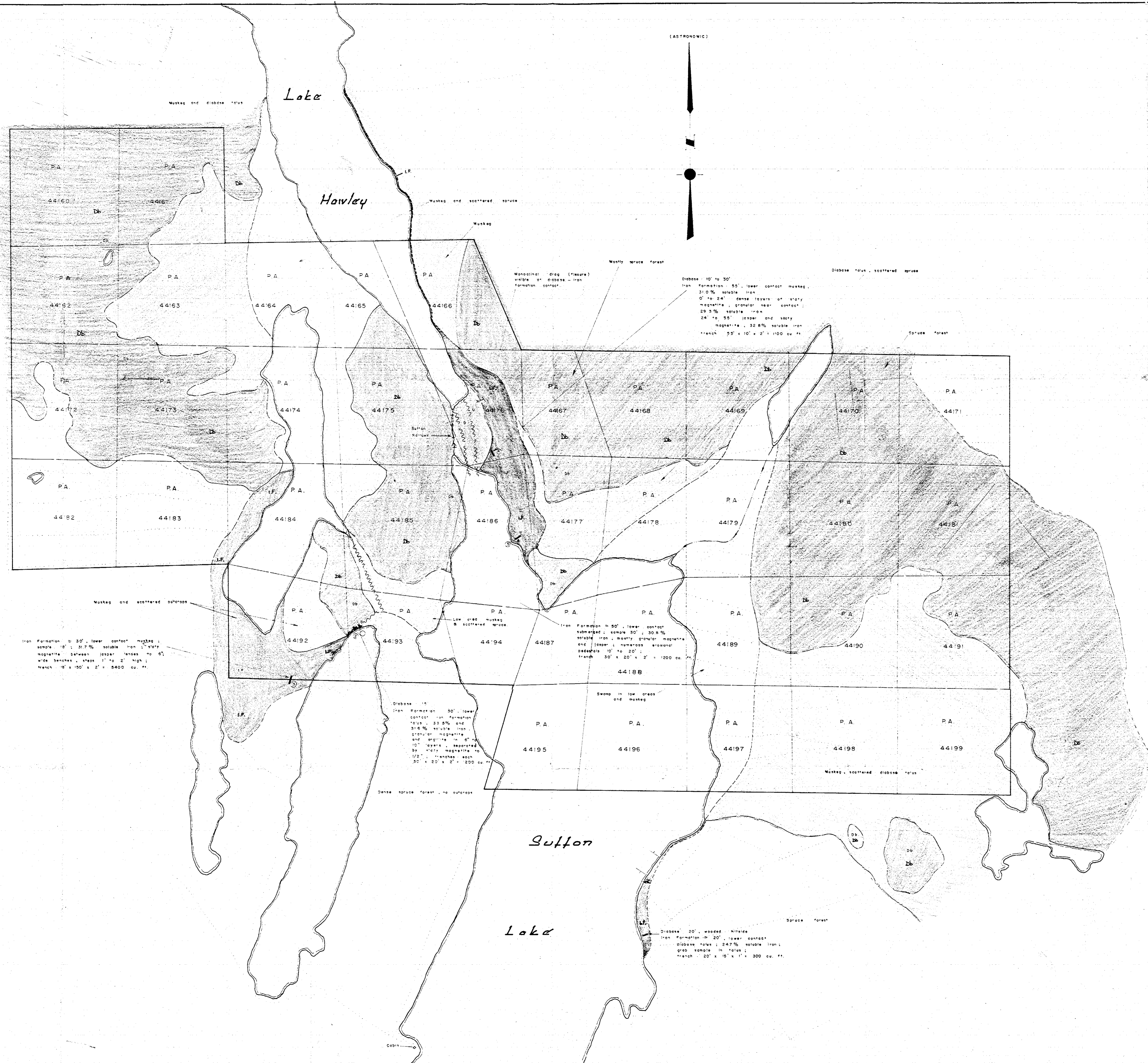


LEGEND

- 5 [Symbol] — Diabase (Db)
- 5a [Symbol] — Diabase boulder field
- 4 [Symbol] — Iron Formation (I.F.)
- 3 [Symbol] — Quartzite
- 2 [Symbol] — Cherty Breccia
- 1 [Symbol] — Dolomite
- [Symbol] — Boundary Lakes
- [Symbol] — Claim Lines
- [Symbol] — Traverse Lines
- [Symbol] — Outcrop
- [Symbol] — Contact: Defined, assumed
- [Symbol] — Stream and direction of flow
- [Symbol] — Small rapids
- [Symbol] — Large rapids
- [Symbol] — Trench
- [Symbol] — Bedding (all dips 5° to 8° unless indicated)
- [Symbol] — Fracture trace
- [Symbol] — Fault - vertical (?) defined, assumed

All stratigraphic measurements refer to true thickness.
Iron Formation measurements refer down-section from diabase contact.
Bedrock as indicated.
Areas not enclosed by contacts are mostly swamp covered.

Geology: E. Frey, assisted by W. Brown
E. Frey



E. Frey