

825551

**DATE:** November 1, 1991  
**TO:** Ian Pirie  
**COPIES TO:** Alex Davidson, Dave Heberlein  
**FROM:** Cam Clayton  
**RE:** Copper Camp Claims, King and Queen Claims Property Submittal

Copper Camp Claims, King, and Queen Claims  
 Greenwood Mining Division  
 NTS 82E/2W  
 Latitude 49°43'N Longitude 129°46'W  
 Owners:  
 Alex Boronowski  
 Mary McArthur  
 Estate of Randolph F. Sandner  
 Currently under option to Jeff Ciachurski

**Target:** Skarn Mineralization

#### INTRODUCTION

The King, Queen, and Copper Camp Claims are located near Greenwood and border the Rainbow-Tam O'Shanter property to the north sharing common claim boundaries with the Ingram 1, Mule 15, and Mule 13 claims.

#### CLAIM STATUS

<u>Claim Name</u>	<u>Record No.</u>	<u>Expiry Date</u>	<u>Units</u>	<u>Owner</u>
King	5858	April 4, 1993	18	Boronowski
Queen	5859	April 4, 1993	18	Boronowski
Last Chance	L 660		1	Sandner
Magnolia	L 1851		1	Sandner
Independence	L 2311		1	Sandner
Ute Fraction	L 2611		1	Sandner
Enterprise	L 617		1	McArthur
Honalulu	L 1572		1	McArthur
Copper King	L 1713		1	McArthur
Jumbo	1905 (L655)	Nov.20, 1992	1	McArthur

Commander Fr.	1906 (L1708)	Nov.20, 1992	1	McArthur
Copper Mine	1907 (L456)	Nov.20, 1992	1	McArthur
Jumbo Fr.	3312	Nov.12, 1992	1	McArthur
Mac 1	3313	Nov.12, 1992	1	McArthur
Mac 2	3314	Nov.12, 1992	1	McArthur
CKE Fr.	3732	May 18, 1993	1	McArthur
		<b>TOTAL</b>	<b>50 UNITS</b>	

### REGIONAL GEOLOGY

Refer to Fyles (1990) for the most recent published description of the geology of the Greenwood-Grand Forks area. The area is underlain by Late Paleozoic and Mesozoic volcanics and sediments metamorphosed to greenschist facies. These are intruded by Mesozoic plutons and unconformably overlain by Tertiary volcanoclastics and flows. The group of claims straddles a major fault boundary (Copper Camp Fault) between Marron Formation to the west and older Brooklyn and Knob Hill rocks to the east.

### PROPERTY GEOLOGY

Overburden covers a flat basin trending through the centre of the grid area and limits geological interpretation. According to Shear (1991) the oldest unit mapped on the property is a white crystalline limestone belonging to the Triassic Brooklyn Formation. A mag survey completed in 1990 suggests the limestone pinches out to the southwest and trends off the grid in a northeasterly direction. A unit of sharpstone conglomerate mapped on the property is interbedded with fine grained felsic volcanics and felsic feldspar porphyry volcanics. Limestone conglomerate crops out in the southern portion of the property. The block of Late Paleozoic rocks on the property is bounded to the east and west by Eocene age rocks which are in fault contact. The western boundary is marked by the west dipping Copper Camp Fault while the eastern boundary is marked by the east dipping Copper Mountain Fault. The faults are northeasterly trending and may be part of the Toroda Graben extending southward into northern Washington. Stratigraphy on the property dips moderately (50°) to the southeast.

## PREVIOUS WORK AND SAMPLE RESULTS

Information on previous work dates back to 1894 when 18' of shaft and 40' of tunnel were developed on the property. Mineralized widths of 40' and 26' are reported with grades of 15-20% Cu.

Historically the Big Copper/Copper Mine produced 2431 tons of ore with grades of 3.22% Cu, 0.56 opt Ag, and approximately 0.12 opt Au. A further 1375 tons of ore grading 4.74% Cu, 1.24 opt Ag, and 0.183 opt Au was mined from the King Solomon working.

During the 1950's Noranda and Cominco tested mineralized zones on the property intersecting low grade mineralization. In 1967 McIntyre Porcupine Mines completed geological mapping, soil sampling, I.P. surveying, bulldozer stripping, and four diamond drill holes. DDH M-4 intersected limestone and the last 53' of the hole was in calc-silicate altered limestone. Interpretation is that this is a lower limestone unit that may be correlatable with the Brooklyn Fm of Phoenix.

