

RP 343(A)

PRELIMINARY REPORT ON GUERCHEVILLE - LAPPARENT AREA, ABITIBI-EAST ELECTORAL DISTRICT

Documents complémentaires

Additional Files



Licence



License

Cette première page a été ajoutée
au document et ne fait pas partie du
rapport tel que soumis par les auteurs.

Énergie et Ressources
naturelles

Québec 

P. R. NO. 343

PROVINCE OF QUEBEC, CANADA

DEPARTMENT OF MINES

HON. W. M. COTTINGHAM, MINISTER

A.-O. DUFRESNE, DEPUTY MINISTER

GEOLOGICAL SURVEYS BRANCH

I. W. JONES, CHIEF

PRELIMINARY REPORT

ON

GUERCHEVILLE-LAPPARENT AREA

ABITIBI-EAST ELECTORAL DISTRICT

BY

JEROME H. REMICK



QUEBEC
1957

P. R. NO. 343

PRELIMINARY REPORT

ON

GUERCHEVILLE-LAPPARENT AREAABITIBI-EAST ELECTORAL DISTRICT

by

Jerome H. Remick

INTRODUCTION

The Guercheville-Lapparent area, geologically mapped by the writer during the summer of 1956, is bounded by latitudes 49°30' and 49°45' and longitudes 75°15' and 75°30'. It comprises an area of about 200 square miles in Abitibi-East electoral district, about 50 miles southwest of Chibougamau. It includes almost all of Guercheville and Lapparent townships, about one-third of Anville and Drouet townships and small portions of Dolomieu and Saussure.

The area to the east was mapped by Remick in 1955, that to the south by Deland in 1955, that to the west by Shaw in 1937, and that to the north by Beach in 1938.

Several aviation companies located near Chibougamau provide transportation into the area, the flight distance being about 45 miles. Numerous lakes are accessible to float planes. By canoe, the northern part of the area is accessible from Chibougamau via Obatogamau river and the southern part by Opawica river. The new Chibougamau-Senneterre line of the Canadian National Railway, now under construction, traverses the northern part of the area in an east-northeast direction. A bulldozed road about 30 feet wide parallels the railway.

PHYSICAL FEATURES

The area is generally flat and the land surface is covered by numerous small swampy areas and thickly wooded patches. Hills of granitic and volcanic rocks, elongated parallel to the strike of the schistosity, rise 10 to 100 feet above the general level, and rounded hills of anorthosite and amphibolite rise 10 to 250 feet. In the northern part of the area two northeasterly trending diabase dykes form discontinuous ridges which rise 15 to 150 feet above the plain.

The area is drained by tributaries of Chibougamau river, particularly the Houghton and Opawica, and hence into the Waswanipi-Nottaway system and so to James Bay.

A falls, 800 feet wide and 22 feet high, is situated on Opawica river about 1,500 feet north of the central part of the southern boundary of the area. It is divided by islands of rock into five smaller falls.

GENERAL GEOLOGY

All the consolidated rocks of the area are Precambrian in age. Most of these are metamorphosed. Two-thirds of the area is underlain by acidic intrusive rocks, mainly gneissic biotite granite. Toward the north the granite appears to grade into hornblende and biotite injection gneiss inclusive of hybrid rocks varying from amphibolite to syenite. Meta-volcanic rocks of Keewatin-type, sills of meta-gabbro, and a body of meta-anorthosite underlie a zone 3 to 4 miles wide in the southern third of the area. Porphyritic hornblende granite intrudes the volcanic rocks near the western boundary of the area. Dykes of diabase, trending northeasterly, cut both the granitic and the volcanic groups.

Table of Formations

Pleistocene and Recent		Boulders, gravel, sand, silt, clay
Precambrian	Late Precambrian Intrusive Rocks	Coarse-grained to fine-grained diabase dykes
	Intrusive Contact	
	Acidic Intrusive Rocks	Porphyritic hornblende granite
		Hornblende syenite
		Pegmatite and aplite Gneissic biotite granite Gneissic hornblende granite Biotite injection gneiss Hornblende injection gneiss
		Intrusive Contact
	Altered Basic Rocks Associated With Granite	Amphibolite; some hybrid rocks; Gabbro; some amphibolite
	Basic Rocks Associated With Keewatin-Type Rocks	Meta-anorthosite Meta-gabbro
	Intrusive Contact	
	Keewatin-type Rocks	Meta-andesite, meta-basalt; minor feldspar-rich sedimentary rock, porphyroblastic hornblende-garnet slate

Keewatin-type Rocks

Metamorphosed lavas

A west-northwesterly trending belt, 3 to 4 miles in width, of andesite with some basalt and small sills of gabbro underlies the southern part of the area. Meta-anorthosite and porphyritic hornblende granite intrude the volcanic and associated rocks. Small, rounded outcrops of andesitic pillow lava are abundant east of miles 1 to 3 on the central north-south survey line of Guercheville township.

