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Interpretation of TKO-Ridgetop Vegetation Survey

Introduction

Biogeochemical surveys were conducted at TKO-North (TKO-N), TKO-South (TKO-S), Ridgetop-North (RTN), Ridgetop West (RTW), Ridgetop-East (RTE), and the Chips Area (CHPS) on Molycor's claim block north of the Taylor Mine, White Pine County, Nevada. About 400 vegetation samples were taken, comprised of sagebrush (Artemisia. tridentata), dwarf sagebrush (A. arbuscula), mountain mahogany (Cercocarpus montanus), and an unidentified species of spruce (Picea). Each species metabolizes and compartmentalizes trace metals differently, so species effects were anticipated and normalization methods (Z-score) were applied.

Survey lines were 100 meters apart and oriented E-W. Samples on each line were collected at 50-meter intervals. Sample location was established by GPS and elevations were recorded. The author and crew did all of the survey work.

Vegetation samples were prepared for analysis at MEG Labs (Carson City, Nevada). Samples were washed, randomized, dried in microwave ovens, macerated and sized to –1 mm, and ashed in controlled kilns. Ash and dry tissue were sent to Acme Labs (Vancouver, BC, Canada) for ICP/MS gold and multi-element analysis. Two gold values are reported, one from ash and the other from dry tissue, while all other data derives only from dry tissue.

Data quality was determined by inspecting random plots for evidence of systematic error, comparing standards to expected values, and replicate pairs. The data was determined to be reliable. Z-Score statistics were generated for each species, and these were used to plot geochemical trends in the data, using Surfer and Grapher.

Locations of high metal accumulation and/or zones of clustering were noted and compared between metals that are known to be reliable pathfinders to precious metal system, with attention to Alligator Ridge analogues.

Biogeochemical Speciation

Each species metabolizes and compartmentalizes trace metals differently. To compensate for these differences, normalization with a Z-score is used to level analytical data relative to the statistically derived mean and standard deviation for each species. Z = (value-mean)/ standard deviation. Application of a Z-score assumes a sample population that provides good estimates of mean and standard deviation for the true population. The populations of sagebrush (N = 230) and mountain mahogany (N = 106) meet this criterion. The populations of spruce (N = 22), and dwarf sagebrush (N = 40) are just barely sufficient to meet this criterion. Consequently, locations where two species were sampled indicate slightly different Z-scores, which is not desirable, but workable.

Species effects are most easily observed graphically. "Ridgetop+TKO_SPECIES_STATS.xls" shows the following general features (accumulations and depletions relative to sagebrush):

Spruce accumulates: Ag, Ba, Mg, Mn, and Tl
Dwarf sagebrush accumulates: Al. Fe, La, Th, Ti, and U
Mahogany accumulates: Ca, Sr, Tl, and Zn
but
Mahogany is depleted in: Cd, Cu, K, Mn, Mo, and Na

These relationships are skewed by the provenance from which these samples were collected. For instance, mahogany is almost exclusively available on carbonates, so it shows higher concentrations of Ca, Sr, and Zn.

In summary, Z-score does not perfectly normalize the data, but it makes multi-species data more manageable and gives reasonable approximations of the biogeochemical response to subsurface mineralization.

Another "species effect" is encountered with mountain mahogany, which produces hydrocyanoglycosides. These are known to volatilize gold during ashing, causing lower gold values than would be obtained using other preparations and analyses. However, it is presumed that the controlled ashing process volatilizes gold proportionally, so samples with more original gold should report more gold after ashing and analysis. It was also presumed that gold volatility could be monitored by comparing gold concentrations from dry tissue to that of the ash, but gold concentrations in mahogany were not sufficiently above the detection limit to be reliable.