I.P. and resistivity work over the area resulted in three anomalous zones. Only one zone has been tested by drilling (DDH's 77-1, M-1, M-2). The I.P. anomaly was explained by pyrite and graphite in cherty rocks. Two significant intersections were obtained within the pyritiferous zone yielding 0.31 opt Au and 3.16% Zn, and 3550 ppb Au.

In 1980 two holes (502 m) were drilled. The first hole intersected massive white crystalline limestone and grey white chert at the top of the hole. The second hole intersected either Knob Hill or Brooklyn Fm chert. No core was split for assaying.

In 1990 1:1000 scale mapping and soil sampling were completed with a total of 121 soil samples and 17 rock samples collected from the property. Soils were sampled every 100m on 100m spaced lines. Some of the better rock samples are as follows. A mineralized skarn from Copper Queen showing assayed 8675 ppm Cu, 11.7 ppm Ag,

and 4720 ppb Au. A mineralized sample from the King Solomon showing returned 71,308 ppm Cu, 21 ppm Ag, and 2050 ppb Au. Two samples from the King Solomon and Big Copper showings returned 18,327 ppm Cu, 19.7 ppm Ag, 48 ppb Au, and 5744 ppm Cu, 27.9 ppm Ag, and 160 ppb Au, respectively.

Mapping of approximately 3 km of grid on the Copper Camp Claims was completed in 1990 at a scale of 1:1000 and was followed by a magnetometer survey. Herb Shear (1990) suggests the mag survey showed no correlation between magnetic highs and possible mineralization however the limited coverage does not allow any broad conclusions to be made concerning this correlation. A significant magnetic low is associated with a limestone unit, and mafic volcanics to the west show up as a magnetically high area. The airborne magnetometer survey flown by Minnova in 1990 over the Rainbow property shows a distinct mag high on the gradient map in the area of the Copper Camp. As well a resistivity linear trending southwesterly roughly outlines the margin of the horst exposing the Triassic rocks. Further mag highs occur along this trend off both the Copper Camp property and the Minnova property.

#### **EXPLORATION MODEL**

The exploration model presented by R.V. Longe suggests the basal Brooklyn limestone unit hosting the Phoenix ore bodies may be present below Triassic sediments intersected in previous drill holes. Longe presents stratigraphic correlative sections through the Wallace Creek area, including DDH's 75-1 and 75-2 on the Queen claims, and the Phoenix area. If this model holds true then drilling on this property never reached the intended stratigraphic target.

#### **CONCLUSIONS**

The main drawbacks to this property are the size (50 units) and the possibility that the ore horizon explored for may be at depths greater than 200 metres. In defense of the property, though, good Cu-Au soil anomalies are present and these are backed up by good

