UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PROFESSIONAL PAPER 376
PLATE 1

DEPOSITS, PROSPECTS, AND MAGNETIC ANOMALIES

Numbers read from left to right, top to bottom, in rows 5 minutes in latitude. Position in quadrangle is designated by 5-minute ninths: SW, southwest ninth; N, north (central) ninth; C, central ninth, etc.

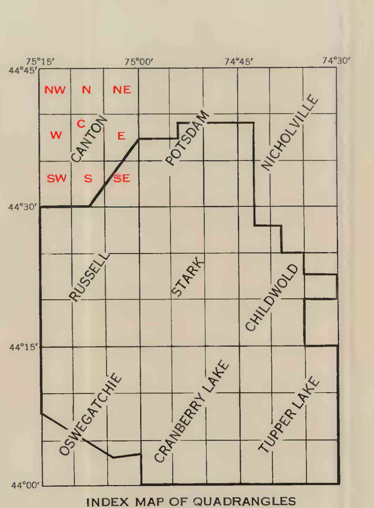
Numbers alone designate magnetite deposits and magnetic anomalies. Letters following numbers designate other deposits: HH, hypogene hematite; PP, pyrite or pyrrhotite; IM, ilmenite-magnetite; HS, supergene hematite.

NUMERICAL INDEX

1-IM	Parishville	Potsdam E
2-HS	McCollum Farm	Canton SE
3-PP	Unnamed	Potsdam SW
4	Claflin School (Enslow)	Potsdam SW
5	Rock Pond	Potsdam SE
6	Sterling Pond	Nicholville SW
7-PP	Stella Mines	Russell NW
8-HS	Devils Elbow	Russell NW
9-HS	O'Brien Farm (Little River)	Russell N
10-HS	Allen Farm	Russell NE
11	White Place	Stark NW
12	Brunner Hill	Stark NE
13	Walker Farm (Hughesville School)	Russell C
14	Wier	Russell C
15-HH	Loup	Russell C
16	Parish	Stark W
17	Long Pond	Stark E
18-IM	South Edwards	Russell SW
19-HH	Georgiana Slate	Russell S
20	VanOrnum (Sweet Pond)	Russell S
21	Clifton	Russell SE
22	Spruce Mountain Northwest	Russell SE
23	Wilson Mountain	Stark S
24	Wolf Hole	Stark S
25	Deerlick Rapids	Stark S
26	Fern	Stark S
27	Outafit	Stark S
28	Hollywood Club	Stark SE
29	Green Farm	Oswegatchie N
30	Skate Creek	Oswegatchie NE
31	Griffin Park (Benson Mines Extension)	Oswegatchie NE
32	Twin Lake Stream	Oswegatchie NE
33	Anderson	Oswegatchie NE
34	Benson Mines	Oswegatchie NE
35	Twin Lakes	Oswegatchie NE
36	Spruce Mountain Southeast	Cranberry Lake NW
37	Jarvis Bridge	Cranberry Lake NW
38	Jarvis Bridge Extension	Cranberry Lake NW
39	Hardwood Mill (Ross)	Cranberry Lake N
40	Trembley Mountain	Cranberry Lake N
41-IM	Dillon Pond	Cranberry Lake N
42	Silver Pond (Brody Tract)	Cranberry Lake NE
43	Brandy Brook Northwest	Cranberry Lake NE
44	Brandy Brook Southeast	Cranberry Lake NE
45	Burntbridge Pond	Tupper Lake NW
46	Jayville	Oswegatchie W
47	Dead Creek	Cranberry Lake W
48	Sucker Brook	Cranberry Lake E
49	Grass Pond	Cranberry Lake E
50	Lake Marian (Rampart Mountain)	Tupper Lake W
51	Iron Pond	Tupper Lake W

