



OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES

MEETING SUMMARY TECHNICAL REVIEW TEAM – WATER RESOURCES SUBCOMMITTEE GRASSY MOUNTAIN GOLD MINE PROJECT

**January 14, 2020
1:30 pm (Pacific) Time
Teleconference/Public Access at the Portland State Office Building**

Attendance:

Committee Members

- Sarah Lewis, Oregon Department of Geology and Mineral Industries (DOGAMI)
- Ian Madin, DOGAMI
- Bob Brinkmann, DOGAMI
- Randy Jones, Department of Environmental Quality (DEQ)
- Heidi Williams, DEQ
- John Dadoly, DEQ
- Rick Hill, DEQ
- Ron Doughten, DEQ
- Tom Segal, Oregon Department of Fish and Wildlife (ODFW)
- Trevor Watson, ODFW
- Joy Vaughn, ODFW
- Phil Marcy, Oregon Water Resources Department (WRD)
- Jackie Cupples, United States Fish & Wildlife Service (USFWS)
- Andrea Bowen, Bureau of Land Management (BLM)
- John Westfall, BLM
- Sarah Doyle, BLM

Others in Attendance

- Adam Bonin, Cardno
- Adele Pozzuto, Cardno
- Jason Thompson, SPF Water Engineering
- Nancy Wolverson, Calico Resources
- Christo Theodossiou, Paramount Gold Nevada
- Jeremy Austin, Oregon Natural Desert Association (ONDA)

Meeting Summary:

The Water Resources Technical Review Team (TRT) Subcommittee met to discuss the Groundwater Baseline Data Report (BDR) and completeness of the Consolidated Permit Application (CPA). The meeting was chaired by Sarah Lewis (DOGAMI), with assistance from Adam Bonin (Cardno). Per requirements, the meeting was recorded to maintain a record under the Oregon Public Meetings Law. Materials shared at the meeting were accessible via AT&T web meeting. Public access was provided at the DOGAMI Portland Office. Topics covered during the meeting included:

- Review of the Groundwater BDR included in the CPA,
- Agency comments and concerns,

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- Initial recommendations,
- Motion adopted, and
- Action items and next steps.

A summary of these topics is provided below.

Review of the Groundwater BDR Completeness

- **Presented by WRD (Phil Marcy)**
 - Well nomenclature not consistent or easily identified, which makes readability difficult.
 - Shut-in pressure for artesian sites would have been helpful.
 - Methodology, lab reports, and field sheets appear complete and adequate.
 - Encourage drilling of Well 5 over 1,000 feet deep for more information on deeper aquifer systems.
 - Some data missing to back up points (e.g., spring 2015 data).
 - Some typos/mistaken labeling.
 - Would like to acquire raw data for analysis.
 - Have extended tests on production wells in future, and include specifics on monitoring of springs (sites, methods, timing, etc.).
 - No information on groundwater age.
 - No information on wells with insufficient seals.
 - Overall agree with results of report and conclusions.
- **Agency Comments/Questions**
 - **BLM:**
 - Asked about state well nomenclature – if possible, update all wells to reflect state nomenclature. Provide groundwater data in excel table.
 - Agree pump-test monitoring for production wells would be good info:
 - Appendix Q in CPA (not BDR) includes monitoring plan.
 - **DEQ:** Similar concerns on drawdown.
 - **DOGAMI:** Concerned with drawdown affecting springs.

Agency Comments and Concerns

- **WRD (Phil Marcy):**
 - No major Category 1 or 2 issues.
- **DEQ (Rick Hill):**
 - Primarily Category 2 comments.
 - Some additional wells will be needed to finish the monitoring well network.
 - Conceptual model for the site needs to be refined:
 - E.g., references to the fault
 - Numeric model resolution of ± 45 feet needs to be smaller
 - Recharge range inconsistencies
 - Need more information on water drawdown impact on monitoring and mitigation.
 - Conflict in data documentation of existing conditions needs to be addressed.
- **ODFW (Tom Segal):**
 - Interested in potential future effects on springs.
- **BLM (Sarah Doyle, John Westfall):**

- Spring in GIS data suggests drawdown, but not discussed in report.
- Need more description on recharge areas, groundwater age, and climatic effects on groundwater.
- Explain no indications that the faults impact topography and water levels.
- Also concerned about drawdown, including spring near the Owyhee River.
- Behind Oregon in their federal approval resources, overall approves of report.
- **DOGAMI (Bob Brinkmann, Ian Madin):**
 - Production wells will need to be monitored.
 - Satisfied on Category 1, agree with others that Category 2 and 3 issues remain.
 - Request TRT Subcommittee to coordinate closely on permit requirements such as monitoring, ongoing data collection, and focus completeness review on compliance with work plan.

Initial Recommendations

- **WRD:** Unless other agencies have specific information requests, okay with approval.
- **DEQ:** Specific shortcomings on numeric modeling, and characterizations in BDR, not ready to approve.
 - DOGAMI responded that numeric modeling is not included in original work plan.
- **DEQ** has 5 specific conditions to submit in writing about adequacy of BDR:
 - In steady-state analytical model, recharge rates were inconsistent with other areas in BDR.
 - Report discusses presence of two different piezometric surfaces, but data suggest a single aquifer system.
 - Speculation about permeability surrounding ore body, and relationship to ore body and groundwater.
 - Reporting in BDR that Well 59762 logs suggest water level at approximately 600 feet, but report says well was dry.
 - Dewatering during mining workings was not taken into consideration when looking at drawdown impacts.
- **DOGAMI:** Approves of BDR.
- **ODFW:** Concerned about effects to springs, and drawdown.

Motion Adopted

- *Groundwater Baseline Data Report is deficient as described and cannot be approved until these deficiencies have been resolved. Motion to be forwarded to TRT for action.*

Action Items/Next Steps

1. Phil Marcy will carry motion to TRT meeting on January 16, 2020.
2. DOGAMI requests written comments from agencies for compilation and transmittal to the applicant for review and response, specifically the Category 1 and 2 concerns.
3. TRT meeting will discuss these recommendations, completeness review, and agency readiness to draft permits, and use of DOGAMI's commenting forms.
4. Future Discussion: Consider forming a TRT Monitoring Subcommittee, or other subcommittees to address common focus areas during permit drafting.