

Mesabi Au-Cu Skarn - Kamloops Area, British Columbia

The Mesabi Property is located 36 km. northeast of Kamloops, B.C. and is accessible by paved highway. Logging roads provide access to most areas of the property which consists of 9 claims comprised of 58 units registered in the name of R.H. McMillan and held in partnership with Messrs. N.C. Carter and R.R. Blusson. The focus of interest is the gold-copper potential of a 200 metre wide and 1.4 km. long soil geochemical anomaly with which is partially coincident with a similar sized magnetic anomaly and carries copper values to 4500 ppm and gold values of up to 2920 ppb (2.9 g/t). Skarn-related gold deposits have recently been shown to have million (+) ounce gold potential at several U.S. locations.

Physiographically, the property is located in the Thompson Plateau, within the Intermontane tectonic Belt. It is part of the Quesnel ~~structural~~ terrane and is underlain by "back-arc" submarine mafic to felsic volcanic rocks, limestone and clastic sedimentary rocks of the late Paleozoic Harper Ranch or Upper Triassic Nicola Group. These strata have been tilted and folded, and dip steeply northeast on the property. Regionally the Harper Ranch and Nicola rocks are capped by flat-lying rhyolite and basalt flows of the Middle Eocene Kamloops Group.

Past Work Copper and magnetite mineralization was originally discovered on the property in 1915 and by the 1940's some hand trenching had been completed. In 1966, following a ground magnetic survey which documented a strong magnetic anomaly on the south side of the property, Madison Oil Limited drilled four diamond drill holes totaling 250 metres to test strong magnetic anomalies for potential iron ore. Hole #2 returned 4.5 metres grading 1.67% Cu and 0.48 g/t Au in semi-massive magnetite. The hole bottomed in "mineralization", with a second interval assaying 0.11% Cu and 13% Fe over 14 metres, but with no assays for gold. The three other Madison Oil holes reportedly encountered mineralization similar to that in hole #2, but were not sampled and assayed. The Madison Oil holes were drilled south of the road near the south margin of the Mesabi 1 claim. In 1980, Cominco Limited completed a geochemical survey, geological mapping and flux-gate magnetometer survey. Mapping by Cominco demonstrated that the copper mineralization was associated with a pyrite-pyrrhotite-magnetite skarn horizon. Cominco's work documented a strong northwest-trending magnetic anomaly and associated copper-in-soil anomaly over a strike length of 1.4 km. - the anomaly is characterized by copper values of several hundred ppm Cu, with a peak value of 1400 ppm Cu. Cominco did not analyze their soil samples for gold. In 1985, the property was staked by Mr. Herb Allan, who drilled a 58 metre diamond hole by the road on the flank of the magnetic anomaly. The hole intersected 16 metres of semi-massive magnetite with traces of chalcopyrite from 42 to 58 metres, with a six metre interval (43 to 49 metres) returning 25% Fe and 0.5 g/t Au.

The property was staked by the Mesabi Syndicate (McMillan, Carter and Blusson) in 1993. In 1994 Formation Capital Corporation optioned the property and completed an airborne electromagnetic-magnetic survey and two lines of soil geochemical sampling. The soil survey resulted in some highly anomalous copper (to 2003 ppm) and gold (to 580 ppb Au). The airborne electromagnetic survey detected a weak conductor (2.3 siemens) associated with the strong magnetic anomaly associated with the skarn zone.

In 1997, the property was examined by Echo Bay Mines Ltd. who collected 104 soil samples, which yielded values of up to 4500 ppm copper and 2920ppb gold. Echo Bay optioned the property and prepared 31.5 km. of grid, collected 1145 soil samples, attempted a magnetometer survey and prepared a geological map. Unfortunately the rented magnetometer was malfunctioning, however the soil geochemical survey confirmed the earlier Cominco results over a strike length of 1.3 km. Copper-in-soil values reach 1950 ppm and gold-in-soil values 1430 ppb. Echo Bay

strongly recommended drilling the property, but exited the exploration business for financial reasons in 1997. In July and September of 1999, McMillan and Blusson completed a combined ground proton magnetometer and VLF-EM survey over the grid (total of 27.75 line km.) utilizing a GEM Systems GSM-19 Omni-directional unit and utilizing the Seattle (24.8 Hz) signal. Several prominent VLF-EM anomalies were detected associated with the strong magnetic anomaly associated with the skarn mineralization.