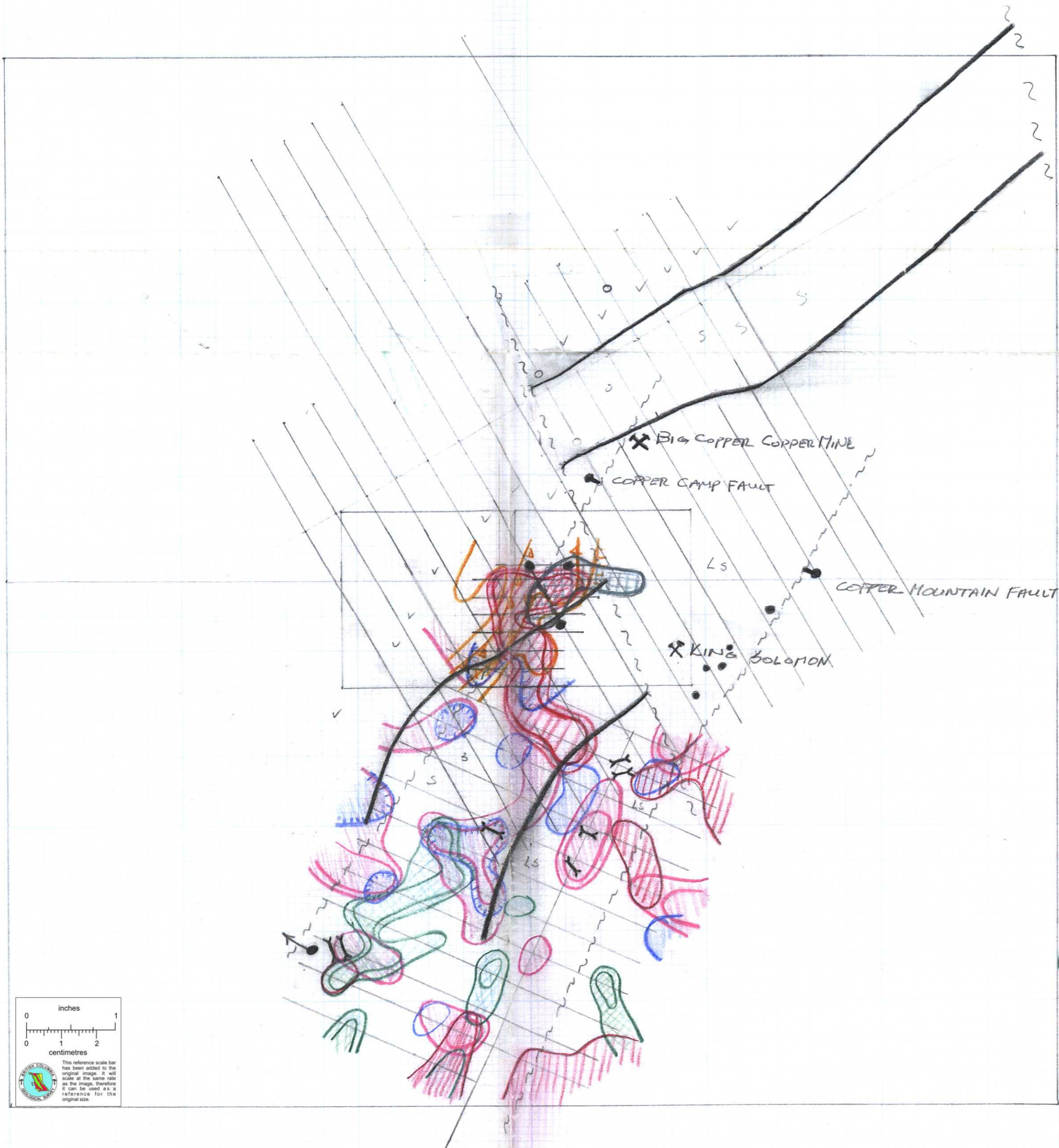
skarn indicator elements in soil (Co, Bi). Induced polarization surveys on the property were carried out in the late 1960's and may have had limited depth penetration due to power supply from battery rather than generator. The one magnetometer survey on the property carried out in 1990 was of a limited extent covering only 3 line km of grid. Stratigraphy in the area consists of Triassic Brooklyn Fm limestone, limestone conglomerate, and sharpstone conglomerate covered by Tertiary volcanics to the west and exposed tectonically by Tertiary graben formation. The property is located near the western margin of the Toroda graben along a structural trend that extends southwesterly across Midway and further south toward Battle Mountain's Crown Jewel deposit in Washington State. The implications of this are not entirely clear, however this observation may be of some importance. The possibility of epithermal mineralization must be considered in this area.






The property presents an interesting combination of geology, geophysics, geochemistry, and structure combined with, what appears on first inspection, a fairly sound exploration hypothesis. The claims themselves border on the Rainbow-Tam O'Shanter property, and an option agreement could be entered into at a very affordable price (unofficially \$2500 1st year, \$10000 2nd, \$20000 3rd, \$30000 4th; 1% NSR to Herb Shear, \$250000 buyout). If there is no urgency on the property I suggest visiting it first hand in the spring once the snow has left. Dave and I will try to get to it when we are in Greenwood this week.

Even if this property does not warrant optioning on further field investigation it has brought attention to this area of the Rainbow property where Triassic rocks are exposed and skarn mineralization may be present. This area should be looked at more closely next year, if a budget is available.







-  Au > 8 ppb  
> 25 ppb
-  Cu > 24 ppm
-  Bi > 3 ppm  
> 4 ppm
-  Co > 7 ppm  
> 8 ppm
-  I.P. Anomaly