The lavas vary from massive or slightly schistose in the southern part of the belt to strongly schistose farther north. In the northern mile of the belt the rocks generally are thinly sheeted; here also small shear zones are common and drag folds appear in a few places. In the less schistose lavas pillows clearly indicate the tops of flows.

The more massive andesite is green to bluish green on the fresh surface and greenish grey weathering. It is generally very fine-grained. Some of the andesite in the southern part of the volcanic belt lacks pillow structure and is slightly coarser in grain than the pillow lavas. These massive lavas consist of hornblende and feldspar with a diabasic texture.

A light bluish green to grey, thinly sheeted chlorite schist occurs south of Anctil lake and northeast of Mina lake.

Metamorphosed Tuffs (?) and Sedimentary Rock.

A chalky white, schistose, feldspar-rich rock(tuff?) is interbedded here and there with schistose, bluish, acidic metalava in the northern part of the volcanic belt. It consists of chalky white feldspar grains, altered to sericite, with elongated, dark, paper-thin lenses.

A slaty, feldspar-rich sedimentary rock occurs in a small outcrop one mile south of Anctil lake. The rock is black, grey-weathering and has very thin laminae of feldspar and, rarely, of hornblende. It breaks into slaty sheets on the surfaces of which small ruby red garnet and hornblende porphyroblasts may be seen.

Basic Rocks Associated with Keewatin-type Rocks

Sills of meta-gabbro commonly are interlayered with the volcanic rocks, particularly toward their northern limit. However, only one area of gabbro is extensive enough to be shown on the present map. This includes several small hills predominantly underlain by the gabbro and forming a zone that extends into the map-area to the east.

The gabbro is a bluish black, fine- to medium- grained rock composed of feldspar and 30 to 50 per cent hornblende. The weathered surface is dark blue, and is usually quite rough due to differential weathering. A weathered border zone 1/8 inch thick shows green hornblende needles in a white groundmass of altered feldspar. Accessory pyrite and sometimes chalcopyrite and pyrrhotite are finely disseminated in the rock.

Meta-anorthosite, occurring in a series of hills 15 to 250 feet high, underlies about 6 square miles toward the southwestern corner of the area. Several anorthosite dykes, 10 to 30 feet wide, intrude the lavas near the main anorthosite body.

The anorthosite consists of 75 to 95 per cent feldspar in very coarse, slightly rounded to ellipsoidal grains, and 25 to 5 per cent greenish black amphibole. The feldspar grains are light grey to light bluish grey and chalky white to light grey weathering. They range in size from $\frac{1}{2}$ to 8 inches in diameter, averaging 1 to 2 inches in the southern part of the body and 3 to 4 inches just southeast of Lapointe lake. The fresher feldspar shows both albite twinning striations and good cleavage. The amphibole is between the feldspar grains or, if present in abundance, surrounds the feldspar grains, giving a net-like appearance to the weathered surface. A few small elongated segregations of amphibole (in one outcrop with 30 per cent ilmenite) were observed $\frac{1}{2}$ miles south-southeast of Lapointe lake. The grain size and the abundance of amphibole increases toward the north.

Small dyke-like outcrops of gneissic biotite granite and pegmatite intrude the anorthosite southeast of Lapointe lake. Here, also, a few layers of slabby hornblende schist, probably metamorphosed Keewatin-type lavas, are included locally in the anorthosite. Irregular dyke-like bodies of even-textured medium-grained anorthosite consisting entirely of feldspar cut the normal coarse-grained type. These dykes contain disseminated pyrite and a little chalcopyrite and are cut by quartz veins. Mineralization in the anorthosite usually occurs where the two types are associated.

The anorthosite is generally massive, but local, faintly schistose zones occur parallel to the contact with the lavas. In the northern part of the area, layering might explain the variation, every 15 to 30 feet, in grain size and mafic content.