The copper and gold soil anomalies generated by Cominco and Echo Bay are partially coincident, located west of and down-slope from the strongest magnetic and electromagnetic anomalies. The geological mapping by Echo Bay and G.E. Ray of the B.C. Geological Survey Branch has documented the presence of both "proximal" (garnet-diopside-amphibole-magnetite) and "distal" (epidote-calcite-amphibole) skarn. The distal skarn contains minor amounts of disseminated pyrite and is anomalous in gold (100 to 500 ppb), but as there is no explanation regarding the cause of the large soil anomalies. G.E. Ray considers the environment to have similarities to the giant Olympic Dam, Mount Earnest Hemry, Candelaria and other Iron Oxide copper-gold deposits which have recently been recognized as a new mineral deposit type. map?
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Potential

Skarn-related gold-copper deposits have recently become important gold producers in adjacent Washington State and in Nevada. In the Okanogan area of Washington State, Echo Bay Mines has been mining skarn-type gold mineralization in the Republic District for the past several years - mineralization is associated with massive magnetite and massive sulphide mineralization with minor copper and is estimated to total approximately 1 million ounces contained in four deposits (Lamefoot, Overlook, Key West and Key East). Battle Mountain's Crown Jewel Mine, also located in the Okanogan area, 27 miles northwest of the Republic District, hosts approximately 1.6 million ounces of gold in magnetite-rich skarn - it is in the permitting stage. In Nevada, the Cove-McCoy and Fortitude Deposits in the Battle Mountain-Eureka "Trend" of central Nevada are also skarn-related. The various ore-mineralized zones at Cove-McCoy, located 30 miles southwest of the town of Battle Mountain, have produced more than 2 million ounces of gold through 1997, and together have a total resource (past production and reserves) of more than 6 million ounces. The Copper Canyon District, located approximately 20 miles north of Cove-McCoy and 10 miles southwest of Battle Mountain, hosted mainly porphyry-style mineralization with production and reserves of 113,400 tonnes of copper and 10 million ounces of gold as well as significant molybdenum and silver - this includes the Fortitude skarn with 2.3 million ounces of gold contained in 10.3 million tonnes of ore which also contained approximately 0.1 % Cu.

In summary, the Mesabi property is very similar in all aspects to the aforementioned proven skarn-hosted copper-gold deposits. The property thus holds significant untested potential for a world-class deposit of this type. The early drill programs tested magnetic anomalies and the holes are located several hundred metres west of the currently-known soil geochemical anomalies.

(2001/06/12)