ALPHABETICAL INDEX

10-HS	Allen Farm	Russell NE
33	Anderson	Oswegatchie NE
34	Benson Mines	Oswegatchie NE
31	Benson Mines Extension (Griffin Park)	Oswegatchie NE
43	Brandy Brook Northwest	Cranberry Lake NE
44	Brandy Brook Southeast	Cranberry Lake NE
42	Brody Tract (Silver Pond)	Cranberry Lake NE
12	Brunner Hill	Stark NE
45	Burntbridge Pond	Tupper Lake NW
4	Claflin School (Enslow)	Potsdam SW
21	Clifton	Russell SE
47	Dead Creek	Cranberry Lake W
25	Deerlick Rapids	Stark S
8-HS	Devils Elbow	Russell NW
41-IM	Dillon Pond	Cranberry Lake N
4	Enslow (Claflin School)	Potsdam SW
26	Fern	Stark S
49	Grass Pond	Cranberry Lake E
29	Green Farm	Oswegatchie N
31	Griffin Park (Benson Mines Extension)	Oswegatchie NE
39	Hardwood Mill (Ross)	Cranberry Lake N
28	Hollywood Club	Stark SE
13	Hughesville School (Walker Farm)	Russell C
51	Iron Pond	Tupper Lake W
37	Jarvis Bridge	Cranberry Lake NW
38	Jarvis Bridge Extension	Cranberry Lake NW
46	Jayville	Oswegatchie W
50	Lake Marian (Rampart Mountain)	Tupper Lake W
9-HS	Little River (O'Brien Farm)	Russell N
17	Long Pond	Stark E
15-HH	Loup	Russell C
2-HS	McCollum Farm	Canton SE
9-HS	O'Brien Farm (Little River)	Russell N
27	Outafit	Stark S
16	Parish	Stark W
1-IM	Parishville	Potsdam E
50	Rampart Mountain (Lake Marian)	Tupper Lake W
5	Rock Pond	Potsdam SE
39	Ross (Hardwood Mill)	Cranberry Lake N
42	Silver Pond (Brody Tract)	Cranberry Lake NE
30	Skate Creek	Oswegatchie NE
19-HH	Slate, Georgiana	Russell S
18-IM	South Edwards	Russell SW
22	Spruce Mountain Northwest	Russell SE
36	Spruce Mountain Southeast	Cranberry Lake NW
7-PP	Stella Mines	Russell NW
6	Sterling Pond	Nicholville SW
48	Sucker Brook	Cranberry Lake E
20	Sweet Pond (VanOrnum)	Russell S
40	Trembley Mountain	Cranberry Lake N
35	Twin Lakes	Oswegatchie NE
32	Twin Lake Stream	Oswegatchie NE
3-PP	Unnamed	Potsdam SW
20	VanOrnum (Sweet Pond)	Russell S
13	Walker Farm (Hughesville School)	Russell C
11	White Place	Stark NW
14	Wier	Russell C
23	Wilson Mountain	Stark S
24	Wolf Hole	Stark S



INDEX MAP OF QUADRANGLES
SHOWING AREA MAPPED

EXPLANATION

QUATERNARY

Qw — Water-laid glacial deposits
Mainly lake and stream deposits. Includes deposits in pitted sand plains, deltas, and kame belts. Mapped only where bedrock cannot reasonably be inferred

Qd — Drift
Mainly ground moraine. Includes some water-laid deposits. Mapped only where bedrock cannot reasonably be inferred

CAMBRIAN

Cp — Potsdam sandstone
Sandstone, conglomerate, and breccia

PRECAMBRIAN

Granite and granite gneiss series

gagn — Alaskite gneiss
Metamorphosed equivalent of ga. Associated biotite granite gneiss, contaminated facies of alaskite gneiss, gagnb

ga — Alaskite
Containing subordinate layers of amphibolite, gaa. With garnet from contamination, gac. Garnet-quartz-feldspar rock in aureole of alaskite granite gneiss, gag

ghgn — Hornblende-microcline-oligoclase granite gneiss
Metamorphosed equivalent of gh. Contaminated with metasedimentary material and amphibolite, ghgnc or syenitic development, ghsy

gh — Hornblende-microperthite granite
Containing subordinate layers of amphibolite, gha. With associated metasedimentary layers, ghs

