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GEOLOGICAL REPORT

on

TOUZIN-SKINNER CLAIMS

BIGWOOD TOWNSHIP - SUDBURY DISTRICT, ONTARIO

63A.258

GEOLOGICAL REPORT ON TOUZIN - SKINNER CLAIMS

Bigwood Township - Sudbury District, Ontario

PROPERTY & LOCATION

The property covered in the following report consists of twelve claims out of a total of twenty-seven held under option by The Minerals Exploration Corporation Limited. These twelve claims are embraced by lots 9 and 10, Concession 3 and 4, Bigwood Township, Sudbury Mining District, Ontario. They consist of the following claims:

S-77866-69	South half Lot 10	Concession IV
S-77862-67-68	South half Lot 9	Concession IV
S-77775)	North half Lot 10	Concession III
S-77582)		
S-77773-74)	North half Lot 9	Concession III
S-77583-85)		
S-77771	North half Lot 8	Concession III

ACCESS

Bigwood Township lies some 40 miles southeasterly from Sudbury, Ontario. Both The Sudbury-Parry Sound Highway and The Canadian Pacific Railway pass across the eastern half of the township. From Bigwood station on the Canadian Pacific Railway a gravel road runs due west for two miles, at which point a little used dirt road turns due north for a distance of one mile along the boundary of Lots 7 and 8. A trail leads in a northerly direction from the end of this road to Rae Lake, a distance of one half mile. The twelve claims covered by the survey extend northward from the north shore of Rae Lake.

HISTORY

The claims were staked during 1954 by John Skinner, Armand

Touzin and associates following the discovery several highly radioactive outcrops. Subsequent analysis proved the presence of Thorium, Cerium and slight amounts of U_3O_8 contained in a mineral identified as Allentite.

The original owners blasted out some shallow test pits at points of highest radioactivity and later optioned the property to Quebar Uranium Mines Ltd. This latter company put down several shallow diamond drill holes on Claims S-77771 and S-77585 on the north shore of Rae Lake at the east end.

The Quebar Uranium Mines Ltd. were refused an extension of option time and the property was subsequently dropped by this company. Results of the work were not made available to the optionors, hence were not available to later interested parties, including The Minerals Exploration Corporation Limited.

GENERAL GEOLOGY

Rocks underlying the property have been classified by the Geological Survey of Canada as belonging to the Killarnean Batholithic intrusives and metamorphosed members of the Huronian formation, all of middle to late Pre-Cambrian age.

Forest fires of several years ago have left the greater portion of the rocks underlying the property exposed. Approximately seventy percent is bare rock exposure, the balance is swamp and sparse Jack-pine second growth.

The series, as found on the property, consists of the following types, from oldest to youngest: Hornblende gneiss, grey paragneiss, light colored orthogneiss, hornblende granite gneiss, red to buff colored syenite and feldspar rich pegmatite dikes. Strike is generally northwesterly.

The hornblende gneiss is to be found as relatively small bodies of generally short lenticular outline infolded in the grey paragneiss. This rock type which is sparingly distributed throughout the property consists of a dark colored medium grained assemblage of quartz and hornblende exhibiting a marked gneissic texture.

The grey paragneiss consists of approximately 85% quartz and 15% biotite. It displays a greyish surface on weathering in contrast to the lighter colored denser orthogneiss. The grey paragneiss is found mainly in the central and easterly portion of the claim group lying between the hornblende granite on the east and the orthogneiss on the west. In the central portion of the property the grey paragneiss may be seen to swing around the main body of orthogneiss, thus forming the limbs of a southeasterly pitching syncline. Some interbanding with both orthogneiss and syenite may be seen at various points on the ground. The latter rocks generally exhibit an intrusive contact with the paragneiss.

The orthogneiss in general occupies the south west portion of the property, contacting the syenite on the west and the grey paragneiss to the east. This main body occupies the central portion of the synclinal

structure described above. This rock consists of about equal amounts of quartz and feldspar with minor biotite. It is a hard dense fine grained rock weathering to a light buff color.

The eastern limits of the property are entirely underlain by a hornblende granite gneiss. This rock is highly gneissic in texture and shows little deviation in strike. No effects of the major folding just described are to be seen reflected in it. In the main this rock consists of a fairly coarse grained aggregate of quartz 10%, orthoclase and plagioclase 80% and hornblende 10%. Locally a few small bodies of non gneissic, typically granitic texture may be seen. These may represent some portions of the original intrusive mass that escaped the effects of deformation.

