

APPENDIX 1

**RESPONSE LETTERS FROM NWMDRC
MINISTRY OF ENVIRONMENT - STEWART, C. AND LOVE, J.: FILE
4500-45/PRIZE MINING
MINUTES FROM NORTHWEST MINE DEVELOPMENT REVIEW
COMMITTEE MEETING, FEB. 26, 2009**



FILE NUMBER: 44500-45/Yellowjacket

April 1, 2009

Prize Mining
Attention: Linda Dandy, P.Geo.
Sierra Place, Suite 810
706-7th Ave NW
Calgary Alberta T2P 0Z1

RE: Comments for *2009 Yellowjacket Water Quality and Waste Sampling Program and 2009 Yellowjacket Mine Water Quality Monitoring Program*

The following letter summarizes comments from Jack Love, Impact Assessment Biologist, Craig Stewart, Senior Environmental Protection Officer and Patrick Hudson, Regional Hydrologist.

A/ Water Quality Monitoring Memo

Overall the memo looks adequate to continue to assess baseline conditions and monitoring for potential mine related impacts to water quality. Below are a few comments regarding the study design:

Sample Locations and Labels

Is the Sed Pond listed in table 1 the exfiltration or discharge pond?

Footnote 2 on table 1 indicates a duplicate will be collected at this station and labeled PC-4. The table does not indicate which “this” station is. One suggestion would be to rotate the duplicates similar to the field blanks.. Reading further in the memo the footnote 2 should go on to PC-6.

Table 1 identifies that PC-2 is 200 m downstream of the exfiltration ponds. Further assessment should be considered to possibly move the site as close to, or farther downstream from the works to capture the majority of the exfiltrated water that mixes with surface water.

Sampling Procedure

Table 2 should include sulphate, and hardness in the list of sampling parameters. For consistency substitute the table 2 from the 2009 Yellowjacket Water Quality and Waste Sampling Program memo.

Include field conductivity, as well as pH. Considerations should also be given to including pH and conductivity in the list of laboratory analyses.

This section indicates that temperature will be measured at each station. A thermometer will need to be added to the equipment list and I assume that it will be water temperature.

This section indicates that the sample bottles will be rinsed three times, this often is an additional source of contamination. Check with the analytical laboratory if this is still a requirement, as the laboratory often sends guaranteed cleaned bottles (as long as the cap remains secure).

Quality Assurance/Quality Control

The QA/QC program appears to be too intensive; each of the blanks or replicates has a cost. An acceptable QA/QC program could be as low as 10% and as high as 30% depending on the uncertainties in environments and samplers. The program as it stands has a single replicate, a single trip blank and a field blank for each sampling event (does this mean each sampling site?). So the program has three QA/QC samples for five sites or 60% QA/QC. With the filtration blanks it is only necessary to run one sample for each lot of syringes, filters and DI water. Field blanks and filter blanks will both capture potential contamination from filtration so there is some redundancy with the QA/QC measures. The idea of running the duplicate at site PC-6 is good as it increases the amount of data. Additional data at the discharge pond may also be useful. One consideration would be to rotate the duplicate between these two sites. Depending on Lorax's overall comfort with the previous baseline data, the QA/QC program could be reduced to possibly a monthly duplicate, a reduced frequency of filtration blanks and elimination of field blanks, as they capture similar contamination sources as the filtration blanks. This program would exceed 20% QA/QC, exceed the Ministry of Environments requirements for most sampling programs and reduce annual costs to the proponent.

Elimination of head space on several of the samples is not always necessary. It may add additional handling of an opened sample and is also an issue when trying to preserve the metals samples with HNO₃. It may be tricky to leave the right amount of room for acid and not have acid or sample overflow.

Sample Treatment

This section indicates the use of a laboratory to filter samples. You could also consider filtration at each site if environmental conditions allow or filtering in the truck as there may be no lab available.

B/ 2009 Yellowjacket Water Quality and Waste Sampling Program

Thank you for the above noted memorandum dated March 10, 2009. The following comments pertain to the program as proposed and in conjunction with previously submitted proposals and review comments.

This memo mentions a Pine Creek Environmental Effects Monitoring Program which will likely be a condition of the effluent permit. The EEM program will use more biological monitoring tools than water quality as presented in this work plan. This requirement will include a risk to the resources assessment using appropriate monitoring tools.

Toxicity testing may also be a monitoring requirement for the effluent discharge permit. The discharge will need to be monitored to ensure it is not acutely toxic to the nearby receiving environment.