Altered Basic Rocks Associated With Granite

Medium- to coarse-grained altered gabbro with small segregations of amphibolite outcrops on a hill $\frac{1}{2}$ miles northeast of Rachel lake. The rock is fine- to coarse-grained, massive, and consists of about equal amounts of amphibole and feldspar. The amphibole is in small, feathery needles which, here and there, vein or penetrate the feldspar. The feldspar is dull and, in places, sugary. The fresh surface of the rock has a salt and pepper appearance and sub-ophitic texture. Amphibolite occurs in a few small dyke-like segregations, 1 to 3 feet wide and 5 to 20 feet long. The relationship of the gabbro and amphibolite is obscure, but the contacts appear gradational in places. Both rocks are black on the weathered surface. In both, finely disseminated sulfides, mostly pyrite, are accessories.

Amphibolite occurs in rounded hills over an area of 2 square miles between Hancock and Ford lakes in the northern part of the area. A much smaller mass outcrops some 2 miles southwest, on the south side of Eleanor lake. The rock is medium- to coarse-grained and contains variable amounts of feldspar. The amphibole is dark green to black, and varies in grain size from $\frac{1}{4}$ to 1 inch. Toward the margin of the amphibolite the feldspar content increases giving such hybrid rocks as meta-gabbro, meta-diorite, and in places meta-syenite. In the hybrid rocks the feldspar is present as large masses, veinlets, or fracture fillings. Breccia made of angular blocks of amphibolite cemented by quartz-feldspar granite is common near the contact with the granite. Small, rounded xenoliths of amphi-

bolite occur in the gneissic biotite granite near the amphibolite. A few schistose layers of what appears to be meta-andesite were observed on the southern slope of the large hill northeast of Hancock lake. It is possible that the amphibolite represents a metamorphosed xenolith or a roof pendant of earlier Keewatin-type lavas, or of basic intrusive rocks or of both.

Acidic Intrusive Rocks

Gneissic biotite granite underlies nearly all the area north of the volcanic belt. The southern half of the granite mass is uniform in composition and texture and is very similar to the gneissic biotite granite which underlies the area to the east (Remick, 1956). The rock is medium-grained and consists of 20 to 30 per cent quartz, 10 to 15 per cent biotite, and white feldspar, most of which is plagioclase. Schistosity is strongly developed in the granite north of Rachel brook for about a mile north of the granite-lava contact. The quartz in the schistose granite is in small lineated lenses and the feldspar, as eye-like lenses surrounded by biotite.

North of Antoinette, Eleanor, and Calumet lakes the granite consists of biotite injection gneiss, hornblende injection gneiss, minor gneissic hornblende granite and gneissic biotite granite. Inasmuch as two or more of these rock types may occur in one outcrop it is difficult to separate them on the accompanying map.

The biotite injection gneiss and hornblende injection gneiss consist of layers rich in biotite or hornblende or, more rarely, of both alternating with layers rich in quartz and feldspar. The thickness of these layers varies from 1/10 to 1/4 inch. The grain size varies from fine to medium but is generally uniform in a single outcrop. West of Houghton river the injection gneiss is medium-grained and contains more hornblende than biotite, whereas to the east it is fine- to medium-grained and contains more biotite. The hornblende injection gneiss on the south shore of Mandarino lake consists predominantly of hornblende.

The content of hornblende and biotite can be approximated from the weathered surface where the biotite has been partly dissolved, leaving slight linear depressions, whereas the hornblende remains relatively unchanged.

The presence of the injection gneisses in the northern part of the granite mass and their gradual increase northward may be due to contamination from the Keewatin-type lavas and basic intrusive rocks that outcrop a few miles north of the northern border of the map-area. The lack of hornblende in, and the uniformity of composition and the schistose nature of, the gneissic biotite granite at its contact with the volcanic belt to the south may indicate that this contact is a fault.

Pegmatite and aplite dykes are rare in the granite mass; a few were noted near the altered gabbro 1½ miles northeast of Rachel lake.

