



52F05NE0044 63A.165 ATIKWA LAKE (GRAPNEL

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63 A.165

Claims K 15234 to K 15245 inclusive

LOCATION AND MEANS OF ACCESS

The group of claims is located on the portage between Caviar and Ajikwa lakes about 50 miles east of Kenora. The claims partly adjoin a group of Noranda claims which contain promising copper-gold deposits.

The claims are reached by a water route from the town of Sioux Narrows on the Kenora - Fort Frances highway, via Dogpaw and Caviar lakes.

PROPERTY OWNERSHIP

The claims are owned by Jack Edwards of Lakeside Beach, Kenora, Ontario and are optioned to Falconbridge Nickel Mines Ltd. at the time of the Geological work.

TIME OF GEOLOGICAL SURVEY

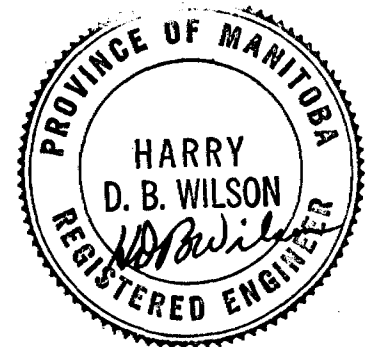
The mapping was done during the period August 21 to August 30, 1952. The geological mapping required eight days. The map and report were completed during the following week.

GEOLOGICAL MAPPING.

The mapping of the Edward's Option is on a scale of 1" = 200'. The magnetometer picket lines were used as a base for the geological mapping. These lines strike N 78° W and are spaced 400' apart. All magnetometer lines were traversed and as far as possible all outcrops examined and located on the map. Undoubtedly many small outcrops occurring in dense bush between lines were not seen.

TABLE OF FORMATIONS

- Dikes - Mainly feldspar porphyry
- Granite
- Gabbro
- Lavas - andesite and basalt.



GEOLOGY

The claims are underlain mainly by andesitic and basaltic lavas which have been intruded by masses of hornblende gabbro. In the southeast corner of the area the greenstone - gabbro complex

has been cut and brecciated by numerous granite stringers, dikes, and stockworks. Many acid, basic, and porphyritic dikes also intrude the greenstone - gabbro complex.

Lavas.

The lavas in the map area are composed of andesites and basalts. Both types are apparently present as the weathering surface shows some are high in iron whereas others are lighter green and contain less iron. The two types are not readily distinguishable and could not be mapped separately. It is probable that most of the lavas are basaltic.

Pillow lavas are abundant, flow breccia types are less common and banded lavas relatively rare. Considerable areas are massive and show no evidence of lava structures. However structures would probably be apparent even in this type if the outcrops were not covered with lichen.

The lavas appear unaltered and are composed of hard, dense massive fine grained material. Some of the lavas are spotted with large feldspar crystals.

Gabbro.

The rocks mapped as gabbro consist mainly of medium grained massive hornblende gabbro. Some of the rock mapped as gabbro is fine grained but has a distinctive crystalline texture.

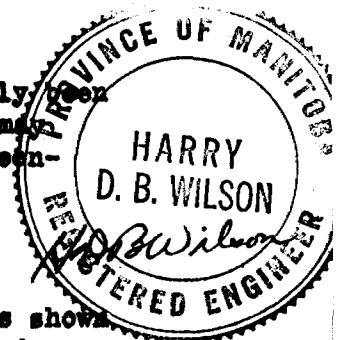
The large gabbro masses are apparently intrusive stock-like bodies but some of the smaller masses are mixed with greenstone to form a greenstone-gabbro complex. Some of the smaller bodies are sills or dikes as in places medium grained gabbro occurs in sharp contact with normal aphanitic greenstone. Other gabbro bodies may represent thick portions of flows. Some of the fine grained gabbros may be chill phases of the larger gabbro bodies or they may be small sills or thick flows.

