A REPORT ON A MAGNETOMETER SURVEY

FEMONY and McWAMI PROPERTIES,
Kowkash Mining Division, Ontario

In conjunction with an exploration program of the Femony and McWami copper-nickel properties in the Shabuskwa Lake area of Northwestern Ontario, a magnetometer survey was completed by the Exploration Department of The Consolidated Mining and Smelting Company of Canada Limited. The properties, composed of claims numbered KK 15185-520 and KK 15387-623, respectively, 36 claims each, are located in the Musgrave claim area of the Kowkash Mining Division, Ontario. The survey was carried out between June 1th and July 8th, 1957.

In general, the geology consists of pyroxene and biotite gneisses intruded by generally concordant masses of granitic pegmatite. The strike of these rocks lies between 275-295°, and their dip is normally close to vertical. Patches of coarse-grained, basic feldspar found within the pyroxene gneiss often contain disseminated chalcopyrite and nickel-bearing pyrrhotite, and lesser amounts of these sulphides can be found in the gneisses.

In order to search for magnetic anomalies caused by possible concentrations of the nickel-bearing pyrrhotite, a grid system for the magnetometer survey was set up, with two base lines, 500' apart, traversing the six-claim width of the property from east to west, and crosslines were cut at 100' intervals. A diagonal base line, with 100' interval crosslines, was also cut to the southwest to cover a possible change in strike of the gneisses. Magnetometer readings were taken over the area every 100 feet along the crosslines, or at 50' intervals, where required. Where more detailed work was necessary, crosslines were cut at 50' and 100' intervals, and readings were taken every 25 or 50 feet along these. A total of 11.5 miles of line were cut, and readings at 900 magnetometer stations were taken.

The instrument used was an Askania vertical intensity magnetometer. Magnetic values recorded were in scale unit readings, since the sensitivity of the instrument (previously 2U gammas per scale unit) had not recently been tested. The prime base station was set up 80' E of grid station 8+00 W, 5' 100 N.

Anomalous readings were recorded in spotty patches across the area. The most prominent anomaly lies 1250' north of the main base line, between crosslines 3W and 5W (see Plate 5). High values of up to 50 scale units above the average of 35, correspond in width and trend with a north-south trending diabase dike, indicated by a diamond drill hole to be vertical and approximately 100 feet in width.

Readings taken in the vicinity of the original showing, 100' south of the main base line near the O E crosslines, were erratic though high over small areas (Plate #8). The erratic high values were obtained in proximity to outcrops of pyroxene gneiss and coarse feldspar containing small visible spots of oxidised sulphides.

One to several anomalous peaks are apparent on crossline profiles south of the main base line, from 12W to the western boundary of the property. This area is in general underlain by WNW trending biotite gneiss which has been intruded by discordant bands of pegmatite. Disseminated magnetite associated with these contacts, as was observed in DDH 7FE-2, is probably responsible for the majority of the anomalous readings.

Small spotty areas of higher magnetic intensity, 10 to 20 scale units above the average, are located on the grid on crosslines 32W, 28W and 12W, respectively 500', 1000' and 900' north of the main base line. Where a more detailed study was made of this type of anomalous occurrence, east of crossline 16 W, 1000' north of the north base line (Plate 7), erratic high
magnetic readings could be correlated with surface or near-surface spots of pyrrhotite and chalcopyrite in the gneiss and coarse feldspar.

In the vicinity of the "north showing", approximately one mile to the NNW, the same occurrence of erratic high magnetic values exists, and a similar relation to spotty pyrrhotite in the gneisses or in boulders in the overburden is probable. The average value of magnetic intensity is higher in this area than on the main grid to the south; diamond drilling indicated this was due more to the pyrrhotite content of the boulder-strewn overburden than to that of the underlying gneisses.

Port Arthur, Ontario, August 7th, 1957.

George F. Koehler,
LEGEND

1. GRANITE
2. QTZ-HBL'D SCHIST
3. COARSE PLAG. WITH HBL'D & SULPHIDES

LIMIT MOD - LIGHT OVERBURDEN
CONTACT - OBSERVED, - INFERRED

ASSAYS %Cu, Ni
Au & Ag ALL NIL
The Consolidated Mining and Smelting Company of Canada, Limited

FEMONY
SHABUSKWA LAKE AREA, ONTARIO
DETAILED MAGNETOMETER SURVEY

Scale: 1" = 100' Date: AUGUST 5, 1957 Plate: 9
The Consolidated Mining and Smelting Company of Canada Limited

McWAMI & FEMONY
CLAIM GROUPS

Scale: 1" to ½ mile
Date: July 31, 1957
Plate: 4

From M 1830
Department of Mines, 
Parliament Buildings, 
TORONTO 2, Ontario.