Hornblende syenite underlies the north-central part of the area. It is massive, medium-grained and composed of white feldspar, 10 per cent or less quartz, and 10 to 20 per cent hornblende. The feldspar consists of about 20 per cent plagioclase in rectangular grains 1/8 to 1/4 inch long, and the remainder as a fine-grained, white groundmass. The hornblende is in small prismatic grains which, in a few places, show fairly good lineation. Quartz was noted only in some of the northern outcrops. Salmon-pink to brick-red colouration of

the feldspar is common along fractures in the rock, and is most intensely developed where the syenite is in contact with coarse-grained diabase. The uniform composition and generally massive nature of the hornblende syenite suggest that it may be younger than the gneissic biotite granite.

Porphyritic hornblende granite outcrops in the western part of Guercheville township. The rock is massive, medium-grained and composed of 5 to 15 per cent hornblende, 20 to 25 per cent quartz, and 15 to 25 per cent phenocrysts of pink potash feldspar. The feldspar phenocrysts are 2/3 to 1 inch long and 1/4 inch wide. Inasmuch as this rock, like the hornblende syenite, is massive it is possibly of later age than the gneissic biotite granite.

Diabase Dykes

Two massive, medium- to coarse-grained diabase dykes trend north-easterly across the northern part of the area in discontinuous, elongated ridges. Individual ridges are 1/4 to 1 mile long, 25 to 150 feet high, and 100 to 400 feet wide. Cliffs are common along the ridges. Both dykes have been traced about 8 miles within the area and continue to the north (Beach, 1941).

The coarse-grained diabase consists of plagioclase feldspar needles and pyroxene in a subophitic texture. The eastern dyke is more equigranular than the western. Accessory pyrite, several per cent magnetite-ilmenite, and up to 1 per cent biotite are usually present in the western dyke. A few grains of chalcopyrite and some pyrite were observed in several places in the eastern dyke. Both dykes have a chilled border zone a few inches wide followed by a zone a few feet wide in which the grain size gradually increases. Weathering by exfoliation is common.

Fine- to medium-grained, rusty-weathering, diabase dykes were observed southeast of Fenton lake and east of Mina and Kitty lakes. The rock consists of feldspar phenocrysts 1/8 to 1/4 inch long in a matrix which, in the smaller dykes, is black and aphanitic. These dykes are up to 30 feet wide, but are usually much less, and generally are traceable for only a few tens of feet. The wider dykes have a chilled border zone grading into a medium-grained centre. Accessory pyrite is present in all dykes.

Pleistocene and Recent

Unconsolidated glacial deposits of silt, sand, gravel, and boulders cover most of the area. Small esker-like ridges are common. These trend north-easterly, except toward the southeastern corner of the area where they trend northward and stand in a flat, slightly elevated plain of sand.

A roche moutonnée on the east bank of the stream draining Barbeau lake is elongated N. 35°E., and its shape indicates that the glacial movement was from the northeast. Glacial striae in the area have an average direction of N. 35°E.,

STRUCTURAL GEOLOGY

Schistosity, Gneissic Structure, Lineation

The schistosity in the Keewatin-type lavas strikes slightly south of east and dips steeply to the north. An exception to this general trend was seen just east of mile post two on the central east-west survey line of Guercheville township. Here, and for about 1,000 feet northward, the strike is almost north-south.

Gneissic structure and lineation in the biotite granite generally trend slightly south of east in the southern part of the granite area and southeast or southwest in the central and northern parts.

The granite and lava are most nearly in contact on the surface in the western part of the area. Here, both rocks are strongly schistose and, for about a mile to the north of the contact, schistosity in the granite is parallel to that in the lava. These features may indicate that the contact between the two groups is a fault.

Shear Zones

Shear zones in the lavas, especially near Fenton lake, strike 20° to 30° more to the south than the schistosity of the surrounding rocks. Small mineralized shear zones are common all along the northern border of the lava-gabbro belt and, in many cases, their strike is 10° to 15° more to the south than that of the schistosity of the surrounding rocks. Evidently many of these shear zones were superimposed upon the earlier schistosity of the lava and gabbro. However, a few do conform to the schistosity of the lavas.

Small shear zones in the northern part of the meta-anorthosite strike about northeast and in the southern part they strike south of east.

Attitude of Pillow Lava

Abundant top determinations of fairly massive pillow lavas indicate that all pillows in the map-area face north to slightly east of north.

Joints

Joints in the granite strike either slightly north of east or slightly west of north, with steep to vertical dips. Usually both directions are present in the same outcrop.