The gabbro is composed of amphibole and feldspar with amphibole usually being the predominant mineral. Sulphide spots were noted in a few places but they did not show any nickel when tested with dimethylglyoxime.

The gabbro in the southeast part of the area has obviously been recrystallized by the granite intruding it. Some of the gabbro may also represent recrystallized greenstone although much of the greenstone remains fine grained in this area.

Granite.

Large bodies of granite were not found in the map area as shown on the magnetic map. In a few places small outcrops were composed entirely of granite but for the most part the granite occurs as small



dikes, veinlets, and stockworks in shattered greenstone and gabbro in the southeast part of the area. Granite was not found in the western portion as indicated on the magnetic map.

The area of granite intrusion can be fairly definitely outlined. Within the intruded area granite may be found on almost every outcrop, but outside this area it is not found at all. The granite intrusive apparently shattered and intruded a definite area leaving the remainder solid. Within this granite area the gabbro and greenstone have been brecciated and large blocks have been moved around.

The granite is usually a normal granite in composition with many pegmatitic phases.

Dikes.

Dikes are very numerous throughout the area. In places they follow a northerly trend but many of the dikes are irregular and follow curved or blocky patterns. Most of the dikes are only a few feet wide.

The most common type is feldspar porphyry with feldspar phenocrysts ranging up to about one quarter inch in diameter in a gray aphanitic groundmass. Other types noted include pyrite bearing felsite or rhyolite, biotite syenite or granite, and many aphanitic basic types which are difficult to distinguish from greenstone except in a few places where the outcrop is free from lichens.

STRUCTURE

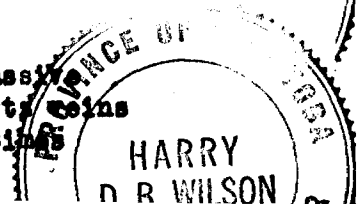
Structural features are not prominent in this area. In general the rocks are very massive and lacking in schistosity.

The strike of the rocks was only determined in seven places and all but one of these showed the lavas striking in a northwesterly direction. These strikes agree with those determined independently by the Noranda and Wright-Margreaves geologists on properties to the northeast although the lichen covered exposures are no better on these properties and all were a little skeptical of their own observations.

Topographically the ridges trend to the northeast in the southwest part of the map area but appear to swing more northerly in the northeastern part.

The only shearing seen consisted of two narrow, but strong shears in the southwestern part of the area. The strike of the shears coincides with the direction of the ridges so there may be a joint-shear direction striking northeasterly.

In general however the area leaves an impression of massive rocks with little shearing and an almost complete lack of quartz veins or stringers. However the rocks have been broken up several times by blocky intrusions of several different types of dikes.



ECONOMIC POSSIBILITIES

Thus far the only exploration preceding the geological mapping has been a magnetometer survey of the property. There has been no development work.

MAGNETIC ANOMALIES.

The magnetic survey showed several magnetic anomalies which were examined on the ground during the present mapping. A description of the conditions for each magnetic anomaly follows.

Line 28S, 2100 E. The rock outcropping here shows rusty fractured greenstone. The rust was due to sulphide which has leached out leaving small holes. The sulphides causing the iron oxide were not found as I was unable to break into fresh rock with a prospecting pick. Two samples were taken for gold assay to determine whether residual gold occurs. One sample assayed a trace of gold and the other nil. It thus seems improbable that this is the copper-gold type of mineralization similar to that on the Noranda property. A trench on the rusty outcrops would settle this for certain.

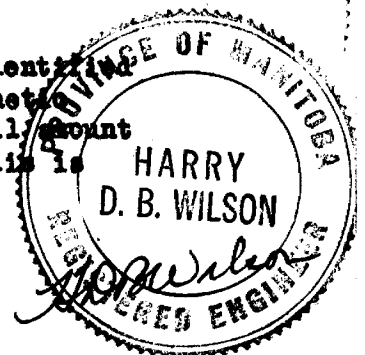
The same anomaly apparently occurs on line 32 S at 2200 E but this point is under swamp and the only outcrops occur close to line 28 S as shown on the map.

