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Memorandum

22 December, 2005

To: **Harold Noyes**

Cc: **Odie Christensen**

From: **Jeff Jaacks**

Subject: **Preliminary Geochemistry Evaluation at the Typhoon Property, Yukon**

Introduction. During the summer of 2005, a follow-up soil sample program was conducted on the Typhoon claims in order to follow up a gold anomaly located in the eastern portion of the 2004 soil grid. This information was integrated with the 2005 soil geochemistry program and evaluated.

Soil Program. In the original 2004 program, 147 soils were collected and sent to Acme Analytical Laboratories in Vancouver, British Columbia. These soils were dried and sieved to -80 mesh. A 15g sample was then digested in 90 ml of Aqua Regia and diluted to 300ml with distilled water. This solution was analyzed for gold and 36 elements by ICP-MS (Casselman, 2004). In the 2005 program 409 soil samples were collected from a depth of around 25cm in the “C” horizon. The samples were sent to ALS-Chemex in Vancouver, British Columbia where they were dried and sieved to -80 mesh. A 30g sub-sample was analyzed for Au using Fire Assay extraction with an ICP-AES finish (Method Au-ICP21). Another 10g sub-sample was digested with Aqua Regia and analyzed for 50 elements using a combination of ICP-MS and ICP-AES finishes (Method ME-MS-41).

Evaluation. The data from the combined surveys were evaluated using basic statistics to determine element thresholds, correlation analysis to examine the relationship between elements, and factor analysis to evaluate the geochemical associations present in the soil geochemistry.

Presentation. The results of the factor analysis evaluation are presented in Plate 1. The data from both surveys are included. The original 2004 survey samples form E-W trending lines 200-500 meters apart with sample stations every 50 meters. The 2005 survey samples form N-S oriented lines 200 meters apart with stations every 50 meters. All of the plots in Plate 1 are plotted at the same scale (approximately 1:20,000) in the UTM Zone 8N coordinate system using the NAD83 datum (Figure 1).

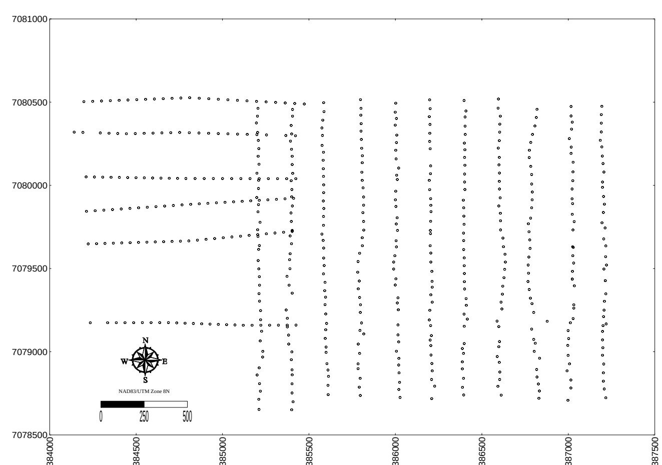

Figure 1. 2004-2005 Typhoon soil sample locations.

Plate 1 shows Au, As, W, Sb, U, and Bi soil analyses. Each of the plots is labeled with the element name and the range of concentrations used to scale the proportional symbols in the plot. The lower value of each range is the threshold chosen as anomalous. The upper range is strongly anomalous. Histograms for each element are located just below the range of values and show the distribution of data.

For example, the upper left plot in the Plate 1 is a plot of As (also shown in Figure 2). The As data in this plot ranges from 10 ppm (anomalous) to 36 ppm (strongly anomalous). The minimum size of the symbols is set to a size of 0.01 inches. The data is then linearly scaled to a maximum value of 0.5 inches at a concentration of 36 ppm. A histogram of As data is posted just below the As label. One population of data is present in this distribution. A normal data distribution is indicated in the histogram by the red line. One can see in a circular pattern developed by soils anomalous for As (Figure 2).