Structural Interpretation

Biogeochemistry can be regarded as a mapping tool for ground water quality. Where metal concentrations in ground water are high due to naturally occurring mineralization, plants reflect these enhanced concentrations in their tissue. Geological structures (faults, fractures, joints) provide conduits for aqueous mobility resulting in biogeochemically derived structural interpretations. TKO-Ridgetop data show several zones of anomalous gold concentration with NE and NW orientations. These linear zones are haloed by typical toxic pathfinders (As, Cu, Ga, Hg, Sb, Se, Tl, Zn) common to Alligator Ridge and Bald Mountain analogues.

Precious Metal Targets

The best exploration targets are those where gold concentrations are the most prevalent, and associated pathfinders are supportive. Note that the highest concentrations of any metal are not the ultimate criterion, because those are usually associated with proximity to structure, which may or may not be mineralized.

Two gold values are reported by Acme Labs. One is derived from acid attack on dry plant tissue and the other is derived from dissolution of ash. The ash data is the more reliable because, 1) it represents a 30 gram aliquot that is ashed to a 1 gram residuum, 2) nugget capture is improved from the large aliquot size, 3) dissolution is complete, 4) analytical detection is well below the range of reported concentrations. On the other hand, Au data from dry tissue should only be used to support the credibility of the ash data because, 1) only 0.25 grams of tissue is analyzed, therefore nugget capture is minimal, 2) dissolution is not complete and can be uncontrollable 4) analytical detection is very near the range of reported concentrations. Nevertheless, ashing is known to volatilize several elements like Hg, Cd, As, and Au, so there can be some material loss of gold from this process. Gold loss during ashing is increased when hydrocyanic glycosides are active metabolites of certain plant species. Consequently, mahogany on this property would not be a good candidate for ashing.

Based primarily on the Au-ASH data, with support from pathfinder element distributions, five gold targets emerge as areas for further testing:

TKO-North

Shale is indicated by plots of Mg and K, which weathers to create a valley through the middle of the block. Devils Gate and Joana limestones are indicated by elevated Ca concentrations in the vegetation. These limestones and higher biogeochemical concentrations of Ca flank the valley. Nickel and Mo anomalies suggest a deep-seated intrusive may have caused epithermal activity and resulting indications of mineralization.

TKO-North biogeochemistry is characterized by a large anomalous zone of Se trending N-S through the valley with adjacent Sb and As on its west flank. Gold anomalies represented as Z-Au-DRY cluster on the west ends of Lines 410N, 420N, and 345N. The clusters are not spatially common with gold anomalies represented by Z-Au-ASH, nor with simple gold values that have not been transformed into a Z-score. The simple values, which in this case might be more reliable, are anomalous and spatially coincident with the Se pattern. A drill target between lines 4334500N

and 4334400N at 700000E 4334500N is indicated by this data.

TKO-South

Shale, which occupies the west half of the block, is indicated by plots of K and the depletion of Ca. Limestones are indicated by elevated biogeochemical concentrations of Ca and Mg, and these prevail on the east half of the block. There are biogeochemical indications of a local hydrothermal source, as suggested by elevated concentrations of Mo and Ni at TKO-North.

TKO-South biogeochemistry is characterized by two, sub-parallel, north-trending gold linears that are surrounded by a ring of elevated Sb concentrations. Gold mineralization is also indicated by a minor NE-NW structure set. The Se cluster at 700100E 4332100N would be a reasonable drill target. Mercury and copper anomalies are located east of the eastern-most gold linear, suggesting an east-dipping mineralized structure.

Ridgetop-North

Shale, seems to dominate the entire block, as indicated by generally elevated K concentrations. Limestones are indicated by an inlier of mahogany and slightly elevated biogeochemical concentrations of Ca. A prominent cluster of Mo anomalies suggests there is a deep-seated intrusive that could have created a local hydrothermal source.

Ridgetop-North biogeochemistry is characterized by two, sub-parallel, northwest-trending gold linears that are flanked by elevated concentrations of As, Sb, and Se toward the northeast. This suggests that the mineralized structures are dipping to the northeast. The larger toxics halo (As, Sb, Se) associated with the northeastern-most gold linear should be initially drill tested at 701250E 43323000N. The minor gold linear and toxics halo (As, Hg, Se) should be initially drill tested at 701000E 43322000N.

