



**MEETING SUMMARY  
TECHNICAL REVIEW TEAM - Geochemistry Subcommittee  
GRASSY MOUNTAIN GOLD MINE PROJECT**

**May 23, 2018  
1:00 pm (Pacific)  
Teleconference/Public Access at DOGAMI Albany Office**

**Attendance:**

Committee Members

- Randy Jones, Oregon Department of Geology and Mineral Industries (DOGAMI)
- Larry Knudsen, Oregon Department of Environmental Quality (DEQ)
- Heidi Williams, DEQ
- Phil Marcy, Oregon Water Resources Department (WRD)
- Bob Brinkmann, DOGAMI

Others in Attendance

- Amy Prestia, SRK Consulting
- Andrew Nicholson, Integral
- Jarrod Gasper, Integral
- David Livermore, Integral
- Rich DeLong, EM Strategies
- Nancy Wolverson, Calico Resources
- Dan Morse, Oregon Natural Desert Association
- Janet Gillaspie, Environmental Strategies

**1. Introductions**

Randy Jones, DOGAMI, chaired the Technical Review Team (TRT) – Geochemistry Subcommittee (GCS) meeting. Jones stated the meeting was being recorded and is a meeting subject to the Oregon Public Meetings Law.

Jones said that TRT Subcommittee members and consultants for both Calico Resources and DOGAMI were participating in the meeting.

He asked the group to introduce themselves, which they did.

**2. Review of Agenda and Additional Items to Add**

Jones asked for changes or revisions to the agenda. There were none from the GCS.

Jones added that there should be a correction on the draft agenda. As mentioned in the SRK Consulting revised geochemistry report of April 2018, and included in the Integral review, there is additional baseline geochemistry testing necessary to complete the baseline geochemistry

data. The gathering of this data is dependent on the final mine plan in areas related to:

- Underground backfill
- Access and haul roads
- Borrow material
- Topsoil stockpile

There is also additional testing underway on the tailings material.

The final acceptance of the baseline geochemistry data report is dependent on these additional tests being conducted and submitted to the State. However, Jones said, the meeting today can review the SRK April 2018 revised report and determine if the report is acceptable. The outcome of today's meeting is likely a letter to Calico outlining the GCS's thoughts on the April 2018 report.

Jones said that the baseline erionite analysis and results were being excluded from the GCS discussions; these results are still under review.

### **3. Meeting Purpose**

Jones said the purpose of the meeting was to discuss the revised Geochemistry Baseline Report (SRK-April 2018) and the technical memo prepared by Integral (May 16, 2018). The GCS will be able to ask questions of DOGAMI's consultant, Integral and Calico's consultant, SRK. Based on the discussion, the GCS will prepare a consensus position on its review of the April 2018 report and that will be communicated to Calico in a letter.

Jones asked if there were questions from the GCS on the purpose and direction of today's meeting; there were none.

### **4. Integral Technical Review of Revised Calico Grassy Mountain Geochemistry Report (SRK-Revised April 2018)**

Jones asked Integral to summarize and highlight the key issues in its review memo, dated May 16, 2018.

David Livermore, Integral, said that SRK made several revisions and corrections in the revised report; SRK summarized the changes in a summary memo dated April 11, 2018.

Livermore said that a new Section 8 was added in the April 2018 revised report that discusses the additional testing underway for completing the final geochemistry baseline data. This is a useful 'roadmap' for additional direction for the baseline data and is a good addition, said Livermore.

Andrew Nicholson, Integral, said that the most important aspect of the report is supplying the necessary geochemistry data for the project moving forward. There is one exception; post Humidity Cell Test (HCT) testing committed to in the baseline geochemistry work plan and the HCT termination request.

Nicholson agreed with SRK that the additional testing would not add additional information, if it was conducted. The testing shows the material to be acid-generating, with the ability to continue to generate acid. This is a good indication of how the materials will react in the environment. The mineralogy testing will not provide additional information; the assumption should be that there will be additional acid generation in the materials. SRK did not complete these tests, but there is good rationale for not performing the tests, Nicholson said.

Nicholson added that all the other data is included in the SRK April 2018 revised geochemistry report.

Jones asked if, scientifically, the additional testing of HCT residues would have provided additional interpretation of the existing data. Nicholson said that the only information to be gleaned was a finding that the materials were less acid-generating. It would not be possible to have a different interpretation of the data with the additional mineralogical testing.

Jones reviewed the approved baseline data methodologies related to “unanticipated conditions.” The approval of the baseline data methodologies addresses unanticipated conditions, and that includes notice to the TRT of unanticipated conditions. The TRT is to consider unanticipated conditions and advise Calico of any necessary additional testing or other actions.