Faulting

Cliffs in many outcrops of coarse-grained diabase may define small vertical faults. The best examples are on the south shore of L'Anse lake and half a mile west of the northern part of Houghton river. A small fault, parallel to the diabase dykes, was noted in the granite about one mile north-east of Kitty lake.

The diabase dykes appear to fill early, northeasterly trending, structural breaks.

ECONOMIC GEOLOGY

Mineralization in the Lavas and Gabbro

Small amounts of pyrite, chalcopyrite, and pyrrhotite are finely disseminated in many of the gabbros and lavas and are concentrated along the shear zones in these rocks.

Nine samples from various shear zones within a 7-mile interval along the northern portion of the volcanic belt were assayed for gold, silver, copper, and, in a few instances, for zinc and nickel. The best results were obtained in a sample from a shear zone about 3,500 feet northeast of Mina lake; it gave 0.15 per cent copper, 0.02 per cent nickel, 0.01 per cent zinc, 0.015 ounces of silver per ton, and no gold. The other assays gave 0.01 to 0.06 per cent copper, 0.02 per cent nickel, 0.01 to 0.02 per cent zinc, 0.01 to 0.02 ounces of silver per ton, and no gold. Weathering dissolves the sulfide minerals and leaves the shear zones coated rusty brown.

A small east-west silicified zone in a greenish blue lava approximately 1,500 feet southeast of Fenton lake gave 0.145 ounces of gold per ton, 0.65 ounces of silver per ton and 0.23 per cent copper. The mineralized zone contains small lenses with 20 to 30 per cent pyrite in cubes and minor chalcopyrite. Two samples of gabbro taken near the northern boundary of the lavas gave 0.00 and 0.015 ounces of silver per ton, 0.00 and 0.02 per cent copper, and no gold.

Mineralization in the anorthosite

Mineralization in the anorthosite is accompanied by quartz veinlets and small dyke-like masses of medium-grained light grey anorthosite. Pyrite cubes and minor chalcopyrite are disseminated in the veinlets and in both types of anorthosite. Assays of samples from three outcrops located within half a mile of the northern border of the anorthosite mass, gave 0.24, 0.13, and 0.12 per cent copper. Small masses of ilmenite are associated with large amphibole grains in an outcrop south of Lapointe lake.

Mineralization in the Altered Gabbro

Altered gabbro and amphibolite 1½ miles northeast of Rachel lake contain a small amount of disseminated sulfides, mostly pyrite. Assays of each rock type gave 0.01 per cent copper, 0.01 per cent cobalt, 0.01 and 0.03 per cent nickel, 0.01 ounces of silver per ton, and no gold.

Mineralization in the Gneissic Biotite Granite

Pyrite is disseminated in the schistose granite and in quartz veinlets near the contact of granite and lava. A sample from schistose granite about 4,000 feet north of the nearest outcrop of lava assayed zero for gold, silver and copper.

Mineralization in the Diabase Dykes

Fine-grained sulfides are disseminated throughout the coarse-grained diabase dykes, especially as films along the interfaces between feldspar and pyroxenes. Samples from two outcrops in each dyke assayed zero for gold, silver, and platinum. The dyke west of Houghton river assayed 0.01 per cent nickel, no cobalt, and no copper. A sample from the dyke east of Houghton river gave 0.01 per cent copper, 0.02 per cent nickel, and 0.01 per cent cobalt. Several per cent ilmenite-magnetite is present in the dyke west of Houghton river.

The fine-grained diabase dykes contain accessory pyrite. The one sample of this rock assayed gave no values in gold, silver or copper.

Description of Properties

Consolidated Mining and Smelting Company of Canada, Limited.

Consolidated Mining and Smelting Company of Canada, holds 14 claims in Guercheville township just south of Fenton lake. The claims were staked in 1948, and 12 holds totaling 4,000 feet were drilled during May and June of 1949. The property has been inactive since 1949, as drilling results were not encouraging.

Mineralization consisting principally of pyrite with minor chalcopyrite and some gold was observed by the writer in a northwesterly trending shear zone about 4,000 feet southeast of Fenton lake. The zone is in silicified, fine-grained, bluish, acid lava cut by quartz veinlets and a lens of schistose, medium-grained quartz porphyry. The shear zone is about midway between two diabase dykes spaced $\frac{1}{2}$ mile apart. The dykes trend northeasterly, or roughly normal to that of the shear zone. A sample from the zone assayed 0.062 ounces of gold, 0.048 ounces of silver, and 0.23 per cent copper.