Ridgetop-West

Shale, seems to dominate the entire block, as indicated by generally high K concentrations. Mg and K are elevated in the center of the block, possibly related to a local heat source as suggested by elevate Ni concentrations.

Biogeochemical Au anomalies are confined to two, intersecting linears on the west edge of the block. This expression is only indicated by the Z-Au-DRY data, and not indicated by the ash data. This is worrisome, since the dry data is the least reliable for gold. A broad, semi-circular halo of Sb, and a more distal Se anomaly suggests that if economic mineralization occurs here, it is deep and possibly lies under the Se-Ga anomaly. This is a deep target and drilling at this time should be low priority.

Ridgetop-East

Shale occupies the northwestern half of the block, is indicated by plots of K and the depletion of Ca. Limestones are indicated by mahogany and spruce in the southwest half of the block, and elevated biogeochemical concentrations of Ca. Robust clustering of Mo and Ni biogeochemical anomalies indicates a local hydrothermal source. This could be one reason why this area is very biogeochemically active and has been previously drilled.

Two prominent zones of Au-enrichment with widths of about 150 meters make this area the most promising for early drilling success. Gold zones trend N-S and NW-SE, respectively. Halos of As, Hg, Sb, and Se surround an obvious structural intersection in the center of the block. Gold anomalies extend north and south from this center. Thallium anomalies trend NE-SW, with subsidiary anomalies trending NW-SE.

An E-W structure that sub-parallels Line 307 appears to be a weakly mineralized bleed-structure. It is spatially juxtaposed between the more prominent gold anomalies that trend north and south from this structure. The structure is a mappable surface feature that was the focus of Amselco's unsuccessful drilling campaign in the mid-1980s (pers. comm. Paul Muto). The structure itself is not a drill target, but the larger gold anomalies that lie north and south of the structure offer a new exploration opportunity and should indeed be drill tested.

Early drilling success at 701500E 4330700N is likely. A second target is 701400E 4330600N. If these first holes intersect economic mineralization, the biogeochemical trends should be further explored north from 701500E 4330700N, and southeast from 701400E 4330600N. Additional biogeochemical sampling north and south of the block might extend these anomalies and provide yet more favorable drill targeting.

Chips

Shale seems to dominate the entire block, as indicated by generally elevated K concentrations.

Chips biogeochemistry is characterized by two, sub-parallel, northeast-trending gold linears with a spatially related Ga-Hg halo. Iron and Cu are generally enriched and show more of an organized pattern than other elements.

This block is not strongly mineralized with the typical economic suite. Drill testing is not recommended.

Recommendations

At TKO-North a drill target between lines 4334500N and 4334400N at 700000E 4334500N is recommended.

At TKO-South a reasonable drill target would be 700100E 4332100N.

At Ridgetop-North two drill holes are recommended: one at 701250E 43323000N where toxic halos (As, Sb, Se) are associated with the northeastern-most gold linear, and another at 701000E 43322000N where a minor gold linear and toxics (As, Hg, Se) are indicated.

Ridgetop-West offers a deep target and drilling at this time should be low priority.

Ridgtop-East has top priority drill targets that should be tested at 701500E 4330700N and 701400E 4330600N. More biogeochemical surveying north and south of the present block is recommended.

