REPORT ON THE PROPERTY

OF

KENWELL OILS & MINES LIMITED

PICKEREL TOWNSHIP

SUMMARY

A geological survey of the Pickerel Township property of Kenwell Oils & Mines Limited determined that it is almost entirely underlain by intermediate to basic flows.

Intrusive rocks include quartz and granite porphyries, feldspar porphyry, and possibly diorite.

No indication of any important regional folding, faulting, or shearing was observed. No mineralization of any interest was uncovered, and further interest in the property is not considered to be warranted.

INTRODUCTION

The following report covers a detailed geological survey carried out in Pickerel Township during June and July, 1952.

Information in part used in this report has been gained from the report of E. M. Hurst to the Ontario Department of Mines, Vol. XLI, Part 6, 1932 and from my previous report to Kenwell Oils & Mines Limited, on this property dated April, 12, 1952.

EXTENT, LOCATION, AND OWNERSHIP

The property consists of a contiguous group of fourteen unpatented mining claims of approximately forty acres each, a total of five hundred and sixty acres, more or less, situated in the west central portion of Pickerel Township Patricia Mining Division, with the main portion of the property lying east of Mileage 20 on the Sioux Lookout - Dinorwic Highway (Ontario Highway No. 72). The fourteen claims comprising the property are more particularly described as follows:

Pa 13738 to 13751 inclusive.

All of the claims are duly recorded at the Mining Recorder's Office at Sioux Lookout, Ontario, and are in good standing.

WOOD, WATER, AND POWER

The land area of the claims is covered with a mixed growth of timber, predominently spruce and balsam, with lesser amounts of birch, poplar, and pine. All timber rights are held by the Patricia Lumber Company.

Pickerel Arm provided a readily available source of good water for all mining and other needs.

Power is available at Newlund Mines Limited, four and one half miles to the southwest.

TRANSPORTATION

No transportation problems are present. Highway No. 72 which connects the Town of Sioux Lookout with the Trans-Canada Highway at Dinorwic, passes through the northwestern portion of the property at a point nineteen miles southwest of Sioux Lookout, a divisional point on the main western line of the Canadian National Railways.

Direct water transportation from Sioux Lookout is also available by way of Pelican Lake, Abram Lake, Minnitaki Lake and Pickerel Arm.

TOPOGRAPHY

The property lies in an area of generally low relief. Low ridges with a general northeast - southwest trend yield sporadic rock outcrops. The depressions between the ridges are filled with clay, boulder clay, and muskeg. It

is not thought that the overburden has excessive depth at any point within the claim boundaries.

The only pronounced topographic feature is the deep trough of Pickerel Arm. This depression, which varies in width from a few hundred feet to nearly a mile runs in a southwest direction from Minnitaki Lake to a point south of the claim group, from where it trends more to the south.

SURVEY PROCEDURE

Due to the shape of the property and the claim distribution it was found necessary to run three base lines, all on a bearing of astronomic East and West.

No. 1 Base Line started at a point fifty feet south of the No. 4 Post of Claim No. Pa. 13741, and continued easterly to a point 260 feet east of the east boundary line of Claim No. Pa. 13749. From this point a line was run due North 270 feet, which was necessary to avoid running into Pickerel Arm with the original Base Line. From the point north of the end of the No. 1 Base Line, No. 3 Base Line was continued due east until it reached a point on the shore line 20 feet west of the east boundary of Claim No. Pa. 13748, at a point 60 feet south of the No. 1 Post.

No. 2 Base Line was carried on a due west bearing from the No. 1 Post of Claim No. Pa. 13740 until it intersected the west boundary of this claim at a point 53 feet south of the No. 4 Post.

Traverse lines were run at a nominal distance of 400 feet apart, although this distance was varied on Claim Pa. 13740, to best suit the terrain.

Both Base Lines and Traverse Lines were taped and picketed with pickets set at 100 foot intervals.

Topography and outcrops were mapped in from the Traverse Lines, by means of tape and compass.

