

## 1.0 Summary

The Kin claim is located approximately 125 kilometres southwest of Williams Lake, British Columbia.

The claim was located to cover an exposure of altered volcanic rocks known to be anomalous in arsenic. The property is underlain by volcanics and sediments of the Kingsvale Formation, which have been transected by northerly and northeasterly trending fault systems. Target mineralization is an epithermal style, structurally controlled gold deposit. <

A small soil grid was established <sup>and sample results showed</sup> which returned a strong arsenic anomaly, and weaker sporadic results in copper and zinc. Geologic mapping did not locate economic mineralization in the area of anomalous soils or the altered volcanic ~~s~~, but bedrock exposure must be considered poor.

<sup>rocks</sup> More exploration work covering a larger portion of the claim block is required, and drill testing of the arsenic soil anomalies should be considered.

## 2.0 Description of Property

### 2.1 Objective

The Kin claim was staked to cover an exposure of altered volcanic rocks known to be highly anomalous in arsenic. A small soil grid was established and prospecting/mapping traverses were conducted in an attempt to further define the arsenic anomaly and determine if any anomalous gold values were associated.

### 2.2 Location and Access

The Kin property is located approximately 260 kilometres north of Vancouver in the Chilcotin Plateau. The claim is immediately west of the Taseko River and four kilometres northeast of Elkin Lake.

Access is via Highway 20 from Williams Lake to Hanceville, followed by approximately 80 kilometres of good quality gravel road to a cat trail which leads another 10 kilometres into the property (see Figures 1 and 2).

#### 4.0 Property Geology

The geologic setting of the Kin property is illustrated on Figure 3. The property is underlain by volcanic and sedimentary rocks of the Cretaceous Kingsvale Group. All of the observed outcrops are restricted to two canyons in the southern portion of the property, and the banks of the Taseko River.

The volcanic rocks exposed in the canyons consist of red and green lithic tuffs and porphyritic flows. They are intensely fractured, with fracture fillings of carbonate, quartz, and rarely magnetite. Bright red realgar was occasionally noted as disseminations and fracture fillings. These units trend northeasterly and dip steeply. Outcrops of greywacke and conglomerate were noted on the banks of the Taseko River.

*SW trending fault structures are believed to be the control for*  
~~The altered volcanics in the steep canyons are believed to represent southwest trending fault structures.~~  
 Hydrothermal solutions may have permeated along these structures and caused the observed alteration. Sampling indicates the altered volcanics <sup>mass</sup> are anomalous in arsenic, but contain no significant base or precious metal values.

The Kingsvale formation is overlain by relatively flat lying basaltic lavas of Pliocene or Miocene age in the southwest corner of the property.

No mineralized bedrock or float were located during the cursory geologic mapping of the property. However, the alteration and arsenic anomaly observed in the canyons may be indicative of an epithermal mineralizing system.

*The alteration in the volcanic rocks.*

## 5.0 Soil Geochemical Survey

The geochemical survey on the Kin claim included collection of 227 soil samples from a small grid. Survey control was maintained by compass and hip-chain. Lines on the grid are spaced 50 metres apart. Soil samples were collected at 25 metre intervals along the lines.

### 5.1 Sample Collection

A narrow bladed spade, a plastic spoon, and Kraft paper bags were used in the field to obtain and package the samples. Soil material was collected from the BC or B-horizon. Sample depths ranged from 15.0 to 40.0 centimetres, but commonly average 30.0 centimetres. Notes on the nature of the soil material collected and on-site conditions were recorded to aid interpretation of the geochemical results.

Soils on the Kin property are generally well-drained and dry. They are very poorly developed and typically consist of a very thin organic layer over a very thin to non-existent grey leached layer, the A2-horizon. The B-horizon, or zone of metal and mineral accumulation, is only occasionally recognized as a distinct layer; commonly it is gradational into the C-horizon or parent material. The BC-horizon is typically medium to dark brown in colour; sometimes it has a lighter tan or greyish tint.

Examination of the sample field notes reveals that soils within the property have developed on either colluvium or till. This material is probably locally transported; however, geochemical anomalies in colluvium and till should be traceable to their source. From examination of local air photographs, the regional ice movement appears to have been from the north to the south.

determined from the histograms. Symbols of fixed dimension were assigned to each class interval.

## 6.0 Discussion of Geochemical Results

Tabulated below are the basic statistics for soil geochemical results from the Kin property.

<u>Element</u>	<u>Minimum Value</u>	<u>Mean</u>	<u>Maximum Value</u>	<u>Standard Deviation</u>
Copper	8 ppm	45 ppm	152 ppm	22 ppm
Zinc	50 ppm	95 ppm	190 ppm	23 ppm
Gold	3 ppb	7 ppb	20 ppb	3 ppb
Arsenic	7 ppm	114 ppm	1100 ppm	161 ppm
Lead	6 ppm	10 ppm	16 ppm	2 ppm
Silver	.05 ppm	.09 ppm	.20 ppm	.08 ppm

Examination of the correlation matrix (Appendix II) for this element suite reveals a moderate statistical correlation between copper and arsenic values, and copper and zinc values. Scatter plots of copper versus arsenic, and copper versus zinc, do demonstrate a correlation between these elements.

The following range of values are considered to be background, threshold, and anomalous concentrations for each element.

<u>Element</u>	<u>Background</u>	<u>Threshold</u>	<u>Anomalous</u>	<u>Plate No.</u>
Copper	< 30 ppm	30-75 ppm	> 75 ppm	I
Zinc	< 75 ppm	75-125 ppm	>125 ppm	II
Gold	< 5 ppb	5-20 ppb	N/A	III
Arsenic	< 50 ppm	50-100 ppm	>100 ppm	IV
Lead	< 16 ppm	N/A	N/A	V
Silver	< 0.2 ppm	N/A	N/A	VI

Plots of the geochemical results for the various elements illustrate that underlying bedrock lithology does not appear to control element distribution. It is also noted that although background for gold is less than 5 ppb, gold distribution for concentrations less than 20 ppb appear to be a function of analytical noise rather than a response to natural features.

Higher concentrations of copper, zinc and arsenic define multi-element geochemical anomalies. Arsenic values define two anomalous trends, one parallel to the northern edge of the northern canyon, and the other, 50 to 100 metres wide and 350 metres long, trending north-south along the eastern side of the grid. Anomalous copper values define a 75 by 350 metre long trend also parallel to the northern edge of the northern canyon, but displaced to the west with respect to the arsenic anomaly. Anomalous zinc values display a more sporadic pattern, but do partially overlap the anomalous trends defined by arsenic and copper. No anomalous levels of gold, lead, or silver were obtained.

## 7.0 Conclusions and Recommendations

The alteration and anomalous arsenic values in the volcanic rocks exposed in the canyons suggest a hydrothermal system may have been active on the property, and resulted in deposition of epithermal style mineralization. The arsenic soil anomalies, with partially corresponding copper and zinc values, define targets for further exploration.

More work is recommended to evaluate the potential of the property. Geologic mapping, soil geochemistry, and magnetometer and ~~EM-VLF~~ surveys should be completed over the balance of the claim block. Drill testing of the arsenic soil anomalies should be considered. Overburden in the anomalous zones is believed to be too thick to make trenching practical.