

94-D-8

**NAME:** SOUP

**DISTRICT:** Omineca Mining District

**LOCATION AND ACCESS:** Located on Kliyul Creek, about 200 km NNE of Smithers in north-central B.C. (N.T.S. 94D/8). Access is by helicopter from Johanson Lake, approximately 15 km NW. The Omineca Mining Access Road passes within 9 km to the north.

**LAND POSITION:** Ten 2-post claims, two 4-post claims and 2 fractional claims, owned jointly by Vital Pacific Resources Ltd. and Athlone Resources Ltd.

**TARGET:** Porphyry Copper-Gold  
Cu-Au skarn and replacement mineralization.

**GEOLOGICAL SETTING:** The Soup claims lie within the NNW trending Quesnel Terrane of the Canadian Cordillera. The Quesnel Terrane consists mainly of Triassic to Jurassic island arc alkaline volcanics and subvolcanic intrusives and associated sedimentary rocks. These are cut by granitic to intermediate intrusives of the Jurassic to Cretaceous Omineca intrusions (Hogew Batholith). Major regional high angle faults trend N and NW and include the Ingenika-Pinchi, Dortatelle and Lay Range fault systems. Significant mineralized occurrences in the area include the Kli property (7 km NNW of the Soup claims), an auriferous skarn with drill indicated reserves of 500,000 tons at 0.05 opt Au and 0.4% Cu.

The Soup claims are underlain by Takla Group rocks. In the NE of the property are andesite flows, flow breccias and tuffs. The SW is underlain by andesitic tuffs, volcanoclastics and limestone. Subvolcanic intrusives range in composition from pyroxenite and diorite to monzonite. The Kliyul Creek Pluton is exposed in the SW corner of the property and ranges in composition from quartz diorite to quartz monzonite. A number of major NW to WNW striking faults cross the claims. Subordinate faults strike N and NNE.

**HIGHLIGHTS:** Four types of mineralization occur on the property: magnetite-sulphide skarn bodies (including the Main Zone); magnetite-sulphide replacement lodes (including the Saddle Gully Zone); quartz-carbonate-sulphide veins; and sulphide fracture-fillings and disseminations.

Magnetite-rich Au and Cu bearing skarns occur within a 25 m thick calcareous tuff near the base of the andesite flows, which strike NNW and dip moderately east. The skarns are related to a microdiorite sill near the footwall of the tuff. Three parallel skarn horizons are recognized, ranging from 1-5 m thick. The main skarn zone is partially buried by talus, but is traceable across fault offsets for up to 2.5 km.

Replacement bodies consisting of magnetite, pyrite and chalcopyrite are hosted by steeply dipping, intensely sheared andesite porphyry over widths of up to 3 metres. The most notable of these is the

Saddle Gully Zone, which cross-cuts and displaces the skarn horizon; at this intersection, gold values are elevated, reaching up to 1.68 opt Au. This presents an attractive target for low to moderate tonnage high grade Au-Cu mineralization.

Randomly oriented quartz-carbonate-pyrite-chalcopyrite veins occur upslope from the skarn. Zones of fracture-filling and disseminated chalcopynite and pyrite mineralization are also found. These are hosted by andesite porphyry and diorite, proximal to monzonite porphyry dykes and plugs.

**AREA ACTIVITY:** The area was first explored in the 1930's, when numerous lode gold showings were discovered. Gold continued to be the focus of exploration through the 1940's. In the 1960's and 1970's, the search for porphyry copper-molybdenum deposits resulted in the discovery of Falconbridge Nickel Ltd.'s Sustut Copper deposit, 40 km W of Johanson Lake (50,000,000 tonnes of 1.25% Cu).

**WORK HISTORY:** The area of the current claims was first staked in 1947 over a series of gold-bearing magnetite-chalcopyrite veins. The gossanous iron-copper-gold skarns were recognized but not explored, and the claims covering them allowed to lapse. The skarn showings were not staked again until 1964. Since then, exploration has been sporadic, and has involved geological mapping, mineralographic study, and geochemical and geophysical surveys by various individuals and companies. Surface sampling has returned some significant values, including a 3 m continuous rock chip sample grading >10,000 ppb Au (BP Minerals, 1971), and a 1.5 m sample running 62.30 gpt Au (1.82 opt) (BP Resources, 1984). In 1971, Falconbridge Nickel Ltd. did three X-ray diamond drill holes (totalling 65'), with extremely poor recovery in oxidized zones. Vital Mines Ltd. optioned the claims in 1981 and performed geochemical and geophysical surveys. In 1988-89, Athlone Resources Ltd. optioned the property and drilled 7 BQ holes (338.94 m total), of which 3 did not hit the target. Recoveries were again poor. Intersections included 2 m of 9.67 gpt Au (0.282 opt over 6.57') and 0.18% Cu; 1.12 m of 104.00 gpt Au (3.033 opt over 3.68') and 0.18% Cu; and 3.20 m of 48.94 gpt Au (1.427 opt over 10.50') and 0.17% Cu. Drilling indicates that gold mineralization in the magnetite rich zones has continuity and persists to depth.

**1990 PROGRAM:** In 1990, the Soup claims were held under option by Teck Explorations Ltd. Detailed geologic mapping, prospecting and rock chip sampling were carried out to determine the overall exploration potential of the property. Significant values included a chip sample running 0.240 opt Au, 0.60 opt Ag, and 2.80 % Cu; and a grab sample running 63,000 ppb Au, 12787 ppm Cu, 8.7 ppm Ag. The 1990 program concluded that existing Cu-Au skarn and replacement mineralization may be peripheral to an underlying or distal porphyry Cu-Au system. Recommended future work included diamond drilling of the Saddle Gully and skarn zones, and continued prospecting and mapping targeting Cu-Au porphyry mineralization.