Lines 8 and 10 S at about 900 E. This anomaly occurs on a low ridge with many scattered outcrops. A small amount of rust was found in part of this outcrop but most of it is massive unmineralized rock. The small amount of rusty greenstone does not seem enough to cause this anomaly. If further work is being done, this magnetic anomaly could be closely outlined with pickets, and trenching would be easy and shallow. However the ground does not look promising for ore occurrence.

Line 10 S, 11 S, 12 S, and 14 S, at about 400 W. This anomaly occurs on a bouldery drift covered ridge. No outcrops occur over the actual anomaly area, although a small, unmineralized, non-magnetic, fine grained gabbro or greenstone outcrop occurs about fifty feet east of the anomaly. The anomaly is unexplained and only further geophysical work or trenching might explain it. The depth of overburden is uncertain although it is on a ridge so should not be too great.

Line 4 S at 00. Nothing was found to explain this sharp anomaly although outcrop occurs very close if not on it. It occurs at the top of the west face of a steep hill. I am very doubtful that it has any economic importance but it might be further checked if any work is being done in the area.

Line 20 S at 1600 E. Outcrop is good but nothing was identified as a cause of the anomaly unless some of the dike rocks are magnetic enough. Dike and other samples do not affect a compass. A small amount of rusty greenstone occurs about 100' west of the anomaly but this is



apparently not the cause. There appears to be nothing of economic importance.

Line 43 S at 400 E. This anomaly occurs in an area of fairly good outcrop with no evidence of sulphide. It is probable that the anomaly is caused by magnetite in the recrystallized gabbro.

Several other small anomalies appear to be due to slightly magnetic phases of the gabbro as they occur over large outcrops of massive gabbro.

OTHER MINERALIZED AREAS.

A zone of quartz stringers carrying pyrite was found on the cliff edge of a high greenstone outcrop at 12 S, 540' E. The size of the zone is difficult to estimate because of its occurrence near the bottom of a cliff edge, but it is several feet wide and outcrops for forty or fifty feet along the length. It is open on three sides. A sample composed of several chips assayed only a trace of gold so the vein appears of no interest.

A chip sample was taken from the carbonate bearing shear at 30 S, 2200 W. The shear is only two to three feet wide and as the sample assayed only a trace of gold it is considered to be of no interest.

SUMMARY AND CONCLUSIONS

1. Outcrops are numerous and the mapping shows that the area is underlain by massive basic and andesitic lavas and gabbro. Extensive moss and lichen cover on the outcrops prevent detailed interpretation of the lava types and structures, both on this and other groups of claims in the area.

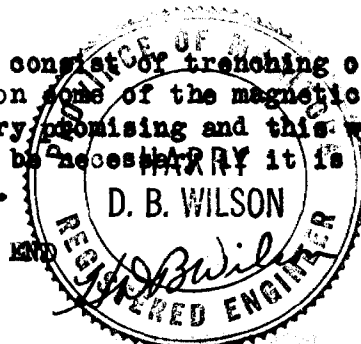
2. The lavas are similar to those on the Noranda copper - gold property to the north. However these claims are a mile distant from the nearest Noranda showing and the lavas are not directly along the strike which appears to be to the northwest.

