CORRESPONDENCE/MEMORANDUM

State of Wisconsin

DATE: June 2, 2011 FILE REF: Aquila Resources

TO: Nicholas Schlagenhaft, Project Geologist
Aquila Resources, Inc.
E807 Gerue Street
Stephenson, MI 49887

FROM: Philip Fauble – WA/5 Philip Fauble

SUBJECT: Exploration Borehole Site Inspection Report, Aquila Resources, Town of Easton, Marathon County, Wisconsin

On May 26th, 2011, staff from the Wisconsin Department of Natural Resources (DNR) and Aquila Resources, Inc. (Aquila) inspected 17 proposed metallic mining exploratory borehole sites located just east of Thornapple Creek Road in the Town of Easton, Marathon County. The locations and description of the proposed exploration activities are detailed in the Notice of Intent to Drill dated May 4, 2011. The Notice was submitted to the DNR in accordance with ch. NR 130.10(1) Wis. Adm. Code. The purpose of the inspection is to ensure the drill sites will be in compliance with the minimum standards in ch. NR 130.06(2) Wis. Adm. Code, to determine if additional permits might be needed, and to provide appropriate recommendations.

Attendees:

WDNR

Philip Fauble – Mining Coordinator, Madison
Tom Portle – Reclamation Specialist, Madison
Keith Patrick – Water Regulation & Zoning, Wausau

ACOE

Eric Norton – Regulatory Branch, Plover, WI

Aquila Resources

Thomas Quigley, President & CEO
Nicholas Schlagenhaft, Project Geologist
Paul Herder – Education Outreach Coordinator
Patrick Quigley – Project Geologist
Francis Gardiner – Facilities Manager

Drilling Plan

During the site inspection, several aspects of the drilling plan were modified or clarified by Aquila. These include the following:

- Drilling water will be obtained from a local (~13 miles away) fire protection district well. Since water will not be obtained from a surface water source, water withdrawal permits and disinfection are not required.
- It looks like a drilling mud (additive) or mixture from the DNR-approved list will be acceptable to the drillers. Have your driller contact me if they need to use an additive that is not on the approved list.
- Aquila is still considering the best approach to managing drilling fluids but we discussed using self-contained drill rig units similar to the ones used by Aquila at the Back 40 Project (MI). In any case, the drilling fluids will be contained and collected in tanks or small sumps. Since it would not be practical to allow the drilling fluids to infiltrate at many sites, especially those in the wetland areas, we recommend that spent drilling fluid be taken off site and discharged into a wastewater treatment plant or allowed to infiltrate in an upland site.
- The drill cuttings will be collected in tanks or sumps and either removed from the drill site or buried in place. To minimize impacts to the wetland areas, drill cuttings should not be buried at borehole locations 21A, 24A, 25A, 25B, 26A, 26B, and 27A or any other boring location identified as a wetland. Cuttings from those sites should be removed and either sent to a disposal facility or buried at an upland site in the project area. Cuttings from the more upland borehole sites can be buried in place.
- The borehole locations listed above are in a rather extensive wetland area. While exploration boreholes are not subject to water quality certification under ch. NR 103 of the Wis. Adm. Code, they are subject to s. 293.13(c)(8) Stats. requiring a minimization of wetland disturbance. Since it is not possible to completely avoid wetland impacts to access the drill sites, impacts must be minimized. This should be accomplished by restricting boring or site access activities to periods when the wetland is dry (can support the weight of the drill rig without excessive rutting or soil disturbance) or after the soil is frozen enough to support the drill rig's weight.
- Activities in the wetland areas may require a General Permit from the Army Corps of Engineers. Please coordinate with Eric Norton of the ACOE.
- Since the ore body (or bodies) are known to contain metallic sulfides, there is some concern with properly managing the drill cuttings and drilling mud to prevent the formation of acid drainage. We are recommending that Aquila follow the Michigan Department of Environmental Quality Instruction #1-2005 *Containment and Disposal of Drilling Mud and Cuttings from Test Wells* guidance document (attached). It establishes some minimal standards for fluid and cuttings management and a threshold (50 feet of rock with an average metallic sulfide content greater than 3 percent by volume) above which would require special handling and disposal. Given the nature of the ore body (bodies) and the drilling, special precautions for sulfide management may not be necessary. Please contact me if you have any questions.
- If the proposed drilling activities will disturb more than one acre of land, a Stormwater Management Permit may be necessary. It is expected that the drill site will be disturbed (excavation and potential fill), but potential road construction activities to provide site access may also be included in that total. Merely removing vegetation to access the site would likely not qualify as disturbance, but the addition of fill material (building up roadbed, culverts, etc.) or excavating (i.e. bulldozing or excessive rutting in wet areas) access roads would qualify. Roughly based on the drill site area of influence presented in the Notice of Intent to Drill, it

