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Physical Work Submission for

Work Credit: claim 4278391

By Peter Van Adrichem

The claim is located near Cobalt Ontario in Larder Lake Area and is identified as claim #4278391.

The claim was staked for silver and cobalt metals and kimberlite interests which will be tested for diamond occurrences in 2017.

The edge of the claim can be reached by 4x4 vehicle from the main north - south dirt road.

Work on the claim was characterized by two main activities:

- 1) Slashing brush by hand to improve access from both the road and within the claim area.
- 2) Metal detecting for silver and cobalt floats.

Activity Log:

Friday May 20, 2016: drive from Ottawa area to Cobalt and the claim site. , Found the nearest corner post and claim line and slash brush up to the claim. Over night in Haileybury.

Saturday May 21: metal detect the overburden on top of the hill. Over night in Haileybury.

Sunday May 22: Return to Ottawa area.

October 19, 2016: Arrive from Ottawa area to Cobalt and stayed in Haileybury, Ontario.

October 21, slash more brush and refurbish claim lines. Metal detect in previously dug trenches for silver and cobalt veins in the bed rock. Metal detect overburden for silver float and detect excavated material for float.

October 21, preliminary study and plan work to test the area for kimberlites. Return home to Ottawa area.

Results: unfortunately, only a few rocks emitted a signal with the metal detectors showing a small amount of oxidized silver and cobalt on the surface.

Geology: The greatest geological event of economic importance to the Cobalt area took place between 2217– to 2210–million years ago; the intrusion of an enormous sill of diabase about 1,000 feet thick, which has since been named the Nipissing diabase. The diabase penetrated both the sedimentary rocks and the Keewatan basalt. Veins of ore-rich rocks formed through the faulted fractures, especially in the areas near Cobalt. The silver veins were deposited from mineral solutions which were given off by it during the time the diabase was cooling and for some time after it had solidified. The veins of deposit average three or four inches wide and the silver occurs mainly in its native form; some historic veins were much wider.

Plan: next year we plan to

- 1) Do more metal detecting including under water detecting.
- 2) Collect soil samples to find evidence of kimberlites and diamonds.

Equipment used: shovels, brush cutters, pic

Garrett ATX Metal detector

Minelab Eureka Gold Metal detector

Report Prepared by Peter Van Adrichem

Peter Van Adrichem

date:

March 14/17

Diamond exploration is very specialized and very expensive. When looking for diamonds, it is typical to collect large samples of soils (10 kg +) as close to bedrock as possible, or at least in a setting where you can determine where the soil came from. This give you the best chance to find kimberlite indicator minerals (KIM's) in the setting most likely to be closest to the source, or the least modified by natural processes.

The sample material is screened to collect the -10 mesh material, although the larger material is documented on the sample sheets as to the rock type, and pebble morphology.

Analysis of the sample typically includes washing (to remove clays and debris), and then concentrating the heavy minerals using dense media separation. This is expensive, but you could try a shaking table. Minerals of interest include olivine, pyroxene (diopside), chromite, garnet, ilmenite and of course, diamond. All of these are heavier than the mass of quartz and feldspar that form 90% or more of the sample). These are further separated into the magnetic, paramagnetic and non-magnetic fractions, inspected under a microscope and picked or separated, and then sent to a microprobe for analysis.

The microprobe gives the chemical composition of each mineral grain that can then be used to identify the grain as kimberlitic or not. Further, the diamond-bearing potential of the source kimberlite can be assessed based on these chemistries (garnets are G10 or G9 pyropes etc.).

4278391

Coleman Township Municipality

Haileybury

Town

Mun

Corkill Island
Sasaginaga

Lake
Greenstone
Island

Cobalt

Coleman

Mobile Home
Park

Loon
Lake

Trans-Canada Highway

Gillies
Cement Plant

11B
Lumber Mill

1055

Green Lake

Clear Lake

Pretty Lake

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Diabase
Mountain

Diabase
Point

Greywacke
Mountain

Hoand Chute
Generating
Station

Coleman Township Municipality
GILLIES LIMIT TP

North

4278391

Near Cobalt, Ontario

