From: Brian Williams
To: Russell Copley
Subject: HPRM: Investigation of Sampling - EL30309
Date: Tuesday, 11 October 2016 1:53:40 PM

Hi Russell,

Below is the note I put together as I had a look at integrity of the second phase of sampling at the HR1 Prospect.

As I related over the phone, I am now totally confident that the samples were taken and that the reported assay values relate to these samples.

Investigation of Hale River (EL30309) Sampling - October 2016

The finding that field duplicate samples from Phases 1 and 2 of the Hale River auger drilling /geochemical sampling programme were missing from the rented store in Alice Springs raised the possibility that these samples were substituted for the samples which were to be taken in the second sampling phase. (Geochemical results from the second phase raised some concern at the time they were received. The second phase was infill sampling but in the most part values were lower than adjacent samples from the first phase.)

The process of checking the Second Phase of auger drilling/sampling for possible data irregularity has gone as follows:

1. To check whether the field sampling was undertaken at all, the "before" and "after" photographs supplied by the contractor were examined
    a. For the infill holes on existing lines, locations of the new holes are recognisable on photos from the first phase indicating the photos and GPS locations agree
    b. For the infill lines between original lines, vegetation features are commensurate with the known distribution of vegetation in the area
    c. In a few photos there is minor what could be bedrock spoil around the rehabilitation mounds indicating drilling to bedrock. (The absence around the majority of holes probably means that Procedures were followed well.)
    d. Fresh motorcycle tracks in a number of photos indicates that machinery was moved around
    e. Time gaps of about 12 minutes between "before" and "after" photos are about right for the drilling and sampling of holes
    f. Time gaps of 2-3 minutes between "after" and "before' for the next hole are about right for 25m shifts
2. Geological samples supplied for the second phase must have come from drilling to bedrock by the contract team because the duplicate samples were sieved to -2mm. Lithologies were indistinguishable from the lithologies logged from the first phase samples.

These 2 points are interpreted to indicate that the holes were drilled, in the right place and to bedrock as specified. It seems highly unlikely that, having drilled the holes, taken bedrock samples for geology and for chip sample tray records and then rehabilitated the holes, sieved samples were not taken for assay and as assay duplicates as required in the Procedures.

3. To check the integrity of the assay results, two sets of correlation statistics were run.
    a. Twelve elements representing both mineralization and country rock (Au, As, Sb, Ba, Ca, Cu, Fe, Mn, Pb, Sr, Tl, Zn) were selected with correlation statistics run on the results for each second phase hole against each first phase hole.
    b. Five elements representing mineralization (Au, As, Sb, Tl and Mo) had correlation statistics run on the results for each second phase hole against each first phase hole.

    For the broader set of elements, correlations for the infill holes on Lines B and C and for holes on Lines E, F and G showed no discernible pattern in sequence of numbering nor

was there any strong bias towards any parts of the original lines. There was a slight bias towards Line A from all of the later lines and a slight bias towards holes outside the interpreted “anomaly zone”.

For the mineralization set of elements, infill holes on Line B showed no particular trend, infill holes on Line C showed a moderately strong correlation with Line A holes but there were links with Lines B and C and no sequence pattern. Line E was strongly correlated with holes in the western part of Line C with very few links with Lines A and B. The sequence pattern also was suggestive that the Line E samples could have come from Line C. For Line F, correlation with the eastern part of Line B was strong but there were some links with Lines A and C but for Line G there was no strong pattern either in links to parts of other lines or in sequence. Correlation for all of the newer holes were predominantly with holes outside the “anomaly zone” but this might be expected as there were very few highly anomalous values in the second batch of results.

The strength of correlation between Line E holes for the mineralization set of elements and those in the western part of Line C does raise suspicions but this is in no way supported by correlations using the broader set of elements. Overall it has to be concluded that there is no cogent evidence of substitution in the results of the correlation exercise.

4. The results of the second phase of sampling were disappointing in that they contained no strongly anomalous values of As, Tl, Sb or Mo as were seen from Lines B and C in the first phase. Substitution of samples from the non-anomalous part of Lines A, B and C might explain this. To check for similarity or dissimilarity between the two sets of results for these four elements, the profiles were revisited. Arsenic values were divided by 10, Mo and Tl multiplied by 10 and Sb multiplied by 100 for better definition on the graphs and all six graphs adjusted to the same vertical (assay value) scale.

   For As, values remain within the range 100 to 150ppm for all of Line A, the eastern and western end of Line B and for the western part of Line C. Within the so called “anomaly zone” in the centre of Line B and the eastern half of Line C, values mostly lie above 200ppm and range up to 1030ppm. For the infill holes on Lines B and C, As values range between 100 and 400ppm. On lines E, F and G, values mostly lie in the range 100-150ppm with some ranging up to 250ppm. Thus the infill samples match their neighbours but there is little to tie the other holes to the “anomaly zone”.

   There is much the same pattern for Mo and Tl but with the exception of 1 anomalous Mo value on each of Lines F and G.

   But Sb is different. Values lie in the range 0.05-0.2ppm through all but a small section of Line A in the central west of the line, the eastern and western end of Line B and for the western part of Line C. Within the so called “anomaly zone” in the centre of Line B and eastern half of Line C, values mostly lie above 0.25ppm and range up to 7.06ppm. For Lines E, F and G, values are dominantly 0.3ppm and above. There are no spectacular highs but the values clearly belong to the “anomaly zone’ population.

   On the Sb values alone, sample substitution from the extremities of Lines A, B and C is ruled out. This would leave only the 200m wide section in the central western part of Line A as a potential source of low As-Mo-Tl and higher Sb, a highly unlikely choice when results for the samples were not known to anyone outside the company with access to the duplicate samples.

   (This subtle Sb anomaly on Line A, overlooked during earlier interpretation, could well be the continuation of the “anomaly zone” across the N-S fault in the centre of the prospect. This adds weight to the original thought that, whatever the nature of the mineralization, it is stratabound)

The conclusions drawn from the investigation are that there has been no substitution of Phase 1 duplicate samples for Phase 2 samples and that all reported assay results relate

directly to bedrock samples taken from the auger holes to which their sample numbers are linked.
The question of why the duplicate samples which were taken during Phase 1 and should have been taken during Phase 2 were removed from the Alice Springs store seems destined to remain unanswered.

Brian Williams
11/10/2016

Regards
Brian