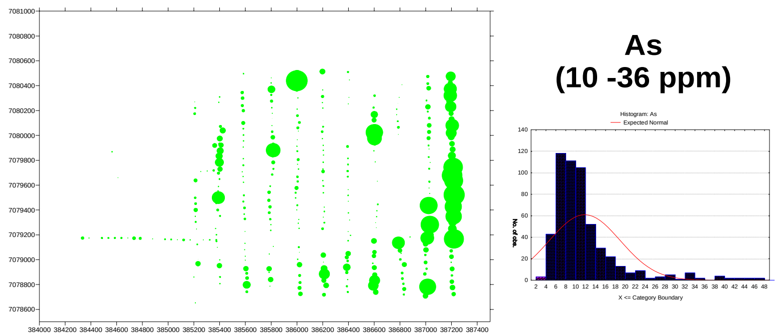

Figure 2. Typhoon 2004-2005 Soil Arsenic. Proportional Symbol range from a minimum of 10 ppm to 36 ppm. Histogram shows one population ranging from 2-26 ppm with a normal distribution indicated by the red curve.

The uppermost left plot on the Plate 1 is a plot of Au. The background of this plot includes the topographic contours for the property and a color image showing the intensity of the geochemical association of Au+W As+Sb+U+Bi determined by Factor Analysis. Proportional symbols for gold are overlaid on top of the image. One can see the circular feature formed by anomalous Au and how it coincides with the anomalous Au+W+As+Sb+U+Bi association (Figure 3).

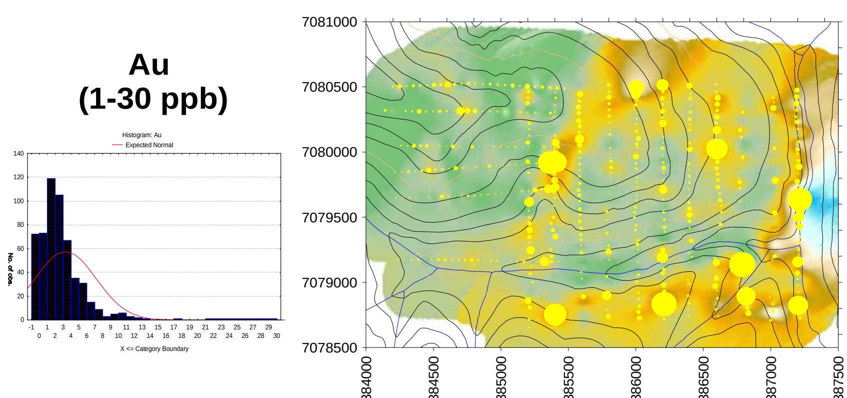

Figure 3. Typhoon Soil Gold. Yellow proportional symbols indicating Au concentration overlay an image of the Au+W+As+Sb+U+Bi association. Topography is indicated by contours.

A color scale bar for the Factor 5 Association (Au+W+As+Sb+U+Bi) is shown at the bottom of the Plate 1.

A plot to the right of the color scale shows how the elements correlate with one another in 3 dimensional space. One can see how elements of the Factor 5 association spatially cluster in the plot. Elements which are highly correlated form spatial clusters which indicate geochemical associations expressed in the soil analyses (Figure 4).

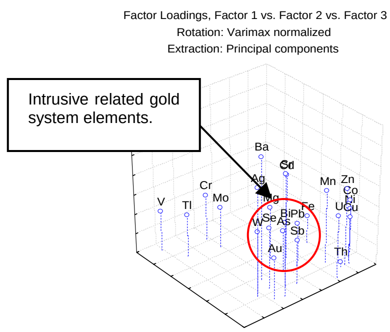

Figure 4. Plot showing the correlation of elements in 3-d space. Elements which are highly correlated form spatial clusters which indicate geochemical associations expressed in the soil analyses.

The Factor Loadings Table (Table 1) shows individual factors, or geochemical associations, derived from Factor Analysis. The correlation of each element with the association determined by Factor Analysis is indicated in the Table 1. Any value with a correlation of greater than 0.30 is significant.

