GEOLOGICAL SURVEY OF CANADA
(DEPARTMENT OF ENERGY, MINES AND RESOURCES)

LEGEND

This legend is common to maps 1412A, 1413A, 1414A, and 1415A (uncoloured blocks do not appear on this map)

PALEOZOIC

ORDOVICIAN

21 — TRENTON AND BLACK RIVER GROUPS
Undifferentiated

HADRYNIAN (?)

20 — *JACOBSVILLE FORMATION:* sandstone, shale, conglomerate
(? formerly classed as Cambrian)

NEOHELIKIAN

KEWEENAWAN GROUP

19 — *MAMAINSE POINT FORMATION:* basalt, rhyolite

APHEBIAN

17 | 18 — *NIPISSING DIABASE:* quartz diabase, gabbro, subordinate granophyre; 17a, *mainly leucogabbro;* 18, *mainly granophyric diabase and gabbro (probably includes some pre-Huronian intrusions)*

HURONIAN SUPERGROUP

COBALT GROUP (13-16)

16 — *BAR RIVER FORMATION:* white quartzite, minor argillite

15 — *GORDON LAKE FORMATION:* varicoloured siltstone, chert

14 — *LORRAIN FORMATION:* quartzite, pebbly quartzite, arkose, jasper conglomerate, argillaceous quartzite, argillite
14f, *white orthoquartzite member:* white quartzite, pebble beds
14e, *upper red quartzite member:* red and buff pebbly quartzite, grit
14d, *jasper conglomerate member:* jasper conglomerate, white quartzite
14c, *lower red quartzite member:* varicoloured pebbly quartzite, grit
14b, *purple siltstone member:* purple arkose, siltstone, argillite
14a, *basal arkose member:* arkose, minor siltstone argillite, quartzite

13 — *GOWGANDA FORMATION:* paraconglomerate, orthoconglomerate, argillite, greywacke, arkose, siltstone, quartzite; 13a, *mainly paraconglomerate;* 13b, *mainly quartzite;* 13c, *mainly pink arkose, quartzite, and siltstone;* 13d, *mainly argillite, greywacke and quartzite;* 13dm, *upper argillite member*

QUIRKE LAKE GROUP (10-12)

12 — *SERPENT FORMATION:* feldspathic quartzite, polymictic conglomerate; 12a, *polymictic conglomerate*
(Absent in Sault Ste. Marie and Wawiekobbi Lake-Dean Lake map-areas)

11 — *ESPANOLA FORMATION:* 11a, *Bruce* limestone member; 11b, *Espanola* siltstone member; 11c, *dolomite member*

10 — *BRUCE FORMATION:* paraconglomerate, minor quartzite, grit, and orthoconglomerate

HOUGH LAKE GROUP (7-9)

9 — *MISSISSAGI FORMATION:* fine to coarse-grained feldspathic quartzite, pebble conglomerate, and paraconglomerate, minor orthoconglomerate; 9a, *paraconglomerate;* 9A, *AWERES FORMATION:* feldspathic quartzite, greywacke, quartz-pebble conglomerate, paraconglomerate, minor argillite, arkose *(? formerly correlated with the Serpent Formation)*

8 — *PECORS FORMATION:* argillite, siltstone
(subsurface only, not identified in outcrop)

7 — *RAMSAY LAKE FORMATION:* paraconglomerate, minor quartzite, argillite

ELLIOT LAKE GROUP (4-6)

6 — *THESSALON FORMATION:* basalt, andesite, rhyolite, minor pyroclastic rocks and intercalated sediments; 6a, *basalt, minor quartzite and quartz-pebble conglomerate;* 6b, *rhyolite;* 6c, *quartzite;* 6d, *amygdaloidal basalt*

4 | 5 — 4, *MATINENDA FORMATION:* feldspathic quartzite, arkose, grit, quartz-pebble conglomerate, polymictic conglomerate, minor basalt; 5, *LIVINGSTONE CREEK FORMATION:* feldspathic quartzite, siltstone, polymictic conglomerate, quartz-pebble conglomerate

PROTEROZOIC

3 — *JARVIS BATHOLITH:* quartz monzonite, granite, syenite, quartz diorite

ARCHEAN

2 — 2a, *mainly pink to grey granite to diorite gneiss, including numerous remnants of 1b and 1c, and areas of 2b;* 2b, *mainly massive pink granite, quartz monzonite, syenite, granodiorite, and quartz diorite, possibly in part younger than 2a;* 2c, *mainly porphyritic pink granite;* 2d, *mixed migmatite, amphibolite, and granitic rocks;* 2e, *mainly migmatite*