While the main mass of hornblende granite gneiss has a stratiform appearance and weathers to a light grey mottled color, in the vicinity of Rae Lake there has been considerable addition of later red feldspars which give the rock a distinct reddish color. It is in this locale that most of the radioactive mineralization has been found.

Syenite is limited to the extreme western portion of the property, representing the eastern limits of the fairly large mass indicated on the regional geological map (Map 238A, Delamere sheet, Geological Survey of Canada). As such it lies along the western limb of the main synclinal structure on the property. In the southwesterly section considerable shallow folding of an intricate nature has been impressed upon the main synclinal limb. Much of the syenite at the contact in this area appears

as bands intruded along this secondary fold structure. Farther to the west, while there is no later banding with either orthogneiss or paragneiss, a folded and banded appearance is displayed by the syenite body.

Along the west boundary of the property, approximately at the center section, a body of syenite has been folded into a distinct, narrow synclinal structure pitching into low ground and apparently beneath the grey paragneiss.

The syenite varies from a light yellow brown color to a dark brick red. In many places, particularly in the northwest portion, there is a distinct banding of the light and dark colored types. In general the light colored syenite consists of 100% feldspar minerals and is fine to medium grained. The darker red variety is of the same texture but contains up to 10% ferromagnesian minerals.

As indicated on the accompanying map, the main pegmatite dikes occur within the syenite on the western portion of the property. They consist of dikes up to 20 feet across composed wholly of orthoclase. In a few localities some fairly large aggregates of biotite may be seen in these dikes.

A second type of pegmatite is limited mainly to the eastern part of the property. These consist mainly of narrow, discontinuous stringer forms averaging an inch in width and three to four feet in length. They are of granitic composition, consisting of equal amounts of quartz and red feldspars of medium grained texture.

STRUCTURE

The main structural feature is the syncline developed in the west central section of the property. Dip and strike determinations indicate a plunge to the southeast. While the central portion of the syncline is relatively hard, resistant orthogneiss, the eastern limb is mainly grey paragneiss which, towards the nose of the syncline exhibits much secondary shallow folding impressed along the main synclinal limb. The western limb, as previously described, consists mainly of interbanded syenite, orthogneiss and grey paragneiss, intrusion of the syenite along the limbs of the minor or secondary folding results in the interbanded appearance of the rocks.

Synclinal folding continues to the northwest from the main fold and as seen from areal photographs, would pass on into a highly folded area to the north west of the property.

Rather poorly developed shallow horizontal folding appears to have taken place in portions of the hornblende granite gneiss. In fact some of the fractures along which radioactivity has been found appear to follow the trend of this folding.

At least four major northwest-southeast trending fault^s zones of steep dip occupy the central portion of the property. These faults zones do not show any horizontal dislocation.

A second, apparently complimentary series of faults strike northeast-southwest. Although not generally as well defined as the former, it is apparent that much of the north shoreline of Rae Lake has been formed by this action.

MINERAL OCCURRENCES

Three principal occurrences of radioactive mineralization were found on the north shore at the east end of Rae Lake. These are on claims S-77585 and S-77771 in the vicinity of their mutual southern corners.

A fourth discovery was made near the northeast corner of claim S-77582 in the southwest portion of the property.

The occurrences as indicated on the accompanying map as Pits No. 1 - 2 and 3 at the east end of Rae Lake have received the main work performed.

Pit No. 1, in the southeast corner of claim S-77585 is located on a sidehill some 50 feet from the north shore of Rae Lake. This pit has been blasted on a narrow seam of rusty material dipping southwest across the dip of the grey paragneiss in which it is situated and striking northwesterly. The seam exposed in the pit would average 2-3 inches in width and is composed mainly of a rusty material believed to be secondary hematite and limonite together with minor amounts of hornblende and allanite. The mineralized material occupying the seam is badly decomposed so that the original minerals present are

hard to determine. Radioactivity is indicated by counts up to 60 times background on the geiger counter. It is undoubtedly due to the presence of allentz. The extension of this seam may be traced northwesterly for twenty feet and thence intermittantly for another hundred feet. Strength is not more than two to three times background on the average.