Age relations unknown

gao — Albite-oligoclase granite gneiss

gm — Microcline granite gneiss
Commonly sillimanitic, locally garnetiferous; associated with metasedimentary layers, gms. Predominantly hornblendic, but in part pyroxenic; associated locally with amphibolite, gma. Contains alaskite layers locally

gpb — Hermon granite gneiss
Porphyritic biotite granite gneiss, in part with augen structure

spgr — Fayalite-ferrohedenbergite granite
Age relations unknown

Quartz syenite gneiss series
Diana and Stark complexes

sgp — Hornblende granite gneiss
Locally alaskitic; mostly with phacoidal structure; locally coarse and even-grained. North of Streeter Lake, includes some rock regarded as part of the Inlet sheet of the Tupper complex

shq — Hornblende-quartz syenite gneiss

spq — Pyroxene-quartz syenite gneiss

sphg — Pyroxene-quartz syenite gneiss
With interlayers of hornblende-quartz syenite gneiss and hornblende granite gneiss

sp — Pyroxene syenite gneiss

spp — Pyroxene syenite gneiss
With interlayers of shonkinite gneiss and feldspathic ultramafic ilmenite-magnetite-pyroxene gneiss

sb — Biotite syenite gneiss
Locally hornblendic or pyroxenic. Age relations unknown

Charnockitic quartz syenite gneiss series
Tupper complex

spqc — Pyroxene-quartz syenite gneiss
Mafic minerals include ferroaugite, ferrohypersthene, and ferrohastingsite

spc — Pyroxene syenite gneiss
Mafic minerals include ferroaugite, ferrohypersthene, and ferrohastingsite. Locally massive

gb — Metagabbro gneiss

am — Amphibolite
Largely with granitic veins and sheets

di — Diorite gneiss
Pre-granite; otherwise age unknown

gba — Anorthositic gabbro and anorthositic gabbro gneiss

Metasedimentary rocks and migmatites of the Grenville series

msq — Quartzose metasedimentary rocks
Pyroxenic and calcareous quartz-feldspar gneisses, fine-grained quartz-feldspar granulite, and quartzite, locally with intercalated beds of limestone, pyroxene granulite, and tremolite schist; thin-layered quartzite and limestone; migmatitic biotite gneiss present locally. Predominantly pyroxene quartzite, mspq

ms — Metasedimentary rocks and related migmatites with sheets of granite gneiss, commonly microcline granite gneiss or alaskite
Metasedimentary rocks and migmatites include pyroxenic, hornblendic, and biotitic gneisses; quartzite, feldspathic quartzite, and quartz-feldspar granulite; amphibolite; skarn and local limestone lenses

msk — Pyroxene skarn and garnet-pyroxene skarn
Metamorphosed equivalent of msl

msl — Marble
Locally with beds of pyroxene granulite

mslq — Marble
Locally with beds of quartzite, diopside granulite, and some tremolite schist and biotite gneiss

msg — Garnet-biotite migmatitic gneiss and biotite-quartz-feldspar gneiss
Interlayers of amphibolite present. Marble occurs sporadically

msam — Amphibolite
With granitic veins. Skarn lenses and biotite gneiss present locally. Position of amphibolite unknown

Metasedimentary units are lithologic, and only incidentally stratigraphic

Inferred contact
Dotted where concealed

Doubtful or probable fault
Dotted where concealed. U, upthrown side; D, downthrown side

Strike and dip of foliation

Strike of vertical foliation

Horizontal foliation

Bearing and plunge of lineation

Horizontal lineation

NOTE: Foliation and lineation symbols may be combined.

