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GEOCHEMICAL SURVEY  
UDD RAMSAY SYNDICATE  
HIGHLAND VALLEY - 50°12' SE  
OCTOBER 12 TO NOVEMBER 29, 1956

SUMMARY OF QUALIFICATIONS

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A C A D E M I C

Degree	University	Year	Major Subject
Ingenieur ) = M.Sc. Geologe )	Swiss Federal Institute of Technology	1950	Economic Geology,
Ph.D.	Queen's University	1954	Economic Geology Geochemistry

MEMBERSHIPS IN TECHNICAL SOCIETIES

Canadian Institute of Mining and Metallurgy  
Geological Society of America  
American Geophysical Union  
Royal Institute of Dutch Professional Engineers

SUMMARY OF PRACTICE

Two summers field geology - International Nickle Co., Copper Cliff, Ont.  
February 1955 - 1957 (present) - geologist and geochemist for  
McPhar Geophysics Limited.

*Wm Groeneveld Meijer*  
1958

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# McPHAR GEOPHYSICS LIMITED

## REPORT ON GEOCHEMICAL SURVEY,

### BRITISH COLUMBIA

#### FOR

#### UDD RAMSAY SYNDICATE

### 1. INTRODUCTION

At the request of Mr. B. M. Middleton, geologist of the Udd Ramsay Syndicate, geochemical surveys have been performed on portions of the Pimainus Lake and Roscoe Lake claim groups deemed favourable for the occurrence of copper mineralization.

Field work was performed during the months of October and November, 1956 by Mr. Chessman, technician of McPhar Geophysics Limited. The author is familiar with the general area and with the possibilities and limitations of the geochemical methods employed.

### 2. OUTLINE OF GEOCHEMICAL PROCEDURE

The McPhar Geochemical Soil Test Kit for copper has been developed for use in determining the amount of copper in a soil sample. The reagents employed are specific for copper only; no other metallic ions, present in the soil, will affect the test.

The soil test kit consists of a field kit and a reserve of chemicals which are kept at the base camp. The field kit consists of a wooden case containing two polyethylene bottles, a supply of filter papers, and a polyethylene funnel. The front of the base is provided with a sample loading port and brief field instructions. A set of standards for estimating the

parts per million of copper, a stainless steel spatula and plunger-type sampler, and a mixing tube shaker are accessory equipment. Mixing tubes of good quality glass are used for individual tests. Two solutions are used in the test: EXTRACTOL extracts copper from the soil, INDICATOR develops the colour, indicative of the extracted copper; these liquids are immiscible with each other. The solutions are carried in polyethylene bottles supplied with the field case and used as needed for each test.

Using the plunger-type sampler and the spatula, a fine-grained fraction of the soil is selected. Two of such sample aliquots (total of approximately 0.2 g soil) are transferred to one glass mixing tube (A). This mixing tube is inserted uncapped into the loading port on the front of the field case and 2 ml of EXTRACTOL from the polyethylene siphon bottle are added after which the bottle is capped and shaken vigorously for one minute. A second mixing tube (B) is now placed into the loading port and one ml from the first tube (A) is filtered through a polyethylene funnel into it. To this filtered one ml portion, one ml of INDICATOR is added after which the tube is capped and shaken for thirty seconds. Upon standing for a few seconds the immiscible liquids will break into two separate phases and a colorimetric comparison against the set of standards can be made. Standards allow for direct visual estimation between 5 and 120 parts per million (ppm). The upper limit of the standards can be extended easily by; a) adding additional 1 ml portions

of INDICATOR, or by 2) halving the original soil sample. The colours of the standards are very stable; they will last for an indefinite period.

### 3. DISCUSSION OF RESULTS

#### A. PIMAINUS LAKE AREA

The Pimainus Lake baseline was cut approximately along the presumed contact between dioritic and granitic phases of the Guichon Creek batholith. Two hundred and twenty-two soil samples were collected at depths ranging between one and two feet on selected compass lines, located at approximately right angles to the baseline. A sample interval of about one hundred feet was chosen on the basis of previous experience in the vicinity along these compass lines.

The presumed contact occupies a swampy creek bed. Outcrops of diorite and granite do occur on the east and west slopes and these areas are thus, in general, not deeply covered by overburden.

All sample stations with results of individual soil analyses are shown on map No. G3132. Background for the area is between 0-15 parts per million copper as determined by the McPhar Geochemical Soil Test Kit for copper. Slightly higher values are occasionally encountered in swampy areas. This is a common feature in view of the higher base exchange capacity of such humus-rich soils. Much higher values would be necessary under such conditions before the occurrence of significant copper mineralization in the bedrock can be postulated. The negative results south of line 15+00N as well as east of the baseline in general are suggestive of less than significant copper concentrations.