appears that the total disturbed area will be slightly less than 1 acre for the total project and that access in most cases can be obtained without significant soil disturbance, so it appears that a permit is not needed. Please be aware that, if a subsequent inspection determines that the land disturbance will be in excess of 1 acre, you may be required to file for a Stormwater Permit. In any case, you will be required to make sure that best management practices for minimizing erosion and surface water runoff are in place at each borehole location.

- In the reclamation of the drill sites, we recommend you use a seed mix specific to the area that includes some native species but does not include species that would be considered invasive. We would be happy to provide an example seed mix that we feel would be successful, if requested, or you can find other seed mixes at local nurseries or the County Highway Department.

Specific Borehole Site Comments

Aquila identified two separate drill areas on two adjacent parcels which, for the sake of this memo, will be referred to as the Northern and Southern Groups. The Northern Group consists of 11 drill sites, some on high ground near a residence and some in an extensive, thinly forested seasonal wetland. There was no navigable water observed in the wetland area. The traces of access roads previously disturbed by exploration activity in the 1980's by Noranda were clearly visible.

The Southern Group consists of 6 additional borehole locations just north of another residence in an area of thin woods and meadows. The ground was generally high, although there was some evidence of wetter seepage areas. These sites looked to be readily accessible from the driveway with only minimal additional disturbance.

Northern Group

Borings GBP-21A, 24A, 25A, 25B, 26A, 26B and 27A – These drill sites are all located within an extensive seasonal wetland. At the time of inspection, the area was very wet and access would be difficult. The wetland reportedly dries out in the late summer and fall. Most are accessible by old Noranda access roads. **GBP-25A** is on a bit higher and drier ground, but access would still have to go through a fairly wet area. To minimize wetland disturbances, drilling activities at these sites should be restricted to dry conditions or after winter freeze.

Borings GBP-22A, 22B, 23A and 23B – These drill sites are on high ground near the residence. Easy access and no wetland issues.

Southern Group

Borings GBP-14A, 15A, 16A and 17B – These sites are dry and within easy access of the road or driveway.

Boring GBP-17A – This boring is at the edge of a seepage wetland; movement of the drill location to the east by 50 feet or more should avoid this area and provide for better footing for the drill rig.

Boring GBP-18A – This boring is also within a small forested seepage wetland. Moving the boring to the south or east by 50 feet or more should get it on drier ground and out of the wetland.

Nick mentioned the possibility of adding boreholes to the Southern Group or postponing wetter drill locations. If Aquila would like to modify the number of boreholes, please submit an addendum or modification of the Intent to Drill listing the proposed additional or revised borehole locations. Minor adjustments to the borehole locations (i.e. to avoid wet areas) do not need to be resubmitted.

Unless additional permits need to be obtained, Aquila is free to commence drilling at the Reef Gold Prospect site. DNR staff will conduct periodic inspections of the drilling operations over the summer. Please note that s. NR 130.10(2) and (3) Wis. Adm. Code requires you to notify to the DNR (contact me at 608-267-3538) prior to the commencement of any drilling and give the DNR at least 24 hours notice prior to filling the borehole.