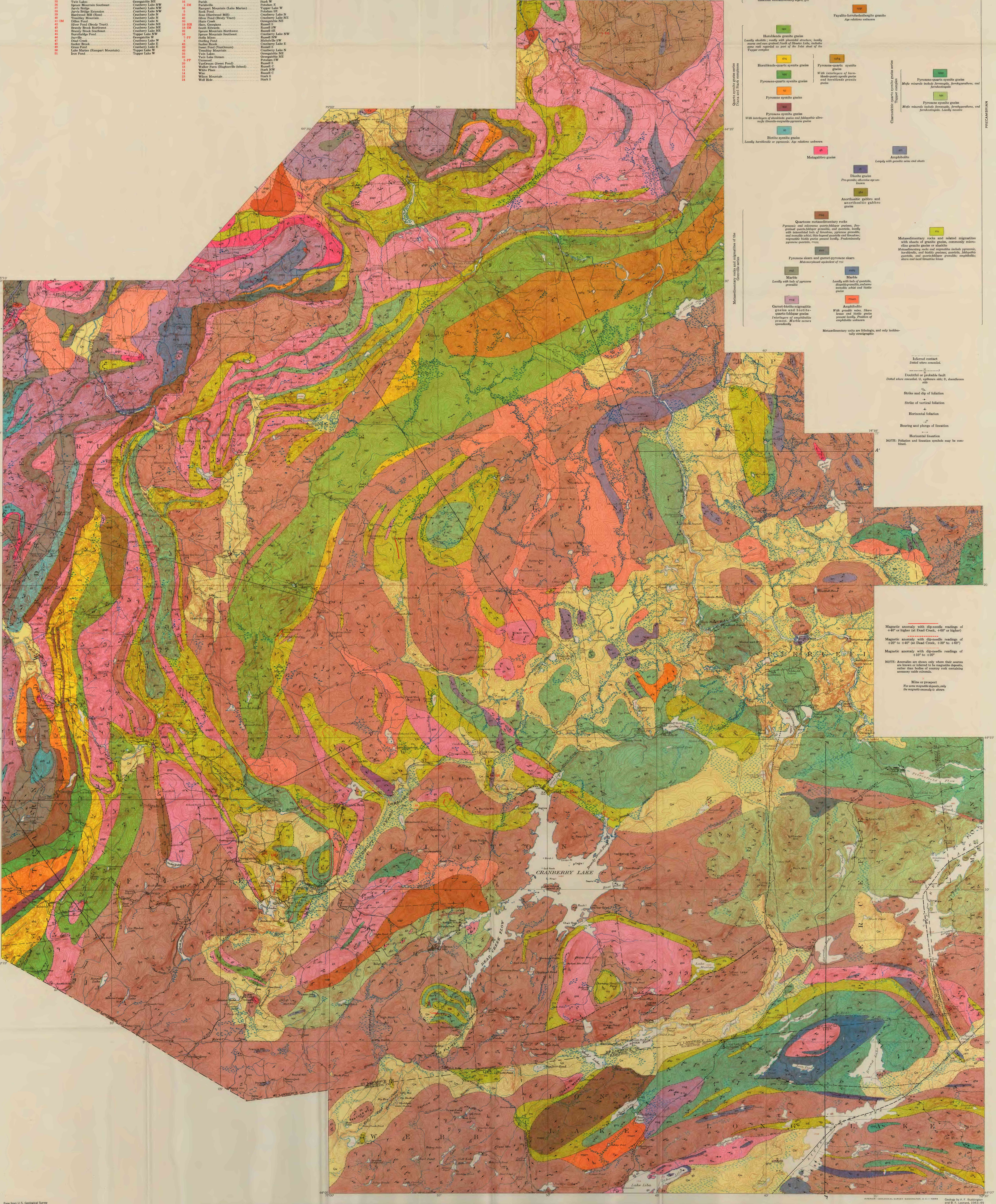
Magnetic anomaly with dip-needle readings of +40° or higher (at Dead Creek, +60° or higher)

Magnetic anomaly with dip-needle readings of +20° to +40° (at Dead Creek, +30° to +60°)

Magnetic anomaly with dip-needle readings of +10° to +20°

NOTE: Anomalies are shown only where their sources are known or inferred to be magnetite deposits, rather than bodies of country rock containing accessory oxide minerals.

Mine or prospect
For some magnetite deposits, only the magnetic anomaly is shown



Base from U.S. Geological Survey topographic quadrangles

GEOLOGIC MAP OF ST. LAWRENCE COUNTY MAGNETITE DISTRICT, NORTHWEST ADIRONDACKS, NEW YORK

SCALE 1:62 500
1 0 1 2 3 4 5 MILES
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

INTERIOR—GEOLOGICAL SURVEY WASHINGTON, D. C.—10059

Geology by A. F. Buddington and B. F. Leonard, 1943–49