Slightly higher but generally erratic values were found in thin overburden west of the baseline between lines 22+50N and 15+00N. In view of the apparent absence of dispersion trains or haloes, which could be expected if these values were due to extensive bedrock mineralization, it is not felt that major copper bearing zones are indicated.

#### B. ROSCOE LAKE AREA

Two baselines were cut on the Roscoe Lake claim group as shown on map No. G4344 which also shows the locations of all samples and results of field analyses with the McPhar Geochemical Kit specific for copper. The baselines were oriented along the traces of two possible faults cutting the granite which underlies the terrain. Sample intervals and depths were the same as on the Pimainus Lake claim group. Two hundred and sixty-seven samples were taken over those areas which were considered favourable on the basis of the preliminary results of magnetometer work which was carried out concurrently.

The results on baseline #2 are all too low to merit serious geochemical consideration. A few slightly higher-than-background values were found, largely in swampy, humus-rich terrain, but their counterpart was not observed in samples from adjacent higher ground where the overburden is considered to be fairly thin.

The same applies to the majority of results obtained in the area about baseline #1 except for a narrow zone located between lines 40+00S and 32+50S on the west side of the baseline. Here field values ranging between 225 and 325 parts per million copper were found in five samples

along a zone between one hundred and two hundred feet wide and more than seven hundred and fifty feet long. This geochemical anomaly is located in a narrow draw filled in with clayey and locally with humus-rich soils. To the north the anomaly is lost under deeper overburden; to the south the anomalous area is open. Chalcopyrite has been observed in quartz-rich float nearby and it is thus possible that the position of the mineralization has been located. Outcrop on both sides of the anomaly tends to minimize the width of the zone. Three of the high samples were analyzed in the laboratory by standard wet chemical procedure. The results are:

<u>Line No.</u>	<u>Station No.</u>	<u>Field Test</u>	<u>Wet Analysis</u>
40+00S	10+00W	260 ppm Cu	1000 ppm Cu
37+50S	10+00W	280 ppm Cu	4000 ppm Cu
32+50S	8+00W	225 ppm Cu	1400 ppm Cu

The comparison of these results seems to indicate that the second sample contains discrete particles of copper mineralization which were not dissolved in the field test. Previous experiment has shown that it is largely copper attached to the base exchange complex of the soil and hence very finely comminuted, which will react in a field tests where a cold extraction liquid is used. In view of these results, it is suggested that one or two trenches be dug across the anomalous area, to determine the nature of the underlying bedrock.

#### 4. SUMMARY AND RECOMMENDATIONS

The McPhar Geochemical Soil Test Kit for copper has been used for a geochemical survey over selected areas of the Pimainus Lake and



Roscoe Lake claim groups. The geochemical equipment, chemical procedure and the results of the surveys are discussed in detail.

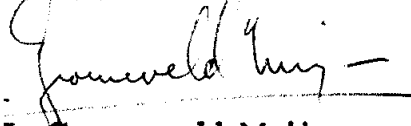
One interesting anomaly was found west of baseline #1 on the Roscoe Lake claim group between lines 40+00S and 32+00S. It is suggested that, if overburden permits, two trenches be excavated to expose bedrock and to examine possible mineralization.

<u>Trench</u>	<u>Line</u>	<u>From</u>	<u>To</u>	<u>Length</u>
1	37+50S	9+50W	10+50W	100'
2	35+00S	8+75W	10+25W	150'

Should encouraging results be obtained in these trenches, a further testing of the anomalous area would be warranted by means of trenching or drilling. A more detailed geochemical station net with a sample interval of fifty feet could be considered.

The remainder of the tested areas in the Pimainus Lake and Roscoe Lake claim groups have yielded results that are geochemically uninteresting.