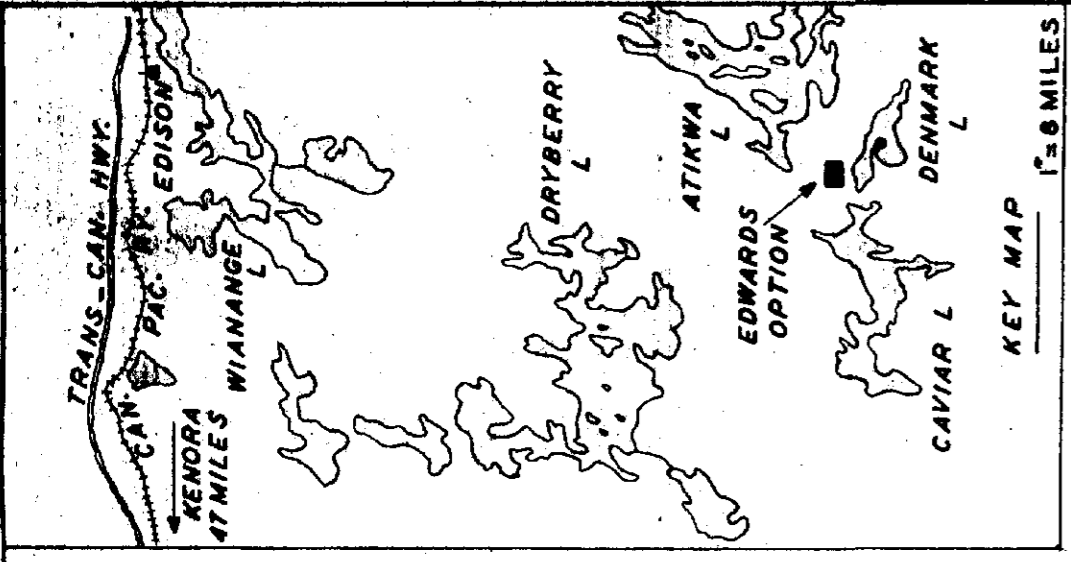
3. Mineralization similar to that on the Noranda claims was not found on the Edward's group.

4. Some rusty zones were located but these did not contain any residual gold like the Noranda ore zones. A small amount of trenching should show their nature.

5. One of the major magnetic anomalies is completely unexplained as it is covered by drift.

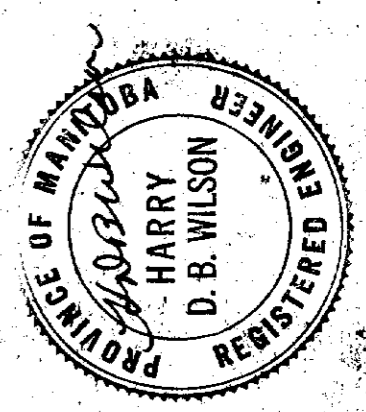
6. Further work could consist of trenching of rusty greenstone outcrops and geophysical work on some of the magnetic anomalies but this claim group does not appear very promising and this work is not specifically recommended. However it would be necessary if it is desired to write off the claim group completely.



