

REPORT ON ANOMALY #107VOLE CREEK GOSSAN105-N-11July 14, 1969

The Vole Creek gossan is a limonite cemented gossan about 60 ft. in diameter located approximately 22 miles west of Swan Lake and 7 miles southwest of Four Moose Lake. The gossan itself is found roughly two miles west of and on the side hill above Vole Creek. Several small lakes on Vole Creek, less than a mile north of the gossan, are possibly suitable for float-equipped aircraft.

Samples taken in the 1968 season indicated insignificant copper and lead but zinc values in five samples ranged from 100-550 ppm and a sixth sample contained 60,000 ppm zinc. On the basis of this single large value, it was decided that the gossan should be re-visited.

One day was spent at the gossan, prospecting and checking geology. A line of soil samples was taken along the side-hill above the gossan and another line passed through the base of the gossan. Three gossan samples were taken at a depth of 12-18 inches. One sample of gossan material was sent for assay.

The gossan material is fairly open and is of a bedded nature although it was too broken to obtain an attitude. Leaf, pine cone and pine needle impressions are common. There are occasional small rock fragments in the gossan. The nearest noted outcrop was several hundred feet north of the gossan. This was a grey weathering dark bedded crystalline Proterozoic limestone. Yukon Group quartzites were noted near the valley bottom and also one-half mile south of the gossan. There is a second gossan in a creek one-quarter mile west. No mineralization was encountered.

Assay and geochemical results were not available at the time of writing.

<u>Assay Tag No.</u>	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Remarks</u>
4024	0.03	0.12	0.48	
(This portion not enclosed with report)				

Respectfully submitted

G. R. Sanford

REPORT ON ANOMALY #114

N.T.S 105-N-11

July 6-8, 1969

Anomaly #114, discovered during the 1968 season, is lead-zinc anomaly in a small cirque 20 miles northwest of Swan Lake. Four Moose Lake, 2½ miles to the northeast, is easily accessible by float-equipped aircraft. Lead values ranged from 10-80 ppm and zinc values from 50-1500 ppm. The largest values were found near the headwaters of the creek which flows to the southeast. The upper edges of the cirque are just above tree line and the anomalous areas lie below tree line in dense undergrowth.

Three complete days were spent checking the anomaly: two days were used to obtain areal geology and one day was devoted to prospecting. Two lines of soil samples were taken around the cirque, one at tree line and the other about 600 vertical feet below the first. Anomalous tributaries to the creek were more completely sampled than had previously been done. The geology had been done on a regional scale only.

The rock in the area is nearly all of the carbonaceous unit of the Devonian-Mississippian sequence, either black cherts and argillites or a quartzite chert argillite breccia with interbedded black slates. The fine grained portions of this breccia are a grey weathering quartzite. A branching and steeply eastward dipping dyke of Cretaceous (?) "aplite" cuts the cherts and argillites along the upper northwestern edge of the cirque. This "aplite" is a light coloured aphanitic rock with scattered 1 mm. diameter quartz phenocrysts. In places, portions of the wall rock have been included in the dyke material. At most this dyke is 50 ft. wide.

An east-west fault, separating the breccias from the cherts-argillites, is seen as a topographic low. The cherts and argillites are contorted near this fault and the dyke terminates against it. The areal attitude of the rocks north of the fault is northwesterly-southeasterly and this changes to northeasterly-southwesterly south of the fault. The direction and amount of fault movement is unknown.

A rust seepage lies at the base of the cirque, near the inferred continuation of the fault. The rust seepage is quite swampy and can be followed for some 150 ft. in a southerly direction. Very minor limonite cemented quartzite breccia talus can be found on the side hill well above the seepage. The quartzite fragments are similar to the in-place fine grained quartzites. No mineralization was detected in the area.

From soil and silt samples obtained during the examination very high zinc values (up to 6700 ppm) were found in the vicinity of the gossan but no anomalous leads were detected. Some moderately high zinc values (up to 700 ppm) were found near the "aplite" dyke but these were also accompanied by non-anomalous leads. Limonite cemented quartzite breccia when analyzed gave 45 ppm copper, 20 ppm lead and 1020 ppm zinc.

As black cherts and argillites in several areas of the Hess Region are known to have high background zinc without accompanying economic mineralization, further investigations are not recommended in the area at present.

Illustration: Geochemistry  
Geology

Respectfully submitted,

G. R. Sanford