



TO Phyllis Beaulieu
Manager of Licensing, Nunavut Water Board

File: 9545-2-3.2BE-RBPA

CIDMS: 263003

September 19, 2008

FROM David Abernethy
Regional Coordinator, Water Resources Division
Nunavut Regional Office

**SUBJECT Water License #2BE-RBP0608, Roche Bay Plc. and Advanced
Explorations Inc., Roche Bay Project, Qikiqtani Region,
Renewal Application and Summary of Drilling Procedures**

Please be advised that on behalf of Indian and Northern Affairs Canada (INAC), I have reviewed the above-referenced license renewal application and summary of drilling procedures submitted by the Advanced Explorations Inc. to the Nunavut Water Board (NWB) for approval.

Two (2) Technical Memorandums are provided for the NWB's consideration.

Should you have any questions regarding the comments / recommendation provided, please contact me at (867) 975-4555 or AbernethyD@inac-ainc.gc.ca.

Regards,
David W. Abernethy

Cc. Kevin Buck, Manager of Water Resources
Bernie MacIsaac, Manager of Field Operations
Andrew Keim, Water Resource Officer



Supplemental Technical Memorandum

File : 9545-2-3.2BE.RBP0608
CIDMS: 262429

TO Phyllis Beaulieu
Manager of Licensing, Nunavut Water Board

September 19, 2008

FROM David Abernethy
Regional Coordinator, Water Resources Division
Nunavut Regional Office

SUBJECT Water License #2BE-RBP-0608, Roche Bay Plc. and Advanced
Explorations Inc., Roche Bay Project, Qikiqtani Region,
Additional Review of Drilling Procedures

DESCRIPTION

Advanced Explorations Inc. (AE) submitted the report "*Summary of Drilling Procedures for Advanced Explorations Inc., The Roche Bay Magnetite Project*" (undated) and additional documentation to the Nunavut Water Board (NWB) as required in its July 7, 2008 Amendment No. 3 to water license #2BE-RBP0608. These drilling procedures were distributed by the NWB to interested parties for review on August 19, 2008. The summary report/documentation was reviewed and compared with the requirements/information provided in:

- water license #2BE-RBP0608 and Amendments No.'s 1, 2, and 3;
- the May 16, 2008 Nunavut Impact Review Board (NIRB) Screening Decision Report 08EA041;
- the December 12, 2007 Indian and Northern Affairs Canada (INAC) Water License Inspection Report; and,
- the AE February 14, 2008 *Response Water License Inspections – Roche Bay Project*.

COMMENTS / RECOMMENDATIONS

The following comments / recommendations are provided to the NWB for consideration in the review of the submitted drilling procedure information.

1. Progress Summary of Implemented Drilling Procedures

- a. Page 2, Paragraph #6 of Amendment No. 3 to the water license requires AE to provide a progress summary of procedures implemented to address

discrepancies between drilling procedures proposed for the conservation of water and the practice taking place at the time of the July 15, 2007 INAC Inspection. The submitted report and additional documentation do not appear to specifically address this issue. It is recommended that AE provide more detailed information with respect to water conservation and drill waste management that reflects the information requirements/requests stated in the Inspection Report and License Amendment No. 3. As such, AE should confirm the procedures that will be implemented to conserve water and manage drill wastes during drilling operations.

- b. Part F, Paragraph 3 of the Inspection Report states that AE was requested to provide photographic evidence of remedial actions taken and provide this information via email to the inspector once completed. This photographic evidence was not submitted. It should be submitted now to the NWB and the Inspector.

2. Water Use

- a. AE's February 14, 2008 Inspection Report Response states that it was informed that in place of water meters a suitable method of water use calculation and estimation would also be acceptable. The method and calculations were to be attached in an Excel spreadsheet for review.

AE should make known who/which organization informed them that a suitable method of water use calculation and estimation is acceptable and provide the Microsoft Excel spreadsheet which outlines the method and calculations to estimate water use. This spreadsheet is not available for review on the NWB public registry. A description of the methodology for determining water consumption must be provided to the NWB. This is required to determine the correct amount of water used at site.

- b. Average daily drill water consumption rates should be provided in the Annual Report.

3. Disposal of Drill Waste

- a. The submitted Drilling Procedure summary report states that once drilling fluid reaches the ground surface it will flow to a baffle where the cuttings will settle to the bottom. Cuttings are then shoveled into bags for deposition into a sump and/or for the reclamation of drill holes. AE should describe what form of baffle will be used for the settling of suspended solids.

- b. AE's February 14, 2008 Inspection Report response states that Hardy pumps will direct drill muds and waste away from water sources, toward rocky areas wherever possible. AE should describe, using diagrams/maps, the location of the pumps and the proposed flow path of the waste drilling fluids, indicating how this method will effectively manage this material to ensure that there are no adverse effects to water. Regardless of the use of a Hardy pump, or any other means of directing wastewater, AE must comply with Part F, Item #2 of its water license and Condition #'s 7 and 12 of the NIRB Screening Decision Report when disposing drill waste.
- c. A more detailed description of the sumps/natural depressions used to contain drill waste, including water and CaCl in any quantity or concentration, should be provided, including any applicable diagrams.

4. Reclamation Procedures

- a. A detailed description of reclamation procedures applied to drilling operations should be provided. These procedures should address drill holes and drill waste disposal areas.

Should you have any questions regarding the comments / recommendation provided, please contact me at (867) 975-4555 or AbernethyD@inac-ainc.gc.ca.

Regards,
David W. Abernethy

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