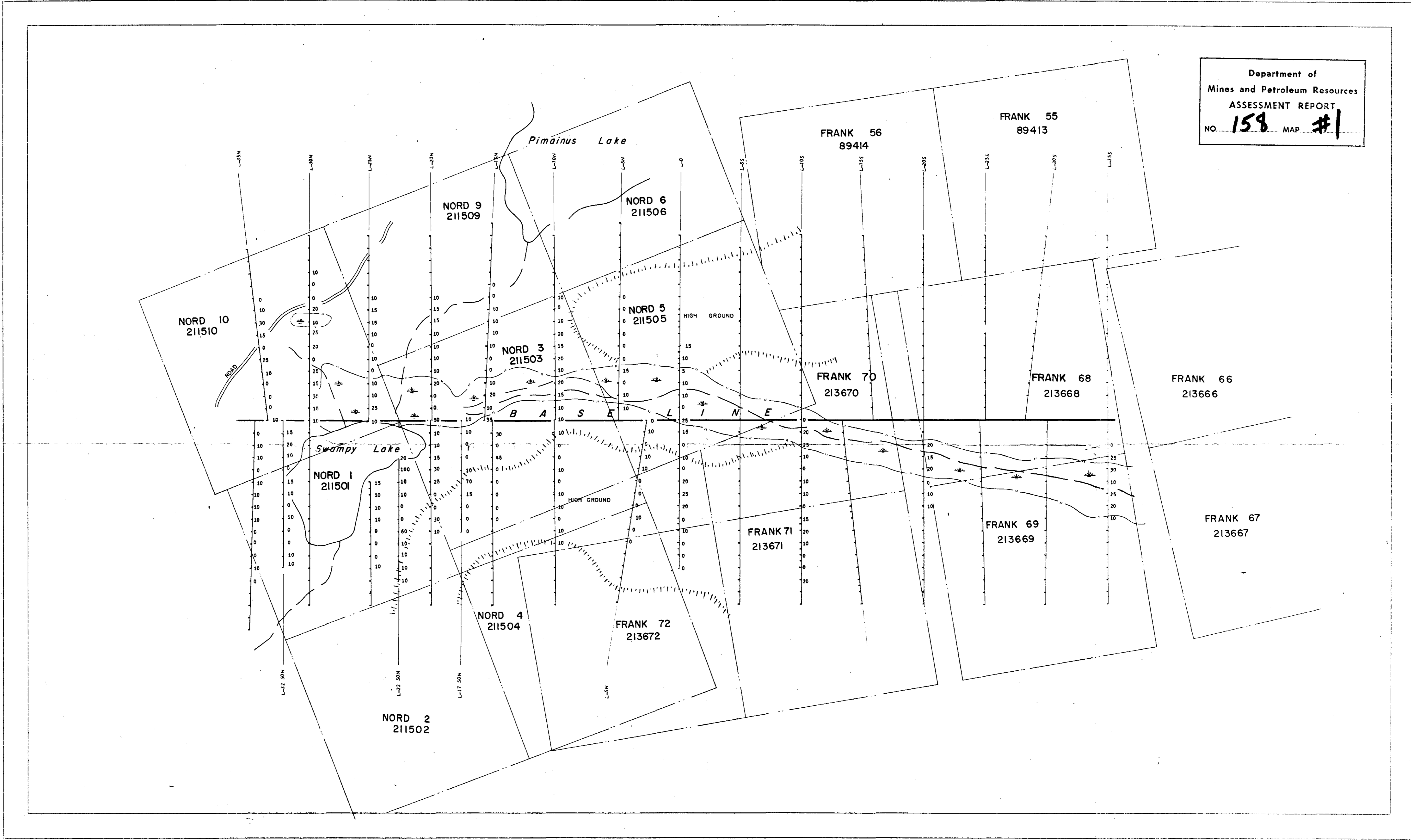
McPHAR GEOPHYSICS LIMITED

  
W. O. J. Groeneveld Meijer,  
Geochemist.

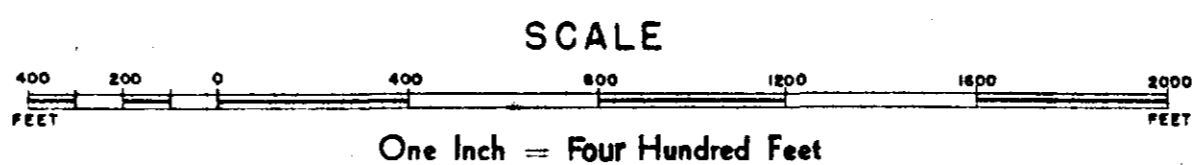
Dated: December 12th, 1956.