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Au					**0.56**	
Ag			0.68			
As	0.36				**0.80**	
Ba			0.83			
Bi	0.44			0.65	**0.32**	
Cd			0.71			
Co	0.88					
Cr		0.82		-0.42		
Cu	0.84					
Fe	0.79	0.33				
Mg	0.39	0.33		-0.72		
Mn	0.70		0.33			
Mo		0.68		0.32		
Ni	0.92					
Pb	0.49			0.70		
Sb	0.31				**0.69**	
Se						0.82
Sr			0.81			
Th	0.75		-0.35			
Tl		0.73				
U	0.62				**0.43**	
V		0.91				
W					**0.71**	
Zn	0.80		0.38			
Expl.Var	6.05	2.88	2.95	2.07	2.46	1.17
Prp.Totl	0.25	0.12	0.12	0.09	0.10	0.05

Table 1. Factor Analysis Loadings. This table shows the correlation of element with each geochemical association. Factor 5 indicates the element associated with intrusive related gold systems.

Geology and Geochemical Models. The area of the soil surveys is underlain by phyllites, quartzites, psammites of the Hyland Group and their weakly metamorphosed equivalents (Casselman, 2004). These strata are east-trending and moderately north dipping and have been are altered to lower greenschist facies. No intrusives outcrop in the area of the soil grid and the surface rocks show little or no alteration related to hydrothermal activity.

The Clear Creek area is known to host intrusive related gold systems 2-8 miles northeast of the property. In these systems, gold occurs within and surrounding intrusives of quartz monzonite, granodiorite, and diorite composition. The gold mineralization often occurs as steeply dipping, sheeted gold-bearing quartz veins within the intrusive rocks or their surrounding hornfels aureoles. The vein sets show geochemical enrichment of Bi+As+W+Mo+Sb associated with Au (Marsh, 1999).

Mineralization is generally sulfide poor, but consists of arsenopyrite, pyrite, and pyrrhotite, with traces of sheelite, molybdenite, galena, chalcopyrite, and bismuthinite. Gangue minerals consist of potassium feldspar, muscovite, biotite, and carbonate with less abundant tourmaline, albite, and sericite (Marsh, et.al, 1999).

Figure 5 shows a generalized model for intrusive related gold systems developed by Lang and Baker (2001) showing the styles of mineralization, and the relationship between the styles of mineralization and their associated geochemical signatures.

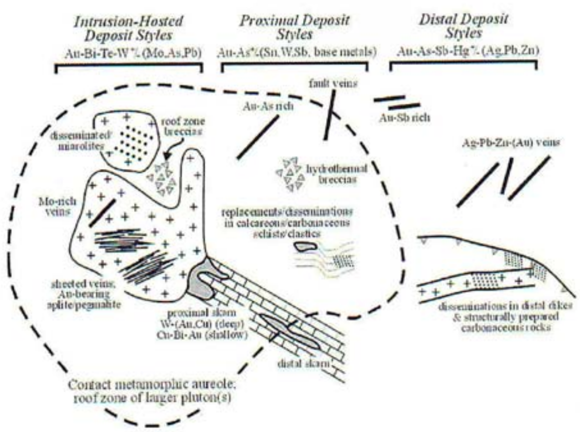

Figure 5. Geological and Geochemical Model for Intrusion related Gold Deposits (Lang and Baker, 2001).

Discussion. Soil geochemistry suggests the presence of an intrusive related gold system in the eastern half of the Typhoon claim block. Au, As, W, Sb, U, and Bi are all anomalous (Figure 6). These anomalies are spatially coincident, which is reflected in the association of Au+As+W+Sb+U+Bi indicated by Factor 5 in the Factor Analysis. This suite of elements is characteristic of an intrusive related system as shown by Lang and Baker (Figure 5).

Although the anomalous thresholds of the trace elements are lower than other mineralized locations of the Tintina belt, the anomaly is coherent and forms a circular feature 1.1 km by 1.5 km across in the eastern portion of the property (Figure 6). This association most likely represents sheeted gold-bearing quartz veins developed in the hornfels surrounding a buried intrusive.