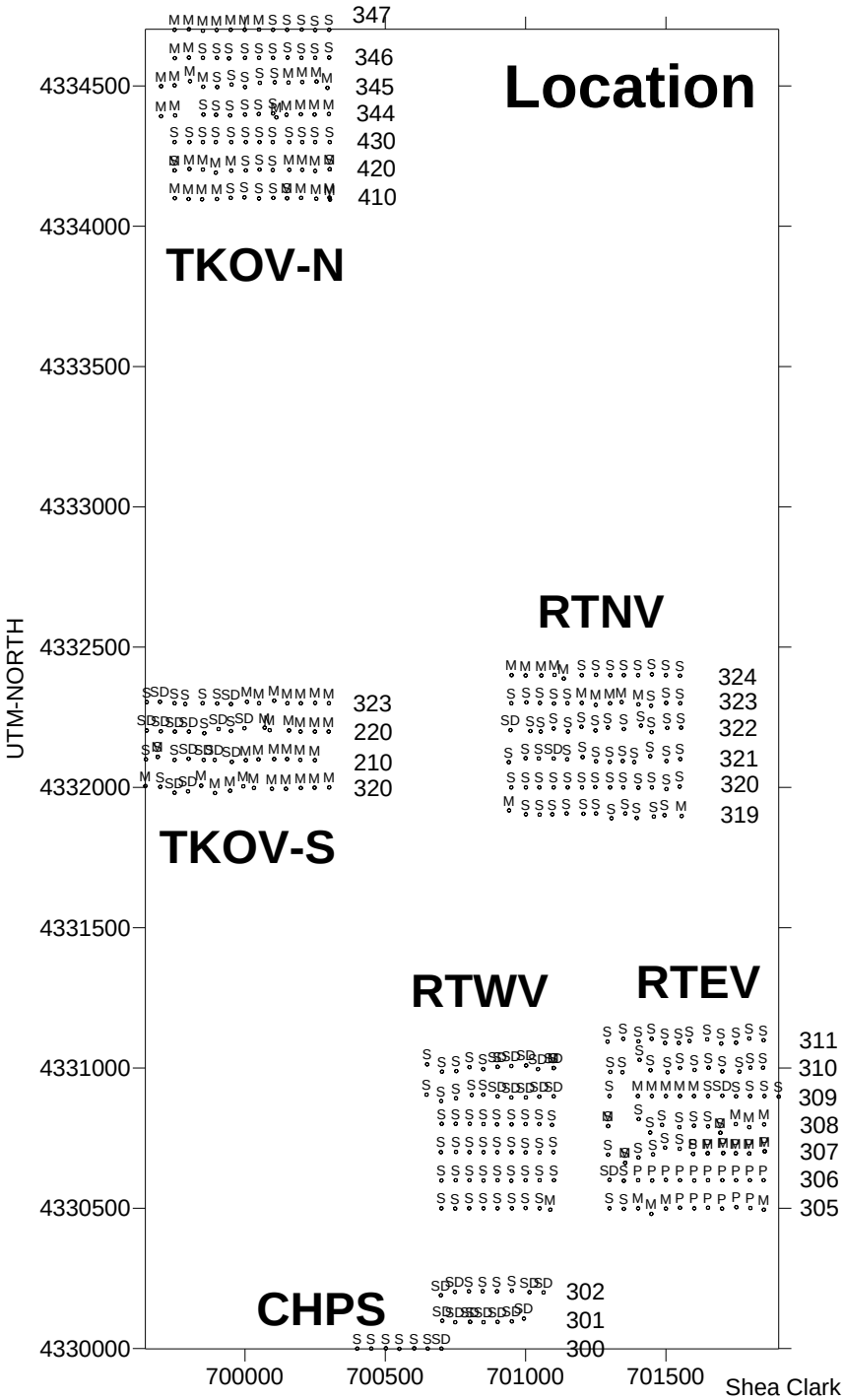
Drill testing at Chips is not recommended.

Respectfully submitted,

Shea Clark Smith, P.G.