REGIONAL GEOLOGY

The claims lie within a relatively wide belt of greenstones whose southern limit is Pickerel Arm, and whose northern limit is just south of the creek, joining Maskinonge Lake and Little Vermilion Lake. The south-western part of this greenstone mass contains the ore bodies of Newlund Mines Limited.

The considerable shearing and schisting of the rocks in the immediate vicinity of Pickerel Arm, and in other localities within this greenstone mass were noticeably absent within the claim area.

The regional structure consists of a wide area of greenstones with Temiskaming sediments lying to both north and south, and it is considered that these sediments represent the north and south flanks of a steeply dipping syncline, whose main axis strikes northeast-southwest.

The greenstones in this area, that is, those described as lying between the sedimentary belts and, north of Pickerel Arm fail to show any well defined shear zones.

It is considered that the fracturing and shearing as found in Echo Township does not continue to the northeast. It is believed that the Echo Township shearing may have been largely developed by the Pickerel Arm Fault Zone.

GEOLOGY OF THE PROPERTY

All of the exposed rocks on the property are Pre-Cambrian in age. Recent and Pleistocene deposits of peat, alluvium, boulder clay, varved clays, and gravel occupy the depressions, and clay and gravel cover in to a large degree the higher ground.

Rock exposures would indicate that practically all of the claim area is underlain by Keewatin flows which contain interbedded tuffs.

The geology is summarized as follows:

Table of Formations

Cenozoic	
Recent	Peat, alluvium
Pleistocene	Clay, sand, gravel
Pre-Cambrian	
Algoman	Pelsite Quartz porphyry Granite porphyry Feldspar porphyry
Keewatin	Andesite Basalt Pillow lava (basaltic) Chlorite schist Feldspar basalt porphyry Basic tuffs

Keewatin

Surface outcrops would indicate that approximately ninety per cent of the property is underlain by pillow lava and intermediate to basic flows.

The pillow lavas are andesite and basalt, olive green to dark green in color with generally ill defined tops, which show moderate rusty weathering.

The lavas are basic ranging from andesite to basalt. They are generally fine grained, hard, and olive green to dark green in color. They consist of plagioclase feldspar, amphibole, epidote, pyroxene and chlorite.

Interbedded with the flows are what are considered to be relatively thin beds, of basic tuffs, which are dark grey-green to black in color and show moderately defined banding. They appear to consist of chiefly plagioclase feldspar together with the ferro-magnesium minerals. In all they constitute a very small percentage of the underlying rock.

Chlorite schist has been developed along very narrow and limited shear zones through alteration of the basic lavas. The schists fail to show any mineralization or important quartz intrusions.

A phase of the basic flow rocks is that of feldspar basalt porphyry which has a limited surface expression. This rock type is the same as that described by Hurst in his report on the area, with special reference to its character and distribution in the Kabikwabik Lake section. Phenocrysts

of grey-white feldspar stand out prominently in a dense black basalt matrix.

Algoman

The Keewatin rocks are cut by acid dikes which have a general strike of N-60-E and a range of from ten to twenty feet in width. Practically no alteration of the host rocks is present along their contact margins. Some tension fractures are present but these fractures are not accompanied by any mineralization.

The quartz porphyry dikes have a very dense fine grained acid groundmass with quartz eyes of approximately 1 mm. in size.

The granite porphyry dikes are very similar to the quartz porphyries insofar as strike, width and contact metamorphism are concerned. They have a granitic groundmass consisting of orthoclase feldspar and white quartz with phenocrysts of quartz and orthoclase. They are generally pink in color.

The felsites closely resemble the quartz porphyries but lack the quartz eyes. The denses hard acid groundmass is identical in hand specimens. The strike of the felsites conform with the other dike types.

Some dikes of feldspar porphyry were observed. These dikes are, in many ways, similar to the larger masses of feldspar basalt porphyry. They are generally much finer in texture and grain and their occurrence definitely proves them to be intrusive, whereas the larger masses of feldspar

basalt porphyry are phases of the flow rocks.