Jones said the testing that was not completed will not affect the conclusion – that the majority of the waste rock and ore materials are acid-generating and the sulfide concentrations are related to the potential for acid generation.

Jones called on Integral for any additional thoughts. There were none from Integral.

On a different note, Nicholson suggested that bookmarks be embedded in the electronic version of the report for easy reference in the PDF version.

Bob Brinkmann, DOGAMI, asked about the acid-generating potential in the underground mine and mine workings, stated in the Integral report on page 7. Will the underground workings also be acid-generating, he asked? Nicholson responded that the information from the report will be used in designing the mine; the report shows that exposing the rock to oxidation will generate acid. There are a number of design criteria that affect how the rock behaves in the mine environment, said Nicholson; engineering controls and uses can mitigate acid-generating potential in the future.

Jones asked Nancy Wolverson, Calico, and Amy Prestia, SRK, for their thoughts and additional items to add. Prestia thanked Integral for their helpful comments to improve the report. Generating a PDF with bookmarks might be helpful, but does that need additional TRT review, she asked. Jones indicated that is a minor adjustment that can be accommodated without additional TRT review.

Prestia continued that the mine plan is still in progress, so some baseline samples cannot be collected at this time. When the samples can be collected, they will be characterized per the approved baseline methodology work plan. The tailings samples have been obtained and are at the laboratory; there are no results to date, she said.

Wolverson asked for concurrence from Larry Knudsen, DEQ, that editorial revisions to the document will not delay subcommittee review. Knudsen indicated the GCS can continue its review and add electronic bookmarks in the future. He continued that the full TRT will accept the entire report with the additional information that is being collected now, and the bookmarks can be added in that version of the document. Knudsen said that changes to add electronic bookmarks do not affect today's anticipated actions.

Jones asked for additional questions from DEQ staff and from WRD staff; there were none.

##### **5. Key Issues Regarding Final Report**

Jones highlighted the summary of the data provided in the SRK report on page 68 at section 7.3 that reads:

*...the majority of the waste rock and unprocessed ore material will generate acid and leach metals under long term weathering conditions. The exceptions to this include the sinter materials that shows a low potential for acid generation. This can be attributed to the lower sulfide sulfur content associated with this metal type.*

*The tailings materials show similar results to the waste rock and ore samples demonstrate a potential to generate acid and leach metals if no additional lime is added. Ongoing testing is underway to determine the amount of lime required to neutralize the tailings materials to meet Oregon regulation standards.*

Jones said that the Geochemistry Subcommittee acknowledges the ongoing testing that is necessary to complete the baseline geochemistry information, including testing:

- Underground backfill
- Access and haul roads
- Borrow material
- Topsoil stockpile
- Tailings metallurgical testing

The GCS might also want to consider adding to its comments the need for testing basalt or tuff, if either units are encountered in additional drilling at the proposed mine site.

Jones added that the data will need to meet Oregon's environmental standards, and proper practices to manage waste rock and other materials will need to be established.

Jones asked the agencies for additional thoughts and key issues:

- DEQ – Larry Knudsen indicated he had nothing more to add, and reported that John Dadoly did not have additional comments either. Heidi Williams did not have more comments.

- WRD – Phil Marcy did not have additional comments
- DOGAMI – Brinkmann did not have any more comments.

Jones asked Integral for any additional issues; there were none. He asked if Calico, SRK, or EM Strategies had additional issues; there were none.

### **Geochemistry Subcommittee Recommendation**

Jones indicated that the full TRT meeting set for June 4, 2018 has been cancelled. He said that baseline data reports are continuing to be received and reviewed.

Jones asked the GCS to develop a consensus position on the recommendation.

Knudsen recommended that the TRT – GCS accept the SRK Consulting April 2018 revised geochemistry report subject to these conditions:

1. Note it does not address the erionite data.
2. The TRT recognizes the baseline data collection is not complete for geochemistry; additional sampling and analysis will be provided once a mine plan and operations plans are developed, as part of the Pre-Feasibility Study
3. The TRT requests that Calico sample and test for geochemistry baseline characteristics of any basalt and tuff encountered in additional drilling at the site.
4. The TRT should approve the decision to not complete additional HCT mineralogy testing based on the SRK report and Integral review, concluding that the testing would not provide additional information regarding the acid generation potential of the waste rock and ore material.

Knudsen moved unanimous consent of that motion; Marcy provided a second. Jones asked for objections; hearing none, the motion was adopted.

### **6. Necessary Follow up and Next Steps**

Jones indicated that next steps and follow up are clear in the geochemistry work session. Jones stated that information will be provided to the TRT at its next meeting. As there will be more sampling and reporting about the baseline geochemistry conditions at the mine site, there will be additional GCS meetings, and review by Integral.

The meeting was adjourned at 1:47 pm.