In the vicinity of pit No. 1 the Quebar Uranium Mines Ltd. are reported to have drilled five shallow holes to intersect the seam at depth. Three shallow holes are reported to have been drilled from northeast to southwest. The setup for this drilling may be seen a few feet beyond the pit. Two other shallow holes are reported to have been drilled from southwest to northeast. Setups for these holes may be seen a few feet northwesterly from pit No. 1' .

Pit No. 2 is located approximately 100 feet northeasterly from No. 3 post of claim S-77771. A seam of similar nature to that in pit No. 1 is exposed and cuts across the foliation of the hornblende granite gneiss in which it is located. As exposed in the north face of the pit the radioactive seam starts at the surface in the upper right hand corner and swings down to the bottom of the pit in a gentle curve. At the bottom of the pit a single seam 3 inches in width is exposed and from it a seam swings upward and to the left in a gentle curve, the arrangement of the two seams is a cusp form. Radioactivity of up to 10 times background may be obtained from the rusty decomposed material in the seam in the bottom of the pit. Strong reaction may be obtained from the seams in the north wall of the pit. They do not exceed 1 inch in width.

Extension along strike of the radioactive seam in Pit No. 2 can be traced with certainty for along a few feet in either direction.

A third pit has been blasted out some 50 feet southwest of Pit No. 2 only insignificant radioactivity was noted. Several other 'Pop shots' have been put in at various points in the vicinity of Pit No. 2 but none give any significant geiger counter readings.

Apart from Pit No. 1 which is in the grey paragneiss, all the radioactivity in the eastern section of the property is confined entirely to the hornblende granite gneiss. In all cases there is a strong reddish discoloration to the host rock and numerous narrow stringer forms of granite pegmatite. Several of these are exposed in Pits No. 2 and 3.

Near the No. 1 post of claim 77583 there are three areas in the hornblende granite gneiss that give four to five times background along tight, narrow seams. These areas are indicated on the accompanying map. These areas are about the same distance from the paragneiss contact as at Pit No. 2 and 3 although separated by a claim length along strike. No significant readings were obtained along the intervening distance and the red discoloration of the host rock is less noticeable. Although this may be construed as representing a radioactive zone it is felt that it means only that radioactive mineralization occurs most favorable at or near the contact zone but not necessarily in continuity.

The exposure in the northeast corner of claim S-77582 on the western side of the property is the most significant from the standpoint

of cerium oxide content. It is also one which contains the largest exposure of Allanite. A 'Pop shot' has been put down on a six inch seam that dips northeasterly at 30 degrees, conformable with the syenite host. A 'splash' of heavy allenite mineralization is exposed across six inches and for a length of fifteen inches. Erratic disseminated allenite occurs for a further three feet southeasterly along the strike.

The seam containing the allenite mineralization can be traced for a total distance of seventy feet. It dies out to the north and disappears to the south under heavy overburden although before doing so it is only barely discernable. No radioactivity could be determined in the low ground along the continuation of strike.

Mr. F.C. Tomlinson in his report of May 30, 1955 reports values of 7.0% CeO_2 from a sample of the allanite in this showing. While the mineralization is strong, where present, structural conditions do not appear either strong enough or persistent enough for the development of an orebody.

CONCLUSIONS

Radioactive mineralization, due to the presence of allanite is localized mainly under two general conditions, in narrow seams in the hornblende granite gneiss near its contact with the grey paragneiss and in areas of reddish discoloration and also in a narrow seam within the syenite.

The first type occurs in an area where the rocks are exposed over distances of 200 feet or more. None of the radioactive seams

can be traced with certainty for more than 50 feet in length. If any orebodies exist it is felt that some indication of them could be seen at surface. On the contrary all the radioactive occurrences appear confined to narrow, tight fractures wide enough only for the movement of mineralizing solutions. No space is available for any major concentration of minerals.

The second type of occurrence, while located in the syenite and carrying a heavier content of allenite bears a similar resemblance to the former structurally in that the vein form occupies a tight discontinuous fracture.

In concluding, it is felt that because of lack of favorable structure, containing radioactive mineralization or not, there is slight possibility for the development of orebodies on this property.

Port Arthur, Ontario
August 4, 1955

Trevor W. Page P. Eng.
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Trevor W. Page P. Eng.