Section 2.2 Waste Material Sampling Program (comments provided by Craig Stewart)

Overall, the proposed program appears adequate to address the questions regarding the materials characterization and an evaluation of their potential impacts to the receiving environment. For further information, please refer back to the letter dated March 2, 2009, (C. Stewart to Linda Dandy) regarding the initial evaluation. Please ensure that questions posed in that letter regarding the initial test work and data interpretation are considered in this program and are addressed during the 2009 waste program evaluation and subsequent report.

With consideration to the points provided below, the proposed program is acceptable at this time; with further studies as necessary to be based upon the results obtained from the 2009 work.

- Note that the Sobek method of analysis may over-estimate the available NP, an artefact which requires consideration in the final interpretation. This is especially true for samples that will lower carbonate values.

- In terms of the proposed leach-bins, the use of plastic barrels as illustrated may reduce air flow into the material, inhibit precipitation captured when compared to an open, conical pile, as well as imposing collection and flow paths through a vertical alignment. What has been the experience of this particular set-up for ensuring that the tests are representative of the local ambient conditions? What has Lorax found to be the positive and negative characteristics of these specific test designs? Have these specific designs been utilized elsewhere and if so, how effective were they?

We look forward to assessing the final documentation and reviewing the results of the test work.

Hydrology and Hydrogeology (comments provided by Patrick Hudson):

There is no specific mention of monitoring for the purpose of hydrologic and / or hydrogeologic data collection in the monitoring plan information that was provided, but I can provide the following comments to consider in preparing your monitoring plan. There are a number of common operational issues and water management planning functions that support the rationale for the collection of surface water flow information in the context of small scale mines. Some of the most common purposes are as follows;

- **Dilution modeling:** whenever a surface discharge is applied for under the Environmental Management Act (EMA) the technical assessment component of the application needs to address the degree to which the receiving environment can dilute the chemical constituents of the proposed effluent to levels that can conservatively be assumed to pose no risk of pollution and the resultant adverse ecological effects. Usually some form of water quality model is run that looks at a proposed annual effluent delivery schedule and matches it to the stream hydrograph. This is done in order to assess the seasonal availability of in stream flow for effluent dilution. The Ministry has standards for effluent dilution that must be met before a permit will be awarded.
- **Water balance models/calculations;** Water balance models are prepared for permitted mine sites to assess the proposed water management infrastructure for capacity readiness to handle high and, sometimes low flows. The mandate for the development of water balances arises from the EM Act provisions related to pollution prevention and, specifically, the avoidance of unregulated discharges from improperly designed water management infrastructure. The balance is used to test the design criteria of the various water handling systems, settling ponds, water treatment systems among other things. These vary in complexity but they all require continuous hydrometric data as inputs. Some sites have integrated groundwater / surface water components to track the exchange of water between surface and ground.

- **Seepage assessments:** hydrogeologic monitoring is often conducted to track effluent seepage volumes and the fate and transport of effluent plumes, and can be used to estimate important water management issues in open pit and underground mine situations.

With respect to this site there will definitely be the need to collect some onsite hydrologic information in support of dilution modeling. Given the alluvial character of the site it is not unreasonable that there are some issues around alluvial aquifers and surface /subsurface interactions that will be worth exploring. There are examples of other local mines whose operations have resulted in stream dewatering (particularly at low flows) so this may be a concern worth considering. Upstream and downstream surface water monitoring would be recommended to monitor for long term subsurface drainage issues.

If there is the potential for the mine plan to go underground, some groundwater monitoring (level, chemistry etc) may prove very useful. Most of these types of monitoring can be accomplished relatively inexpensively given the shallow nature of the deposit.

Thank you for providing the opportunity to comment of the above documents, if you have any questions or concerns please do not hesitate to contact me at (250) 847-7302.

Sincerely,

Jack Love, R.P.Bio.
Environmental Impact Assessment Biologist
Environmental Protection Division
Skeena Region

cc: AJ Downie, Section Head Environmental Quality, Skeena Region, MOE,
Patrick Hudson MoE
Craig Stewart MoE
Kim Bellefontaine MoE
Mike Hagen, Environment Canada
Bruce Graff



NORTHWEST MINE DEVELOPMENT REVIEW COMMITTEE (NWMDRC) MEETING

DRAFT MEETING NOTES Feb 25, 2009

**NORA Building MEMPR / MOT Conference Room
2nd Floor, 3726 Alfred Avenue, Smithers B.C.
ph: (250)847-7345
Dial-up Instructions: 1-866-596-5277; PIN 7648861#**

PARTICIPANTS:

Chair

Loren Kelly (MEMPR) (Loren.Kelly@gov.bc.ca)