STRUCTURE

There is, unfortunately, a lack of any favourable structure within the claim area. No defined shearing or folding could be located, and it is considered that any strong structure, even considering the sparcity of outcrops, would have left some very tangible evidence, at some point, to be observed. It can only be accepted that such structure does not exist.

QUARTZ VEINS

Reference to the map will show the occurrence of several narrow white quartz veins. These veins are of no economic interest. They fail to show either fracturing or mineralization and cannot be considered of any interest, or of warranting further investigation.

CONCLUSION AND RECOMMENDATIONS

The detailed survey, which included stripping and prospecting along base and traverse lines, failed to uncover either mineralization or any evidence of favourable structure.

While much of the terrain is covered with a mantle of overburden, there are sufficient outcrops to carry some evidence of favourable structure, if such were present.

It is possible that the overburden may cover both structure and mineralization but such an assumption does not warrant further expenditure in the light of the results as established to date.

It is recommended that this property does not warrant further interest or expenditure.

Respecfully submitted,

Robert McCombe

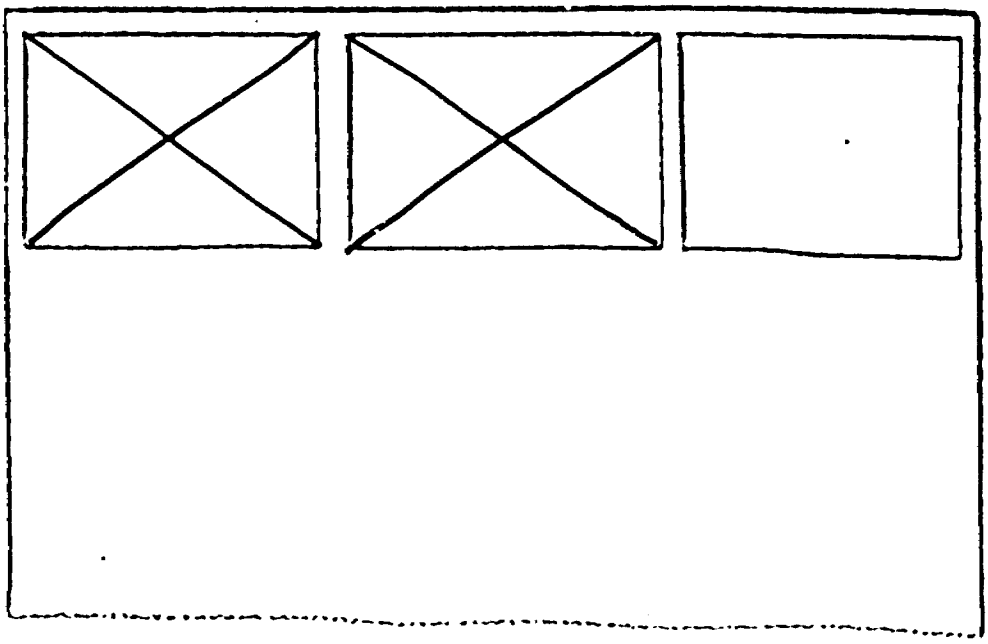
Robert McCombe, B. Sc.
Mining Geologist

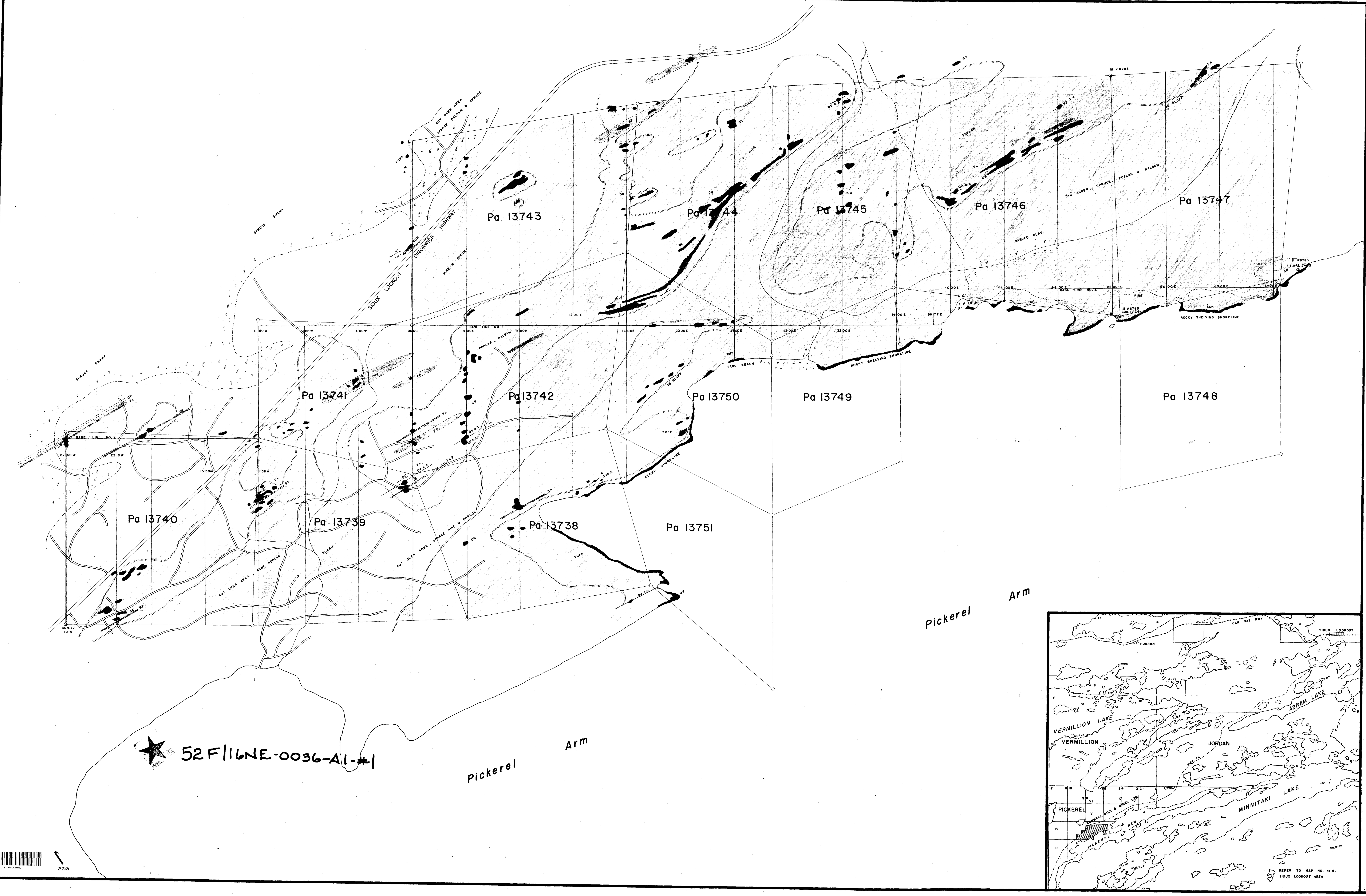
RM:VJ

SEE ACCOMPANYING MAP(S) IDENTIFIED AS

52F/16NE-0036-A1,#1

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





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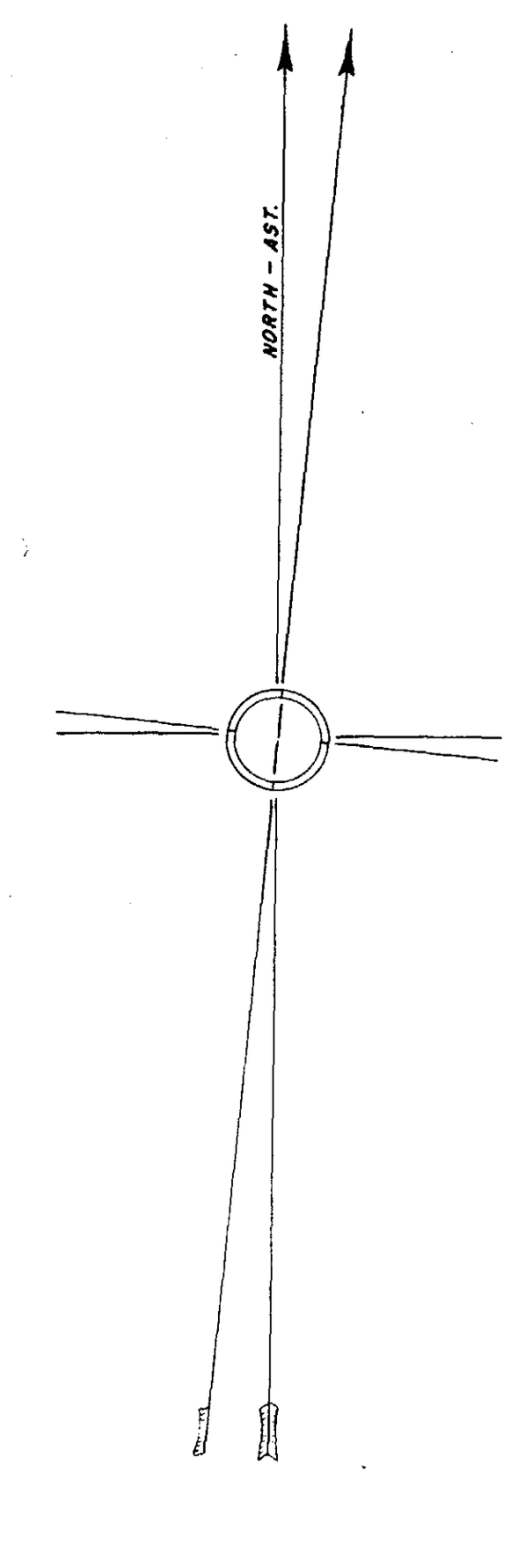

GEOLOGICAL MAP

OF PART OF THE PROPERTY OF

KENWELL OILS & MINES LIMITED

PICKEREL TOWNSHIP – DISTRICT OF KENORA

ONTARIO

SCALE - 1 INCH EQUALS 200 FEET

