

KROYDER PROSPECTINTRODUCTION:

Mr. M. Kroyder, while searching for steel pipe along the abandoned Canol pipeline, noticed a spring surrounded by a gelatinous bright reddish-brown material. He brought this to the attention of A. Kulan who found that this spring was surrounded by several thousands of square feet of limonite. Working on the assumption that the gossan could be the result of leaching of an ore body, claims were staked and stripping, geochemical and geophysical surveys started.

LOCATION:

The main gossan is located about  $1\frac{1}{2}$  miles S.W. of the S. end of Quiet Lake, near the Canol road, at a point approximately 50 miles from Johnsons Crossing.

DESCRIPTION:

The bog-iron deposits are found in low swampy areas. A notable feature is that one or more low rounded hummocks are found on each gossan. These represent "cones" of iron oxide built up as precipitate from springs. From these centres limonite is spread in all directions. Toward the periphery of the gossans the limonite is found as mere coatings on the gravel or vegetation. Toward the centres the material is progressively more homogeneous and hard. Layering of the material is noticeable and relict structures indicate that pebbles, soil, roots, leaves and even boulders were first coated, then completely replaced by limonite.

One outcrop was seen on Dawn #8. It consisted of schist containing up to 5% disseminated pyrite. Oxidation and leaching was indicated by the cellular nature of the rock.

WORK DONE:

Thirty-eight claims (Dawn #3 - #40) were staked.

A base line, N  $12^{\circ}$  W, 6000' long, and a cross line 7400' in length were cut out. The lines were so situated that they intersected near the centre of the main gossan.

Geochemical samples were taken at 100' intervals. These samples gave no indication of Pb, Zn or Cu by the heavy metals system, and no Cu indication by the/

Work Done (Cont'd):

the Rubenic Acid technique. Samples ("D" Group) sent to X-Ray Laboratories, Toronto, gave no encouragement. D-15 showed Cu - 200 and Zn - 220 p.p.m. Since this sample was taken on the old pipeline road it was not considered of value.

An attempt was made to do an Askania magnetometer survey but a faulty instrument prevented this. The Arvela pocket magnetometer was read at 100' intervals along the base and cross lines, as well as near and over some of the other gossans. No anomalous magnetic condition was found.

E.M. traverses totalling about 15,000' failed to indicate a conductor.

S.P. traverses indicated an anomalous zone striking N 60° W. Negative values, almost 600 m.v. above background, suggested graphite.

Trenching by D-8 Cat was undertaken at three locations. Two attempts were made to penetrate the limonite and reach bedrock beneath the main gossan. The capping was found to be overlying a spongy, wet, clay layer which was impossible to move. The third trench started at 900 N. on the base line and went S-W to cross-cut the S.P. anomaly. At 181' - 191' from N. 800, a grey, graphitic, brecciated quartz vein was cut. It lay concordant with the schistosity of the country rock that had an attitude of N-W/45° N.E. The wall rock was quartz-sericite schist, locally markedly graphitic, carrying up to 2% pyrite. Near the surface, cubic pores indicated leaching and loss of the pyrite. Assays of quartz material indicated no economic values.

CONCLUSIONS:

- (1) The iron is derived from the oxidation and leaching of pyrite finely disseminated through the schist in the surrounding area.
- (2) The iron in solution is carried from the higher ground and deposited in topographically low areas.
- (3) Geochemical samples indicated it was improbable that Zn, Pb or Cu deposits would be found in this basin.

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Angus MacDonald.