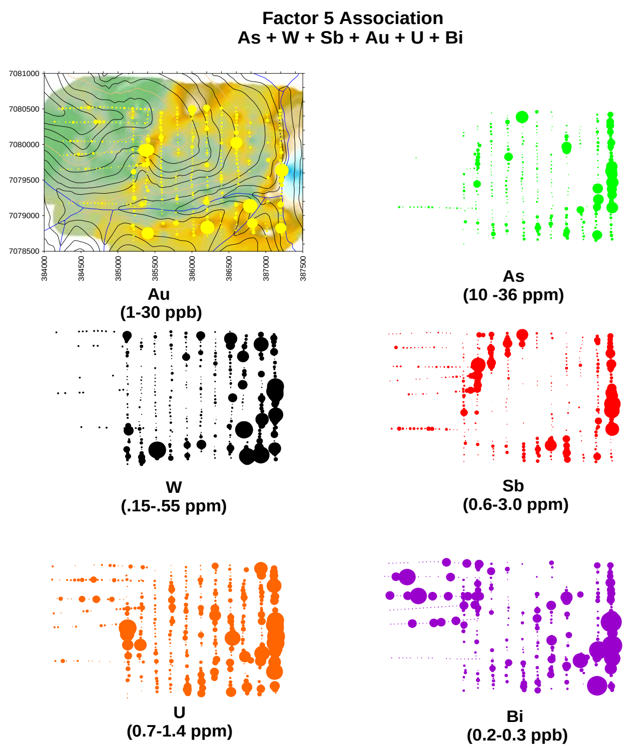

Figure 6. Typhoon Soil geochemistry. Proportional symbol plots of the Factor 5 association, which characterizes a intrusive related gold system.

Although not shown in Plate 1, Sr, Ba, and K anomalies spatially correlate with this circular feature. This enrichment could be caused by potassium feldspar, muscovite, sericite, and carbonate alteration associated with mineralization in the hornfels aureole located about the intrusive (Figure 7).

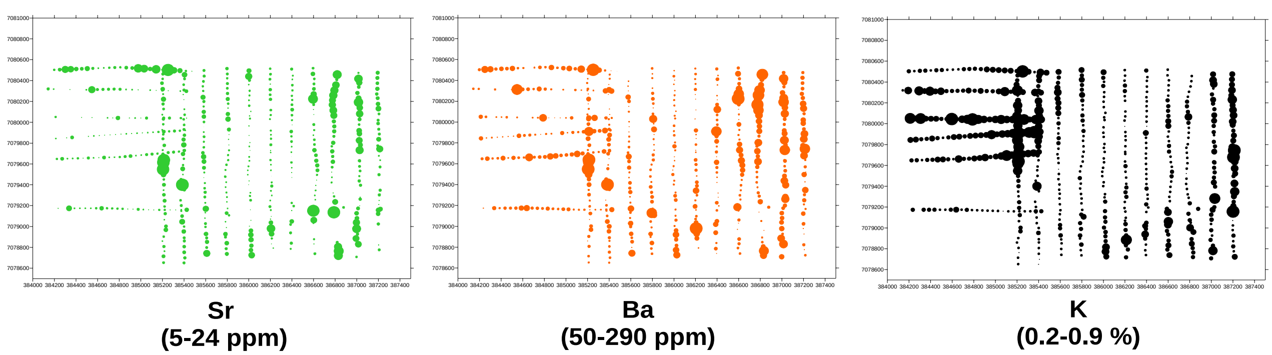

Figure 7. Typhoon Soil Geochemistry showing Sr, Ba, and K.

The center of the circular feature is enriched in Mo (Figure 8). This anomalous Mo indicates Mo veins developed over the top of the intrusive. In addition, there are coincident soil Au and Mo linears oriented NE and NW which cross-cut the circular feature. These linears are most likely expressions of Mo-Au vein sets common to intrusive related gold systems.

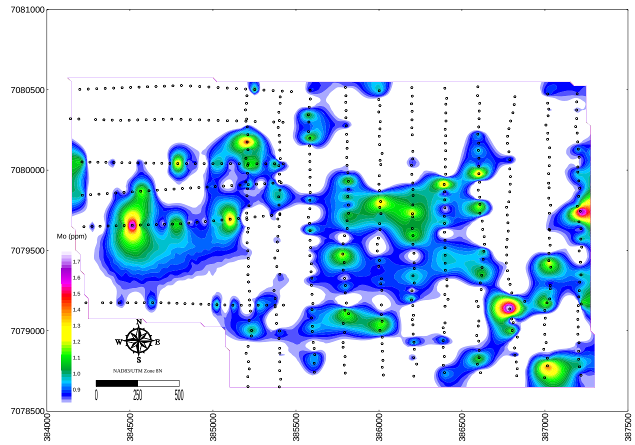

Figure 8. Typhoon Soil Molybdenum.