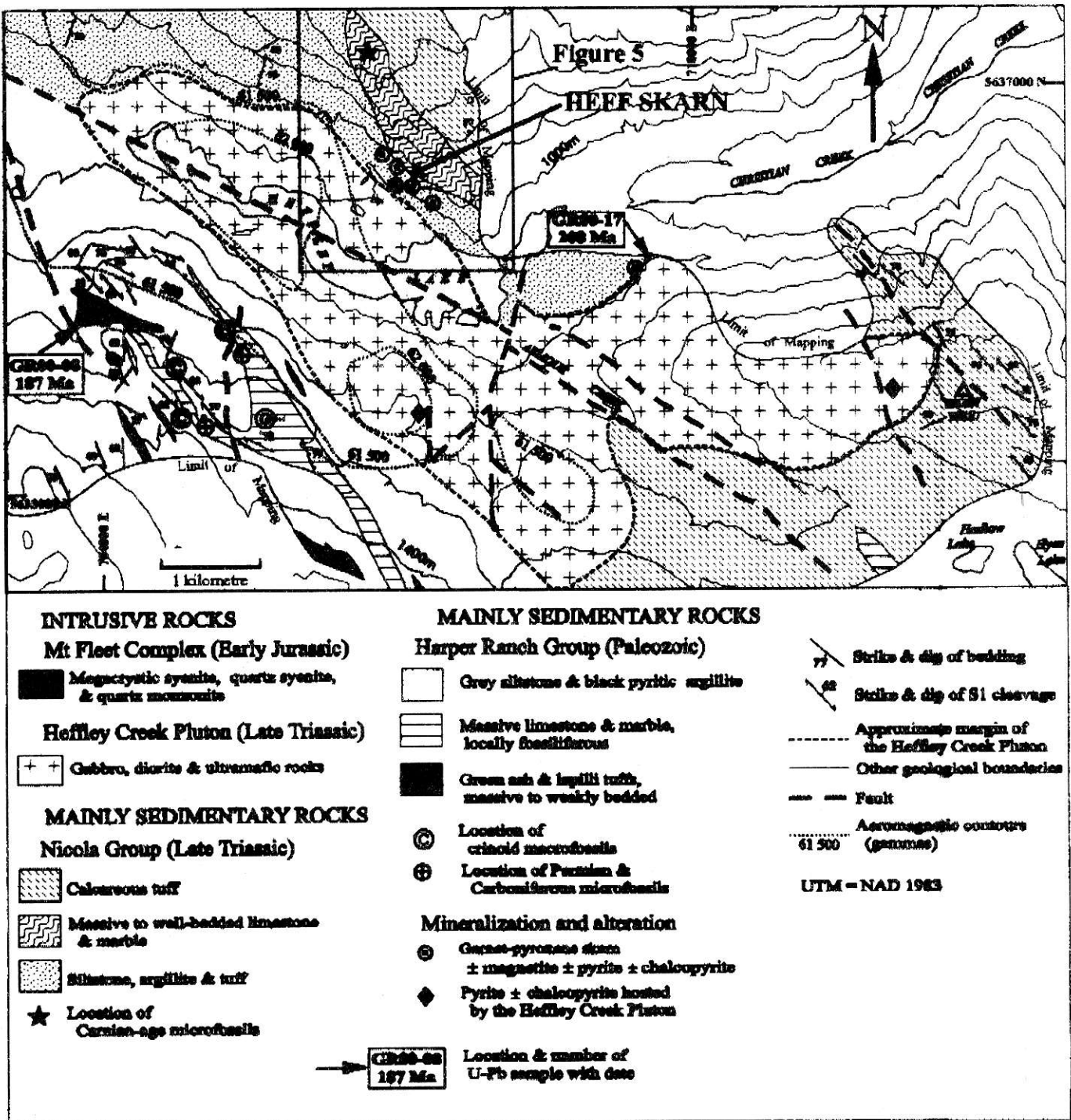


FIG. 4: Geology of the Heffley Lake area showing location of the Heff Skarn and microfossil and U-Pb zircon samples collected for this study. Geology after Ray & Webster (2000a & b).

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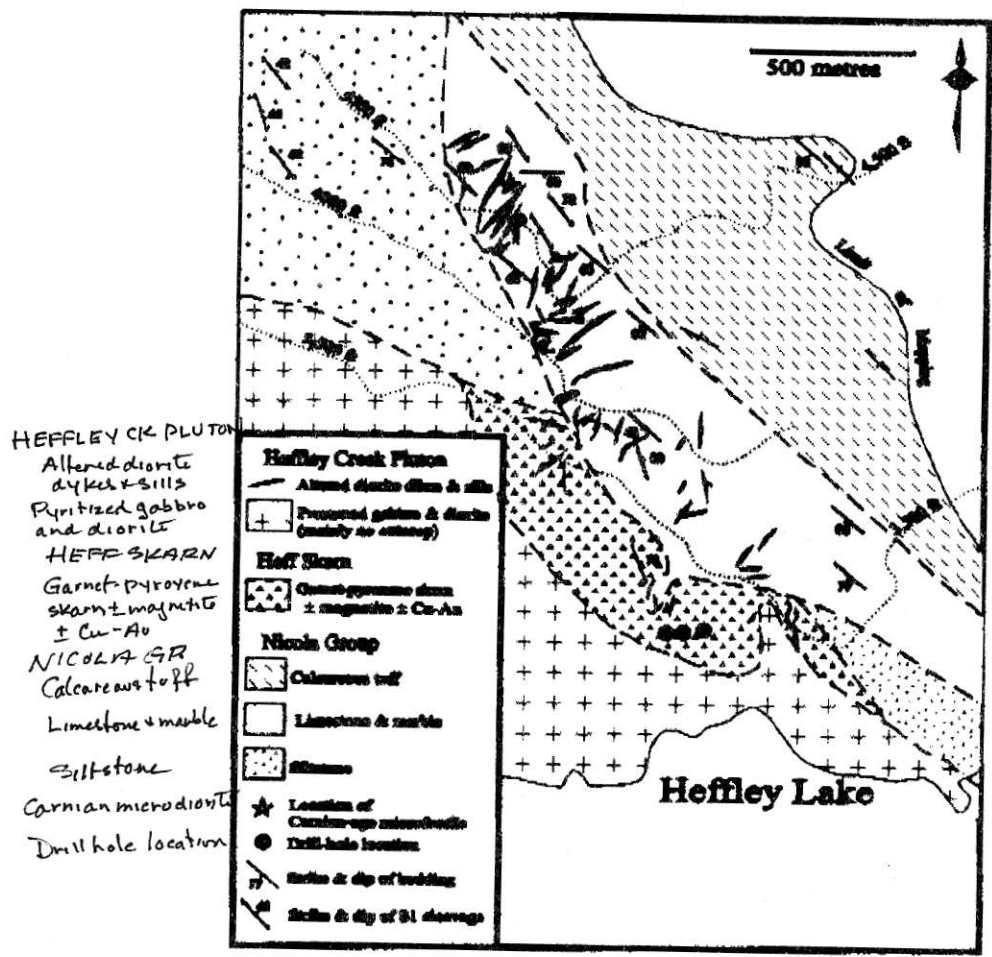


Figure 5: Geology of the Heff skarn showing the distribution of the sill-dike swarm. After Ray & Webster (2000a & b).