Cox Twp. (M-735)

Delamere Twp. (M-752)



VI

V

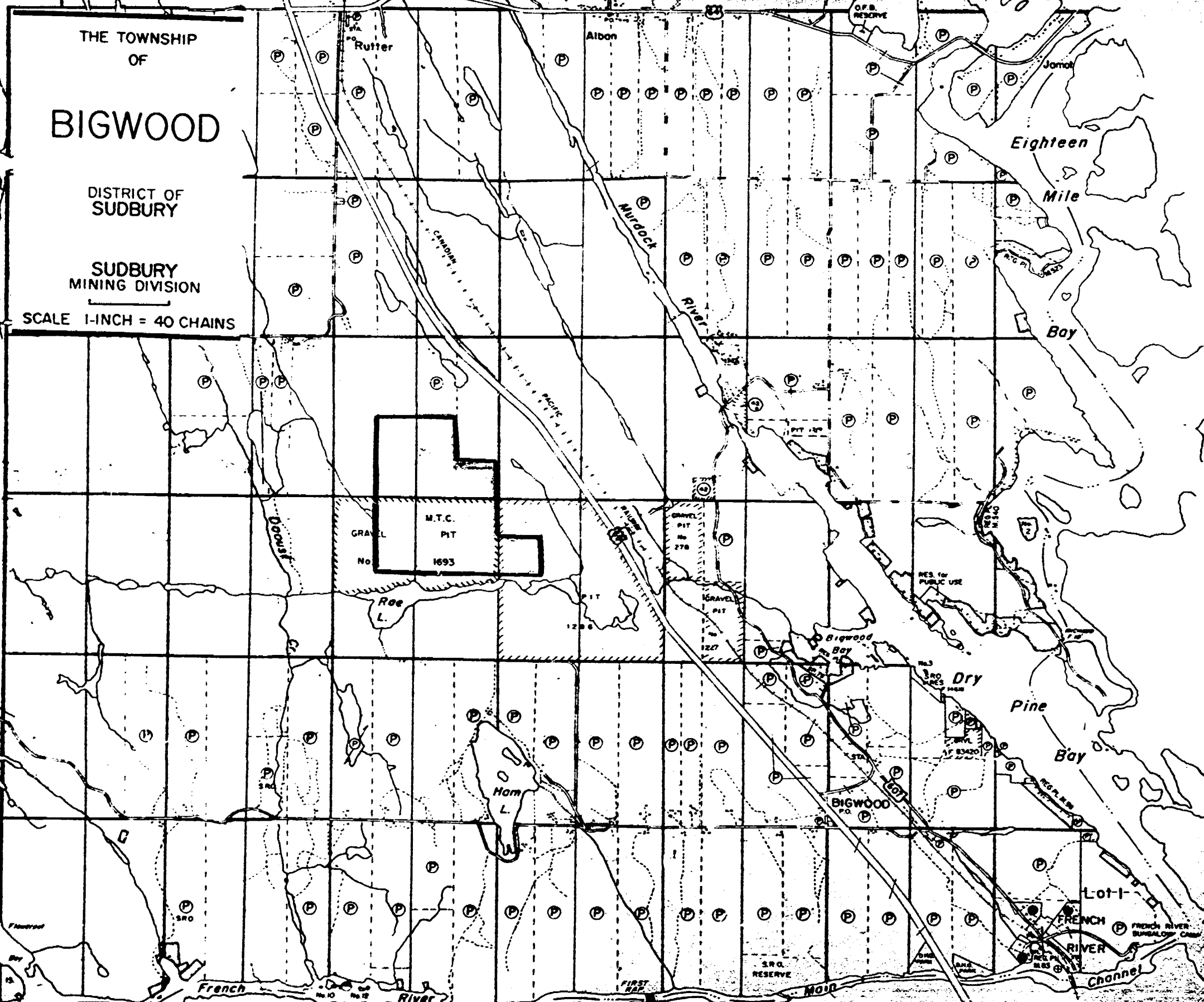
IV

III

II

I

Alton Twp. (M-625)



THE TOWNSHIP OF
BIGWOOD

DISTRICT OF
SUDBURY

SUDBURY
MINING DIVISION

SCALE 1-INCH = 40 CHAINS

M.T.C. PIT
No 1693

BIGWOOD
P.O.