0 100 200 300 400 FEET

SURVEYED BY R. MCCOMBE — SEPT. 1952
MAPPED OCT. 1952
RETRACED BY R. MCCOMBE — JAN. 1953

SYMBOLS

- GEOLOGICAL BOUNDARY – DEFINED
- GEOLOGICAL BOUNDARY – APPROXIMATE OR ASSUMED
- BOUNDARY OF ROCK OUTCROP
- STRIKE & DIP OF SCHISTOSITY
- STRIKE OF VERTICAL SCHISTOSITY
- PICKET LINE
- CLAIM LINE
- CLAIM POST
- SURVEY POST
- LOGGING ROAD
- EDGE OF HILL OR SLOPE
- SWAMP
- TRAIL
- CABIN

LEGEND

CENOZOIC

RECENT

- PEAT, ALLUVIUM

PLEISTOCENE

- CLAY, SAND, GRAVEL

PRE-CAMBRIAN

ALGOMAN

- QV 0.7 — QUARTZ VEIN - WIDTH IN FEET (QS QUARTZ STRINGERS)
- FLP — FELDSPAR PORPHYRY
- QP — QUARTZ PORPHYRY
- GP — GRANITE PORPHYRY
- FL — FELCITE

KEEWATIN

- FP — FELDSPAR BASALT PORPHYRY
- CG — COARSE GRAINED FLOW
- PL — PILLOW LAVA
- TUFF — TUFF

THE DARKER COLOURED SPOTS INDICATE OBSERVED ROCK OUTCROPS

52F/16NE-0036-A1-#1

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