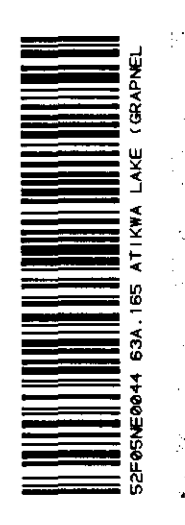
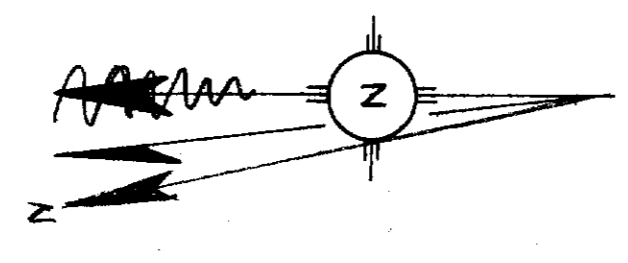
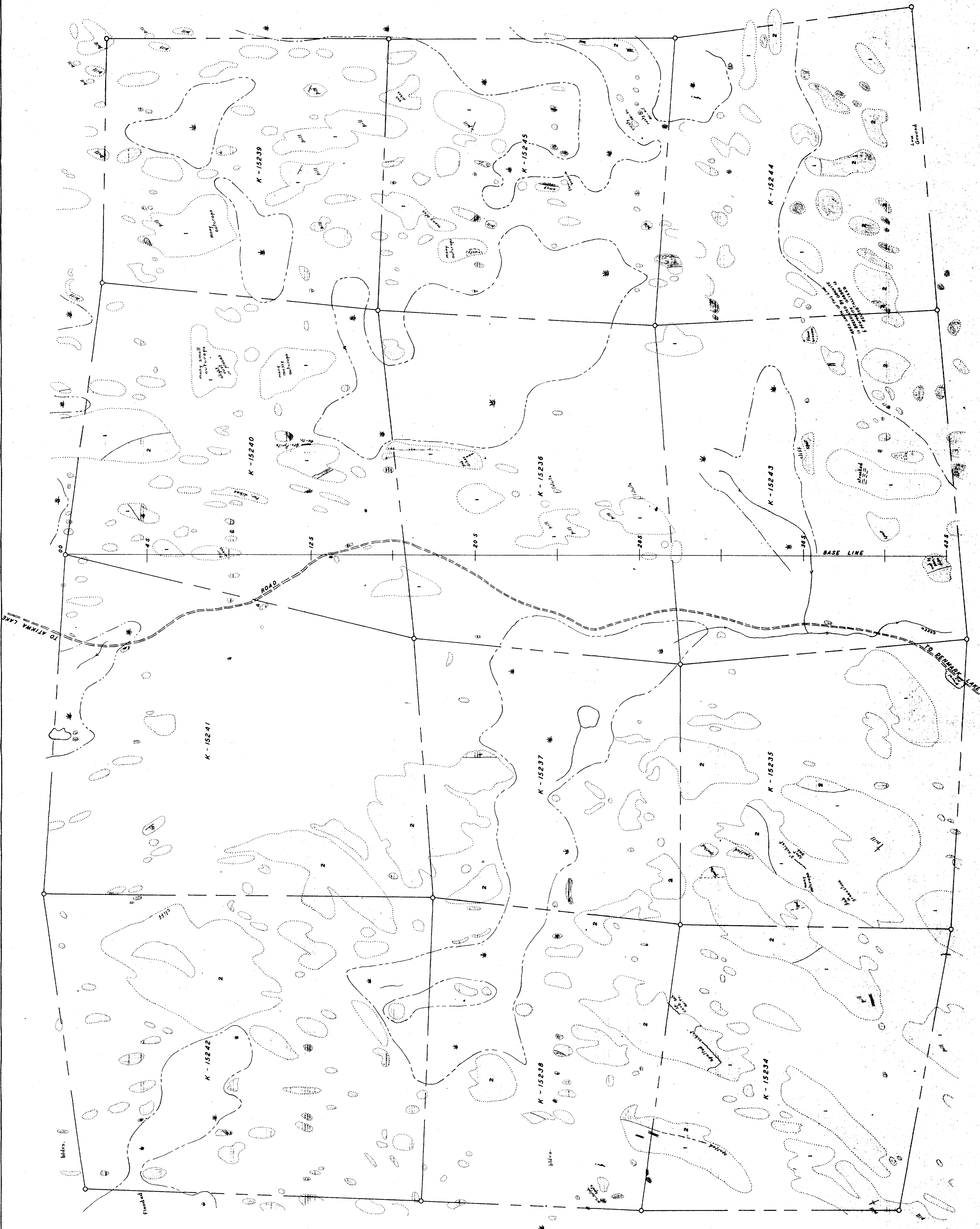


LEGEND

1	FELDSPAR PORPHYRY
2	GRANITE
3	GABBRO
4	BASALT - ANDESITE



K.G.B. WILSON - SEPT. 1952
 GEOLOGICAL MAP
 SCALE 1" = 1000 FEET



DENMARK LAKE AREA
 DISTRICT OF KENORA

EDWARDS OPTION