Eighteen
Mile
Bay

Bay

Pine
Bay

Lot-1

FRENCH RIVER
BUNGALOW CAMP

RIVER

Channel

POTVIN

French

River?

FIRST
RAP

S.R.O.
RESERVE

MOID

S.R.O.
RESERVE

S.R.O.
RESERVE

S.R.O.
RESERVE

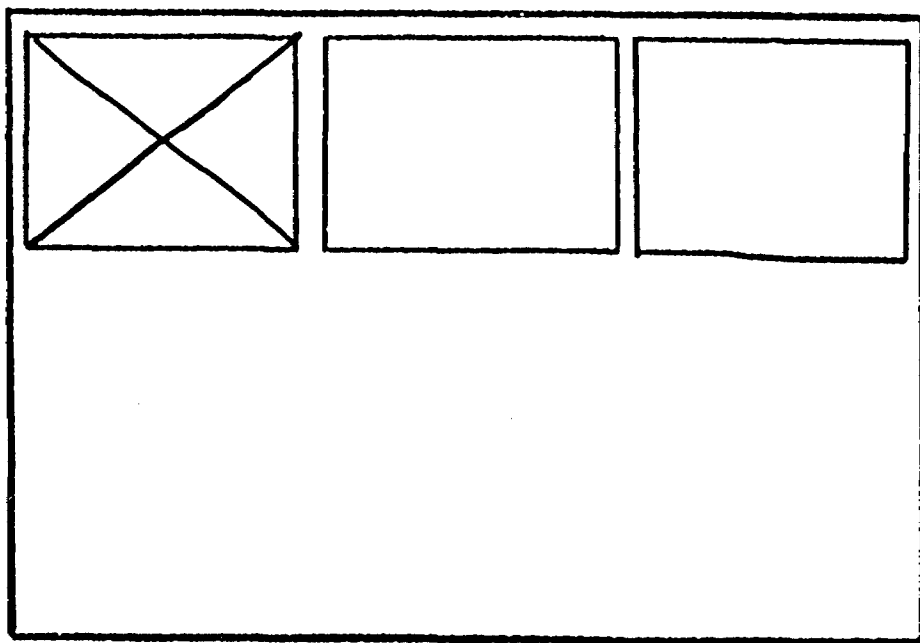
S.R.O.
RESERVE

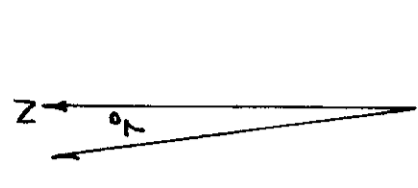
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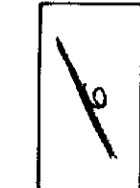
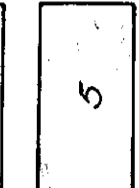
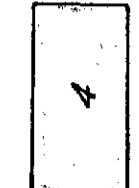
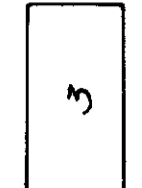


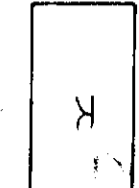
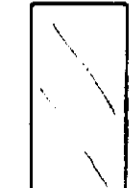

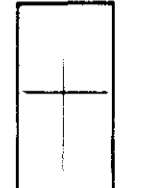
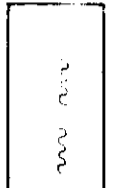
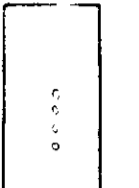
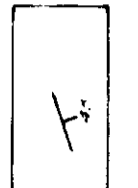
SEE ACCOMPANYING
MAP(S) IDENTIFIED AS
BIGWOOD - 0011-A1 #1