Provincial Agencies

Pardoe, Jill EMPR (Jill.Pardoe@gov.bc.ca)
Flynn, Doug, EMPR (Doug.Flynn@gov.bc.ca)
Wojdak, Paul, EMPR (Paul.Wojdak@gov.bc.ca)
Stewart, Craig, MOE-EPD (Craig.Stewart@gov.bc.ca)
Claus Rygaard, MOFR (Claus.Rygaard@gov.bc.ca)
Hudson, Patrick, MOE-EPD (Patrick.Hudson@gov.bc.ca)
Love, Jack, MOE-EPD (Jack.Love@gov.bc.ca)
Diemert, Karen MOE-ESD (Karen.Diemert@gov.bc.ca)
Girling, Janice – EMPR (Janice.Girling@gov.bc.ca)

By teleconference

Diane Howe, EMPR, Victoria (Diane.Howe@gov.bc.ca)
Kim Bellefontaine, EMPR, Victoria (Kim.Bellefontaine@gov.bc.ca)
Ron Craig – Northern Health (Ron.Craig@northernhealth.ca)

Randy Kelleher, Land & Resources Department TRTFN (rkeleher@gov.trtfn.com)
Bob Magill, Taku River Tlingit First Nation (bobmagill@live.ca)

Proponent

Linda Dandy, Prize Mining Corporation (lindadandy@telus.net)
Chuck Downie, Eagle Plains Resources (ccd@eagleplains.com)
Bruce Graff, contractor for Prize Mining Corporation (bdgraff@telus.net)

AGENDA:

- 1) Welcome and Introductions by Chair Loren Kelly;
- 2) Presentation by Linda Dandy, Project Manager for Prize Mining Corporation (powerpoint slide presentation attached to meeting notes)
- 3) Discussion on MDRC process;
- 4) Comments & Questions
- 5) Closure

**Ministry of
Energy, Mines and
Petroleum Resources**

Mining and Minerals Division

**Mailing Address:
Bag 5000
Smithers, BC V0J 2N0
Ph: (250) 847-7383
Facsimile: (250) 847-7603**

**Location:
2nd Floor
3726 Alfred Avenue
Smithers BC
V0J 2N0**

MEETING NOTES:

Loren Kelly (EMPR) – Welcome to the NWMDRC. First we will have introductions around the table and via teleconference. Then Prize Mining will show their powerpoint presentation.

Linda Dandy (Prize) - presented Power Point on the Atlin Gold property, Yellowjacket Zone located in Pine Creek near Atlin, BC.

Slide - Prize Mining proposes to placer mine surficial material (area 145 m X 90 m), mine an open pit (area 70 m X 40 m), and construct a processing plant at the Yellowjacket zone.

Slide - Material stockpiles will be built. There will be no discharge of water (effluent) into Pine Creek, it will clone the existing pit upstream from the present location

Slide - Location of existing pit. The mining operations will not affect the Independent Power Project (IPP) proposed 2 km upstream.

Slide - Acid Base accounting indicates that the waste material is not actively producing ARD.

Slide - Erhardt & Connor reviewed Pine Creek diversion Project including the locations of the water quality sampling sites. Lorax Environmental conducted fourteen months of baseline water quality sampling from May 2006 to the end of June 2007. G & T Metallurgical Services did the metallurgical testing.

Slide - No explosives were used in the bulk sample – everything was done by excavator alone.

ROUND TABLE DISCUSSION AND QUESTIONS

Kim Bellefontaine (EMPR) - asked for clarification on old workings versus proposed new workings.

TRTFN asked if there were any plans to divert Pine Creek

Linda Dandy (Prize) – No they will not, again.

TRTFN asked if the pits will be used for tailings storage after the project is completed.

Diane Howe (EMPR) - What does deregulation on Pine Creek mean?

Karen Diemert (MOE-ESD) – Prize Mining are not considered Placer Miners so they would need a discharge permit if they do intend to discharge into Pine Creek.

Kim Bellefontaine (EMPR) - suggested that Prize Mining collect ARD samples on waste material presently on site. Did Prize Mining assess the waste material for neutral pH metal leaching?

Bruce Graff (contractor for Prize) – There is ARD and metal leaching information in the Lorax report. He read it out.

Kim Bellefontaine (EMPR) - agreed that it sounds relatively low risk for neutral pH metal leaching.

Kim Bellefontaine (EMPR) - What is Prize Mining's proposed timing to apply for a **Mines Act** Permit?