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GEOCHEMICAL SURVEY

Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. **158** MAP **#1**



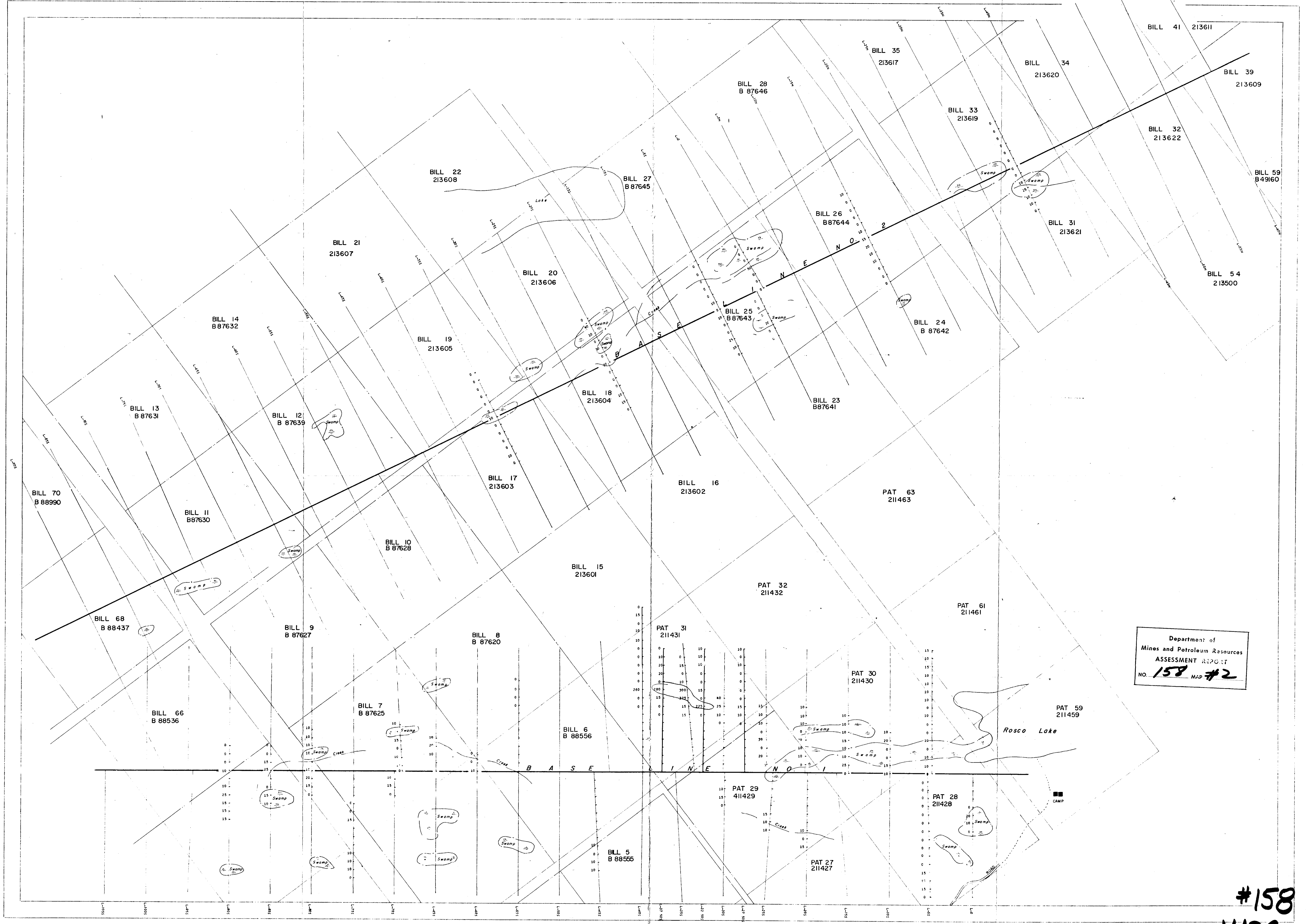
UDD RAMSAY SYNDICATE  
PIMAINUS LAKE AREA HIGHLAND VALLEY BRITISH COLUMBIA



NOTE:  
SOIL SAMPLE  
VALUES GIVEN  
IN P.P.M.  
CLAIM BOUNDARIES APPROX.

**#158**  
**MAP 1**

DRAWN G. YOUNG  
DATE DEC. 1956.  
APPROVED  
DATE Nov. 11/57



Department of  
Mines and Petroleum Resources  
ASSESSMENT REPORT  
NO. 158 MAP #2

UDD RAMSAY SYNDICATE  
ROSCO LAKE AREA HIGHLAND VALLEY BRITISH COLUMBIA  
SCALE  
One Inch Four Hundred Feet

NOTE:  
SOIL SAMPLE VALUES  
GIVEN IN P.P.M.  
CLAIM BOUNDARIES APPROX

#158  
MAP 2  
DRAWN BY YOUNG  
DATE DEC 1956  
APPROVED  
DATE