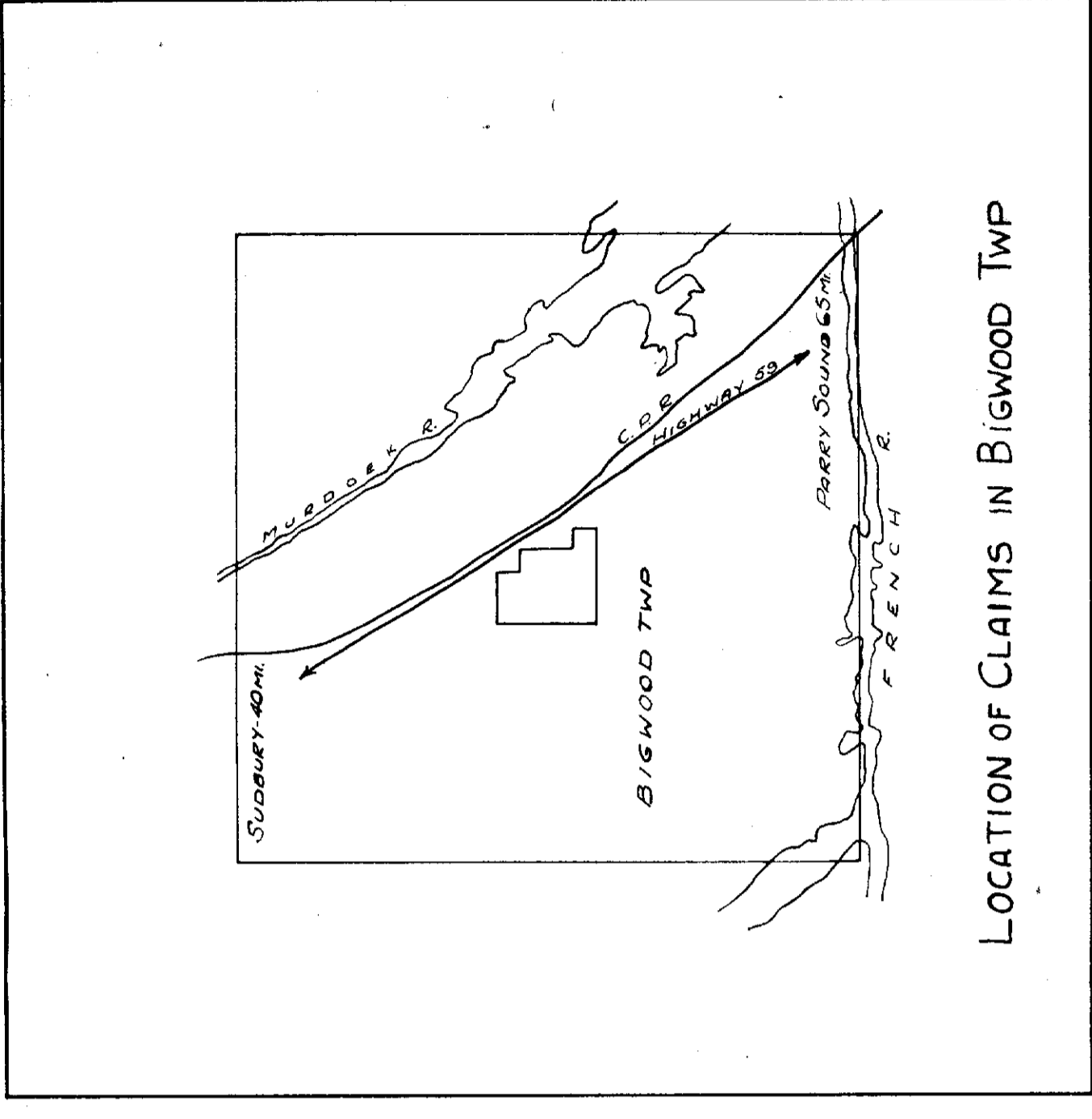
LOCATED IN THE MAP
CHANNEL IN THE FOLLOWING
SEQUENCE (X)





-LEGEND-

-  DIORITE DIKE
-  SYENITE
-  HORNBLENDE GRANITE GNEISS
-  ORTHOGNEISS
-  GREY PARAGNEISS
-  HORNBLENDE GNEISS
-  SWAMP
-  GEOLOGICAL CONTACT DEFINED - ASSUMED
-  ROCK OUTCROP
-  TRENCH & DICKET LINE
-  FAULT
-  RADIOACTIVITY
-  DIP & STRIKE



LOCATION OF CLAIMS IN BIGWOOD TWP

THE MINERALS EXPLORATION CORPORATION LIMITED
 GEOLOGICAL MAP

TOUZIN SKINNER CLAIM GROUP
 BIGWOOD TOWNSHIP, ONTARIO

SCALE: 1:2000
 AUGUST 1, 1955