ATTENTION: Mr. R. V. Scott, 
Chief, Mining Lands Branch.

Dear Sirs: 

Re: Femony and McWami Properties, 
Shabuskwia Lake area, Kowkash M.D., 
Magnetometer Survey - Your ref. 63-889.

The Femony and McWami claim groups were one while held by Cominco but details were kept track of under the two 36-claim groups due to option agreement commitments.

For assessment credit purposes the 72 claims were grouped into four units of 18 claims each in such a way that the widely separated areas drilled and mapped could be used to cover the claims which do not yet rate that work.

The geophysical work credit applied for is as follows:

Claims KK 15388-90, KK 15392, KK 15394, KK 15397-98, KK 15400-01, KK 15406-13, and KK 15518 - 22 man days.

Claims KK 15391, KK 15488-90, KK 15491-502, KK 15509-11, KK 15516 and KK 15520 - 65 man days.

Claims KK 15085-87, KK 15191-93, KK 15503-08, KK 15512-13, KK 15515 and KK 15517-19 - 173 man days.

Total - 260 man days.

Total time actually spent - 318 man days.

Plate 5 shows the magnetometer survey covering or partly covering 17 claims, 18 claims of which are in the claims listed above. Plate 6B shows partial coverage of 3 additional claims. The geophysical work credit applied for then covers, or partly covers, 17 claims in the 3 groupings listed above. The total of 260 man days requested averages (260/17) about 15 days per claim on which geophysical work was performed. Over 100 days' credit has not been asked for in respect to any claim.
Re: Femory and McWami

We regret the delay in answering your query, dated January 9th, occasioned by my absence from the office.

Yours truly,

H. F. Aston

H. F. Aston,
Exploration Engineer,
NORTH CENTRAL DISTRICT.
Dear Sir:

Re: Femony & McWard Properties,
Shabuskwia I. Area,
Kowkash M.D. - Mag. Survey,
Your ref. 63 - 889

Replying to your letter of February 4th may I answer your last question first. I have not introduced any new figure -- I have merely shown that we are applying for credit only 260 man days of the total of 318 man days which were actually spent. The 260 days used are accounted for in the Form 12 applications and the appended Magnetometer report shows the breakdown of the 318 days which were actually available. Only 260 of the 318 days are needed for assessment application.

The geophysical work has not been applied to any claim upon which geophysical work was not done. The 72 claims had to be grouped into 18's in order to apply diamond drilling. One of the groups of 18 contain no claim upon which geophysical work was credited, although work was done on three of them. The other 3 groups do contain claims which were geophysically surveyed and for which credit is requested. The claims comprising them were listed in my letter of January 28th. The first group was credited with 22 man days for geophysical work. The claims which are being credited equally consist of the three claims Nos. KK 15388, -392 and -394. The second group was credited with 65 days. The claims which the work was done and which are being credited equally consist of 18 claims, Nos. KK 15391, -511, -515, and -520. The third group was credited with 173 days. The claims on which the work was done and which are being credited equally consist of 10 claims, Nos. KK 15506, -512, -513, -515, -517, -518, -519, -492, -493, and -494. The following summarizes this:

1. 3 claims covered or partly covered - 22 days applied (ave. 7+ days/claim
2. 18 claims covered or partly covered - 65 " " (ave. 16+ " ")
3. 10 claims covered or partly covered - 173 " " (ave. 17+ " ")

Total days applied - 260

In addition, 3 claims (Nos. KK 15393, -395, and -396) were covered.
in the 1st group but no credit is requested.

The total available (see Magnetometer report attached to Applications for Work) = 34.8 man days.

There are 20 claims in all upon which geophysical work was done for an average of \( \frac{34.8}{20} = 1.74 \) man days per claim. This average is not exceeded in (1), (2) or (3) above.

If the department prefers us to apply this 1.74 man days to all of the claims of the property then it would not be necessary to apply so much drill footage as we did in group (1) above or the 1st group on which no geophysical work was applied. In any case the Department has all the drilling data and all the geophysical data and that amounts to more than the minimum that is required to hold all of the claims for 1 year.

Yours truly,

H. F. Aston
Exploration Engineer,
NORTH CENTRAL DISTRICT.