1 — 1a, *schistose basic to acidic flows and pyroclastic rocks; sub-ordinate sediments including iron-formation; minor diorite and gabbro;* 1b, *biotite and hornblende-plagioclase-quartz gneisses, commonly with granitic intercalations;* 1c, *amphibolite;* 1d, *mixed zones of amphibolite, biotite gneiss and granite, "granitized" amphibolite, migmatite*

Drift-covered area
Rock outcrop
Geological boundary (approximate, assumed)
Bedding (inclined)
Schistosity, gneissosity (inclined, vertical dip unknown)
Anticline (direction of plunge)
Syncline (direction of plunge)
Fault, shear zone (approximate, assumed, downthrow side)
Thrust or reverse fault (direction of dip)
Glacial striae (direction of ice movement known, unknown)
Raised beach
Breccia zone
Drillhole (vertical, inclined)
Mineral occurrence
Inactive mine workings

ELEMENT AND MINERAL SYMBOLS

Cobalt	Co	Silica	sc
Copper	Cu	Silver	Ag
Iron	Fe	Uranium	U
Lead	Pb	Zinc	Zn
Pyrite	py		

Key to numbered copper prospects and past producers*, by township (For descriptions see the Ontario Department of Mines, Mineral Resources Circular No.12, 1969)

Aberdeen
1. Fraser
2. Indian Lake
3. Rock Lake*

Aberdeen Additional
4. Two Horse Lake

Anderson
5. Taylor

Awrey
6. Hillman
7. Nyoted

Bridgland
8. Bandore
9. Paynter
10. Rowing River

Chesley
11. Ranson

Chesley Additional
12. Sabourin

Cobden
13. Goulding*

Day
14. Dempsey
15. Sowerby
16. Two Lake

Deroche
17. Edgar

Galbraith
18. Wilmot

Gladstone
19. Glagoma*
20. Principle Strategic Minerals

Gould
21. Grand Portage*
22. Rockwin

Grasett
23. Kynoch
24. Little Pickerel Lake

Jarvis
25. Doyle

Johnson
26. Rainbow*

Kehoe
27. Asidin
28. Dolan
29. Ginsby

Kirkwood
30. Anthony
31. Jerzo

McMahon
32. Patton Lake East
33. Romar

Montgomery
34. Cobden River
35. North Montgomery

Morin
36. Copper Queen
37. Rising Sun

Otter
38. Fano

Parkinson
39. Clarland Lake
40. Little White River

Patton
41. Bilbo*
42. Brady
43. Copper Float
44. Jury*
45. Kennedy
46. Mantio

Plummer Additional
47. Bald Dome
48. Bruce*
a) Copper Bay Section
b) Mississagi Section
c) Taylor Section
d) Bruce Section
49. Campbell-Dukes
50. Centre Line
51. North Prospect
52. Steinberg

Rose
53. Algomont
54. Canada Verde

Scarfe
55. Chibiloe Lake
56. Plump Lake

Talbott Additional
57. Add Prospect

Talbott, Talbott Additional, and Johnson
58. Desharnais

Thompson
59. Bar Fire*
60. Knoblauch

Wells
61. Whamcliffe

Township 168
62. Cannon
63. Crowebridge

Township 175
64. Aldrican
65. Ridgefield
66. Sheba

Copies of this map may be obtained from the Geological Survey of Canada 601 Booth Street, Ottawa, Ontario K1A 0E8 3303 - 33rd Street N. W., Calgary, Alberta T2L 2A7

INDEX MAP

Geology by M.J. Frarey, 1961, 1963, 1967, 1970

To accompany Memoir 383 by M.J. Frarey

Geological cartography by G.W. Fouchard, Geological Survey of Canada

Any revisions or additional geological information known to the user would be welcomed by the Geological Survey of Canada

Base-map at the same scale published by the Army Survey Establishment, R.C.E., in 1953-58

Copies of the topographical edition of this map may be obtained from the Canada Map Office, Department of Energy, Mines and Resources, Ottawa

Approximate magnetic declination 1974, 9°17' West decreasing 1.0' annually

Elevations in feet above mean sea-level

MAP 1414A
GEOLOGY

BRUCE MINES - LAKE GEORGE AREA

DISTRICT OF ALGOMA
ONTARIO

Scale 1:50,000

Kilometres 1 0 1 2 3 4 Kilometres
Miles 1 0 1 2 Miles

Universal Transverse Mercator Projection

Printed by the Surveys and Mapping Branch 1975

NATIONAL TOPOGRAPHIC SYSTEM REFERENCE

MAP 1414A
BRUCE MINES - LAKE GEORGE AREA
ONTARIO

1414

Ont. BRUCE MINES
File under → LAKE GEORGE
1:50,000
MAP 1414A