Table 5A. Microprobe analytical data of magnetite crystals in the Heff Skarn compared to those in some other magnetite-rich deposits in British Columbia and South America.

| | Heff Skarn ¹ | | | Magnet-Glen Iron Mine ² | | | Merry Widow Mine ³ | | | Prescott Mine ⁴ | | | El Romeral Mine ⁵ | | | Condestable Mine ⁶ | | |
|--------------------------------|-------------------------|--------|-------|------------------------------------|--------|-------|-------------------------------|--------|-------|----------------------------|--------|--------|------------------------------|--------|--------|-------------------------------|--------|--------|
| | n = 17 | | | n = 22 | | | n = 16 | | | n = 13 | | | n = 16 | | | n = 12 | | |
| | Min | Max | Avg | Min | Max | Avg | Min | Max | Avg | Min | Max | Avg | Min | Max | Avg | Min | Max | Avg |
| SiO ₂ | 0.14 | 2.03 | 0.82 | 0.00 | 0.28 | 0.08 | 0.16 | 1.75 | 0.71 | 0.16 | 0.85 | 0.35 | 0.00 | 0.86 | 0.07 | 0.02 | 3.38 | 0.82 |
| TiO ₂ | 0.01 | 0.08 | 0.03 | 0.00 | 0.09 | 0.03 | 0.00 | 0.09 | 0.03 | 0.00 | 0.10 | 0.03 | 0.00 | 0.57 | 0.08 | 0.00 | 0.08 | 0.03 |
| Al ₂ O ₃ | 0.06 | 0.68 | 0.22 | 0.11 | 0.46 | 0.24 | 0.04 | 0.45 | 0.17 | 0.04 | 0.18 | 0.08 | 0.03 | 0.34 | 0.09 | 0.15 | 1.53 | 0.38 |
| Cr ₂ O ₃ | 0.00 | 0.05 | 0.02 | 0.00 | 0.05 | 0.02 | 0.00 | 0.06 | 0.02 | 0.00 | 0.06 | 0.02 | 0.00 | 0.05 | 0.01 | 0.00 | 0.05 | 0.01 |
| Fe ₂ O ₃ | 63.24 | 68.69 | 66.62 | 67.79 | 68.73 | 68.30 | 63.73 | 68.94 | 67.01 | 66.64 | 68.87 | 68.10 | 65.89 | 68.89 | 68.40 | 58.76 | 69.27 | 66.75 |
| FeO | 30.97 | 33.11 | 31.80 | 28.64 | 30.54 | 29.67 | 31.15 | 32.77 | 31.72 | 31.09 | 31.86 | 31.38 | 30.78 | 31.76 | 31.06 | 31.04 | 34.18 | 31.81 |
| V ₂ O ₃ | 0.00 | 0.03 | 0.01 | 0.36 | 0.45 | 0.40 | 0.00 | 0.02 | 0.01 | 0.01 | 0.02 | 0.01 | 0.24 | 0.40 | 0.35 | 0.00 | 0.01 | 0.00 |
| MnO | 0.00 | 0.08 | 0.03 | 0.11 | 0.30 | 0.20 | 0.00 | 0.09 | 0.03 | 0.00 | 0.09 | 0.03 | 0.06 | 0.20 | 0.09 | 0.00 | 0.05 | 0.02 |
| MgO | 0.08 | 0.32 | 0.17 | 0.40 | 1.30 | 0.81 | 0.09 | 0.27 | 0.16 | 0.09 | 0.16 | 0.12 | 0.03 | 0.38 | 0.08 | 0.08 | 0.86 | 0.26 |
| ZnO | 0.00 | 0.11 | 0.03 | 0.00 | 0.10 | 0.03 | 0.00 | 0.08 | 0.03 | 0.00 | 0.08 | 0.03 | 0.00 | 0.12 | 0.03 | 0.00 | 0.08 | 0.02 |
| Sum % | 99.01 | 100.66 | 99.74 | 98.95 | 100.62 | 99.76 | 98.53 | 100.89 | 99.90 | 99.62 | 100.76 | 100.14 | 99.76 | 100.76 | 100.25 | 98.86 | 100.88 | 100.10 |

Sample locations and type (see superscripts above).

1. Heff Skarn. Massive magnetite with minor garnet & pyrrhotite, and trace apatite. Heffley Lake, BC, Canada
2. Massive magnetite-apatite veins, Magnet and Glen Iron Mine, west of Kamloops, BC, Canada
3. Massive magnetite ore with minor garnet skarn, Merry Widow deposit, Vancouver Island, BC, Canada
4. Massive magnetite ore with minor garnet skarn, Prescott deposit, Texada Island, BC, Canada
5. Magnetite-apatite ore, El Romeral IOD deposit, Chile.
6. Magnetite-chalcopyrite ore, Condestable IOCG deposit, Peru.