It is possible that both the location of this shear zone between the diabase dykes and the introduction of quartz porphyry into the zone were factors favouring mineralization.

American Metals Company of Canada and Kennco Exploration (Canada) Limited.

American Metals and Kennco staked 39 claims near Fenton lake in 1948. Three small gold showings, spaced 400 to 500 feet apart in a north-south direction, are present on the west side of the lake. They are all in southeasterly trending shear zones associated with thinly sheeted, bluish green, pillow lava.

In the northern zone a carbonate lens trending S. 20° E. cuts the lava, and is itself cut by veinlets of quartz. The schistosity of the pillow lava adjoining the shear zone is east-west. Mineralization consists of pyrite, sphalerite, and grey carbonate. A sample from the shear zone assayed 0.091 ounces of gold, 0.158 ounces of silver, 0.12 per cent copper, and 7.0 per cent zinc.

In the central showing a large barren quartz lens is surrounded by mineralized, silicified, sheared, pillow lava containing lenses of pyrite with minor chalcopyrite. Disseminated eyes of biotite $\frac{1}{8}$ to $\frac{1}{4}$ of an inch

in diameter occur in the central part of the shear zone; their size decreases toward the margin. The biotite flakes are perpendicular to the schistosity and are probably the result of hydrothermal processes. A sample from this shear zone assayed 0.1000 ounces of gold, 0.404 ounces of silver, and 0.09 per cent copper.

The southern showing, which is about 500 feet west of the central part of the lake, consists of a shear zone 50 feet long with brown-weathering carbonate lenses parallel to the schistosity. Small cubes of pyrite and a little chalcopyrite were observed in the schistose lava at its contact with the carbonate lenses. A sample from this shear zone assayed 0.146 ounces of gold, 0.026 ounces of silver, and 0.09 per cent copper.

O'Leary-Malartic Mines Limited

O'Leary-Malartic Mines has an interest in a group of 30 claims, all in Guercheville township just west of the north-south centre line. A mineralized, northeasterly-striking, schistose zone seen here by the writer is $\frac{1}{4}$ mile south of Mile Post II on the centre line. The zone is exposed over an area 20 feet by 50 feet, and includes the contact of a fine- to medium-grained anorthosite with a coarse-grained type. The former appears to intrude the coarse-grained type and to be more heavily mineralized. Quartz veins up to 15 feet long and a foot wide parallel the schistosity, and also are mineralized. Visible mineralization comprises pyrite in $\frac{1}{8}$ - to $\frac{1}{4}$ -inch cubes with minor chalcopyrite. A sample from this zone assayed 0.005 ounces gold and 0.09 ounces silver per ton, and 0.24 per cent copper.

Recommendations

The best mineral showings in this area are in the shear zones of the volcanic belt, along the margins of the anorthosite body, and along the two coarse-grained diabase dykes.

The shear zones in the vicinity of Fenton lake and those along the northern part of the volcanic belt appear to be the most favourable areas for gold and copper mineralization. Apparently the latter zones have been little prospected.

Particular attention should be paid to those shear zones that strike more to the south than the strike of the surrounding rocks, for much of the known mineralization has been in such structures.

The few occurrences of copper mineralization seen in the anorthosite were in schistose zones near the contact of the anorthosite and lavas. The combination of coarse-grained anorthosite intruded by fine- to medium-grained anorthosite and quartz veinlets seems to favour copper mineralization. A more intensive search within the meta-anorthosite body at or near the contact with the lava is warranted.

Lastly, a thorough exploration for base metals along the strike of the two coarse-grained diabase dykes in the northern part of the area may be warranted.

REFERENCES

- Remick, J.H. (1956) Preliminary Report on the Anville-Drouet Area, Abitibi-East County; Que. Dept. Mines, P.R. No. 322.
- Deland, A.N. (1955) Preliminary Report on Du Guesclin-Royal Area, Abitibi-East County; Que. Dept. Mines, P.R. No. 318.
- Shaw, G. (1940) Lewis Lake, Abitibi Territory, Quebec; Geol. Surv. Canada, Map 555A.
- Beach, H.H. (1941) Mechamego Lake, Abitibi Territory, Quebec; Geol. Surv. Canada, Map 608A.
-