Bruce Graff (contractor for Prize) - after this NWMDRC meeting Prize Mining will review information and requirements. They would like to have a Permit for this summer 2009. However,

they will move forward with the Placer approval they obtained in 2008 last year and will continue working with the bulk sample from last year's approval.

Craig Stewart (MOE-EPD) – What is the length of the construction season?

Bruce Graff (contractor for Prize) - For 2009, Prize is looking at working for 3 months.

Craig Stewart (MOE-EPD) – Where will waste be disposed? Where will ore be stockpiled?

Bruce Graff (contractor for Prize) – There will be very little waste. Tailings will not be moved they will stay in the current location. Slurry material would be pumped to a sediment pond.

Paul Wojdak (EMPR) – is there an option to enlarge the pit?

Jack Love (MOE-EPD) – MOE would be interested in the reports on water sampling, seepage rates and quality and water calculations for water pumping. We would like those numbers submitted to MOE for future mining operations.

Karen Diemert (MOE-ESD) – Can we have copies of the baseline program information provided in the Powerpoint presentation. I would like to see the terrestrial environment data.

Linda Dandy (Prize) – The *Mines Act* permit application will be on a very limited sized portion of the claim area, an area of approximately 25 hectares.

Ron Craig (Northern Health) – Will there be a camp or any food provided on site? What about water or septic services?

Linda Dandy (Prize) – No, people will bring their own food and water is delivered to a plastic container in the First Aid tent. Water is delivered in a truck. A closed septic tank is pumped out regularly by a truck.

Loren Kelly (EMPR) – What is the length of mine life?

Bruce Graff (contractor for Prize) –Five (5) to six years possibly with the maximum allowable annual tonnage to be 75 tonnes per year but in reality, the allowable operating time (seasonal window) would limit the company to 35 tonnes per year.

PERMITTING ISSUES – QUESTIONS AND DISCUSSION

Craig Stewart (MOE-EPD) – Summary comments for MOE:

- Sewage will be handled by Northern Health, with the sewage waste to be transferred to Atlin.
- Prize will require an MOE EMA effluent permit, and baseline monitoring will be required,
- If blasting is considered to develop the pit, then MOE will have some concerns. Craig will send some comments to proponent by email.
- Monitoring requirements will be a must in the *Mines Act* Permit, and
- Please send the Lorax water quality report to Kim Bellefontaine at MEMPR, Victoria.
- An application is required to start the process for an effluent permit with MOE. The focus on the Project for water quality will be dissolved metals and monitoring in close proximity to the site; approximately 100 meters from the sediment ponds and monitoring of any seepages.
- Toxicity testing may be required at a near field site.
- Generator for electricity is proposed as 1000 kilowatts but MOE would like to see eventually power from the IPP.
- Advertising is a requirement for the MOE EMA permit, the project description including effluent discharges must be published in the local newspaper.

- No permit or authorizations are required from Karen Diemert (MOE-ESD) at this time.

Randy Kelleher (TRTFN) – Are there permits or authorizations required from DFO?

Jack Love (MOE-EPD) - It depends on the volume and frequency of discharges from the mining operation.

Karen Diemert (MOE-ESD) – If the TRTFN contact Steve (?) with DFO in Vancouver and explain the situation, Prize may require an authorization under the Fisheries Act.

Linda Dandy (Prize) – Our **Mines Act** Application should be ready by the end of March, 2009.

Bruce Graff (contractor for Prize) – TO ALL REGULATORS: Please email myself or Linda a list of your specific information requirements and concerns.

Bruce Graff (contractor for Prize) – Should we schedule another NWMDRC meeting or can Prize Mining call and advise EMPR with updates.

ACTION ITEM #1. Regulatory Agencies to email directly to Prize Mining (Bruce and Linda) lists of their information requirements, questions and concerns about the Atlin Gold – Yellowjacket Zone Project

(Calling is just fine with MOE)

Linda Dandy (Prize) – asked what EMPR timeline would be –

Diane Howe (EMPR) – A two (2) month referral period is the minimum for a Minister's Permit. We advise at least 3 – 4 months for permit review and issuance.

Loren Kelly (EMPR) – What about consultation with the Taku River Tlingits First Nation? Without seeing application yet, EMPR feels there may not be too many complications.

Doug Flynn (EMPR) - Had a caller who wants to do some placer mining on a Prize claim, how will that work?

Linda Dandy (Prize) – Prize has optioned a claim to another proponent.

Loren Kelly (EMPR) - thanks to everyone for participating.

Linda Dandy (Prize) – thanks to everyone for participating and we look forward to working with everyone in the future.

Meeting adjourned at 11:30 AM.