Conclusions. Evaluation of the 2004 and 2005 soil geochemistry programs indicates that there is a buried intrusive in the eastern portion of the Typhoon claim block which displays geochemical zonation and geochemical characteristics of an intrusive related gold system. Figure 9 shows the geochemical interpretation of the soil analyses.

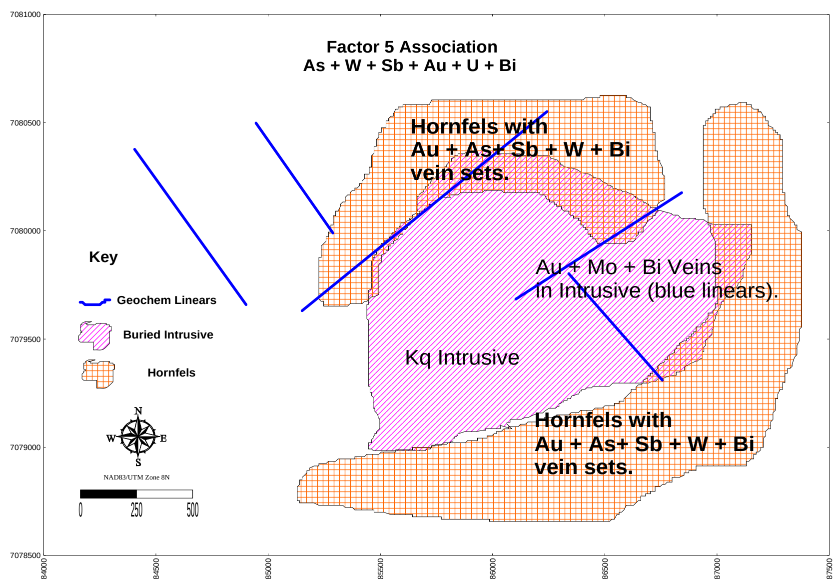

Figure 9. Interpretation of Soil Geochemical Associations and features on the Typhoon Property.

Au, As, Bi, Sb, W and U are anomalous and form a donut feature which is cored by anomalous Mo and cross-cut by Au+Mo+Bi linears (Figure 9). The anomalous Mo is interpreted as Mo rich veins developed over the core of the intrusive (Figure 9) and corresponds with the Mo vein sets indicated by Lang and Baker in their model of intrusive related systems (Figure 5). This part of the system also has linear features which would suggest sheeted quartz veins with Au+Mo+Bi (gold, molybdenum, and bismuthinite) oriented in NE and NW trending directions within the intrusive.

The strongest part of the gold anomaly forms a donut shaped halo about the Mo core. This donut feature has a geochemical signature (Au+As+Sb+W+Bi) characteristic of the Au bearing vein sets developed in hornfels surrounding the gold mineralized intrusive systems located to the northeast in the eastern Clear Creek area (Marsh, et.al, 1999).

In addition, there is evidence from the western-most Mo anomaly (Figure 8) that another lobe of the intrusive may extend to the west. Northwestern trending linears formed by anomalous Au+Bi+U extend from the distal margins of the donut feature to the northwest boundary of the 2004 soil grid. These linears suggest fault related mineralization extending out beyond the hornfels aureole or the presence of a related system associated with another lobe of the intrusive.

Recommendations. The current geochemical program should be extended to the north and south from the 2005 soil grid to determine the extent of the anomalies extending to the current boundaries of the property. These soil samples should be collected in the same manner as the 2005 program and analyzed using the same analytical methods as the 2005 soil program.

References.

Casselman, S., 2004. Report on the 2004 exploration program on theTyphoon group property, Clear Creek area, Yukon. Report prepared for Curlew Resources, Inc. 13 pages.

Lang, J.R. and Baker, T., 2001. Intrusion-related gold systems: The present level of understanding: Mineralium Deposita, v. 36, p. 477-489.

Marsh, E.E., Hart, C.J.R., Goldfarb, R.J., and Allen, T.L., 1999. Geology and geochemistry of the Clear Creek gold occurrences, Tombstone gold belt, central Yukon Territory: Yukon Exploration and Geology 1998: Exploration and Geological Services Division, Yukon, Indian and Northern Affairs, Canada, p. 185-196.