Enclosures: Raw Data Files, Surfer Files, Grapher Files, Report File

TKO-RIDGETOP-CHIPS BIOGEOCHEM SURVEYS



SPECIES:
M = Mahogany
S = Sagebrush
SD = Dwarf Sagebrush
P = Spruce

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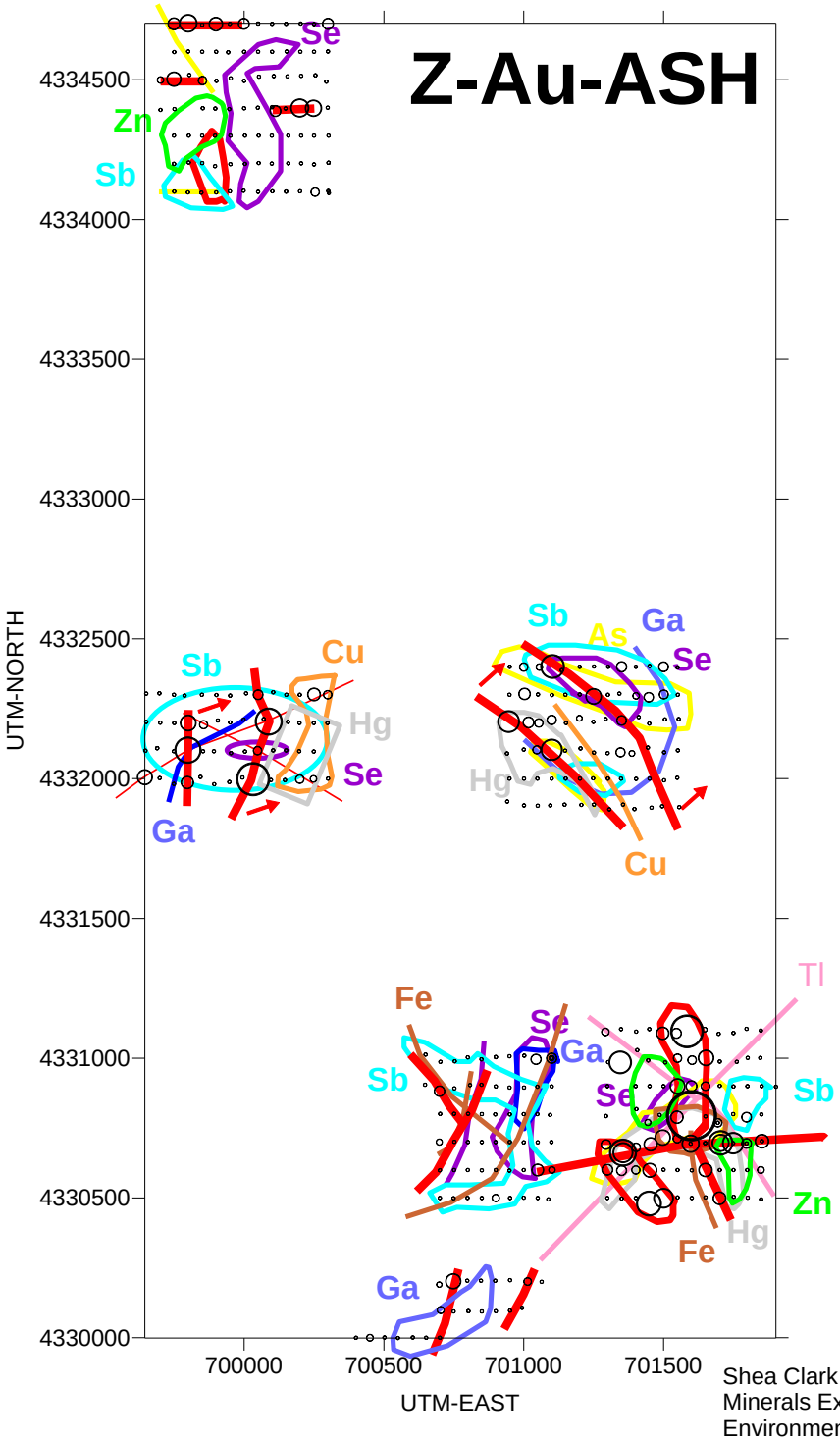
Date: 22-NOV-2006
Scale: 1 in = 600 m

TKO-RIDGETOP-CHIPS BIOGEOCHEM SURVEYS



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